1 INTRODUCTION

Congratulations on your choice of an AgriMetal 3 Point Hitch Snow Blower to complement your operation. This equipment has been designed and manufactured to meet the needs of a discerning snow removal industry.

Safe, efficient and trouble free operation of your AgriMetal Snow Blower 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 MTC 3474, 3480, 4080, 4086 & 4092 3 Point Hitch Snow Blower. 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 Agri-Metal Dealer 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 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 3 Point Hitch Snow Blower 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.

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

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 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 3 Point Hitch Snow Blower. YOU must ensure that you and anyone else who is going to operate, maintain or work around the Snow Blower 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 Snow Blower.

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.

- Snow Blower owners must give operating instructions to operators or employees before allowing them to operate the machine, and at least annually thereafter.

- 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.

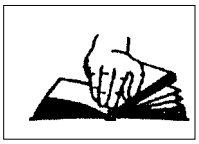
- A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible serious injury or death.

- 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.

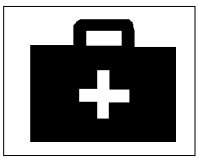
- Think SAFETY! Work SAFELY!

2.1 GENERAL SAFETY

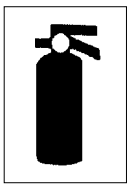
1. Read and understand the Operator's Manual and all safety signs before operating, maintaining, adjusting or unplugging the Snow Blower.



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.



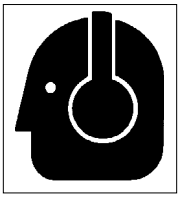
4. Do not allow riders.

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 Snow Blower.

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.

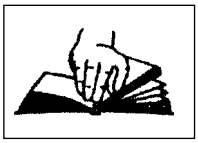
9. In addition to the design and configuration of this implement, including Safety Signs and Safety Equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of the machine. Refer also to Safety Messages and operation instruction in each of the appropriate sections of the power unit, engine and machine Manuals. Pay close attention to the Safety Signs affixed to the power unit 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 power unit, 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 power unit engine and machine quickly in an emergency. Read this manual and the one provided with your power unit.

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 Dealer Parts Department or the factory.

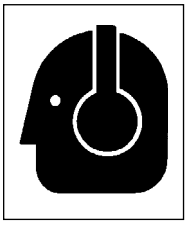
How to Install Safety Signs:

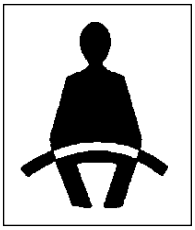
- Be sure that the installation area is clean and dry.
- Be sure temperature is above 50°F (10°C).
- Determine exact position before you remove the backing paper.
- Remove the smallest portion of the split backing paper.
- Align the sign over the specified area and carefully press the small portion with 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. Do not operate the tractor and 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.

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!
Tractors 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 the machine only with a tractor equipped with an approved Roll-Over-Protective Structure (ROPS). Always wear your seat belt. 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.

5. Clear working area of stones, branches or hidden obstacles that might be hooked or snagged, causing injury or damage.

6. Operate only in daylight or good artificial light.

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

8. 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 Blower. 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 Snow Blower 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. Never place yourself between the tractor and machine while implement is in operation.

9. 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.

10. Use extreme care during travel. Slow down on turns and watch out for bumps.

11. 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.

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

13. 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.

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

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

16. Do not reach into screw impeller openings when the engine is running. Keep others away also.

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

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

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

20. Do not place hands, feet or other body parts into snow stream.

2.7 TRANSPORT SAFETY

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

2. The use of flashing amber lights is acceptable in most localities. However, some localities prohibit their use. Local laws should be checked for all highway lighting and marking requirements.

3. At all times when driving the tractor and equipment on the road or highway under 20 mph (32 kph), use flashing amber warning lights and a slow moving vehicle (SMV) identification emblem. Do not exceed 20 mph (32 kph). Reduce speed on rough roads and surfaces.

4. Plan your route to avoid heavy traffic.

5. Use a mounting pin with provisions for a retainer. Install the retainer.

6. Do not drink and drive.

7. 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.

8. Never allow riders on either tractor or 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.

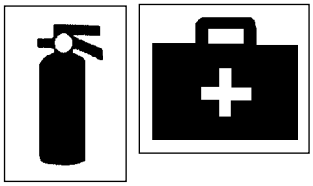
4. Before working on this machine, shut off the engine, set the brakes, and remove the ignition keys.

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.

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 tighten all bolts, nuts and screws and check that all cotter pins are properly installed to ensure unit is in a safe condition.

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 3 Point Hitch Snow Blower 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 chute 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 en 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.

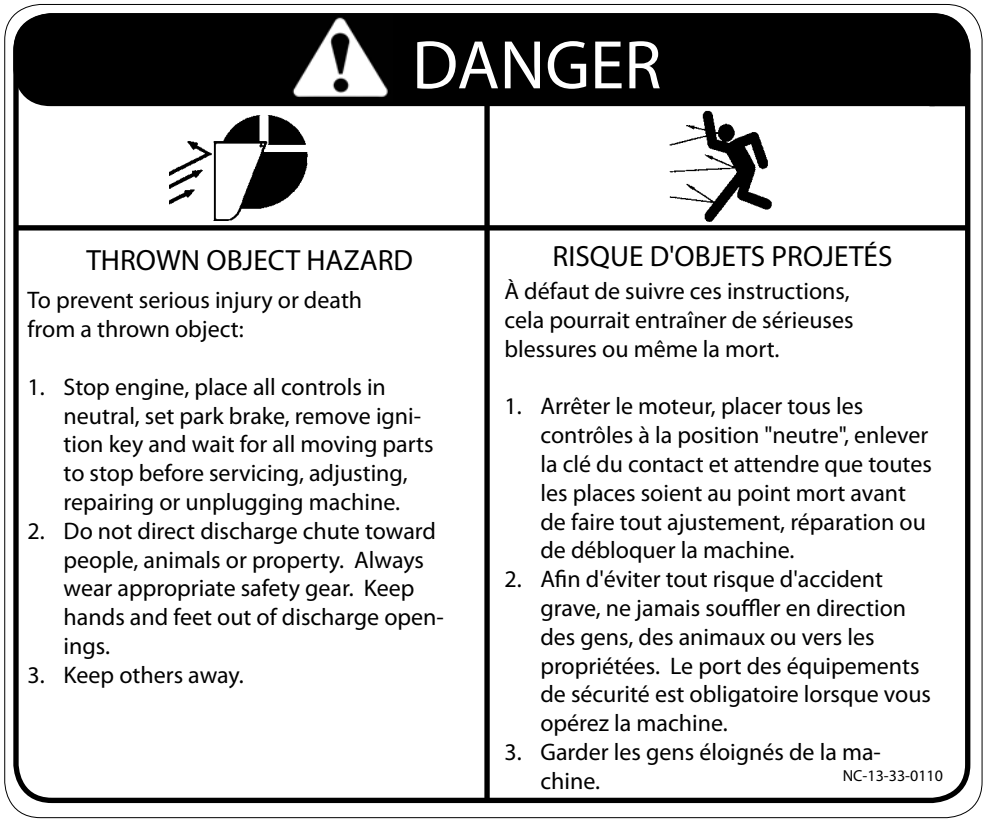
NC13-33-0108

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

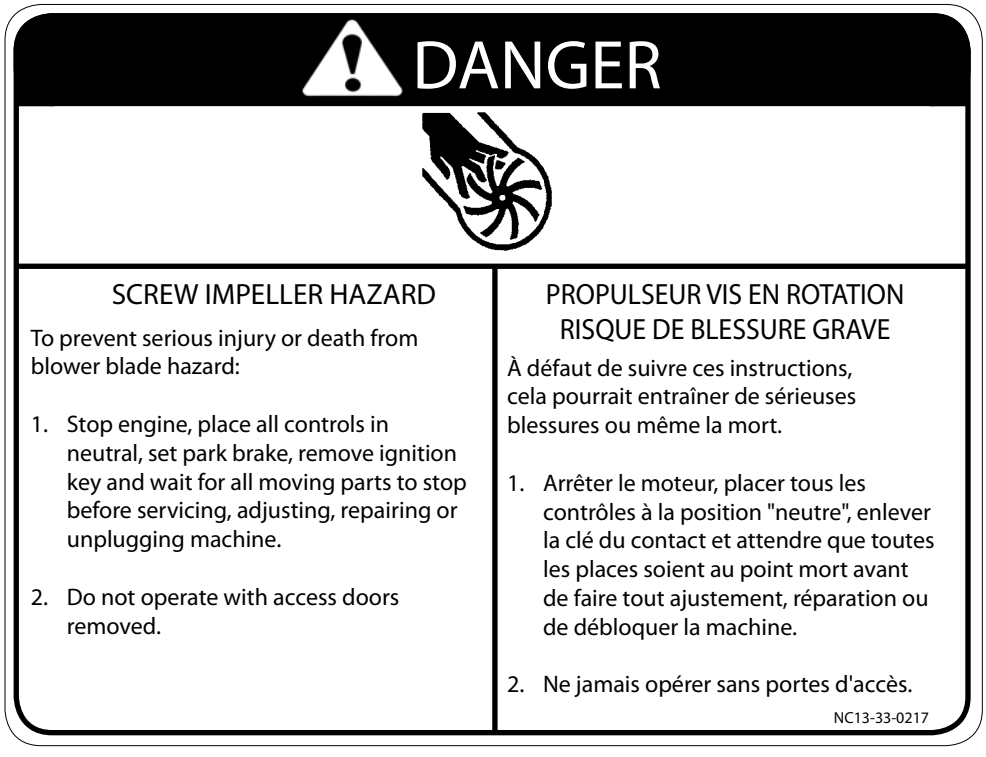


REMEMBER - If safety signs have been damaged, removed, become illegible or parts replaced without safety signs, new signs must be applied. New safety signs are available from your authorized dealer.

