

# ***OPERATOR'S AND PARTS MANUAL***

***L4474 - 74" COMMERCIAL SNOWBLOWER  
L4485 - 80" COMMERCIAL SNOWBLOWER***

*SERIAL NO. 21400001 AND UP*

***For 4 cylinder GL40 & GL60 series tractors***

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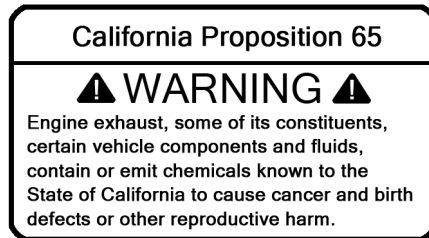
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# SPECIFICATION

Features and Specifications	L4474	L4485
Working Width	74" 1/2	80" 1/2
Transport Width	94"	94"
Working Height	31"	31"
Length	49"	49"
Single/Dual Auger	Simple	Simple
Auger Diameter	20"	20"
Auger Flighting Thickness	3/8"	3/8"
Impeller Diameter	26"	26"
Impeller Width	10 1/2"	10 1/2"
Impeller Shaft Diameter	1 9/16"	1 9/16"
Number of Impeller blades	4	4
Chain	60 H	60 H
Chain idler	Twin sprocket	Twin sprocket
Tractor RPM	2000	2000
Impeller RPM	545	545
Auger RPM	205	205
PTO Description	12E	12E
Skid Shoe	Adjustable & replaceable	Adjustable & replaceable
Skid Shoe Material	High Carbon steel	High Carbon steel
Back Plate Thickness	3/16"	3/16"
End Plate Thickness	0.120"	0.120"
Back Plate Thickness	3/16" CHT100	3/16" CHT100
Impeller Blade Thickness	5/16"	5/16"
Side Panel Bottom Thickness	1/2"	1/2"
Cutting Edge	High Carbon steel Replaceable & reversible	High Carbon steel Replaceable & reversible
Cutting Edge Dimension	1/2" x 3"	1/2" x 3"
Parking Stand	Standard	Standard
Hitch Category	4-point Hitch	4-point Hitch
PTO HP Requirements - min-max (hp)	35-80	35-80
Operating Weight (lbs)-hyd. rot. & defl.	1082	1120
Shipping Weight (lbs)	1280	1320
Approx. Set-up Time (min.)	35	35
Chute Deflector Adjustment	Hydraulic cylinder (2" x 4")	Hydraulic cylinder (2" x 4")
Chute Rotation (standard)	Hydraulic with motor	Hydraulic with motor
Chute Type	3 part	3 part

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# INTRODUCTION

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## **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:

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SERIAL NUMBER:

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DATE OF PURCHASE:

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DEALER NAME:

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# SAFETY PRECAUTIONS

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## 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.

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## **SAFETY PRECAUTIONS - continued**

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### **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.



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## SAFETY PRECAUTIONS - continued

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### **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.

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## SAFETY PRECAUTIONS - continued

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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.

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## SAFETY PRECAUTIONS - continued

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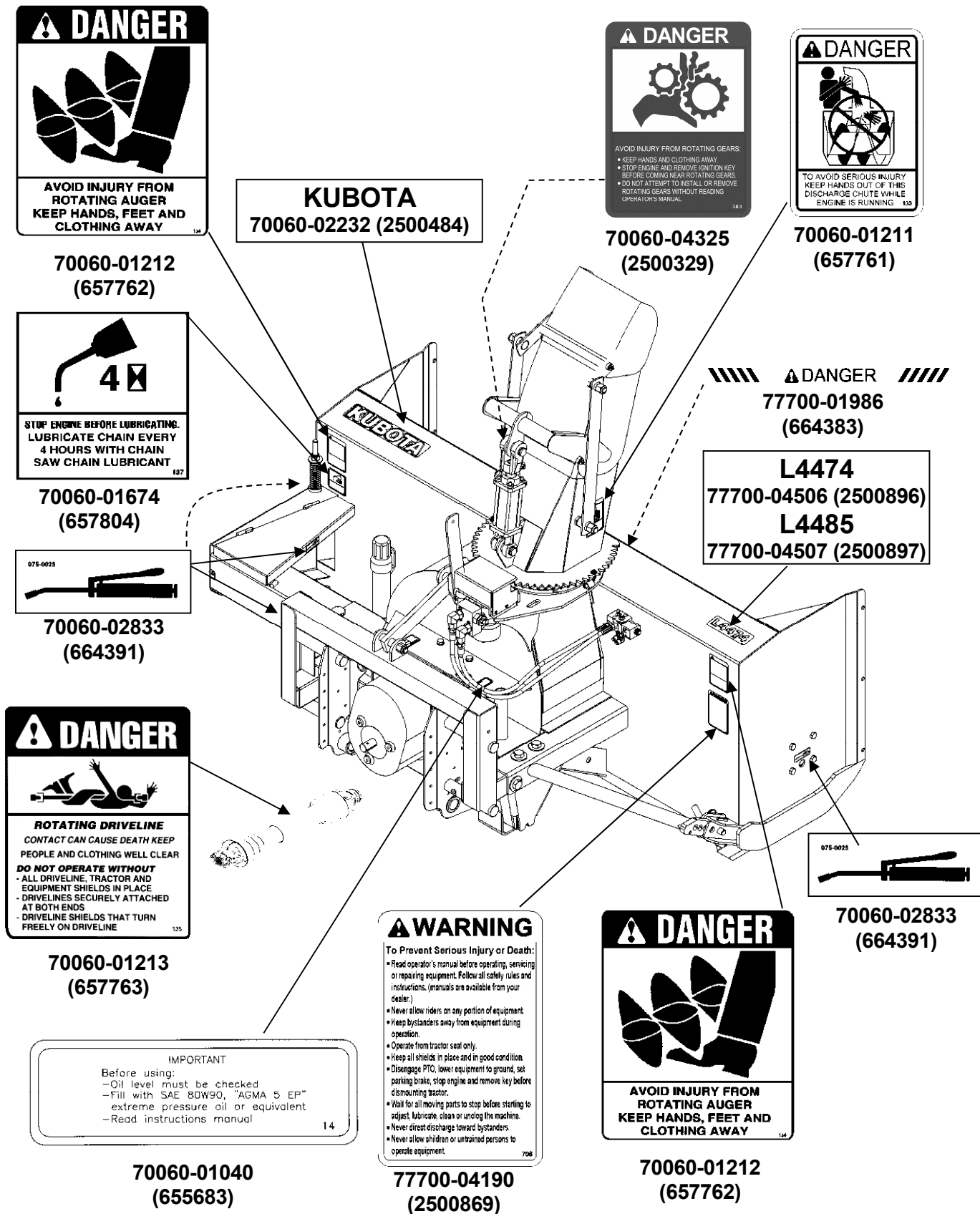
### **MAINTENANCE**

#### **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.

# SAFETY DECALS

Replace Immediately If Damaged



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# ASSEMBLY

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## **SNOWBLOWER ASSEMBLY**

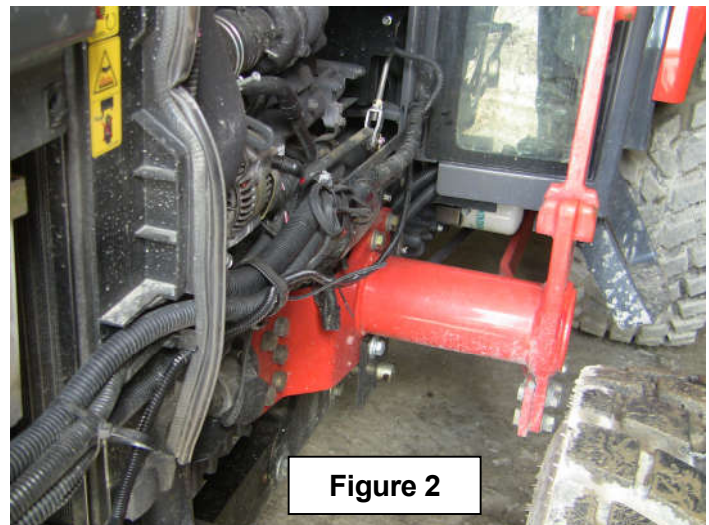
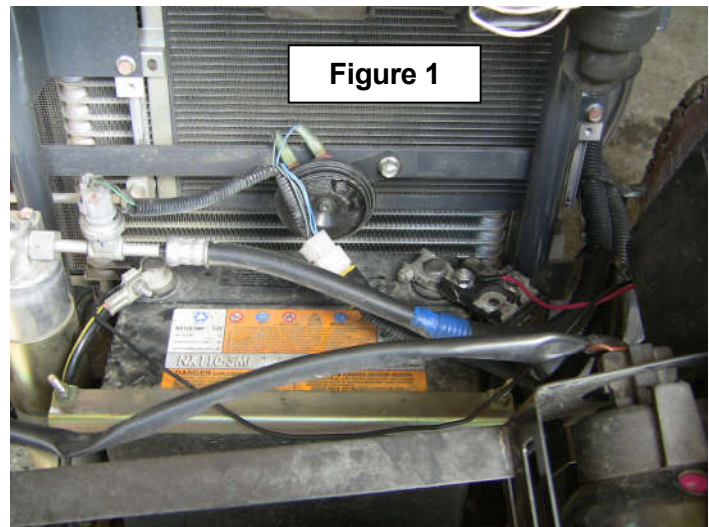
The snowblower is pre-assembled at the factory, however, parts in the box and/or hardware bag must be assembled. Use the present manual and lay out all parts for assembly. Separate bolts and nuts into various sizes. After assembly, torque all the bolts according to the "Torque Specification Table" enclosed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

**IMPORTANT - UNPACKING:** After unpacking the snowblower, replace the two bolts that were on the cutting edge ends by the two 1/2"NC x 1 1/2" plow bolts and 1/2"NC stovers locknuts, that are in the hardware bag, in the same position as the other cutting edge plow bolts already installed.

