

OWNER'S MANUAL

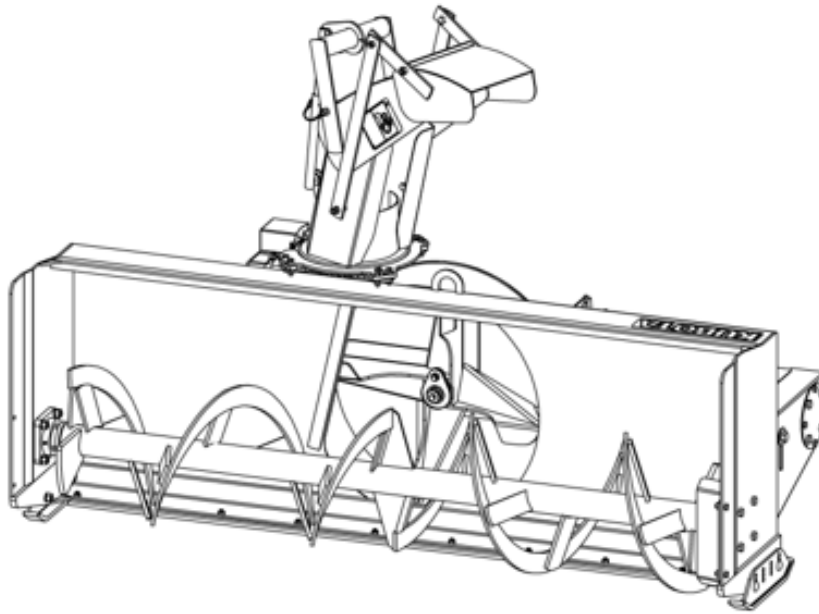
OM 0427SB-A / Rev2 05-21

MANUAL PN 77700-05750

Kubota®

L4469 - 64" UTILITY SNOWBLOWER
L4479 - 74" UTILITY SNOWBLOWER

SERIAL NO. 21400001 AND UP



CALIFORNIA PROPOSITION 65

 **WARNING:**

Cancer and reproductive harm - www.P65Warnings.ca.gov

PLEASE READ THIS MANUAL CAREFULLY
KEEP READY AT ALL TIMES

LEGAL DISCLAIMER

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SPECIFICATIONS

Features and Specifications	L4469	L4479
Working width	64"	74"
Transport width	69"	79"
Working height	26"	26"
Length	37"	37"
Single/Dual Auger	Single	Single
Auger diameter	14 3/4"	14 3/4"
Auger Flighting Thickness	5/16"	5/16"
Impeller Diameter	24"	24"
Impeller Width	7"	7"
Impeller Shaft Diameter	1 3/8"	1 3/8"
Number of Impeller blades	4	4
Roller chain	#60	#60
Chain idler	Single Sprocket	Single Sprocket
Tractor RPM	2 000	2 000
Impeller RPM	685	685
Auger RPM	215	215
PTO – description	6E	6E
Skid Shoe	Adjustable & replaceable, 3 positions	Adjustable & replaceable, 3 positions
Skid Shoe Material	High Carbon steel	High Carbon steel
End Plate Thickness	1/4"	1/4"
Back Plate Thickness	10GA	10GA
Impeller Housing Thickness	10GA	10GA
Impeller Blade Thickness	1/4"	1/4"
Lower End Plate Thickness	5/8"	5/8"
Cutting Edge	High Carbon steel replaceable & reversible	High Carbon steel replaceable & reversible
Cutting Edge Dimension	3/8" x 2"	3/8" x 2"
Parking Stand	None	None
Hitch Category	4-point Quick Hitch	4-point Quick Hitch
HP Requirements – min-max (ch)	20-60	20-60
Operating Weight (lb)- rot. & hyd. defl.	640	720
Shipping Weight (lb)	830	910
Approx. Set-up Time (min.)	25	25
Chute Deflector Adjustment	Manual 5 positions	Manual 5 positions
Chute Rotation (standard)	Hydraulic with motor	Hydraulic with motor
Chute Type	Three part	Three part

TABLE OF CONTENTS

INTRODUCTION – TO THE PURCHASER	4
SAFETY PRECAUTIONS	5
Before Operation	5
Notice	6
Subframe & Snowblower	6
Before Operation	6
Subframe & Snowblower Operation	7
Transportation	8
Storage	8
Maintenance	9
DECALS	10
ASSEMBLY	11
Snowblower Assembly	11
Installation of the Chute	11
Installation of the Attach Protectors	11
INSTALLATION WITH THE MANUAL COMPLETION KIT - L4431	12
Hydraulic Hoses Installation	12
Installation of the Snowblower	13
Routing of the Hoses on the Tractor	16
INSTALLATION WITH AUTO-CONNECT COMPLETION KIT - L4432	
- Refer to the Instruction sheet of the L4432 kit.	
Detaching Snowblower from 4 point Hitch	17
OPERATION	18
General Preparation	18
Operating Controls	18
Up & Down Control	18
Hydraulic Chute Rotation	18
Engine Speed	18
Increasing Traction and Stability	18
Engaging the Drive Mechanism	18
Operating Controls	18
Deflector Adjustment	19
Auger Drive Chain Adjustment	19
Skid Shoe Adjustment	19
Snow Removal Methods	20

TABLE OF CONTENTS

MAINTENANCE.....	21
Shear Bolts	21
Gearbox and Reduction Box	21
Mounting the Reduction Box Bearing Preload cover	21
Procedure for Checking the Torque.....	22
LUBRICATION	22
PROBLEM: HYDRAULIC CHUTE ROTATION IS SLOW OR DOESN'T TURN	23
STORAGE	24
 PARTS.....	 25
Introduction	25
Snowblower	26
Three Part Chute.....	29
Hydraulic Rotation.....	30
Male Driveline	31
Reduction Box – "Comer".....	32
Reduction Box – "4500148S"	33
Snowblower Completion Kit - L4431	34
Gearbox	36
 AVAILABLE OPTIONS	 37
TORQUE SPECIFICATION TABLE	38

INTRODUCTION

TO THE PURCHASER

All products are designed to give safe, dependable service if they are operated and maintained according to instructions. **Read and understand this manual before operation.**

This manual has been prepared to assist the owner and operators in the safe operation and suitable maintenance of the snowblower. The information is applicable to products at the time of manufacture and does not include modifications made afterwards.

Read and understand this operator's manual before attempting to put snowblower into service. Familiarize yourself with the operating instructions and all the safety recommendations contained in this manual and those labeled on the snowblower and on the tractor. Follow the safety recommendations and make sure that those with whom you work follow them.

Illustrations

The illustrations may not necessarily reproduce the full detail and the exact shape of the parts or depict the actual models, but are intended for reference only.

Direction Reference

All references to right and left are from the operator's seat, looking at the implement operating.

To assist your dealer in handling your needs, please record hereafter the model number and serial number of your snowblower and tractor. It is also advisable to supply them to your insurance company. It will be helpful in the event that snowblower or tractor is lost or stolen.

TRACTOR

SNOWBLOWER

MODEL:

SERIAL NUMBER:

DATE OF PURCHASE:

DEALER NAME:

SAFETY PRECAUTIONS



SAFETY FIRST

This symbol, the industry's "Safety Alert Symbol", is used throughout this manual and on labels on the machine itself to warn of the possibility of personal injury. Read these instructions carefully. It is essential that you read the instructions and safety regulations before you attempt to assemble or use this snowblower.



DANGER: Indicates an immediate hazardous situation which, if not avoided, will result in death or serious injury.



WARNING: Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION: Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

IMPORTANT: Indicates that snowblower or property damage could result if instructions are not followed.

NOTE : Gives helpful information.

All products are designed to give safe, dependable service if they are operated and maintained according to instructions. **Read and understand this manual before operation.** It is the owner's responsibility to be certain anyone operating this product reads this manual, and all other applicable manuals, to become familiar with this snowblower and all safety precautions. Failure to do so could result in serious personal injury or snowblower damage. If you have any questions, consult your dealer.

BEFORE OPERATION

Children

Tragic accidents can occur if the operator is not alert to the presence of children. Children are generally attracted to machines and the work being done. Never assume children will remain where you last saw them.

1. Keep children out of the operating area and under the watchful eye of another responsible adult.
2. Be alert and turn machine off if children enter the work area.
3. Before and when backing, look behind for small children.
4. Never carry children while operating the machine. They may fall off and be seriously injured or interfere with the safe operation of the machine.
5. Never allow children to play on the machine or snowblower even when they are turned off.
6. Never allow children to operate the machine even under adult supervision.
7. Use extra care when approaching blind corners, shrubs, trees, or other obstructions that might hide children from sight.

SAFETY PRECAUTIONS - continued

NOTICE

A safe operator is the best assurance against accidents. All operators, no matter how experienced they may be, should read this operator's manual and all other related manuals before attempting to operate the snowblower. Please read the following section and pay particular attention to all safety recommendations contained in this manual and those labeled on the snowblower and on the tractor.

SUBFRAME & SNOWBLOWER

Before Operation

1. Read and understand both the tractor and this operator's manual before operating the equipment. Know how to operate all controls and how to stop the unit and disengage the controls quickly. Lack of knowledge could lead to accidents.
2. Never wear loose, torn, or bulky clothing around the tractor, the subframe and the snowblower. It may catch on moving parts or controls, causing injury.
3. Before and during seasons, thoroughly inspect the area where the snowblower is to be used and remove all objects that may be thrown or cause damage to the snowblower.
4. Set transmission to neutral and disengage clutch, if equipped, before starting the engine.
5. Do not operate snowblower in wintertime without wearing adequate winter garments. Always wear protective clothing.
6. Never attempt to make any adjustments while engine is running. Read this manual carefully to acquaint yourself with the snowblower as well as the tractor operator's manual. Working with unfamiliar snowblower can lead to accidents. Be thoroughly familiar with the controls and proper use of the snowblower.
7. Keep all safety guards in place and verify hardware for proper tightening.
8. Check for moving parts excessive wear regularly. Replace worn parts with genuine parts.
9. Replace all missing, illegible, or damaged safety and warning decals. See list of decals in operator's manual.
10. Keep safety decals clean of dirt and grime.
11. Do not modify or alter this snowblower or any of its components, or any snowblower function without first consulting your dealer.
12. Make sure the tractor is counterweighted as recommended by the operator manual for the tractor. Weights provide the necessary balance to improve stability, traction and steering.

SAFETY PRECAUTIONS - continued

Subframe & Snowblower Operation

1. Before leaving the tractor/snowblower unattended, take all possible precautions. Park the tractor/snowblower on level ground, place the transmission in neutral, set the parking brake, disengage the PTO, lower the snowblower to the ground, place all levers including auxiliary control levers in neutral, shut off the engine and remove the ignition key.
2. Before starting the tractor/ snowblower, remove the ice that might have accumulated on the auger/fan, inspect and clean every rotating part.
3. Prior to operation, clear work area of all objects that can be picked up and thrown. Mark all curbs, pipes, etc. that cannot be moved.
4. Be sure the PTO switch/lever is in OFF/disengaged position before starting engine.
5. Exercise extreme caution when operating on or crossing a gravel drive, walks, or roads. Stay alert for hidden hazards or traffic.
6. Do not carry passengers.
7. Keep clear of all rotating parts. Do not put hands or feet under, or into snowblower and subframe with engine running. Be especially observant of the snowblower areas of discharge, intake or all other mechanical motions.
8. For your safety, do not work under any hydraulically supported machine elements that may creep down, suddenly drop or be accidentally lowered.
9. Park the tractor/snowblower on level ground, place the transmission in neutral, set the parking brake, disengage the PTO, lower the snowblower to the ground, place all control levers in neutral, shut off the engine, remove the ignition key and allow the rotating parts to stop BEFORE unclogging the housing or the chute and making any repairs, adjustments or inspections. Use only a 36" long stick of wood to unclog the snowblower.
10. If the snowblower starts to vibrate abnormally, disengage the PTO, stop the engine immediately and check for cause. Excessive vibration is generally a sign of trouble.
11. Do not run the engine indoors except when starting engine and transporting attachment in or out of building. Carbon monoxide gas is colorless, odorless and deadly.
12. Do not attempt to operate on steep slopes. If operating on slopes is necessary, exercise extreme caution when changing direction.
13. Never operate snowblower without guards, and other safety protective devices in place. All tractor and snowblower shields and covers must be correctly installed at all times. When necessary to remove these, they must be reinstalled immediately.
14. Never operate snowblower near glass enclosures, automobiles, window wells, embankments, etc., without proper adjustment of snow discharge angle.
15. Never operate machine at high transport speeds on a slippery surface.
16. Use extra caution when backing up.
17. Disengage power to auger/fan when transporting or when not in use.
18. Never operate the snowblower without good visibility and lighting.
19. Prolonged exposure to loud noise can cause impairment or loss of hearing. Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable noises.

SAFETY PRECAUTIONS - continued

20. Never allow anyone near the work area.
21. Never allow anyone to operate the snowblower until they have read the manual completely and are thoroughly familiar with basic tractor and snowblower operation.
22. Make sure the tractor is counterweighted as recommended by the operator manual for the tractor. Weights provide the necessary balance to improve stability, traction and steering.
23. Always make sure all snowblower components are properly installed and securely fastened BEFORE operation.
24. Adjust housing height to clear gravel or crushed rocks surface.
25. Keep away from chute discharge. This chute has the capacity to throw debris at far distances.
26. Never direct chute discharge towards people or animals. A thrown debris can cause serious injury.

TRANSPORTATION

1. If the tractor/snowblower is to be driven on public roads, it must be equipped with an SMV (Slow Moving Vehicle) sign. Check local traffic codes that may apply to unit usage on public roads and highways in your area.
2. Check local traffic codes that may apply to unit usage on public roads and highways in your area. The use of flashing amber lights is acceptable in most localities. However, some localities may prohibit their use.
3. Always disengage the snowblower before transport.

STORAGE

Before storing the snowblower, certain precautions should be taken to protect it from deterioration.

1. Clean the snowblower thoroughly.
2. Make all the necessary repairs.
3. Replace all Safety Signs that are damaged, lost, or otherwise become illegible. If a part to be replaced has a sign on it, obtain a new safety sign from your dealer and install it in the same place as on the removed part.
4. Repaint all parts from which paint has worn or peeled.
5. Perform maintenance of the subframe and snowblower as instructed under "**Maintenance**" section.
6. When the snowblower is dry, oil all moving parts. Apply oil liberally to all surfaces to protect against rust.
7. Store in a dry place.
8. If snowblower has hydraulic components, install protective plugs and caps on the quick couplers.

