LandMax

Suppliers Of Quality Agricultural Machinery

21 Plummers Point Road, Tauranga

Wood Chipper

Models: BX42F / BX52RF

Operator's Manual

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BX42F
WOOD CHIPPER

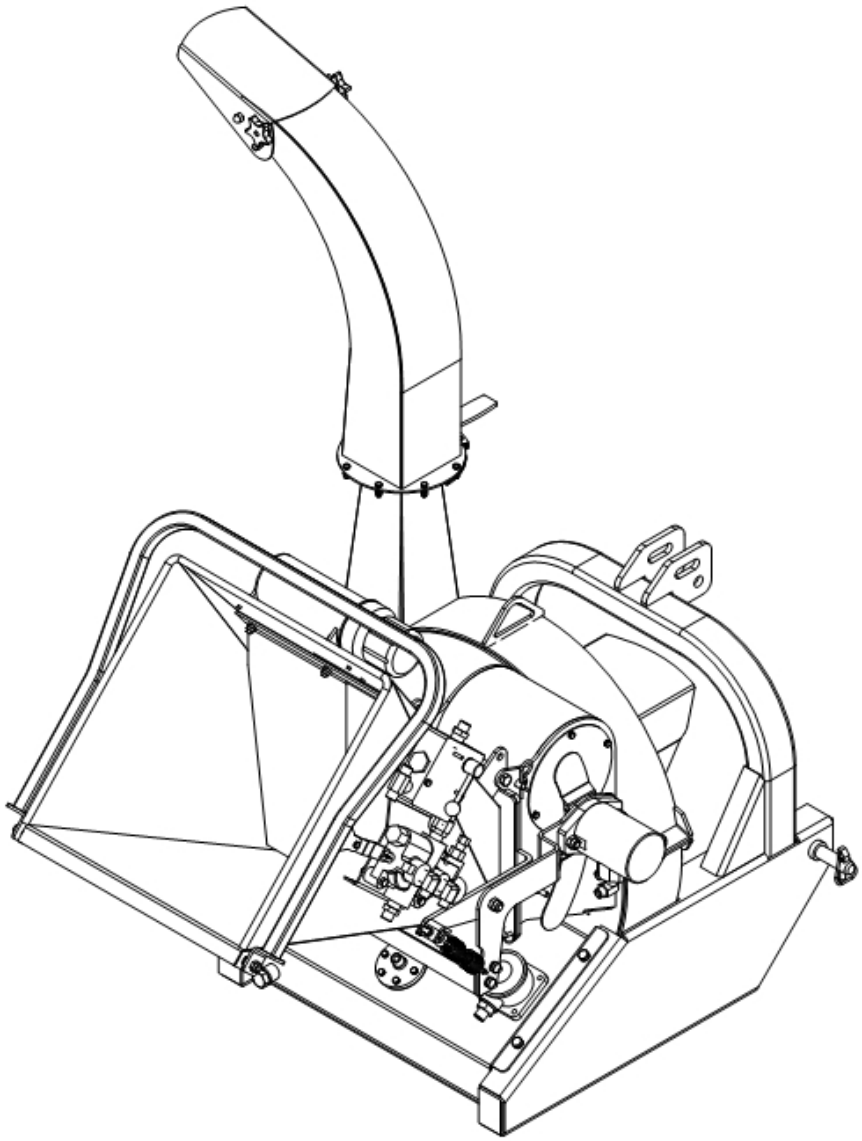
If a difficulty develops with the product, you should contact your distributer. Only these locations are authorized to make repairs to the product or affect the replacement of defective parts. Unit or parts should be returned at the customer's expense to the nearest repair location or Authorized Service Centre. Pack unit in a strong carton and pad tightly to avoid damage.

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

1 INTRODUCTION

Congratulations on your choice of a LandMax 3 Point Hitch Wood Chipper to compliment your operation. This equipment has been designed and manufactured to meet the needs of a discerning timber or landscaping industry.

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



This manual covers the LandMax 3 Point Hitch Wood Chipper BX42F. Use the Table of Contents or Index as a guide to locate required information.

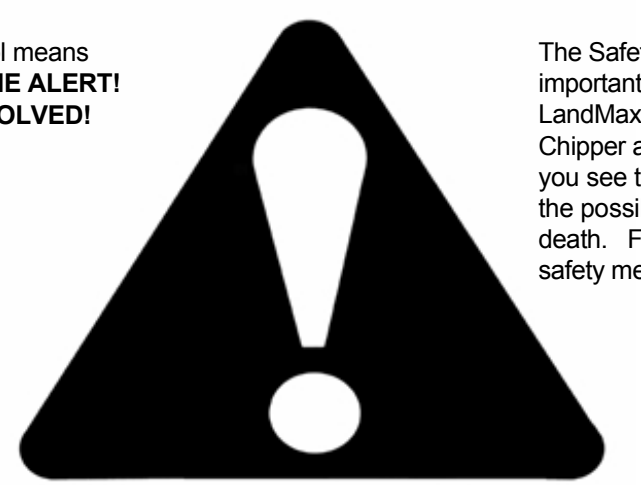
Keep this manual handy for frequent reference and to pass on to new operators or owners. Call your dealer or the Distributer if you need assistance, information or additional copies of the manuals.

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

2 SAFETY

SAFETY ALERT SYMBOL

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



The Safety Alert symbol identifies important safety messages on the LandMax 3 Point Hitch Wood Chipper and in the manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.

Why is SAFETY important to you?

3 Big Reasons

Accidents Disable and Kill
Accidents Cost
Accidents Can Be Avoided

SIGNAL WORDS:

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

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

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

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

If you have any questions not answered in this manual or require additional copies or the manual is damaged, please contact your dealer.

SAFETY

YOU are responsible for the SAFE operation and maintenance of your LandMax 3 Point Hitch Wood Chipper. **YOU** must ensure that you and anyone else who is going to use, maintain or work around the 3 Point Hitch Wood Chipper be familiar with the using and maintenance procedures and related **SAFETY** information contained in this manual. This manual will take you step-by-step through your working day and alerts you to all good safety practices that should be used while using the 3 Point Hitch Wood Chipper.

Remember, **YOU** are the key to safety. Good safety practices not only protect you but also the people around you. Make these practices a working part of your safety program. Be certain that **EVERYONE** using this equipment is familiar with the recommended using 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.

- 3 Point Hitch Wood Chipper owners must give operating instructions to operators or employees before allowing them to operate the machine, and at least annually thereafter.
- The most important safety device on this equipment is a SAFE operator. It is the operator's responsibility to read and understand ALL Safety and Operating instructions in the manual and to follow these. Most accidents can be avoided.
- A person who has not read and understood all using and safety instructions is not qualified to use 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 using, maintaining, adjusting or cleaning the 3 Point Hitch Wood Chipper.

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

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

4. Do not allow riders.
5. Wear appropriate protective gear. This list includes but is not limited to:

   - A hard hat
   - Protective shoes with slip resistant soles
   - Protective glasses, goggles or face shield
   - Heavy gloves
   - Wet weather gear
   - Hearing Protection
   - Respirator or filter mask
6. Install and secure all guards before starting.
7. Wear suitable ear protection for prolonged exposure to excessive noise.

8. Turn machine off, stop and disable engine, remove ignition key and place in your pocket, set park brake and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
9. Clear the area of people, especially small children, before using the unit.
10. Review safety related items annually with all personnel who will operating or maintaining the 3 Point Hitch Wood Chipper.

2.2 EQUIPMENT SAFETY GUIDELINES

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

2. In order to provide a better view, certain photographs or illustrations in this manual may show an assembly with a safety shield removed. However, equipment should never be used in this condition. Keep all shields in place. If shield removal becomes necessary for repairs, replace the shield prior to use.

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

4. Never use alcoholic beverages or drugs which can hinder alertness or coordination while using this equipment. Consult your doctor about using this machine while taking prescription medications.

5. **Under no circumstances should young children be allowed to work with this equipment. Do not allow persons to use or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and of how it works.** Review the safety instructions with all users annually.

6. This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible, properly trained and physically able person familiar with machinery and trained in this equipment's operations. If the elderly are assisting with work, their physical limitations need to be recognized and accommodated.

7. Never exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely, is in question - **DON'T TRY IT.**

8. Do not modify the equipment in any way. Unauthorized modification may result in serious injury or death and may impair the function and life of the equipment.

9. In addition to the design and configuration of this implement, including Safety Signs and Safety Equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of the machine. Refer also to Safety Messages and operation instruction in each of the appropriate sections of the tractor and machine manuals. Pay close attention to the Safety Signs affixed to the tractor and the machine.

2.3 SAFETY TRAINING

1. Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be wiped out by a single careless act of an operator or bystander.

2. In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of this equipment.

3. It has been said, "The best safety feature is an informed, careful operator." We ask you to be that kind of an operator. It is the operator's responsibility to read and understand ALL Safety and Using instructions in the manual and to follow these. Accidents can be avoided.

4. **Working with unfamiliar equipment can lead to careless injuries. Read this manual before assembly or using, to acquaint yourself with the machine. If this machine is used by any person other than yourself, or is loaned or rented, it is the machine owner's responsibility to make certain that the operator, prior to using:**

   a. Reads and understands the operator's manuals.

   b. Is instructed in safe and proper use.

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

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

2.4 SAFETY SIGNS

1. Keep safety signs clean and legible at all times.

2. Replace safety signs that are missing or have become illegible.

3. Replaced parts that displayed a safety sign should also display the current sign.

4. Safety signs displayed in Section 3 each have a part number in the lower right hand corner. Use this part number when ordering replacement parts.

5. Safety signs are available from your authorized Distributor or Dealer Parts Department or the factory.

How to Install Safety Signs:

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

2.5 PREPARATION

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

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

3. 
PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS!
Power equipment with or without equipment attached can often be noisy enough to cause permanent, partial hearing loss. We recommend that you wear hearing protection on a full-time basis if the noise in the Operator's position exceeds 80db. Noise over 85db on a long-term basis can cause severe hearing loss. Noise over 90db adjacent to the Operator over a long-term basis may cause permanent, total hearing loss. **NOTE:** Hearing loss from loud noise (from tractors, chain saws, radios, and other such sources close to the ear) is cumulative over a lifetime without hope of natural recovery.

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

5. Use only in daylight or good artificial light.

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

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

2.6 MAINTENANCE SAFETY

1. Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.

2. Follow good shop practices.

   - Keep service area clean and dry.
   - Be sure electrical outlets and tools are properly grounded.
   - Use adequate light for the job at hand.

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

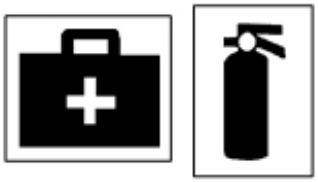
4. Before working on this machine, shut off the engine, set the brake, and turn fuel valve off.

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

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

7. Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your equipment to original specifications. The manufacturer will not be responsible for injuries or damages caused by use of unapproved parts and/or accessories.

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

9. Periodically tighten all bolts, nuts and screws and check that all electrical and fuel connections are properly secured to ensure unit is in a safe condition.

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

2.7 OPERATING SAFETY

1. Please remember it is important that you read and heed the safety signs on the 3 Point Hitch Wood Chipper. Clean or replace all safety signs if they cannot be clearly read and understood. They are there for your safety, as well as the safety of others. The safe use of this machine is strictly up to you, the operator.

2. All things with moving parts are potentially hazardous. There is no substitute for a cautious, safe-minded operator who recognizes potential hazards and follows reasonable safety practices. The manufacturer has designed this 3 Point Hitch Wood Chipper to be used with all its safety equipment properly attached, to minimize the chance of accidents. Study this manual to make sure you have all safety equipment attached.

3. Close and secure rotor cover before operating.

4. Close and secure all guards, deflectors and shields before starting and operating.

5. Read and understand operator's manual before starting. Review safety instructions annually.

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

7. Keep hydraulic lines and fittings tight, in good condition and free of leaks.

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

9. Turn machine off, stop and disable engine, remove ignition key and place in your pocket, set park brake and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.