### **Installation of the Electric Harness on the Tractor (Figures 1 to 5)**

**(Not required for L4554A Automatic 4-point Hitch - CONTINUE to Step "Installation of the Hitch Protectors" at page 14, figure 9.**

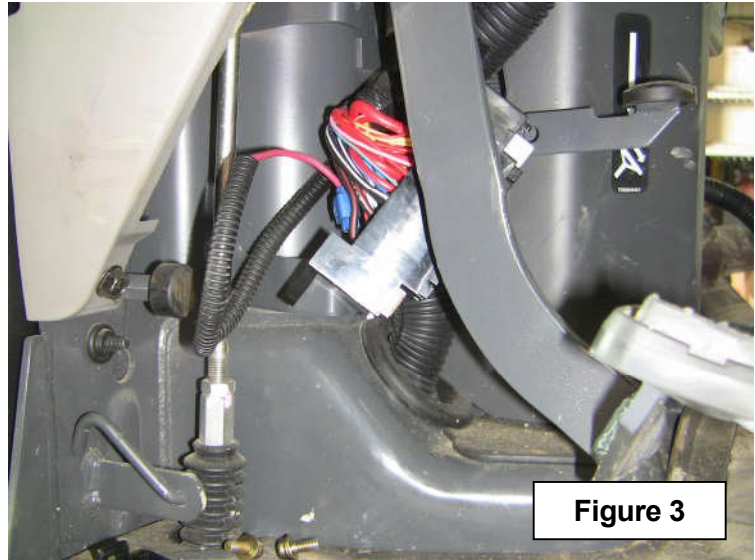
1. **Figure 1:** Install the red wire to the battery positive terminal and the black wire to the negative terminal.
2. **Figure 2:** Make the wires follow the existing tractor wires. Secure with tie wraps.
3. **Figure 2a:** Bring the wiring harness on the platform or inside the cabin under the dash. Leave the extra length of harness between the dash and the engine compartment.



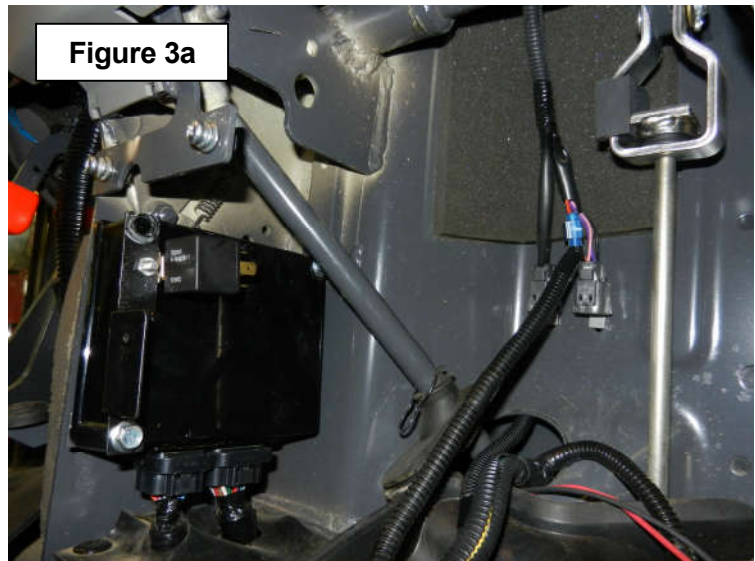


## ASSEMBLY

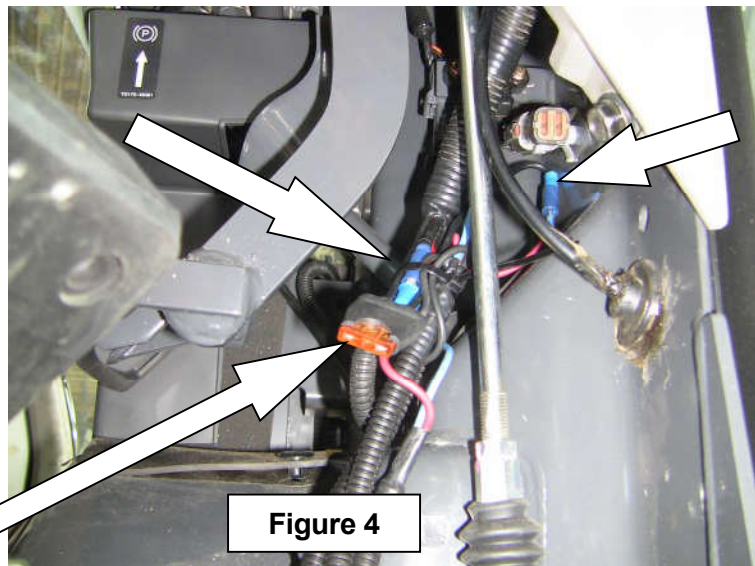
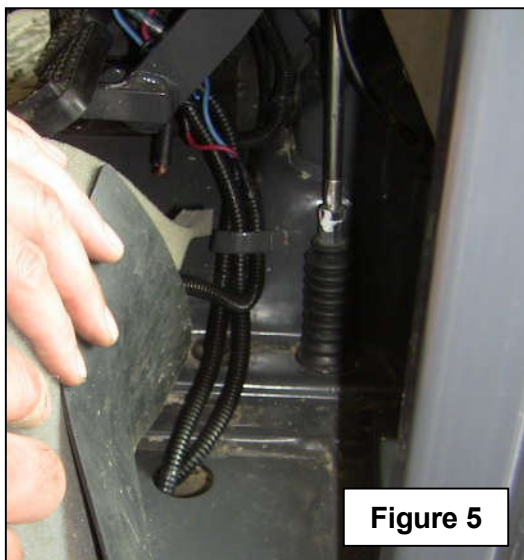
4. **Figures 3-3a:** Find a wire in the back of the fuse holder which is a power supply source "key on signal"; that means that when the ignition key is in the ON position, the power gets through. Install the green wire to this wire with the supplied tap connector. If the fuse holder is hard to reach, you can use a wire from the right side of the dash (see figure 3a).



5. **Figure 4:** The electric harness is made to facilitate installation; there are junctions at different locations. Pass the wires previously installed so they do not get in the way of the operator. Reconnect the wire junctions to their related color.



6. **Figure 4-5:** Push the wires under the console making sure to keep an easy access to the fuse holder. Run the red and blue wires under the step plate to reach the switch for connection.



# ASSEMBLY

## Installation of the Switch and Switchbox (Figures 6-7-8)

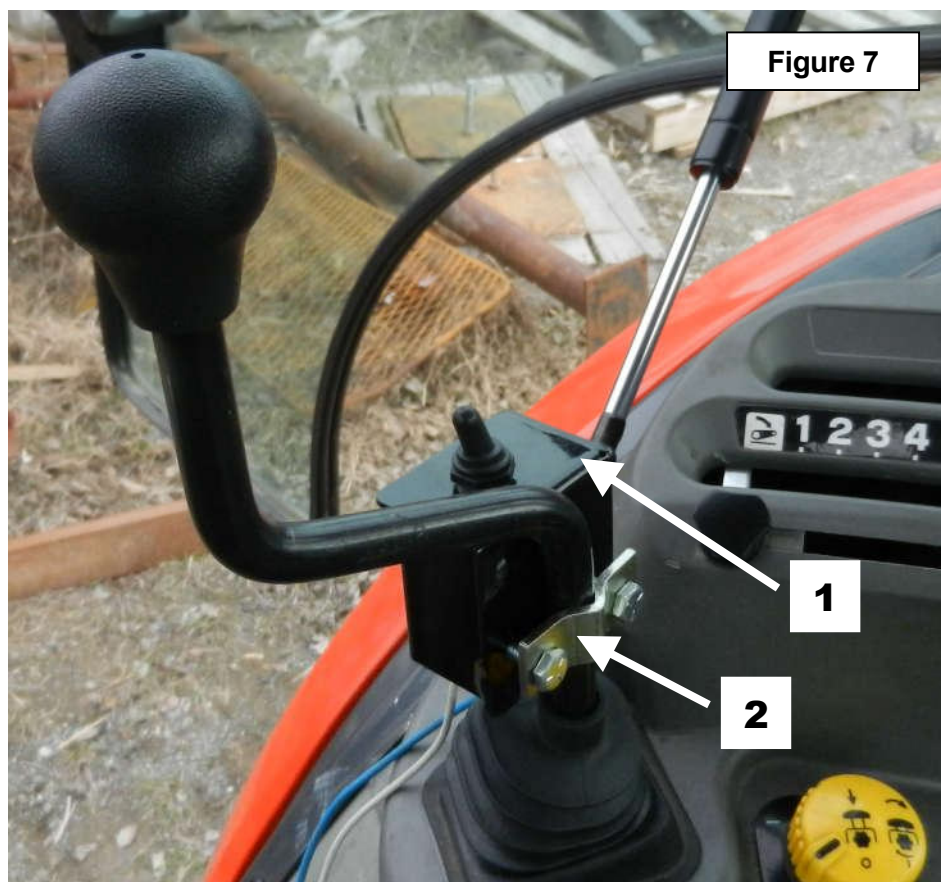
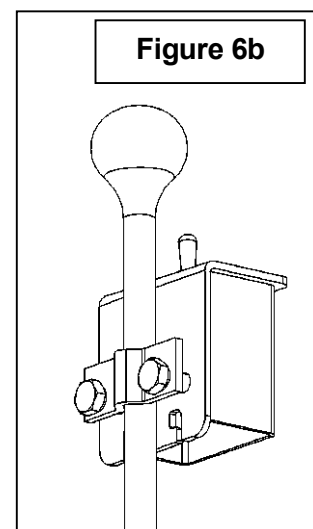
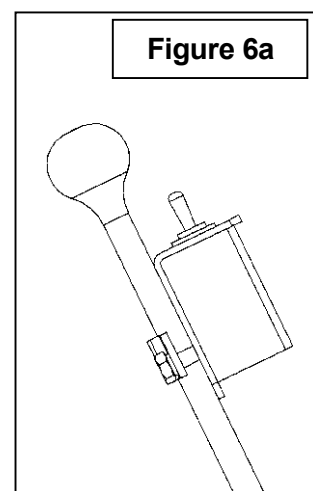
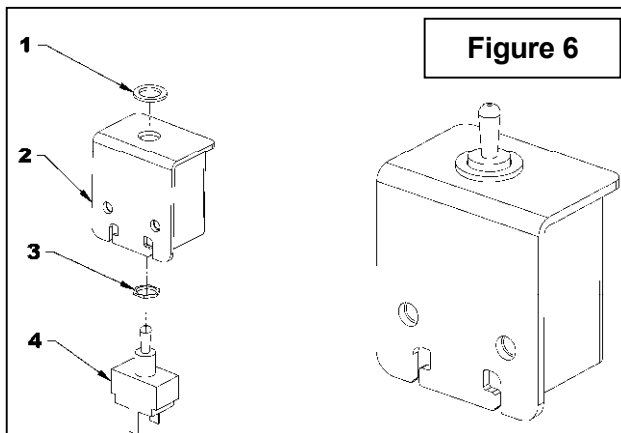
**NOTE: DO NOT INSTALL THIS SWITCHBOX WITH THE L4554A AUTO-CONNECT SUBFRAME.**

