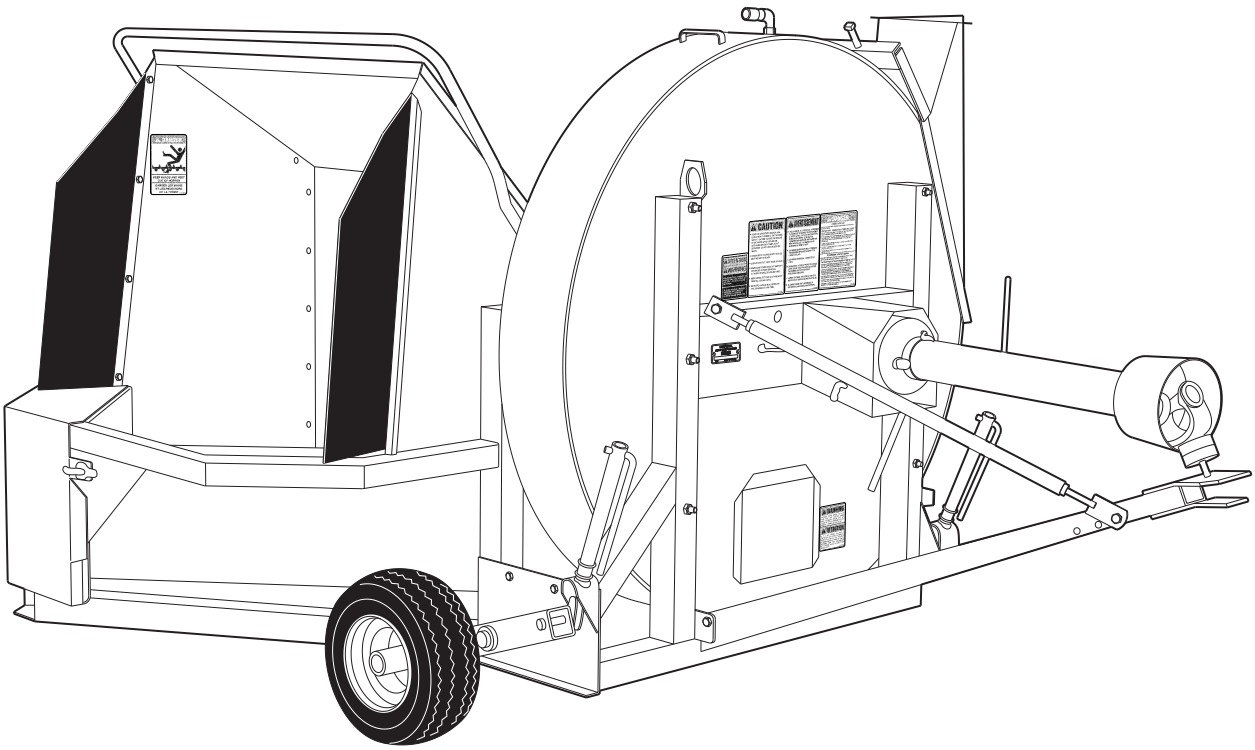
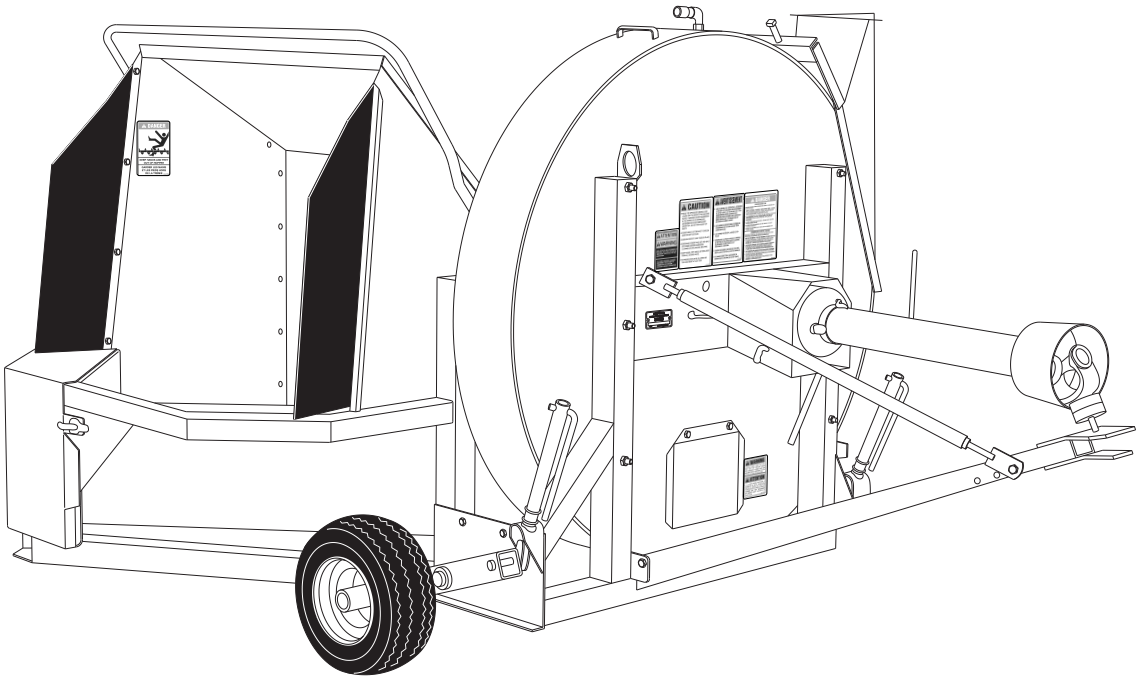
DION Ag Inc.



Forage Blower
Operator's manual

Manual No. S5505E904E

FORAGE BLOWER



TO OUR CUSTOMER

We appreciate your confidence in DION Farm Equipment and thank you for your trust. In preparing this manual, we hope we have furnished you with a valuable tool for operating and maintaining this fine machine. Use this manual as your guide. Practicing the instructions given here will result in many years of dependable service from your machine.

Your Dealer can give you assistance with parts and specially trained personnel to assist you in repair and maintenance.

Call your Dealer if you need any assistance or information.

Manual No. S5505E904E

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SPECIFICATIONS

(Specifications and design are subject to change without notice and without liability therefore.)

MAIN FAN

Main fan	59” (150cm)
Blades	8
RPM (540 PTO)	540
RPM (1000 PTO)	650
Speed at blade tip:	
540 RPM (540 PTO)	8340 ft/min. (2542m/min)
650 RPM (1000 PTO)	10038 ft/min. (3060m/min)

MAIN AUGER

Length	55” (140cm)
Diameter	14” (36cm)
Pitch	10” (25cm)
RPM (540 PTO)	500
RPM (1000 RPM)	601

Overall length with pole	129” (378cm)
Overall width	84” (213cm)

DRUM OUTLET HEIGHT

Transportation position	70” (178cm)
Operating position (wheels lowered)	61” (155cm)

HOPPER

Height (operating position)	21” (53cm)
Inlet width	42” (107cm)
Inlet depth	30” (76cm)

Tires	16.5 X 6,5-8
Weight	1350 lbs (610Kg)

RECOMMENDED TRACTOR POWER

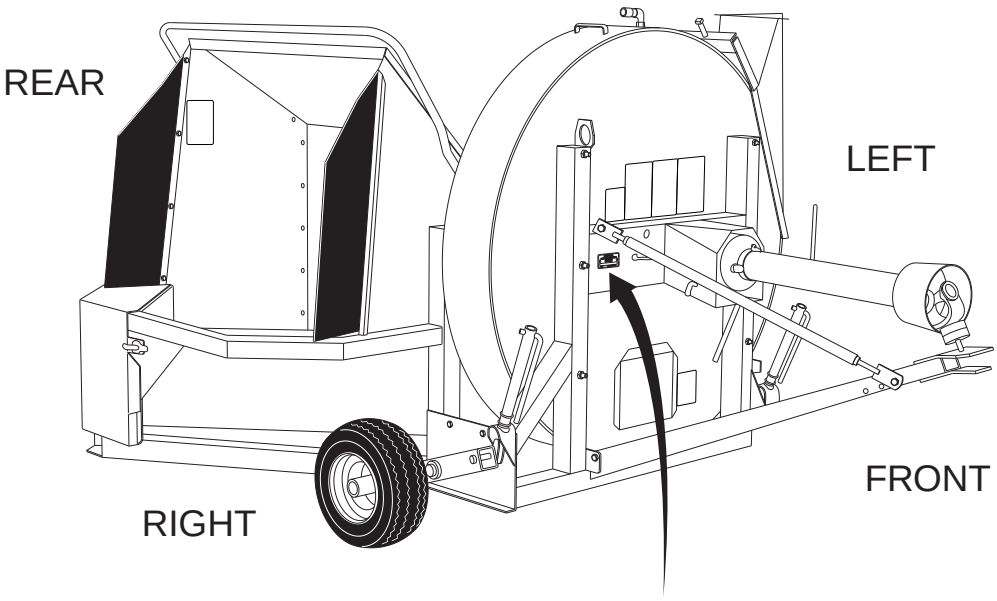
540 RPM - 14” dia. auger	60 to 160 HP
540 RPM - 16” dia. auger	140 to 200 HP
1000 RPM - 14” dia. auger	130 to 200 HP
1000 RPM - 16” dia. auger	150 to 200 HP

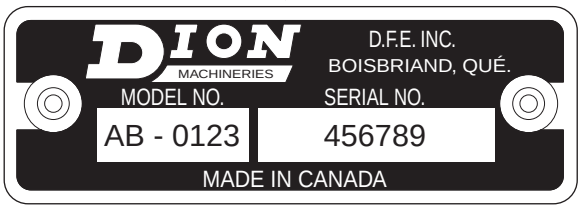
SERIAL NUMBER LOCATION

For your convenience, write down in full in this manual both the model and serial numbers of your machine, as shown on the name plate illustrated below. Always mention both the model and the serial numbers when ordering parts or regarding any other correspondence referring to your machine

Write down your number here:

MODEL NO.	SERIAL NUMBER





CHECK LIST

PRE-SEASON CHECKS

- ☐ Check auger brake.
- ☐ Check tension of belts. Check all sheaves for correct alignment.
- ☐ Check all adjustable components for correct setting (blower and auger).
- ☐ Check tire pressure. See specifications.
- ☐ Perform complete lubrication and servicing of the machine according to Servicing. Make sure all grease fittings are in place and taking grease properly. Check gearbox fluid levels if you have the option.
- ☐ Look for loose or missing bolts and parts.
- ☐ Run the machine in a stationary position at half-speed for a short period of time. Shut off tractor engine. Make sure all moving parts have stopped, then inspect bearings for over-heating, excessive wear, or loose flanges and lock collars.
- ☐ Make sure the proper operating adjustments have been made.
- ☐ Make sure all shields are installed. Review Safety Precautions.
- ☐ Check for wear on parts (paddles, blower and auger bottoms, etc.).

DAILY CHECKS

- ☐ Check auger brake
- ☐ Remove all crop residue and wipe off oil and dirt.
- ☐ Lubricate and service the machine according to the Servicing section.
- ☐ Check belt tension. Check all sheaves for correct alignment.
- ☐ Check tire pressure. See Specifications.
- ☐ Make sure Blower is hooked to tractor correctly, and that the safety chain is installed securely. Make sure all controls are operable.
- ☐ Make sure that all shields are in good condition on the blower (with special attention to the driveline shields).

FOREWORD

TO OUR CUSTOMER

The following pages and illustrations are printed to help supply you with the knowledge to better operate and service your DION Forage Blower.

Any piece of equipment needs, and must have a certain amount of service and maintenance to keep it in top running condition. We have attempted to cover all the adjustments required to fit most conditions; however, there may be times when special care must be taken to fit a condition.

Study this operator's manual carefully and become acquainted with all the adjustments and operating procedures before attempting to operate your new equipment. Remember, it is a machine and it has been designed and tested to do an efficient job in most operating conditions and will perform in relation to the service it receives.

If special attention is required for some conditions, ask your DION Dealer; his parts and Service Organization will be glad to help and answer any questions on operation and service of your new machine.

THIS MANUAL SHOULD REMAIN WITH THE MACHINE WHEN SOLD

This manual was prepared from the latest product information available at publication time. The Company reserves the right to make changes at any time without notice.

The safety section of your Operator's manual is intended to point out some of the basic safety situations which may be encountered during the normal operation and maintenance of your Forage Blower, and to suggest possible ways of dealing with these situations. This section is NOT a replacement for other safety practices featured in other sections of this book.

WARRANTY INFORMATION

Your DION Warranty for this machine appears on your copy of the Retail Purchase Order and Warranty Terms and Conditions Statement which you received from your dealer when you purchased the Blower.

As indicated on the Retail Purchase Order signed by you and your dealer, you, the equipment purchaser, shall assume charges for service calls or transportation of equipment to and from the location of servicing DION dealer.

SAFETY

The safety of the operator is one of the main concerns in designing and developing a new Forage Blower. Designers build in as many safety features as possible. However, every year many accidents occur which could have been avoided by proper thinking and a more careful approach to handling farm machinery and implements.

Read and implement the safety instructions detailed in the safety section of this manual.

SAFETY ALERT SYMBOL

The symbol above calls your attention to instructions concerning your personal safety. It is found throughout the manual as well as on the machine to point out specific hazards and ways to avoid them. Always follow the instructions to minimize the risk of personal injury or death.

DANGER, WARNING AND CAUTION
Whenever you see the words and symbols shown below, used in this manual and on decals, you MUST take note of their instructions as they relate to personal safety.

DANGER: Indicates an imminently hazardous situation that, if not avoided, will result in DEATH OR VERY SERIOUS INJURY.

WARNING: Indicates a potentially hazardous situation that, if not avoided, could result in DEATH OR SERIOUS INJURY.

CAUTION: Indicates a potentially hazardous situation that, if not avoided, may result in MINOR INJURY.

IMPORTANT: *The word IMPORTANT is used to identify special instructions or procedure which, if not strictly observed, could result in damage to, or destruction of the machine, process or its surroundings.*

NOTE: *The word NOTE is used to indicate points of particular interest for more efficient and convenient repair or operation.*

SIGNS

WARNING: DO NOT remove or obscure Danger, Warning, Caution safety signs or Instruction signs that are not readable or are missing. Replacement signs are available from your Dealer in the event of loss or damage. The actual location of these Safety signs is illustrated on pages 6.

FOLLOW A SAFETY PROGRAM

For proper operation
For proper operation of a Forage Blower, you must be a qualified and authorized operator. To be qualified, you must read and understand the written instructions supplied in this Operator's Manual, have training, and know the safety rules and regulations for the job.

Some local regulations specify that no one under the age of 16 years, for example, may operate power machinery. This includes tractors. It is your responsibility to know what these regulations are, and obey them, in the operating area or situation. These will include, but are not limited to, the following instructions for proper operation.

WARNING: An operator should not use alcohol or drugs which can change their alertness or co-ordination. *An operator on prescription or "over the counter" drugs needs medical advice on whether or not he or she can properly operate machines.*

A WORD TO THE OPERATOR

It is YOUR responsibility to read and understand the safety section in this manual before operating your machine. You must follow these safety instructions that take you step by step through your working day.

In reading this section, you will note that illustrations have been used to highlight certain situations. Each illustration is numbered and the same number appears in the text in parenthesis. This number is placed at the end of the written text that refers to the illustration.