SAFETY PRECAUTIONS - continued

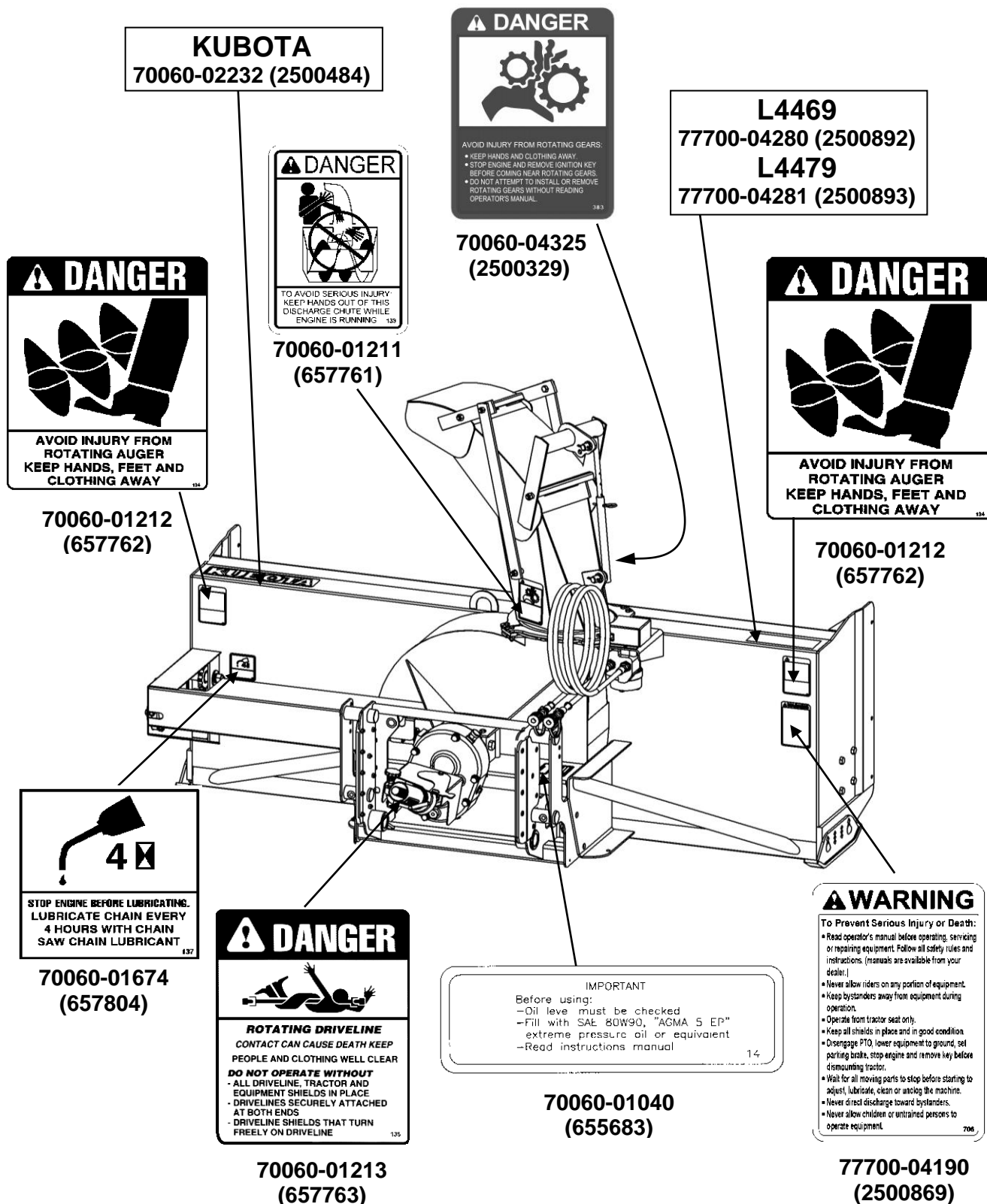
MAINTENANCE

ALWAYS USE GENUINE PARTS WHEN REPLACEMENT PARTS ARE REQUIRED

1. Keep the tractor and snowblower properly maintained.
2. Park the tractor/snowblower on level ground, place the transmission in neutral, set the parking brake, disengage the PTO, lower the snowblower to the ground, place all control levers in neutral, shut off the engine and remove the ignition key and allow the rotating parts to stop BEFORE making any snowblower adjustments.
3. To avoid injury, do not adjust, unblock the driving system, or service the snowblower with the tractor engine running. Make sure rotating components have completely stopped BEFORE leaving the operator's seat.
4. Keep the tractor/snowblower clean. Snow, dirt or ice build-up can lead to malfunction or personal injury from thawing and refreezing in garage.
5. Always wear eye protection when cleaning or servicing the snowblower or subframe.
6. DO NOT service the tractor while the engine is running or hot, or if the unit is in motion. Always lower snowblower to the ground. If necessary to service snowblower in raised position, securely support with stands or suitable blocking before working underneath. Do not rely on hydraulically supported devices for your safety. They can settle suddenly, leak down, or be accidentally lowered.
7. Do not attempt to service machine, clear obstructions or unclog the snowblower with the engine running. Always shut off engine and allow all motion to cease.
8. The manufacturer will not claim responsibility for fitment of unapproved parts and/or accessories and any damages as a result of their use.
9. Make sure all shields and guards are securely in place following all service, cleaning, or repair work.
10. Do not modify or alter this snowblower or any of its components or operating functions. If you have questions concerning modifications, consult with your dealer.
11. Do not operate a snowblower that is defective or has missing parts. Make sure that all recommended maintenance procedures are completed before operating the snowblower.
12. Check all controls regularly and adjust where necessary. Make sure that the brakes are evenly adjusted.
13. Periodically check all nuts and bolts for tightness, especially wheel hub and rim nuts.
14. Regularly check that the auger and the fan are well tight. Remove any object that could have wrap around the auger or the fan.
15. To avoid serious personal injury: Escaping hydraulic/diesel fluid under pressure can penetrate the skin causing serious injury. Do not use your hands to check for leaks. Use a piece of cardboard or paper to search for leaks. If you are injured by escaping high pressure fluid, see a medical doctor at once.
16. Stop engine and relieve pressure before connecting or disconnecting hydraulic hoses. Tighten all connections before starting engine or pressurizing hoses.

DECALS

Replace immediately if damaged



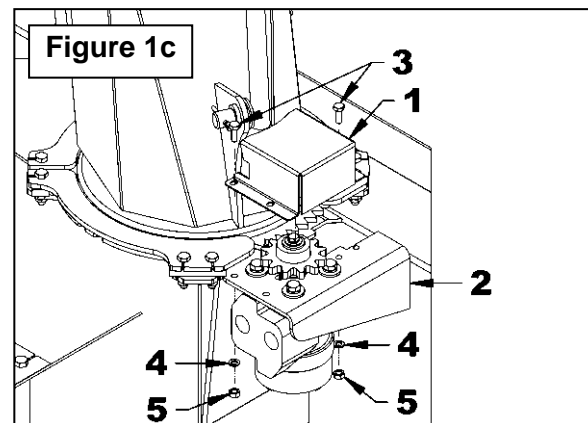
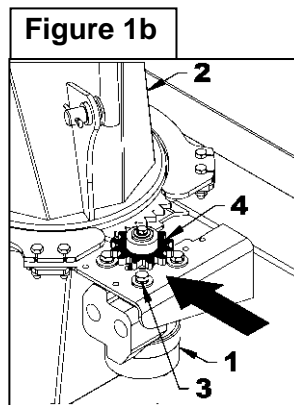
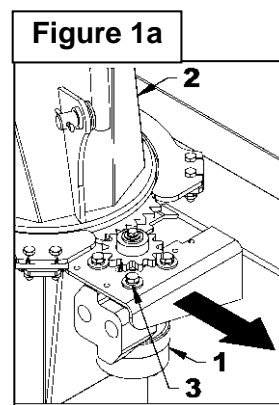
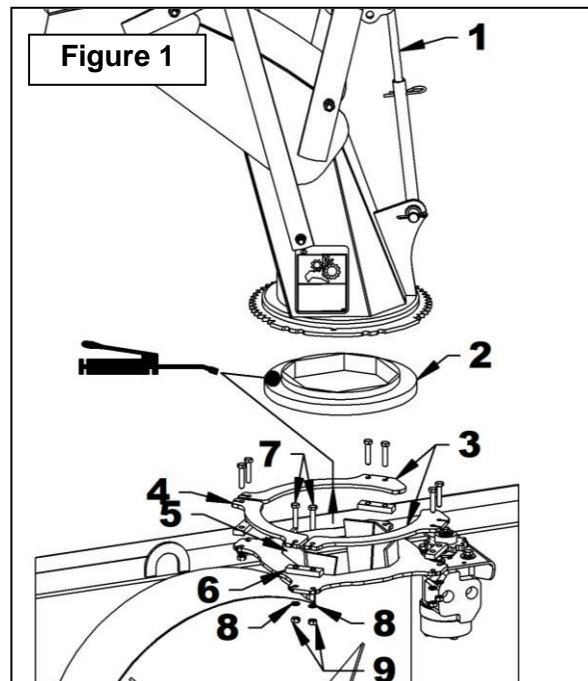
ASSEMBLY

SNOWBLOWER ASSEMBLY

The snowblower is assembled at the factory, however, parts in the bag and box must be assembled. Use the present manual and lay out all parts for assembly. Separate bolts and nuts into various sizes. After assembly, torque all the bolts according to the "Torque Specification Table" enclosed at the end of the manual.

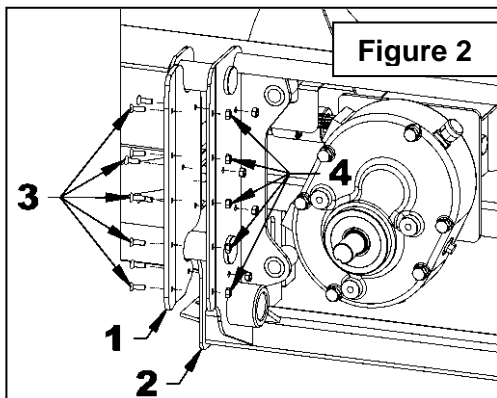
Installation of the Chute (Figures 1)

- Figure 1:** Remove the chute (item 1) and the rotation bushing (item 2) from the crate.
- Figure 1a:** Slightly loosen the four hex bolts (item 3) of the hydraulic motor (item 1).
- Figure 1:** Grease the retaining plates (items 3-4) on the side in contact with the rotation bushing, and the top of the rotation bushing (item 2) before installing them on snowblower.
- Figure 1:** Install the rotation bushing (item 2), then the chute (item 1), align the eight spacers (items 5-6) with the eight holes on the housing and secure using the retaining plates (items 3-4) placing them as illustrated and eight 5/16"NC x 1 1/2" bolts (item 7), lockwashers (item 8) and nuts (item 9).
- Figure 1b:** Push the hydraulic motor (item 1) so the gear teeth (item 4) connect as much as possible with the gear teeth of the chute (item 2). Tighten the bolts (item 3) at 31 ft-lb (42 N-M).
- Figure 1c:** Place the gear shield (item 1) on top of gear; secure with two 1/4" NC x 3/4" bolts (item 3), lockwashers and hex. nuts (items 4-5).



Installation of the Hitch Protectors (Figure 2)

Install on each side of the snowblower 4 point hitch (item 2) a hitch protector (item 1) with nine 1/4" x 3/4" flat head set screws (item 3) and 1/4" stover lock nuts (item 4).



ASSEMBLY

INSTALLATION WITH THE AUTO-CONNECT COMPLETION KIT L4432

Refer to the Instruction sheet provided with the L4432 Completion kit

INSTALLATION WITH THE MANUAL COMPLETION KIT - L4431

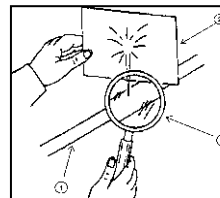
Hydraulic Hoses Installation (Fig.3-3a)

1. **Figure 3:** On each hydraulic hose (item 3) insert a protective nylon sheath (item 4). The protective nylon sheath should cover the hose from the male fitting of the hose.
2. **Figure 3:** Install a nylon tie wrap (item 5) in the middle of the protective nylon sheath (item 4).
3. **Figure 3:** On each hydraulic hose apply thread sealant onto the male fitting. Install female quick coupler (item 6), dust cap (item 7) and identification rings (item 8-9). Install both set of identification ring on the hose one will be removed later for the identification of the coupler on the tractor valve.
4. **Figure 3:** Install both flow restrictors (item 1) into the port of the hydraulic motor (item 2).
5. **Figure 3:** Install the hydraulic hoses (item 3) to the flow restrictors (item 1) on the motor (item 2).
6. **Figure 3a:** Install the hose support (item 1) on the upper corner of the 4-point hitch with a 3/8"NC x 1 1/4" bolt, 3/8" (7/16" hole) flat washer, 3/8" lockwasher and 3/8"NC nylon insert locknut (items 2 to 5). Before tightening, run the hoses inside the hose support and direct the hose support so that hoses move freely. Then tighten the bolt firmly.



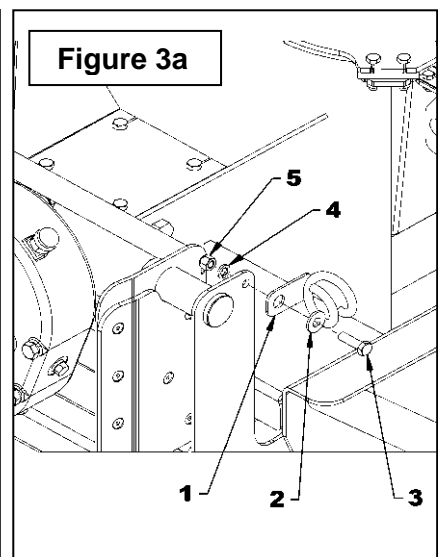
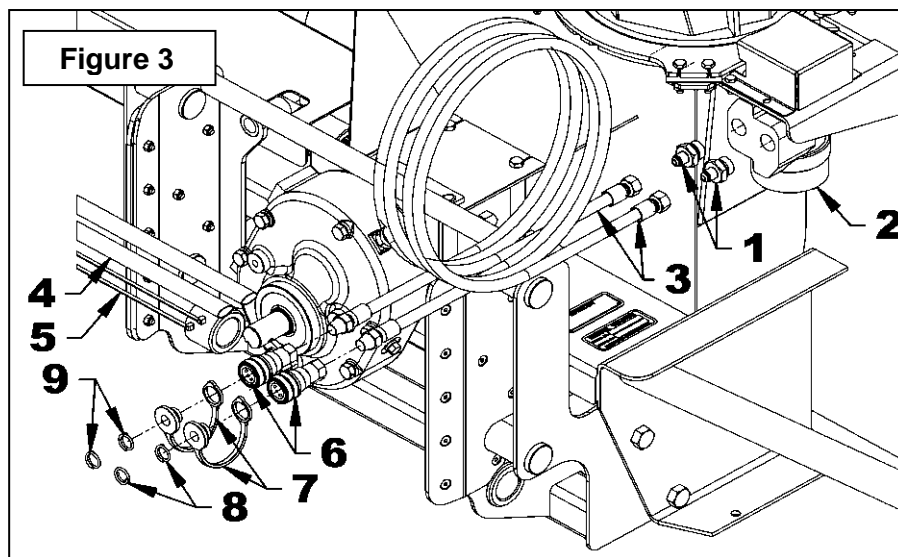
WARNING: To avoid serious personal injury. Escaping hydraulic/diesel fluid under pressure can penetrate the skin causing serious injury.