1. **Figure 6:** Insert the switch (item 4) in the switchbox (item 2) and secure with the two nuts (items 1-3) supplied with the switch in the order shown. Install the rubber cap on the switch.
2. **Figure 7:** Place the switchbox (item 1) on the lever in a position that will be comfortable when the hand is on the knob and attach with the box clamp (item 2) and two 1/4"NC x 3/4" hex. bolts.

**NOTE: Figure 6a:** Tighten the bolts just enough to securely fix the clamp and the switchbox on the lever. DO NOT TIGHTEN TOO MUCH to not deform the clamp.

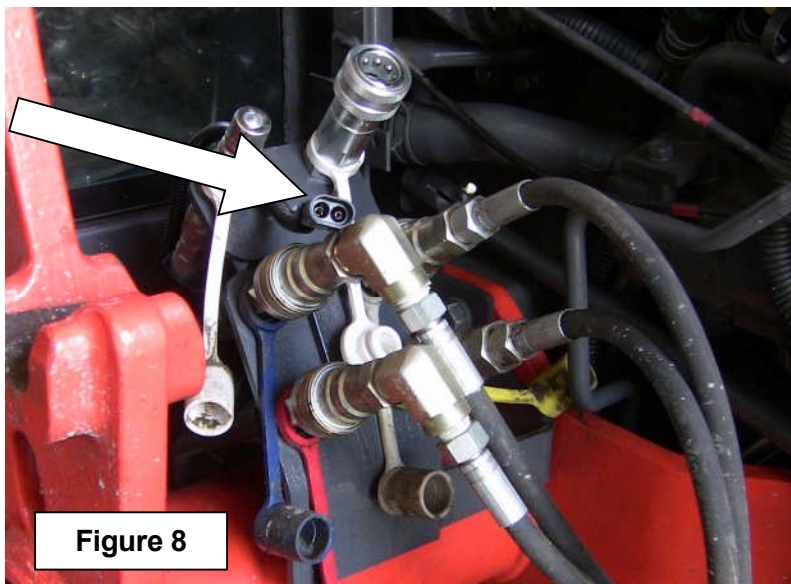
**NOTE: Figure 6b:** Make sure the clamp is in the right direction so the lower openings on the switchbox are not blocked.

3. Connect wires to the switch. There is no specific position for the connection.



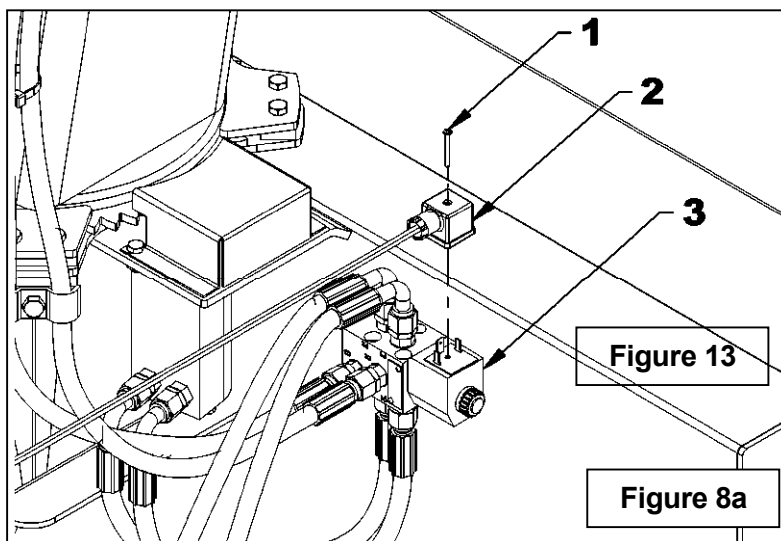
## ASSEMBLY

4. **Figure 8:** Attach the wire that goes to the electric deviator to the hoses with tie wraps. The quick connect is used to disconnect the wire when removing the snowblower from the tractor. It should be installed around the hydraulic quick coupler as shown.



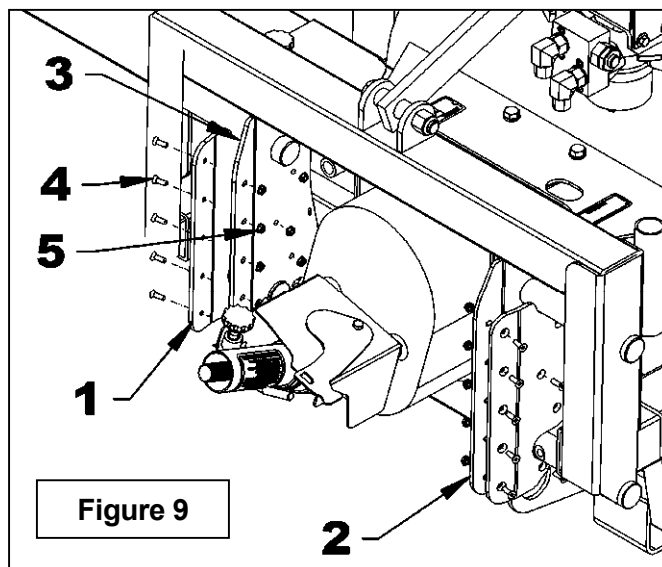
### **Installation of Connector DIN (Figure 8a)**

1. Run the wiring harness with DIN connector along the selector valve hydraulic hoses.
2. Install the DIN connector (item 2) on the selector valve (item 3) with the screw (item 1) supplied with the connector.



### **Installation of the Hitch Protectors (Figure 9)**

Install the left hitch protector (item 1) and the right hitch protector (item 2) on each side of the snowblower 4-point hitch (item 3) using eighteen 1/4" x 3/4" flat head set screws and 1/4" stover lock nuts (items 4-5).





# ASSEMBLY

## ***Installation of the Chute (Figures 10 to 12)***

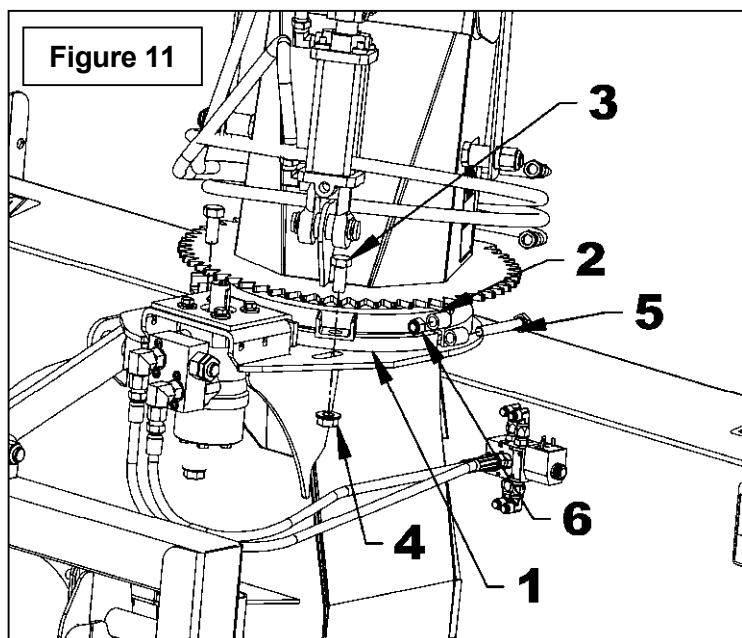
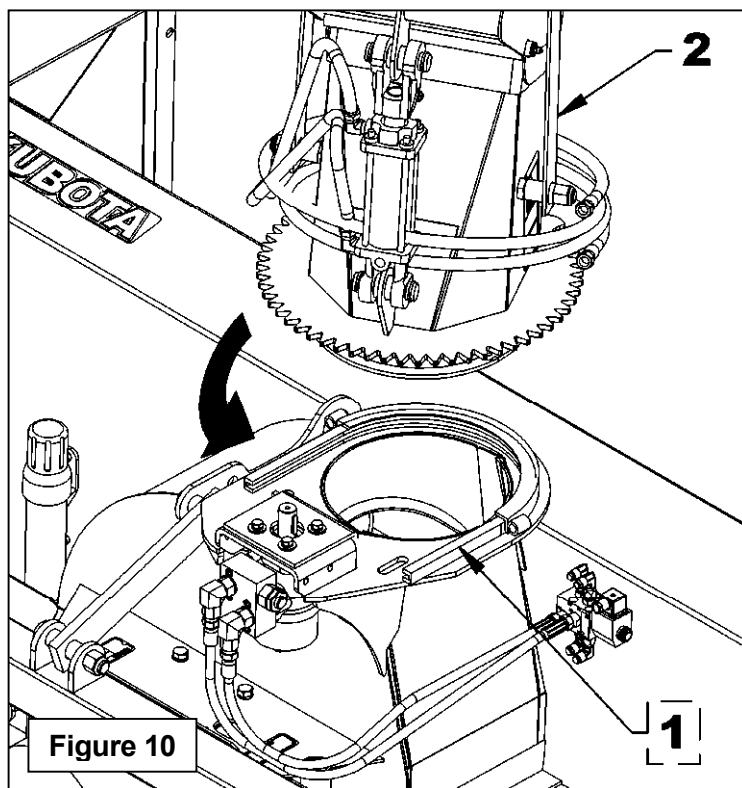
1. **Figure 10:** Insert the rotation bushing (item 1) in the snowblower's welded retaining plate. Place the chute (item 2) on the plate of the snowblower head and push the chute towards the front to insert it in the rotation bushing.

