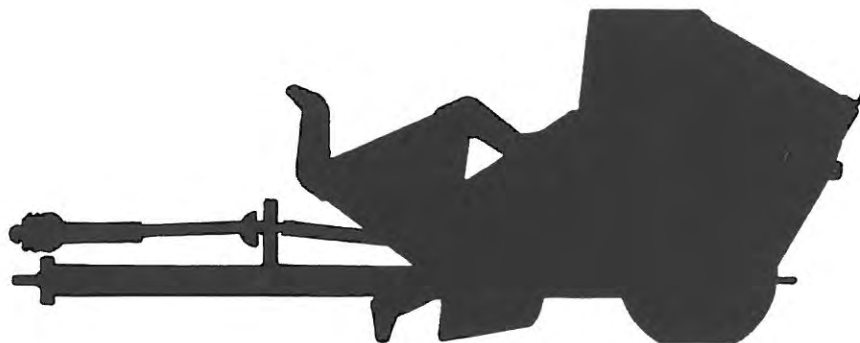


Degelman

**Super Picker
7800**



**OPERATOR'S
MANUAL**

142377

June 90

farm implements

**DEGELMAN
SUPER PICKER
MODEL 7800**

W A R R A N T Y

Degelman Industries Ltd. warrants its products to the original owner for a period of one (1) year from date of purchase. All matters related with the warranty of our products must be handled through the authorized selling dealer. Warranty does not cover normal wear of the machine components or damages caused by lack of maintenance or misuses, and is subject to the following provisions:

REPLACEMENT PARTS:

Will be warranted for a period of ninety (90) days.

WARRANTY ON MACHINES USED FOR CUSTOM WORK, RENTALS OR INDUSTRIAL USE:

Will be warranted as stated above, with the exception that it shall be for a period of ninety (90) days only.

TIRES:

Will be adjusted for warranty by the tire manufacturer.

LABOUR:

Any labour subject to warranty must be authorized by a Degelman representative before work is started. Warranty labour allowance and rates will be handled according to established service warranty policy.

GOVERNMENT LEGISLATION:

Warranty terms and conditions are subject to Provincial or State Legislation.

MODIFICATIONS:

Warranty will be void if any component is altered or modified, unless written authorization is granted by Degelman Industries Ltd.

WARRANTY on ATTACHED EQUIPMENT:

No responsibility will be assumed for whatever damages may occur to equipment attached to this Degelman product.

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SERIAL NUMBER LOCATION

Always give your dealer the serial number of your Degelman Super Picker Model 7800 when ordering parts or requesting service or other information.

The serial number plate is located where indicated. Please mark the number in the space provided for easy reference.



Model Type _____

Serial Number _____

1 INTRODUCTION

Congratulations on your choice of a Degelman Super Picker 7800 to complement your farming operation. It has been designed and manufactured to meet the needs of a discerning Agricultural market for the efficient picking of rocks.

Use this manual as your first source of information about this machine. If you follow the instructions given in this manual, your Super Picker will work well for many years.

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

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



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

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 Degelman Rock Picker 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 guidelines.

DANGER: An immediate and specific hazard which **WILL** result in severe personal injury or death if the proper precautions are not taken.

WARNING: A specific hazard or unsafe practice which **COULD** result in severe personal injury or death if proper precautions are not taken.

CAUTION: Unsafe practices which could result in personal injury if proper practices are not taken, or as a reminder of good safety practices.

SAFETY

YOU are responsible for the SAFE operation and maintenance of your Degelman Rock Picker. YOU must ensure that you and anyone else who is going to operate, maintain or work around the Rock Picker 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 will alert you to all good safety practices that should be adhered to while operating this equipment.

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.

- ✓ - Rock Picker owners must give operating instructions to operators or employees before allowing them to operate the Rock Picker, and at least annually thereafter per OSHA 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. All 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 or adjusting the Picker.



✓ 2. Install and properly secure all shields and guards before operating.

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

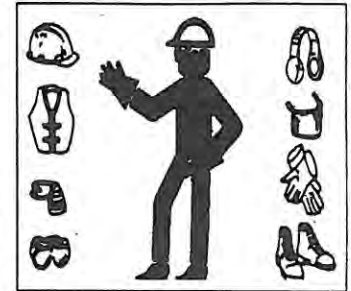


✓ 4. Have a fire extinguisher available for use should the need arise and know how to use it.



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. Clear the area of people, especially small children, and remove foreign objects from the machine before starting and operating.

✓ 7. Do not allow riders.

✓ 8. Lower grille and hopper box, stop tractor 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.

9. Review safety related items with all operators annually.

2.2 OPERATING SAFETY

1. Read and understand the Operator's Manual and all safety signs before using.
2. Lower grille and hopper box, stop tractor 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.
3. Keep hands, feet, hair and clothing away from all moving and/or rotating parts.
4. Do not allow riders on the Picker or tractor during operation or transporting.
5. Keep all shields and guards in place when operating.
6. Clear the area of all bystanders, especially children, before starting.
7. Do not operate machine or raise hopper box on steep side hills or slopes.
8. Use a long pole or bar to dislodge material from paddles or grille. Pressure in hydraulic system and paddle spring tension can cause paddles to kick back if they are jammed.
9. Be careful when working around or maintaining a high-pressure hydraulic system. Ensure all components are tight and in good repair before starting.
10. Clean all reflectors, lights and the SMV sign before transporting on a highway or public road. Be sure to check with local highway authorities and comply with their lighting requirements.
11. Stay well back from machine when operating to prevent being hit by flying rocks. Keep others away.
12. Turn to the left when maneuvering to keep the tractor away from the path of flying rocks.

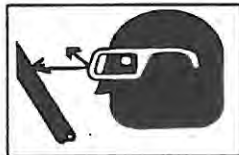
2.3 MAINTENANCE SAFETY

1. Review the Operator' Manual and all safety items before working with, maintaining or operating the Picker.
2. Lower grille and hopper box, stop the tractor 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.
3. Keep hands, feet, clothing and hair away from all moving and/or rotating parts.
4. Clear the area of bystanders, especially children, when carrying out any maintenance and repairs or making adjustments.
5. Place safety stands or large blocks under the frame before removing tires or working beneath the machine.
6. Be careful when working around or maintaining a high-pressure hydraulic system. Wear proper eye and hand protection when searching for a high-pressure hydraulic leak. Use a piece of wood or cardboard as a backstop when searching for a pin hole leak in a hose or a fitting.
7. Always relieve pressure before disconnecting or working on hydraulic system.
8. Use a long pole or bar to dislodge material from paddles or grille. Pressure in hydraulic system and paddle spring tension can cause paddles to kick back if they are jammed.

2.4 HYDRAULIC SAFETY

1. Always place all tractor hydraulic controls in neutral before dismounting.
2. Make sure that all components in the hydraulic system are kept in good condition and are clean.
3. Replace any worn, cut, abraded, flattened or crimped hoses and metal lines.
4. Do not attempt any makeshift repairs to the hydraulic lines, fittings or hoses by using tape, clamps or cement. The hydraulic system operates under extremely high pressure. Such repairs will fail suddenly and create a hazardous and unsafe condition.

5. Wear proper hand and eye protection when searching for a high-pressure hydraulic leak. Use a piece of wood or cardboard as a backstop instead of hands to isolate and identify a leak.



6. If injured by a concentrated high-pressure stream of hydraulic fluid, seek medical attention immediately. Serious infection or toxic reaction can develop from hydraulic fluid piercing the skin surface.
7. Before applying pressure to the system, make sure all components are tight and that lines, hoses and couplings are not damaged.

- Think SAFETY! Work SAFELY!

2.5 TRANSPORT SAFETY

1. Read and understand ALL the information in the Operator's Manual regarding procedures and SAFETY when operating the Picker in the field/yard or on the road.
2. Check with local authorities regarding machine transport on public roads. Obey all applicable laws and regulations.
3. Always travel at a safe speed. Use caution when making corners or meeting traffic.
4. Make sure the SMV (Slow Moving Vehicle) emblem and all the lights and reflectors that are required by the local highway and transport authorities are in place, are clean and can be seen clearly by all overtaking and oncoming traffic.
5. Keep to the right and yield the right-of-way to allow faster traffic to pass. Drive on the shoulder, if permitted by law.
6. Always use hazard warning flashers on tractor when transporting, unless prohibited by law.
7. Always use a pin with provisions for a mechanical retainer and a safety chain when attaching to a tractor or towing vehicle.
8. Locate the red transport pin in position and swing hitch pole fully inward before moving on a public road.

2.6 STORAGE SAFETY

1. Store unit in an area away from human activity.
2. Store Picker only with grille and hopper box lowered.
3. Do not permit children to play around the stored unit.

2.7 TIRE SAFETY

1. Failure to follow proper procedures when mounting a tire on a wheel or rim can produce a blow out which may result in serious injury or death.
2. Do not attempt to mount a tire unless you have the proper equipment and experience to do the job.
3. Have a qualified tire dealer or repair serviceman perform required tire maintenance.

2.8 SAFETY DECALS

1. Keep safety decals and signs clean and legible at all times.
2. Replace safety decals and signs that are missing or have become illegible.
3. Replaced parts that displayed a safety sign should also display the current sign.
4. Safety decals or signs are available from your Dealer Parts Department. Safety decals will be available free of charge upon request.

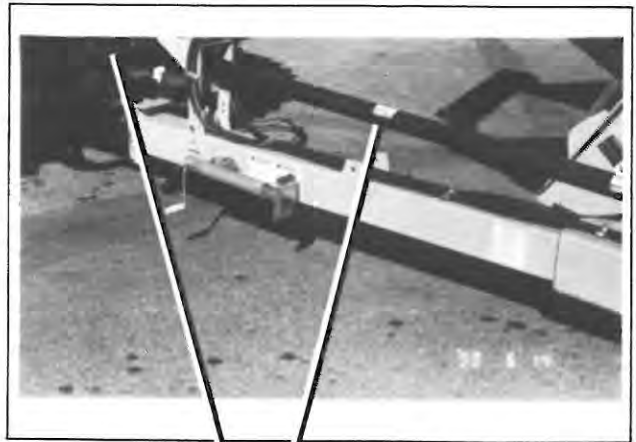
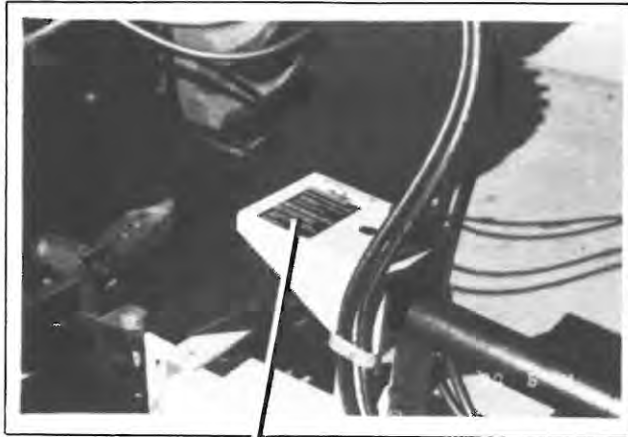
How to Install Safety Decals:

- Be sure that the installation area is clean and dry.
- Decide on the exact position before you remove the backing paper.
- Remove the smallest portion of the split backing paper.
- Align the decal 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 decal in place.
- Small air pockets can be pierced with a pin and smoothed out using the piece of decal backing paper.

3 SAFETY DECAL LOCATIONS

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

- Think SAFETY! Work SAFELY!



! **DANGER**

ROTATING DRIVELINE

Can cause serious injury or death

- Keep all guards and shields in place when operating.
- Operate only at 1000 RPM.

LIGNE DE COMMANDE ROTATIVE

Peut causer des blessures graves et meme mortelles.

- Tenir tous les gardes de securite en place pendant que la machine est en marche.
- Operer a 1000 RPM.

72212

! **DANGER**

**ROTATING DRIVELINE
CONTACT CAN CAUSE DEATH
KEEP AWAY!**

DO NOT OPERATE WITHOUT -

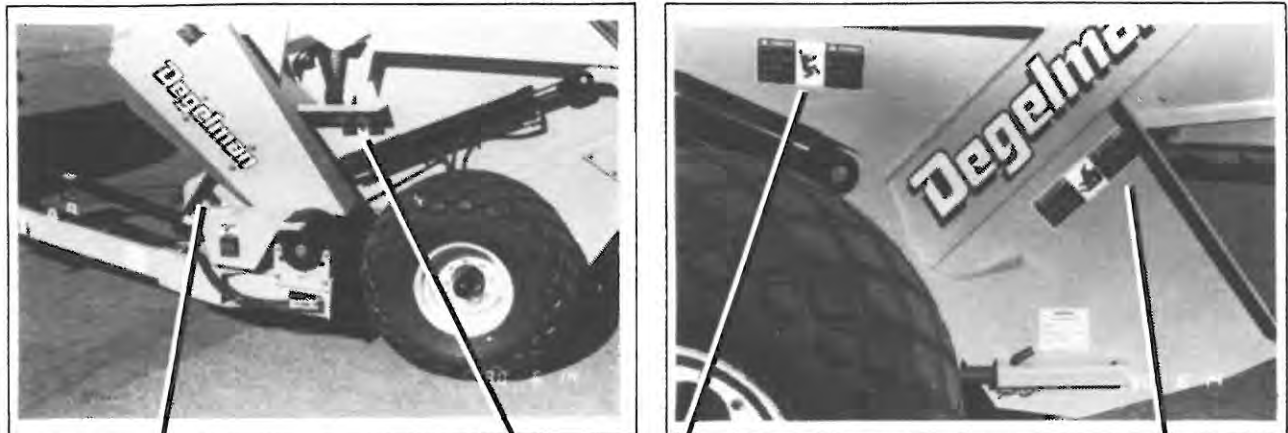
- All driveline, tractor and equipment shields in place.
- Driveline security attached at both ends.
- Driveline shields that turn freely on driveline.