Remember that YOU are the key to proper operation of the machinery. Good safety practices not only protect you, but also the people around you. Study the features in this manual and make them a working part of your safety program. Keep in mind that this safety section is written only for this type of machine. Practice all other usual and customary working precautions, and above all. **REMEMBER - SAFETY IS YOUR RESPONSIBILITY. YOU CAN PREVENT SERIOUS INJURY OR DEATH.**

WARNING: In some of the illustrations used in this Operator Instruction Book, panels or guards may have been removed for clarity. Never operate the machine without these components in position. If the removal of panels or guards is necessary to make a repair, they MUST be replaced before operation.

- Wear appropriate clothing, safety boots or shoes. Do not operate the machine when visibility is bad, or during night, in poor lighting.
- Keep children away from the machine at all times.
- Carefully read all safety signs applied on the machine. If they are damaged, replace them immediately.
- Keep hands and clothes away from all moving parts.
- Never lubricate or clean any part while the machine or tractor engine is running.
- If a feeding or throwing mechanism should become jammed, never attempt to unblock it or remove any material when the machine is in motion or the tractor engine running.
- Never remove guards or make adjustments while the machine or tractor engine is running.
- Before starting the tractor engine, make sure all guards, shields, and doors are in place and properly secured and check the machine thoroughly for possible loose parts or bolts and tighten them.
- Be very careful when adjusting the fan blades and hopper auger.
- Before operating make sure that all projection pipes are properly fastened.
- Keep hands and feet out of hopper when the driveline is coupled to the tractor and the tractor engine is running.
- Do not climb over or around the hopper when the forage blower is in operation.
- If it is necessary to enter a silo, make sure it is well ventilated.
- Always keep the forage blower hitch pinned to tractor draw bar when operating.
- Make sure all rotating parts are stopped and the tractor engine is turned off before cleaning or servicing fan and conduct.
- After having performed any adjustments, be sure that there are no tools in or on the machine.

PTO OPERATION

- POWER-TAKE-OFF DRIVE - Before starting the tractor engine make sure that the PTO driveline locking device is properly engaged onto both the tractor and equipment drive shafts.
- Never wear loose clothing and keep people, especially children away from the driveline.
- Do not connect a tractor with a PTO speed of 540 RPM on a machine equipped with a 1000 RPM drive. Do not connect a tractor with a PTO speed of 1000 RPM on a machine equipped with a 540 RPM drive.
- Never proceed to the starting of the machine before making sure all PTO, machine and tractor shields are well installed in place.
- The PTO driveline shields should turn freely, be well connected and kept in good condition.
- Never step across any PTO driveline.
- Never use the PTO driveline as a step.
- Keep at least your height away from a rotating driveline.

RECOMMENDED WORKING AREA

The diagram in figure 1 shows the recommended working area. It should be marked off with colored nylon or plastic ropes as portable barriers to define exactly the designated working areas.

WARNING: To prevent personal injury, keep all persons out of the working area.

WARNING: To prevent personal injury, the work area must be smooth, clean and free of debris and tools.

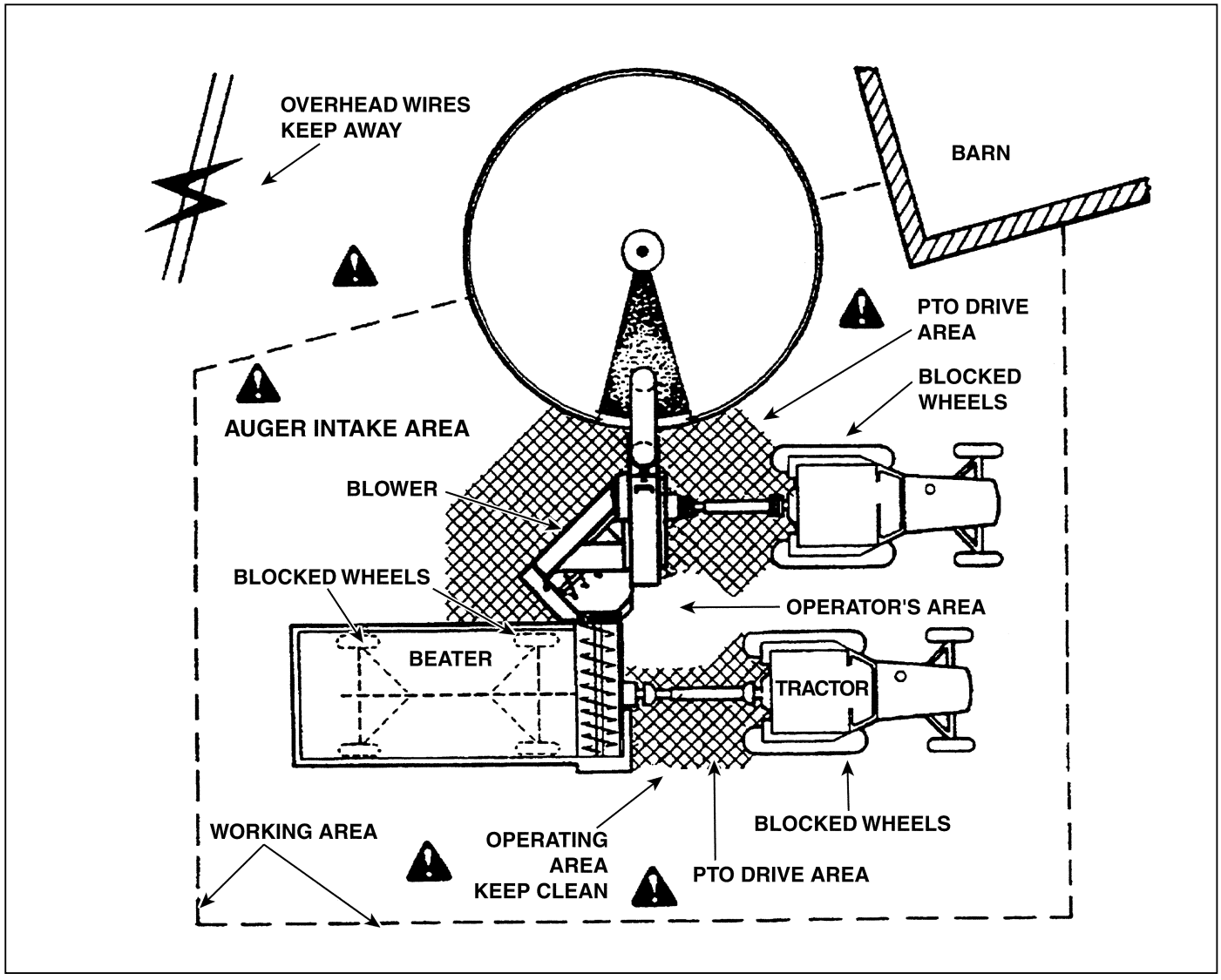


Figure 1 *Typical working area diagram*

PROCEDURES FOR STOPPING THE FORAGE BLOWER

WARNING: To prevent personal injuries, do not perform any kind of maintenance work while the machine is running.

Before cleaning, adjusting, or greasing, the following procedures should be followed to stop the Forage Blower:

1 Disengage the tractor PTO.

2. Stop the tractor engine. Set parking brake and remove the key.

3. Wait until all rotating movements have come to a complete stop.

4. Remove the PTO chain.

5. Remove the driveline from the tractor output shaft and attach it on its special support.

WARNING: Secure the PTO driveline to the support to prevent rotation of the fan or auger.

6. Block all equipment wheels.

GUARDS AND SHIELDS - FIGURE 2

The Forage Blower is equipped with guards and shields at various locations. Observe the safety signs and follow their instructions.

All guards and shields factory installed should be in place and maintained in good condition.

1. The telescopic driveline which couples to the tractor is covered with a rotating shield (item 1).

2. A hinged guard covers the driveline (item 2).

3. A hinged guard covers the "V" belt mechanism, driving the hopper auger (item 3).

4. A hinged guard covers the main fan rear mechanism (item 4).

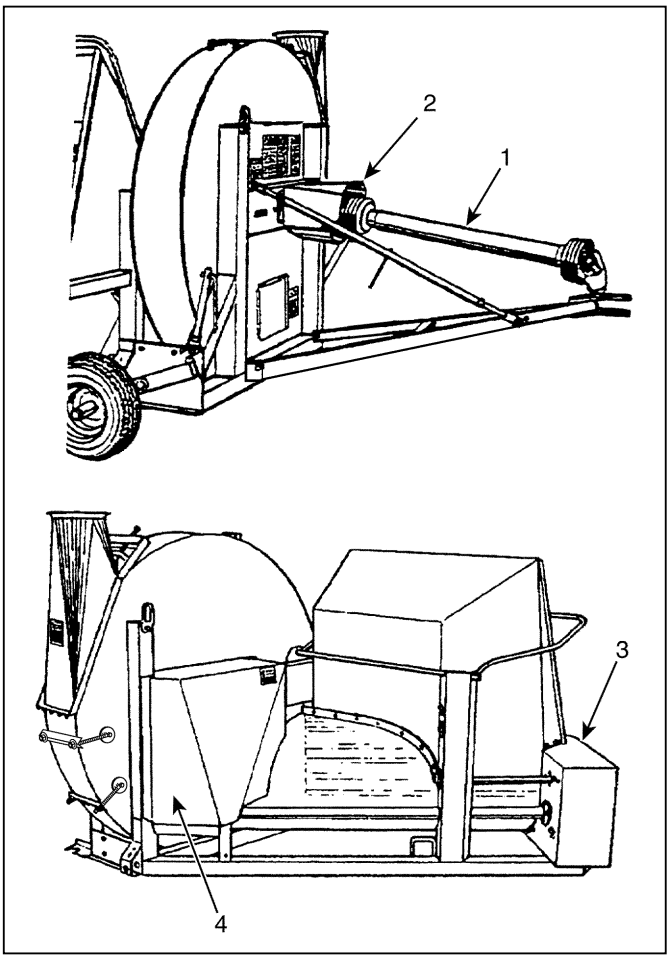


Figure 2 *Guards and shields*

SAFETY SIGN IDENTIFICATION

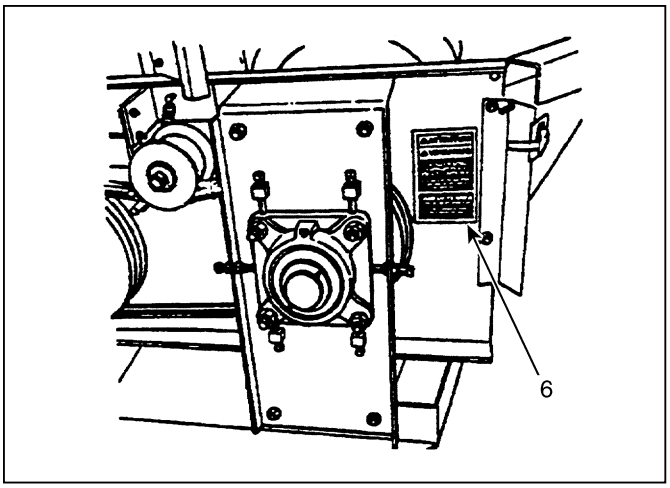
IMPORTANT: All safety signs should be kept as clean and free of dust as possible.

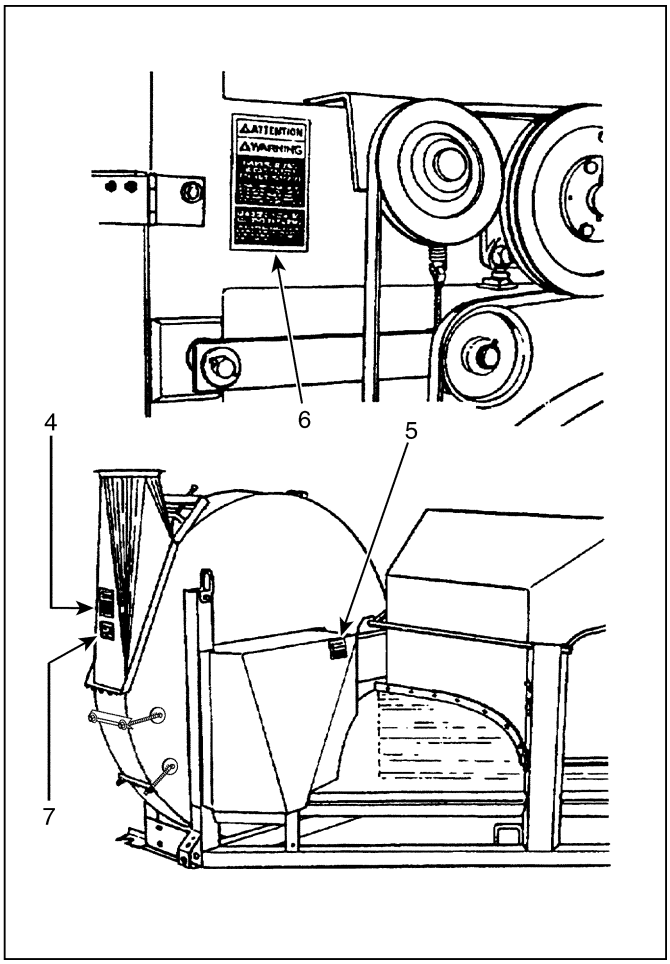
SAFETY SIGN APPLICATION PROCEDURE

1. The surface should be free from dirt, grease, earth, or any other foreign material.

2. When the surface is dry, remove a portion of the backing paper and apply the decal in part and align its position as per the surrounding parts. Slowly peel off the remaining backing paper and apply hand pressure.

3. Press slightly on the surface of the safety sign to remove all air bubbles.





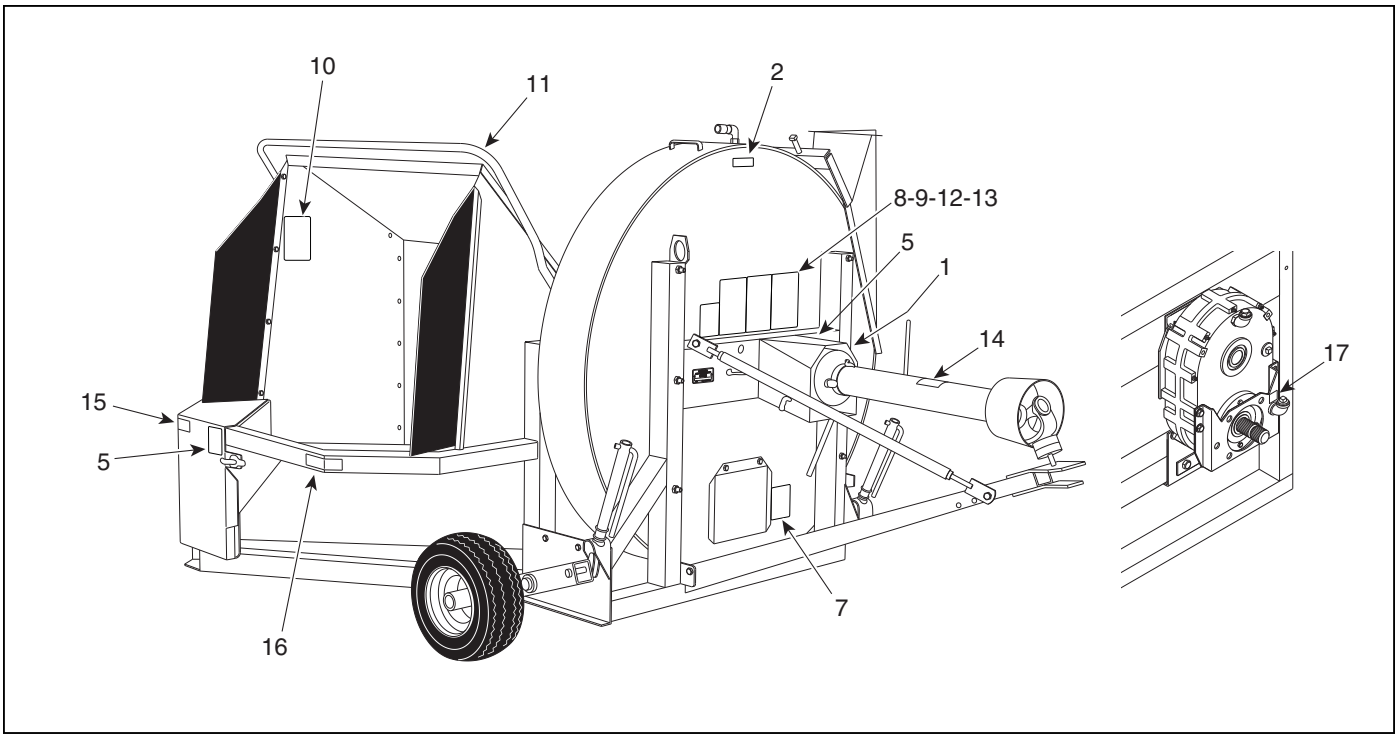


Figure 3 *Safety sign location*

SET-UP INSTRUCTIONS - FIGURE 4

Remove all cables and/or wires used for transportation.