2. **Figure 11:** Install the retaining plate (item 2) on the snowblower by bending each bushing end (item 1) inside the retaining plate. Align the vertical holes of the retaining plate (item 2) with the oblong holes of the snowblower. Secure in place with the two 5/8" x 1 1/2" bolts and 5/8" serrated flange nuts (items 3-4) previously removed. Do not tighten.

3. **Figure 11:** Insert two 1/2" x 3 1/4" bolts (item 5) to join together the two retaining plates. Bring the two retaining plates closer. When enough threads of the 1/2" x 3 1/4" bolts (item 5) exceed the holes, screw in the 5/8" x 1 1/2" bolts (item 3) slightly. When the bolt ends (item 5) exceed sufficiently, secure with two 1/2" nylon insert nuts (item 6) until the two retaining plates are approximately 1/4" apart.

4. **Figure 11:** Tighten the 1/2" x 3 1/4" bolts (item 5) to reduce the gap between the retaining plates until chute turns with a slight resistance.

5. **Figure 11:** Tighten the two 5/8" x 1 1/2" bolts (item 3) according to the "***Torque Specification Table***" at the end of the manual.



## ASSEMBLY

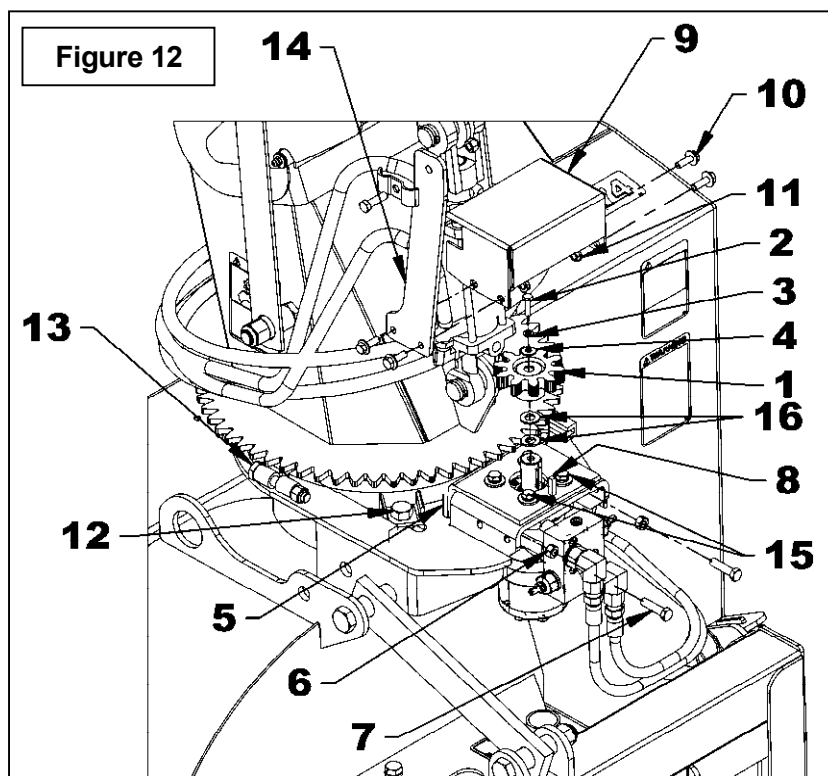
6. **Figure 12:** Slightly unscrew the bolts of the motor to adjust the distance between gears.

7. **Figure 12:** Grease the inside of the motor gear (item 1) and install with the key (item 8), the 1/4"NC x 1"lg bolt (item 2), 1/4" lockwasher, 1/4" flat washer (items 3-4) and the two 12mm flat washers (item 16). Tighten according to the "**Torque Specification Table**" at the end of the manual.

8. **Figure 12:** Adjust the distance between the chute gear and the motor gear according to the following step:

- A. Slightly unscrew the two bolts (item 12) that hold the retaining plate.
- B. Screw the two nuts (item 13) simultaneously until the distance between the retaining plates and the chute base is leveled.
- C. Retighten the bolts (item 12) according to the "**Torque Specification Table**" at the end of the manual.
- D. Adjust the gears to a distance between 1/32" and 1/16" by screwing the two bolts (item 7). Secure with the nuts (item 6) moving those against the anchoring flat bar (item 5). Tighten the four bolts (item 15) at 30 lbs-ft (41 N-M).
- E. Run a test at low speed. If the gears have an irregular sound while testing, it means the adjustment is incorrect. Bring parts closer to each other until the sound becomes regular and even.

9. **Figure 12:** Install the gear cover (item 9) and the hose support (item 14) with four 5/16" x 1" serrated flange bolts and 5/16" serrated flange nuts (items 10-11) on the inside. Tighten according to the "**Torque Specification Table**" at the end of the manual.



# ASSEMBLY

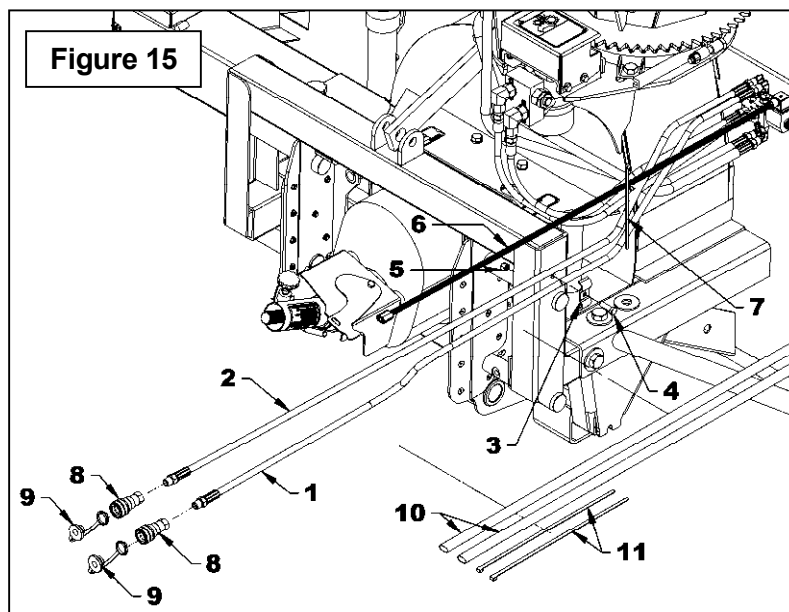
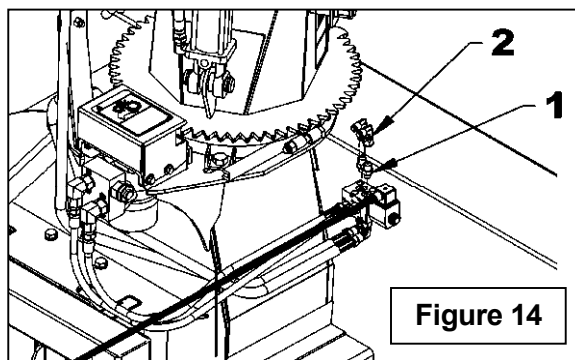
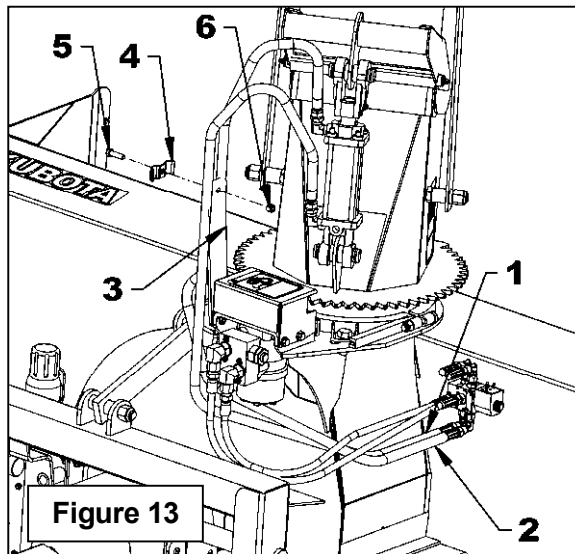
## INSTALLATION WITH THE AUTO-CONNECT COMPLETION KIT L4434

Refer to the Instruction sheet provided with the L4434 Completion kit.