- Do not use your hands to check for leaks. Use a piece of cardboard or paper to search for leaks.



1. Hydraulic hose
2. Cardboard
3. Magnifying glass

- Stop engine and relieve pressure before connecting or disconnecting lines.
- Tighten all connections before starting engine or pressurizing lines.
- If any fluid is injected into the skin, obtain medical attention immediately or gangrene may result.

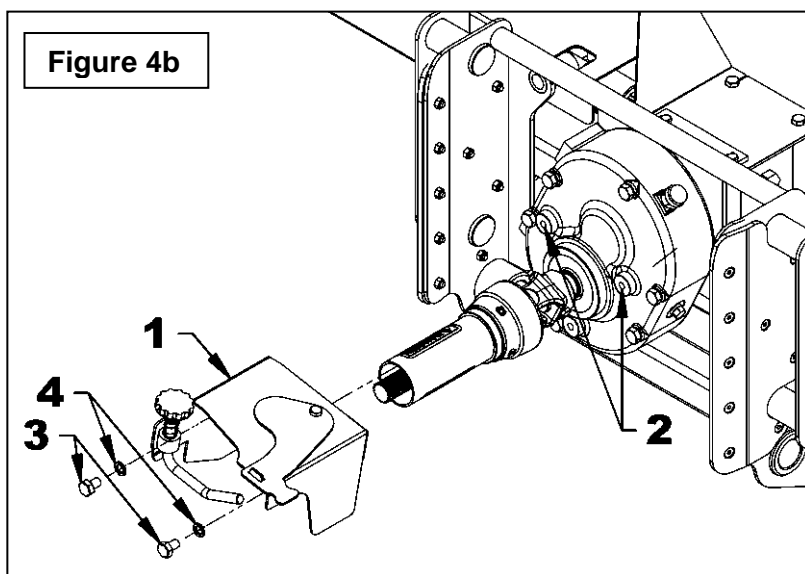
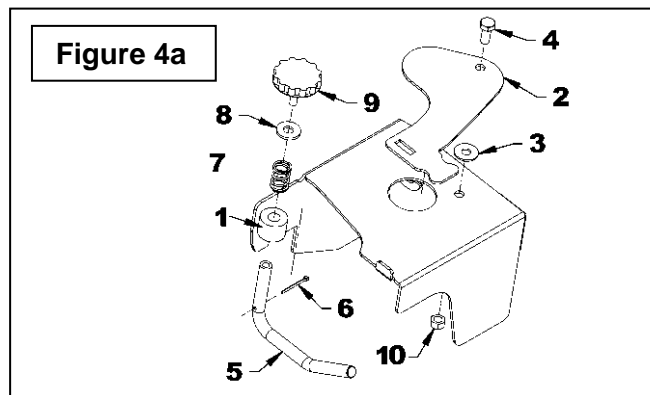
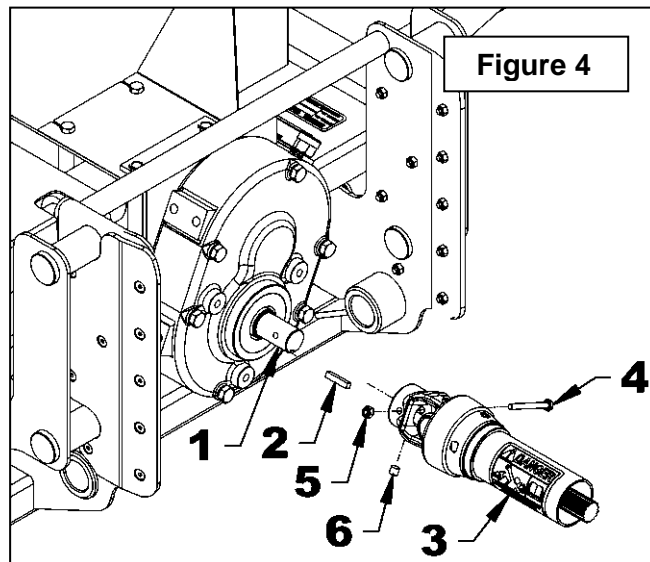


ASSEMBLY

Installation of the Snowblower (Figures 4-5)

1. **Figure 4:** Install on the reduction box shaft (item 1) the 1/4" x 1/4" x 1 1/4" key (item 2).
2. **Figure 4:** Install the driveline male half (item 3) on the reduction box shaft (item 1) and secure in place with a 1/4"NC x 2 1/2" hex bolt (item 4) and 1/4" nylon insert lock nut (item 5). Using thread locker, install the 3/8" x 3/8" allen setscrew (item 6) on the driveline.
3. **Figure 4a:** Install between the driveline guard and the grease panel (item 2) one nylon flat washer (item 3) and secure with a 5/16" x 3/4" hex bolt (item 4) and a 5/16" stover lock nut (item 10). The grease panel (item 2) should move freely, but tighten enough to immobilize it.
4. **Figure 4a:** Install a 3/32" x 1" cotter pin (item 6) on the support rod (item 5).
5. **Figure 4a:** Insert the driveline support rod (item 5) into the guard welded bushing (item 1). Install the compression spring (item 7) and a 5/16" flat washer (item 8). Apply a small drop of threadlocker (Loctite) on the threads of the plastic knob (item 9) and install it into the guard bushing.
6. **Figure 4b:** Install the driveline guard (item 1) on the reduction box (item 2) with two M10 x 16mm hex bolts (item 3) and 10mm lockwashers (item 4). Use the top hole on the left side of the guard.

⚠ WARNING: This shaft turns at very high RPM. If the collar is not locked to the shaft at tractor end, or if the yoke at the blower end is not secured properly, the driveline can fly loose with great force capable of causing serious injury or death.



ASSEMBLY

IMPORTANT: It is very important to follow these next instructions to avoid contact with the snowblower driveline and damaging it.

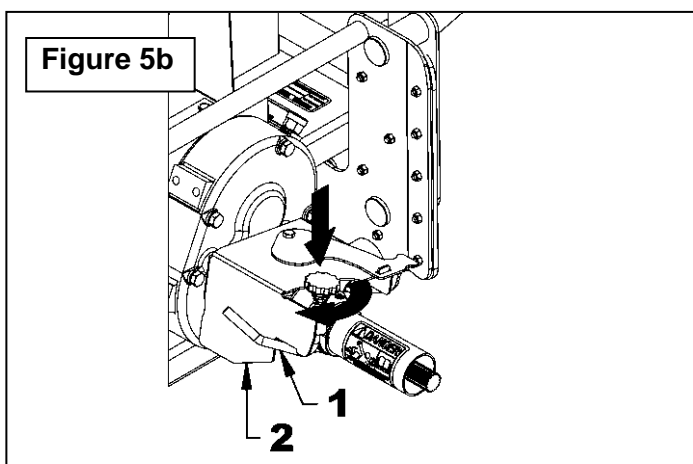
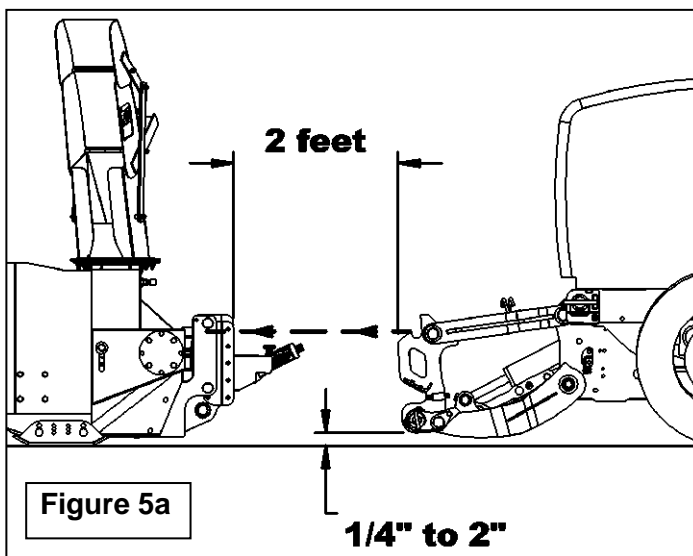
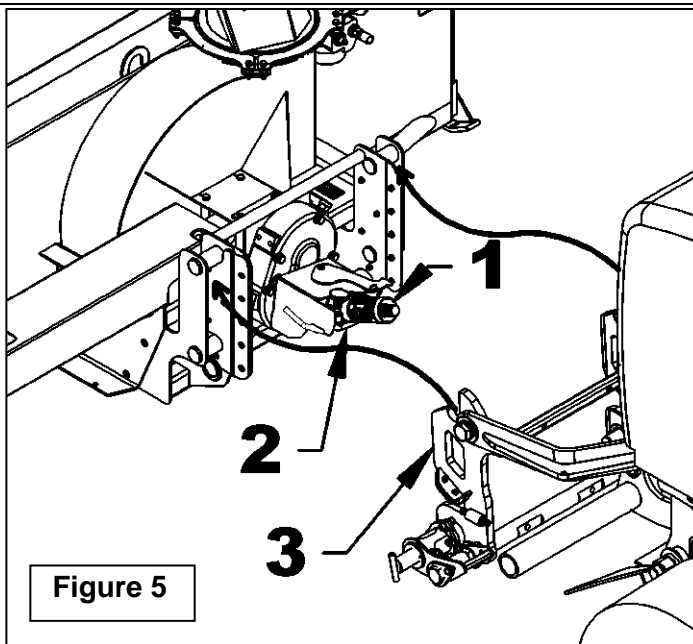
NOTE: Perform this procedure only on a clear area.

7. **Figure 5-5a:** With the male driveline (item 1) on its support rod (item 2) approach the tractor to around 2 feet from the snowblower. Lower the tractor 4 point hitch (item 3) to about 1/4" to 2" from the ground.
8. Carefully move the tractor forward, making sure to position the inside of the tractor 4-point hitch towards the outside of the two UHMW hitch protectors of the snowblower 4-point hitch.
9. Hook up the snowblower, making sure the left and right hooks of the tractor 4-point hitch are well connected to the pins of snowblower 4-point hitch. Raise the snowblower completely with the tractor hydraulic lever.
10. Turn off tractor engine, set parking brake and remove the ignition key.
11. **Figure 5c:** Release the pin (item 1) on each side of the 4 point hitch.

NOTE: If the pins do not insert into the snowblower lower bushings, the snowblower is not properly set into the 4 point hitch. Restart previous steps 7 to 9.

12. **Figure 5b:** Remove the male driveline from its storage support. Secure the support rod (item 1) on the side of the PTO guard (item 2).

⚠ CAUTION: DO NOT WORK with the driveline placed on its support, to not damage the driveline or other parts.



ASSEMBLY

13. **Figure 5c:** Insert the female driveline (item 2) into the 4 point hitch frame (item 5), and connect the female driveline (item 2) to the male driveline (item 4). Attach the female driveline quick connect yoke to the subframe PTO shaft.

14. Using the hydraulic lever of the tractor, slowly release the hydraulic pressure until the snowblower sets on the ground. Then, release the pressure from the hydraulic system by moving the control valve lever in all directions.

15. **Figure 5c:** Connect the two hydraulic hoses (item 3) from the hydraulic motor to the tractor quick couplers. Turn on tractor engine, by moving sideways the hydraulic lever the chute will turn.

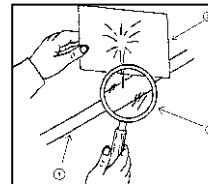
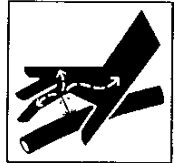
NOTE: If operation is not as desired, reverse the two hydraulic hoses. Refer to "OPERATING CONTROLS" on page 17.

16. **Figure 5b:** Take one identification ring (items 6-7) from each hose and insert them on the tractor quick couplers, matching the colors from the hoses.



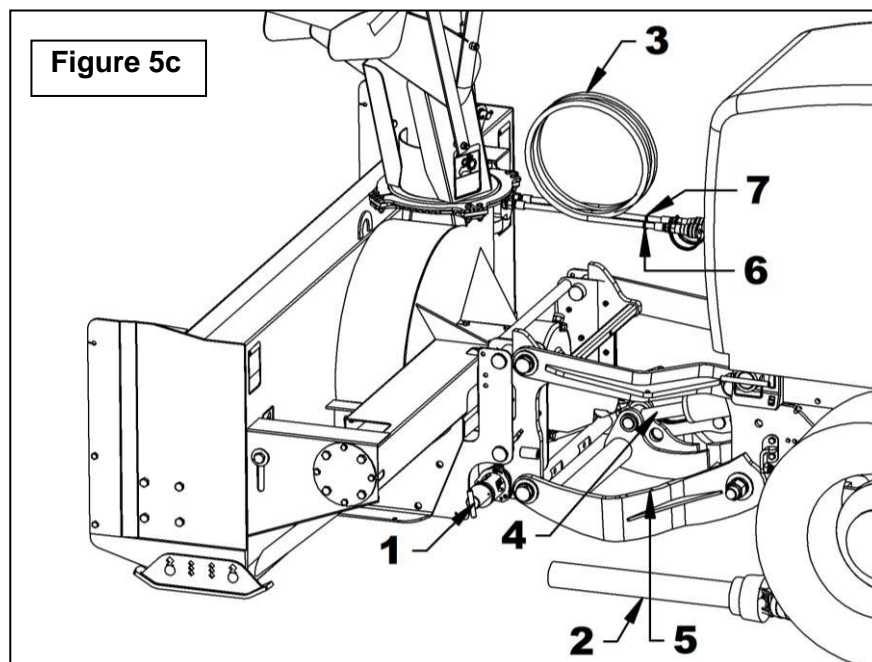
WARNING: To avoid serious personal injury. Escaping hydraulic/diesel fluid under pressure can penetrate the skin causing serious injury.

- Do not use your hands to check for leaks. Use a piece of cardboard or paper to search for leaks.