Remove the draw bar (item 12) by unscrewing the fan bearing 5/8 dia. nut (item 13). Also remove the three (3) supplementary 5/8" dia. nuts (item 8) from the other bolts installed on the same bearing (item 9).

Attach the draw bar to the Forage Blower main frame using bolts (item 4) already installed. Do not tighten these bolts.

Attach the turnbuckle (item 5) to the Forage Blower using the bolts (item 6) already in place. Adjust the draw bar height in relation to the tractor.

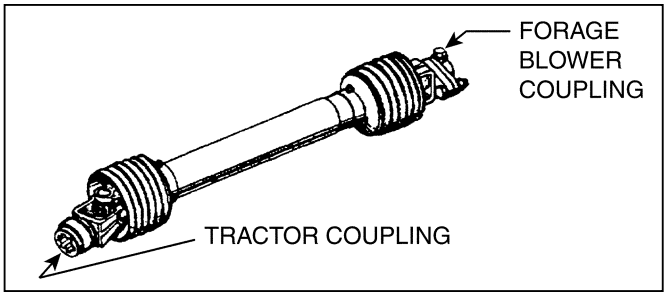
Carry out this adjustment making sure both the Forage Blower and the Tractor are on a level terrain. (See figure 6 page 11 - driveline Alignment).

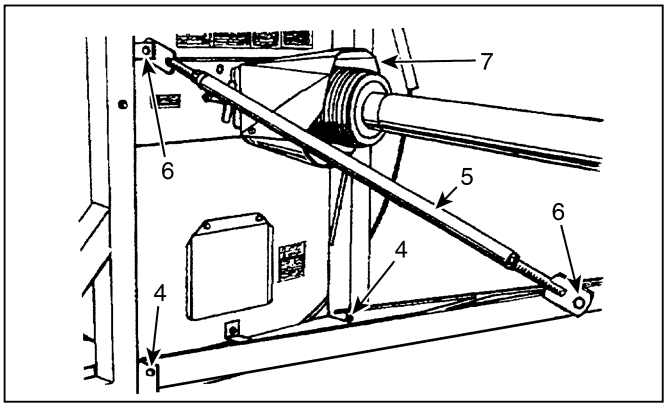
Tighten the draw bar nuts (item 4) and the turnbuckle nut (item 6) by applying a light pressure.

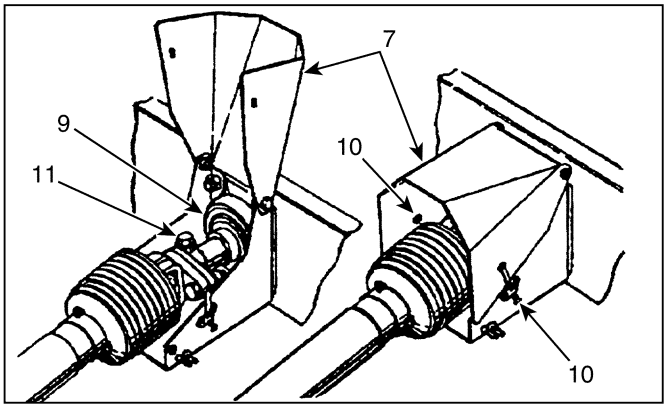
Bolt the driveline guard (item 7) onto the fan bearing (item 9) using the four (4) 5/8" dia. supplementary nuts already removed. Open the driveline guard (item 7), slide the driveline on item 1 and bolt it to the fan shaft. Tighten the bolt (item 9) on the driveline at 103 N-M. Close the guard and secure using the locks (item 10).

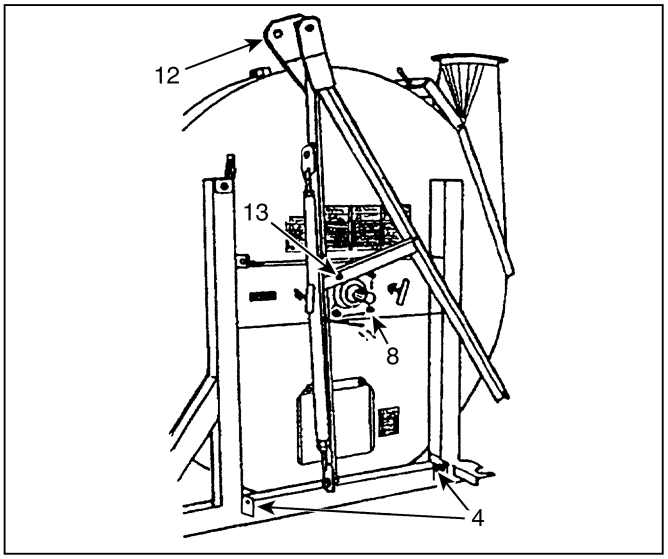
Install the driveline (item 1) on its support (item 2) by pushing the slide collar (item 3). Make sure it is locked securely in place.

Lubricate the Forage Blower (refer to the Lubrication Instructions) and make sure that all rotating parts move freely.









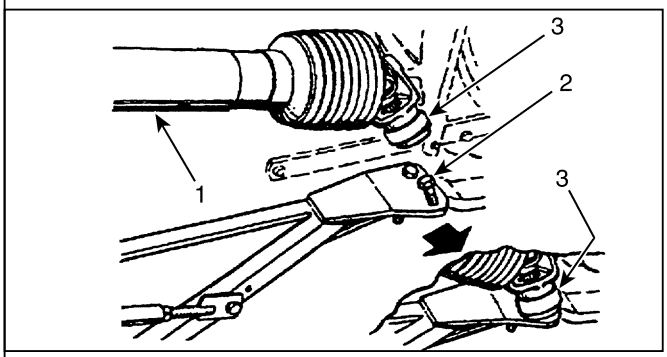


Figure 4 *Set-up instructions*

1000 RPM GEARBOX ASSEMBLY INSTRUCTIONS - FIGURE 5

Must be installed on a blower with main shaft specially designed for a 1000 rpm transmission (without grooves, for drive-line anchor bolt)

Follow the step-by-step instructions below to install a 1000 RPM gearbox.

1. Remove driveline.
2. Remove the guard (item 1).
3. Remove the 2 nuts (item 2) and fasten the U support (item 8).
4. Install the plate (upper gearbox support) (item 3) using 4 bolts 1/2" X 1" lg and 4 lock washers 1/2".
5. Install the plate (lower gearbox support) (item 4) using 3 bolts 5/16" X 3 1/2" Lg , 12 washers 5/16" (item 6) (the number of washers may vary, according to the adjustment), 3 lock nuts 5/16" and 3 spacers (item 14).

NOTE: The 12 *washers (item 6) must be inserted between the plate (item 4) and the gearbox as needed. These washers will set the gearbox parallel to the machine frame and thus avoiding any pressure on the drive shaft*.

6. Slide the gearbox onto the shaft (item 5).
7. Align the gearbox as shown on page 26.
8. Re-adjust the lower plate (item 4) with the flat washers (item 6).
9. Install the plate (item 7) on the plate (item 4) onto the U support (item 8).
10. Screw in the upper elbow (item 9). Use teflon tape.
11. Screw in the fitting (item 10). Use teflon tape.
12. Screw in 4 bolts 5/8" X 1 1/2" lg (item 15) with 4 nuts 5/8" on the plate (item 11).
13. Install the plate (item 11) on the gearbox using 2 bolts 1/2" X 1" and 2 lock washers 1/2".
14. Install the lower elbow (item 12). Use teflon tape.
15. Fill up the gearbox with oil. Pour oil into the upper elbow (item 9) until the oil comes out of the lower elbow (follow recommendations on page 17).
16. Put the elbow cap back on (item 17).
17. Install the vent (item 13).
18. Install the guard (item 1) with 4 nuts 5/8".
19. Install the driveline.
20. Install the guard (item 16).
21. Install the chain (item 18) on the draw bar with a pair of pliers.

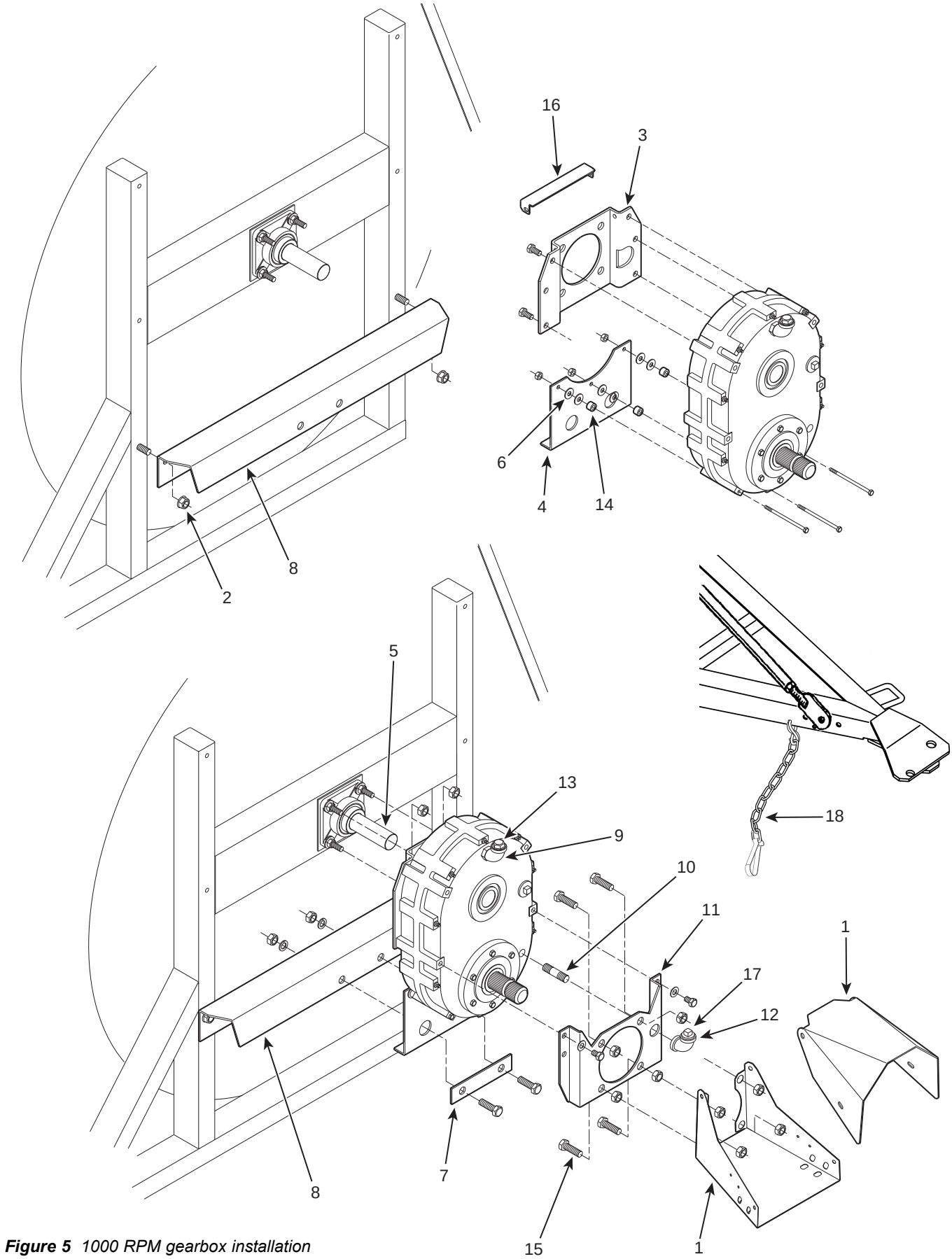


Figure 5 *1000 RPM gearbox installation*

DRIVELINE SHAFT ALIGNMENT - FIGURE 6

NOTE: All driveline (item 1) should be aligned as straight as possible. Under no circumstances should the operating angle of a driveline exceed 10 degrees.

CAUTION: **The driveline should never extend beyond 63" (1,6 m) that is when measured at both ends of the driveline (item 2).**

NOTE: *Verify the condition of all driveline shields before operating any machine.*

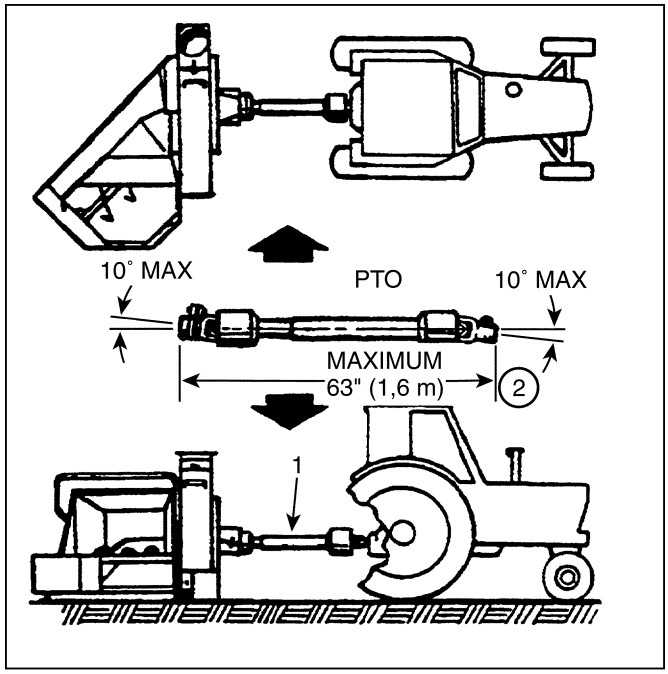


Figure 6 *Driveline shaft alignment*

The succeeding steps should be followed to ensure efficient operation.

WARNING: Always keep blower hitch pinned to tractor draw bar when operating the blower.

The tractor parking brakes should be applied, and the wheels blocked then place the forage blower at "ground position".

Connect the driveline to the tractor and verify carefully if the locking devices are properly engaged. Hook the safety chain to the tractor.

RUNNING SPEED

WARNING: **Make sure that all guards, shields and doors are in place and properly secured before starting the tractor engine.**

Operate the machine at half speed for five (5) minutes to loosen up bearings and to be sure that they are not heating. The machine should then be run at its normal speed for a short period of time. If everything is found satisfactory, the machine can be used at a moderate unloading speed.

NOTE: It is recommended to become familiar with the operation of the Forage Blower at the time of the first 4 or 5 forage box loadings before operating the machine at its maximum capacity.