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!

C

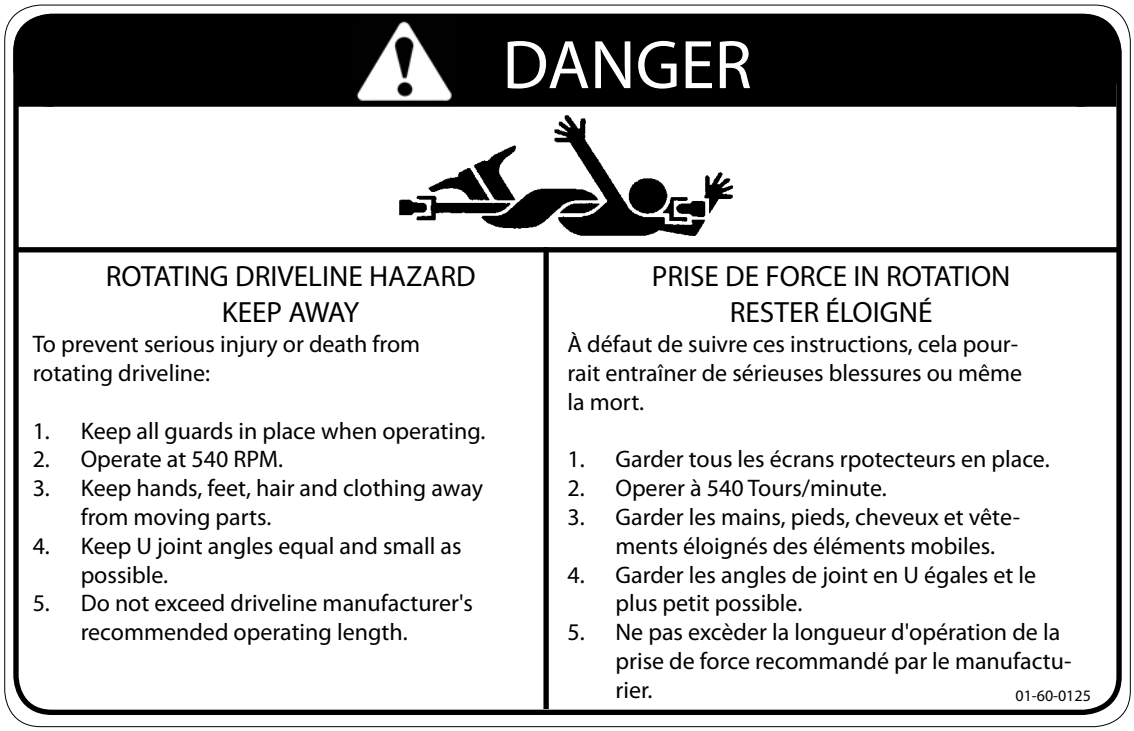


REMEMBER - If safety signs have been damaged, removed, become illegible or parts replaced without safety signs, new signs must be applied. New safety signs are available from your authorized dealer.

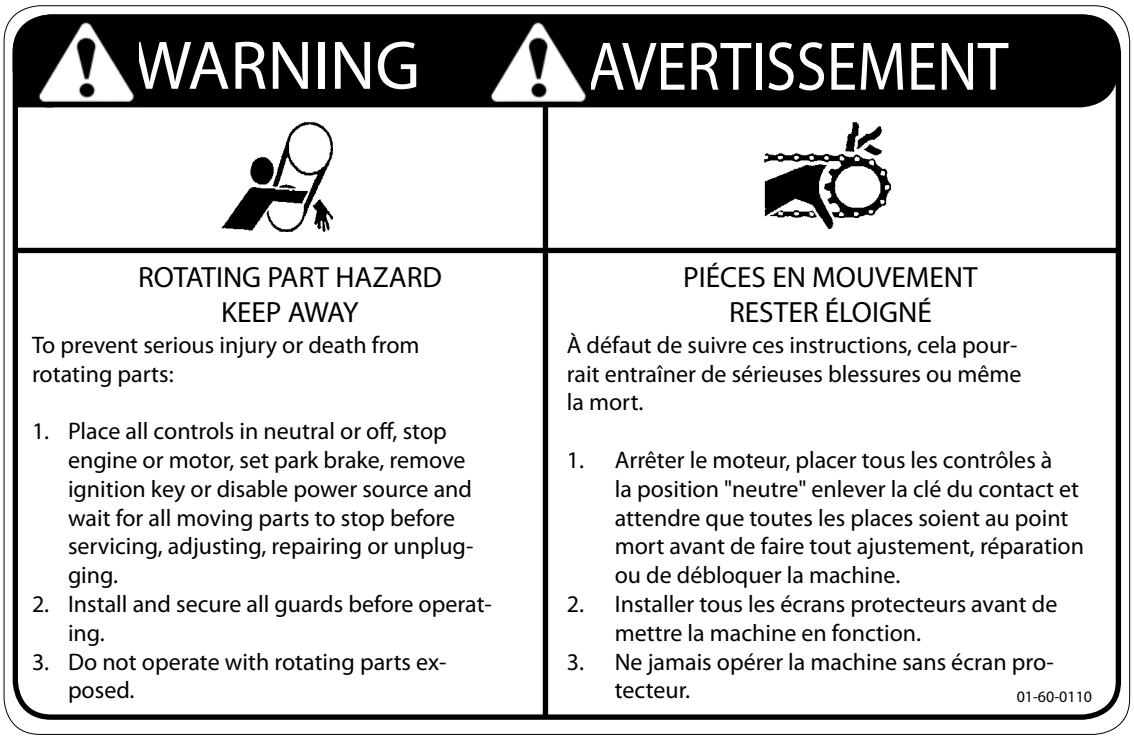
The types of safety signs and locations on the equipment are shown in the illustrations that follow. Good safety requires that you familiarize yourself with the various safety signs, the type of warning and the area, or particular function related to that area, that requires your SAFETY AWARENESS.

- Think SAFETY! Work SAFELY!

D



E



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!

F

WARNING	AVERTISSEMENT
MISSING SHIELD HAZARD	GARDE ABSENT
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.	À 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.

NC13-33-0113

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.

4 ASSEMBLING

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.

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.

Fig. 1 SHIPPING CONFIGURATION

4. Cut and remove strapping holding components to pallet.

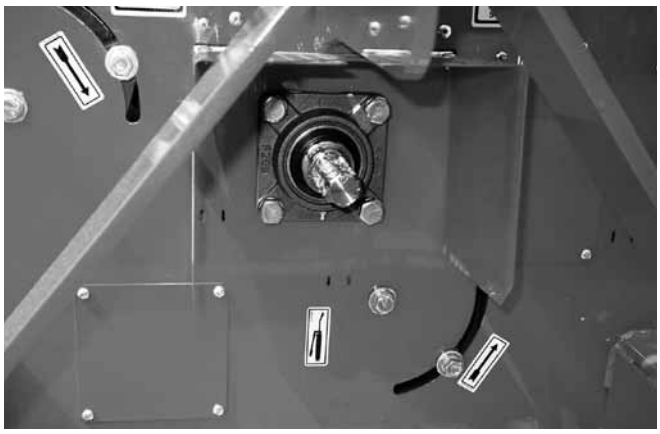
Strapping

Strapping Removed

Fig. 2 LOOSENING

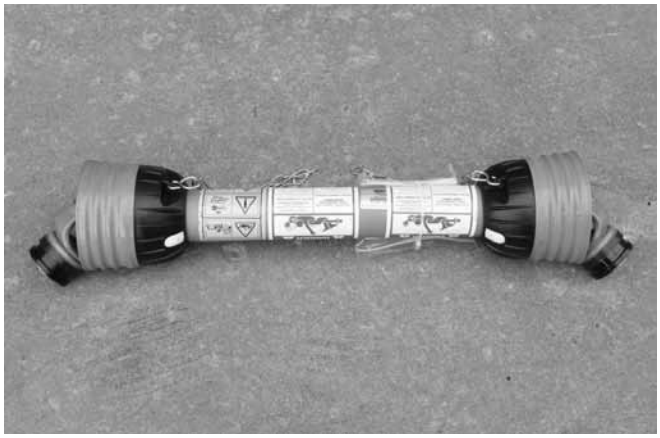
5. Clean the splines on the input shaft.