1. Hydraulic hose
2. Cardboard
3. Magnifying glass

- Stop engine and relieve pressure before connecting or disconnecting lines.
- Tighten all connections before starting engine or pressurizing lines.
- If any fluid is injected into the skin, obtain medical attention immediately or gangrene may result.



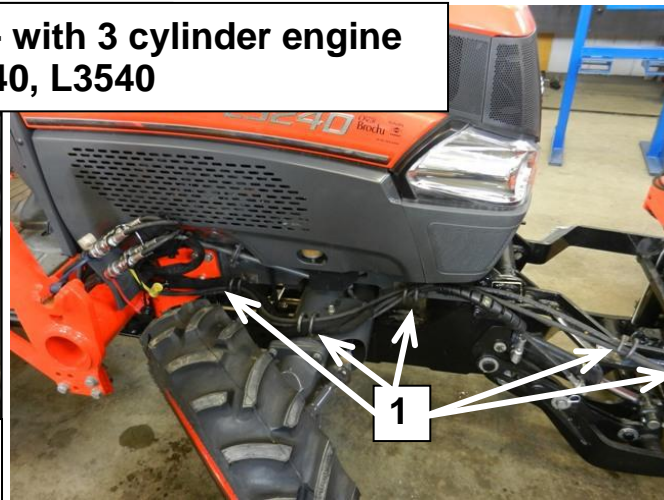
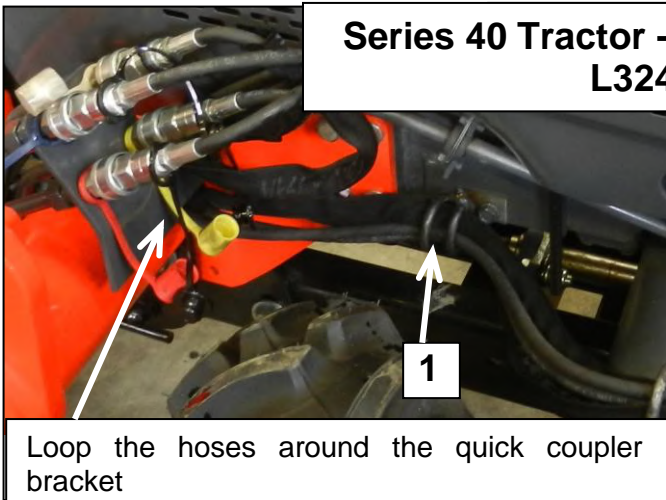
ASSEMBLY

Routing of the Hoses on the Tractor

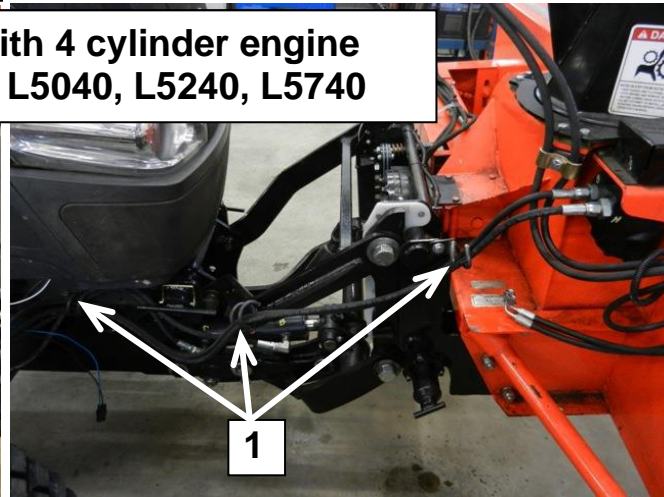
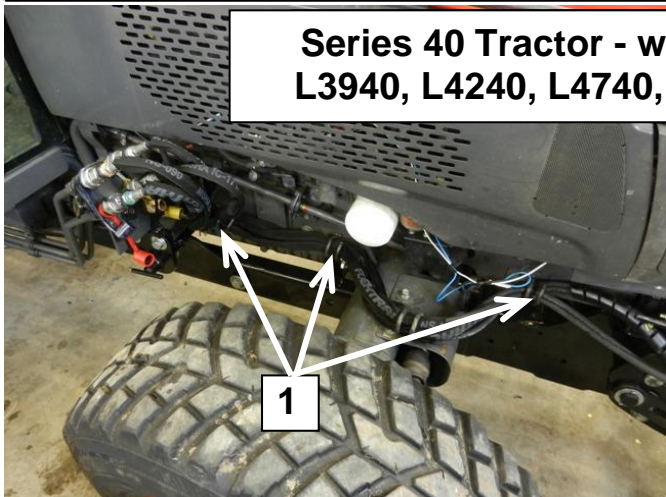
ROUTE HOSES ACCORDING TO RESPECTIVE TRACTOR MODEL

Run and fasten the hoses into the hose clamps (item 1) along the tractor frame, making sure to leave some free hose on the right side of the tractor to prevent tension when the snowblower is raised or lowered to its maximum.

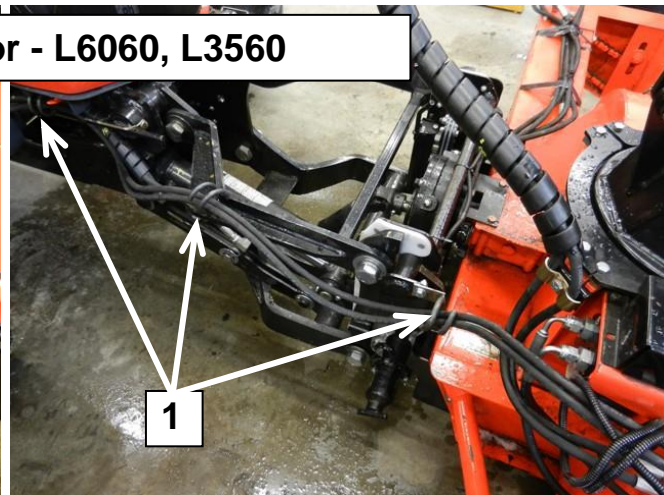
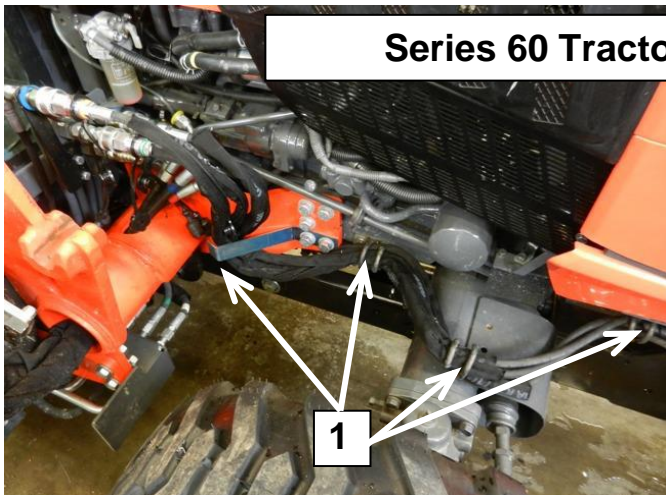
Series 40 Tractor - with 3 cylinder engine L3240, L3540



Series 40 Tractor - with 4 cylinder engine L3940, L4240, L4740, L5040, L5240, L5740



Series 60 Tractor - L6060, L3560



ASSEMBLY

Detaching Snowblower from 4 Point Hitch (Figure 6)

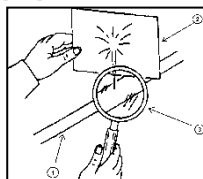
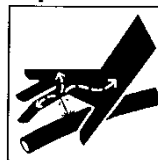
NOTE: Perform this procedure only on a clear area.

1. Set the snowblower at maximum height position, turn the engine off, set the parking brake and remove the ignition key.
2. **Figure 6:** Disconnect the female driveline (item 2) from the tractor and from the snowblower male driveline, and keep it for a future installation
3. **Figure 6a:** Push the knob and rotate the driveline support rod (item 1) from its lock position on the driveline guard (item 2). Set the male half driveline on its support rod.
4. **Figure 6:** Pull both side pins (item 1) from the 4 point hitch (item 5) and turn them in lock position.
5. Disconnect the hydraulic hoses from the tractor female couplers and place the dust plugs and caps on the couplers. Remove the hoses from the tractor hose clamps.
6. Slowly release the hydraulic pressure with the tractor lever until the snowblower sets on the ground. Release the system hydraulic pressure by moving the control valve lever in all directions.
7. Slowly back the tractor away from the snowblower.



WARNING: To avoid serious personal injury. Escaping hydraulic/diesel fluid under pressure can penetrate the skin causing serious injury.

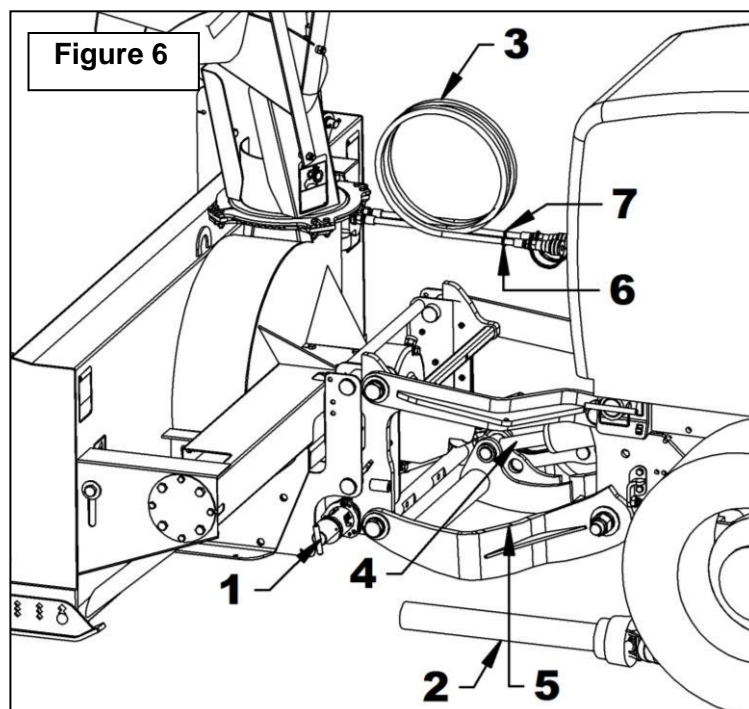
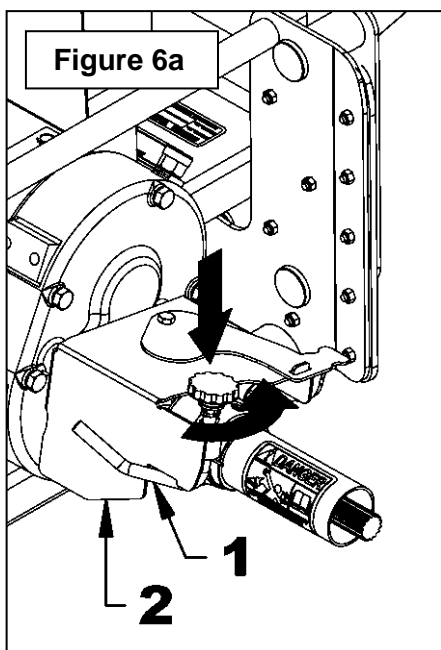
- Do not use your hands to check for leaks. Use a piece of cardboard or paper to search for leaks.



1. Hydraulic hose
2. Cardboard
3. Magnifying glass

- Stop engine and relieve pressure before connecting or disconnecting lines.
- Tighten all connections before starting engine or pressurizing lines.

If any fluid is injected into the skin, obtain medical attention immediately or gangrene may result.



OPERATION

GENERAL PREPARATION

1. Read the operator's manual carefully before using the tractor and snowblower. Be thoroughly familiar with the controls and proper use of the equipment. Know how to stop the unit and disengage the controls quickly.
2. Wear adequate winter outer garments while operating the equipment.
3. Make sure the snowblower is clear of snow and other material before engaging the snowblower.
4. Make sure the auger and fan operate freely.
5. Check the oil level in the reduction box and gearbox and if necessary, add AGMA 5EP extreme pressure oil, SAE 80W90 gear oil or equivalent.
6. Check the two shear bolts, one on the fan and one on the driving shaft for proper tightness.
7. Adjust the skid shoes so the snowblower runs levelled.
8. Before engaging the snowblower drive, always have the engine running at idle.

OPERATING CONTROLS

Up and Down Control

Pulling the lever rearward raises the snowblower, pushing the lever forward lowers the snowblower and pushing the lever fully forward sets the snowblower in float action.

Hydraulic Chute Rotation

Pushing the hydraulic lever to the right rotates the chute to the right in a clockwise direction. Pushing the lever to the left rotates the chute to the left.

Engine Speed

1. Start the tractor engine. Let the engine warm up at least one minute before engaging the drive mechanism then increase speed gradually.
2. Make sure the snowblower head is properly positioned and engage the drive mechanism.
3. Adjust the ground speed according to conditions. For maximum power, run engine at or near full throttle.

IMPORTANT : Use full RPM power when removing wet, sticky snow. Low RPM power will tend to clog the chute.



CAUTION : Do not use your hands to unclog the chute. Use a 36" (925mm) stick or board. Do not attempt to unclog the chute while engine is running. If the chute is clogged, shut off the tractor engine, remove the key and allow the rotating parts to stop before removing the snow from the chute.

Increasing Traction and Stability

The use of Kubota approved wheel weights or rear weights is recommended for extra traction and stability, especially when operating in snow and/or on slippery surfaces. See your dealer for details

Engaging the Drive Mechanism

Refer to the tractor's operating manual for instructions.



CAUTION: DO NOT WORK with the driveline placed on its support, to not damage the driveline or other parts.

OPERATION

ADJUSTMENTS



CAUTION : To ensure safety, make sure tractor engine and snowblower come to a complete stop and tractor drive mechanism is disengaged **BEFORE** making any adjustments.

Deflector Adjustment

The deflector angle must be set according to the distance the snow must be thrown. To adjust the angle:

- Turn the chute to the right as far as possible.
- Remove hairpin from adjustment tube and adjust the deflector with the adjustment rod.
- Reinsert hairpin in adjustment tube.

Auger Drive Chain Adjustment (Figure 7)

To adjust the tension on the drive chain, loosen the bolt (item 1), securing the idler sprocket to the snowblower housing. To tighten the chain, lower the bolt. Leave approximately 1/4" to 1/2" deflection in one span of the chain. Retighten securely the bolt holding the idler sprocket.