NOTE: When operating, it is recommended to maintain tractor engine at FULL RUNNING SPEED: PTO must turn between 540 RPM (minimum) and 630 RPM (maximum) for 540 PTO units and between 1000 RPM (minimum) and 1050 RPM (maximum) for 1000 PTO units.

The hopper auger control lever should be disengaged (figure 9, page 13, item 4).

Start the tractor engine and bring the driveline speed to 630 R.P.M. MAXIMUM.

Engage the hopper auger by raising the auger control lever. Start unloading forage in the hopper.

DANGER: **Keep hands and feet out of hopper.**

CAUTION: **When there is no forage to be blown the auger should be disengaged.**

WARNING: Never walk on or near the hopper when it is running.

CAUTION: Always make sure the auger does not turn when the auger control lever is disengaged. If it does turn, refer to the ADJUSTMENTS section.

DANGER: If the feeding or throwing mechanism should become jammed, never attempt to unblock it or remove any material when the machine is in motion or the tractor engine is running.

WHEEL LIFTING SYSTEM - FIGURE 7

Before operating the Forage Blower, lower it to the ground. Use wood blocks under the frame to support the Blower on the ground.

To level, simply turn the handles (item 1) on both sides until the wheels are off the ground.

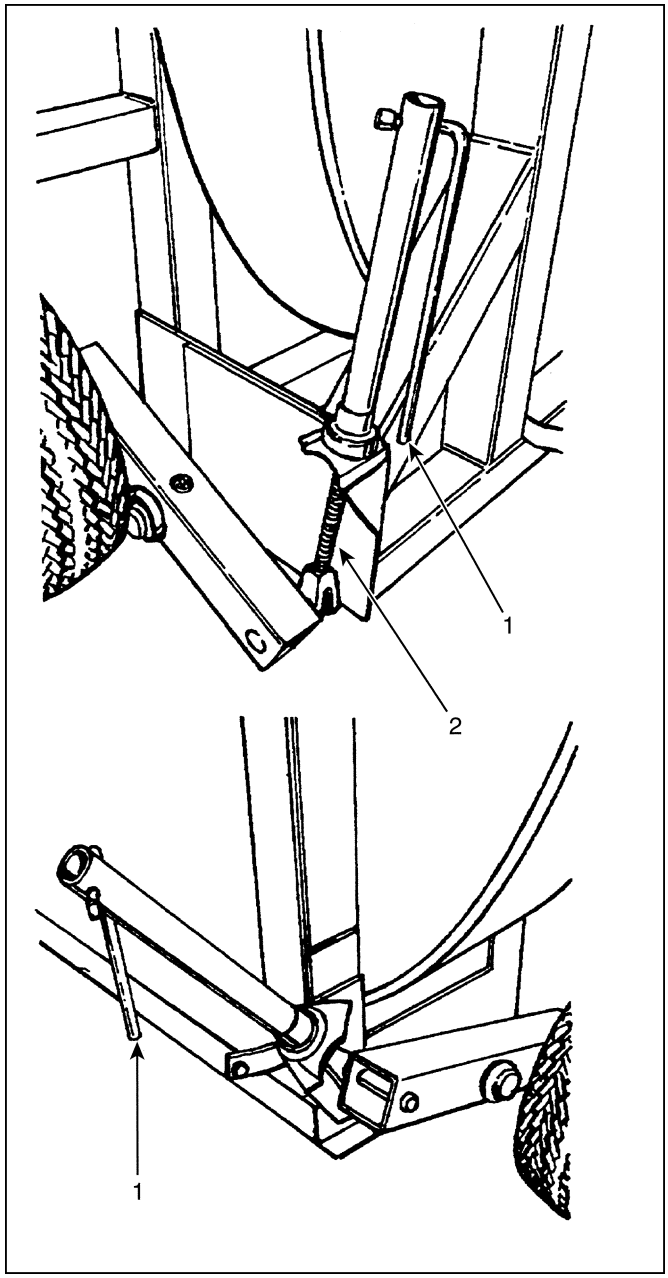


Figure 7 *Wheel lifting system*

TRANSPORTING INSTRUCTIONS WITHOUT GEARBOX - FIGURE 8

1. Install the driveline end (item 1) coupling in its support (item 2). Push the yoke ring then release it.

2. Install the safety chain (item 3) on the draw bar and tractor.

3. Lift the Forage Blower up by lowering the wheels at their maximum.

NOTE: *Always use a hitch pin with a safety pin (item 4) for travelling.*

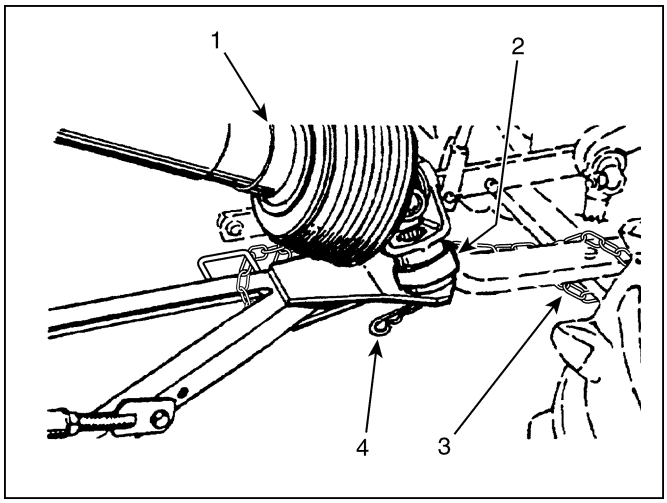


Figure 8 *Transportation instructions*

When the chain has been fastened, make a test run by moving the tractor forward and turning to the right and to the left to check the chain length. Should the chain be too short, or too long, make the necessary adjustments before going on public roads.

TRANSPORTING INSTRUCTIONS FOR BLOWERS EQUIPPED WITH 1000 RPM GEARBOX - FIGURE 9

1. Remove the tractor end of the driveline.

2. Use the safety chain (item 1) to fasten the Blower end of the driveline (item 2) to the Blower Tow bar (item 3).

NOTE: Always use a hitch pin with a safety pin (item 4, fig. 8) for travelling.

NOTE: Maximum speed is 15 MPH (25 km/h)

When the chain has been fastened, make a test run by moving the tractor forward and turning to the right and to the left to check the chain length. Should the chain be too short, or too long, make the necessary adjustments before going on public roads.

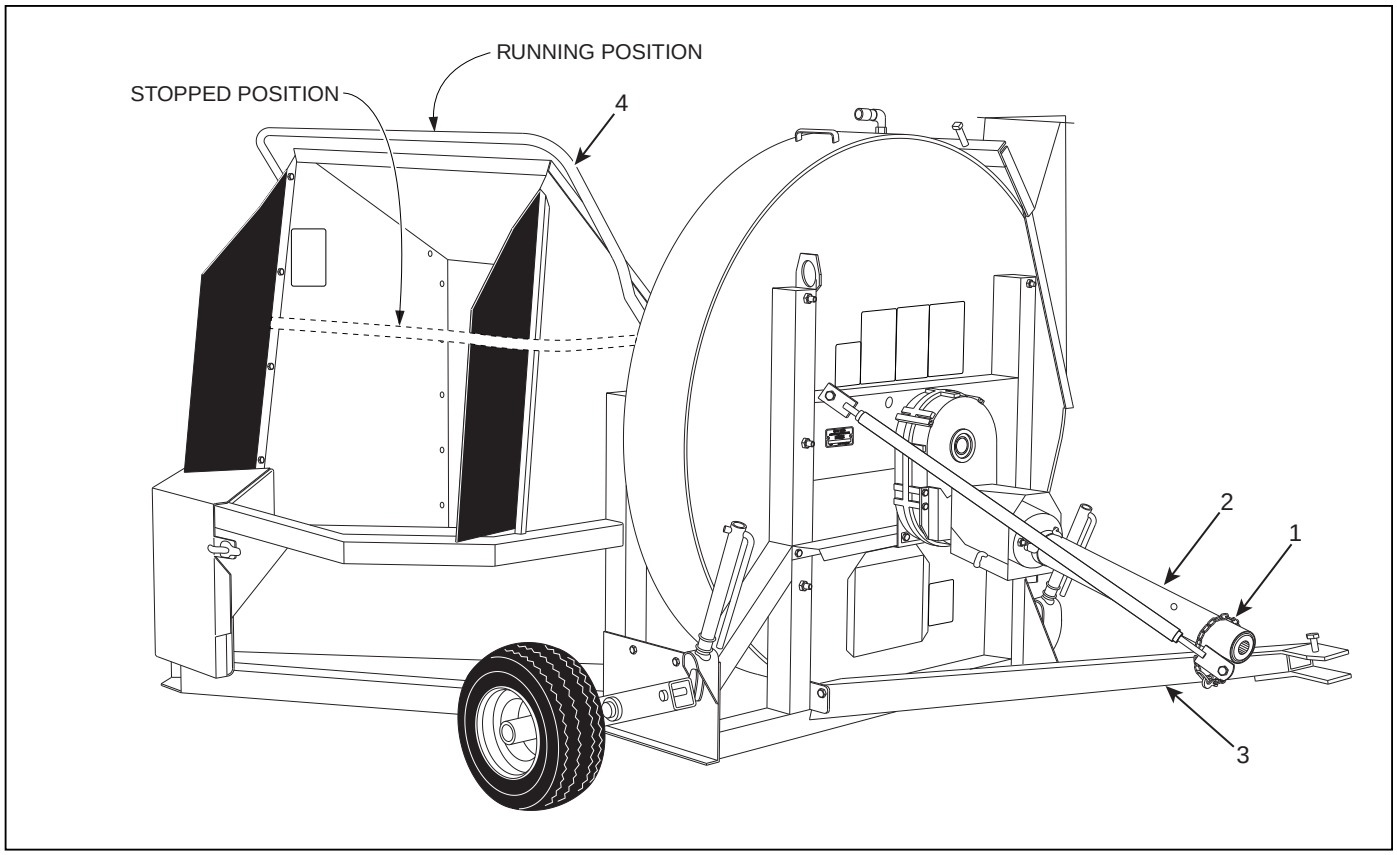
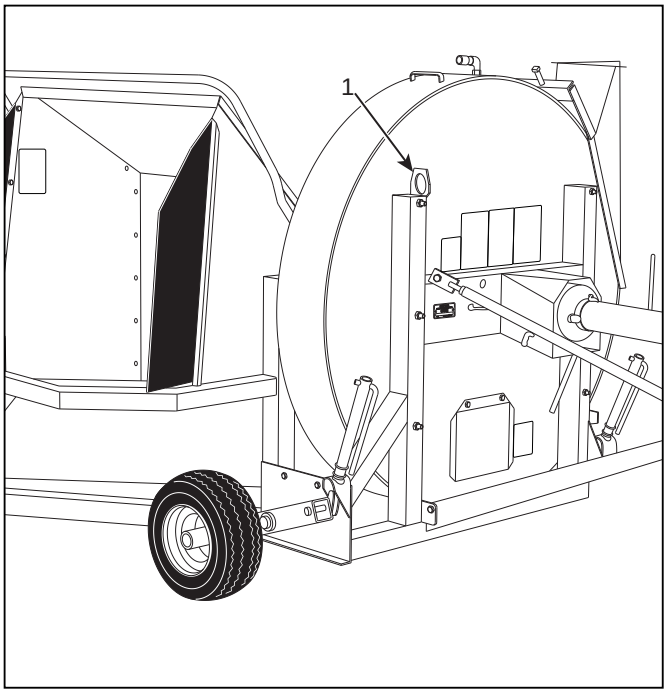


Figure 9

FORAGE BLOWER LIFTING HOOKS FIGURE 10

When the Forage Blower is to be lifted for transport on a trailer, use the lifting hooks (item 1).



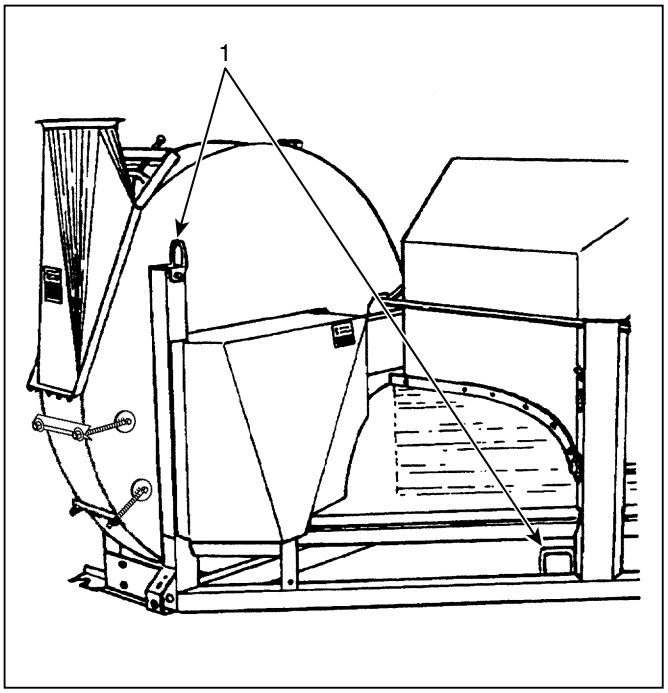


Figure 10 *Forage blower lifting hooks*

MAINTENANCE DOOR - FIGURE 11

WARNING: Stop the tractor and remove the key before opening the maintenance door. Make sure rotation has stopped.

If the fan becomes jammed, the maintenance door should be removed in order to clean it. Unscrew both screws (item 1) then remove the door. Clean and reinstall the door (item 2) inserting the end inside (see arrow) and securely tighten both bolts (item 1).

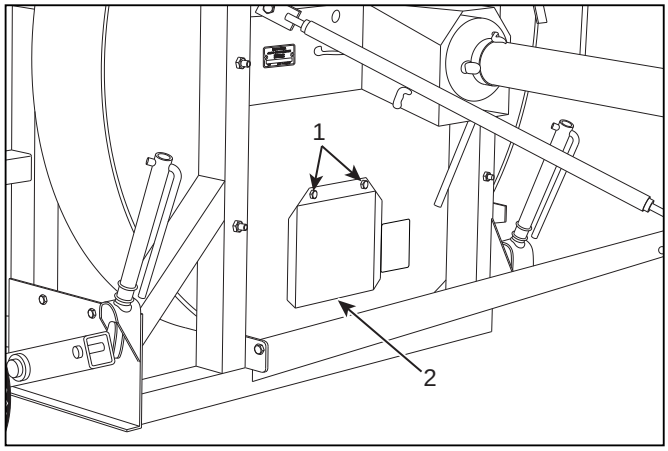


Figure 11 *Maintenance door*

WATER SYSTEM - FIGURE 12

When the moisture content in most crops reaches 40 to 60 percent, a sticky liquid is produced when the material is blown through the Forage Blower fan. This liquid causes a gum deposit which accumulates both on the Forage Blower fan and on the contour. This residue build-up reduces the machine's efficiency and causes a "ticking" noise as well, which increases with increased accumulation.

In order to prevent this problem, use a garden hose connected to the valve (item 1) of the Forage Blower drum, and inject a spray of water into the Forage Blower until it is free from any material build-up. The standard water inlet hole (item 2) is 1/8" (3 mm) dia. However, the inlet hole should be increased to 1/4” (6 mm) dia. if Blower is equipped with a Speed Reducer. If water doesn’t flow, remove valve (item 1) and clean dirt in hole.

WARNING: Make sure that both the tractor engine and the Forage Blower fan are completely stopped before inspecting the surfaces (inside lining) between forage unloadings.

The increase in crop moisture content, due to the addition of the water, is negligible. For example: when 19 L (5 US Gal.) of water are added to a 4 ton forage load with a moisture content of approximately 50 percent, the increase in moisture content will only be 1/4 of one percent, ending at 50.25%.