6. Apply a light coating of grease to the splines.



Attaching

7. Clean the splines on the PTO shaft.



Removing

Fig. 3 LIFTING

8. Retract the lock pin with the sliding collar and slide the yoke over the input shaft.

9. Attach the anchor chain to an adjacent frame member to prevent the guard from turning.

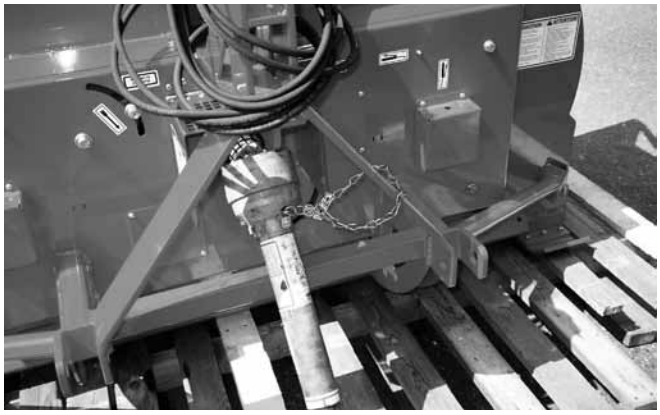


Fig. 4 PTO SHAFT

10. Back the tractor up to the machine and align the lift arms with the mounting brackets.

Fig. 5 ALIGNING

11. Attach PTO shaft to tractor:

    a. Align yoke.

    b. Slide collar on yoke back to retract lock pin.

Yoke

    c. Slide yoke onto shaft until lock pin seats in its groove.

    d. Pull on yoke to be sure lock pin is positively engaged.

Anchor Chain

IMPORTANT

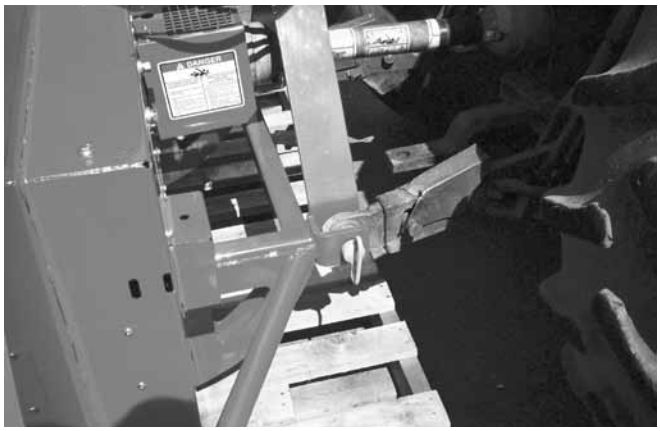
Refer to Section 5.5 "Driveline Dimension" and check that the driveline is at the correct length.

Attached

Fig. 6 PTO SHAFT ATTACHED

12. Install lower arm mounting pins and retainers.

Left



Right

Fig. 7 LOWER ARM MOUNTING PINS

13. Attach the top link pin and retainer.

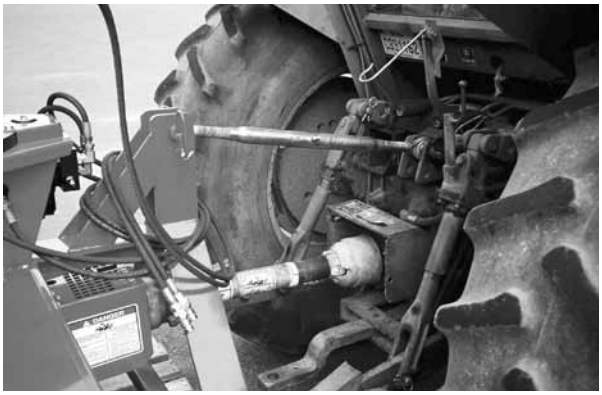


Fig. 8 TOP LINK

14. Connect the hydraulic system:

    a. Use a clean cloth or paper towel to clean the dirt and build-up from around the couplers and the male tips.

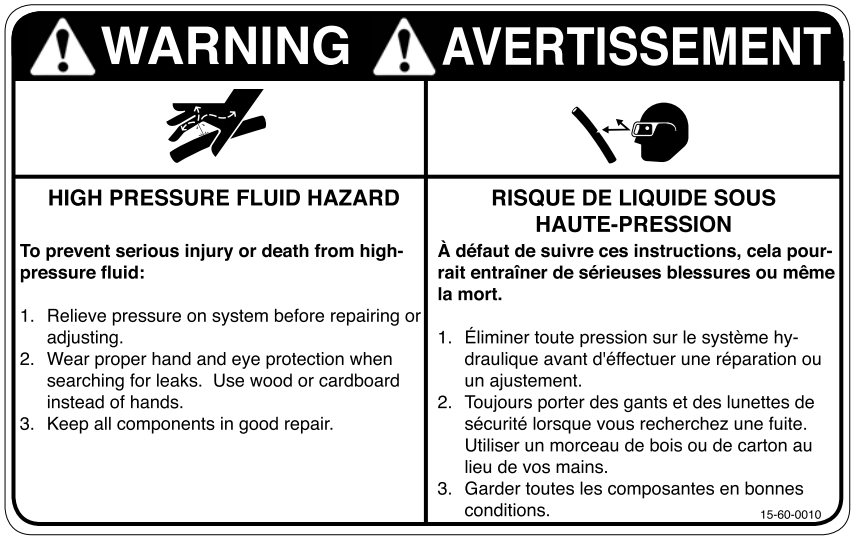
    b. Insert the male tips into the couplers. Make sure they are locked in place.

    c. Route the hoses along the hitch frame and secure in place with clips, tape or plastic ties. Be sure they do not drop to the ground or get pinched when turning.

Circuit 1

Circuit 2

Fig. 9 HYDRAULIC HOSES



15. Raise the frame off the pallet.

Raised

16. Drive forward to clear the pallet.

Forward

Fig. 10 LIFTED

17. Mount the optional scraper box:

    a. Raise the frame and place blocks under each side.

    b. Lay out small skid plates on each side.

    c. Attach skid plate.

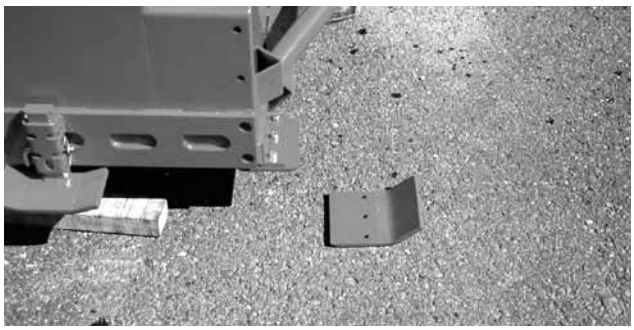
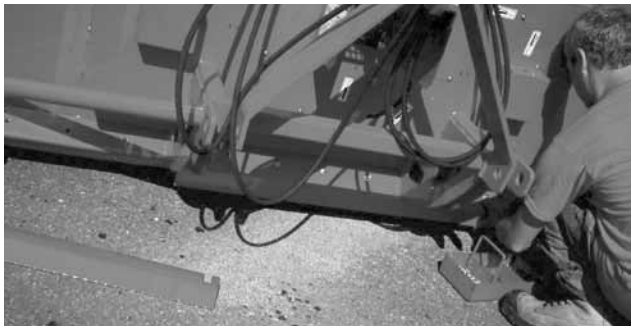


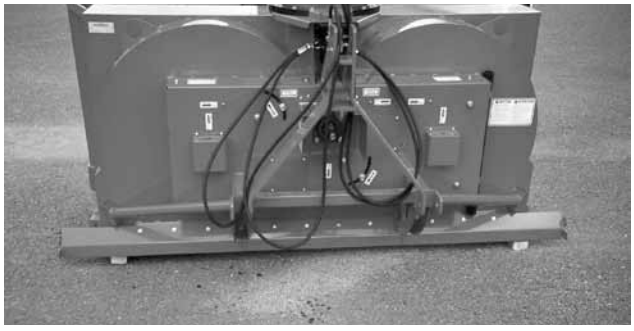
Fig. 11 SKID PLATE

18. Attach side and bottom skirts:

    a. Lay out and install the front skirt.



Lay-Out



Installed

Fig. 12 FRONT SKIRT

b. Lay out side skirts.

Left Side Skirt

c. Lay out spacer brackets next to side skirt.

Spacers

d. Slide spacer between side skirt and frame.

Spacer Positioned

e. Install fasteners and tighten to their specified torque.

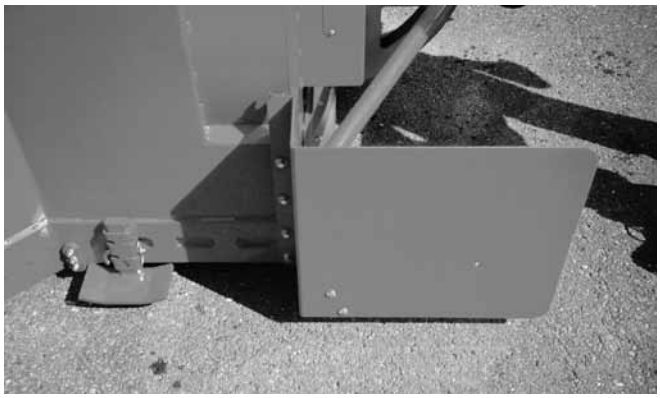
Installed

f. Repeat on the other side.