Skid Shoe Adjustment (Figure 7)

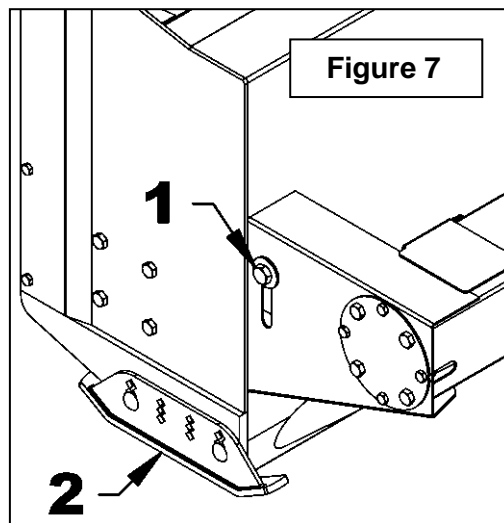
Adjust the skid shoes so that the snowblower runs level and according to the surface conditions so that stones are not thrown with the snow.

Adjust both skid shoes to the same height to keep the cutting edge level and adjust upwards for smooth surfaces.

Loosen skid shoe bolts (item 2) and adjust according to instructions below, and securely tighten bolts:

Clearance between cutting edge and surface:

- *Level paved surface*: Adjust to lower hole
- *Slightly uneven surface*: Adjust to middle hole
- *Uneven or gravel surface*: Adjust to upper hole



OPERATION

SNOW REMOVAL METHODS

When removing snow, do not use the snowblower as a dozer blade to push snow. Let the snowblower work its way through deep drifts. If the speed of your tractor is too fast, the snowblower may become overloaded and clog. For best results, raise the snowblower and remove a top layer of snow. A second pass with the snowblower will remove the remaining snow.

IMPORTANT: Use full RPM power when removing wet, sticky snow. Low RPM power will tend to clog the chute.

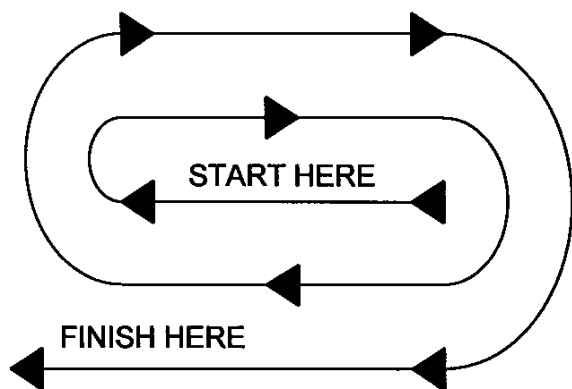


WARNING: Do not use hands or feet to unclog chute. Do not attempt to clear clogged chute of snow while tractor engine is running. If the chute clogs, disengage the drive shaft, shut off the tractor engine, remove the ignition key, wait for all movement to stop, and then clear the snow from the chute.

A definite pattern of operation is required to thoroughly clean the snow area. These patterns will avoid throwing snow in unwanted places as well as eliminating a second removal of snow

PATTERN 1

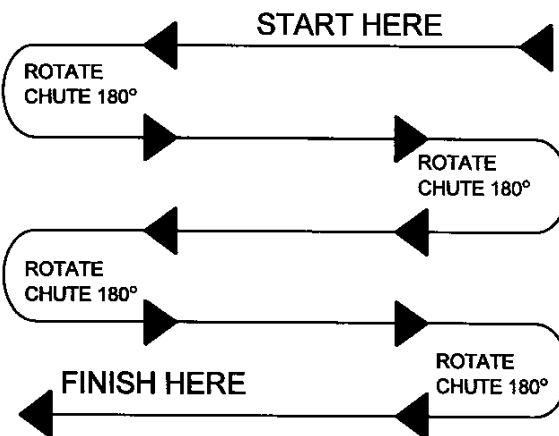
DISCHARGE SNOW BOTH SIDES



DISCHARGE SNOW BOTH SIDES

Where it is possible to throw the snow to the left and right (above), as on a long driveway, it is advantageous to start in the middle. Plow from one end to the other, throwing snow to both sides without changing the direction of the discharge guide

PATTERN 2



DISCHARGE SNOW THIS SIDE ONLY

If the snow can only be thrown to one side of the driveway or sidewalk (above), start on the opposite side. At the end of the first pass, rotate the discharge guide 180 degrees for the return pass. At the end of each succeeding pass, rotate the discharge guide 180 degrees to maintain direction of throw in the same area.

MAINTENANCE

MAINTENANCE

ALWAYS USE GENUINE PARTS WHEN REPLACEMENT PARTS ARE REQUIRED.

Shear Bolts

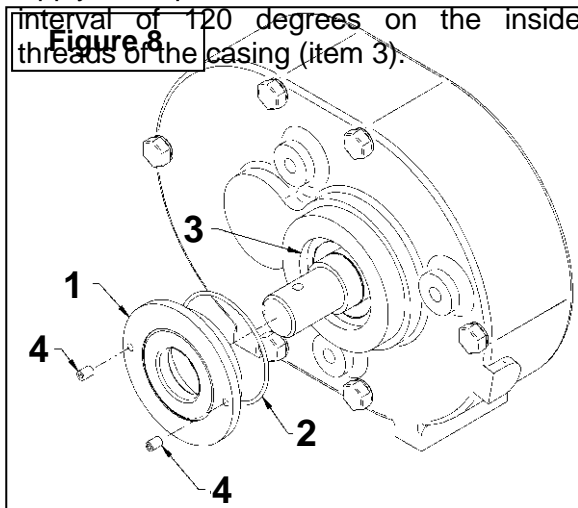
Check the shear bolts (refer to parts section for shear bolts part #) on the fan and the drive shaft at frequent intervals for proper tightness to be sure the snowblower is in safe working condition.

Gearbox and Reduction Box

When servicing either the gearbox or the reduction box, the sealing of the casing must be restored. To do so, apply a layer of silicone to the casing before closing it. Allow the silicone to cure for at least 24 hours before filling it with oil.

Mounting the Reduction Box Bearing Preload Cover (Figure 8)

1. Make sure that the outside threads of the cover (item 1) and the inside threads of the casing are clean and oil free. Any presence of oil or dirt can affect the tightening of the bearings and the performance of the Loctite n° 242/243 that will be used.
2. Install and grease the o-ring (item 2) on the cover (item 1).
3. Apply 3 drops of Loctite n° 242/243 at an interval of 120 degrees on the inside threads of the casing (item 3).



WARNING

- Before cleaning, adjusting or repairing the snowblower: bring the tractor to a complete stop, lower the implement shut off the engine and remove the ignition key.
 - Never park the tractor inside a building where an open flame or sparks are present. Allow the engine to cool down before storing in any enclosure.
 - Run the snowblower a few minutes after blowing snow to prevent freeze up of auger and fan.
 - Provide adequate blocking before working under the snowblower when in raised position.
4. Apply 3 drops of Loctite n° 242/243 at an interval of 120 degrees on the outside threads of the cover (item 1).
 5. Screw the cover (item 1) in the casing after having assembled the sprocket and the gear.
 6. Tighten the cover manually until the play in the cone bearings has disappeared.
 7. Then, tighten the cover and make sure the torque required to turn the input shaft is between 6-10 lb-in. The torque must be measured with a torque wrench (if one is not available, follow the procedure on the following page) and without the seals being installed on the input and the output shafts.
 8. Apply a drop of Loctite n° 242/243 in the inside thread where the two 1/4-20-NC setscrews will be inserted (item 4).
 9. Apply a drop of Loctite n° 242/243 on each setscrew (item 4) and insert them in the cover. Tighten at 84 lb-in. Wipe the excess Loctite.
 10. Grease the seal lips and make sure they are correctly placed.

MAINTENANCE

Procedure for Checking the Torque

(Figure 9)

This procedure must be done after having opened and reassembled the gearbox.

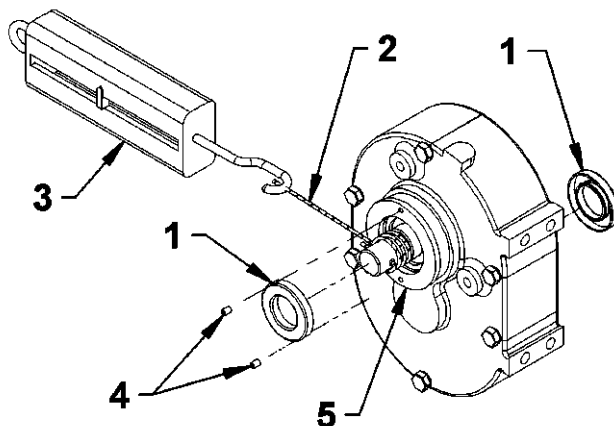
1. Remove the two seals (item 1) from the gearbox.
2. Insert a rope (item 2) in the shaft hole and tie a knot to keep it in place then turn it three times around the shaft.
3. Attach the other end of the rope to a fish scale with a graduation from 0 to 50 lb (item 3).
4. Place the gearbox so the input and output shafts do not touch any other component then pull on the scale (item 3) and take the reading when the shaft just starts to turn. The reading must be between 24 to 32 lbs.
5. If that's not the case, unscrew the two setscrews (item 4) from the external threaded cap (item 5) and screw the cap (item 5) to increase the torque or unscrew to decrease it.
6. Reinstall the seals (item 1).

STORAGE

Before storing the subframe or snowblower, certain precautions should be taken to protect it from deterioration.

1. Clean the subframe and snowblower thoroughly.
2. Make all the necessary repairs.
3. Replace all safety signs that are damaged, lost, or otherwise become illegible. If a part to be replaced has a sign on it, obtain a new safety sign from your dealer and install it in the same place as on the removed part.
4. Repaint all parts from which paint has worn or peeled.
5. Perform maintenance of the subframe and snowblower as instructed under "**Maintenance**" section.
6. When the subframe and snowblower are dry, oil all moving parts. Apply oil liberally to all surfaces to protect against rust.
7. Store in a dry place.
8. If snowblower has hydraulic components, install protective plugs and caps on the quick couplers.

Figure 9



MAINTENANCE

PROBLEM: HYDRAULIC CHUTE ROTATION IS SLOW OR DOESN'T TURN

When activating the chute rotation, it turns very slowly or not at all.



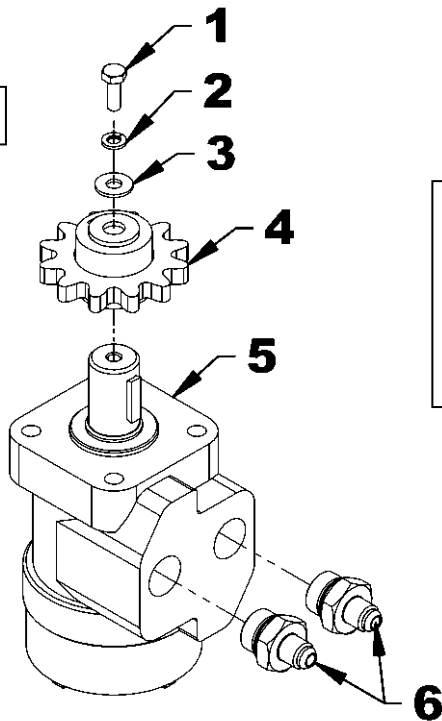
WARNING

To avoid serious personal injury, always wear safety glasses while doing the instructions below.

1. Check if the tractor valve works well. Test it by plugging another equipment to the valve. If it does not work well, refer to the appropriate operator's manual.
2. **Figure 10:** Check if the chute itself rotates well. To do so, remove the 1/4" x 3/4" hex bolt (item 1), 1/4" lockwasher (item 2), 1/4" flat washer (item 3) and the motor gear (item 4) attached to the motor shaft (item 5) and check if the chute rotates well in both directions by turning it by hand. If it does not rotate well, correct the problem by checking if there is some excess wear or debris locked between components.

3. **Figure 10:** Check if there are residues in the hydraulic circuit. To do so, first verify if the chute rotates well in one direction. If so, remove the 1/4" x 3/4" hex bolt (item 1), 1/4" lockwasher (item 2), 1/4" flat washer (item 3) and the motor gear (item 4) attached to the motor shaft (item 5) and activate the rotation in the direction the motor turns well for approximately 1 minute to evacuate the residues. Then rotate the chute in the direction it did not turn well and check if the problem is resolved. - If not or if the chute does not rotate well in either direction, disconnect the motor hoses, remove the two flow restrictors (item 6) attached to the motor (item 5) and inspect the holes of the two flow restrictors carefully. Remove the residues if needed. If no residue is present, disconnect hoses and clean them with compressed air. - If the problem persists, clean with compressed air the inside of the two motor inputs holes. You can also turn the motor shaft in both directions while shooting compressed air.

Figure 10



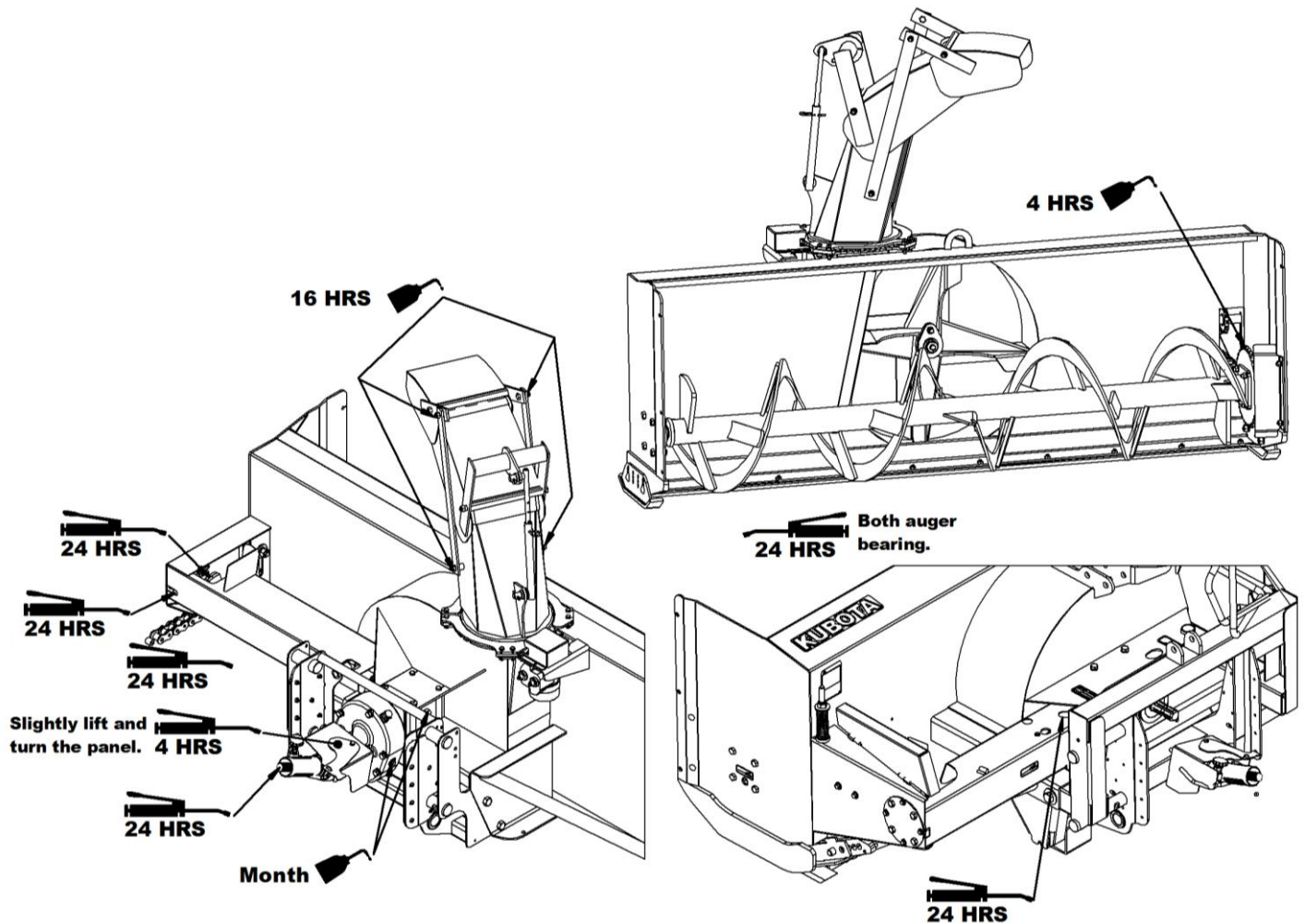
IMPORTANT: When removing connectors, always make sure to install the plugs and caps on the hoses and tractor valve connectors. This will prevent contamination of the hydraulic circuit and obstruction of the flow restrictor hole.