IMPORTANT!
To reduce the residue on the fan and contour, begin blowing before turning the water on. Turn the water off before unloading is complete.

If the water should enter the pipe section before the forage does, the pipe could become wet and the forage could stick to it causing a clogging.

While water is usually added to remove sticky residues, the addition of water can also improve the blowing performance by up to 15% for most crops, even though no sign of sticky deposits can be seen.

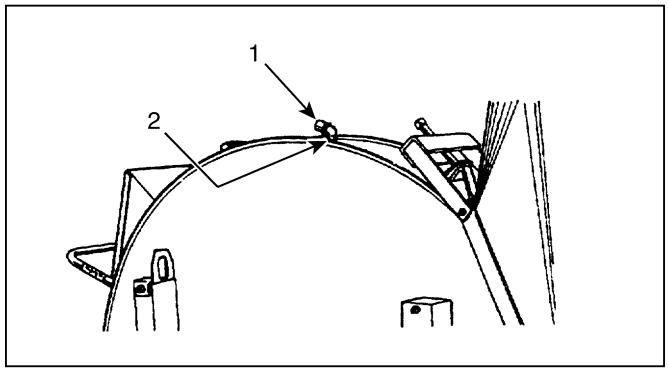


Figure 12 *Water system*

NOTE: *Corn silage doesn't cause any gumming of blower inside lining, thus water is not required.*

SPEED REDUCER - FIGURE 13

When a Forage Blower is equipped with a speed reducer (item 1) the tractor driveline output shaft should be 1000 RPM.

The blower fan in this case and the feeding screw turn respectively at 650 RPM and 600 RPM.

Periodically check the oil level (item 2) and the chain tension (refer to the ADJUSTMENTS / MAINTENANCE section).

NOTE: It is mandatory to use water with a 1/4" (6 mm) dia. inlet hole in the fan contour if Blower is equipped with a Speed Reducer.

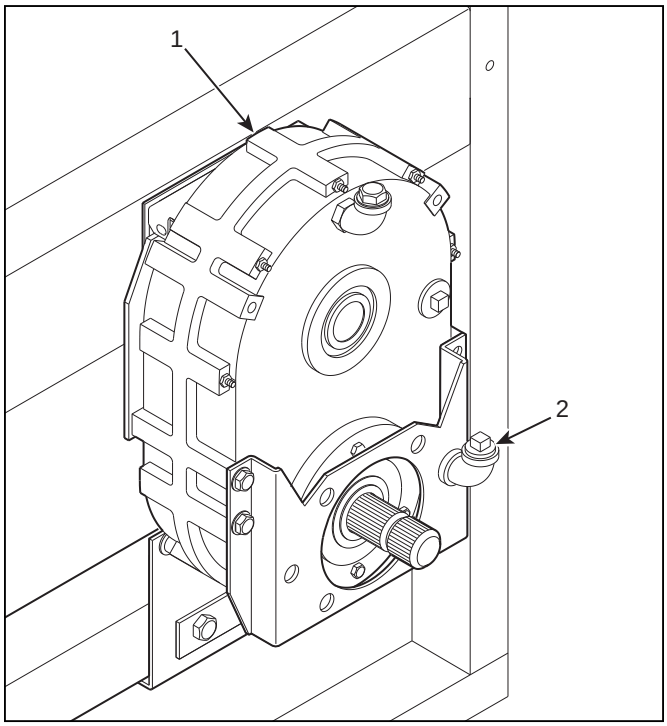


Figure 13 *Speed reducer*

WARNING: **Never lubricate or clean any part while the machine and/or tractor engine is running.**

IMPORTANT!
Frequent lubrication and greasing in correct quantity will reduce the wear on components and could reduce the frequency of breakdowns.

DRIVELINE

To allow the driveline to telescope, disassemble both sections and grease the tubular shaft with about two (2) ounces of grease. Lubricate the complete driveline as shown in figure 15.

The speed reducer of the Forage Blower should be verified after ten (10) hours of operation and then at the beginning of the season and afterwards, every 100 hours of operation (figure 21, page 19).

It is recommended to use 80W90 (S5524952P /1 litre) oil in the speed reducer.

Check to make sure that there are no oil leakages around the joints of the speed reducer. Oil should be changed if its color has changed or if there is foam indicating traces of water. Otherwise, change oil once a year.

LUBRICATION CHART

These symbols indicate specific points which should be greased, oiled, and verified.

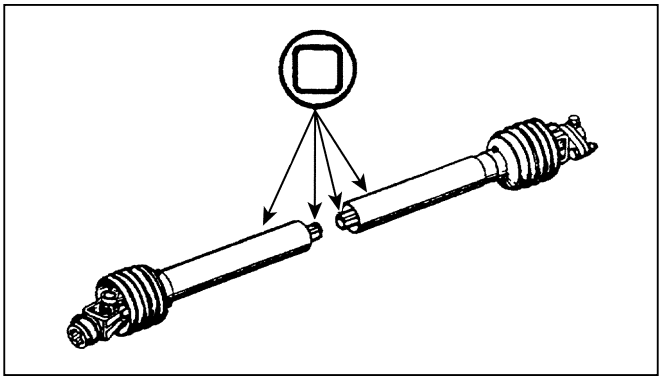


Figure 14 *Lubrication points*

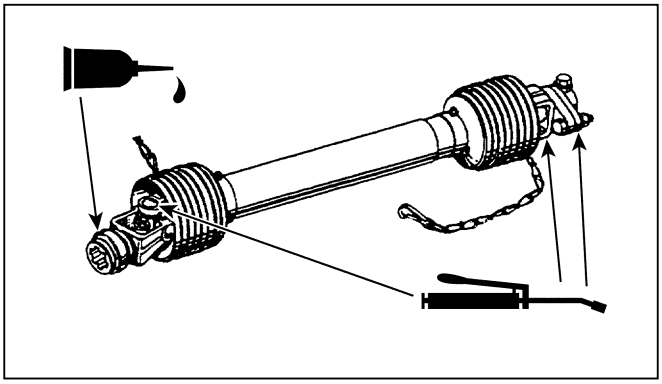
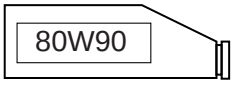


Figure 15 *Lubrication points*

SYMBOLS	DESCRIPTION	FREQUENCE
Black on White	Grease - 14 points	Every 12 hours of operation
	Oil - 3 points	Every 12 hours of operation
	Filling plug	Change once a year or every 500 hours
	Transmission boxes drain plugs	

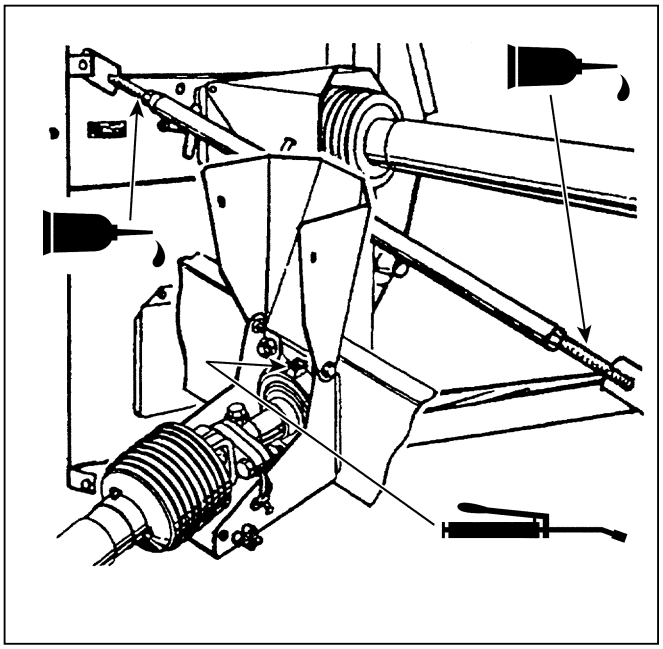
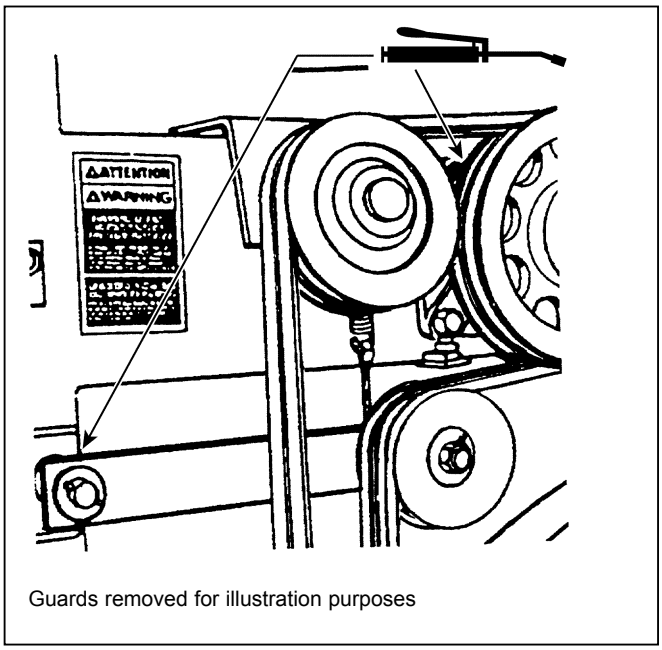


Figure 16 *Lubrication points*



Guards removed for illustration purposes

Figure 17 *Lubrication points*

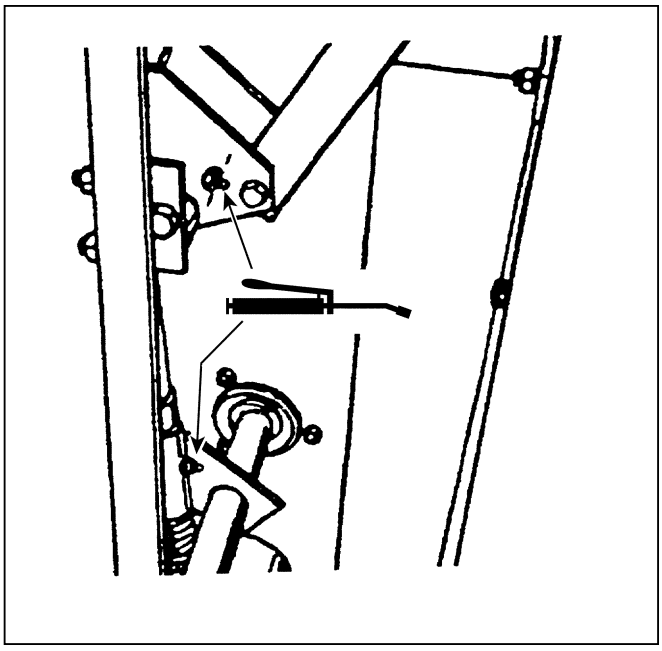
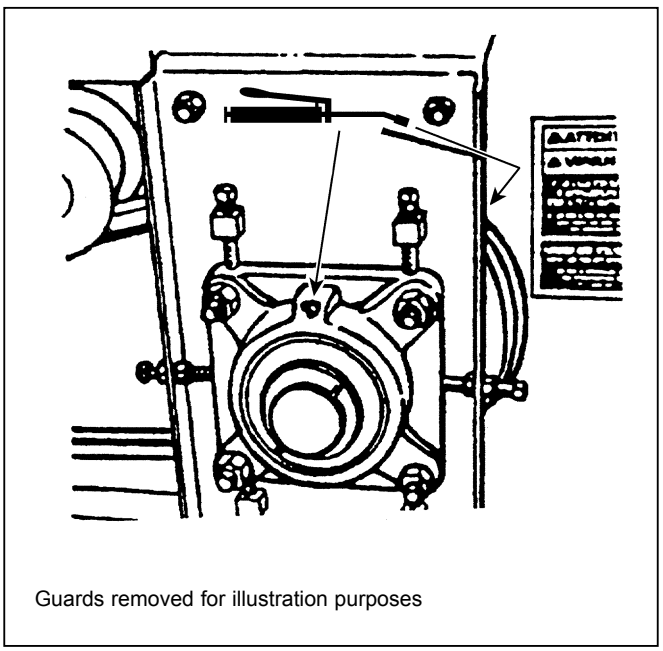


Figure *18 Lubrication points*



Guards removed for illustration purposes

Figure 19 *Lubrication points*

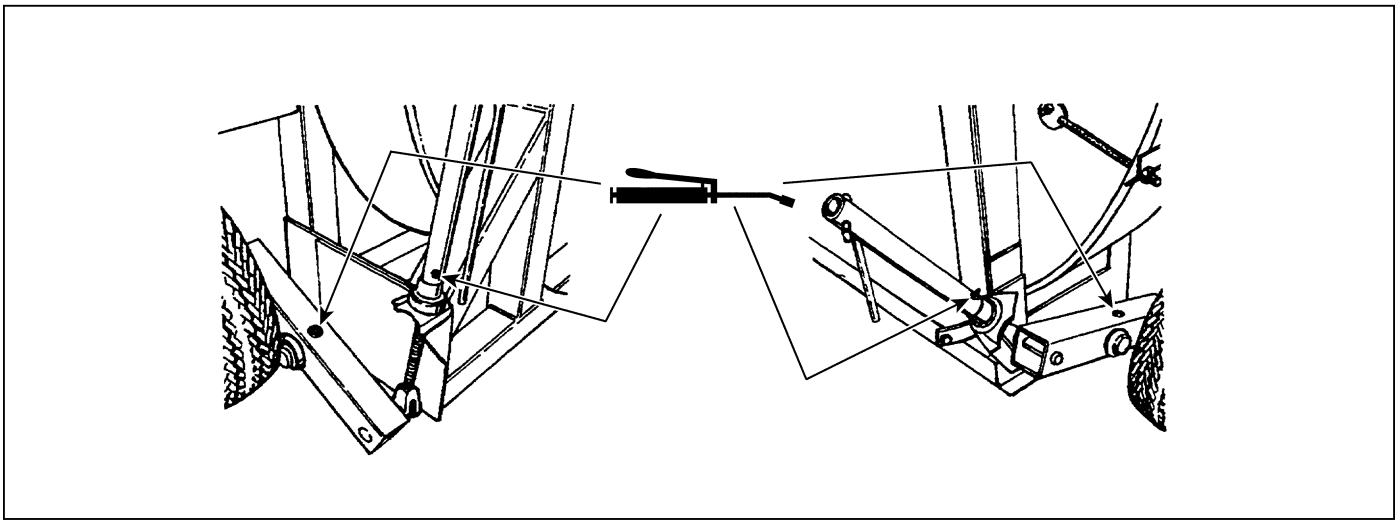


Figure 20 *Lubrication points*

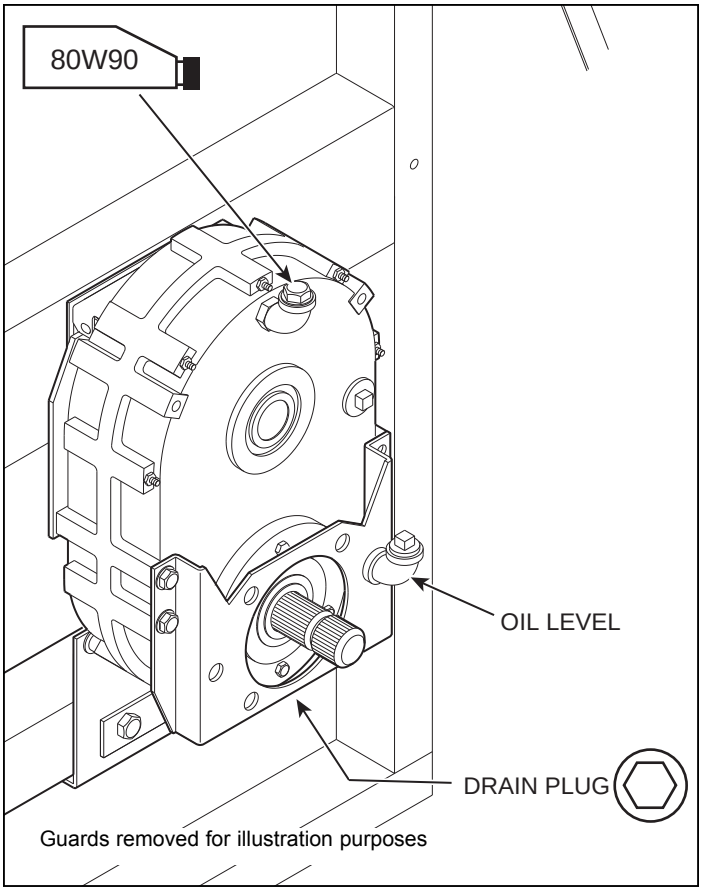


Figure 21 *Lubrication points*

WARNING: Never remove guards or make adjustments while the machine or tractor engine is running.