10. Do not run machine inside a closed building to prevent asphyxiation from engine exhaust.

11. Use care when feeding material into chipper. Do not send metal, bottles, cans, rocks, glass or other foreign material into wood chipper. If foreign material enters chipper, stop machine, turn engine off and place ignition key in your pocket and wait for all moving parts to stop before removing material and/or unplugging. Inspect machine for damaged or loose parts before resuming work.

12. Never use alcoholic beverages or drugs which can hinder alertness or coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription medications.

13. Do not allow riders on this machine at any time. There is no safe place for any riders.

14. Never allow children or unauthorized people to operate or be around this machine.

15. Do not reach into rotor or feed hopper openings when the engine is running. Install and secure access covers before starting engine.

16 Keep the working area clean and free of debris to prevent tripping. Operate only on level ground.

17 Do not point discharge at people, animals or buildings. Rotor can expel wood chips fast enough to cause injury.

18. Do not move or transport chipper when the rotor is turning.

19. Do not exceed a safe travel speed when transporting.

2.8 HYDRAULIC SAFETY

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

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

3. Do not attempt any makeshift repairs to the hydraulic lines, fittings or hoses by using tapes, clamps or cements. The hydraulic system operates under extremely high pressure. Such repairs will fail suddenly and create a hazardous and unsafe condition.

4. 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.

5. If injured by a concentrated high-pressure stream of hydraulic fluid, seek medical attention immediately. Serious infection or toxic reaction can develop from hydraulic fluid piercing the skin surface.

6. Relieve pressure on hydraulic system before maintaining or working on system.

2.9 STORAGE SAFETY

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

2. Do not children to play on or around the stored machine.

3. Store the unit in a dry, level area. Support the frame with planks if required.

2.10 TRANSPORT SAFETY

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

2. Check that all the lights, reflectors and other lighting requirements are installed and in good working condition.

3. Do not exceed a safe travel speed. Slow down for rough terrain and cornering.

4. Fold up and secure feed hopper before moving or transporting.

5. Be sure the machine is hitched positively to the tractor and a retainer is used through the mounting pins.

6. Do not drink and drive.

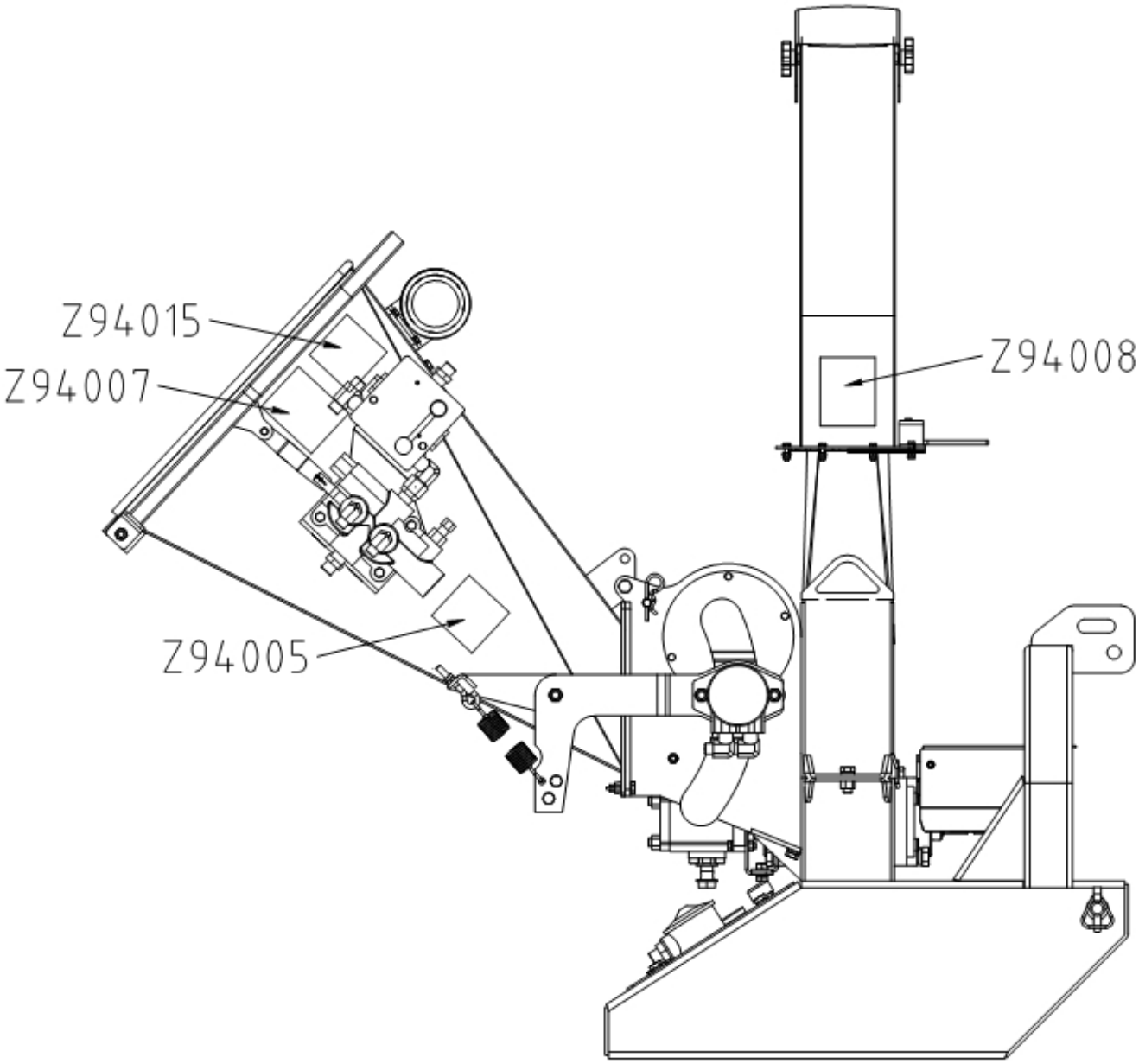
7. Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc. Watch for traffic when operating near or crossing roadways.

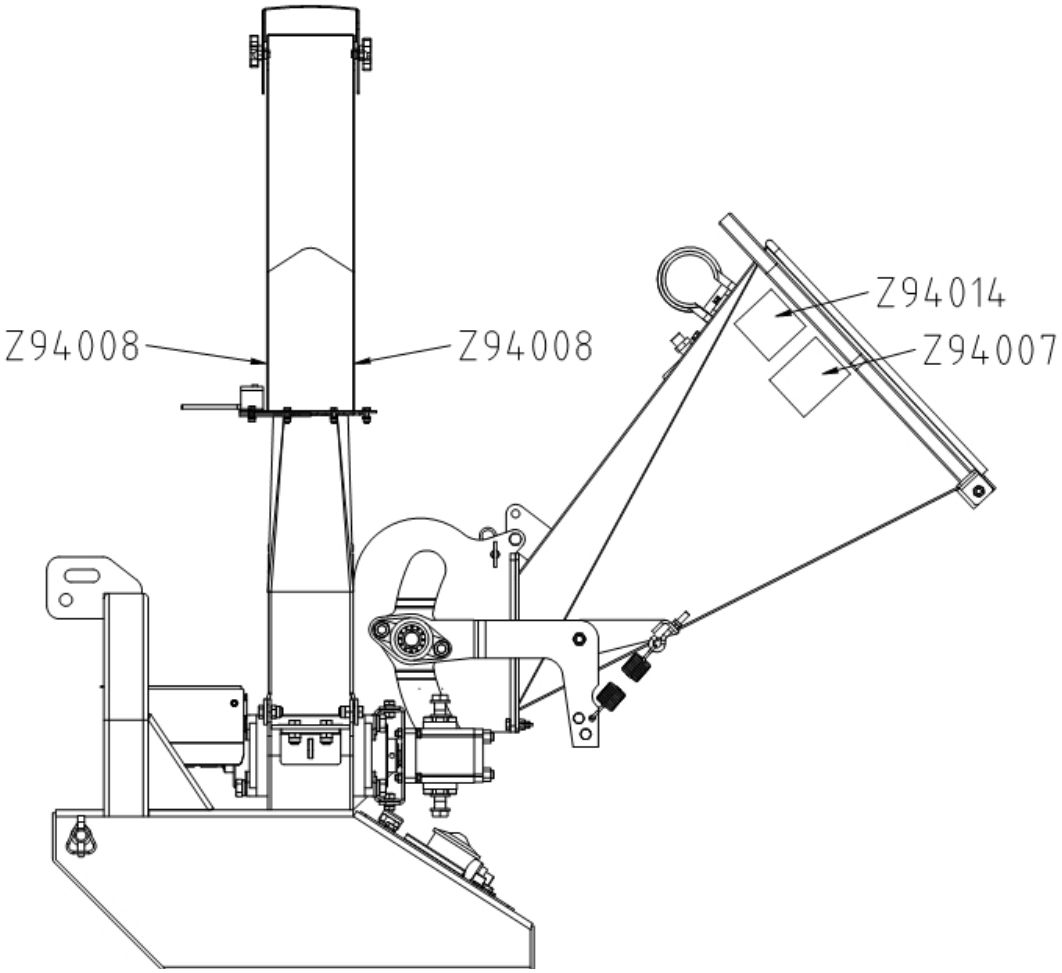
8. Never allow riders on the machine.

3 SAFETY SIGN LOCATIONS

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

- Think SAFETY! Work SAFELY!

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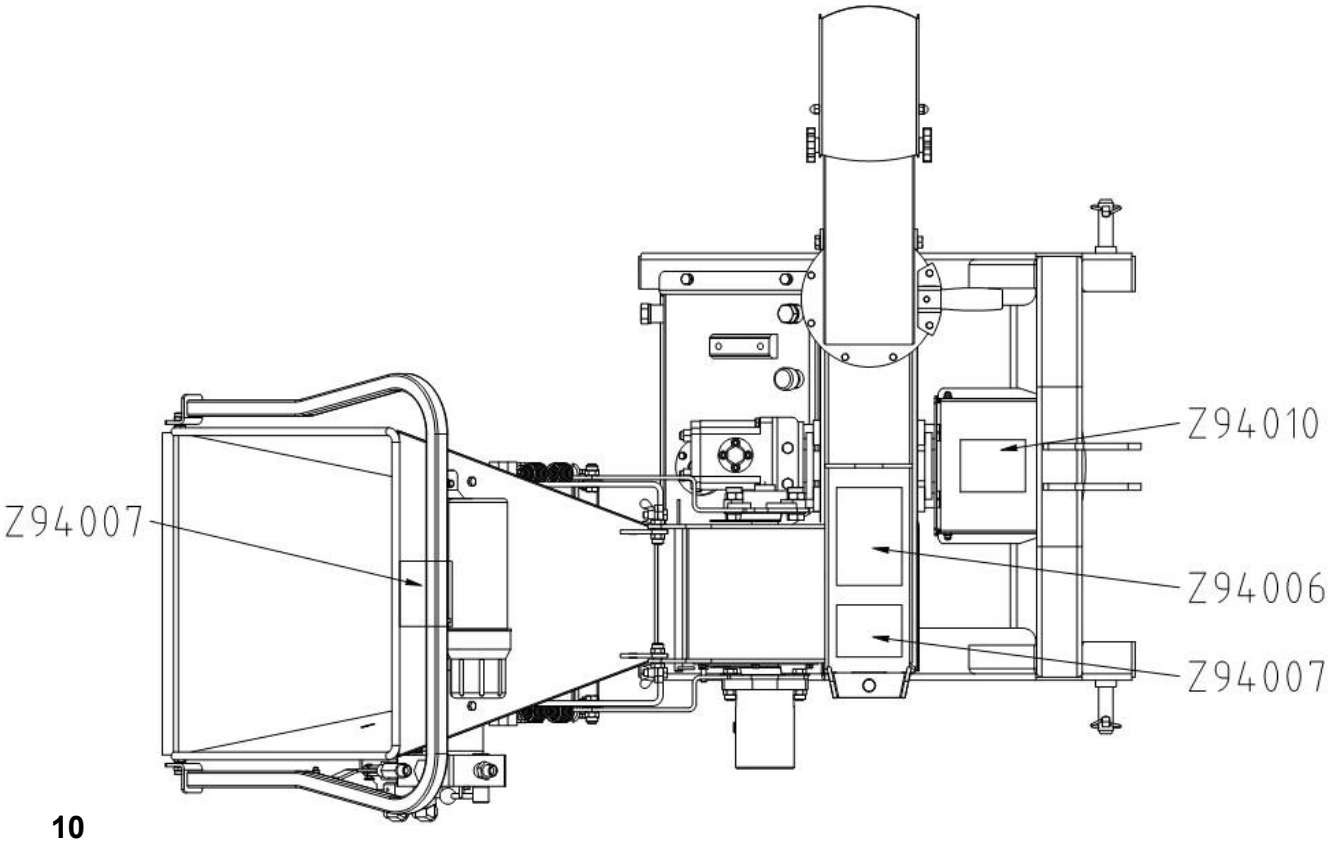
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Z94010
Z94006
Z94007

WARNING

HIGH PRESSURE FLUID HAZARD

To prevent serious injury or death from high-pressure fluid:

- Relieve pressure on system before repairing or adjusting.
- Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands.
- Keep all components in good repair.