MAINTENANCE

LUBRICATION

Use a grease gun and lubricate as follows:

DESCRIPTION	INTERVAL	LUBRICATION REQUIRED
Driveline	4 hours	Grease each universal joint
	24 hours	Separate the sliding parts and cover each one of them with grease
Driving chain	4 hours and after each operation	Lubricate with chain saw lubricant
Reduction box & Gearbox	24 hours of operation	Check oil level. If needed, add AGMA 5EP extreme pressure oil, SAE 80W90 gear oil or equivalent.
Bearing	24 hours of operation	Grease each auger bearing
Chute	16 hours of operation	Oil the pivots



PARTS

INTRODUCTION

All parts are illustrated in "exploded views" which show the individual parts in their normal relationship to each other. Reference numbers are used in the illustrations. These numbers correspond to those in the "Reference Number" (REF) column, and are followed by the description and quantity required.

O/L - "Obtain Locally" in the part number column indicates common hardware that is available at your local hardware supply.

All reference to right and left, forward or rearward, is from the operator seat facing the equipment while in operation.

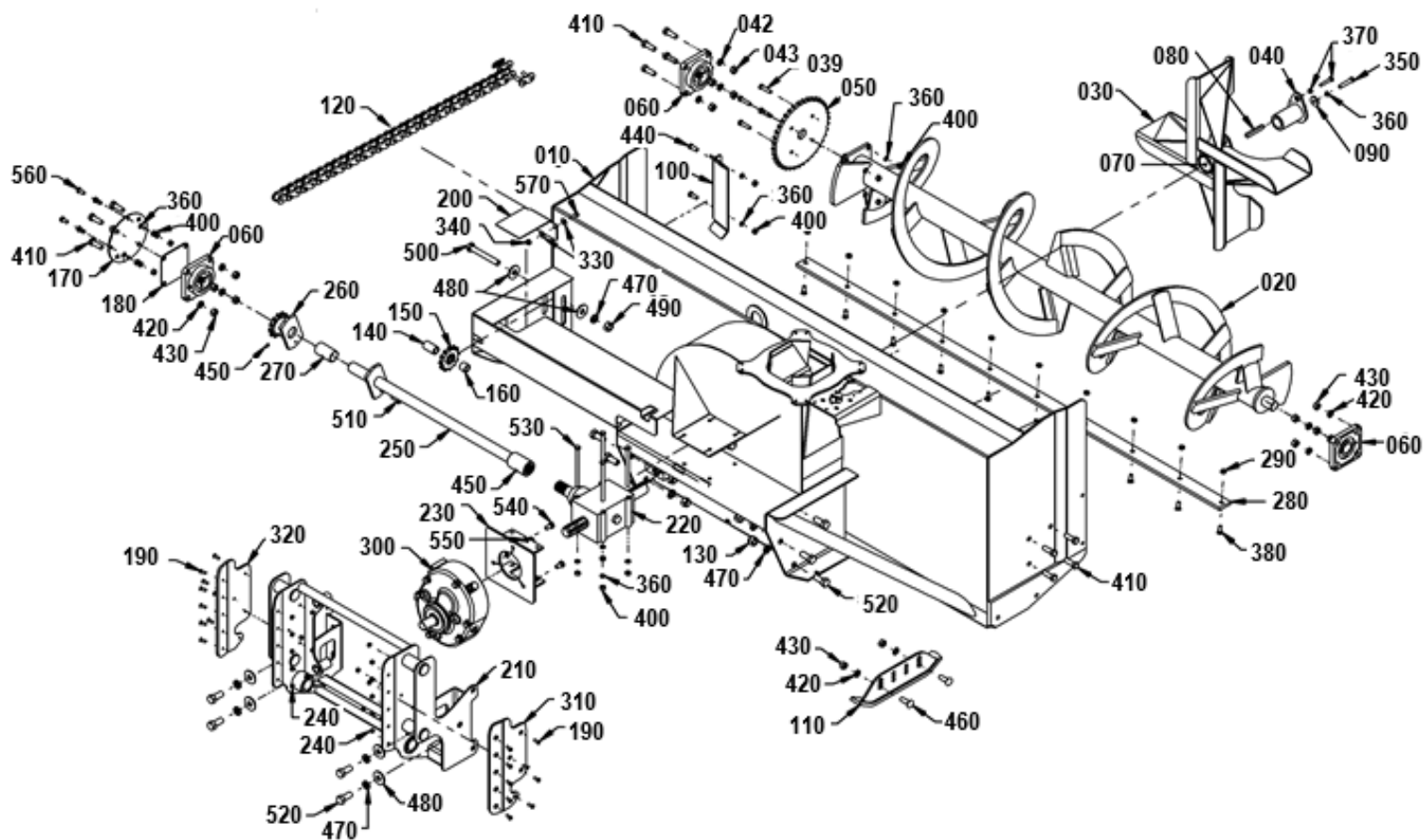
Orders must give the complete description, correct part number, the total amount required, the serial number, the method of shipment and the shipping address.

The manufacturer reserves the rights to change, modify, or eliminate from time to time, for technical or other reasons, certain or all data, specifications, or the product or products themselves, without any liability or obligation.

The parts listed here are available through your local dealer.

PARTS

SNOWBLOWER – L4469 - L4479



PARTS

SNOWBLOWER – L4469 - L4479				
REF.	PART#	QTY	DESCRIPTION	CODE
010	77700-04276	1	Housing 64" without gearbox	670326
011	77700-04273	1	Housing 74" without gearbox	670280
020	70060-02552	1	Auger 64"	666269
021	70060-02567	1	Auger 74"	666271
030	70000-02652	1	Fan	666378
040	70060-03302	1	Shear plate	659509
050	70000-02644	1	Sprocket 60A38	654007
060	77700-05004	3	Bearing with set screw 1 1/4"	4300118
007	70060-03301	2	Bushing	659505
080	70060-03299	1	Key 3/8" x 3/8" x 2 3/4"	654174
090	70001-00620	1	Fan washer	661554
100	77700-04337	1	Chain guard	669724
110	77700-02283	2	Skid shoe	669586
120	70060-02633	1	Chain 60 x 78 links	654009
121	70060-03313		- Connecting link	654839
130	77700-01199	6	Nylon insert locknut 5/8" PTD	1000012
140	77700-00784	1	Spacer ring	668093
150	77700-00554	1	Idler sprocket	3300022
160	77700-00783	1	Spacer ring	667777
170	77700-01956	1	Driving shaft support	669356
180	77700-02689	1	Access plate	669722
190	77700-00967	18	Allen setscrew flat head 1/4" x 3/4" PTD	0700016
200	77700-02691	1	Removable guard	669597
210	77700-04275	1	4 point hitch	670325
220	70060-04431	1	Gearbox	663485
230	77700-04277	1	Reduction box support	670327
240	70060-02441	18	Stover lock nut 1/4" PTD	1100001
250	77700-02696	1	Drive shaft - for L4469	669719
251	77700-02697	1	Drive shaft - for L4479	669720
260	77700-02690	1	Shear plate	669595
270	77700-01965	1	Bushing	4300072

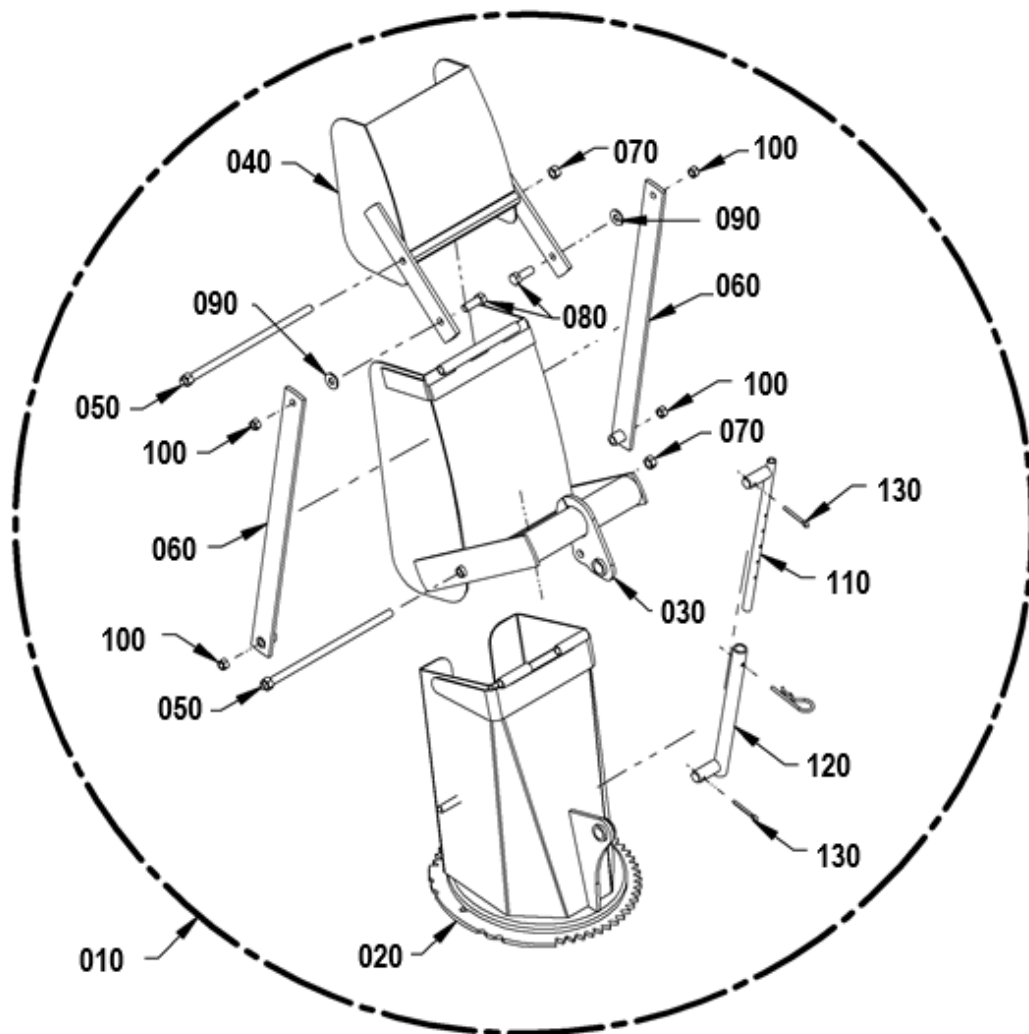
PARTS

SNOWBLOWER – L4469 - L4479				
REF.	PART#	QTY	DESCRIPTION	CODE
280	77700-04512	1	Cutting edge 64"	670340
281	77700-02711	1	Cutting edge 74"	669136
290	70060-04442	10	Stover lock nut 3/8" PTD	1100003
300	77700-04338	1	Reduction box	4500148
310	77700-04278	1	Right hitch protector	670328
320	77700-04279	1	Left hitch protector	670329
330	70060-03052	2	Nylon flat washer 11/32"	658467
340	75599-31912	1	Nylon insert locknut 5/16" PTD	1000005
350	75599-01340	1	Hex bolt 3/8"NC x 2" PTD	0100042
360	75599-33013	15	Lockwasher 3/8" PTD	1200004
370	70060-04440	1	Shear bolt	665547
380	70060-02562	10	Plow bolt 3/8" x 1" PTD	0400001
390	75599-01330	4	Hex bolt 3/8"NC x 1 1/2" PTD	0100040
400	75599-31013	14	Hex nut 3/8" PTD	0900003
410	75599-01530	12	Hex bolt 1/2"NC x 1 1/2" PTD	0100070
420	75599-33015	16	Lockwasher 1/2" PTD	1200006
430	75599-31015	16	Hex nut 1/2" PTD	0900006
440	75599-01320	2	Hex bolt. 3/8"NC x 1" PTD	0100038
450	70060-00940	2	Grease fitting 1/4"	654106
460	70060-02635	4	Carriage bolt 1/2" x 1 1/2"	0300024
470	70001-00804	11	Lockwasher 5/8" PTD	1200007
480	75599-32017	6	Flat washer 5/8" (11/16" hole) PTD	1400008
490	70001-00802	1	Hex nut 5/8" PTD	0900007
500	75599-01790	1	Hex bolt 5/8"NC x 4 1/2" PTD	0100104
510	77700-04339	1	Shear bolt	669596
520	75599-01730	10	Hex bolt 5/8"NC x 1 1/2" PTD	0100093
530	77700-01241	4	Hex bolt 3/8" x 5 1/2" PTD	0100052
540	70060-04370	3	Hex bolt M10 x 1.50 x 20mm PTD	0200012
550	70060-00793	3	Lockwasher 10mm PTD	1200018
560	75599-01315	4	Hex. bolt 3/8"NC x 3/4" PTD	0100037
570	75599-01220	1	Hex bolt 5/16"NC x 1" PTD	0100019