WARNING: Make sure all guards, shields, and doors are in place and properly secured before starting the tractor engine.

WARNING: Never park or work on a machine without first blocking the wheels, turning off the tractor engine, applying the parking brakes and removing the key.

ROTATING OUTLET - FIGURE 22

When the Forage Blower outlet (item 1) is being tilted make sure no forage has entered between the mobile contour (item 2) and drum sides (item 3) before tightening the screw (item 4) to immobilize the outlet and the contour reinforcement nuts (item 6).

Keep the unloading pipes (item 5) in line with the drum outlet even if the pipes are in different positions.

NOTE: *The tightening screw (item 6) should always be securely tightened and lined up with the center of the blower.*

The Forage blower should be as close as possible to the silo so that the outlet and unloading pipes are as straight as possible and as parallel as possible to the silo. Figure 26 on page 23 shows the good and the wrong way to install the unloading pipe.

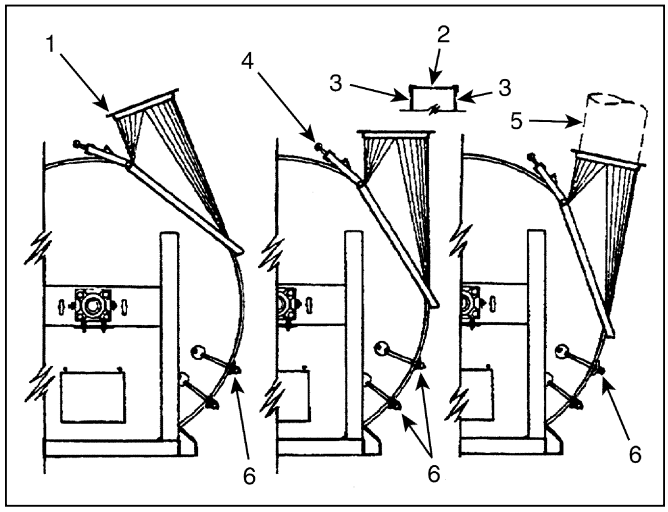


Figure 22 *Rotating outlet*

FAN ADJUSTMENT - FIGURES 23 AND 24

CAUTION: Always remove the driveline before adjusting the fan.

For maximum fan efficiency, place one blade horizontally on the outlet side. Allow a 1/8" (3 mm) gap between this blade and the drum contour (item 3), then a 3/32" (2.5 mm) gap between the second (following) blade and the drum bottom -vertically (item 4).

To adjust, loosen nuts (item 1) on both front and rear bearing housings then set with the screw (item 2) until required gaps are obtained. Tighten all nuts.

NOTE: *Move both sides equally.*

NOTE: *When aligning the fan, keep the same space between blades and drum inner sides.*

NOTE: For blowers equipped with a 1000 RPM reducer, the speed reducer must be aligned perpendicular to the fan shaft whenever the fan is adjusted (see page 29).

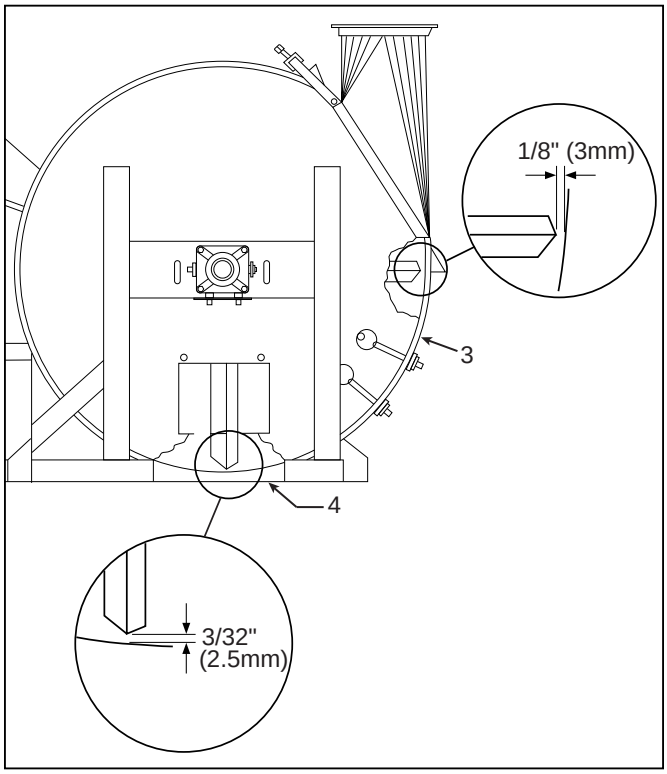


Figure 23 *Fan adjustment*

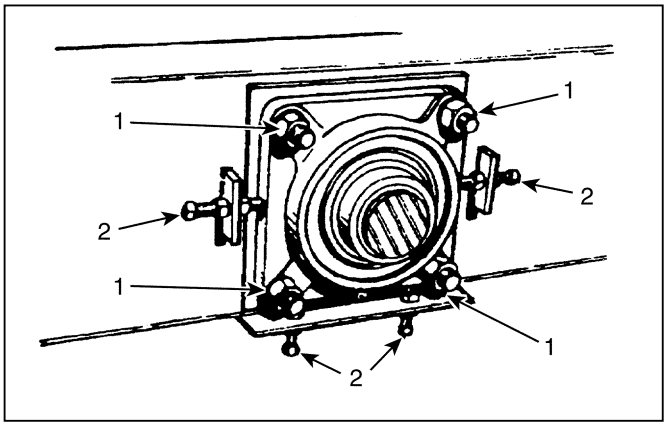


Figure 24 *Fan adjustment*

SPOUT KNIFE ADJUSTMENT - FIGURE 25

Whenever this adjustment is carried out on the fan or when the fan blades are replaced, it is important to adjust the distance between the blade tip (item 1) and the spout knife (item 2). The distance must be 1/16” (1.6mm) as shown in figure 25.

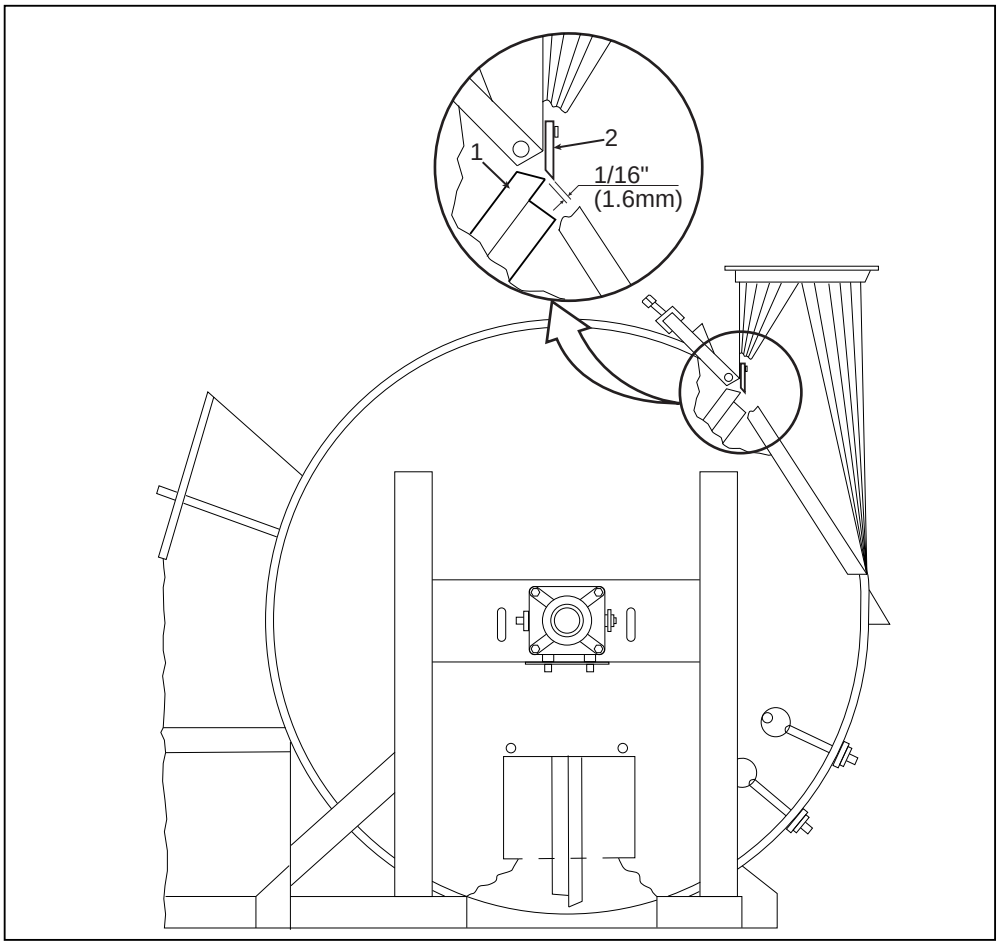


Figure 25 *Spout knife adjustment*

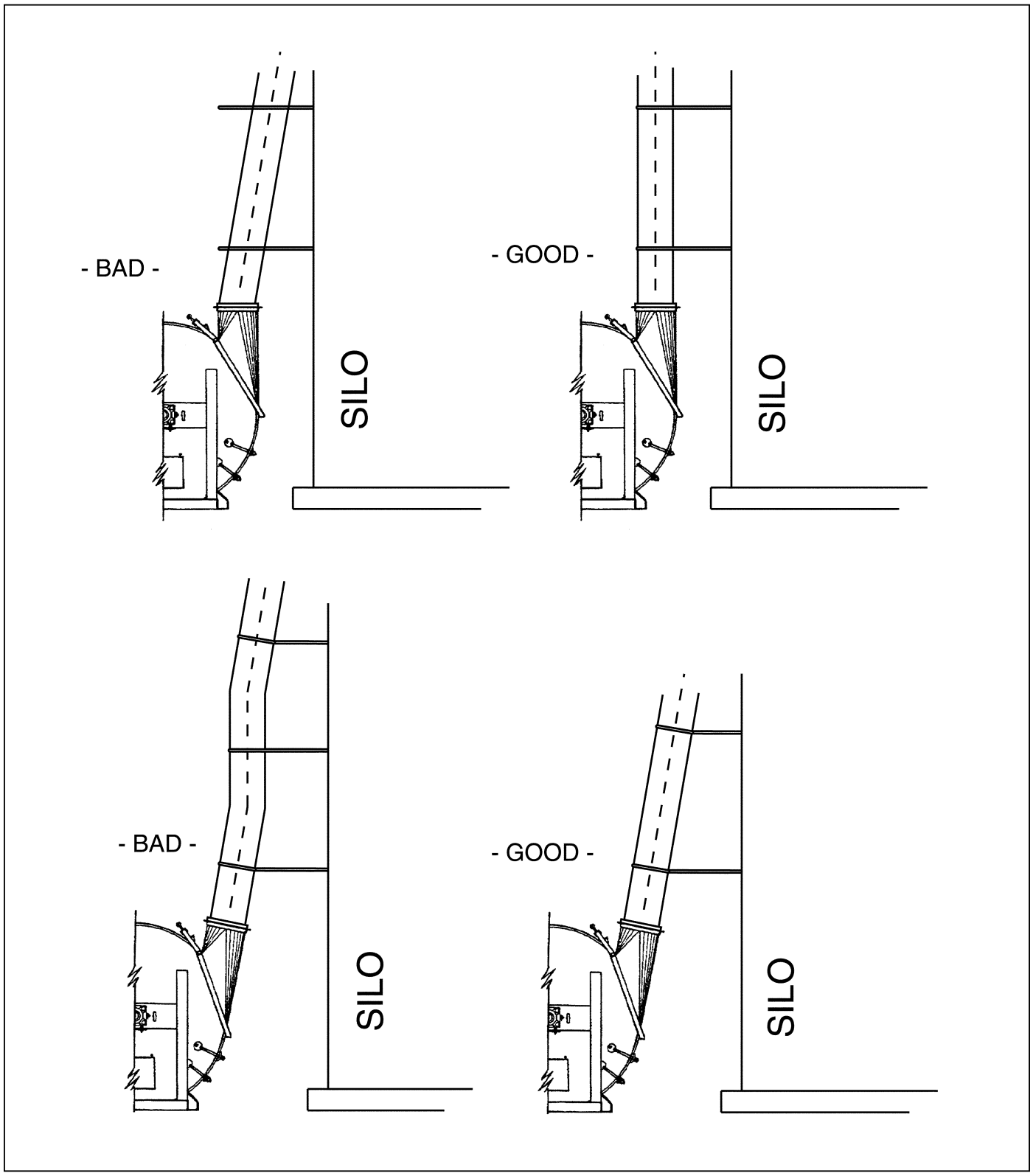


Figure 26 *Rotating outlet and unloading pipe*

DRIVELINE SHEAR BOLTS - FIGURE 27

This shear bolt (item 1) protects the whole mechanism in the event of any overloading due to jamming or obstruction.

NOTE: Always use the genuine metric bolt and nut #S5520751P. If Blower is equipped with a Speed Reducer, use bolt #S5522973P.

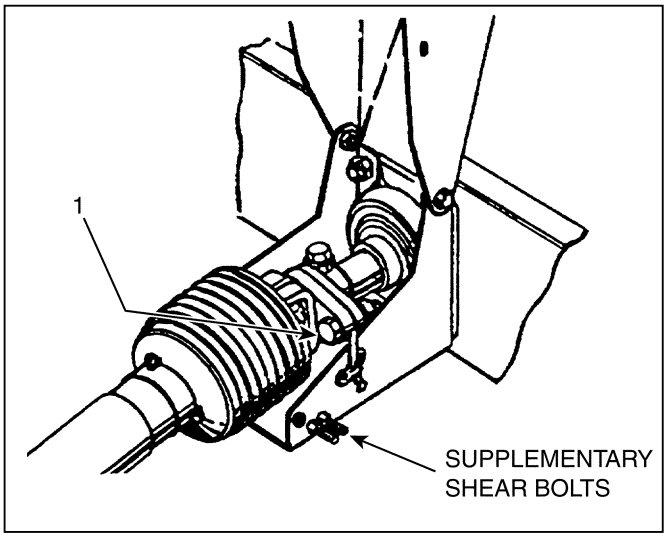


Figure 27 *Driveline Shear bolts*

AUGER REPLACEMENT FIGURE 28

To replace the feeding auger (item 1), remove the spring pin (item 2). Unscrew the Allen screws of the pulley (item 3) and bearings (item 4). Push the auger towards the blower making sure to turn it between two (2) fan blades. Remove the auger, then install the new one reversing the procedure. Tighten the Allen screws and install back the spring pin (item 2).