72212

REMEMBER - If Safety Decals have been damaged, removed, become illegible or parts replaced without decals, new decals must be applied. New decals are available from your authorized dealer free of charge.

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

- Think SAFETY! Work SAFELY!

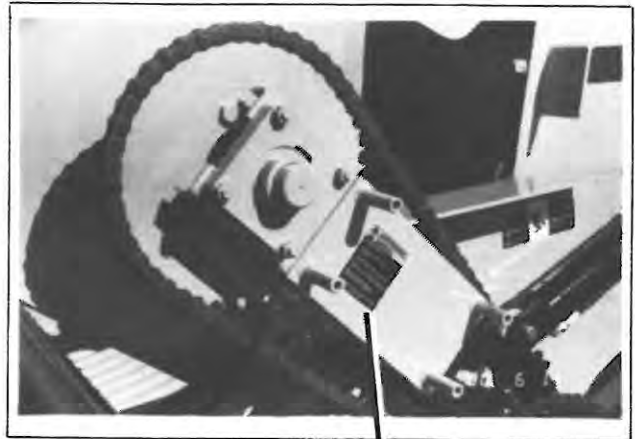
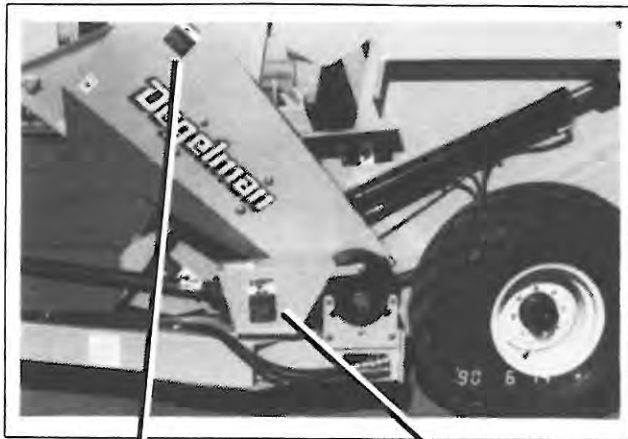


<p>! DANGER</p> <p>SE TENIR A L'ECART</p> <p>Peut causer des blessures graves et même mortelles.</p> <ul style="list-style-type: none"> - Se tenir à distance lorsque la machine est en marche - Tenir toute personne à distance 		<p>! DANGER</p> <p>THROWN ROCK HAZARD</p> <p>Can cause serious injury or death.</p> <ul style="list-style-type: none"> - Stay away from machine when operating - Keep others away <p>112361</p>
<p>! AVERTISSEMENT</p> <p>RISQUE DE BLOCAGE DES PALLETES</p> <p>Le déclenchement brusque du ressort peut causer de blessures graves et même mortelles.</p> <ul style="list-style-type: none"> - Utiliser une longue poutre ou barre rigide pour déloger tout objet coincé - Ne pas se servir de ses mains 		<p>! WARNING</p> <p>JAMMED PADDLE HAZARD</p> <p>Sudden release of spring pressure can cause serious injury or death.</p> <ul style="list-style-type: none"> - Use long pole or pry bar to dislodge - Do not use hands <p>11216-0</p>

REMEMBER - If Safety Decals have been damaged, removed, become illegible or parts replaced without decals, new decals must be applied. New decals are available from your authorized dealer free of charge.

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

- Think SAFETY! Work SAFELY!



AVERTISSEMENT

WARNING

ROTATING PART HAZARD

Can cause serious injury or death

- Keep all guards and shields in place
- Keep hands, feet and clothing away from moving parts

PIECES EN MOUVEMENT

Peut causer des blessures graves et meme mortelles

- Tenir les gardes et ecrans protecteurs bien en place
- Tenir les mains, les pieds et les vêtements à l'écart des pièces en mouvement

14235-4

AVERTISSEMENT

WARNING

ROTATING PART HAZARD

Can cause serious injury or death.

- Keep all guards and shields in place
- Keep hands, feet and clothing away from moving parts

PIECES EN MOUVEMENT

Peut causer des blessures graves et meme mortelles

- Tenir les gardes et ecrans protecteurs bien en place
- Tenir les mains, les pieds et les vêtements à l'écart des pièces en mouvement

14235-6

AVERTISSEMENT

WARNING

MISSING SHIELD

Can cause serious injury or death

- Install shield before operating

ECRAN PROTECTEUR MANQUANT

Peut causer des blessures graves et meme mortelles

- Installer l'écran protecteur avant la mise en marche



14235-5

REMEMBER - If Safety Decals have been damaged, removed, become illegible or parts replaced without decals, new decals must be applied. New decals are available from your authorized dealer free of charge.

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

- Think SAFETY! Work SAFELY!



 ATTENTION	 CAUTION
<ol style="list-style-type: none"> 1. Lire et comprendre le manuel de l'utilisateur avant la mise en marche. 2. Installer et s'assurer que les écrans protecteurs et les gardes sont bien en place avant la mise en marche. 3. S'assurer qu'il n'y a personne autour de la machine, surtout des enfants, avant la mise en marche. 4. Tenir les mains, les pieds et les vêtements à l'écart des pièces en mouvement. 5. Abaisser la machine au sol, fermer le moteur du tracteur, bloquer les freins, arrêter la clé de contact et attendre que toutes les pièces en mouvement s'arrêtent avant de régler, ajuster, lubrifier, débarrasser ou réparer la machine. 6. Utiliser une longue pèche ou barre rigide (crowbar) pour déloger les rochers ou objets coincés entre la grille et les palettes. Ne pas en servir de ses mains. 7. Rappeler au début de chaque saison les conseils de sécurité. 	<ol style="list-style-type: none"> 1. Read and understand Operator's Manual before operating. 2. Install and ensure all shields and guards before starting. 3. Clear the area of bystanders, especially small children, before starting. 4. Keep hands, feet, hair and clothing away from moving parts. 5. Lower machine to the ground, stop tractor engine, set park brake, remove ignition key and wait for all moving parts to stop before servicing, maintaining, adjusting, repairing or unplugging. 6. Stay away from machine when operating to prevent being hit by flying rocks. Keep others away. 7. Review safety instructions annually.

REMEMBER - If Safety Decals have been damaged, removed, become illegible or parts replaced without decals, new decals must be applied. New decals are available from your authorized dealer free of charge.



OPERATING SAFETY

1. Read and understand the Operator's Manual before starting.
2. Lower grille and hopper box, 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.
3. Keep hands, feet, hair and clothing away from all moving and/or rotating parts.
4. Do not allow riders.
5. Clear the area of bystanders, especially small children.
6. Keep all guards and shields in place.
7. Use a long pole or bar to dislodge material from paddles and grille. Pressure in hydraulic system and paddle spring tension can cause paddles to kick back if they are jammed.
8. Stay well back from machine when operating to prevent being hit by flying rocks. Keep others away.
9. Turn to the left when maneuvering to keep the tractor away from the plane of flying rocks.

4.1 TO THE NEW OPERATOR OR OWNER

The Degelman Model 7800 Rock Pickers are designed to efficiently gather rocks from 1 3/4 to 30 inches (45 to 760mm) diameter and debris from fields. Many of the features incorporated into this machine are the result of suggestions made by customers like you.

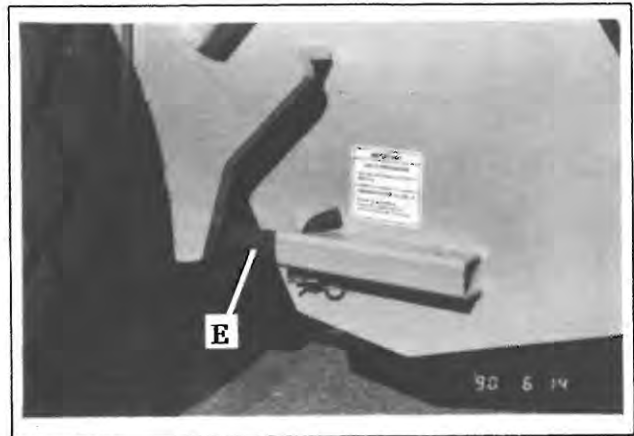
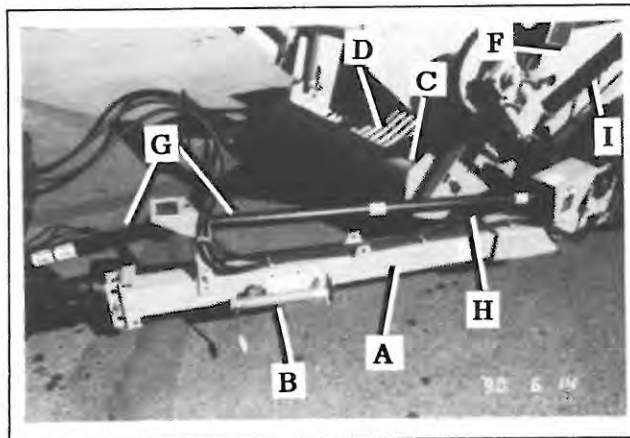
It is the owner's or operator's responsibility to read this manual carefully to learn how to operate the machine safely and how to set it to provide maximum efficiency. Safety is everyone's business. By following safe operating practices, a safe environment is provided for the operator and bystanders.

The manual will take you step-by-step through your working day. By following the operating instructions in conjunction with a good maintenance program, your Super Picker will provide many years of trouble-free service.

4.2 PRINCIPLES OF OPERATION

The Super Picker is a framework of steel bars called a grille that moves along the surface of the ground to gather rocks and debris. A rotating paddle moves along the top of the grille to move the rocks and material into the hopper box. When the hopper box fills, it is emptied by dumping out the back.

The machine is powered by the tractor PTO.



- A Hitch Pole
- B Jack
- C Paddles
- D Grille
- E Grille Lock
- F Hopper Box
- G Paddle Drive Train
- H Hitch Pole Angling Cylinder
- I Unloading Cylinder

Although there are no operational restrictions on the Rock Picker when it is new, there are some mechanical checks that must be done to insure the long term integrity of the unit. When using the machine for the first time, follow this procedure:

A. Before using:

1. Read Operator's Manual.
2. Lubricate all grease points.
3. Check all bolt tightness.

B. After operating for 2 hours:

1. Retorque wheel bolts.
2. Check all hardware tightness.
3. Check all hydraulic system connections. Tighten if any are leaking.

C. After operating 10 hours:

1. Repeat Step B.
2. Go to the service schedule as outlined in the Maintenance Section.

D. After operating for 100 hours:

1. Drain the oil from the gear box.
2. Replace with SAE85W90 gear oil.
3. Replace oil again at 2500 hours.

**PRE-OPERATION
CHECKLIST**

Efficient and safe operations of the Rock Picker requires that each operator reads and understands the operating procedures and all related safety procedures outlined in this manual. A pre-operational check list is provided for the operator. It is important for both personal safety and maintaining the good mechanical condition of the Rock Picker that this checklist be followed.

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

1. Lubricate the machine per the schedule outlined in the "Maintenance Section".
2. Use only a tractor of adequate power (70 hp minimum) and weight to carry the Rock Picker.

3. Ensure that the machine is properly attached to the tractor using a drawbar pin with provisions for a mechanical retainer. Make sure that a retainer such as a Klik pin is installed.

NOTE: It is important to pin the drawbar in the central location only.

4. Ensure that a safety chain on the hitch is installed.

5. Check all roller chains and sprockets for proper alignment and tension. Adjust for tension as required.

6. Check the oil level in the tractor hydraulic reservoir. Top up as required.

7. Inspect all hydraulic lines, hoses, fittings and couplers for tightness. Tighten if there are leaks. Use a clean cloth to wipe any accumulated dirt from the couplers before connecting to the tractor's hydraulic system.

8. Inspect all moving and rotating parts. Remove any debris that has become entangled in them.

9. Check the oil level in the gearbox. Top up as required.

10. Make sure that all guards and shields are installed and secured in position.

11. Check the tires and insure that they are inflated to the specified pressure: 30 psi (207kPa).

12. Insure that the PTO driveline is securely attached on both ends and can telescope easily. Check that the PTO driveline shield rotates freely.

13. Check the paddles, grille and hopper box. Remove any rocks or debris that has become jammed an any of the components.