Z94005

CAUTION

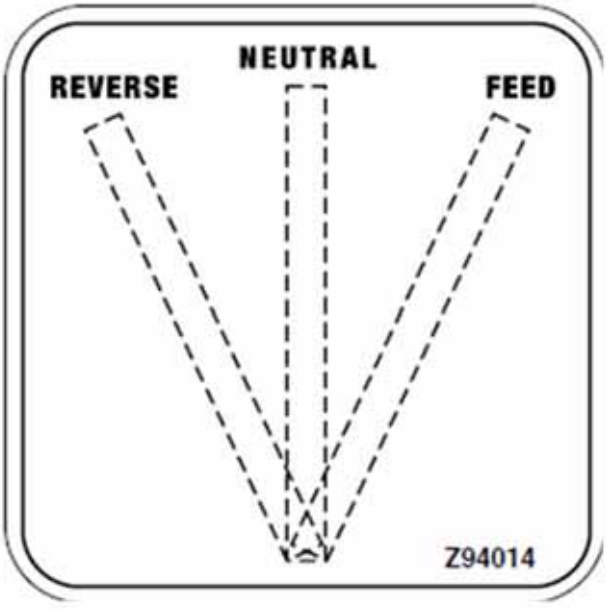
- Read and understand operator's manual before starting. Review safety instructions annually.
- Turn machine off, stop and disable engine, remove ignition key and place in your pocket, set park brake and wait for all moving parts to stop before adjusting, servicing, maintaining, repairing or unplugging.
- Keep the working area clean and free of debris to prevent slipping or tripping. Operate only on level ground.
- Close and secure rotor cover before operating.
- Close and secure all guards, deflectors and shields before starting and operating.
- Keep hydraulic lines and fittings tight, in good condition and free of leaks.
- Keep hands, feet, hair and clothing away from moving parts. Never wear loose clothing around machinery.
- Keep driveline universal joint angles equal and small as possible.
- Do not point discharge at people, animals or buildings. Rotor can expel wood chips fast enough to cause injury.
- Do not allow children, animals or unauthorized people into working area.
- Do not run machine inside a closed building to prevent asphyxiation from engine exhaust.
- Use care when feeding material into chipper. Do not send metal, bottles, cans, rocks, glass or other foreign material into wood chipper. If foreign material enters chipper, stop the machine, turn engine off and place ignition key in your pocket and wait for all moving parts to stop before removing material and/or unplugging. Inspect machine for damaged or loose parts before returning to work.
- Always wear P.P.E. (Personal Protective Equipment) such as safety goggles and heavy gloves whenever operating machine.
- Do not place hands or any body parts into feed hopper during operation.
- Do not move or transport chipper when the rotor is turning.
- Do not exceed a safe travel speed when transporting. Z94006

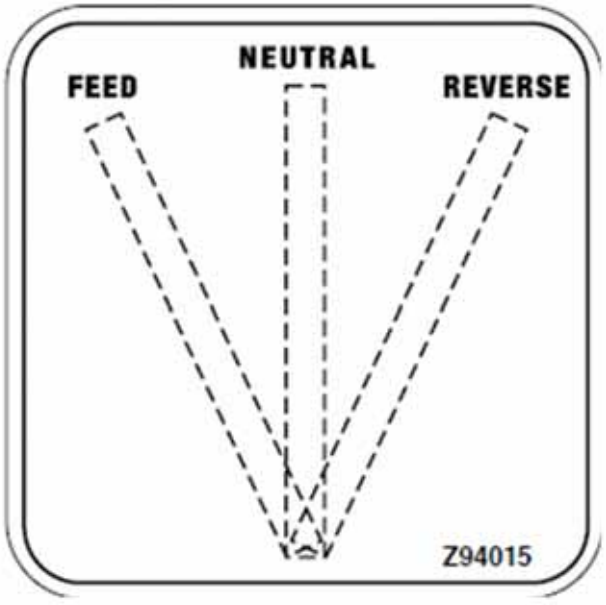
DANGER

ROTATING CUTTING BLADES

Keep hands and feet out of inlet and discharge openings while machine is operating to avoid serious personal injury. Stop engine, remove spark plug wire and allow machine to come to a complete stop before clearing obstructions or making adjustments.

Z94007





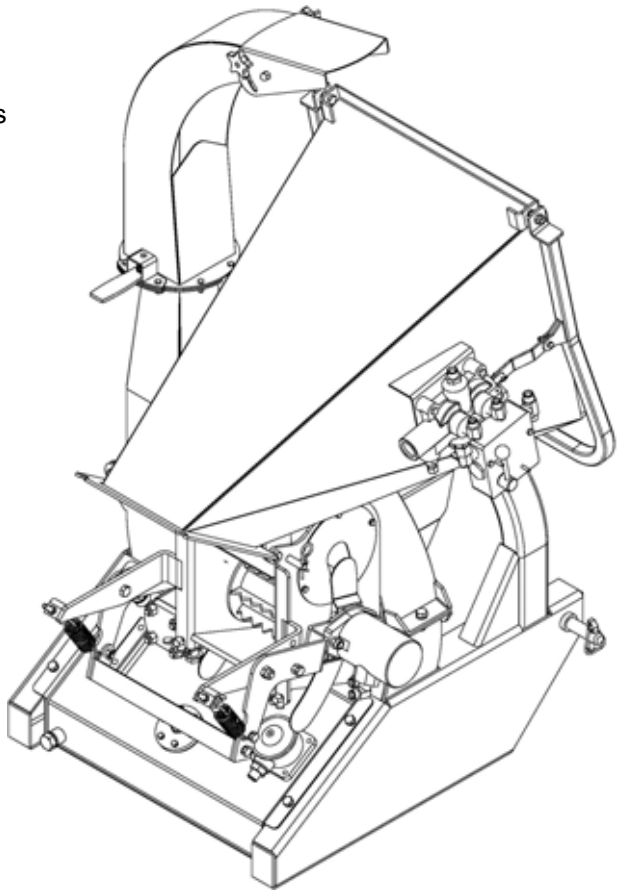
REMEMBER - If safety signs have been damaged, removed, become illegible or parts replaced without safety signs, new signs must be applied. New safety signs are available from your authorized dealer.

4 ASSEMBLING

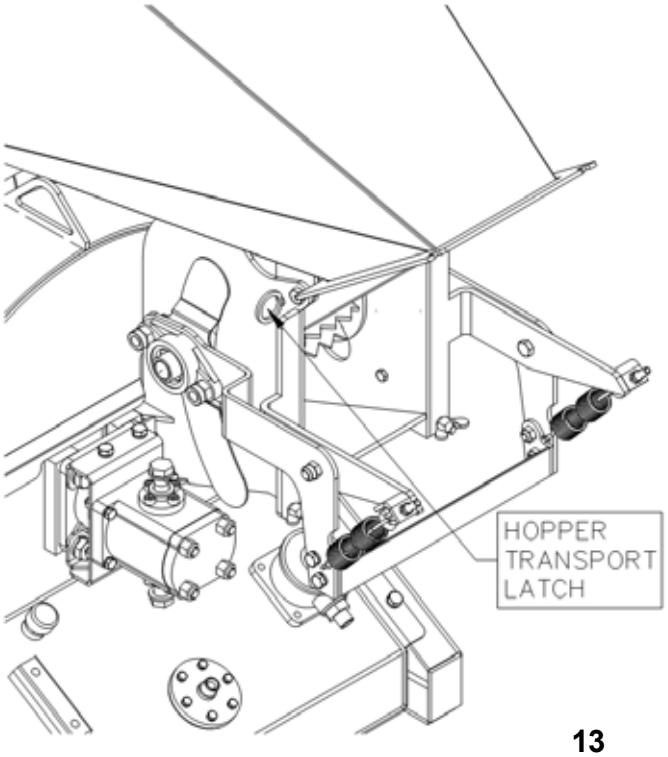
The machine comes from the factory in a shipping configuration. Always use tools equipment and forklifts of appropriate size and capacity for the job. Always use 2 men when lifting, moving and assembling the machine.

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

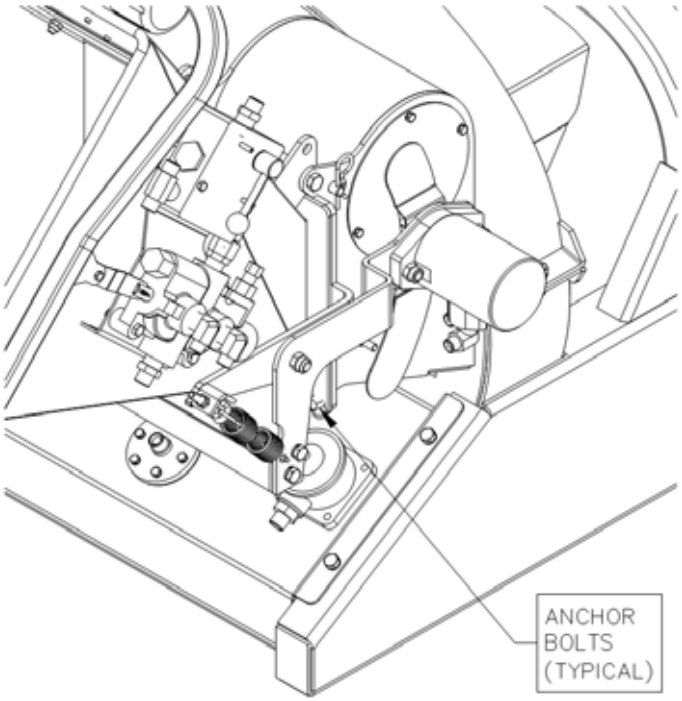
1. Clear the area of bystanders especially small children before starting.
2. Use a forklift to lift the pallet/machine from the truck. Carry the load close to the ground.
3. Move the machine to the assembly area. Be sure there is sufficient clearance to access the machine from all sides.
4. Cut the tie-down straps.
5. Lay-out components next to machine.
6. Use a forklift to raise and lift the frame.
7. Or alternatively attach a lifting device to the lifting bracket on top of the frame.
8. Remove pallet and place machine on the ground.
9. Release feed hopper transport latch and lower hopper into the working position. Stow anchor latch.



SHIPPING



10. Tighten anchor bolts to their specified torque.



11. **Connect the PTO drivline:**

a. Raise the input shaft guard.

b. Check that the driveline telescopes easily and that the shield rotates freely.