AUGER ADJUSTMENT FIGURE 28

The auger (item 1) should be adjusted so that the auger end near the blower fan is 1/4" (6 mm) farther off the bottom (item 7) and side (item 8) than it is near the auger drive end bearing. To adjust the auger, loosen nuts (item 5) then adjust using screws (item 6) until required adjusment is obtain. Tighten all hardware.

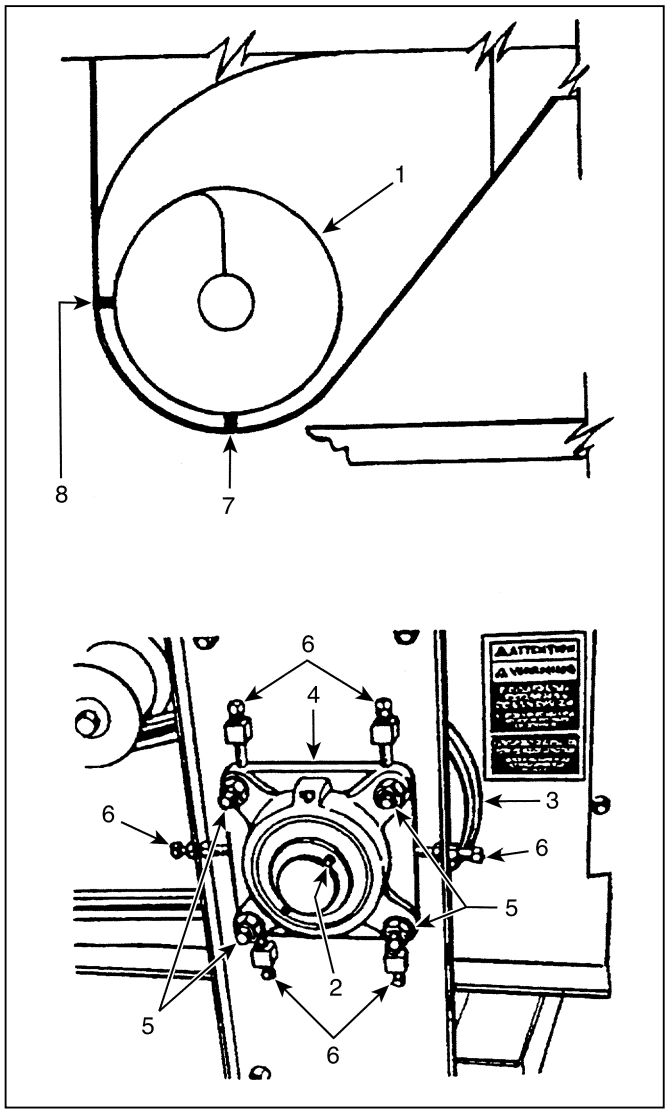


Figure 28 *Feeding auger adjustment and replacement*

AUGER INTERMEDIATE BELT TENSION FIGURE 29

Adjust the intermediate belt (item 1) tension by turning the adjusting nut (item 2) of the tightener (item 3).

To make sure the spring (item 4) is sufficiently tightened, leave a 1/16" to 3/32" (1,5 to 3,4 mm) gap between the spring spirals.

Next, adjust the stop bolt (item 5) by loosening the nut (item 6) so that a 1/8" (3 mm) gap is obtained between the bottom of the tightening arm and the stop bolt. Retighten the nut

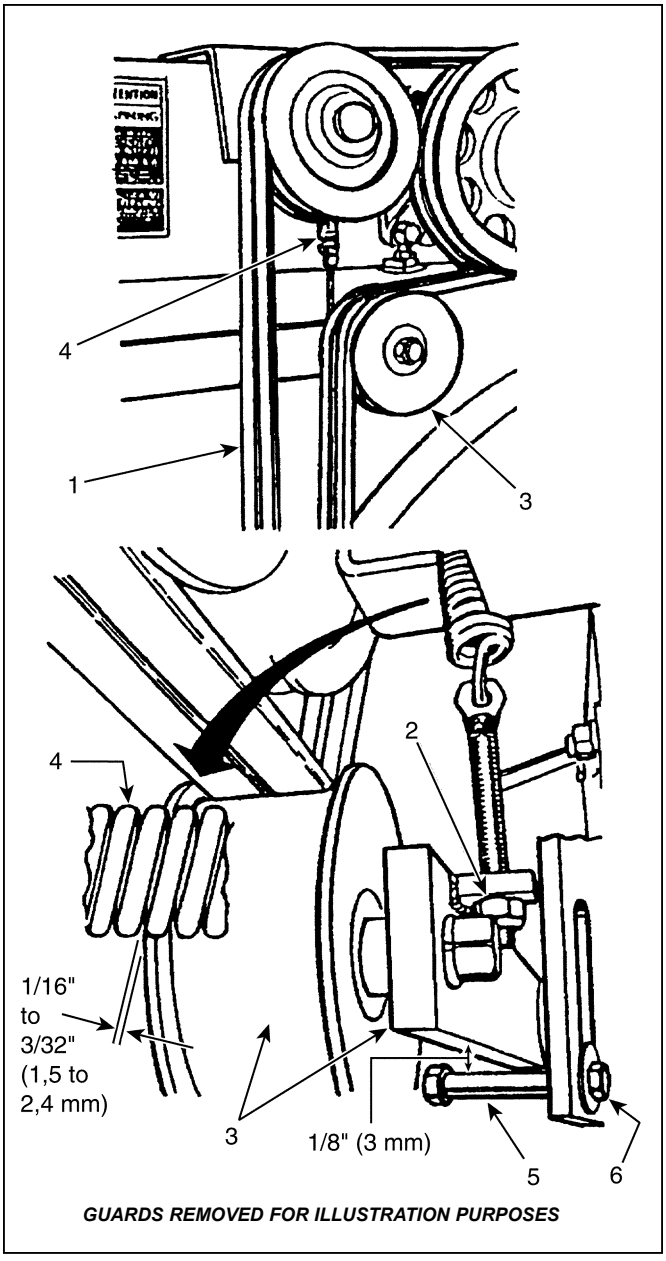


Figure 29 *Auger intermediate belt tension*

AUGER DRIVE BELT TENSION FIGURE 30

Set the clutch control arm (item 1) to the ON position.

Adjust the tightener (item 6) tension on the auger drive belts (item 3) with the tension spring (item 2) nuts (item 4) to obtain a normal tension. Leave a 1/32" (0,8 mm) gap between the spring spirals.

The locking nuts (item 5) should be adjusted to leave a 1/4" (6,4 mm) gap as shown in the illustration. The clutch control arm (item 1) should be in the ON position.

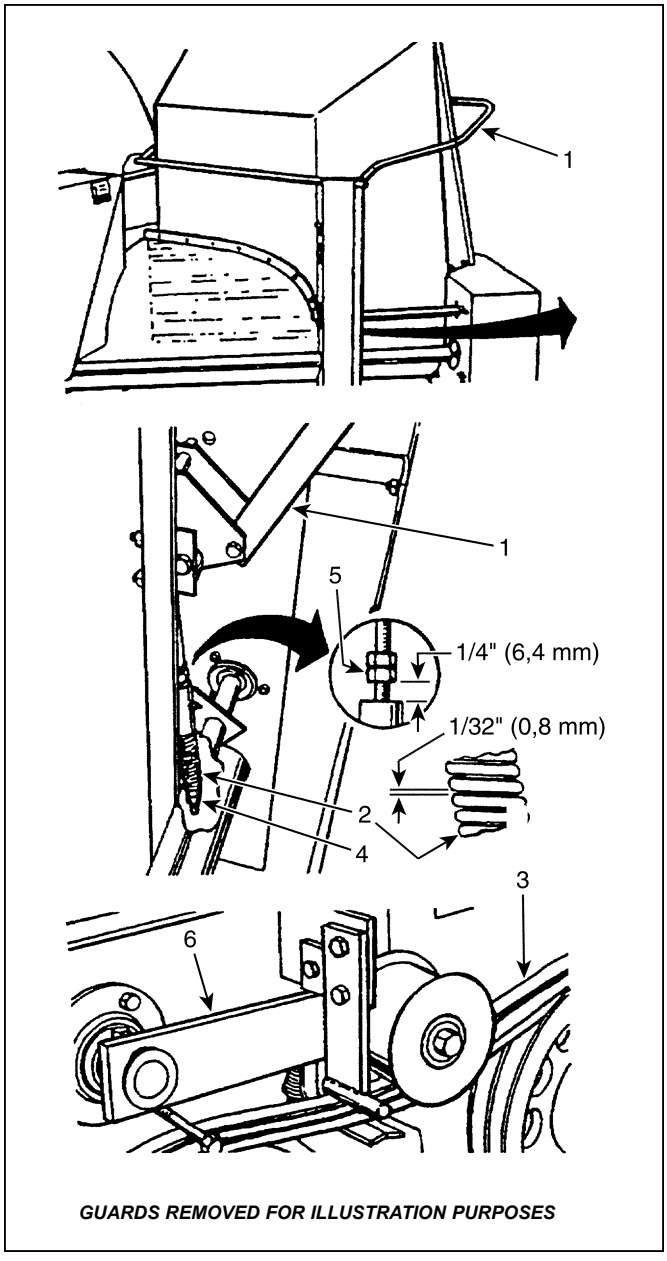


Figure 30 *Auger drive belt tension*

AUGER BELT REPLACEMENT FIGURES 31 AND 32

To change the auger belts, remove the 4 (four) bolts (item 1), rotate the bearing support plate (item 2) then remove the belts (item 3). It could be difficult to rotate the bearing support plate so use a rubber hammer to loosen the bearing support plate and facilitate the procedure. Replace the belts and rotate the bearing support plate back in place. Check the auger adjusment.

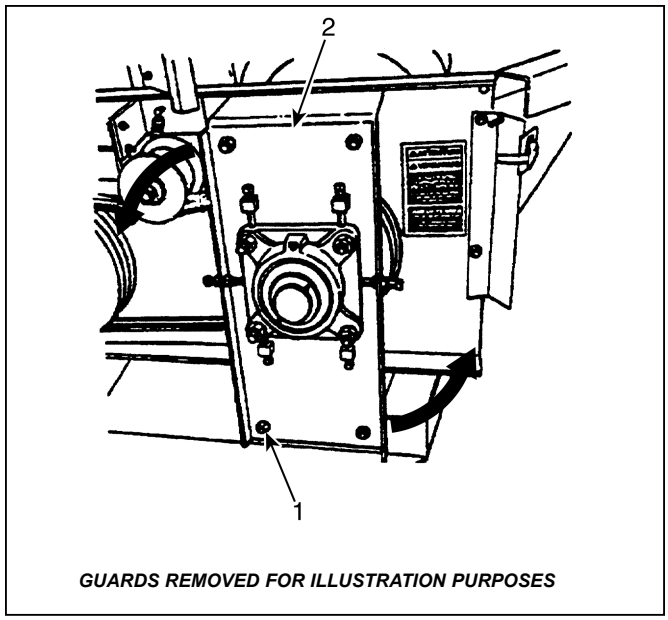


Figure 31 *Rotate plate to remove belts*

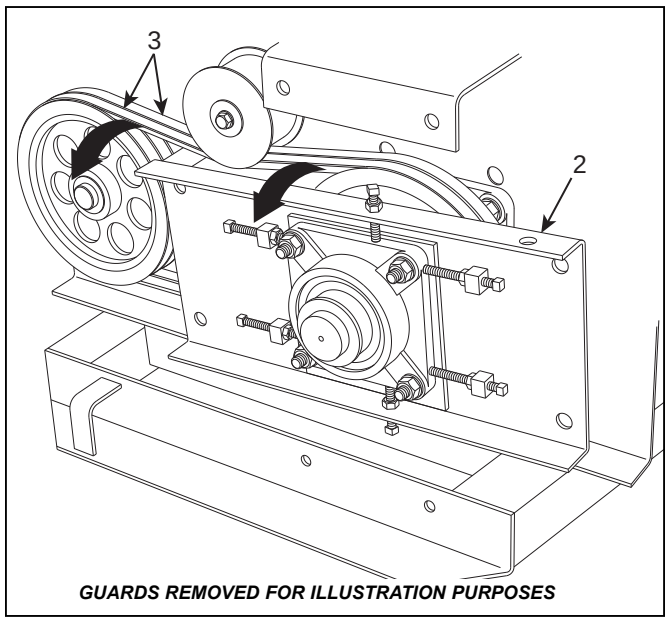


Figure 32 *Remove belts*

AUGER BRAKE - FIGURE 33

Set the clutch control arm to the STOP position.

Using the nuts (item 3) adjust the height of the braking plate (item 2) so that the plate will exercise sufficient pressure onto the belt (item 1) to stop the auger from rotating when the Forage Blower is running after setting the clutch control arm to the STOP position.

WARNING: Guards should be closed when the auger brake is being tested.

NOTE: *Excess pressure may damage the belts.*

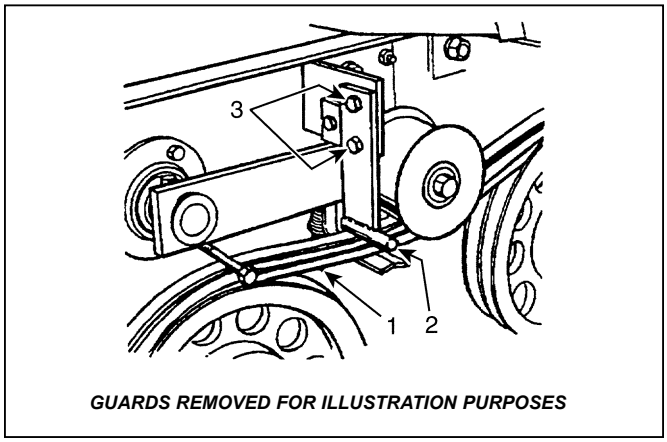


Figure 33 *Auger screw brake*

AIR INTAKE CONTROL - FIGURE 34

To adjust the fan air intake, turn the handles (items 1 and/or 2) located at front of the Blower. If discharge becomes clogged, increase air intake; if there is too much air back flow at the auger level, decrease air intake.

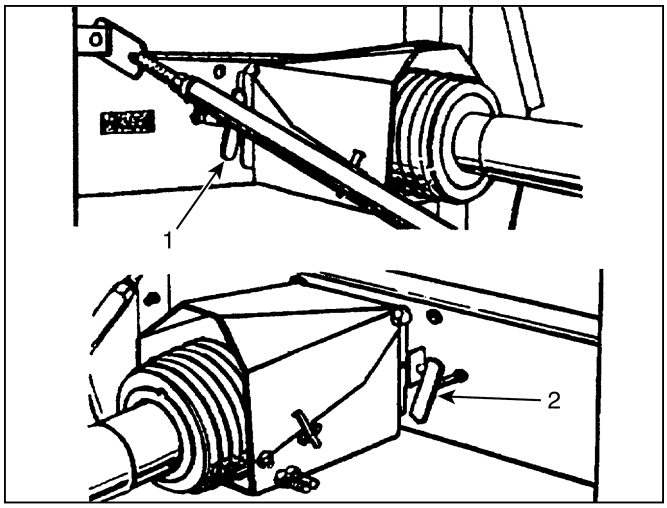


Figure 34 *Air intake control*

SUGGESTED INITIAL AIR INTAKE ADJUSTMENTS - FIGURE 34

TRACTOR HP	SILO HEIGHT	AIR INTAKE ADJUSTMENTS
70-90	50' - 70' (12m - 21m)	close air traps 1 and 2
90-120	60' - 90' (18m - 27m)	open air trap 1 1/2" to 3/4" (13 to 19mm)
160-200 (with speed reducer only)	70' - 100' (21m - 30m)	open air trap 1 1 1/4" (32mm)

NOTE: *When operating, it is recommended to maintain tractor engine at FULL SPEED: driveline must turn between 540 RPM(minimum) and 630 RPM (maximum) or between 1000 RPM (minimum) and 1050 RPM (maximum) if Blower is equipped with a (1000-650) Speed Reducer.*

DISMANTLING AND REASSEMBLY OF DRIVELINE ROTATING GUARDS FIGURE 35

To dismantle rotating guards (item 1), unscrew the 1/4 turn bolts (item 2). When rotating guards are reassembled, make sure that all bolts, locks, and pins are properly reinstalled and the guards rotate freely.