14. Check the reel paddle radius. Adjust to give the required reel diameter. Replace any springs that are broken.

4.5 EQUIPMENT PREPARATION

4.5.1 TRACTOR PREPARATION

Follow this procedure when selecting and preparing a tractor for use with the machine:

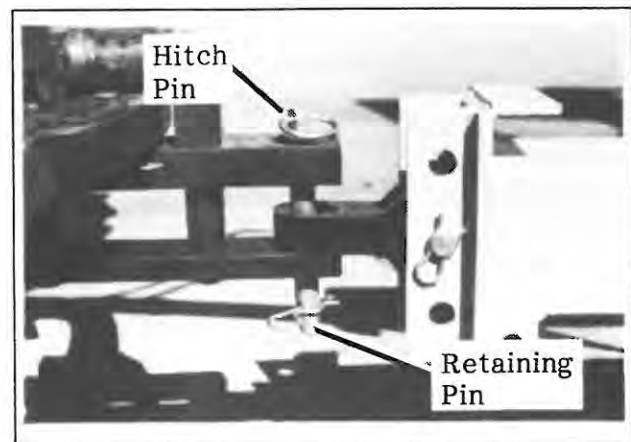
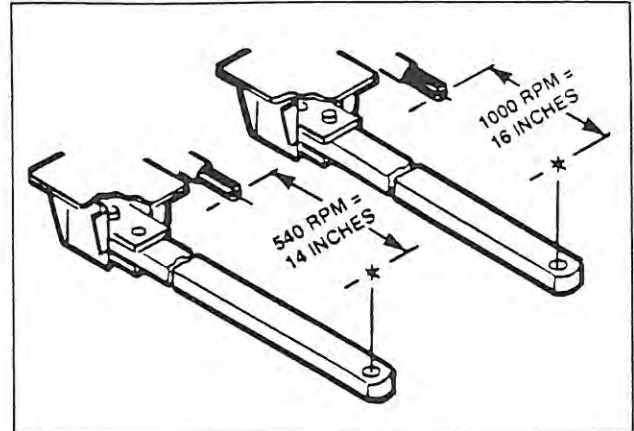
1. Use only a tractor of sufficient power and weight to adequately handle the machine. It is recommended that the tractor have at least 70 PTO horsepower for normal operating conditions and 100 PTO horsepower when operating in hilly conditions.
2. The drawbar pin to PTO shaft end dimension should be:
 - a. 16 inches (406mm) for 1000 RPM speed.
 - b. 14 inches (356mm) for 540 RPM speed.

Important: Do not use on a tractor equipped with a PTO shaft adapter to prevent mismatching of PTO speeds and overtelescoping of the driveline.

3. Locate the drawbar in its center position to prevent it from swinging.
4. Use only a drawbar pin with provisions for a mechanical retainer such as a Klik pin. Always install the retainer.

5. Always attach a safety chain between the tractor and the machine to prevent unexpected separation.

6. It is not recommended to use a tractor that is equipped with duals. The right outer tire will drive over the rocks, push them into the ground and make them difficult to pick up with the grille.



4.5.2 ROCK PICKER PREPARATION

1. Hitch Pole "Field/Transport" configuration:

The hitch pole has a "Full Transport" position that is normally used when the machine is new or when it will be transported for long distances to bring the body of the machine as close behind the tractor as possible.

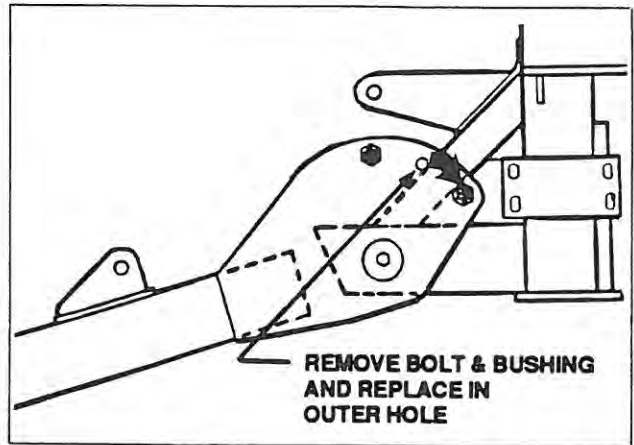
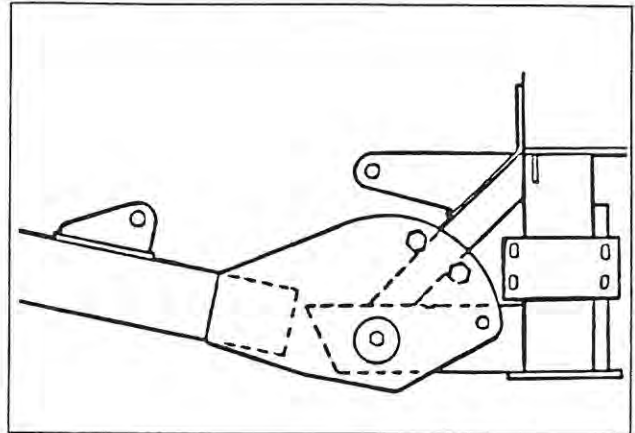
The hitch pole must be changed to "Field" position before starting to work. "Field" position will swing the body of the machine over to clear the tires of the tractor.

To change positions, follow this procedure:

- a. Remove the bolt and bushing shown holding the pole in transport.
- b. Swing the pole into field position.

NOTE: It may be necessary to move the tractor forward slightly or the outside wheel of the machine back to change the pole position.

- c. Reinstall the bolt and bushing and tighten.

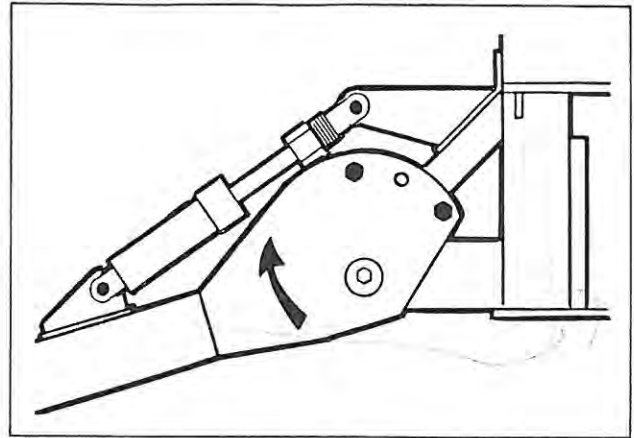


2. Hitch Pole Preparation:

In addition to the field and transport position for the hitch pole, the draft angle can be reduced slightly on occasion when operating over heavy rolling land to have a more maneuverable picker condition.

Since the outside tire of the Picker is positioned ahead of the inside tire, the draft sideload increases dramatically in heavy rolling land. Keep it to manageable levels by decreasing the offset a little.

Activate the appropriate tractor remote lever to retract the cylinder until the desired draft angle is obtained.

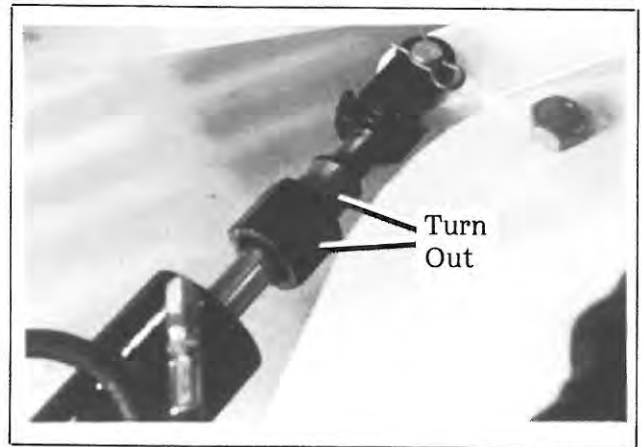
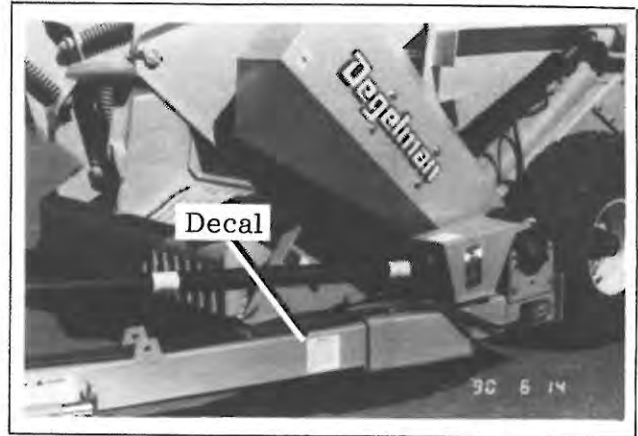


Important: Be sure to read and perform the instructions on the hitch pole decal before starting:

Fully extend both threaded sections of the hydraulic cylinder nut before operating machine in the field. By extending both these threaded sections, the stroke of the hydraulic cylinder is shortened and the inward swing of the hitch pole is limited.

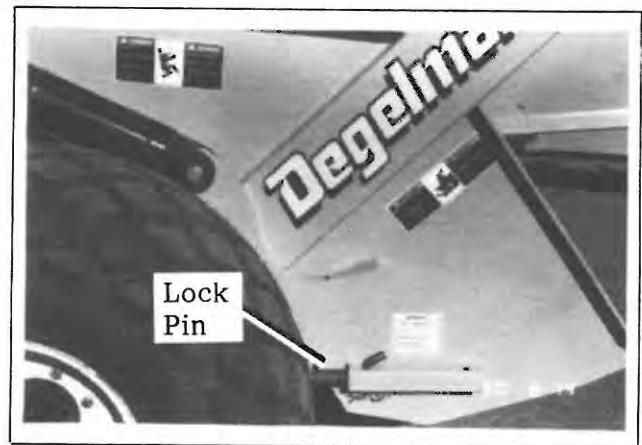
This operation will prevent interference between driveline and chain shield should the hitch pole be swung inward while picking rock.

To perform this operation, fully extend hydraulic cylinder and turn out both threaded sections.



3. Grille Preparation:

Remove the red transport lock pin from its transport position.



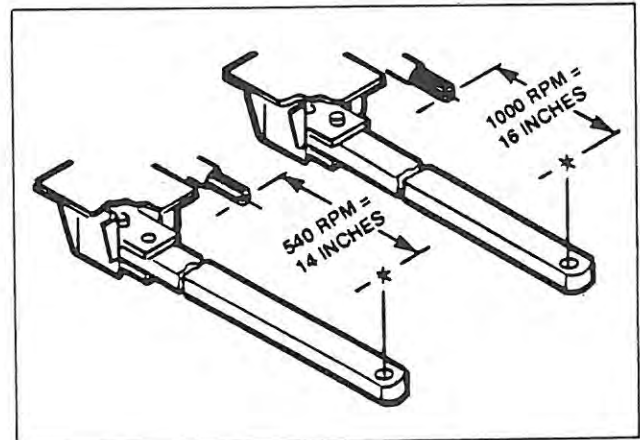
4.6 ATTACHING/UNHOOKING

The Picker should always be parked on a level, dry area that is free of debris and foreign objects. Follow this procedure when attaching:

1. Clear the area of bystanders and remove foreign objects from the machine and working area.
2. Make sure there is enough room to back the tractor up to the hitch pole.
3. Start the tractor and slowly back it up to the hitch point.
4. Stop the tractor engine, place all controls in neutral, set park brake and remove ignition key before dismounting.



5. Adjust the length of the drawbar to give the appropriate dimension between the PTO shaft and drawbar pin hole. (Refer to Tractor's Operator's Manual).



6. Use the hitch pole jack to raise or lower the pole to align with the drawbar.

7. Install a drawbar pin with provisions for a mechanical retainer such as a Klik pin. Install the retainer.

8. Install a safety chain between the tractor drawbar and the hitch pole.



9. Connect drivelines. Proceed as follows:

- a. Check that the PTO driveline telescopes easily and that the shield rotates freely.
- b. Attach the driveline to the tractor by retracting the locking collar, slide the yoke over the shaft and push on the yoke until the lock collar clicks into position. Be sure the unit is locked in position.



- c. Check the angle of the hitch pole. With the unit on level ground, the hitch pole should be parallel to the ground.

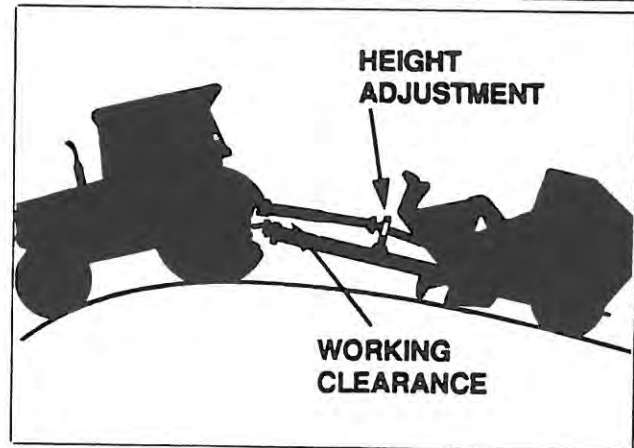
Use the adjusting pin in the hitch clevis to set the pole height.



- d. Check the clearance between the PTO driveline and the top of the hitch clevis. This dimension should be a minimum of 6 inches (152mm) to provide adequate clearance when going over the crest of a hill.

Use the height adjusting holes on the driveline mounting frame to set this clearance dimension.

- e. Check that the tractor drawbar is in its centered position and pinned in its non-swinging mode.

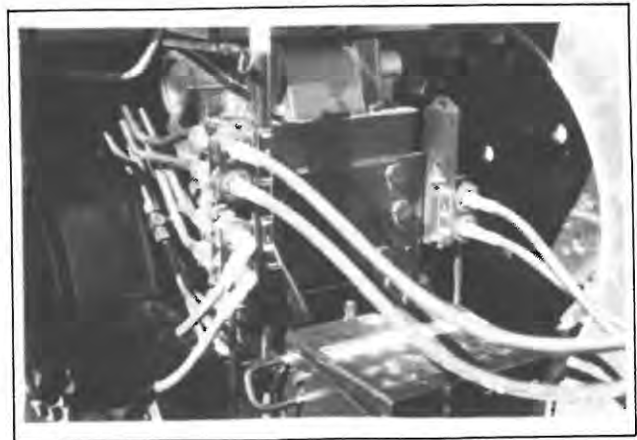




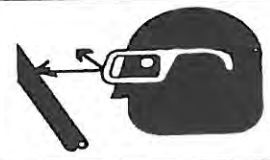
It is important that the hitch, pole, drawbar and driveline be set per the above guidelines. This will insure adequate clearance and minimum vibration during operation.