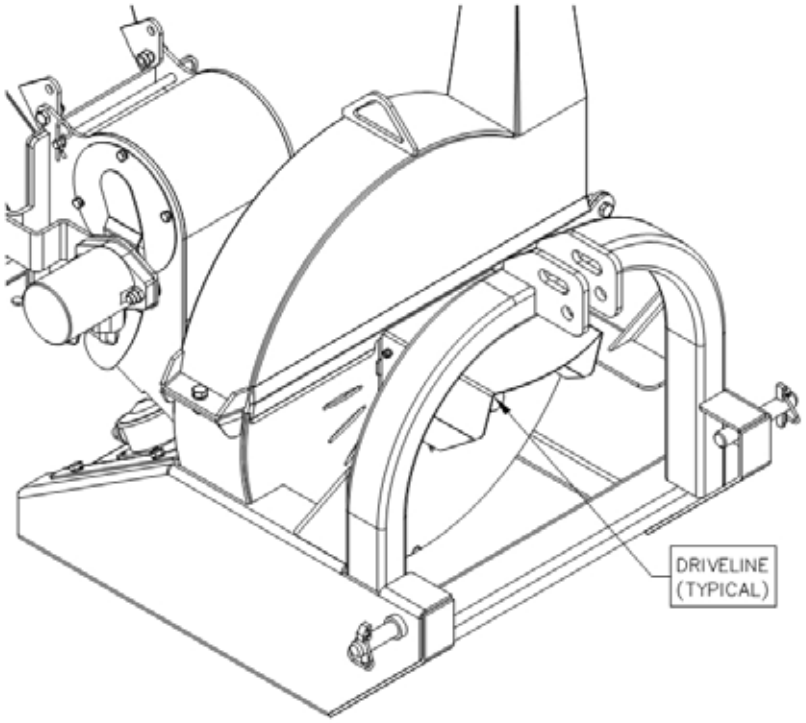
c. Attach the driveline to the chipper input shaft by depressing the lock pin, slide yoke over the shaft and pushing on the yoke until the lock pin clicks into position.

NOTE

Be sure the yoke with the shear pin is attached to the machine shaft.

d. Lower the guard to cover the input shaft.

12. Depress handle on discharge chute latch and turn assembly to its desired position. Turn until latch seats in its detent.



5 OPERATION

OPERATING SAFETY

- Please remember it is important that you read the operator's manual and heed the safety signs on the 3 Point Hitch Wood Chipper. They are there for your safety, as well as the safety of others. The safe use of this machine is strictly up to you, the operator.
- Personal protection equipment including hearing protection, hard hat, safety glasses, safety shoes, and gloves are recommended during assembly, installation, operation, adjustment, maintaining, repairing, or plugging. Do not allow long hair, loose-fitting clothing, or jewellery to be around moving parts.
- Turn machine off, stop and disable engine, remove ignition key and place in your pocket, set park brake and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
- Do not run machine inside a closed building to prevent asphyxiation from engine exhaust.
- Use care when feeding material into chipper. Do not send metal, bottles, cans, rocks, glass or other foreign material into wood chipper. If foreign material enters chipper, stop machine, turn engine off and place ignition key in your pocket and wait for all moving parts to stop before removing material and/or unplugging. Inspect machine for damaged or loose parts before resuming work.
- Never use alcoholic beverages or drugs which can hinder alertness or coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription medications.
- Do not allow riders on this machine at any time. There is no safe place for any riders.
- Never allow children or unauthorized people to operate or be around this machine.
- Do not reach into rotor or feed hopper openings when the engine is running. Install and secure access covers before starting engine.
- Do not move or transport chipper when the rotor is turning.
- Do not exceed a safe travel speed when transporting.
- Keep hydraulic lines and fittings tight, in good condition and free of leaks.
- Keep the working area clean and free of debris to prevent tripping. Operate only on level ground.
- Do not point discharge at people, animals or buildings. Rotor can expel wood chips fast enough to cause injury.

5.1 TO THE NEW OPERATOR OR OWNER

The LandMax 3 Point Hitch Wood Chippers are designed to chip or chop scrap lumber, small trees, brush, limbs and other wood debris. The chipped material is fine enough to be composted or used in a variety of ways.

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

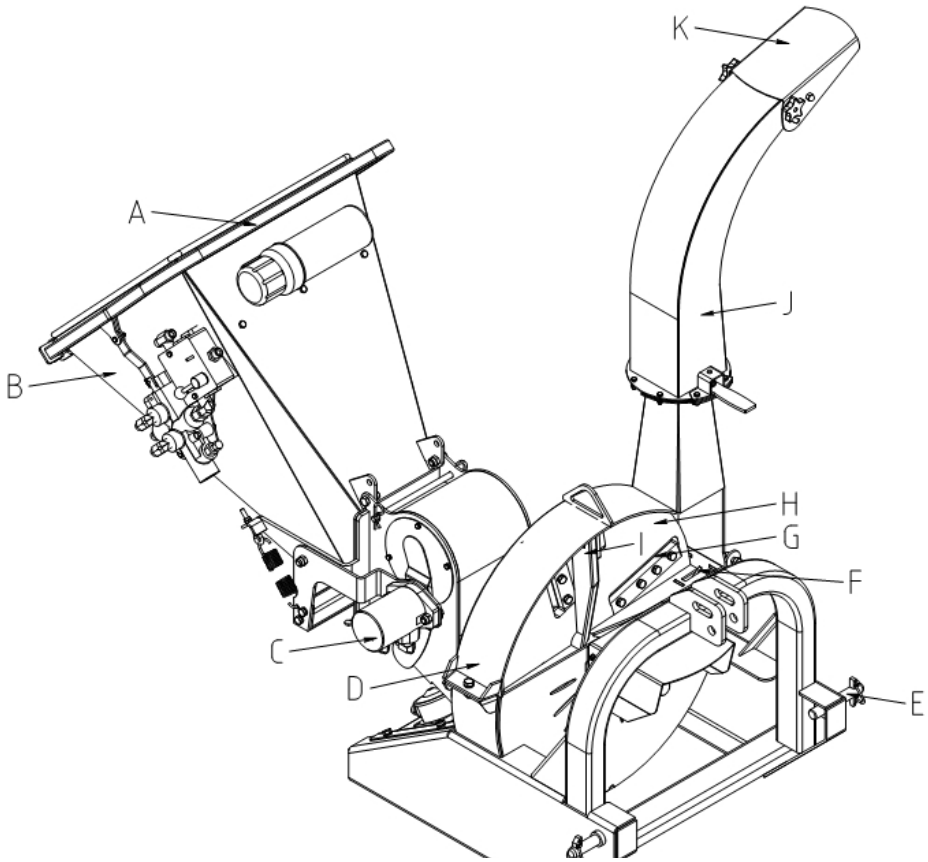
Follow all safety instructions exactly. Safety is everyone's business. By following recommended procedures, a safe working environment is provided for the operator, bystanders and the area around the worksite. Untrained operators are not qualified to operate the machine.

Many features incorporated into this machine are the result of suggestions made by customers like you. Read this manual carefully to learn how to use the chipper safely and how to set it to provide maximum field efficiency. By following the using instructions in conjunction with a good maintenance program, your 3 Point Hitch Wood Chipper will provide many years of trouble-free service.

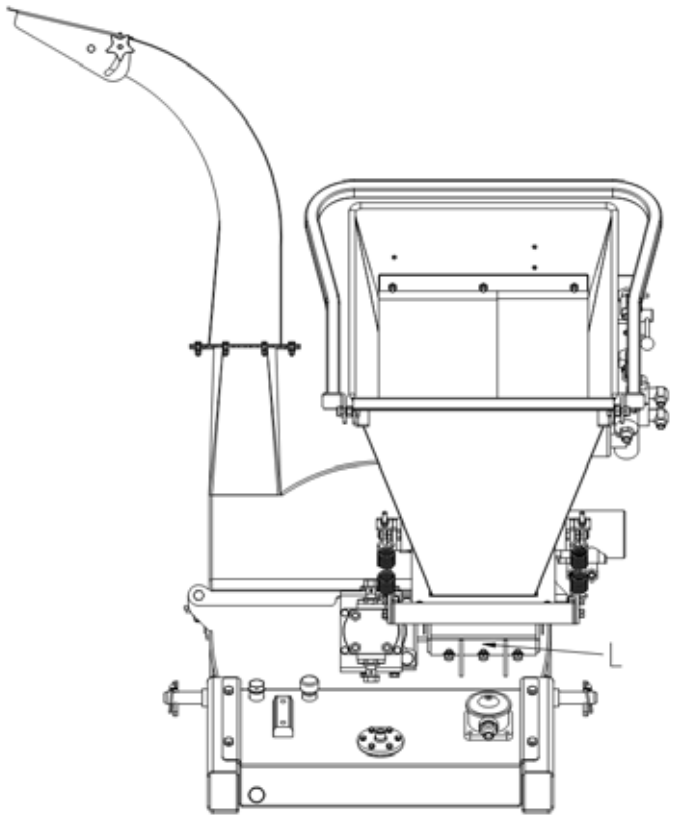
5.2 MACHINE COMPONENTS

The LandMax 3 Point Hitch Wood Chipper is a rotor with blades for chip- ping wood. A hinged feed hopper moves the wood material into the rotor. Each rotor is designed with 4 blades and a twig-break- er to generate the small pieces of wood. A station- ary knife at the rear of the rotor housing is placed by the moving knives to shear, chip or chop the material.

The tractor provides rotational power through a PTO shaft on the front of the frame and hydraulic power for the hydraulic feed hopper.



A Hydraulic Feed Control
B Hydraulic Feed Hopper
C Hydraulic Motor
D Rotor Housing
E 3 Point Hitch
F Twig Breaker
G Rotor Blade
H Rotor
I Paddle
J Discharge Hood
K Hood Deflector
L Stationary Blade



5.3 MACHINE BREAK-IN

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

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

1. Torque all fasteners and hardware.

2. Check condition of rotor bearings.

3. Check the condition and clearance of the twig-breaker, rotor and stationary blades. Adjust or replace as required.

4. Check for entangled material. Remove all entangled material before resuming work.

5. Lubricate all grease fittings.

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

1. Repeat steps 1 through 5 listed above. (Section A)

2. Go to the normal servicing and maintenance schedule as defined in the Maintenance Section.

5.4 PRE-OPERATION CHECKLIST

Efficient and safe operation of the LandMax 3 Point Hitch Wood Chipper requires that each operator reads and understands the using procedures and all related safety precautions outlined in this section. A pre-operation checklist is provided for the operator. It is important for both the personal safety and maintaining good mechanical condition that this checklist is followed.

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

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

2. Check the rotor, blades and twig-breaker. Remove any twine, wire or other material that has become entangled.

3. Check the condition and clearance of the twig-breaker, rotor and stationary blades. Adjust or replace as required.

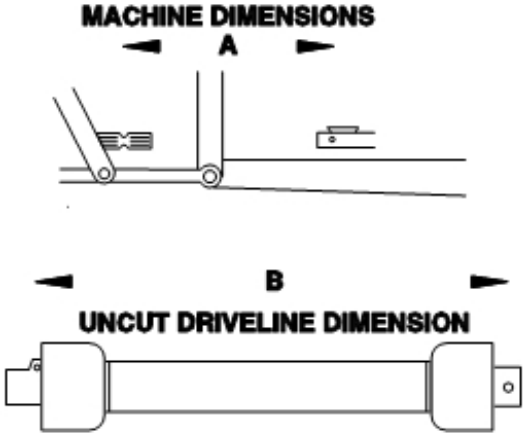
4. Check that all bearings turn freely. Replace any that are rough or seized.

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

6. Check the condition of the curtain in the feed hopper. It must be in good condition to prevent chips from flying out.

5.5 DRIVELINE DIMENSION

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



DRIVELINE DIMENSIONS

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

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

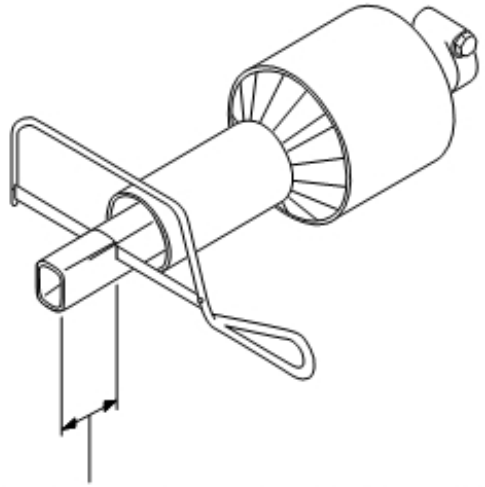
   b. Attach the chipper to the tractor but do not attach the driveline.

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

   d. Measure the dimension between the locking grooves on the tractor PTO shaft and the machine input shaft.

   e. Measure the same dimensions on the compressed driveline.