Fig. 13 SIDE SKIRTS

g. Secure the front skirt to the side skirt. Tighten fasteners to their specified torque.

Left



Right

Fig. 14 CONNECTING SKIRTS

h. Lay out side struts.

Side Strut

i. Mount side strut and cross brace.

j. Mount side strut to center frame.

Strut / Brace

k. Tighten all fasteners to their specified torque.

Assembled

Fig. 15 SIDE STRUTS / CROSS BRACE

5 OPERATION

OPERATING SAFETY

- Please remember it is important that you read and heed the safety signs on the Snow Blower. 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 riders on the machine or tractor at any time. There is no safe place for any riders.
- 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 openings when the engine is running. Clear the work area of objects which might be picked up and snagged or entangled in the machine.
- Clear the work area of objects which might be picked up and snagged or entangled in the machine.
- Do not reach into blower 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 snow stream toward people, animals or buildings to prevent injury or damage.
- Do not place hands, feet or other body parts into snow stream.

5.1 TO THE NEW OPERATOR OR OWNER

AgriMetal 3 Point Hitch Snow Blowers are designed to quickly and efficiently, pick up and blow away snow. The snow moves into the screw impeller where it is picked up and thrown out through the discharge chute.

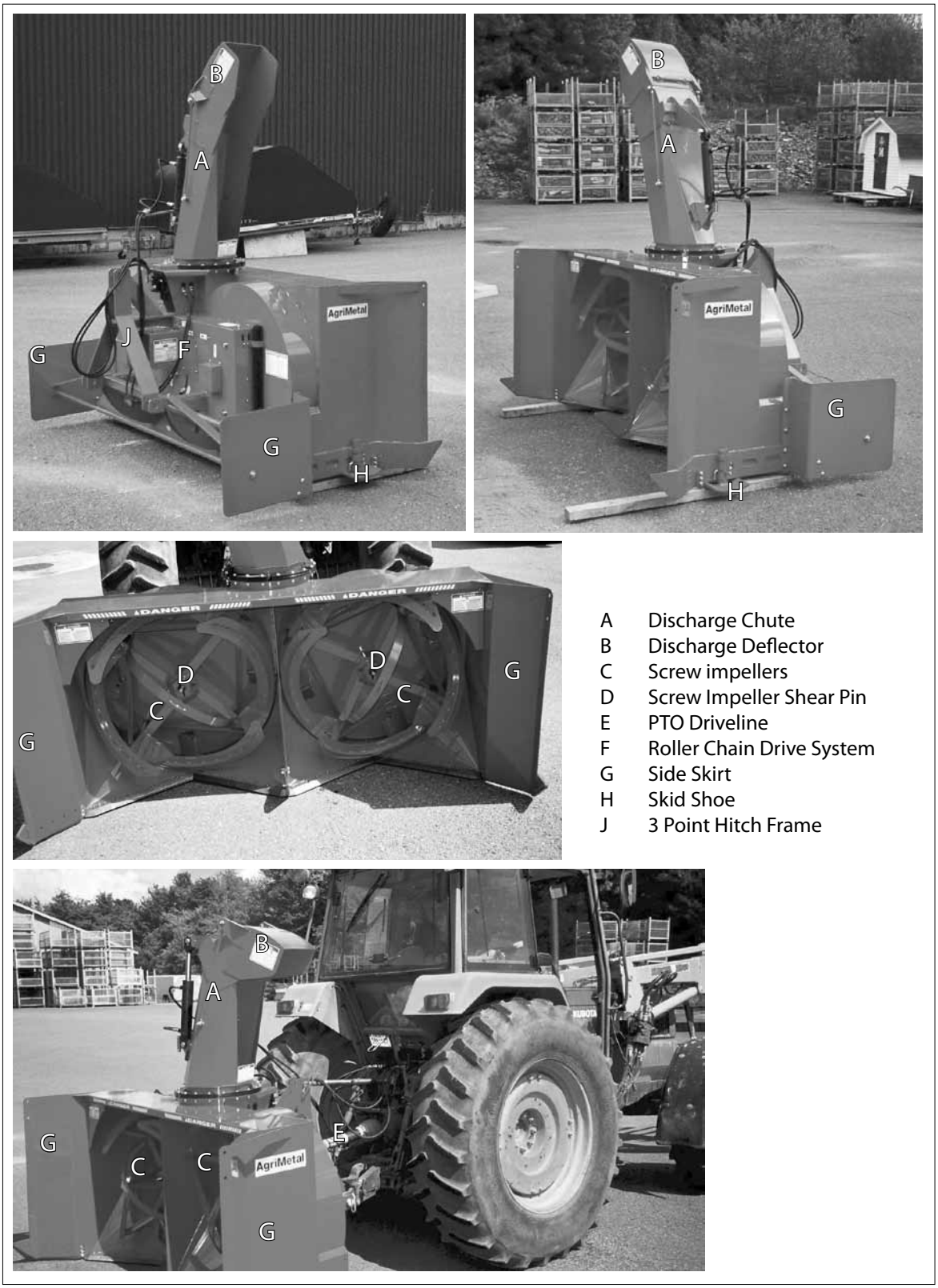
In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of equipment. It is the responsibility of the owner or operator 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 3 Point Hitch Snow Blower will provide many years of trouble-free service.

5.2 MACHINE COMPONENTS

The AgriMetal 3 Point Hitch Snow Blower is a large twin screw impeller machine designed to pick up snow and expel it through the adjustable chute on the top. The tractor provides PTO power to drive the screw impellers through roller chain drives on the front of the frame. Shear pins on the screw impeller hubs protect the drive train components from damage if any obstruction is encountered. The tractor provides hydraulic power to turn the chute and adjust the deflector.



A Discharge Chute
B Discharge Deflector
C Screw impellers
D Screw Impeller Shear Pin
E PTO Driveline
F Roller Chain Drive System
G Side Skirt
H Skid Shoe
J 3 Point Hitch Frame

Fig. 16 PRINCIPLE COMPONENTS

5.3 BREAK-IN

Although there are no operational restrictions on the Snow Blower 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. Torque all fasteners and hardware.

   2. Check condition of screw impeller bearings.

   3. Check the hydraulic components to be sure all are in good condition.

   4. Check for and remove all entangled material.

B. After operating for 10 hours:

   1. Repeat steps 1 through 4 listed above. (Section A).

   2. 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 3 Point Hitch Snow Blower 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 Snow Blower and each time thereafter, the following areas should be checked off:

1. Lubricate the machine per the schedule outline in the Maintenance Section.

2. Check that all bearings turn freely. Replace any that are rough or seized.

3. Make sure that all guards and shields are in place, secured and functioning as designed.

4. Check for and remove all entangled material.

5. Check the condition of the hydraulic components. Replace any that are damaged or broken.

5.5 DRIVELINE DIMENSION

A PTO driveline is supplied with the machine. To accompany the variety of 3 point hitch geometry available today, the driveline can be too long for most machines or too short for others. It is very important that the driveline be free to telescope but not to 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.

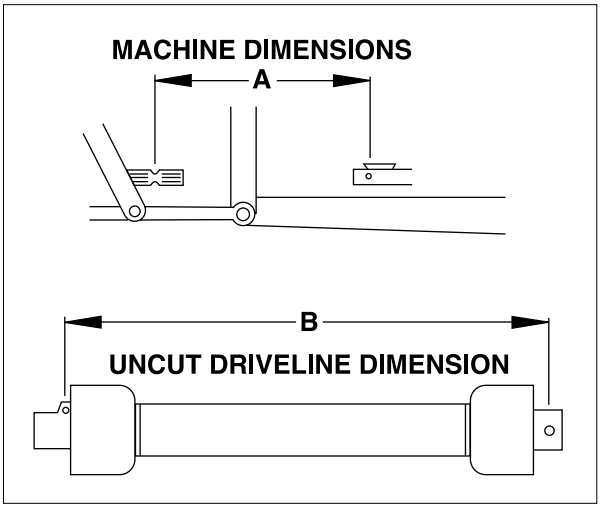


Fig. 17 DRIVELINE DIMENSIONS

1. To determine the proper length of the driveline, follow this procedure:

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

   b. Attach the Snow 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 grooves on the tractor PTO shaft and the machine input shaft.

   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.