10. Connect the hydraulics. To connect, proceed as follows:

- a. Use a clean cloth or paper towel to clean the couplers on the ends of the hoses. Also clean the area around the couplers on the tractor.
- b. Remove the plastic plugs from the couplers and insert the male ends. Be sure to match the pressure and return lines to one valve bank.
- c. Connect the remaining coupler. Be sure to match the system with the desired control lever in the tractor.

NOTE: If the direction of motion is wrong, reverse the couplers.

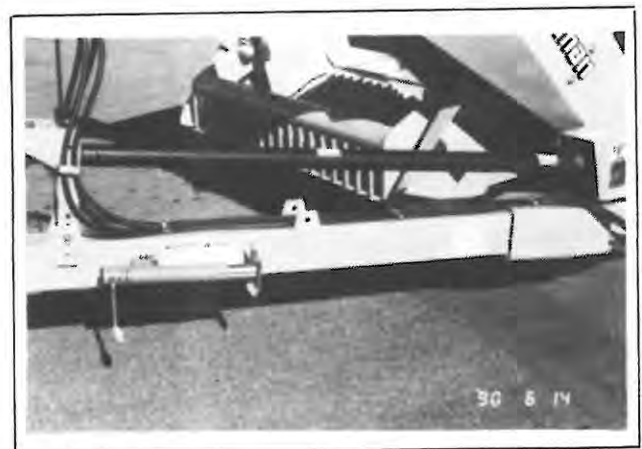


 WARNING	
	
<p>Use extreme care when working around a high pressure hydraulic system. Make sure all connections are tight and all components are in good repair. Wear hand and eye protection when searching for suspected leaks.</p>	

11. Route the hoses along the hitch and secure in position to prevent dragging on the ground or entanglement with any moving parts.

12. Raise the hitch jack and rotate it 90° to place in its stowed position.

13. When unhooking from the tractor, reverse the above procedure.



Refer to these operational hints before starting:

1. **Material size:** The machine was designed to pick and unload rock and debris ranging in size from 1 3/4 to 30 inches (45 to 760mm) in diameter. Smaller pieces will fall through the spacing in the grille and larger rocks will stall the paddle drive.

2. **Operator's Responsibility:** Every operator should read this manual and be instructed in safe operating procedure. An untrained operator is not qualified to operate this machine and could place themselves or bystanders in danger.

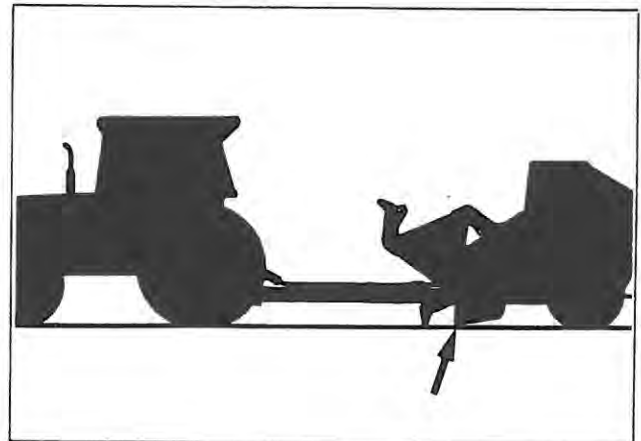
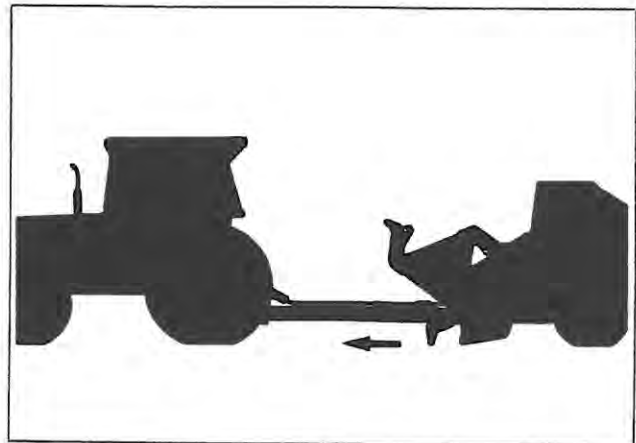
3. **Ground Speed:** Operating speed will vary according to rock size and density and whether spot picking or windrow picking will be encountered.

Experience will teach you the correct combination of forward travel speed and reel RPM to suit field conditions. As a rule 4 to 6 MPH (6 to 10 km/h) is a normal operating speed. Slow the travel speed when picking heavy rock windrows.

4. **Grille Height:** The grille should be lowered to allow the front of the teeth to skim the ground surface. This will provide the best gathering angle and allow a minimum amount of dirt being carried into the hopper box.

All rocks should be laying on top of the ground for best results when picking. Rocks that are partially submerged or have been run over by the tractor tire are difficult to pick. In these conditions, the grille can be set to momentarily run below the ground surface in an attempt to pick the rock. However, raise the grille back to skimming the surface to reduce the amount of dirt going into the hopper.

Important: Do not use the Picker grille to pry out deeply buried rock of debris.

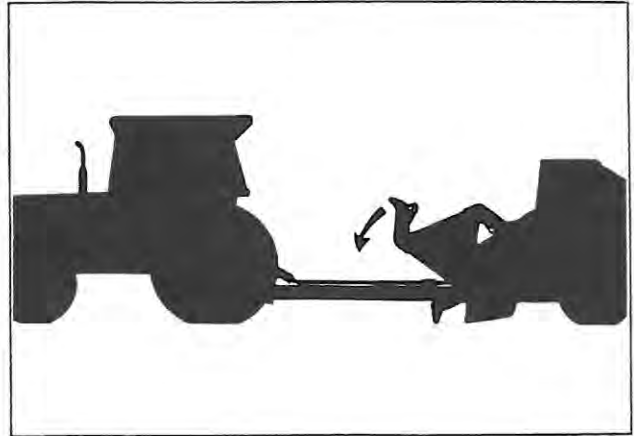


5. Reel Speed: The purpose of the reel is to sweep the rocks from the front of the grille over the grille framework and into the hopper box. The spring loaded paddles should keep the grille framework clear of rocks by moving them into the hopper.

Spot Picking: Best results are obtained when the reel is running 5% to 40% faster than ground speed.

Windrow Picking: The reel must be allowed to sweep the rocks from the grille even when there are large numbers as in windrows. To control the number of rocks entering the machine, reduce the forward speed.

The reel and paddles always run at a constant speed as determined by the PTO input speed and the drive ratios through the gearbox. The ratio of reel speed to ground speed is changed by changing ground speed. Slowing ground speed allows the paddles to sweep over the grille more frequently and clear the rocks. This is particularly important when picking up heavy rock windrows.



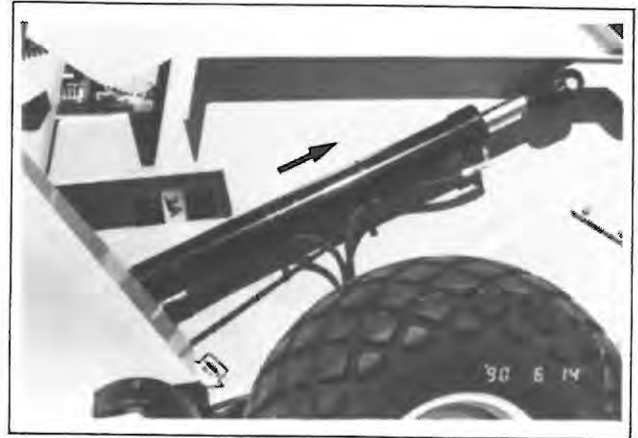
6. Loading/Unloading:

- a. Loading: The machine can be loaded until the hopper box is filled and rocks stay on the back edge of the grille. Do not overfill the box as the paddles will carry the rocks over the top of the paddle and throw them out.



DANGER

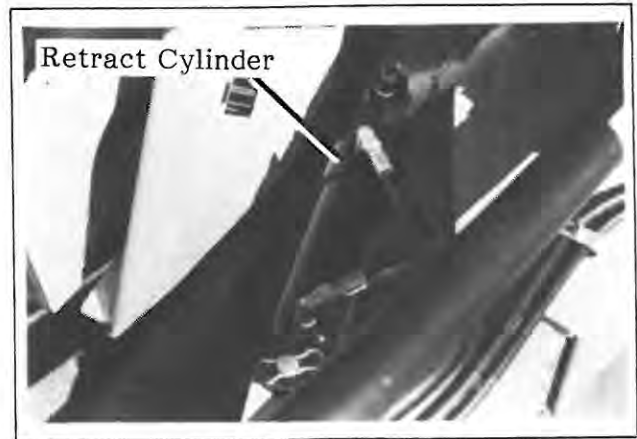
Rocks can be thrown from machine. Stand well clear of machine when operating. Keep others away.



When hopper box is full, stop the reel to prevent throwing rocks.

- b. Unloading: It is recommended to swing the hitch pole inward to ease frame loading on the machine when maneuvering or backing up to a dumping site.

The hopper box is unloaded by extending the unloading cylinders on the box.



WARNING

Stay clear of the machine and surrounding area when unloading. Keep others away.

- Be sure the machine is on level ground when raising the hopper box to unload. Uneven ground conditions can cause the box to tilt and result in damage to the frame.

- Swing the pole outward and proceed with work.

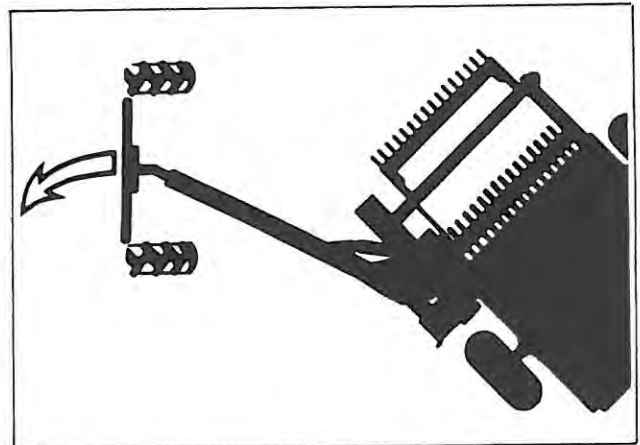
7. Safety Area: Always treat the machine with the utmost respect when it is operating. Since the paddles are all loaded with strong springs, they can catch and throw rocks a considerable distance as they move around the reel. Although the most common direction is in the plane of reel motion, they can also hit the frame and bounce off to the sides.



DANGER

Rocks can be thrown from machine. Stand well clear of machine when operating. Keep others away.

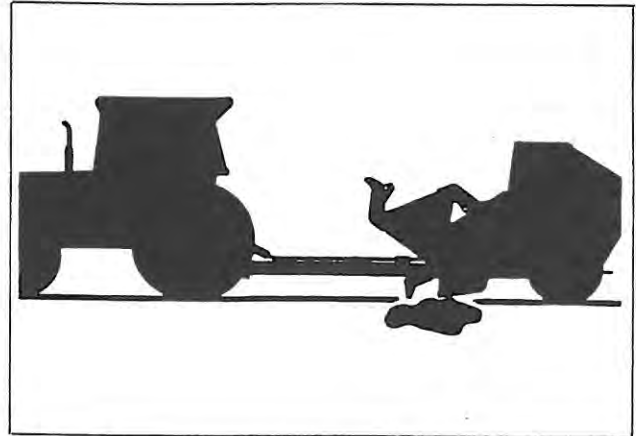
It is recommended that the tractor be turned to the left as much as possible when picking to keep it out of the path of flying rocks. This has the added benefit of eliminating the right hand tractor tire from running over rocks and pushing them into the ground.



8. Buried Rocks: The machine is only designed to pickup material that is loose and on top of the ground. Lodged or solid objects will shock load the frame of the machine when trying to pick them up and cause failures. They should be dug out by hand and placed on top of the ground.

9. Unplugging: Small rocks or debris can get jammed between the grille, paddle or frames and stop the reel from turning. To unplug, follow this procedure:

- a. Lower grille to ground, stop tractor engine, place all controls in neutral, relieve the pressure in hydraulic system, set park brake and remove ignition key.
- b. Use a long pry bar (not hands) to dislodge the material.