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



CUT OFF DIMENSION

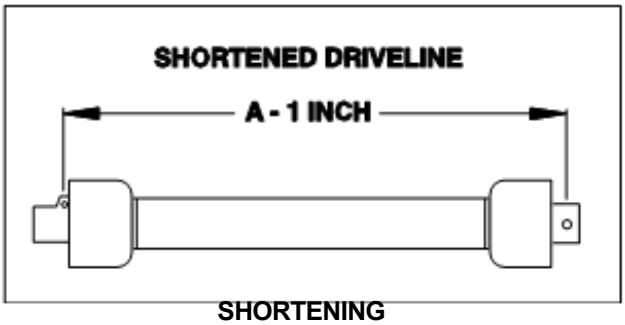
2. **When cutting the driveline, follow this procedure:**

   a. Subtract the machine dimension (A) from the uncut driveline dimension (B) or (B-A). This dimension determines how much too long the driveline is.

   b. Add another inch (25 mm) to the dimension to be sure it doesn't bottom out, to determine (C) the cut off dimension.

   c. Use a hacksaw to cut dimension (C) from both ends. Cut both the plastic tubes and the metal cores.

   d. Use a file to remove the burrs from the edges that were cut.



SHORTENING

   e. Assemble the 2 ends of the shaft.

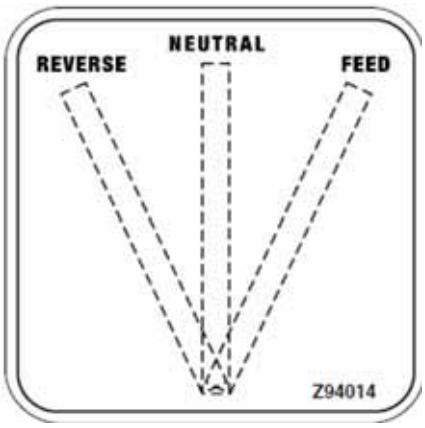
   f. Make sure the shaft can telescope freely. If it does not, separate the 2 parts and inspect for burrs or cuttings on the shaft ends. Be sure it telescopes freely before installing.

5.6 CONTROLS

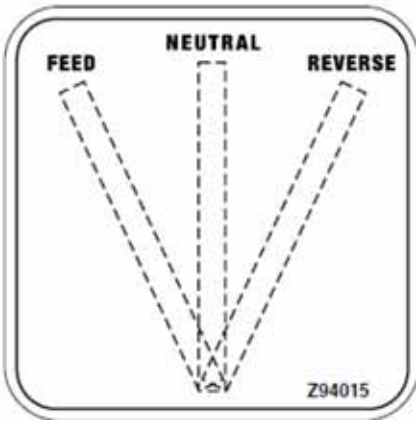
All controls are conveniently positioned next to where the operator would stand when feeding the machine to provide easy operation. Review this section to familiarize yourself with the location and function of each control before starting.

1. **Hydraulic Feed Control Lever:**
   This lever is positioned to extend around the feed hopper and provides access from all sides. It is only available when the chipper is equipped with the optional hydraulic feed hopper.
   Pull the control all the way out to engage the feeding system. Push in slightly to the first detent to stop the feeding system. Push the control all the way in to reverse the feeding system.

NOTE
Use the typical flow divider next to the control valve to set the feeding spread.

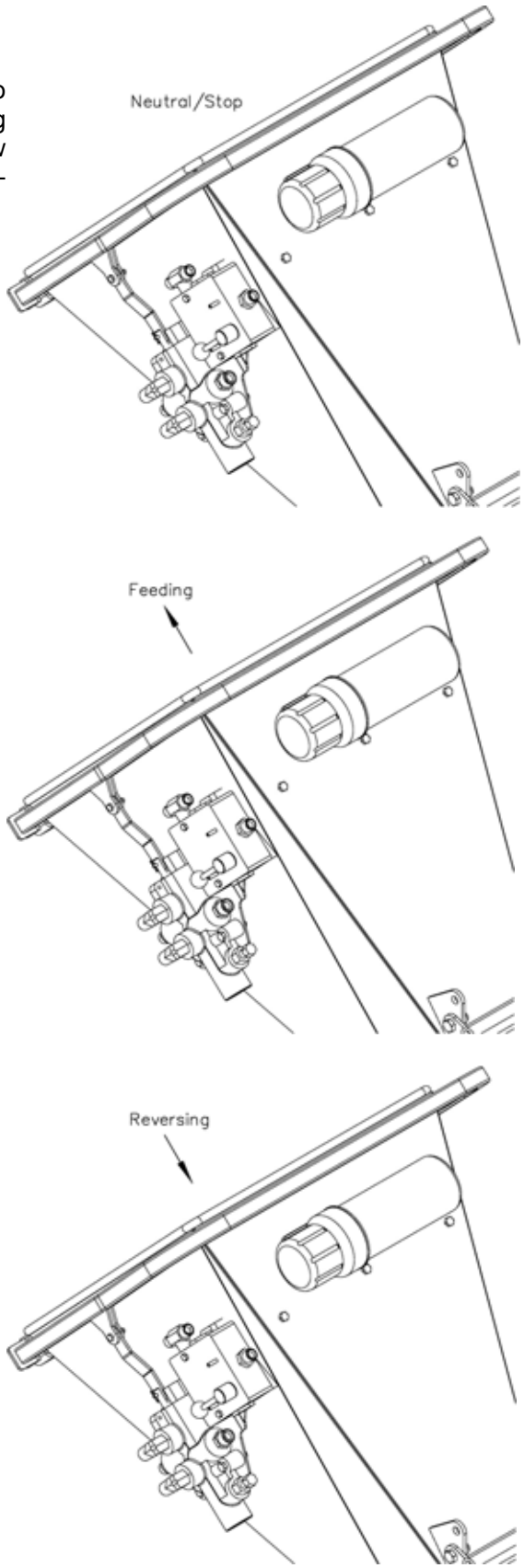


Left Side



Right Side

Control Schema

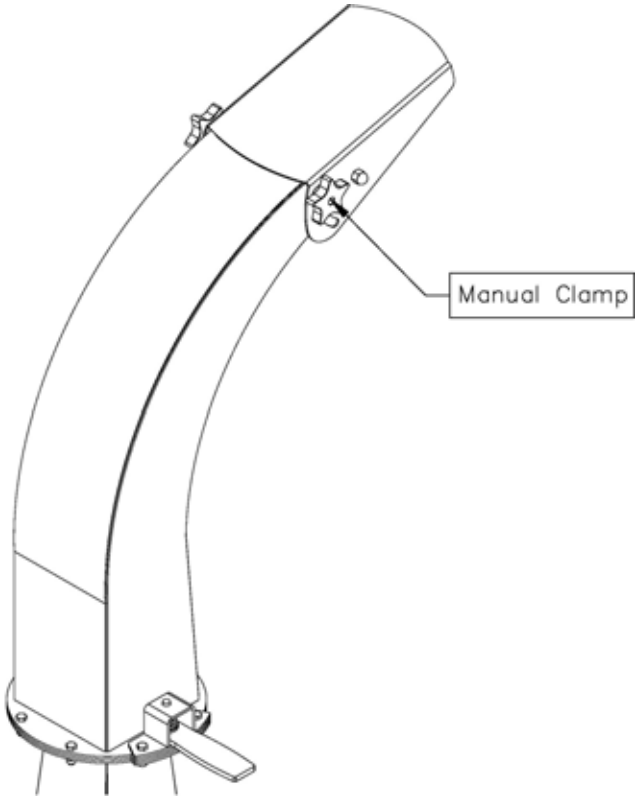


HYDRAULIC FEED CONTROL LEVER

2. **Deflector Position:**
Each discharge hood is equipped with a deflector on the end to place the chips exactly where desired.

Manual Clamp:
The deflector is held in place by clamping bolts on each side. Loosen the clamps, move the deflector and tighten the clamps. Position as desired.

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



DEFLECTOR POSITION

4. **Flow Control Valve:**
This manually-set flow divider allows the operator to set the flow through the circuit from 0% to 100% by dumping the excess flow back to the tractor. A scale on the face of the valve is numbered from 0 to 10 to define the percent of flow from 0 to 100% flowing into the circuit. The hydraulic feed circuit is equipped with a flow divider so the operator can adjust the feeding speed appropriate for the operating conditions. Loosen the lock and move the pointer arm to the desired position. Tighten the lock bolt. Adjust in small increments as a small change can result in a large change to feeding speed.

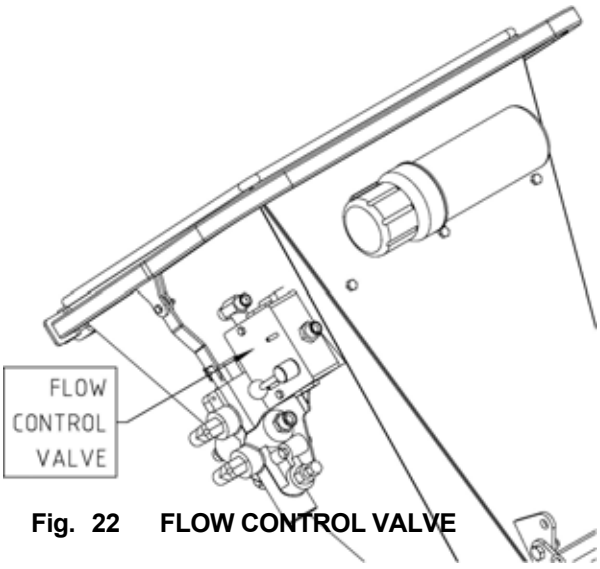


Fig. 22 FLOW CONTROL VALVE

5.7 TRANSPORTING

TRANSPORT SAFETY

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

2. Check that all the lights, reflectors and other lighting requirements are installed and in good working condition.

3. Do not exceed a safe travel speed. Slow down for rough terrain and cornering.

4. Fold up and secure feed hopper before moving or transporting.

5. Be sure the trailer is hitched positively to the towing vehicle and a retainer is used through the mounting pins.

6. Do not drink and drive.

7. Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc. Watch for traffic when operating near or crossing roadways.

8. Never allow riders on the machine.

When transporting the machine, review and follow these instructions:

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

2. Check that all the lights and reflectors required by the highway authorities are in place, clean and working.

3. Insure that the machine is securely attached to the tractor with a retainer through the mounting pins.

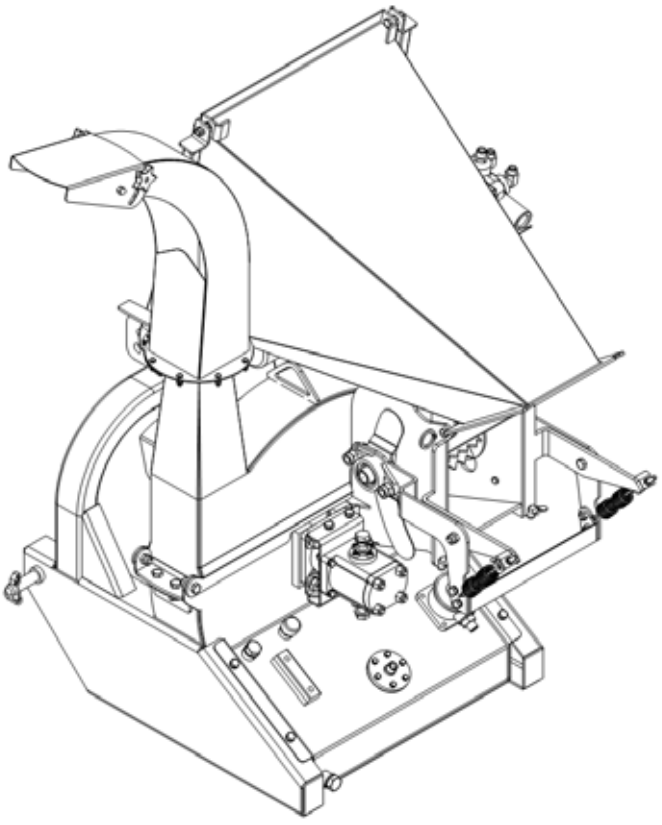
4. Do not allow riders.

5. Never exceed a safe travel speed. Slow down when encountering rough road conditions and cornering.

6. Do not drink and drive.

7. Raise and secure the feed hopper before transporting.

8. Turn the discharge hood and point toward the rotor to reduce the width of the machine.



TRANSPORT CONFIGURATION

6 SERVICE AND MAINTENANCE

MAINTENANCE SAFETY

- Good maintenance is your responsibility.