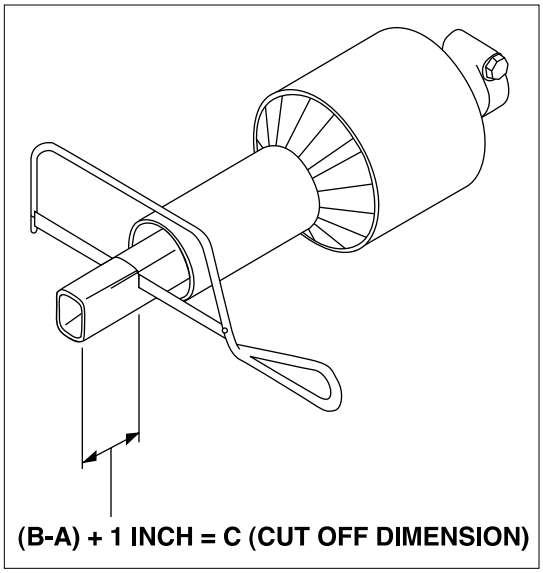


Fig. 18 CUT OFF DIMENSION

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.

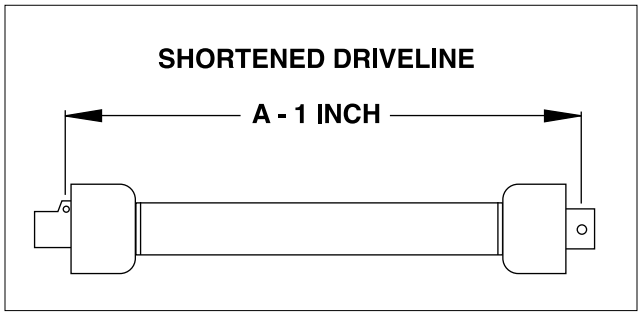


Fig. 19 SHORTENING

   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.

5.6 ATTACHING/UNHOOKING

The Snow Blower should always be located on a level, dry area that is free of debris and other foreign objects. When attaching the machine to a tractor, follow this procedure:

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

2. Make sure there is enough room and clearance to safely back up to the machine.

3. Attach the PTO driveline to the machine if it was removed for storage.

4. Place the tractor arms in their sway position.

5. Back up slowly and align the lower link arms to the mounting brackets on the machine.

6. Be sure the PTO shaft dimension is at the correct length for the tractor being used (refer to Section 5.5).

   Refer to the tractor manual for adjustment procedures.

7. Stop tractor, set park brake, remove ignition key and wait for all moving parts to stop before dismounting.

8. Install the PTO driveline:

   NOTE

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

   a. Depress the lock pin on the yoke, align the splines and slide the yoke on the tractor.

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

   NOTE

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

Fig. 20 ALIGNING

Fig. 21 PTO SHAFT

9. Mounting:

a. Align the lower link with the left mounting bracket.

IMPORTANT

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

Aligned

Pinned

Fig. 22 LOWER ARMS

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.

Fig. 23 TOP LINK

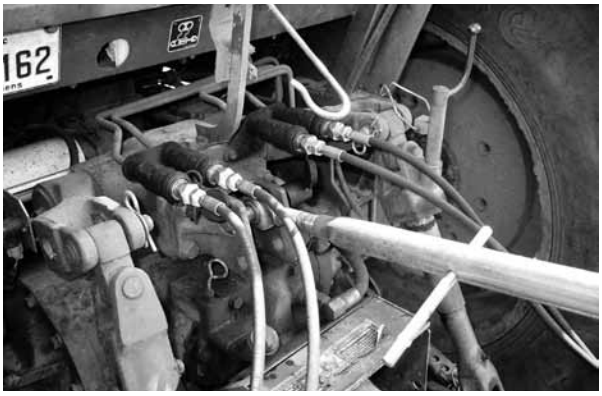
10. Connect the hydraulic system:

    a. Use a clean cloth or paper towel to clean the dirt and build-up from around the couplers and the male tips.

    b. Connect the hoses to the tractor couplers. Be sure the couplers are securely seated.

    c. Route and secure hoses along the hitch with clips, tape or plastic ties to prevent binding and pinching.

First Circuit



Second Circuit

Fig. 24 HYDRAULICS

⚠ WARNING ⚠ AVERTISSEMENT

HIGH PRESSURE FLUID HAZARD	RISQUE DE LIQUIDE SOUS HAUTE-PRESSION
To prevent serious injury or death from high-pressure fluid:	**À défaut de suivre ces instructions, cela pourrait entraîner de sérieuses blessures ou même la mort.**
1. Relieve pressure on system before repairing or adjusting. 2. Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands. 3. Keep all components in good repair.	1. Éliminer toute pression sur le système hydraulique avant d'effectuer une réparation ou un ajustement. 2. Toujours porter des gants et des lunettes de sécurité lorsque vous recherchez une fuite. Utiliser un morceau de bois ou de carton au lieu de vos mains. 3. Garder toutes les composantes en bonnes conditions.

15-60-0010

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

12. 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 frame should always be slightly tilted toward the tractor.

13. 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 location.

Fig. 25 LEVELLING ADJUSTMENTS

5.7 FIELD OPERATION

OPERATING SAFETY

- Please remember it is important that you read and heed the safety signs on the Snow Blower. 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 riders on the machine or tractor at any time. There is no safe place for any riders.
- 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 openings when the engine is running. Clear the work area of objects which might be picked up and snagged or entangled in the machine.
- Clear the work area of objects which might be picked up and snagged or entangled in the machine.
- Do not reach into blower 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 snow stream toward people, animals or buildings to prevent injury or damage.
- Do not place hands, feet or other body parts into snow stream.

Although the Snow Blower is easy to use, each operator should review this section to familiarize himself with the detailed safety and operating procedures. When using the machine, follow this procedure:

1. Clear the area of bystanders, especially small children.
2. Review and follow the Pre-Operation Checklist (see Section 5.4).
3. Attach the machine to the tractor (see Section 5.6). Be sure the frame is level.
4. Transport to the working area (refer to Section 5.8).

5. Starting:

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

   b. Place all controls in neutral or turn off.

   c. Start the tractor engine.

   d. Set the engine RPM at low idle.

   e. Engage the PTO.

   f. Slowly increase the engine speed and bring to the rated RPM.

   g. Proceed with the work.

6. Stopping:

   a. Decrease RPM to low idle.

   b. Disengage the PTO clutch.

   c. Stop engine and remove ignition key.

7. Emergency Stopping:
   If an emergency occurs and the blower must be shut down, disengage PTO clutch or turn engine off. Correct condition before resuming work.

Starting

Stopping

Fig. 26 STARTING / STOPPING

8. Travel Speed:
   Set the forward travel speed appropriate for the job being done. Move faster if the tractor engine speed is remaining at rated speed. Slow the forward travel speed if the engine is being pulled down by the load. If the engine speed drops very much, the machine will plug.

Fig. 27 WORKING

9. Chute Direction:
The chute can be turned through 270° and direct snow away from the working area. Use the hydraulic lever in the cab to rotate the chute to the desired position.

Right

Left

Working

Fig. 28 CHUTE POSITION

10. Discharge Guide:
    The machine is designed with a hydraulically controlled discharge guide that can have its angle adjusted to assist in directing the stream of snow in the appropriate direction. Use the hydraulic control to adjust the angle of the guide to direct the snow to the desired location.

Close

Far

Blowing Snow

Fig. 29 DISCHARGE GUIDE POSITION

11. Unplugging:
Although the machine is designed to handle the heaviest load, it can occasionally plug. When it does, follow this procedure when unplugging:

a. Stop machine, raise frame and drop it on the ground. In most cases the plug will drop out of the screw impeller and discharge opening.

b. Place all controls in neutral, stop engine, set park brake and wait for all moving parts to stop. Remove unplugging tube and unplug the throat of the discharge chute. Replace unplugging tube.

Frame


Unplugging

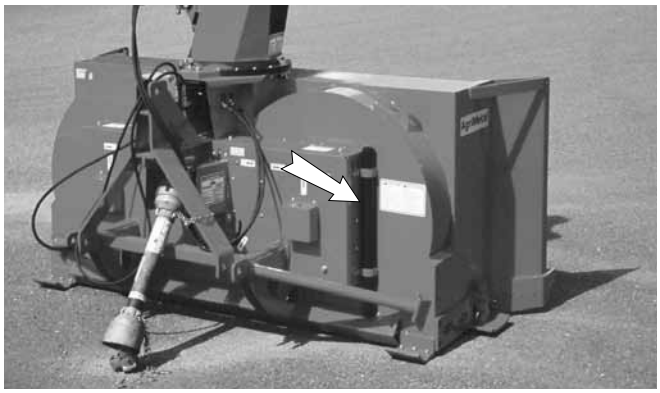
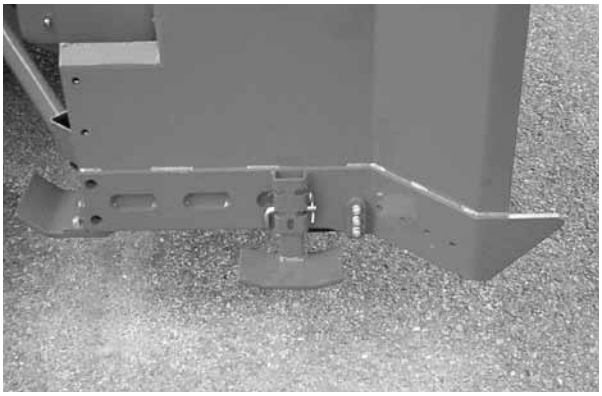

Tube Storage

Fig. 30 UNPLUGGING

12. Skid Shoes:
    The frame is designed with adjustable skid shoes on each end of the frame. Move the skid shoes down to raise the frame above the surface and up to lower the frame down closer to the surface.