WARNING

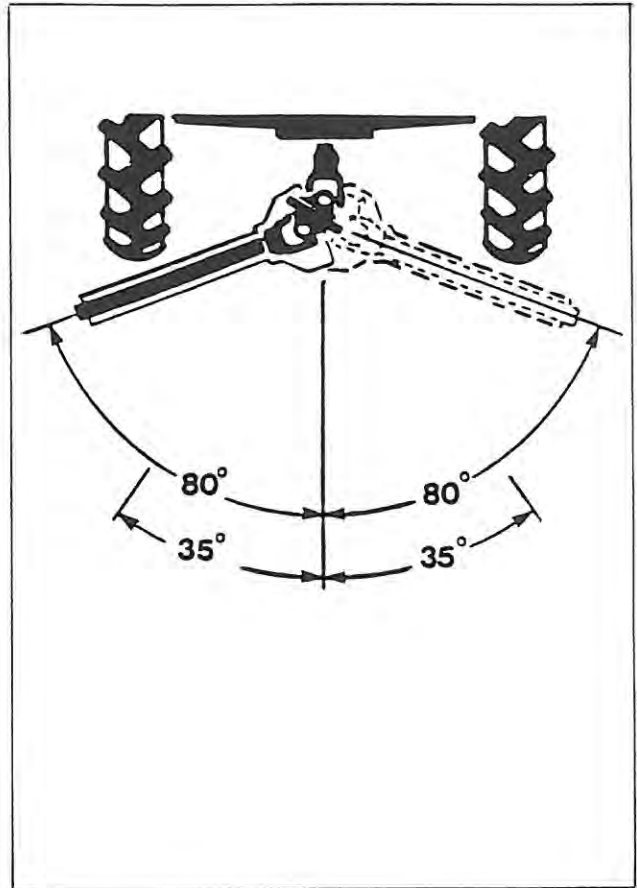
Stay clear of the paddle when removing any lodged material. The paddles could kick back from hydraulic pressure, spring tension or drive torsion. Always use a long bar to remove object.

10. Turning/Maneuvering: A CV universal joint is provided on the front of the 1000 RPM PTO driveline to allow maximum maneuvering capability during operation. However, there are some application restrictions that apply to the CV joint.

- a. The CV joint angle should not exceed 80° in either operating or standstill condition of driveline. Larger angles will result in joint damage.
- b. It is recommended that the angle never exceed 35° when the driveline is under full load.

The operator should plan the path of operation to maintain the CV joint angle at less than 35° . It is better to turn wide and make another pass than turn at a very sharp angle.

Use care when backing up for unloading. If it becomes necessary to cramp the tractor at a sharp angle when backing up, stop, straighten out and try again. A little extra time and patience will ensure longer driveline life.



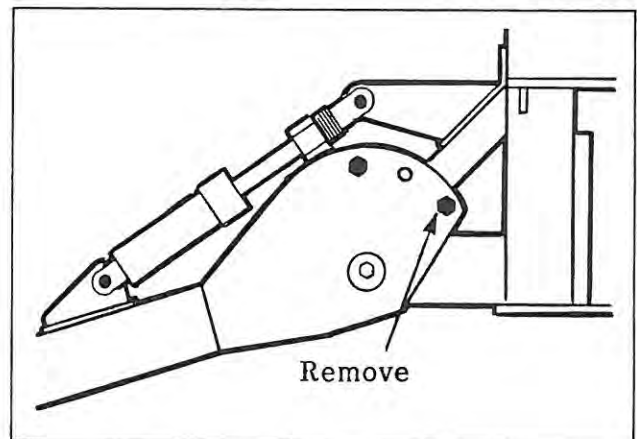
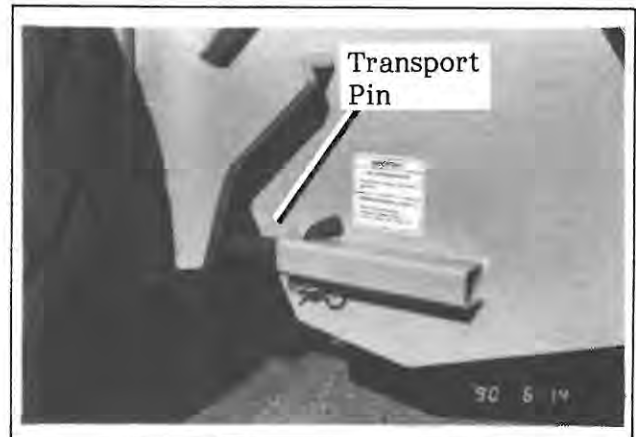


TRANSPORT SAFETY

1. Use only a drawbar pin with a mechanical retainer.
2. Always install the safety chain between the drawbar and hitch pole.
3. Clean the SMV, lights and reflectors before starting.
4. Always use hazard flashing lights on tractor.
5. Lock the red transport pin on the grille in position and swing hitch pole fully inward before using.
6. Travel at a safe speed. Use care when making corners or meeting traffic.

Follow this procedure when preparing to transport:

1. Clear the area of bystanders, especially small children, before converting into transport configuration.
2. Raise the grille to its highest position by retracting the hopper box cylinders.
3. Position the red transport pin into the location shown and secure with the bent pin and hair pin combination.
4. Lower the grille to rest on the red pin.
5. Remove hardware and bushing from pole as shown.



6. Fully turn in both threaded sections of hitch pole hydraulic cylinder to allow for the narrowest possible transport width.

7. Swing machine inwards by fully retracting the hitch pole hydraulic cylinder.

8. Reposition bushing and hardware into center hole.

9. Swing hitch pole jack up and secure with chained pin.

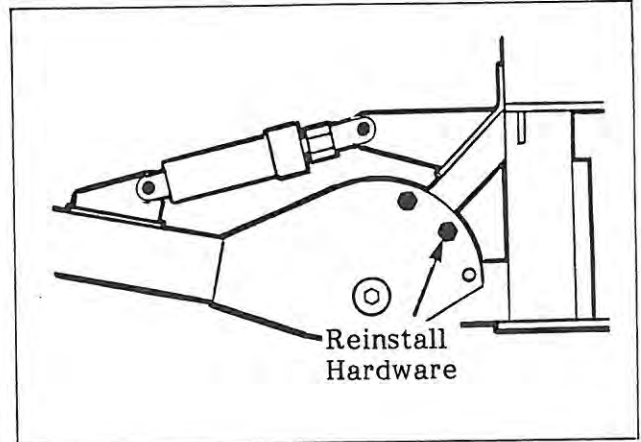
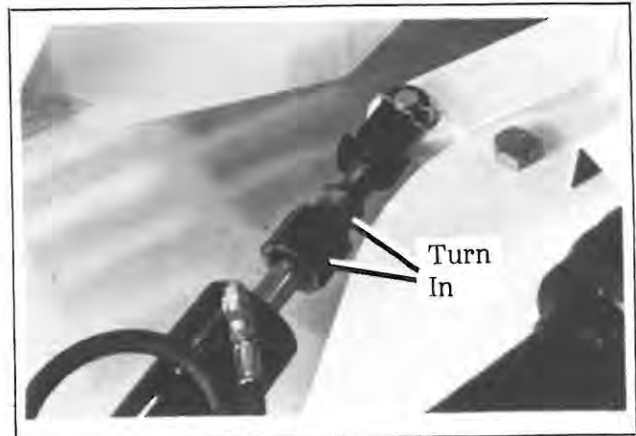
10. Empty hopper box before transporting.

11. Clean the SMV, lights and reflectors.

12. Maintain a safe speed. Slow down when cornering and on rough roads.

13. Slow down and pull off to the side of the road when meeting other traffic.

14. Use hazard flashers on tractor unless prohibited by law.





STORAGE SAFETY

1. Store in an area away from human activity.
2. Do not allow children to play on or around the stored unit.

After the season's use, completely inspect all major systems of the machine. Repair or replace any worn or damaged components to prevent unnecessary down time at the beginning of next season.

Since the unit can be used in extremely adverse conditions during the season, the machine should be carefully prepared for storage to insure that all dirt, mud, debris and moisture has been removed.

Follow this procedure when preparing to store:

1. Wash the entire machine thoroughly using a water hose or pressure washer to remove all dirt, mud, debris or residue.
2. Inspect all moving or rotating parts to see if anything has become entangled in them. Remove the entangled material.
3. Lubricate all grease fittings to remove any moisture in the bearings.
4. Run the machine slowly for 1 minute to distribute lubricant to all surfaces.
5. Apply a light coat of oil to the roller chains while the unit is running to prevent rusting.
6. Inspect all hydraulic hoses, fittings, lines, couplers and valves. Tighten any loose fittings. Replace any hose that is badly cut, nicked or abraded or is separating from the crimped end of the fitting.
7. Touch up all paint nicks and scratches to prevent rusting.

8. Oil the exposed rams on the hydraulic cylinders to prevent rusting.

9. Select an area that is dry, level and free of debris.

10. Follow the procedure given in Section 4.6 when unhooking.



MAINTENANCE SAFETY

1. Read Operator's Manual before servicing, or maintaining machine.
2. Lower grille and hopper box, stop tractor engine, set park brake, remove ignition key and wait for all moving part to stop before servicing, adjusting, repairing or maintaining.
3. Keep hands, feet, hair and clothing away from all moving and/or rotating parts.
4. When a guard is opened or removed for servicing, be sure to install or close it before starting.
5. Be careful when working around or maintaining a high pressure hydraulic system. Wear the proper eye and hand protection when searching for a leak. Use a piece of wood or cardboard as a backstop when searching for a pin hole leak in a hose or a fitting.
6. Place safety stands or large blocks under the frame before removing the tires or working beneath the machine.

5.1

SERVICE

5.1.1 FLUIDS AND LUBRICANTS

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

2. Gearbox Reservoir Oil: Use an SAE 85W90 gear oil for all operating conditions. Reservoir capacity: 1 quart (1 litre).

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.

5.1.2 GREASING

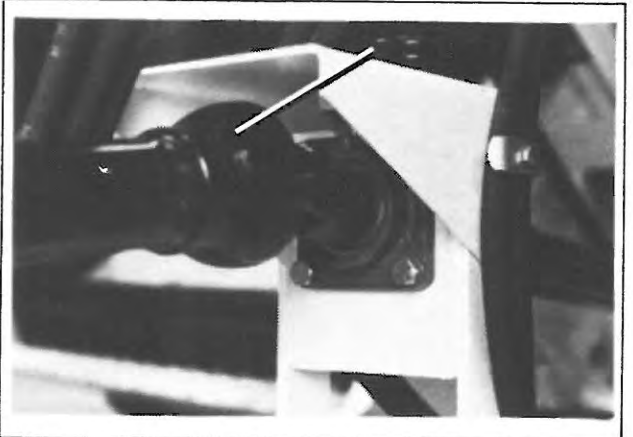
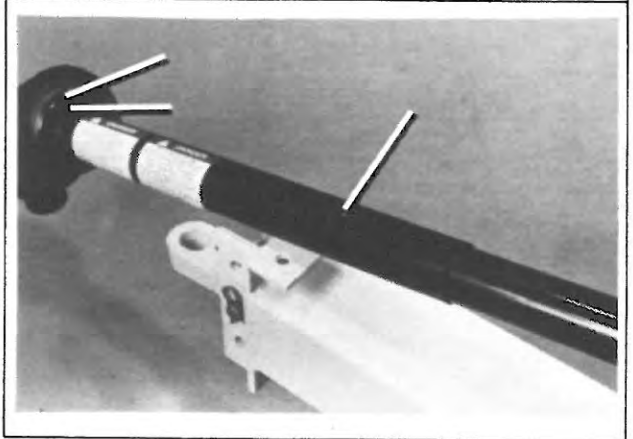
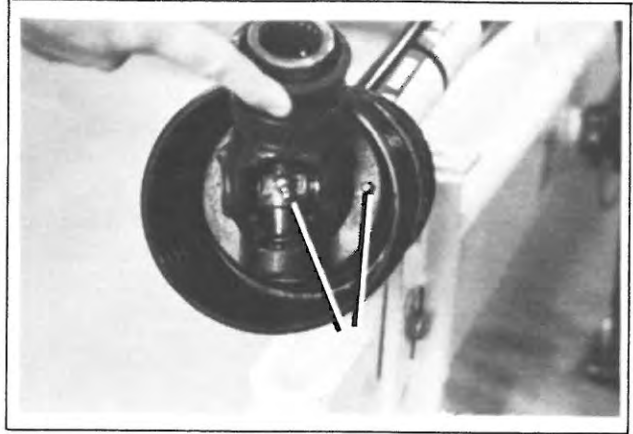
Use the Maintenance Checklist provided to keep a record of all scheduled maintenance.

1. Use only a hand-held grease gun for all greasing.
2. Wipe grease fitting with a clean cloth before greasing, to avoid injecting dirt.
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.
5. Inject grease until you see the grease being expelled from the bearing or bushing areas.

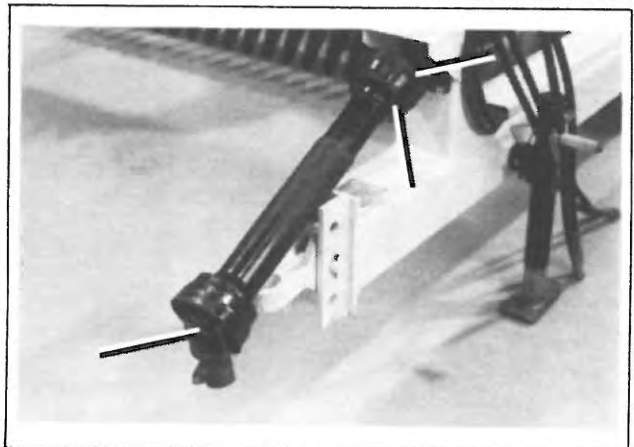
5.1.3 SERVICNG INTERVALS

8 Hours:

1. Grease constanct velocity PTO drive-line (1000 PTO) - 6 locations.



NOTE: For 540 PTO driveline lubricate similarly at 3 locations.



(8 Hours: con't.)

2. Grease universal under guard.



CAUTION

Machine is shown with guard open for illustrative purposes only. Close guard before using.



25 Hours:

1. Grease the grille pin/floatation plate - 2 locations on each side.

NOTE: This applies to earlier design models equipped with grease fittings rather than nylatron bushings.



(25 Hours: con't.)