## INSTALLATION WITH THE MANUAL COMPLETION KIT - L4433

### Connecting the Hoses to the Snowblower (Figures 13 to 15)

1. **Figure 13:** Attach the hose (item 1) already connected to the cylinder base to the left 90° elbow under the selector valve.
2. **Figure 13:** Attach the hose (item 2) already connected to the upper part of the cylinder to the right 90° elbow under the selector valve.
3. **Figure 13:** Secure the two cylinder hoses (items 1-2) to the hose support (item 3) with the hose clamp, a 3/8"NC x 1 1/4"lg hex bolt and a 3/8"NC nylon insert locknut (items 4-5-6). Leave enough hose length to allow for the full movement of the chute rotation. Install two nylon tie wrap between the hose support and the cylinder to maintain the hoses together.
4. **Figure 14:** Install the two 9/16"JIC x 7/16"ORB male adaptors (item 1) in the two cavities on top of the selector valve. Install the two 9/16"JIC female x 9/16"JIC male elbows (item 2) to the two adaptors (item 1).
5. **Figure 15:** Install a protective nylon sheath (item 10) on each hydraulic hose (items 1-2). The protective nylon sheath should cover the hose from the male fitting of the hose.
6. **Figure 15:** Install a nylon tie wrap (item 11) in the middle of the protective nylon sheath (item 10).
7. **Figure 15:** Connect the two hoses (items 1-2) to the two fitting previously installed and secure to the snowblower 4-point hitch with a hose clamp, a 3/8"NC x 1 1/4" lg hex bolt and a 3/8"NC nylon insert locknut (items 3-4-5).
8. **Figure 15:** Attach the selector valve electric wire (item 6) to the hoses (items 1-2) with a nylon tie wrap (item 7).
9. **Figure 15:** Install the two female quick couplers (item 8) and dust plugs (item 9) on the other end of the hoses.



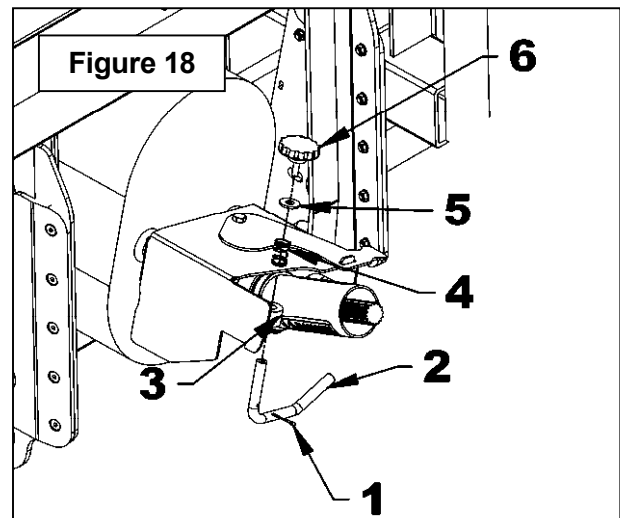
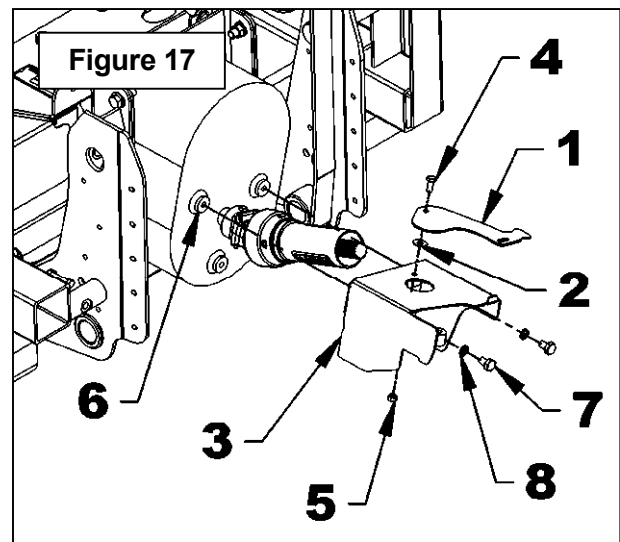
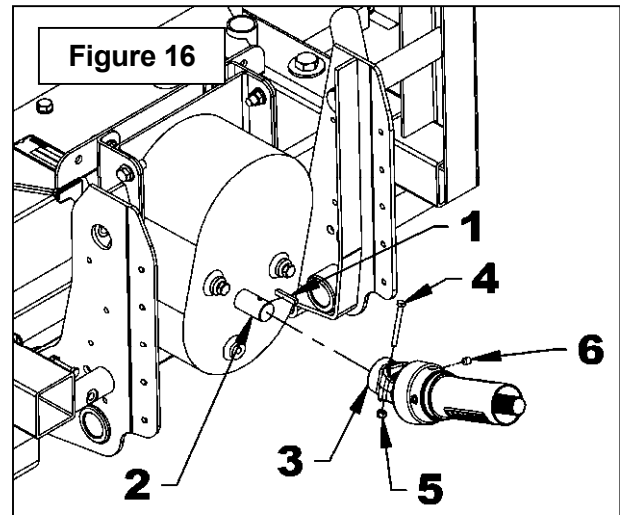
# ASSEMBLY

## **Connecting the Driveline to the Snowblower** **(Figures 16 to 18)**

1. **Figure 16:** Install the 1/4" x 1/4" x 1 1/2" key (item 1) on the reduction box shaft (item 2) then connect the driveline male half (item 3) to the reduction box shaft (item 2) and secure in place with a 1/4"NC x 2 1/2" hex bolt and 1/4" nylon insert lock nut (items 4-5). Using thread locker, install the 3/8" x 3/8" allen setscrew (item 6) on the driveline.
2. **Figure 17:** Place one nylon flat washer (item 2) between the driveline guard (item 3) and the grease panel (item 1) and secure with a 5/16" x 3/4" hex bolt and a 5/16" stover lock nut (items 4-5). The grease panel (item 1) should move freely, but be tight enough to keep it in place.
3. **Figure 17:** Install the driveline guard (item 3) on the reduction box with two 7/16"NC x 3/4" hex bolts and 7/16" lockwashers (items 7-8). Use the top hole on the left side of the guard.
4. **Figure 18:** Install a 5/32" x 1" cotter pin (item 1) on the driveline support rod (item 2) and into the guard bushing (item 3). Install the compression spring, 5/16" flat washer and plastic knob (items 4-5-6).

**⚠ 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.

**⚠ CAUTION:** In order to ensure that the driveline or other parts are not damaged, **DO NOT WORK** with the driveline placed on its support (see figure 20a).



# ASSEMBLY

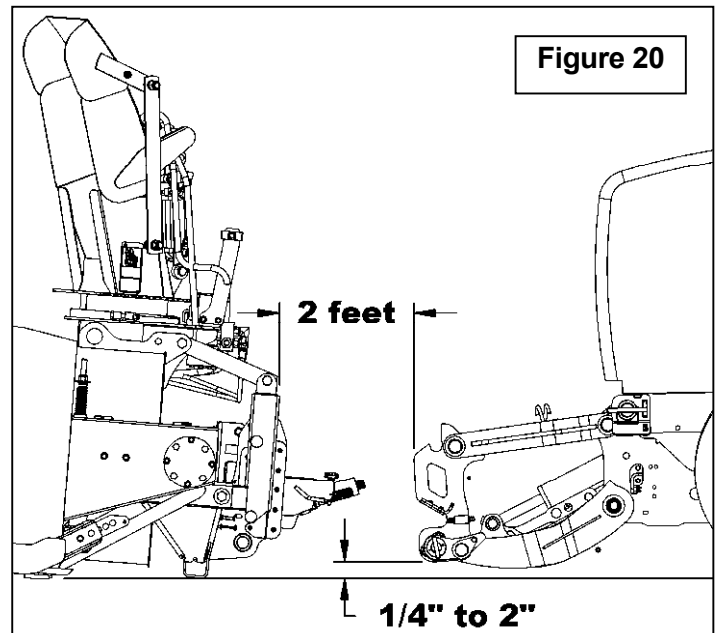
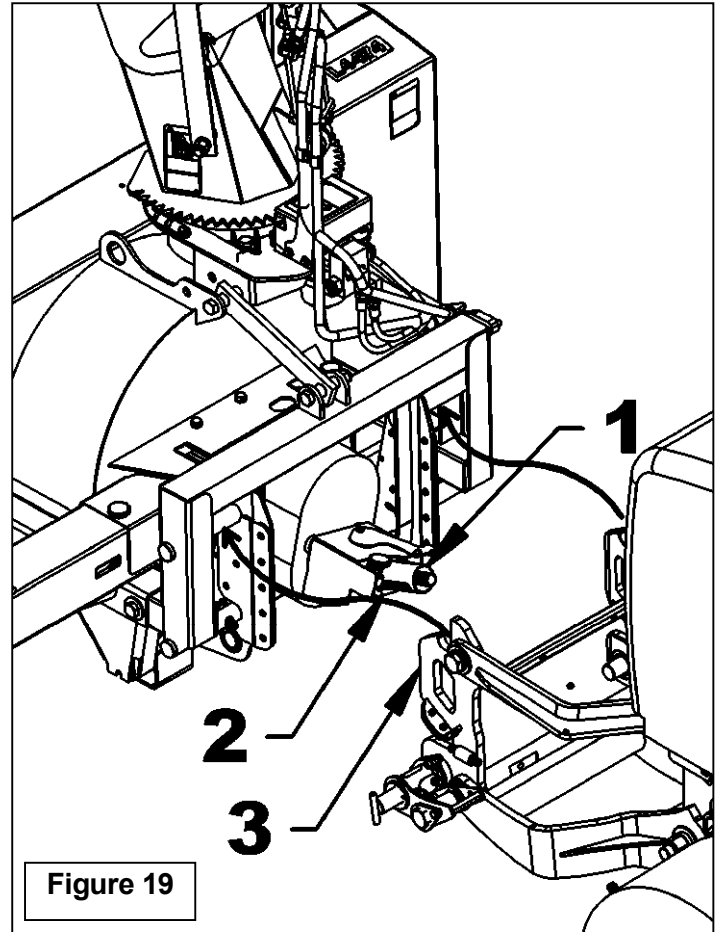
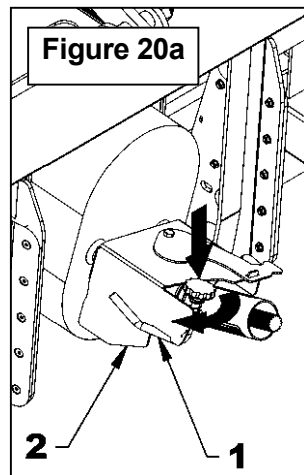
## Installation of the Snowblower on the Tractor (Figures 19 to 21)