    Use the skid shoes in conjunction with the setting of the top link to angle the frame slightly back when operating.



High

Low

Fig. 31 SKID SHOES

13. Shear Bolts:
    To protect the drive train components from overloading or failure, each screw impeller hub is designed with a shear pin. Always use genuine Agrimetal replacement parts when replacing the shear pin(s). Only use a Grade 5 bolt as a shear pin.

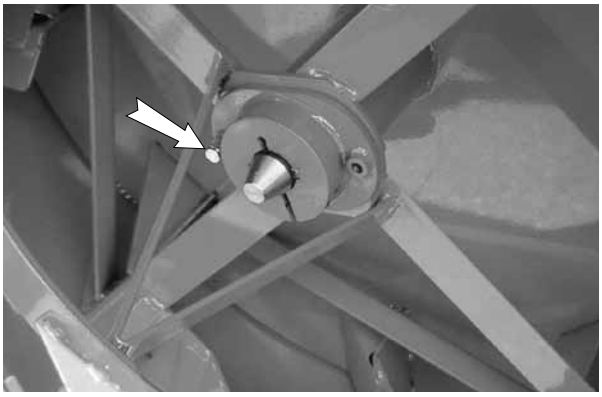


Fig. 32 SHEAR PINS

14. Frame Angle:
    The best results are obtained when the frame is level when placed on the ground. Set the angle with the top link when hooking up to the tractor. This will balance the tendency for the taper angle on the bottom edge of the intake to pull/force the frame down during operation. Adjust the length of the top link as required to level the frame.

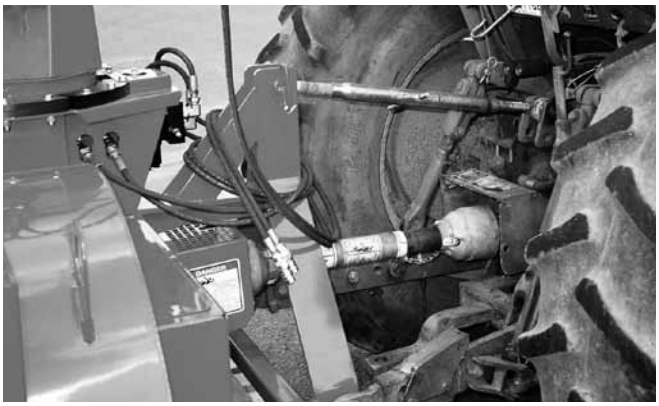


Fig. 33 FRAME ANGLE

15. The machine is designed with a replaceable tapered cutting blade on the leading edge of the intake. It cuts the snow and helps guide it into the screw impellers. The taper tends to pull the front part of the frame down and should be countered by tilting the frame back a small amount. Keep the cutting edge in good condition. Inspect it if an obstruction is hit. Straighten or replace as required.

Fig. 34 CUTTING EDGE

16. Application Hints:

a. Always direct the stream of snow away from people, animals or property to avoid injury or damage.

b. Both screw impellers are designed to aggressively pull themselves into a pile of snow. If any people, animals or objects are in front of the machine, they will be pulled in as well and injured or damaged. Stop the snow blower immediately if a person or animal gets in front of the machine.

Fig. 35 WORKING

c. The machine will pull itself into the snow by the action of the screw impellers and can overload itself if not controlled. Overloading can lead to to breaking of the shear pins/ bolts. Slow the forward speed to reduce the load on the drive train. Reducing drive train load will eliminate shear pin/bolt failures, reduce down time and eliminate frustration.

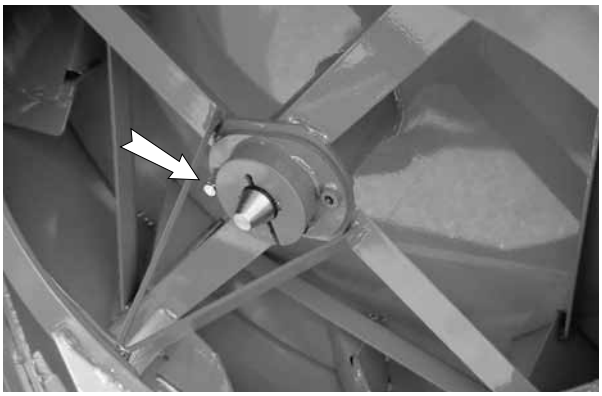
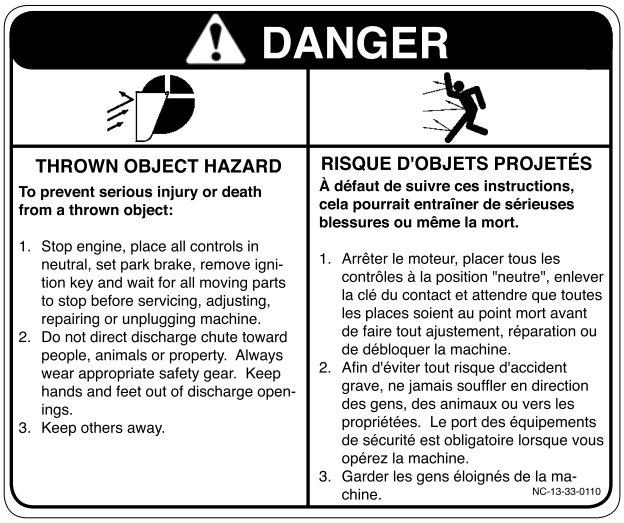


Fig. 36 SHEAR PINS



TRANSPORT SAFETY

- Comply with state and local laws governing highway safety and movement of machinery on public roads.
- The use of flashing amber lights is acceptable in most localities. However, some localities prohibit their use. Local laws should be checked for all highway lighting and marking requirements.
- At all times when driving the tractor and equipment on the road or highway under 20 mph (32 kph), use flashing amber warning lights and a slow moving vehicle (SMV) identification emblem. Do not exceed 20 mph (32 kph). Reduce speed on rough roads and surfaces.
- Plan your route to avoid heavy traffic.
- Use a mounting pin with provisions for a retainer. Install the retainer.
- 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 either tractor or machine.

When transporting the machine, review and follow these instructions:

1. Clear the area of bystanders, especially small children.
2. Insure that the machine is securely attached to the tractor with mechanical retainers through the mounting pins.
3. Do not allow riders on blower.
4. Never exceed a safe travel speed. Never travel faster than 32 kph (20 mph) The ratio of the tractor weight to the machine weight plays an important role in defining acceptable travel speed. The following table summarizes the weight ratio to travel speed.
5. Always shift to a lower gear when going down hill to use the engine as a restraining force.
6. Apply the brakes carefully to prevent losing control.
7. Never disengage tractor transmission and coast down hills. Always keep tractor in gear.

Table 1 Travel Speed vs. Weight Ratio

Road Speed	Weight of fully equipped or loaded implement(s) relative to weight of tractor
Up to 32 km/h (20 mph)	1 to 1, or less
Up to 16 km/h (10 mph)	2 to 1, or less
Do not push	More than 2 to 1

Fig. 37 TRANSPORTING

5.9 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.

At the end of the season, the machine should be thoroughly inspected and prepared for storage. Repair or replace any worn or damaged components to prevent any unnecessary down time at the beginning of the next season. Follow this procedure:

1. Thoroughly wash the machine with a pressure washer or water hose to remove all dirt, mud, debris or residue.
2. Make sure all the water drains out of the screw impeller compartments.
3. Lubricate all grease points to remove any water residue from washing.
4. Remove any material that has become entangled around any moving part.
5. Run the machine for a couple of minutes at low RPM to dry the inside of the screw impellers.
6. Touch up all paint nicks and scratches to prevent rusting.
7. Move the machine to its storage area.
8. Store in a dry, level spot.
9. Store in an enclosed building if possible. If space is not available, cover with a waterproof tarpaulin and tie down securely.
10. Unhook from the tractor (see Section 5.6).
11. Place planks under the frame or rollers for added support if required.
12. Store in an area away from human activity.
13. Do not allow children to play around the stored unit.

Fig. 38 STORED

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 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.

6.1.2 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 fitting if necessary.

6.1.3 SERVICING INTERVALS

The period recommended is based on normal operating conditions. Severe or unusual conditions may require more frequent lubrication or oil changes.