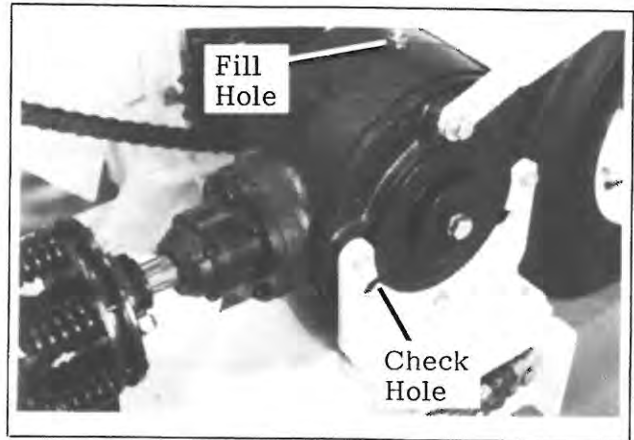
2. Check gearbox oil level.

Remove threaded plug to check oil level. Oil should be level with threads. Add as required by removing the vent cap.

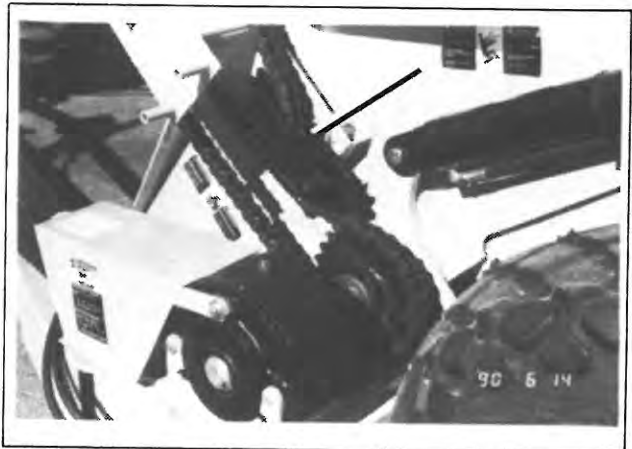


CAUTION

Machine is shown with guard opened for illustrative purpose only. Close guard before using.



3. Grease the chain tightener idler.

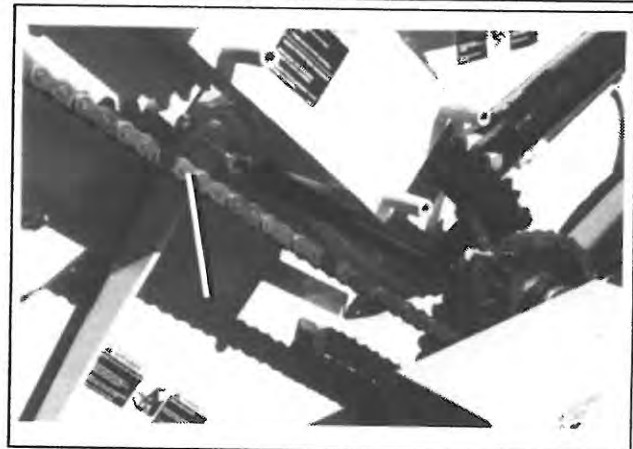


4. Oil the roller chain.



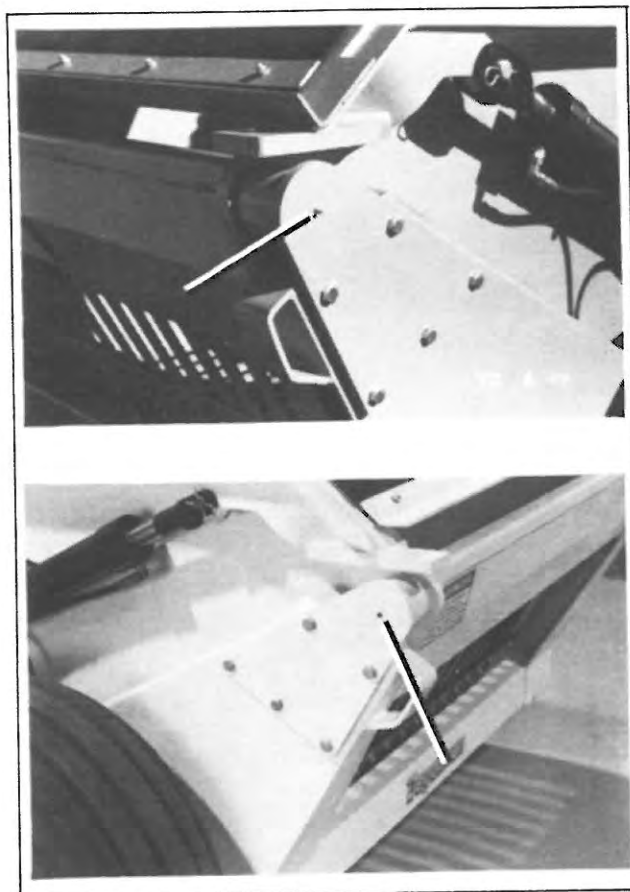
CAUTION

Machine is shown with guard opened for illustrative puposes only. Close guard before using.



(25 Hours: con't.)

5. Grease hopper box pivots - 2 locations.



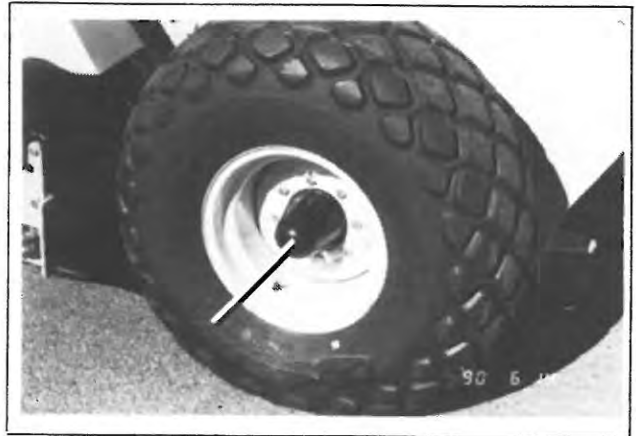
Annually :

2. Repack wheel bearings: Repack wheel bearings seasonally with a good grade of bearing grease.



WARNING

Place safety stands or large blocks under frame before removing wheels.



3. Grease driveline flange bearing.



4. Grease pillow block bearing.



5.1.4 SERVICE RECORD

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

ACTION CODE:

CHECK
L LUBRICATE

C CHANGE
R REPLACE

CL CLEAN

MAINTENANCE	HOURS																			
	SERVICED BY																			
8 HOURS:																				
L PTO Driveline (6) or (3)																				
L Universal under Guard (1)																				
25 HOURS:																				
L Grille/Pin/Floatation Plate (4)																				
<input checked="" type="checkbox"/> Gearbox Oil Level																				
L Chain Tightner Idler (1)																				
L Roller Chain																				
L Hopper Box Pivots																				
ANNUALLY:																				
L Wheel Bearings (2)																				
L Driveline Flange Bearing (1)																				
L Pillow Block Bearing (1)																				

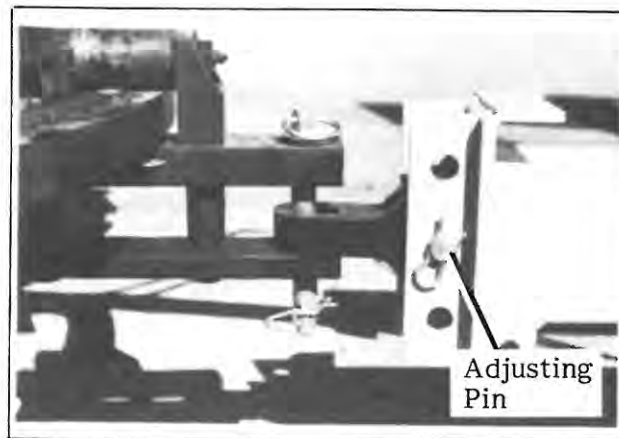
5.2 ADJUSTMENTS

5.2.1 HITCH CLEVIS

The hitch pole should always be set to be parallel to the ground when attached to the tractor. To set this angle, follow this procedure:

1. Clear the area of bystanders, especially small children.
2. Install the drawbar pin to attach the clevis to the tractor.
3. Use the hitch jack to lower the hitch and transfer the weight of the drawbar.
4. Step back and check to see if the pole is parallel to the ground.
5. If it isn't, use the jack to raise the pole and center the clevis to the drawbar.
6. Remove the clevis mounting pin.
7. Move the clevis up or down as required.
8. Install the clevis mounting pin and retainer.
9. Lower the hitch and check the pole angle again.

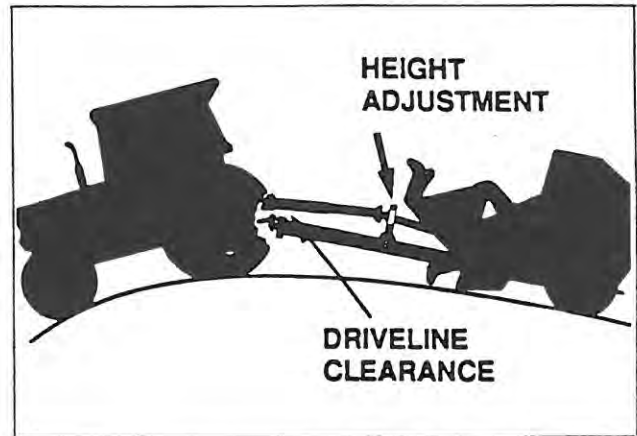
Important: The machine operates at maximum efficiency when the hitch pole is parallel to the ground.



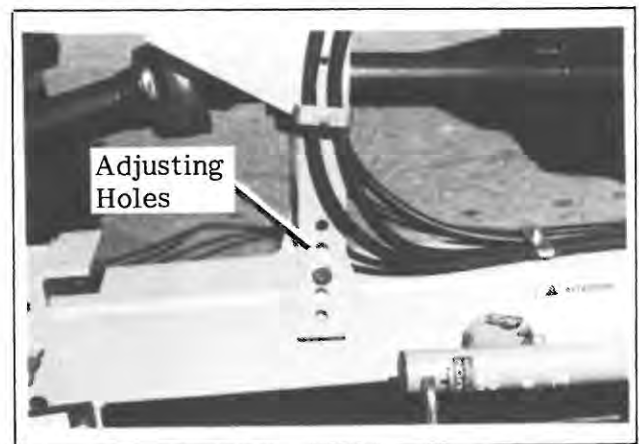
5.2.2 DRIVELINE HEIGHT

The clearance between the PTO driveline and the top of the hitch clevis should be at least 6 inches (152mm) to provide adequate clearance when going over the crest of a hill. To adjust this clearance, follow this procedure:

1. Clear the areas of bystanders, especially small children.
2. Attach the machine to tractor by following the procedure in Section 4.6.
3. Measure the distance between the driveline and the top of the hitch clevis.



4. If this dimension does not exceed 6 inches (152mm), remove the mounting bolts in the driveline support bracket.



5. Raise or lower the frame to give the required clearance.
6. Reinstall the mounting bolts in the appropriate matching holes.

NOTE: DO NOT over tighten the locknuts which will prevent the driveline support bracket from swinging.

5.2.3 PTO SLIP CLUTCH

All machines have a torque limiting slip clutch ahead of the gear box. It protects the drive train parts from shock loads during operation. The clutch should be set to slip when material jams in the machine but not during normal operation.

To adjust the clutch, follow this procedure:

1. Clear the area of bystanders, especially small children.
2. Lower grille to ground, stop tractor engine, place all controls in neutral, set park brake and remove ignition key before dismounting.
3. Tighten the nuts on limiter springs 1/2 turn to increase spring tension.
4. Tighten all 6 nuts the same amount.

Important: Do not overtighten the springs.

5. Operate the machine for a short time to see if the clutch slips at the appropriate time. If the springs are set too tight, some component is likely to fail when the machine jams.

6. After prolonged storage periods, corrosion may seize discs to metal plates. It is therefore recommended to back off spring tension to allow excessive slippage of the unit. Then briefly operate the machine in the field to break discs free.

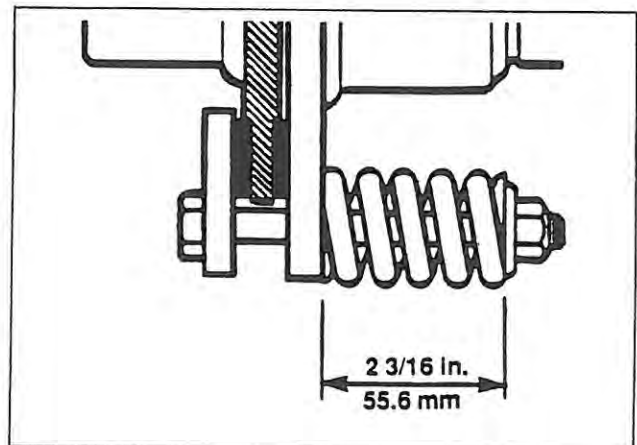
7. Replace fibre discs when thickness reaches 1/16 inch (1.5mm).

8. Reset the spring tension by retightening nuts to provide an initial setting of 2 3/16 inches (56mm).



CAUTION

Machine is shown with guard opened for illustrative purposes only. Close guard before using.