**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.

1. **Figures 19-20:** With the male driveline (item 1) on its support rod approach the tractor to around 2 feet from the snowblower. Lower the tractor 4 point hitch (item 2) to about 1/4" to 2" from the ground. Ensure that the pins are in the unlock position.
2. Carefully move the tractor forward, hook up the snowblower and raise the snowblower completely with the tractor hydraulic lever.
3. Turn off tractor engine, set parking brake and remove the ignition key.
4. **Figure 21:** Release the pin (item 1) on each side of the 4 point hitch. - If the pins do not insert into the snowblower lower bushings, the snowblower is not properly sitting in the 4 point hitch. Restart previous steps 1 and 2.
5. Turn on tractor engine; raise the 4 point hitch to its maximum height. Turn off tractor engine, set parking brake and remove the ignition key.
6. **Figure 20a:** 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.



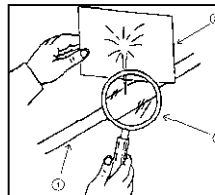
## ASSEMBLY

7. **Figure 21:** Raise the snowblower to its maximum. 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.
  8. 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.
  9. **Figure 21:** Connect the two hydraulic hoses (item 3) from the hydraulic deviator to the tractor quick couplers. Connect the deviator wire (item 4) to the power supply wire located near the valve support. Turn on tractor engine, by moving the hydraulic lever sideways and the chute will turn. (See position of the hoses).
- NOTE:** If operation is not as desired, reverse the two hydraulic hoses.
10. **Figure 21:** Take one identification ring from each hose (items 3-4) and insert them on the tractor quick couplers, matching the colors from the hoses.



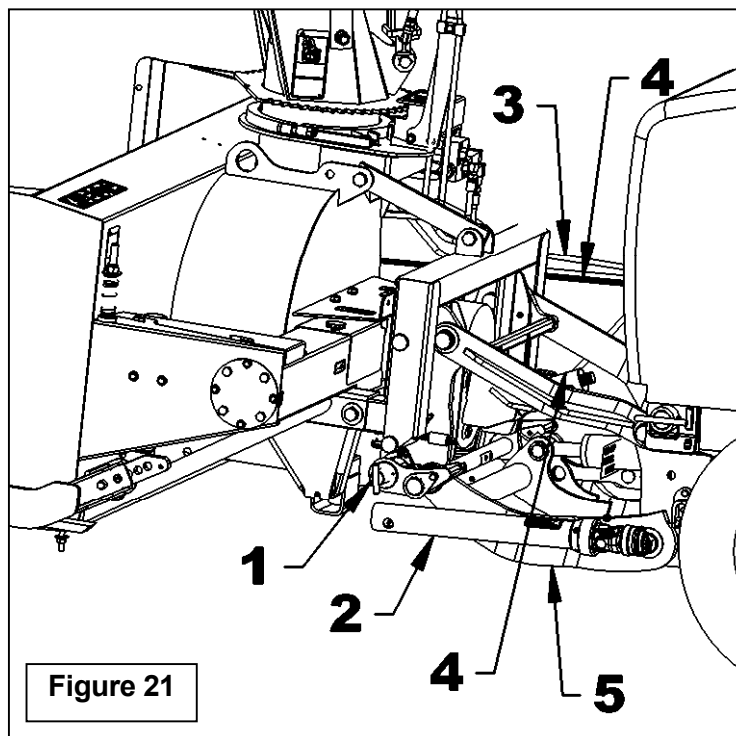
**WARNING:** To avoid serious personal injury. Escaping hydraulic/ diesel fluid under pressure can penetrate the skin causing serious injury.

- 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.



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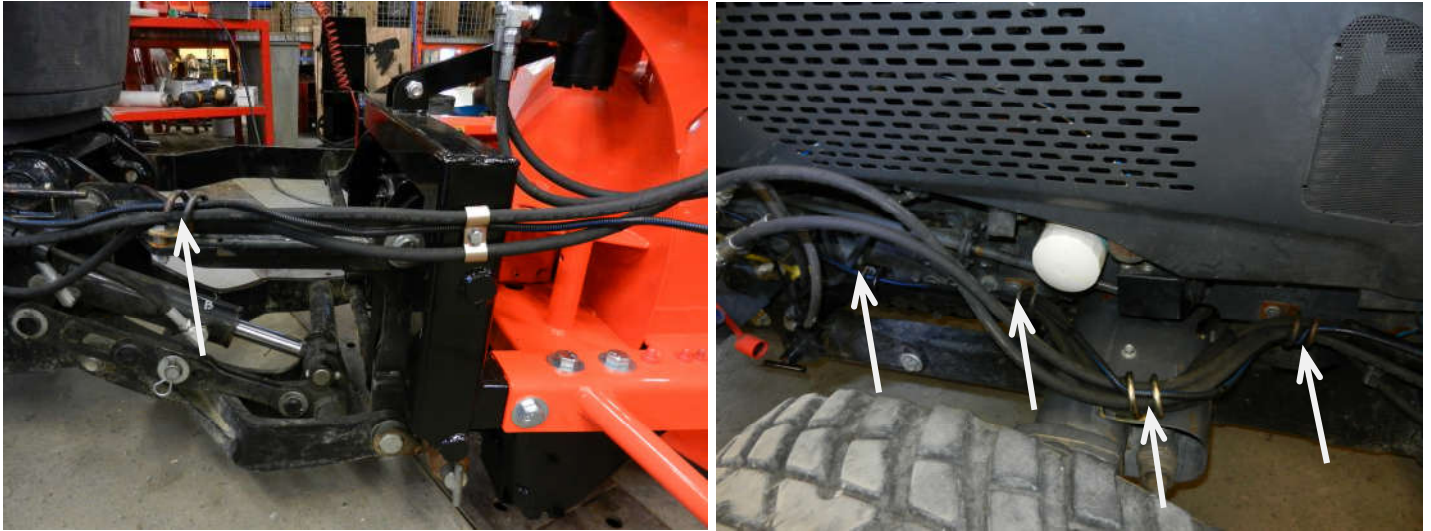
# ASSEMBLY

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## **Positioning the Hoses and Electrical Wire on the Tractor**

Run and insert the hoses and electrical wire into the hose clamps along the tractor frame as indicated by the arrows 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.

### Electrical Wiring



### Hydraulic Hoses



# ASSEMBLY

## ***Detaching Snowblower from 4-Point Hitch (Figures 22-22a)***

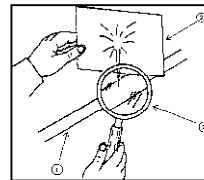
**NOTE:** Perform this procedure only on a clear area.

1. Set the snowblower at maximum height position, turn the engine off, set the parking brake and remove the ignition key.
2. **Figure 22:** Disconnect the female driveline (item 2) from the tractor.
3. **Figure 22a:** Push 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 22:** Remove female half driveline (item 2) from the subframe hitch (item 5) and keep it for a future installation.
5. **Figure 22:** Pull both side pins (item 1) from the 4 point hitch (item 5) and turn them in lock position.
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. 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. Disconnect the electrical wire also.
8. 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.