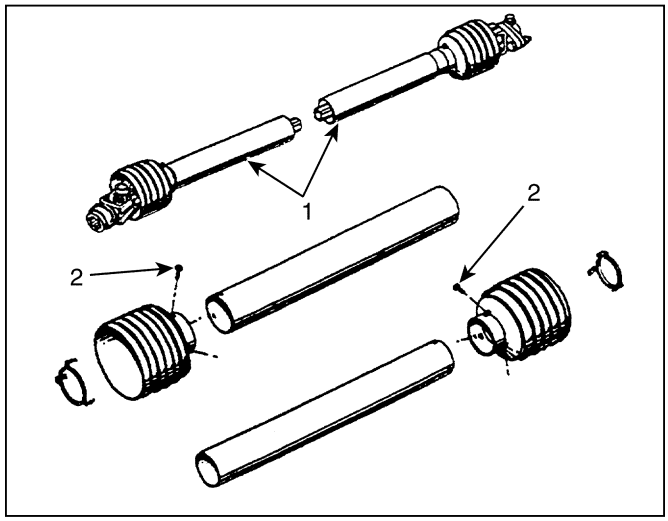


Figure 35 *Dismantling and reassembly of the driveline rotating guards*

ECCENTRIC LOCKING COLLAR INSTALLATION - FIGURE 36

It is necessary to assemble lock collars correctly. Press collar (item 1) lightly against bearing inner ring (item 2) then turn it in the direction of the shaft rotation (item 3) until engaged. With drift pin (item 4) in collar hole, tap gently in direction of shaft rotation and, after seating it tightly, tighten socket head screw (item 5).

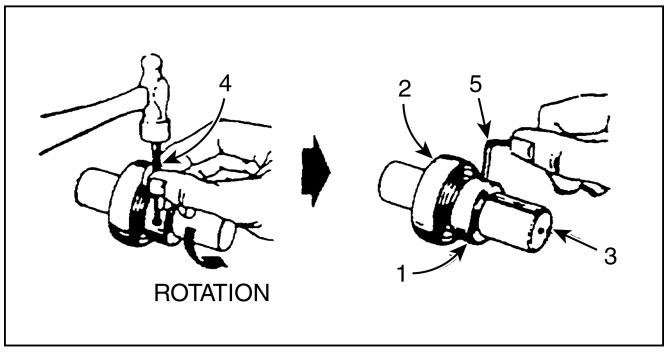


Figure 36 *Eccentric locking collar installation*

REMINDER

The most important maintenance operations which should be performed on the Forage Blower are the following: the fan adjustment and the feeding auger driving belts adjustment.

The condition of the fan blades should be checked periodically for wear by measuring the gap between the tip of the blade and the contour. Refer to fan adjustment on page 21.

Regular maintenance always assures much more efficiency and greatly lengthens the life of a machine.

WARNING: The driveline shields should be inspected on a regular basis.

SPEED REDUCER - FIGURE 37

The speed reducer of the Forage Blower allows the operator to use tractors equipped with a 1000 RPM driveline.

WARNING: **Do not remove any guards or make adjustments while the machine and/or tractor engine is running.**

CHAIN TENSION CHECK

The chain tension should be checked after the first ten (10) hours (approximately) of operation. Afterwards, checks should be done every 100 hours of operation.

To check the tension of the chains (item 6) between both input and output reducer shafts, turn the input shaft clockwise and counterclockwise (item 1) with the output shaft (item 2) secure from rotation. The chain should be adjusted if the play ranges from 10 to 15 degrees.

CHAIN TENSION ADJUSTMENT

To adjust the reducer chains (item 3), proceed as per the following instructions:

1. Lower the Forage Blower to the ground (see page 12).

2. Uncouple the driveline (item 4) and remove the guards (item 5).

3. Unscrew the twelve (12) bolts (item 7) (6 bolts on each side) of the covers (item 8) on the input shaft (item 1).

NOTE: *The covers (item 8) are eccentric thus allowing to tighten the chains (item 6) when turning.*

4. With the help of an hammer and screwdriver, slowly turn both covers (item 8) **in the same direction** until reaching the next cover hole (on both sides) with the housing threaded holes.

IMPORTANT: *It is a must to turn the covers in the same direction and with the same number of holes. If this procedure is not followed, the input and output shafts will no longer be parallel and serious damages could be caused to the reducer.*

5. Check the chain play again as already described. If the play is too high repeat step #4. If the play is satisfactory install the guards and driveline back in place. Check oil level before starting blower.

6. Check the oil level (item 9) and if necessary add some oil (item 10) to reach the proper level.

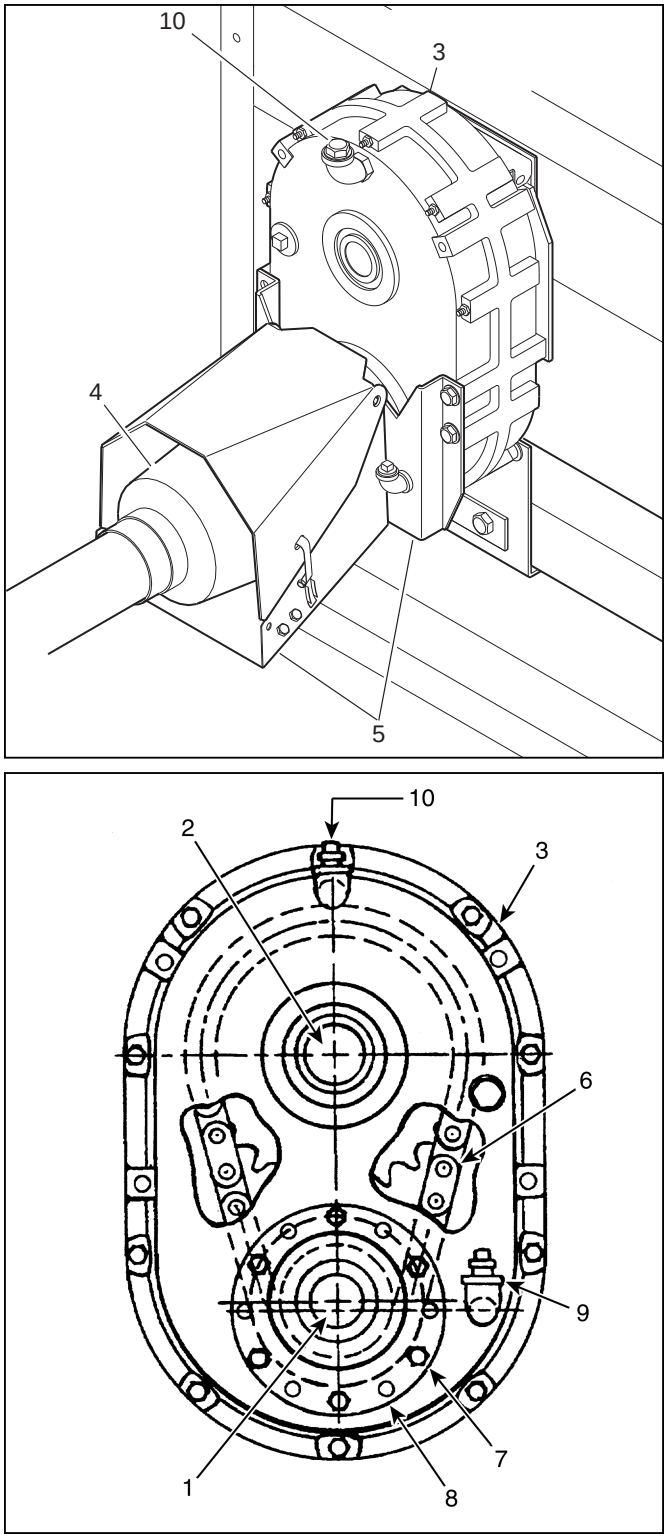


Figure 37 *Speed reducer*

ALIGNMENT AND ADJUSTMENT OF THE SPEED REDUCER - FIGURE 38

CAUTION: **The speed reducer is inserted on the blower shaft (3" (76mm)deep). The shaft is holding the entire speed reducer weight. If you want to remove the speed reducer, you will need a lifting device to lift it.**

NOTE: *Each time the blower fan must be adjusted, the speed reducer must be realigned to be perpendicular to the fan shaft.*

To align the speed reducer follow carefully the following instructions:

1. Remove the driveline (item 1).
2. Remove the guard (item 15)
3. Unscrew the four (4) nuts (item 3) of the support (item 4) of the speed reducer (item 5).
4. Unscrew the two (2) bolts (item 6) and remove the flat bar (item 7) of the lower support (item 8).
5. Slide the speed reducer (item 5) back on the fan (item 9) by pulling it slowly until the flange bearing bolts (item 10) are free.
6. Check if the fan adjustment is correct (see page 21, figure 24).
7. Slide the speed reducer on the fan shaft by pushing it slightly against the flange bearing nuts. Check spacings between the speed reducer support (item 4) and the flange bearing nuts (item 13). Install the spacing washers (item 12) as required.
8. If necessary repeat steps 5 and 7 until the speed reducer is resting perfectly on the 4 flange bearing nuts without spacings. Put back the four (4) nuts (item 3).
9. Reinstall the flat bar (item 7) and bolts (item 6). Check for zero clearance between item 8 and item 16. Adjustment is made by adding or removing washers (item 17 - ref. page 9 item 6) between the support (item 8) and the speed reducer. Tighten well all nuts.
10. Install the driveline (item 1).
11. Put back guard (item 15)

IMPORTANT: *This adjustment is very important to avoid fan shaft bending which could lead to shaft shearing.*

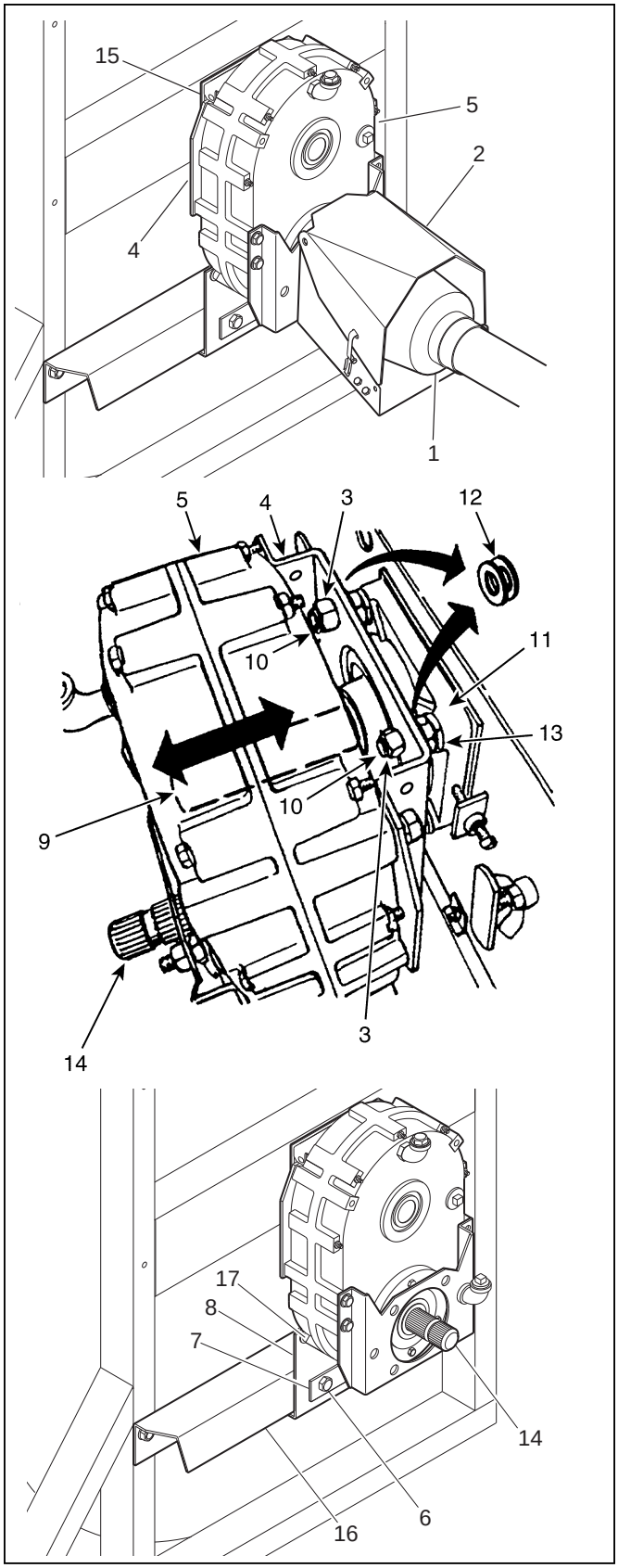


Figure 38 *Alignment and adjustment of the speed reducer*

STORAGE

At the end of the season, prepare the blower for storage by following these procedures:

1. Clean out the Forage Blower of all dirt, crop material, excess grease or any other foreign substance which may absorb water and cause rust.

2. Completely lubricate the Forage Blower.

3. Clean and oil all components which have been exposed to wear.

4. Paint where the paint has worn off.

5. Order parts that need to be replaced, and repair your Forage Blower before starting a new season.

6. Store the Forage Blower in a clean and dry location.

7. Remove tension on all belts.

8. For you own safety, replace all damaged guards and damaged safety signs.

NOTE: *NEVER use a pressure water gun to clean the bearings and roller chains.*

TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	REMEDY
Pipes jam	Built-up pressure in the silo	Open silo roof door
	High winds on top of silo	Close partially silo roof door
	A pipe section was assembled with an obstruction inside	Always check the full height (length) of the pipes. Pipes need to be perfectly straight
	Static in pipe	Ground pipe
	Check if silo is completely filled	Continue with another silo
	The fan does not blow sufficiently	Check that air intakes are open. If they are, adjust the fan
	Pipes, drum contour and blades are in bad condition	Check, rectify, and repair if necessary
Blower requires more power	Sticky residues have accumulated inside the fan	Adapt a water hose and let water flow during the operation
The auger continues to turn when the control lever is disengaged	The auger driving belt is not properly adjusted	Adjust the auger brake following the instructions
Auger jams	Belts are slipping or broken	Tighten belts or replace them
	The alignment of the auger reduces toward the fan	Adjust the auger following the instructions of this manual
Drum vibrates	The mobile contour set screw is not properly tightened	Clean the inside contour then securely tighten this screw along with the contour reinforcement
Drum knocks	Fan is misaligned with both drum sides	Align fan, making sure it is at equal distance from both sides
Auger knocks	Damaged auger	Replace auger
	Sticky debris have accumulated at the bottom or bearing is broken	Clean the bottom or replace the bearing
The speed reducer becomes abnormally hot	Low oil level or incorrect alignment	Check oil level and/or align the speed reducer