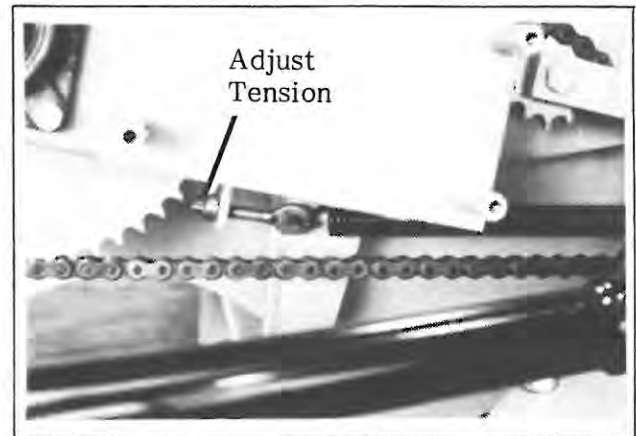


5.2.4 REEL DRIVE CHAIN TENSION

A roller chain transmits power to the reel. This chain should be checked periodically for proper tension.

To adjust the tension, follow this procedure:

1. Clear the area of bystanders, especially small children.
2. Lower grille to ground, stop engine, place all controls in neutral, relieve hydraulic pressure, set park brake and remove ignition key before dismounting.
3. Open chain drive shield.
4. Back off eye bolt nut until chain is just tight.
5. Tighten eye bolt nut 3 to 4 complete turns.
6. Close the shield.



CAUTION

Machine is shown with guard opened for illustrative purposes only. Close guard before using.

5.2.5 REEL PADDLE RADIUS

It is important for optimum picking results to maintain the specified radius of the reel paddle teeth as they mesh through the grille teeth.

Occasionally check the radius by measuring between the outer edge of the reel pipe to the lower edge of tooth as shown. This dimension should be $33 \frac{1}{2}$ - $33 \frac{3}{4}$ inches (850-860mm).



To achieve this dimension either loosen nuts (to increase radius) or tighten nuts (to decrease radius).

Important: Tightening the nuts on the springs is for the singular purpose of acquiring the specified reel paddle radius only and **NOT** for the purpose of achieving additional spring tension. Should spring tension become weak, replace springs.



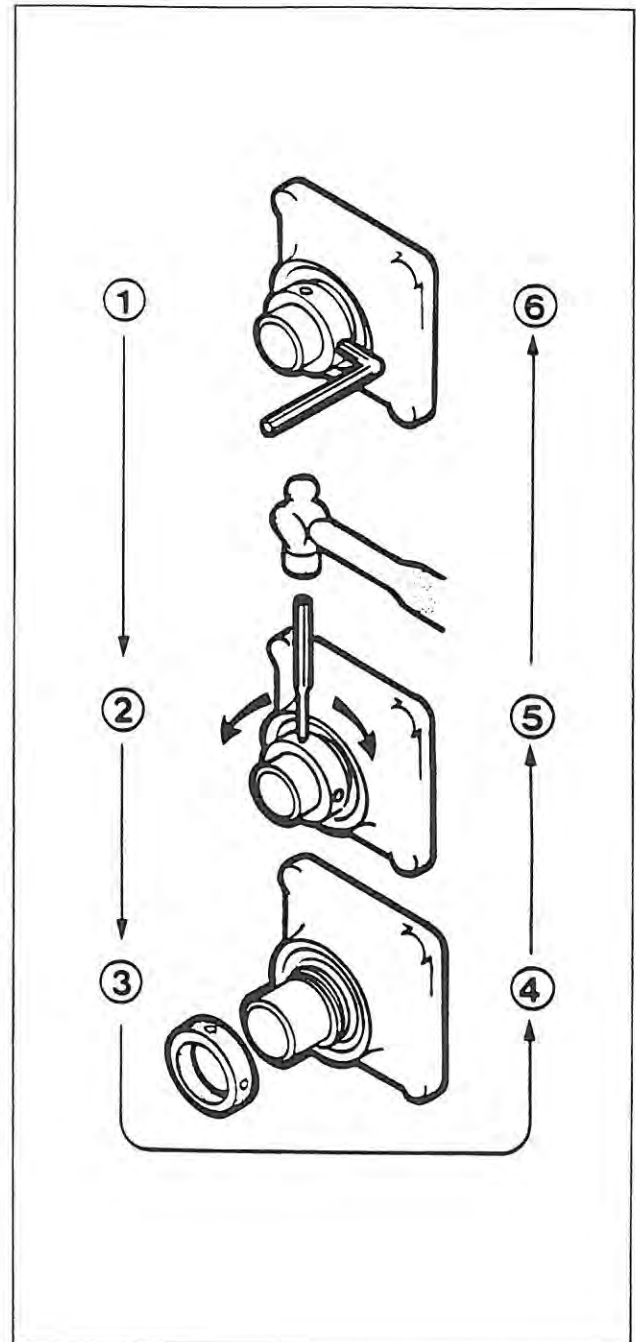
5.3.1 BEARING REPLACEMENT

When bearing noise becomes evident, replacement of the bearing is necessary. Whether the complete bearing unit or just the bearing insert was purchased, proceed as follows:

**WARNING**

Before removing bearing unit be sure affected areas are securely blocked up.

1. Loosen set screw with allen wrench.
 2. Use drift punch and hammer to loosen lock collar.
- NOTE:** Lock collar loosens opposite the direction of rotation.
3. Remove lock collar and bolts.
 4. Pull bearing unit from shaft and replace.
 5. Relocate lock collar and tighten in direction shown.
 6. Tighten set screw.
 7. Lubricate grease fitting.



5.3.2 PADDLE TEETH ALIGNMENT

Occasionally it may become necessary to shift the reel assembly over to realign the paddle teeth to ensure that they pass through the grille teeth evenly.

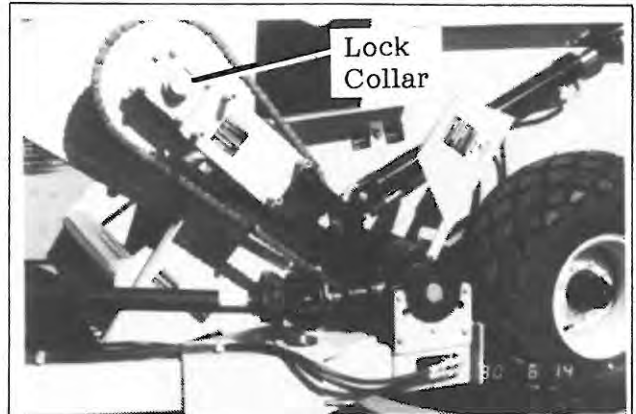
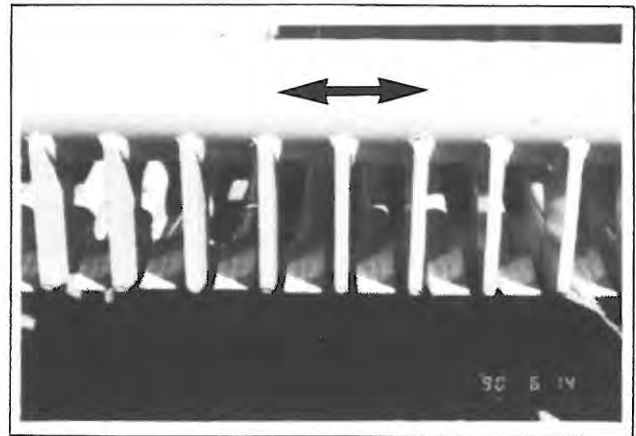
To realign, proceed as follows:

1. Remove chain shield to expose bearing.
2. Loosen set screw on bearing lock collar. Then using a drift punch and hammer, loosen lock collar (opposite the direction of rotation). Repeat on the opposite side.
3. Slide reel over until each of the paddles turn evenly through grille teeth.
4. Secure this setting by tightening lock collar of both bearings (in direction of rotation). Tighten set screw.
5. Reposition the chain shield.



WARNING

DO NOT operate machine without shield secured in position.



5.3.3 PADDLE AND GRILLE TEETH REPAIR OR REPLACEMENT



WARNING

Securely block up grille before attempting any work on grille teeth.

Important: When performing arc welding operations on this machine, the current between the rod and the ground must not pass through any bearing unit to eliminate the possibility of "pitting" due to current arcing across ball bearings and bearing race.

Restoring or Replacing Teeth:

Build up and resurface teeth as required using hard surface welding rods. A hardness of RC45-50 is desirable.

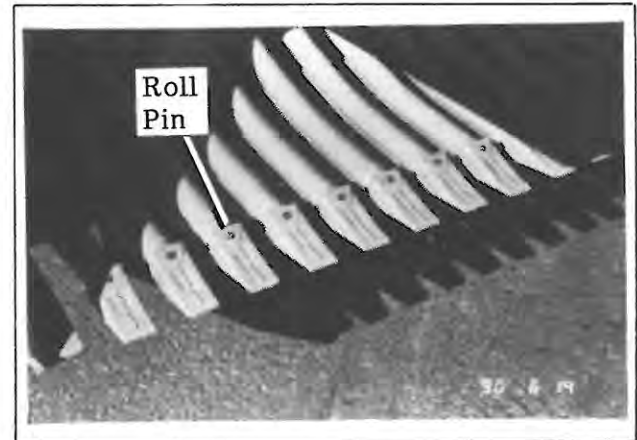
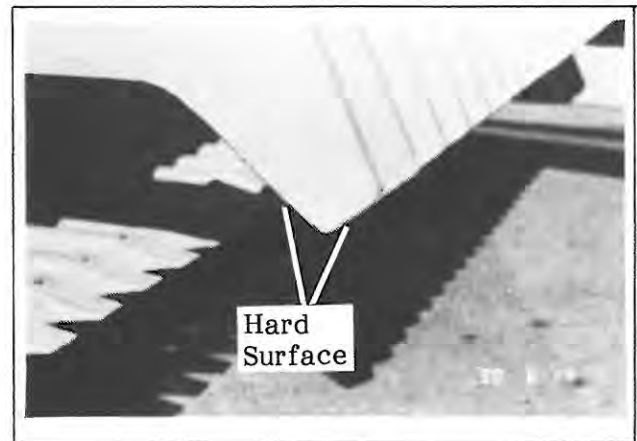
The paddle teeth and grille teeth can be replaced with new ones as required. It will be necessary to cut off and grind away the welding that held the old tooth. Then evenly space, tack up and weld each tooth into position.

Grille Tooth Tip Replacement:

Replace broken cast tips immediately to prevent wearing down of mating stub.

Replace tips by driving out roll pin, wedging new tip into position and reinstalling roll pin.

NOTE: Special hard surfacing rod kits are available through Degelman Industries Ltd. or your local dealer.



5.3.4 WHEEL HUB REPAIR



WARNING

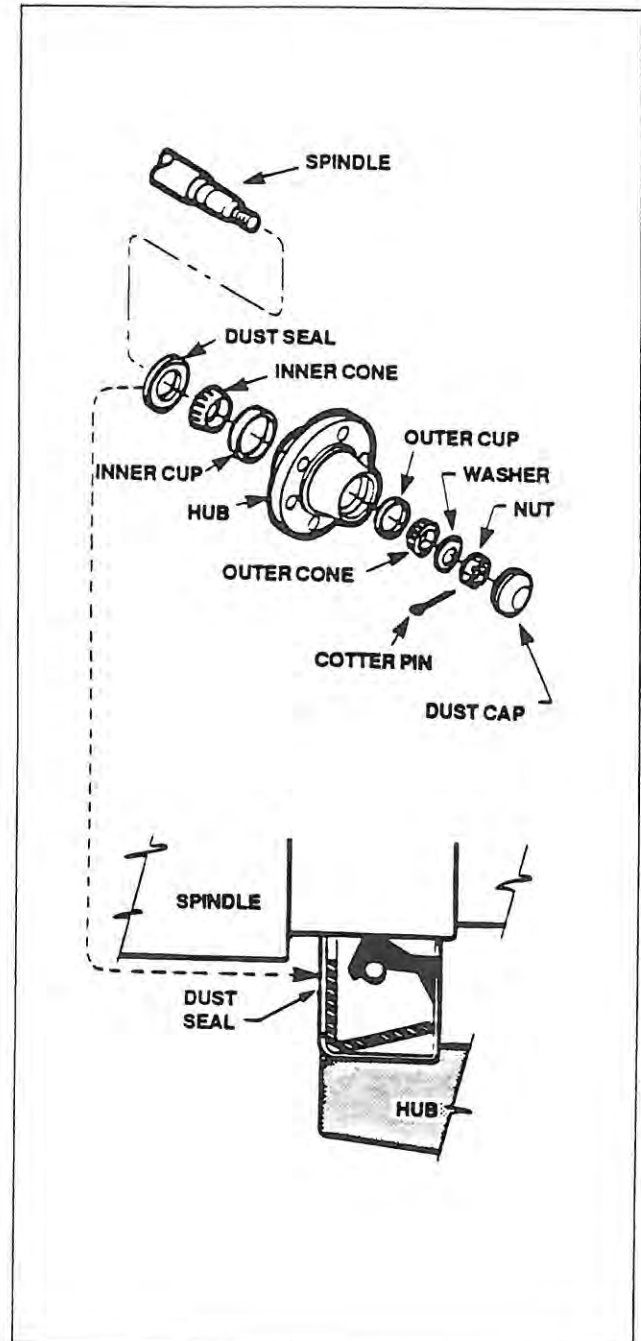
Be sure to block up frame section before removing tires.

Disassembly:

1. Carefully pry off dust cap.
2. Remove cotter pin from nut.
3. Remove nut and washer.
4. Pull off spindle.
5. Dislodge the inner cone bearing and dust seal.
6. Inspect cups that are press fitted into hub for pits or corrosion and remove if necessary.
7. Inspect and replace defective parts with new ones.