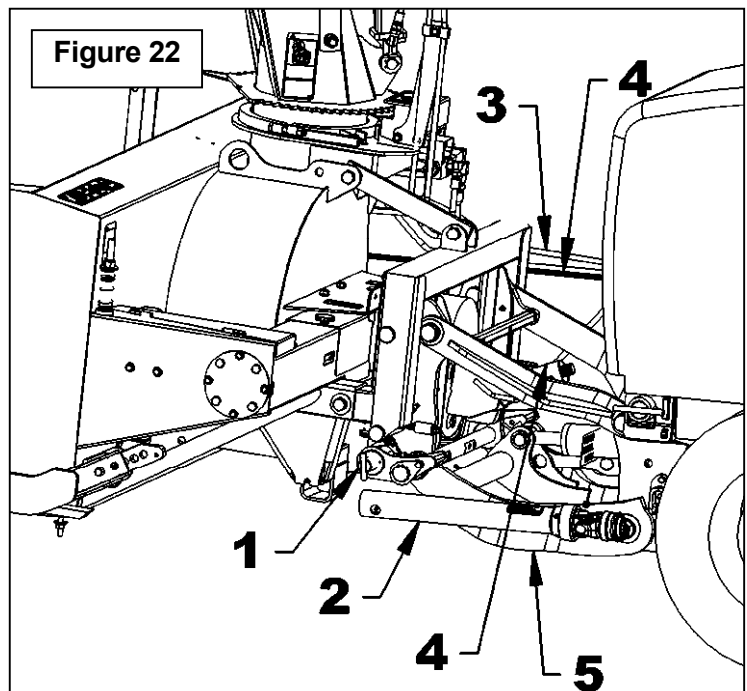
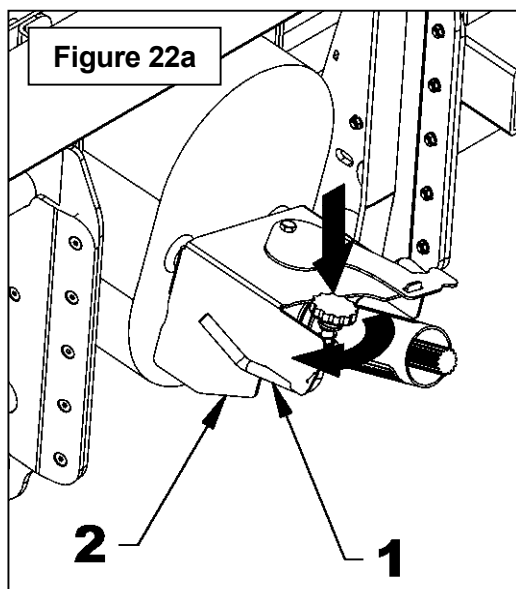
- Do not use your hands to check for leaks. Use a piece of cardboard or paper to search for leaks.



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.





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# OPERATION

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## **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.

**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.



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

## **OPERATING CONTROLS**

### **Raising and Lowering Snowblower**

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.

### **Engine Speed**

Working ground speed will depend on the depth and density of the snow to be cleared. Normally, ground speed will range from 4 to 7 MPH for light, dry snowfalls 3 to 6 inches, and 1 to 3 MPH for heavy, wet or drifted snow. To transport, disengage the drive shaft and raise the snowblower to full transport height.

### **Engaging the Drive Mechanism**

Refer to the tractor's operating manual for instructions.

### **Rotation and Deflector of the chute**

Push the control lever toward the right to throw the snow to the right, and toward the left to throw it to the left.

Activate the hydraulic deviator and push the control lever toward the right to throw the snow closer, and toward the left to throw it farther.

# OPERATION

## ADJUSTMENTS

### **WARNING**

To avoid personal injury, be sure the tractor engine is off, the drive shaft disengaged, and all movement has stopped before making any adjustments.

### **Skid Shoe Adjustment**

Adjust the snowblower so that the skid shoes run level. Adjust the skid shoes according to the surface conditions so that stones are not thrown with the snow, and adjust upwards for smooth surfaces. Adjust both skid shoes to the same height to keep the cutting edge level.

To adjust skid shoes, remove the pins and do the appropriate adjustment.

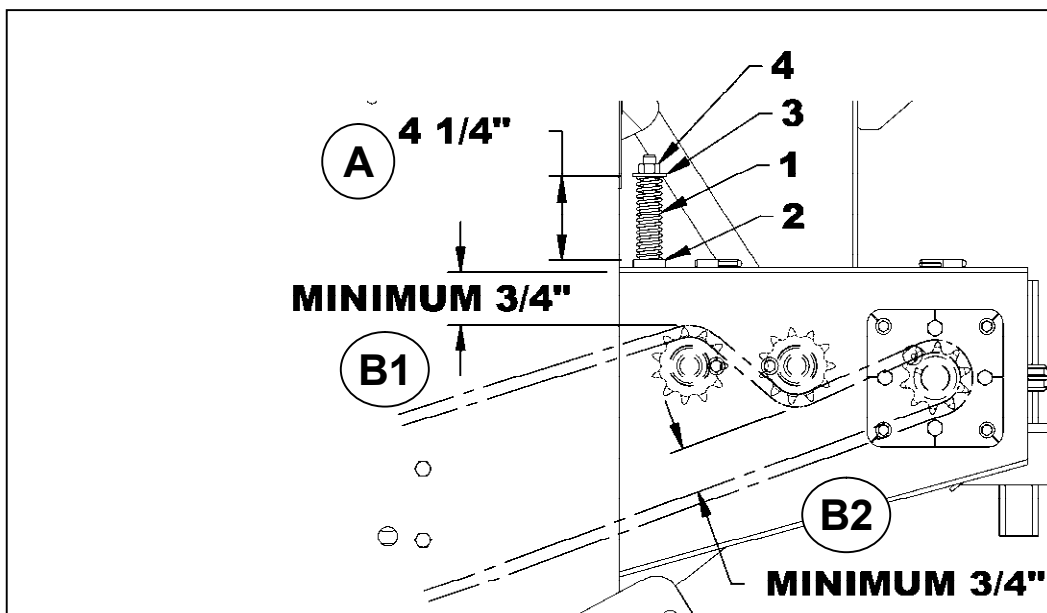
### **Chain Idler Adjustment (Figure below)**

#### **A - COMPRESSION SPRING:**

1. Every ten operating hours check the height of the compression spring (item 1), to have chain idler maximal efficiency.
2. Adjust the distance from the top of the welded bushing (item 2) to the bottom of the flat washer (item 3) by tightening the nut (item 4), to obtain **A: 4 1/4"**

#### **B - DRIVING CHAIN:**

1. At the end of the operating season, check the chain elongation by measuring the distances **B1** from top of the sprocket to underneath the side plate and **B2**, the distance between the chain as shown on figure.
2. The distances **B1** and **B2** must be at least 3/4". If the distance is less than 3/4" then either the chain is too tight (which may cause premature wear of the sprockets) or it may indicate that the chain is worn and needs to be replaced.



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# OPERATION

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## 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.

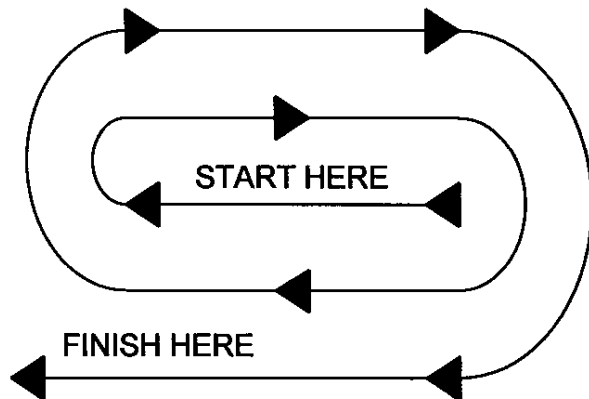


**WARNING:** Do not use hands or feet to unclog chute. Do not attempt to clear clogged chute of snow while tractor engine is running. If the chute clogs, disengage the drive shaft, shut off the tractor engine, remove the ignition key, wait for all movement to stop, and then clear the snow from the chute.

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.

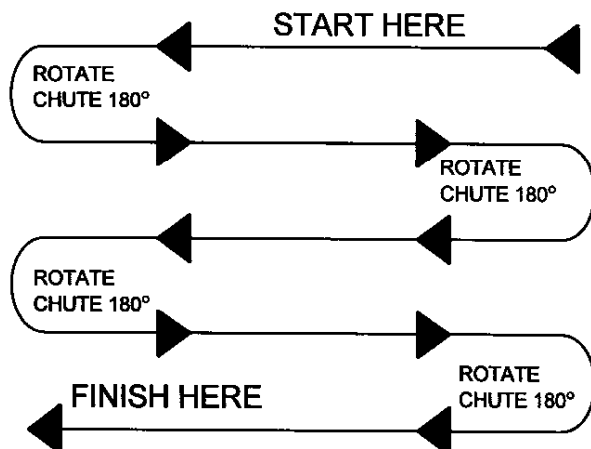
### PATTERN 1

DISCHARGE SNOW BOTH SIDES



DISCHARGE SNOW BOTH SIDES

### PATTERN 2



DISCHARGE SNOW THIS SIDE ONLY

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

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.

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# MAINTENANCE

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## **MAINTENANCE**

**ALWAYS USE GENUINE PARTS WHEN REPLACEMENT PARTS ARE REQUIRED.**

### **Shear Bolts**

Check the shearbolts indicated on the figures below at frequent intervals for proper tightness to ensure the blower is in safe working condition. If the shearbolts need replacement, use the following parts only:

#### **Drive Shaft:**

Shearbolt 5/16"NC x 1 1/4" gr. 5 including lockwasher and nut. Part # 70060-04441