8 - 10 Hours or Daily

1. Grease PTO Driveline (3 locations).

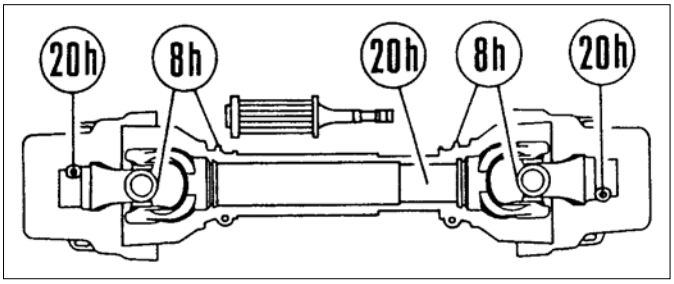


Fig. 39 PTO DRIVELINE

20 Hours

1. Grease PTO Driveline (3 locations).
2. Grease the telescoping section of the PTO shaft.

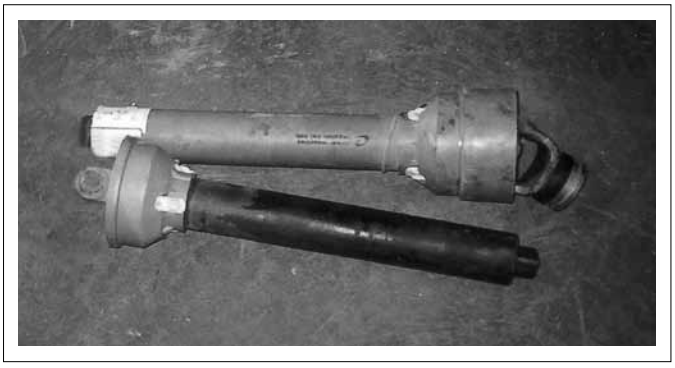
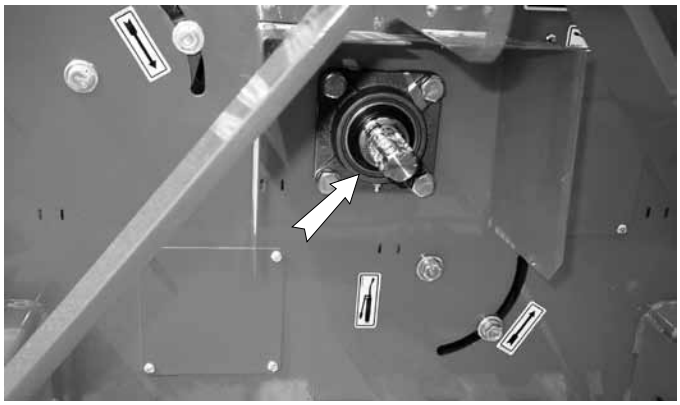


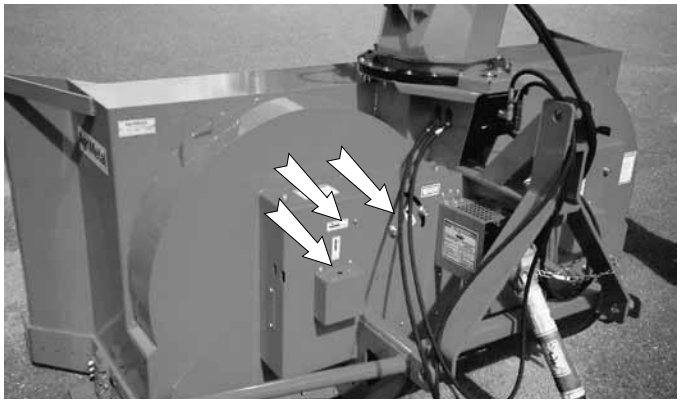
Fig. 40 PTO DRIVELINE LUBRICATION

50 Hours

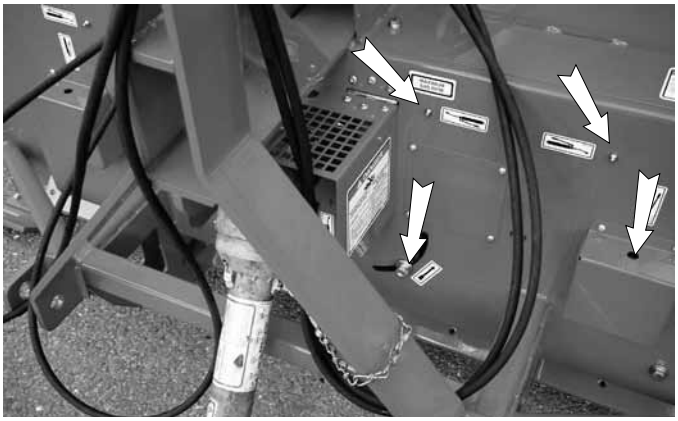
1. Grease bearings.



Input Shaft



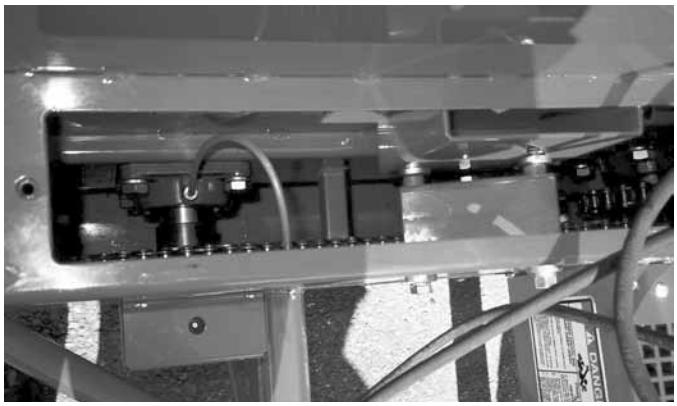
Right



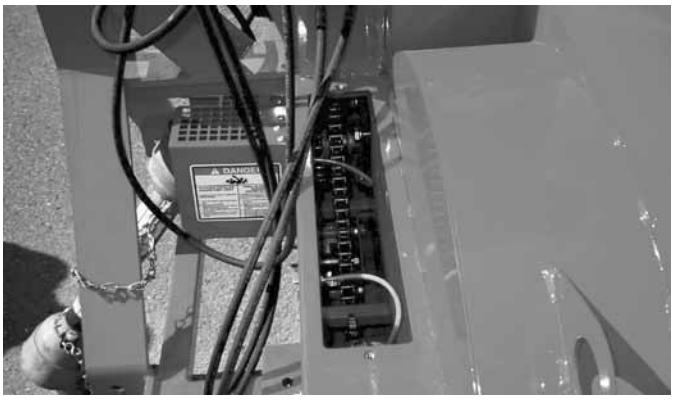
Left

Fig. 41 BEARINGS

2. Check roller chain tension.



Right



Left

Fig. 42 ROLLER CHAIN

WARNING

Machine is shown with guard opened for illustrative purposes only. Do not operate machine with guard opened.

3. Grease roller chain.

Annually

1. Clean machine.

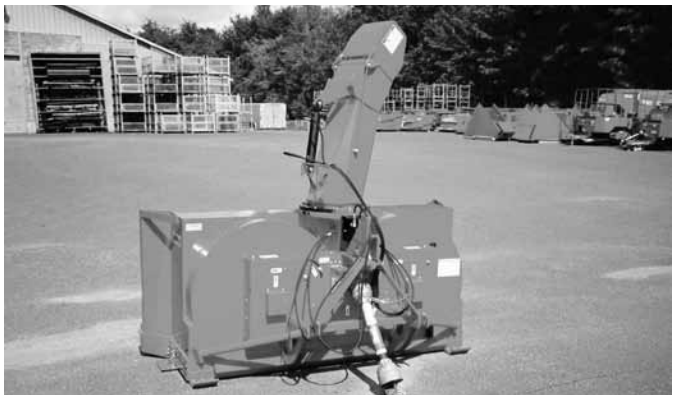
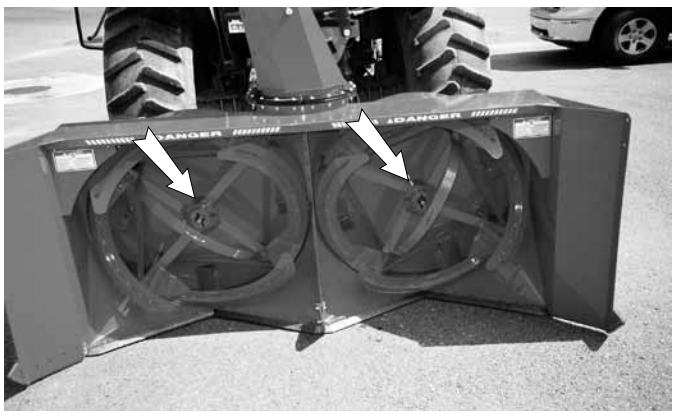


Fig. 43 MACHINE

2. Grease screw impellers.



SCREW IMPELLERS

6.1.4 SERVICE RECORD

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

ACTION CODE: CL CLEAN CK CHECK
G GREASE

HOURS / SERVICED BY / MAINTENANCE																							
8 Hours or Daily																							
G PTO Driveline																							
20 Hours																							
G PTO Driveline																							
G Telescoping Section PTO Shaft																							
40 Hours or Weekly																							
G PTO Driveline																							
G Telescoping Section PTO Shaft																							
50 Hours																							
G Bearings																							
CK Roller Chain Tension																							
G Input Shaft Bearings																							
G Roller Chain																							
Annually																							
CL Machine																							
G Screw Impellers																							

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 SCREW IMPELLER ROLLER CHAIN TENSION AND ALIGNMENT

A set of Roller Chains transmits rotational power to the screw impellers. They must be kept properly tensioned and the sprockets aligned to obtain the expected performance and life.