  Poor maintenance is an invitation to trouble.

- Follow good shop practices.
  - Keep service area clean and dry.
  - Be sure electrical outlets and tools are properly grounded.
  - Use adequate light for the job at hand.

- Make sure there is plenty of ventilation. Never operate the engine of the towing vehicle in a closed building. The exhaust fumes may cause asphyxiation.

- Before working on this machine, shut off the engine, set the brake, and turn fuel valve off.

- Never work under equipment unless it is blocked securely.

- Always use personal protection devices such as eye, hand and hearing protectors, when performing any service or maintenance work. Use heavy gloves when handling sharp components.

- Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your equipment to original specifications. The manufacturer will not be responsible for injuries or damages caused by use of unapproved parts and/or accessories.

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

- Periodically tighten all bolts, nuts and screws and check that all electrical and fuel connections are properly secured to ensure unit is in a safe condition.

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

6.1 SERVICE

6.1.1 FLUIDS AND LUBRICANTS

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

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

6.1.2 GREASING

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

1. Use a hand-held grease gun for all greasing.

2. Wipe grease fitting with a clean cloth before greasing, to avoid injecting dirt and grit.

3. Replace and repair broken fittings immediately.

4. If fittings will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace fittings if necessary.

6.1.3 SERVICING INTERVALS

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

8 Hours or Daily

1. Grease PTO driveline.

40 Hours or Weekly

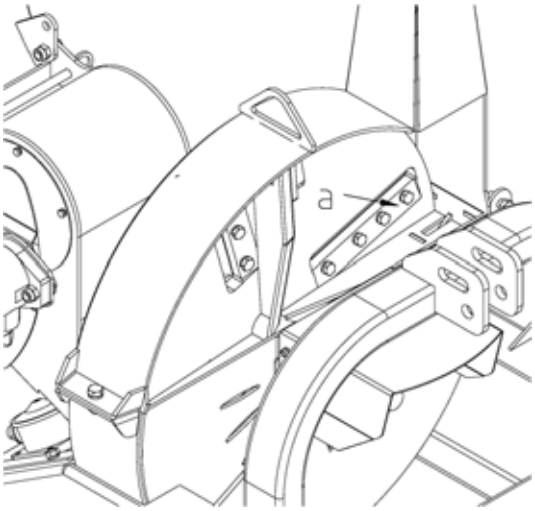
1. Grease the telescoping section of the PTO shaft.

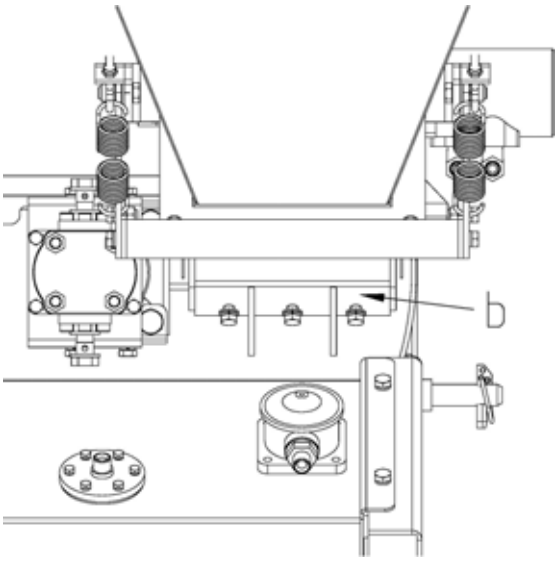
2. Check sharpness of blades:

   a. Rotor

   b. Stationary

   Remove, sharpen or switch edge as required.

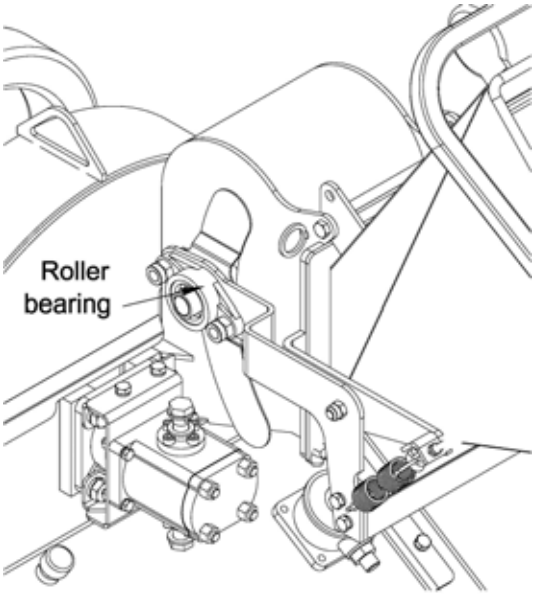




100 Hours

1. Grease the hydraulic feed system:

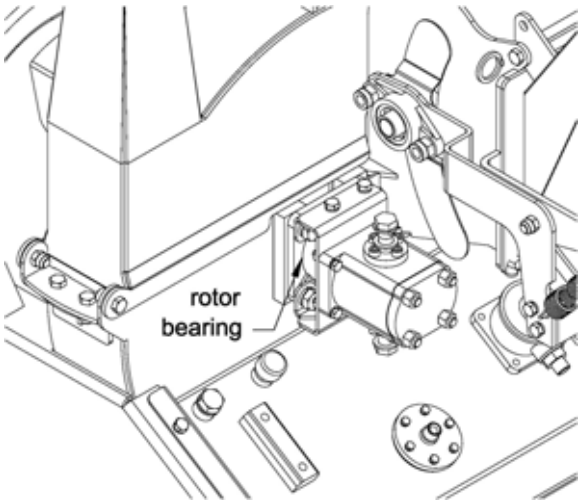
   Roller bearing

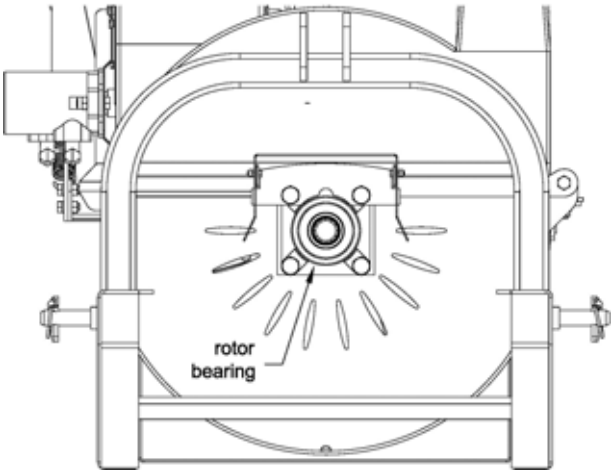


2. Grease rotor bearings.

IMPORTANT

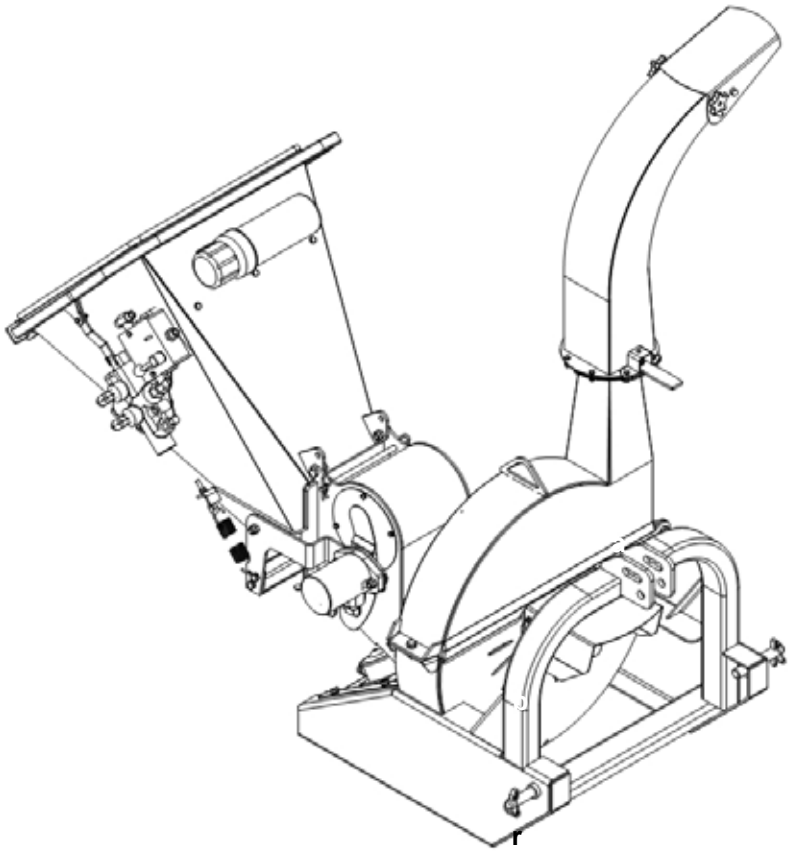
Do not over grease.





Annually

1. Clean machine.



6.2 MAINTENANCE

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

6.2.1 DRIVELINE MAINTENANCE

The PTO driveline is designed to telescope to allow for dimensional changes as the machine goes through its operational range. A tubular guard encloses the driving components and is designed to turn relative to the driving components. The driveline should telescope easily and the guard turn freely on the shaft at all times. Annual disassembly, cleaning and lubrication is recommended to insure that all components function as intended. To maintain the driveline, follow this procedure:

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

Guard Removal

Disassembled

DRIVELINE COMPONENTS

7 TROUBLE SHOOTING

The LandMax 3 Point Hitch Wood Chipper is designed with blades on a rotor to cut, shear and chip wooden material. It is a simple and reliable system that requires minimal maintenance.

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

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

PROBLEM	CAUSE	SOLUTION
Rotor does not turn.	Obstructed discharge.	Shut down and clear debris.
	Rotor plugged.	Clear rotor.
	Broken shear pin.	Replace shear pin.
Slow feeding.	Knives are dull.	Sharpen knives.
	Blade angle wrong, improper angle.	Re-sharpen knives to specified angle.
	Discharge hood clogged.	Clear discharge hood.
Chipper requires excessive power or stalls.	Obstructed discharge.	Clear discharge hood.
	Rotor plugged.	Clear rotor.
	Green material will not discharge.	Allow material to dry or alternately feed in dry material.
	Dull knives.	Sharpen knives.
High power required	Plugged rotor.	Clear rotor.
	Dull knives.	Sharpen knives.
Vibration while running.	Driveline vibration.	Check driveline phasing. Yokes must be aligned.
		Check rotor to see if it wobbles. Check to see if rotor is assembled correctly.

8 SPECIFICATIONS

8.1 MECHANICAL

Model	BX42F
Drive System	Direct drive, pto w/shearbolt
Engine	n/a
Max Chipping Diameter	150mm/ 6"
Chipping House Opening	6"x8"
Number of Rotor Knives	4
Knife Type	Hardened Tool Steel
Rotor Size	25"
Rotor Weight	56kg
Feeding System Feed	Hydraulic Feed
Hopper Holded	40"Lx38"Wx49"H
Hopper Opening	20"x20"
Mounting System	3 Point Hitch
Hopper Discharge Rotation	127°
Hopper Discharge Height	49"
Weight	270kg
Rated RPM	1000
Tractor HP	18-50hp

8.2 BOLT TORQUE

CHECKING BOLT TORQUE

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

ENGLISH TORQUE SPECIFICATIONS

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

METRIC TORQUE SPECIFICATIONS

Bolt Diameter "A"	Bolt Torque*			
	8.8		10.9	
	(N.m)	(lb-ft)	(N.m)	(lb-ft)
M3	.5	.4	1.8	1.3
M4	3	2.2	4.5	3.3
M5	6	4	9	7
M6	10	7	15	11
M8	25	18	35	26
M10	50	37	70	52
M12	90	66	125	92
M14	140	103	200	148
M16	225	166	310	229
M20	435	321	610	450
M24	750	553	1050	774
M30	1495	1103	2100	1550
M36	2600	1917	3675	2710

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

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

8.3 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.