PARTS

THREE PART CHUTE

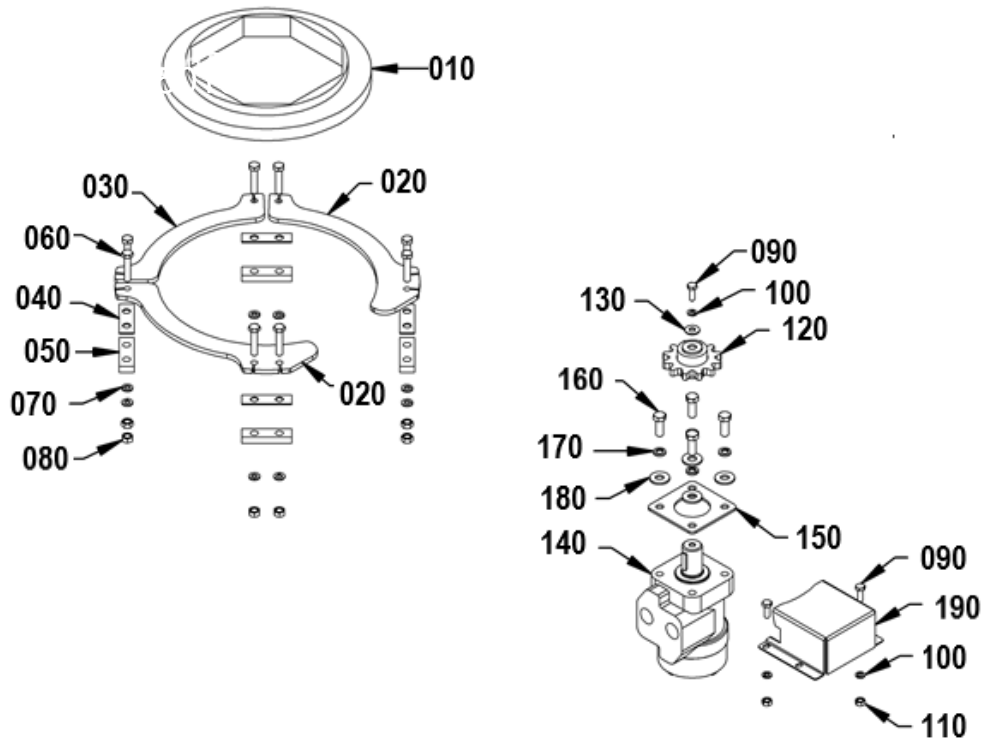
REF.	PART#	QTY	DESCRIPTION	CODE
010	77700-04274	1	Three part chute ass'y	670320
020	77700-04269	1	Chute base	670127
030	77700-04270	1	Middle deflector	670128
040	77700-04271	1	Upper deflector	670129
050	70060-01850	2	Hinge pin 10 27/32" PTD	666654
060	77700-04272	2	Three part chute flat bar	670130
070	77700-01247	2	Stover lock nut 7/16"NC PTD	1100004
080	77700-01242	2	Hex bolt 7/16"NC x 1 1/4" PTD	0100057
090	75599-32014	2	Flat washer 3/8" (7/16" hole) PTD	1400004
100	75599-31914	2	Nylon insert lock nut 7/16"NC PTD	1000009
110	70060-70306	1	Adjustment rod	665332
120	70060-70305	1	Adjustment pipe	665331
130	77700-01116	2	Cotter pin 3/16" x 1 1/2" PTD	1500013
140	70060-04187	1	Hairpin 5/32" X 3 5/32"	1800002



PARTS

HYDRAULIC ROTATION

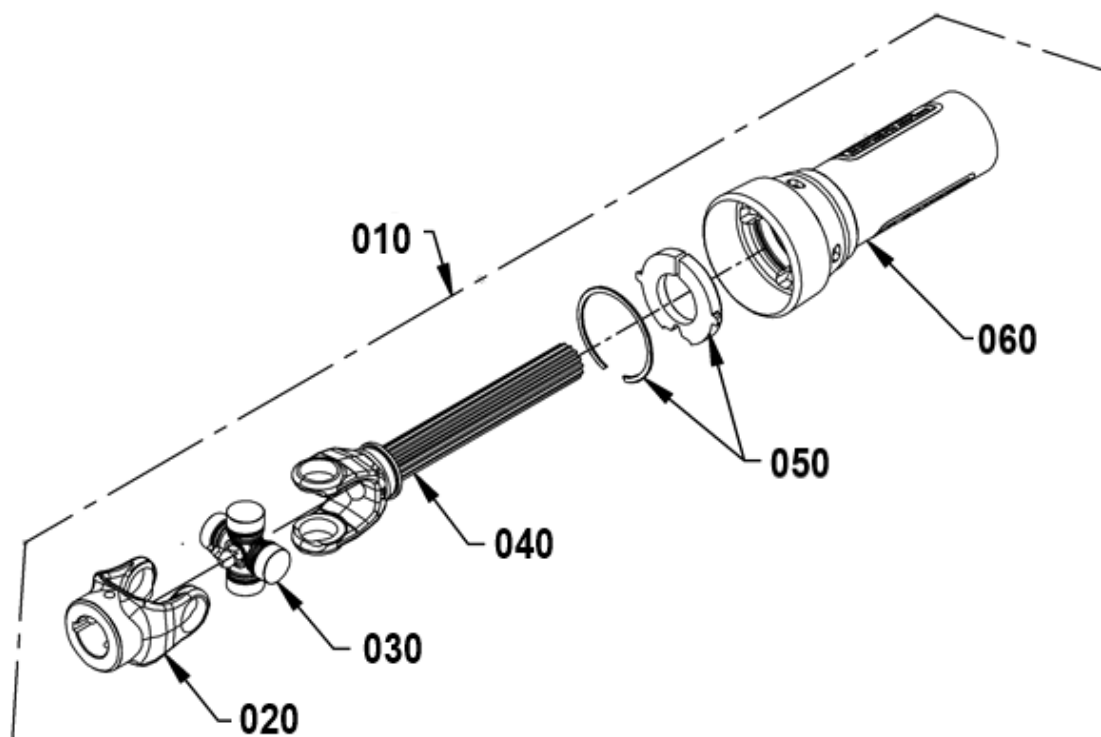
REF.	PART#	QTY	DESCRIPTION	CODE
010	70060-03226	1	Rotation bushing	659151
020	77700-03043	2	Retaining plate 3 holes	669496
030	77700-03044	1	Retaining plate 2 holes	669497
040	70060-00600	4	Retaining plate spacer - 16ga PTD	666191
050	70060-00697	4	Retaining plate spacer - 3/8" PTD	665957
060	75599-01230	8	Hex bolt 5/16"NC x 1 1/2" PTD	0100021
070	75599-33012	8	Lockwasher 5/16" PTD	1200003
080	75599-31012	8	Hex nut 5/16"NC PTD	0900002
090	75599-01115	3	Hex bolt 1/4"NC x 3/4" PTD	0100003
100	75599-33011	2	Lockwasher 1/4" PTD	1200002
110	75599-31011	2	Hex nut 1/4"NC PTD	0900001
120	77700-02692	1	Motor gear hydraulic rotation 12 teeth	669705
130	75599-32011	1	Flat washer 1/4" PTD	1400002
140	77700-01146	1	Hydraulic motor 50cc	3910128
141	77700-05073	1	- Seal kit	3910104
150	77700-02695	1	Motor spacer	669718
160	75599-01320	4	Hex bolt 3/8"NC x 1" PTD	0100038
170	75599-33013	4	Lockwasher 3/8" PTD	1200004
180	75599-32014	4	Flat washer 3/8" PTD	1400004
190	77700-02693	1	Gear shield	669715



PARTS

MALE DRIVELINE – 77700-04340

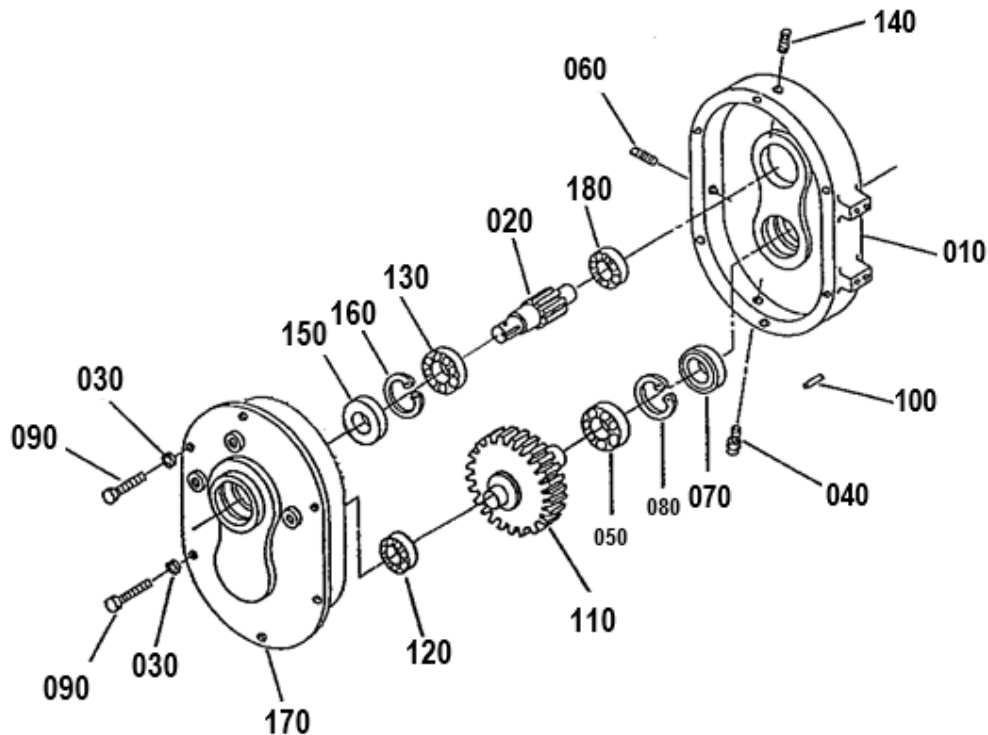
REF.	PART#	QTY	DESCRIPTION	CODE
010	77700-04340	1	Driveline ass'y – male part	4700267
020	70060-03431	1	Quick disconnect yoke ass'y	660149
030	77700-00576	1	Universal joint - journal cross	4700130
040	77700-04341	1	Yoke and male shaft	4700268
050	77700-04343	1	Repair kit	4700270
060	77700-04342	1	Outer shield - plastic	4700269
070	70060-03345	1	Plug 3/8"	655259



PARTS

REDUCTION BOX -77700-04338- "COMER" IDENTIFICATION

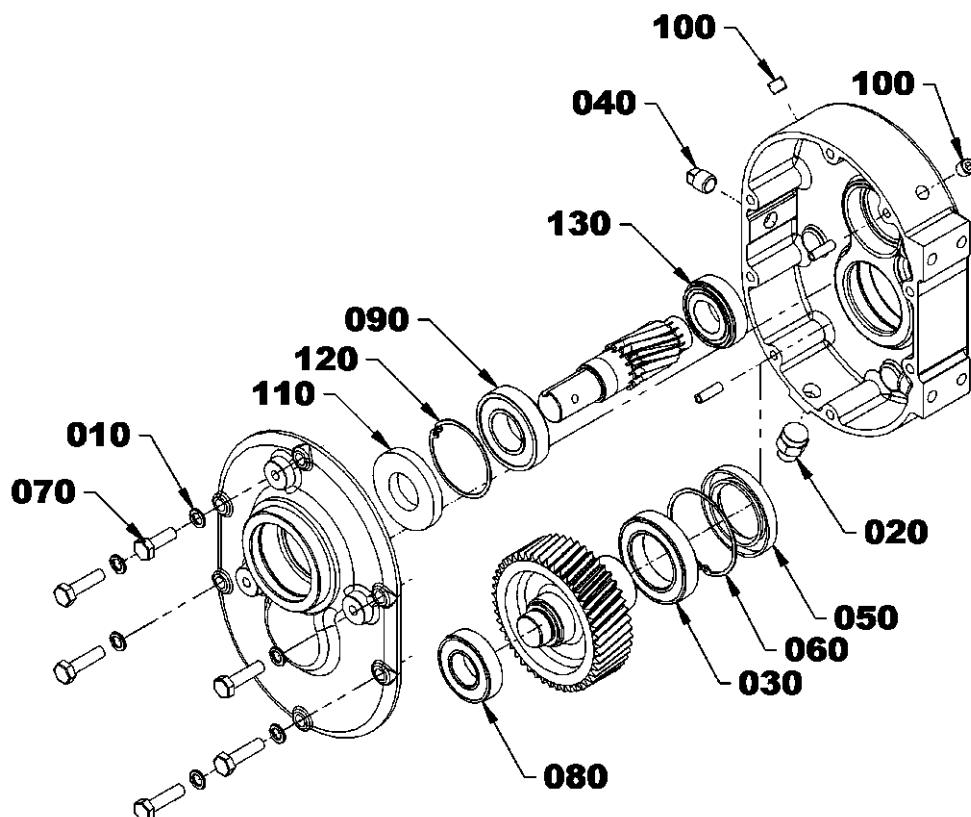
REF.	PART#	QTY	DESCRIPTION	CODE
000	77700-04338	1	Reduction Box ass'y	4500148
010	n/a	1	Casing	n/a
020	n/a	1	Pinion	n/a
030	70060-00792	6	Lockwasher 10mm	1200018
040	70060-03343	1	Breather	656662
050	70060-03344	1	Ball bearing	659838
060	70060-03345	1	Plug 3/8"	655259
070	70060-03346	1	Oil seal	659839
080	70060-03347	1	Snap ring	656642
090	70060-70410	6	Hex. bolt M10 x 1.5 x 30mm - 8,8	0200016
100	n/a	2	Spring pin	n/a
110	n/a	1	Gear	n/a
120	70060-03351	1	Bearing	659843
130	70060-04536	1	Cone bearing	656647
140	70060-70419	2	Plug 1/4"	663570
150	70060-03354	1	Oil seal	659845
160	70060-03355	1	Snap ring	656654
170	n/a	1	Cover	n/a
180	70060-04532	1	Cone bearing	4300069
181	70060-03353	1	Shim (not shown & qty as desired)	656649