To check the tension and alignment, follow this procedure:

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

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

3. Remove the cover on top of the chain case gear box.

4. Reach through the the lid to contact and move the roller chain. It should just move slightly to be at the correct tension.

5. To set chain tension:

    a. Release pivot bolt.

    b. Use a box end wrench to move the bolt head on the idler sprocket.

    c. Check to be sure the chain can move slightly.

    d. Tighten idler sprocket bolt.

    e. Tighten pivot bolt.

6. To replace Roller Chain(s):

    a. Move tension sprocket to its loosest position.

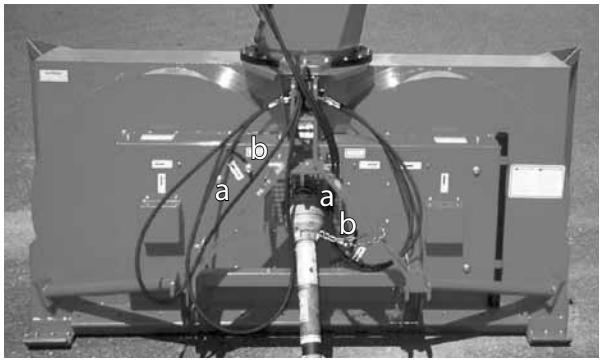
    b. Remove roller chain from sprockets.

    c. Remove connector clip from roller chain.

    d. Split and remove chain.

    e. Install new chain and new connector clip.

    f. Move tensioning sprocket back into position to set chain tension.



Left


Adjusting Sprockets

Fig. 44 ROLLER CHAINS (Typical)

WARNING

Machine is shown with guard opened for illustrative purposes only. Do not operate machine with guard opened.

7. Lay a straight edge across the sprocket faces to check the alignment. Use the sprocket hub to adjust alignment if sprocket faces vary more than 7 mm (1/32 inch).

    a. Loosen hub mounting bolts.

    b. Move hub to align sprockets.

    c. Tighten mounting bolts to their specified torque.

8. Close and secure guard.

6.2.2 DRIVELINE MAINTENANCE

The PTO driveline is designed to telescope to allow for dimensional changes as the machine goes through its operational range. A tubular guard encloses the driving components and is designed to turn relative to the driving components. The driveline 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. To maintain the driveline, follow this procedure:

1. Remove the driveline from the machine.
2. Pull driveline apart.
3. Use a screwdriver to turn lock studs on each end. There are 2 studs per guard.
4. Pull the shaft out of the plastic tubular guard.
5. Use a solvent to clean the male and female portions of the telescoping ends.
6. Apply a light coat of grease to each end.
7. Use a solvent to wash the grooves on each end where the studs are located. Clean each end also.
8. Apply a light coat of grease to each groove.
9. Insert the shaft into its respective guard and align the studs with the holes.
10. Insert the studs through the holes and seat in the groove.
11. Turn each stud to secure guard to shaft.
12. Check that each guard turns freely on the shaft.
13. Assemble the driveline.
14. Check that the driveline telescopes easily.
15. Replace any components that are damaged or worn.
16. Install the driveline on the machine.

Fig. 45 PTO DRIVELINE (Typical)

7 TROUBLE SHOOTING

The AgriMetal 3 Point Hitch Snow Blower is used to blow snow. It is a simple system that requires minimal maintenance.

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 dealer or the factory. Before you call, please have this Operator's Manual and the serial number of your machine at hand.

PROBLEM	CAUSE	SOLUTION
Screw impeller doesn't turn.	Shear bolt(s) broken.	Replace shear bolt(s).
	Drive chain(s) broken.	Replace drive chain(s).
	Failed PTO clutch.	Have tractor checked by your local dealer.
Machine vibrates.	Out-of-balance.	Have your dealer check screw impellers. Repair or replace as required.
	Driveline out-of-phase.	Detach driveline from tractor. Take apart. Rotate ends 90° and reassemble. Repeat procedure until vibration gone.
Chute doesn't move.	Hoses not connected.	Connect hydraulic hoses.

8 SPECIFICATIONS

8.1 MECHANICAL

Description	MTC 3474	MTC3480	MTC4080	MTC4086	MTC4092
Tractor category	COMPACT	COMPACT	FARM	FARM	FARM
Recommanded horse power	40 à 65 HP	40 à 65 HP	50 à 120 HP	50 à 120 HP	50 à 120 HP
Drive shaft height	17 1/2" (44 cm)	17 1/2" (44 cm)	24 1/2" (62 cm)	24 1/2" (62 cm)	24 1/2" (62 cm)
Working width	74" (188 cm)	80" (203 cm)	80" (203 cm)	86" (218 cm)	92" (234 cm)
Working height	34" (86 cm)	34" (86 cm)	40" (102 cm)	40" (102 cm)	40" (102 cm)
Height width chute	84" (213 cm)	84" (213 cm)	90" (229 cm)	90" (229 cm)	90" (229 cm)
2-Screw impeller diameter	33" (84 cm)	33" (84 cm)	39" (98 cm)	39" (98 cm)	39" (98 cm)
Scoop number	16	16	16	16	16
Scoop dimension	6" X 6" (15 x15 cm)	6" X 6" (15 x15 cm)	6" X 6" (15 x15 cm)	6" X 6" (15 x15 cm)	6" X 6" (15 x15 cm)
1 Deflector basic chute	Optional	Optional	Optional	Optional	Optional
2 Deflectors commercial chute	Optional	Optional	Optional	Optional	Optional
Hydraulic rotation chute	Standard	Standard	Standard	Standard	Standard
Manual telescoping system	Optional	Optional	Optional	Optional	Optional
Hydraulic deflector system	Optional	Optional	Optional	Optional	Optional
Chute door	Optional	Optional	Optional	Optional	Optional
Chute extension 12"	Optional	Optional	Optional	Optional	Optional
Chute extension 14"	Optional	Optional	Optional	Optional	Optional
Box scraper blades kit	Optional	Optional	Optional	Optional	Optional
Knife CHT400 steel	Standard	Standard	Standard	Standard	Standard
Side adjustable skate	Optional	Optional	Optional	Optional	Optional
Lateral cutter blades	Optional	Optional	Optional	Optional	Optional
PTO drive line category	T-50	T-50	T-60	T-60	T-60
Recommended RPM	540	540	540	540	540
Width	75" (191 cm)	81" (206 cm)	81" (206 cm)	87" (221 cm)	93" (236 cm)
Depth	49 1/2" (126 cm)	52 1/2" (133 cm)	47" (119 cm)	51" (130 cm)	54" (137 cm)
Height	74" (188 cm)	74" (188 cm)	80" (203 cm)	80" (203 cm)	80" (203 cm)
Approximative weigth	1110 lbs (505 kg)	1140 lbs (518 kg)	1300 lbs (591 kg)	1410 lbs (641 kg)	1440 lbs (655 kg)

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

8.2 HYDRAULIC FITTING TORQUE

Tightening Flare Type Tube Fittings *

1. Check flare and flare seat for defects that might cause leakage.
2. Align tube with fitting before tightening.
3. Lubricate connection and hand tighten swivel nut until snug.
4. To prevent twisting the tube(s), use two wrenches. Place one wrench on the connector body and with the second tighten the swivel nut to the torque shown.

• The torque values shown are based on lubricated connections as in reassembly.

Tube Size OD	Nut Size Across Flats	Torque Value•		Recommended Turns To Tighten (After Finger Tightening)	
(in.)	(in.)	(N.m)	(lb-ft)	(Flats)	(Turn)
3/16	7/16	8	6	1	1/6
1/4	9/16	12	9	1	1/6
5/16	5/8	16	12	1	1/6
3/8	11/16	24	18	1	1/6
1/2	7/8	46	34	1	1/6
5/8	1	62	46	1	1/6
3/4	1-1/4	102	75	3/4	1/8
7/8	1-3/8	122	90	3/4	1/8

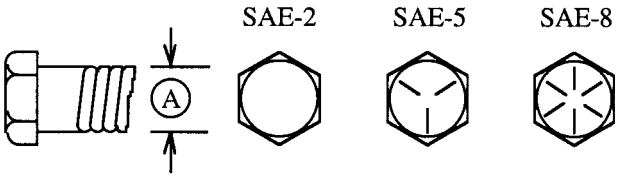
8.3 BOLT TORQUE

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.

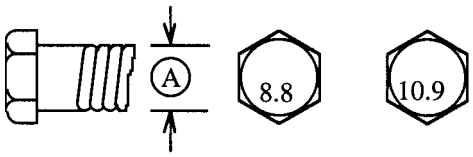
ENGLISH TORQUE SPECIFICATIONS

Bolt Diameter "A"	Bolt Torque * SAE 2 N.m	(lb-ft)	SAE 5 N.m	(lb-ft)	SAE 8 N.m	(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)	(lb-ft)	10.9 (N.m)	(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