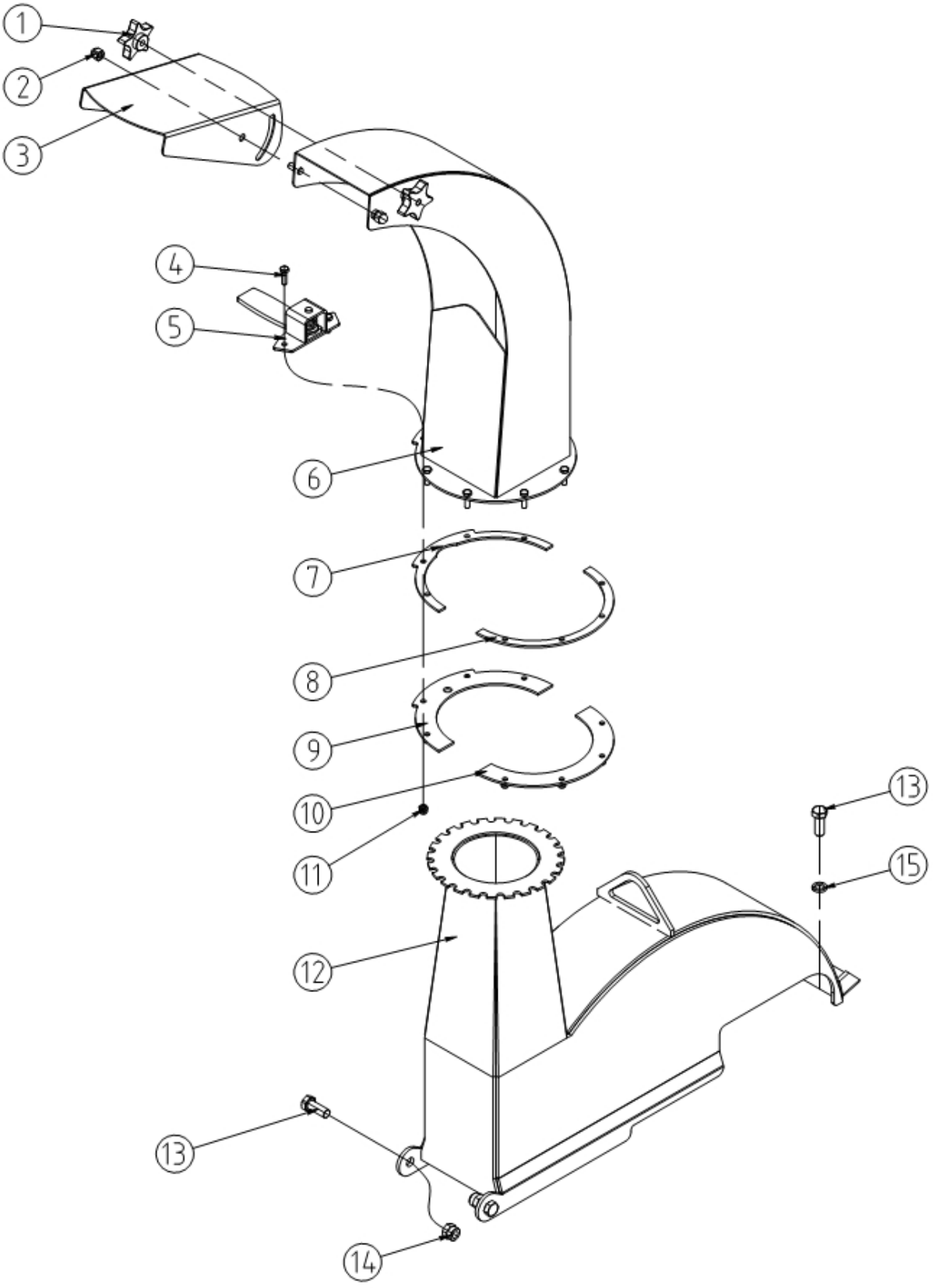
3. Lubricate connection and hand tighten swivel nut until snug.

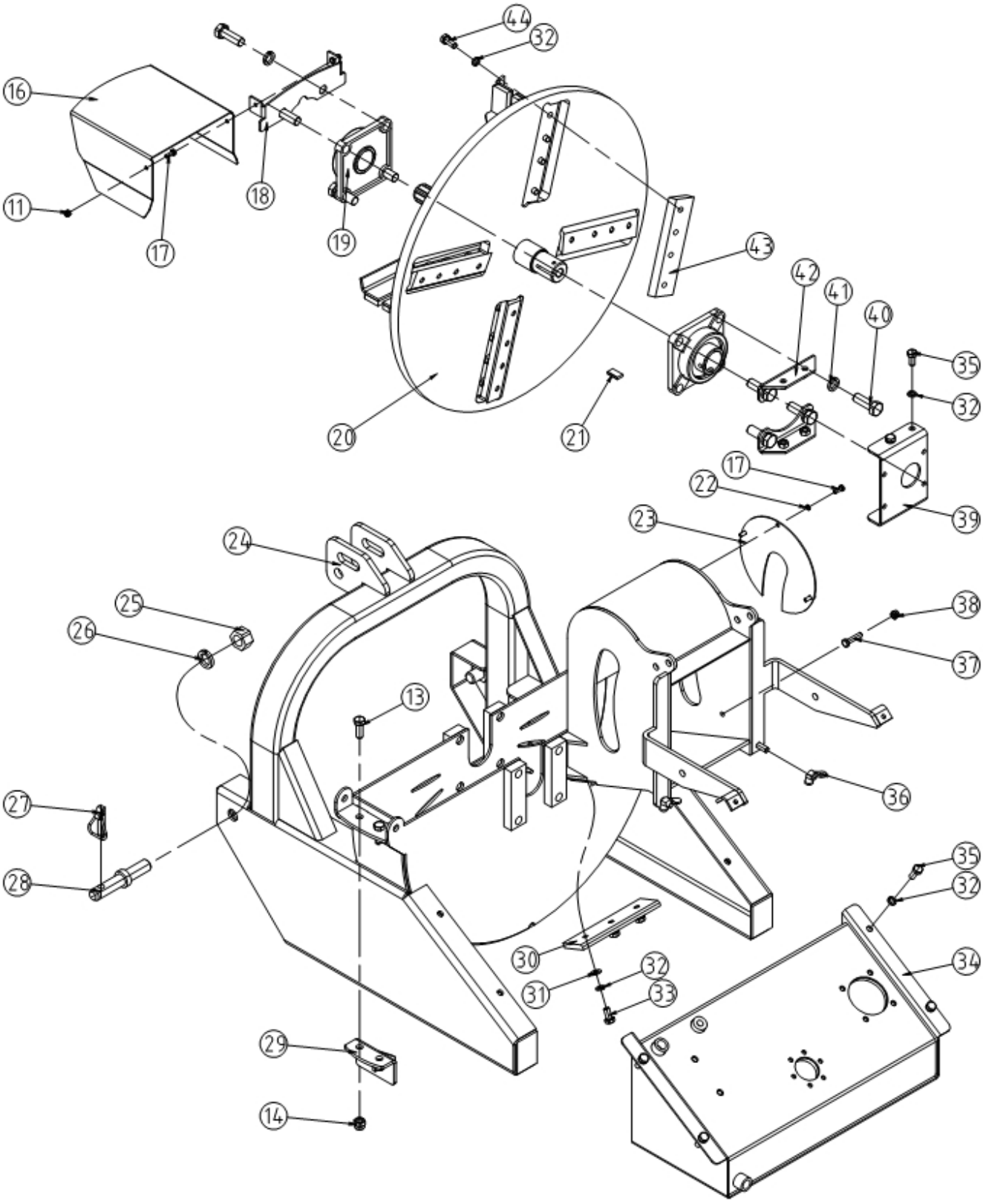
4. To prevent twisting the tube(s), use two wrenches. Place one wrench on the connector body and with the second tighten the swivel nut to the torque shown.