PARTS

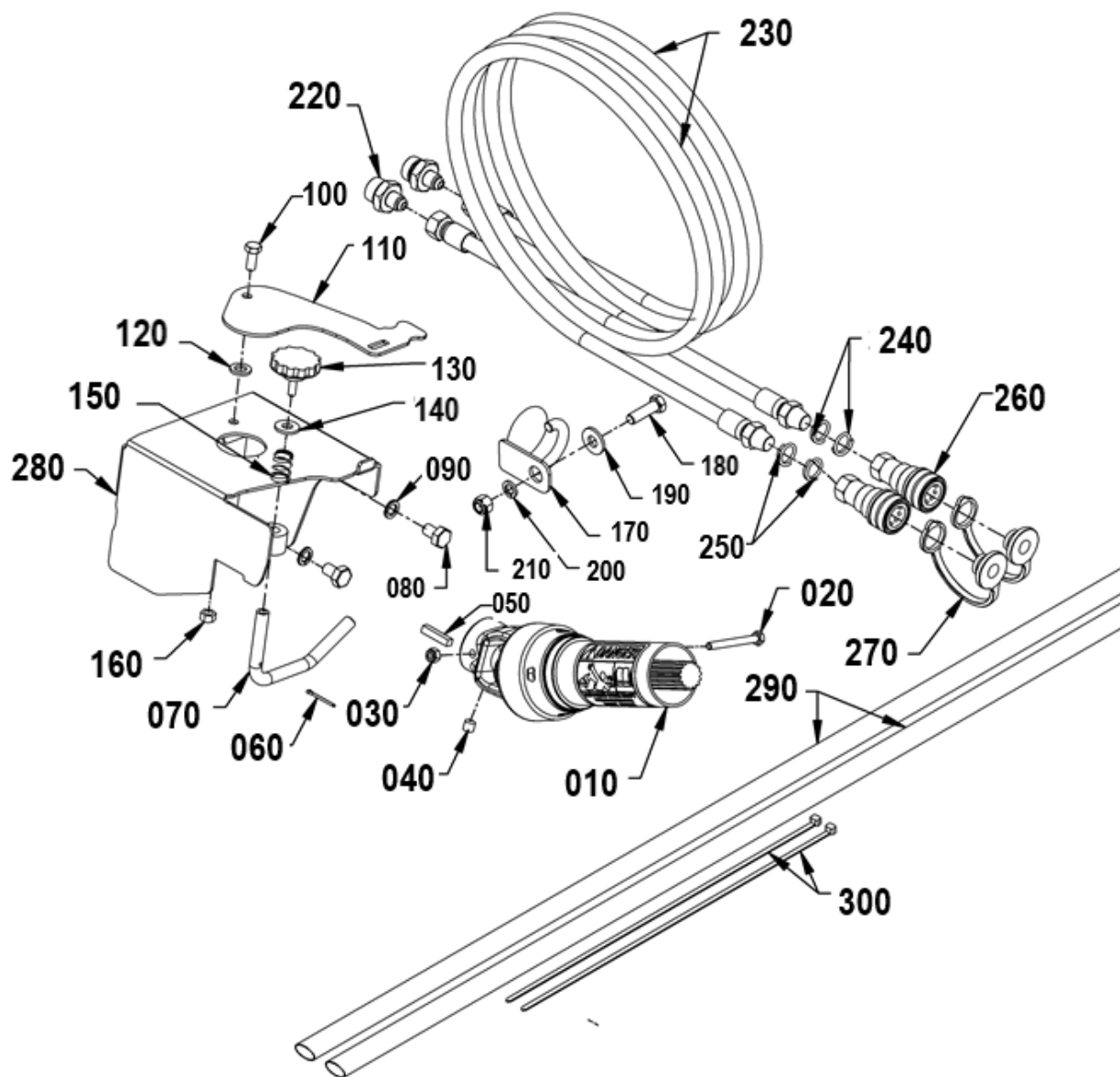
REDUCTION BOX - 77700-04338 - "4500148S" IDENTIFICATION

REF.	PART#	QTY	DESCRIPTION	CODE
000	77700-04338	1	Reduction Box ass'y	4500148
010	70060-00792	6	Lockwasher 10mm	1200018
020	70060-03343	1	Breather	656662
030	70060-03344	1	Ball bearing	659838
040	70060-03345	1	Plug 3/8"	655259
050	70060-03346	1	Oil seal	659839
060	70060-03347	1	Snap ring	656642
070	70060-70410	6	Hex. bolt M10 x 1.5 x 30mm - 8,8	0200016
080	70060-03351	1	Bearing	659843
090	70060-04536	1	Cone bearing	656647
100	70060-70419	2	Plug 1/4"	663570
110	70060-03354	1	Oil seal	659845
120	70060-03355	1	Snap ring	656654
130	70060-04532	1	Cone bearing	4300069
131	70060-03353	1	Shim (not shown & qty as desired)	656649



PARTS

SNOWBLOWER COMPLETION KIT – L4431



PARTS

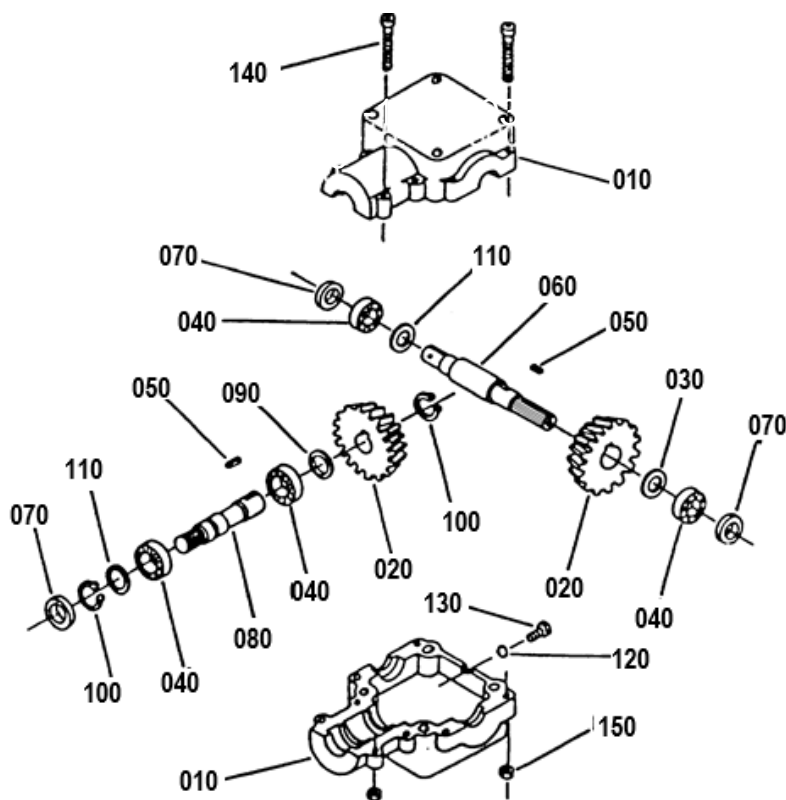
SNOWBLOWER COMPLETION KIT – L4431

REF.	PART#	QTY	DESCRIPTION	CODE
010	77700-04340	1	Male driveline	4700267
020	75599-01150	1	Bolt hex. 1/4"NC x 2 1/2" gr.5 PTD	0100012
030	75599-31911	1	Nylon insert lock nut 1/4"NC PTD	1000003
040	77700-00593	1	Allen set screw 3/8"NC x 3/8" gr5 black	0500017
050	70060-00814	1	Key 1/4" x 1/4" x 1 1/4"lg	654643
060	77700-01720	1	Cotter pin 3/32 x 1"	1500002
070	77700-04348	1	Driveline support rod	670336
008	77700-01245	2	Bolt hex. M10 x 16 x 1.50, PTD	0200011
090	70060-00792	2	Lockwasher 10mm PTD.	1200018
100	75599-01215	1	Bolt hex. 5/16"NC x 3/4" gr.5 PTD	0100018
110	77700-04349	1	Grease panel	670337
120	70060-03052	1	Nylon flat washer 11/32" hole	658467
130	70001-00517	1	Knob 5/16"NC	661832
140	75599-32012	1	Flat washer 5/16" (3/8" hole) PTD	1400003
150	77700-04353	1	Compression spring 0.66" dia x 1"lg	2200038
160	70001-00794	1	Stover nut 5/16"NC PTD	1100002
170	77700-04288	1	Hose support	670319
180	75599-01325	1	Bolt hex. 3/8"NC x 1 1/4" gr.5 PTD	0100039
190	75599-32014	1	Flat washer 3/8" (7/16" hole) PTD	1400004
200	75599-33013	1	Lockwasher 3/8" PTD	1200004
210	75599-31913	1	Nylon insert lock nut 3/8"NC PTD	1000006
220	70060-04309	2	Flow restrictor 0.052"	664362
230	70000-02663	2	Hose rubber 1/4" x 112", 3/8"NPT M x 9/16"JIC SWF	3700030
240	70060-01569	2	Yellow plastic identification ring	658206
250	70060-01570	2	Green plastic identification ring	658209
260	70000-02659	2	Quick coupler 3/8"NPT	2600070
270	70000-02660	2	Dust plug 3/8	2600071
280	77700-04370	1	Driveline guard	670374
290	77700-00978	2	Protective nylon sheath	668821
300	77700-01137	2	Nylon tie wrap 15" lg	2100006

PARTS

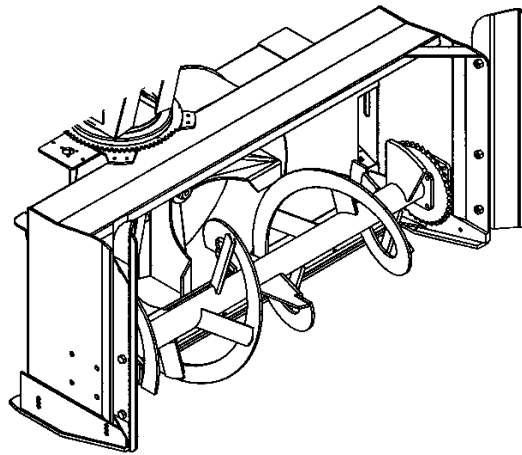
GEARBOX ASSEMBLY

REF.	PART#	QTY	DESCRIPTION	CODE
000	70060-04431	1	Gearbox assembly	663485
010	70060-03358	2	Casing	659848
020	70060-70381	2	Gear	662236
030	70060-03353	1	Shim	656649
040	70060-03850	4	Bearing	659844
050	70060-03360	2	Parallel Key	659850
060	70060-70374	1	Input Shaft	664663
070	70060-03362	3	Oil seal	659852
080	70060-03363	1	Output Shaft	659853
090	70060-03364	1	Shim	659854
100	70060-03365	2	Snap ring	656652
110	70060-03366	2	Shim	659855
120	70060-03794	1	O-Ring	661144
130	70060-03368	1	Plug	659847
140	70060-02617	8	Allen socket head capscrew M8 x 1.25 x 55mm, gr. 8.8	0800032
150	70060-01845	8	Hex. nut (M8, -8.8)	0900022



AVAILABLE OPTIONS

SIDE EXTENSIONS



L2177







TORQUE SPECIFICATION TABLE

GENERAL SPECIFICATION TABLE

USE THE FOLLOWING TORQUES WHEN SPECIAL TORQUES ARE NOT GIVEN

Note: These values apply to fasteners as received from supplier dry, or when lubricated with normal engine oil. They do not apply if special graphited or moly disulfide greases or other extreme pressure lubricants are used. These values apply to dry conditions; under lubricated conditions reduce by 25% the torques in this table.

BOLT HEAD IDENTIFICATION

INCHES Bolt Size	 Grade 2		 Grade 5		 Grade 8		METRI C Bolt Size	 Class 5.8		 Class 8.8		 NP Class 10.9	
	in-tpi ¹	N-m ²	lbs-ft ³	N-m	lbs-ft	N-m		lbs-ft	N-m	lbs-ft	N-m	lbs-ft	
1/4" – 20NC	7.4	5.6	11	8	16	12	M 5 X 0.8	4	3	6	5	9	7
1/4" – 28NF	8.5	6	13	10	18	14	M 6 X 1	7	5	11	8	15	11
5/16" – 18NC	15	11	24	17	33	25	M 8 X 1.25	17	12	26	19	36	27
5/16" – 24NF	17	13	26	19	37	27	M 8 X 1	18	13	28	21	39	29
3/8" – 16NC	27	20	42	31	59	44	M10 X 1.5	33	24	52	39	72	53
3/8" – 24NF	31	22	47	35	67	49	M10 X 0.75	39	29	61	45	85	62
7/16" – 14NC	43	32	67	49	95	70	M12 X 1.75	58	42	91	67	125	93
7/16" – 20NF	49	36	75	55	105	78	M12 X 1.5	60	44	95	70	130	97
1/2" – 13NC	66	49	105	76	145	105	M12 X 1	90	66	105	77	145	105
1/2" – 20NF	75	55	115	85	165	120	M14 X 2	92	68	145	105	200	150
9/16" – 12NC	95	70	150	110	210	155	M14 X 1.5	99	73	155	115	215	160
9/16" – 18NF	105	79	165	120	235	170	M16 X 2	145	105	225	165	315	230
5/8" – 11NC	130	97	205	150	285	210	M16 X 1.5	155	115	240	180	335	245
5/8" – 18NF	150	110	230	170	325	240	M18 X 2.5	195	145	310	230	405	300
3/4" – 10NC	235	170	360	265	510	375	M18 X 1.5	220	165	350	260	485	355
3/4" – 16NF	260	190	405	295	570	420	M20 X 2.5	280	205	440	325	610	450
7/8" – 9NC	225	165	585	430	820	605	M20 X 1.5	310	230	650	480	900	665
7/8" – 14NF	250	185	640	475	905	670	M24 X 3	480	355	760	560	1050	780
1" – 8NC	340	250	875	645	1230	910	M24 X 2	525	390	830	610	1150	845
1" – 12NF	370	275	955	705	1350	995	M30 X 3.5	960	705	1510	1120	2100	1550
1 1/8" – 7NC	480	355	1080	795	1750	1290	M30 X 2	1060	785	1680	1240	2320	1710
1 1/8" – 12NF	540	395	1210	890	1960	1440	M36 X 3.5	1730	1270	2650	1950	3660	2700
1 1/4" – 7NC	680	500	1520	1120	2460	1820	M36 X 2	1880	1380	2960	2190	4100	3220
1 1/4" – 12NF	750	555	1680	1240	2730	2010	¹ in-tpi = nominal thread diameter in inches-threads per inch ² N-m = newton-meters ³ lbs-ft= pounds-foot ⁴ mm x pitch = nominal thread diameter in millimeters x thread Pitch						
1 3/8" – 6NC	890	655	1990	1470	3230	2380							
1 3/8" – 12NF	1010	745	2270	1670	3680	2710							
1 1/2" – 6NC	1180	870	2640	1950	4290	3160							
1 1/2" – 12NF	1330	980	2970	2190	4820	3560							

*Torque tolerance +0%, -15% of torquing values. Unless otherwise specified use torque values listed above

*NOTE: 1 lbs-ft = 12 lbs-in

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