Assembly:

1. If cups need replacing, be careful to install them gently and evenly into hub until they are fully seated.
2. Apply a thick wall of grease inside hub. Pack grease into cones.
3. Install dust seal as illustrated, and inner cone.
4. Position hub onto spindle and fill surrounding cavity with grease.
5. Assemble outer cone, washer and nut.
6. Tighten nut while rotating hub until there is a slight drag.
7. Turn nut back approximately 1/2 turn to align cotter pin hole with notches on nut.
8. Install cotter pin and bend legs sideways over nut.
9. Fill dust cap half full of grease and gently tap into position.



5.3.5 HYDRAULIC CYLINDER REPAIR

Complete seal kits and cylinder components are available when repair work becomes necessary due to excessive oil leakage or damage to various parts.

NOTE: Complete rebuilt cylinder may be available. Contact your dealer for further information.

Disassembly:

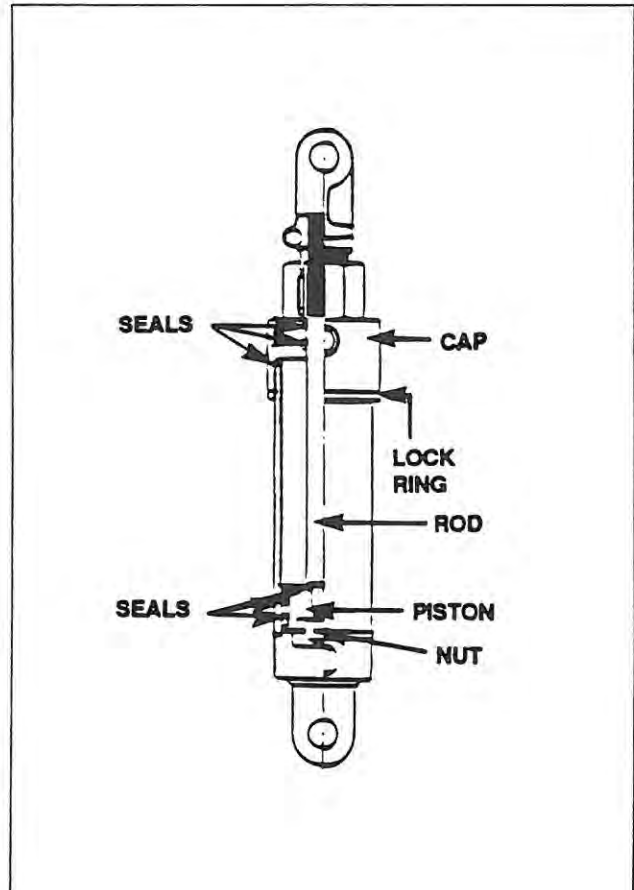
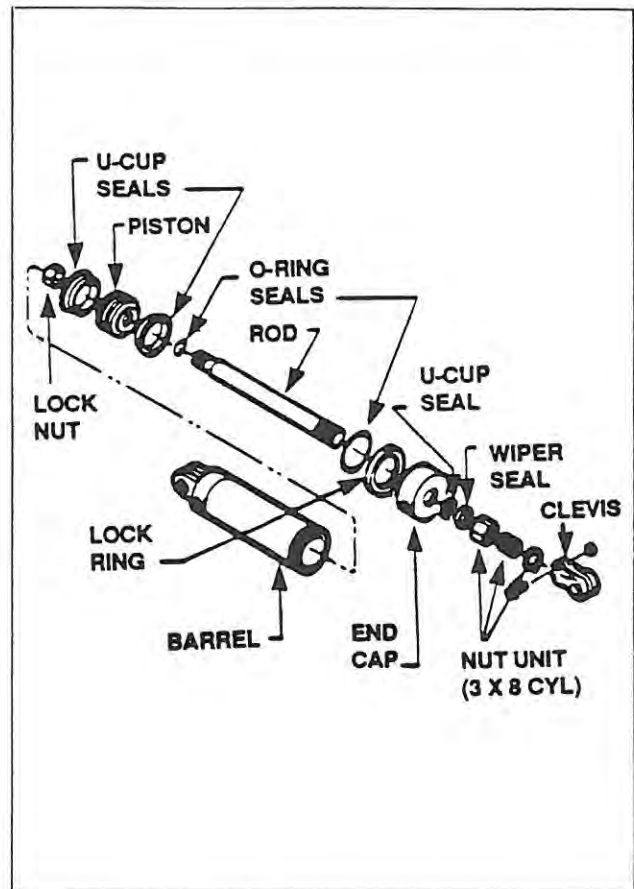
1. Loosen lock ring and turn off end cap.
2. Carefully remove piston, rod and cap combination.
3. Disassemble piston from rod by removing lock nut.

NOTE: DO NOT clamp rod by chromed surface.

4. Slide off end cap.
5. Remove seals and inspect all parts for damage.
6. Install new seals and replace damaged parts with new components.

Assembly:

1. Reinstall rod through end cap.
2. Secure piston to rod with lock nut. Torque to 225 ft. lbs.
3. With cylinder body held gently in a vise, insert piston and rod combination using a slight rocking motion.
4. Thread lock ring fully onto barrel.
5. Turn end cap fully against lock ring then back off end cap to align ports.
6. Tighten lock ring against end cap using a drift punch and hammer.



6 TROUBLESHOOTING

The Super Picker 7800 uses a PTO driven reel to convey rocks from the grille into a hopper box for picking rocks. It is a simple and reliable system that requires minimum maintenance.

In the following section, we have listed some of the problems, causes and solutions that you may encounter.

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

PROBLEM	CAUSE	SOLUTION
Grille creeps down during operation.	Tractor hydraulic leak.	To verify raise grille, disconnect at tractor and observe if grille creeps down. If not, repair tractor hydraulics.
	Damaged hoses or fittings.	Search for leaks with a piece of paper (not by hand). Repair as necessary.
	Hydraulic cylinder leak.	Replace seals or damaged components.
Grille raises too slowly.	Low tractor pressure.	Check pressure (1500-2500 PSI) and service as necessary.
Loaded box will not lift for dumping.	Restriction in hoses.	Disconnect hoses and blow out lines.
Hitch pole will not swing in-to position.	External leaks in hydraulic system.	Search for leaks with a piece of paper (not by hand). Repair as necessary.
Oil accumulation on hydraulic cylinder shaft.	Oil bypassing seals.	Seal manufacturer advises that small amounts of oil getting past seals is desirable. If problem becomes excessive, replace seals.
Excessive picking of dirt.	Grille set too low.	Maintain grille just skimming ground.
Excessive rock pile-up at bottom of grille.	Excessive torque limiter slippage.	Check and adjust unit.
	Reel speed too slow in relation to forward travel.	Change tractor gear range.
	Worn reel springs or inadequate spring tension.	Replace springs.

PROBLEM	CAUSE	SOLUTION
Chain jumps off sprockets or skips over teeth.	Sprocket misalignment.	Check and adjust.
	Chain overstretched.	Remove half link. If excessive wear, replace chain.
	Inadequate chain tension.	Check and adjust.
Paddle teeth contact grille teeth.	Reel misaligned.	Realign reel.
	Bent teeth.	Straighten teeth.

7 SPECIFICATIONS

7.1 MECHANICAL

MODEL:

- Degelman Super Picker 7800

TRACTOR REQUIREMENTS:

- 70 Horsepower (52 kW) minimum
- Hydraulic pressure output-1500-2500 psi (10,300-17,300 kPa)

ROCK PICKER DIMENSIONS:

- Ground clearance 12 in. (305mm)
- Working width 11 1/2 ft. (3.5m)
- Transport width 10 ft. (3m)
- Length 14 1/2 ft. (4.4m)
- Transport height 7 ft. (2.1m)

FRAME CONSTRUCTION:

- .375 in. (9.5mm) wall HSST

HOPPER BOX:

- 2 1/2 cu. yd. (1.9m³) capacity
- Spring steel grating-replaceable
- 48 in. (1220mm) dumping height

WHEEL/HUBS:

- Two 16.5L x 16.1 - 6 ply rating tubeless tires
- 8 bolt rim
- 2 1/2 in. (63.5mm) dia. axles in heavy duty hub units

GRILLE:

- 6 ft. (1.8m) wide
- Teeth-solid round bar
- Replaceable cast tips

REEL:

- 3 paddles-shock protected with 6 compression type springs.
- Replaceable steel bushings.
- Teeth-hard surface

HYDRAULICS:

- Two dumping cylinders 3 1/2 x 34 in. stroke
- One swing pole cylinder 3 x 8 in. stroke

CHAIN:

- #100 roller chain

TYPES OF DRIVES

- PTO drive machines-540 or 1000 RPM equipped with torque limiter slip clutch at heavy duty gear box (1000 PTO is equipped with 80° CV joint at tractor)

HITCH POLE:

- Hydraulic angling

SAFETY FEATURES:

- Mechanical safety transport bar (red)
- Drives are fully shielded and guarded
- Safety decals throughout

SPECIFICATIONS AND DESIGN SUBJECT TO CHANGE WITHOUT NOTICE

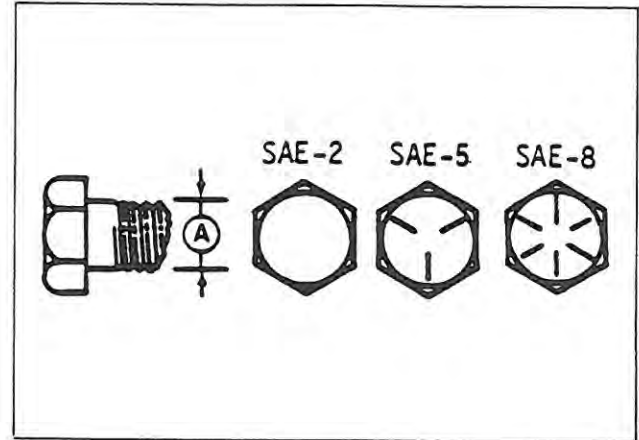
7.2 BOLT TORQUE

Checking Bolt Torque:

The tables given below give correct bolt torque 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.

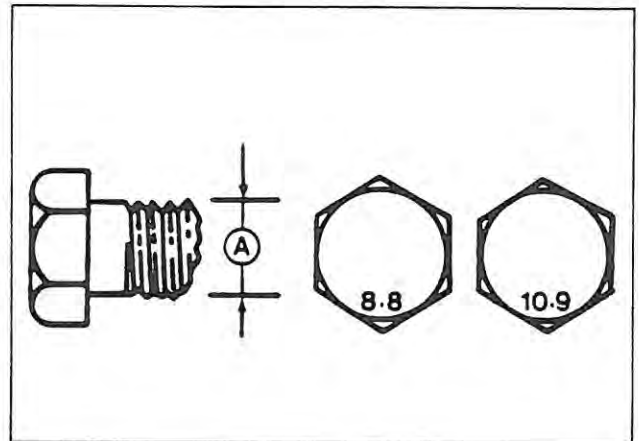
Imperial Torque Specifications:

BOLT DIAMETER	BOLT TORQUE					
	SAE 2		SAE 5		SAE 8	
A	N.m [lb-ft]	N.m [lb-ft]	N.m [lb-ft]	N.m [lb-ft]	N.m [lb-ft]	N.m [lb-ft]
1/4 in.	8 [6]	12 [9]	16 [12]			
5/16 in.	13 [10]	24 [18]	34 [25]			
3/8 in.	27 [20]	41 [30]	51 [45]			
7/16 in.	41 [30]	63 [50]	95 [70]			
1/2 in.	61 [45]	101 [75]	149 [110]			
9/16 in.	95 [70]	150 [110]	210 [155]			
5/8 in.	128 [95]	210 [155]	290 [215]			
3/4 in.	225 [165]	365 [270]	520 [385]			
7/8 in.	230 [170]	590 [435]	840 [620]			
1 in.	345 [255]	895 [660]	1250 [930]			



Metric Torque Specifications:

BOLT DIAMETER	BOLT TORQUE			
	8.8		10.9	
A	N.m	[lb-ft]	N.m	[lb-ft]
M3	0.5	[0.4]	1.8	[1.3]
M4	3	[2.2]	4.5	[3.3]
M5	6	[4]	9	[7]
M6	10	[7]	15	[11]
M8	25	[18]	35	[26]
M10	50	[37]	70	[52]
M12	90	[66]	125	[92]
M14	140	[103]	200	[148]
M15	225	[166]	310	[228]
M20	435	[321]	610	[450]
M24	750	[553]	1050	[774]



7.3 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 (in.)	NUT SIZE ACROSS FLATS (in.)	RECOMMENDED TURNS to TIGHTEN (AFTER FINGER TIGHTENING)			
		TORQUE VALUE*		(Flats)	(Turns)
		(N.m)	(lb-ft)		
3/16	7/16	8	6	1	1/8
1/4	9/16	12	9	1	1/8
5/16	5/8	16	12	1	1/8
3/8	11/16	24	18	1	1/8
1/2	7/8	46	34	1	1/8
5/8	1	62	46	1	1/8
3/4	1-1/4	102	75	3/4	1/8
7/8	1-3/8	122	90	3/4	1/8

7.4**PUBLICATIONS**

Additional copies of the manuals are available through your local dealer. If the dealer is unable to assist you, contact Degelman Industries Ltd. and order per Part No. below.

142376 Manual - 7800-Assembly
142377 Manual - 7800-Operators
142378 Manual - 7800-Parts

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- **complete repair parts lists.**
- **written warranty protection.**
- **ten year parts availability.**

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