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

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

BX42F

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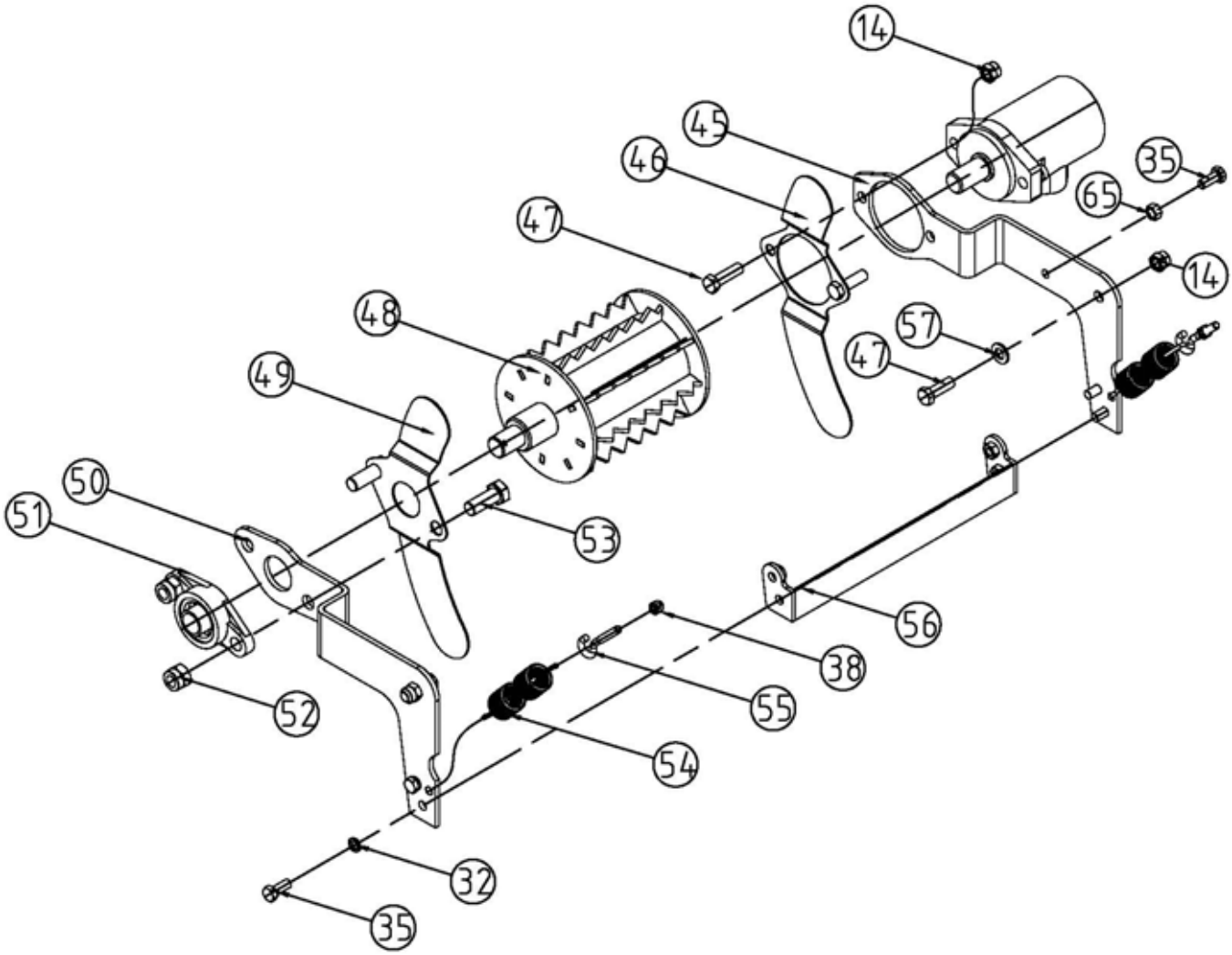
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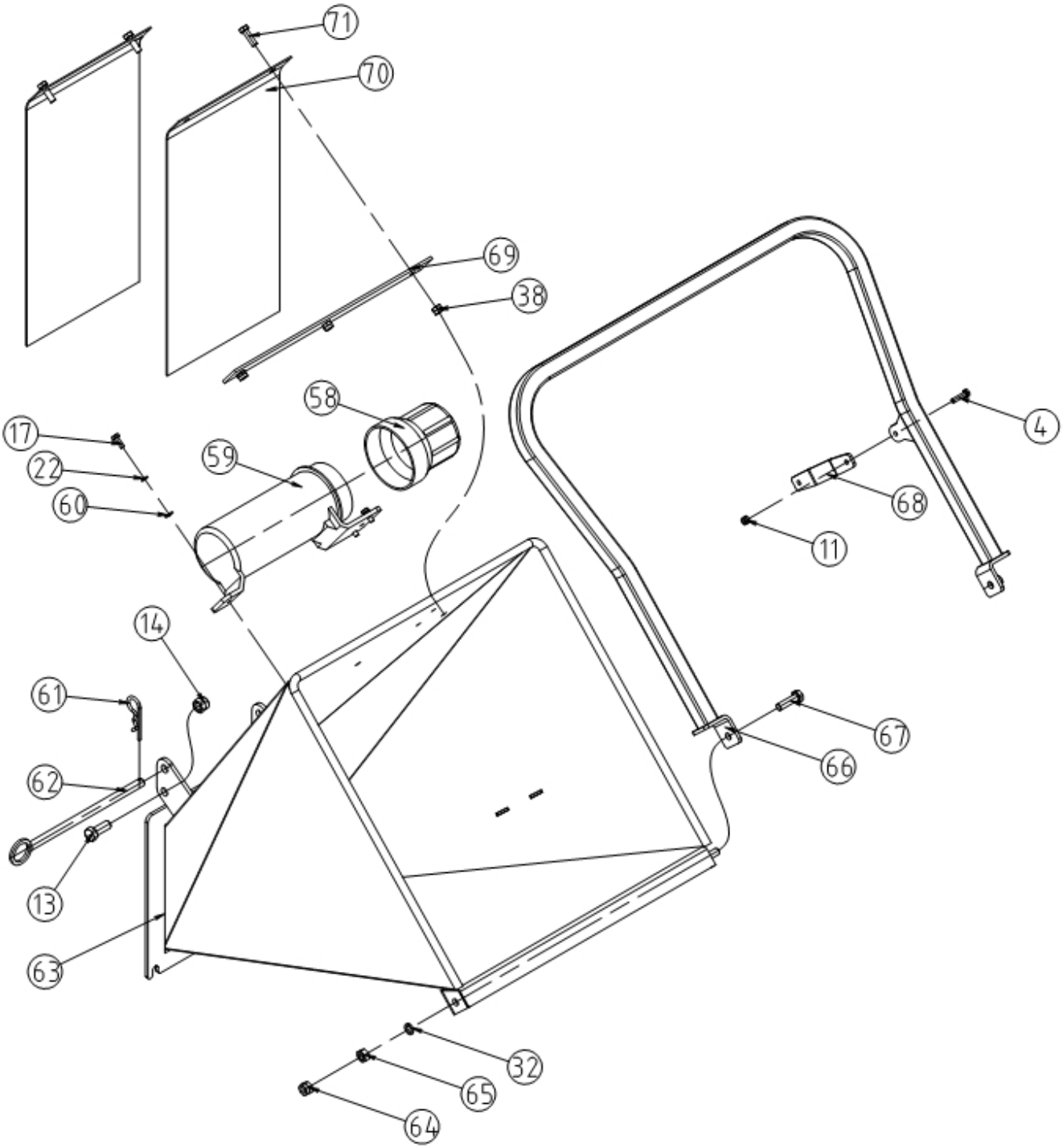
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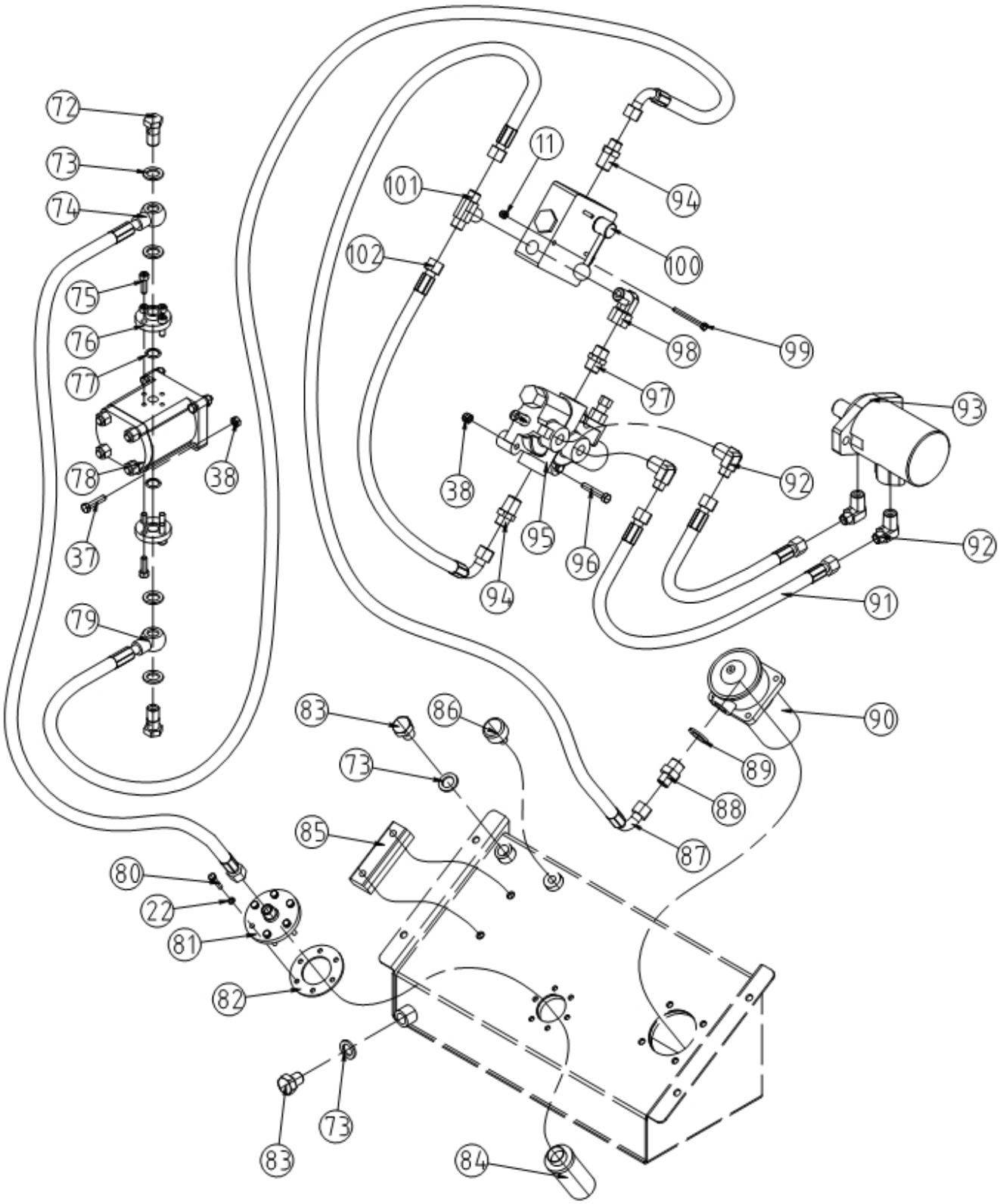
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BX42F

NO.	PART NO.	Name & Specifications		Quantity
1	Z19313	Knob		2
2	GB/T802-88	Acorn Nut M8		2
3	1011L133	Deflector, Discharge Chute		1
4	GB/T5783-2000	Bolt M6*20		9
5	1012W208	Assembly, Hood Latch		1
6	1011W106	Discharge Chute		1
7	1011L129	Plate, Spacer Ring		1
8	1011L127	Plate, Spacer Ring		1
9	1011L130	Plate, Hood Capture		1
10	1011L134	Plate, Hood Capture		1
11	GB/T889.1-2000	Locking Nut M6		13
12	BX42F.015	Housing, Upper Rotor		1
13	GB/T5783-2000	Bolt M12*30		7
14	GB/T889.1-2000	Locking Nut M12		10
15	GB/T93-1987	Spring washer 12		1
16	1011L112	PTO Cover		1
17	GB/T5783-2000	Bolt M6*16		8
18	1011L106	Bracket, PTO Cover Mount		1
19	GB / T7810-1995	Bearing UCFU208		2
20	BX42F.016	Rotor		1
21	BX42F.110	Flat key		1
22	GB/T93-1987	Spring washer 6		12
23	BX42F.105	Circular plate		1
24	BX42F.013	Housing, Bottom Rotor		1
25	GB/T6171-86	Nut M22x1.5		2
26	GB/T93-1987	Spring washer 22		2
27	LPIN 12	Locking pin 12		2
28	Z11431	Implement Pin		2
29	1011W104	Twig Breaker		1
30	BX42F.104	Knife, Ledger		1
31	GB/T97.1-2002	Plain washer 10		3
32	GB/T93-1987	Spring washer 10		33
33	GB/T5786-86	Bolt M10x1x25		3
34	BX42F.014	Oil tank weldment		1
35	GB/T5783-2000	Bolt M10*25		13
36	GB/T62-88	Wing Nut M10		2

37	GB/T5783-2000	Bolt M8*35		5
38	GB/T889.1-2000	Locking Nut M8		13
39	BX42F.107	The plate fix the pump		1
40	GB/T5786-86	Bolt M16x1.5x45		8
41	GB/T889.1-2000	Locking Nut M16		8
42	BX42F.020	Connection plate		1
43	BX42F.106	Knife, Rotor		4
44	GB/T5786-86	Bolt M10x1x30		16
45	BX42F.102	Roller Arm-Right		1
46	BX42F.103	Right turn plate		1
47	GB/T5783-2000	Bolt M12*40		4
48	BX42F.017	Drum, Feed Roller		1
49	BX42F.108	Left turn plate		1
50	BX42F.109	Roller Arm-Left		1
51	GB / T7810-1995	Bearing UCFLU205		1
52	GB/T5783-2000	Bolt M16*40		2
53	GB/T889.1-2000	Locking Nut M16		2
54	BX42F.101	Spring		2
55	BX42F.010	Eye Bolt		2
56	BX42F.018	Pull plate		1
57	GB/T97.1-2002	Plain washer 12		2
58	BX42F.111	Manual tube cover		1
59	BX42F.112	Manual tube		1
60	GB/T97.1-2002	Plain washer 6		3
61	RPIN 3.2	RPIN 3.2		1
62	BX42F.019	Pin weldment		1
63	BX42F.012	Weldment, Main Hopper		1
64	GB/T889.1-2000	Locking Nut M10		2
65	GB/T6170-2000	Nut M10		3
66	BX42F.011	Feed Handle		1
67	GB/T5783-2000	Bolt M10*35		2
68	1014L413	Feed Handle Link Bar		1
69	1011L151	Safety Flap Bar		1
70	1012S203	Flap, Hopper		2
71	GB/T5783-2000	Bolt M8*25		3
72	CP5.60.102	Hollow bolt 18		2
73	JB/ZQ4454	Gasket 18		6
74	BX42F.022	Pump hose,in		1

75	GB/T70-85	Bolt M8*40		8
76	CP5.60.103	Pump adapter		2
77	GB3452.1	O-ring 18x23x2.5		2
78	CBN-320F	Gear pump 320F		1
79	BX42F.024	Pump hose,out		1
80	GB/T5783-2000	Bolt M6*25		6
81	CP5.60.012	Adapter weldment		1
82	CP5.60.109	Washer		1
83	JB/ZQ4451	Plug M18x1.5		2
84	WU-25x100J	Filter		1
85	YWZ-76	Oil level indicators with thermometer		1
86	C-M12	Air filter C-M12		1
87	BX42F.023	Hose		1
88	BH5.60.107	Adapter 22-18		1
89	JB/ZQ4454	Gasket 22		1
90	RFA-25	Oil filter		1
91	BX42F.025	Hose, Valve- Motor		2
92	CP5.60.108	Adapter, Elbow		4
93	BMP-200	Hydraulic Motor		1
94	CP5.60.104	Adapter, Straight		2
95	X-20	Control Valve, Single Spool		1
96	GB/T5782-2000	Bolt M8*45		3
97	CP5.60.107	Adapter, Valve-Valve		1
98	CP5.60.106	Bend adapter		1
99	GB/T5782-2000	Bolt M6*60		2
100	RD1900	Hydraulic Flow Control		1
101	CP5.60.105	Adapter, Tee		1
102	BX42F.021	Hose, Valve- Valve		1