#### **Fan:**

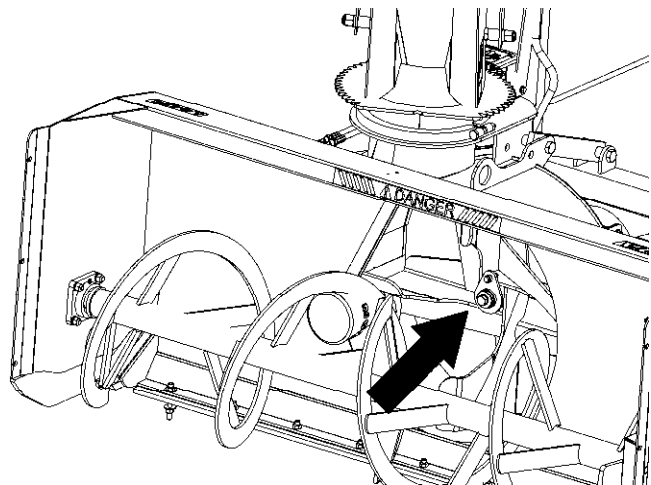
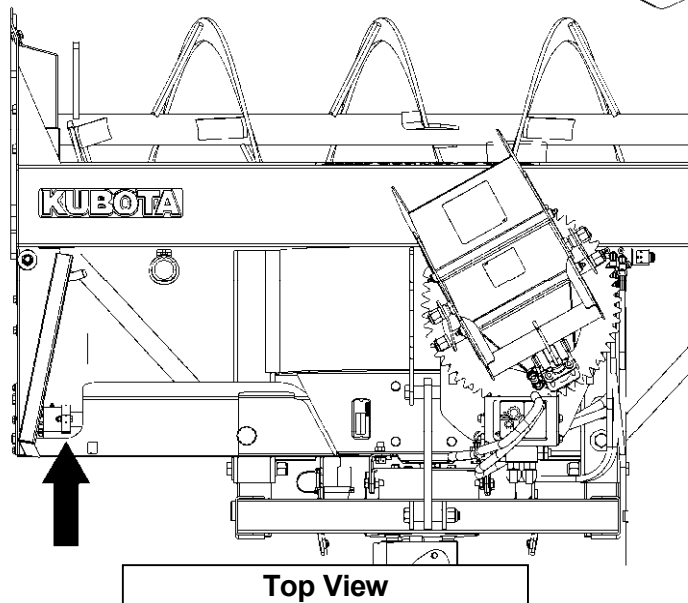
Bolt 5/16" x 1 3/4" gr.5 including lockwasher and nut. Part # 70060-04440.



**WARNING:** Provide adequate blocking before working under the snowblower when in the raised position.

### **Driveline**

**IMPORTANT:** When the snowblower is not used for more than two weeks, perform driveline maintenance and always store it in a dry place, away from bad weather conditions.



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# MAINTENANCE

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## **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.

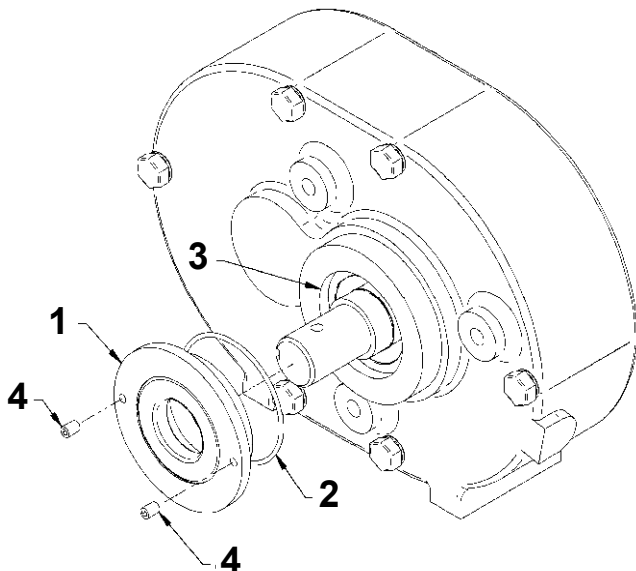


## **WARNING**

- 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.

## **Mounting the Reduction Box Bearing Preload Cover** ***(Figure below)***

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).
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.



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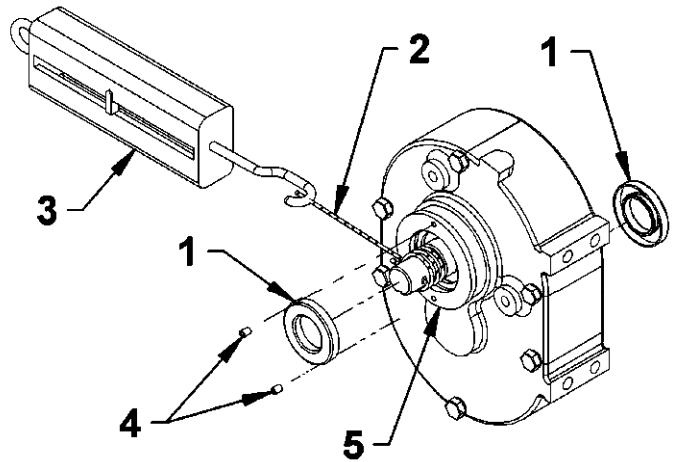
# MAINTENANCE

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## **Procedure for Checking the Torque**

**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.

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## MAINTENANCE

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

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



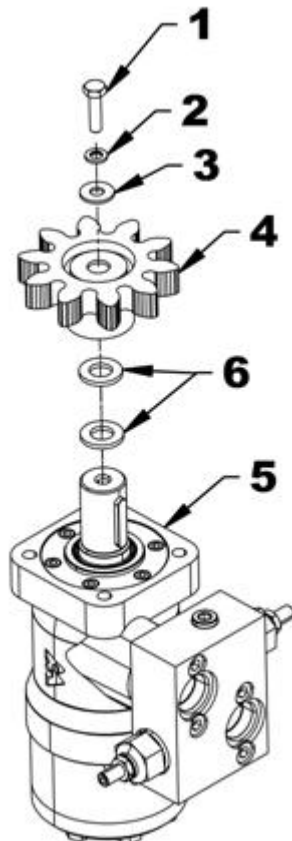
#### **WARNING**

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 below:** Check if the chute itself rotates well. To do so, remove the 1/4" x 1" hex bolt (item 1), 1/4" lockwasher (item 2), 1/4" flat washer (item 3), the motor gear (item 4) and the two 12mm flat washers (item 6), 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 below:** 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 1" hex bolt (item 1), 1/4" lockwasher (item 2), 1/4" flat washer (item 3), the motor gear (item 4) and the two 12mm flat washers (item 6), 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 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.

**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.

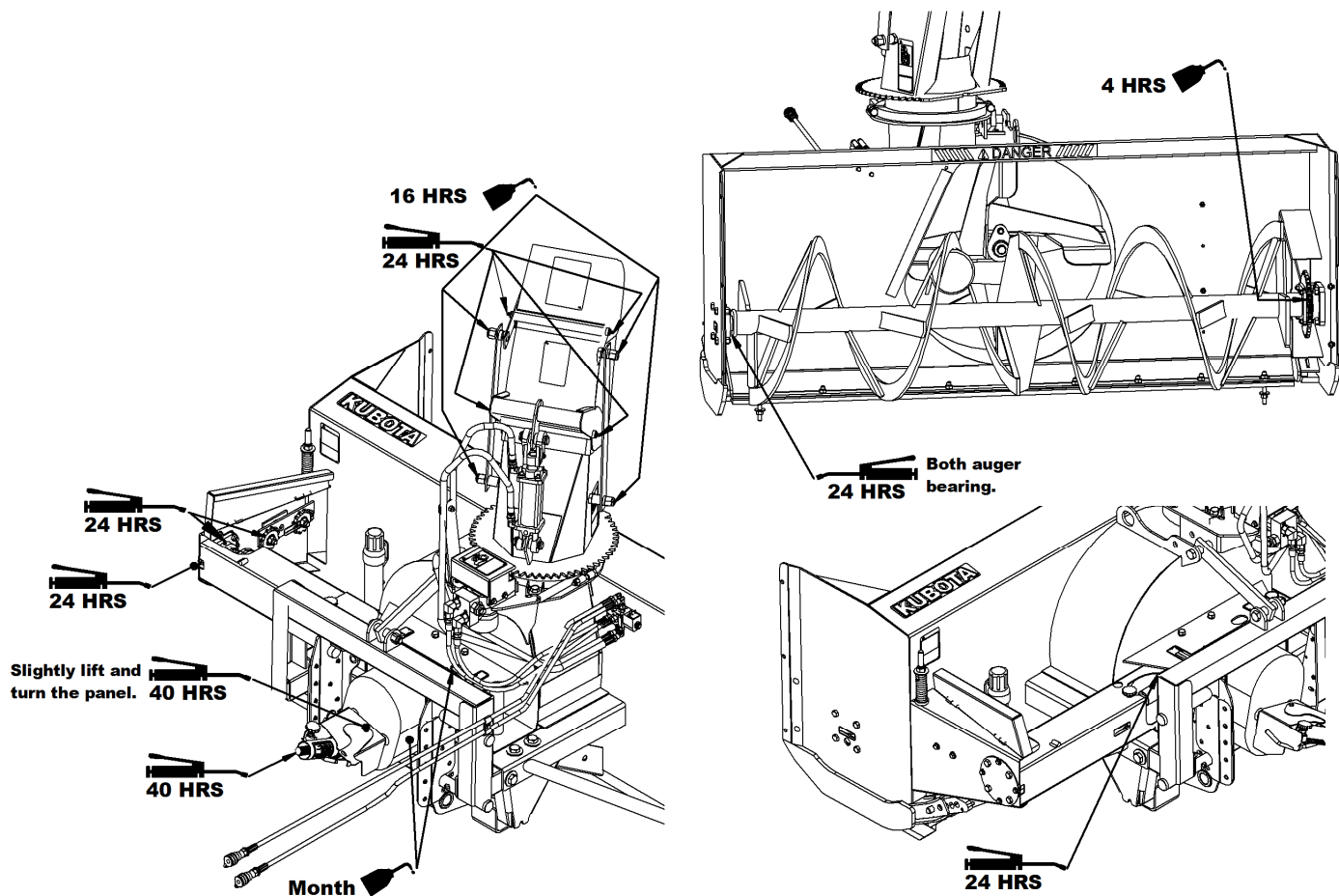


# MAINTENANCE

## LUBRICATION

Use a grease gun and lubricate as follows:

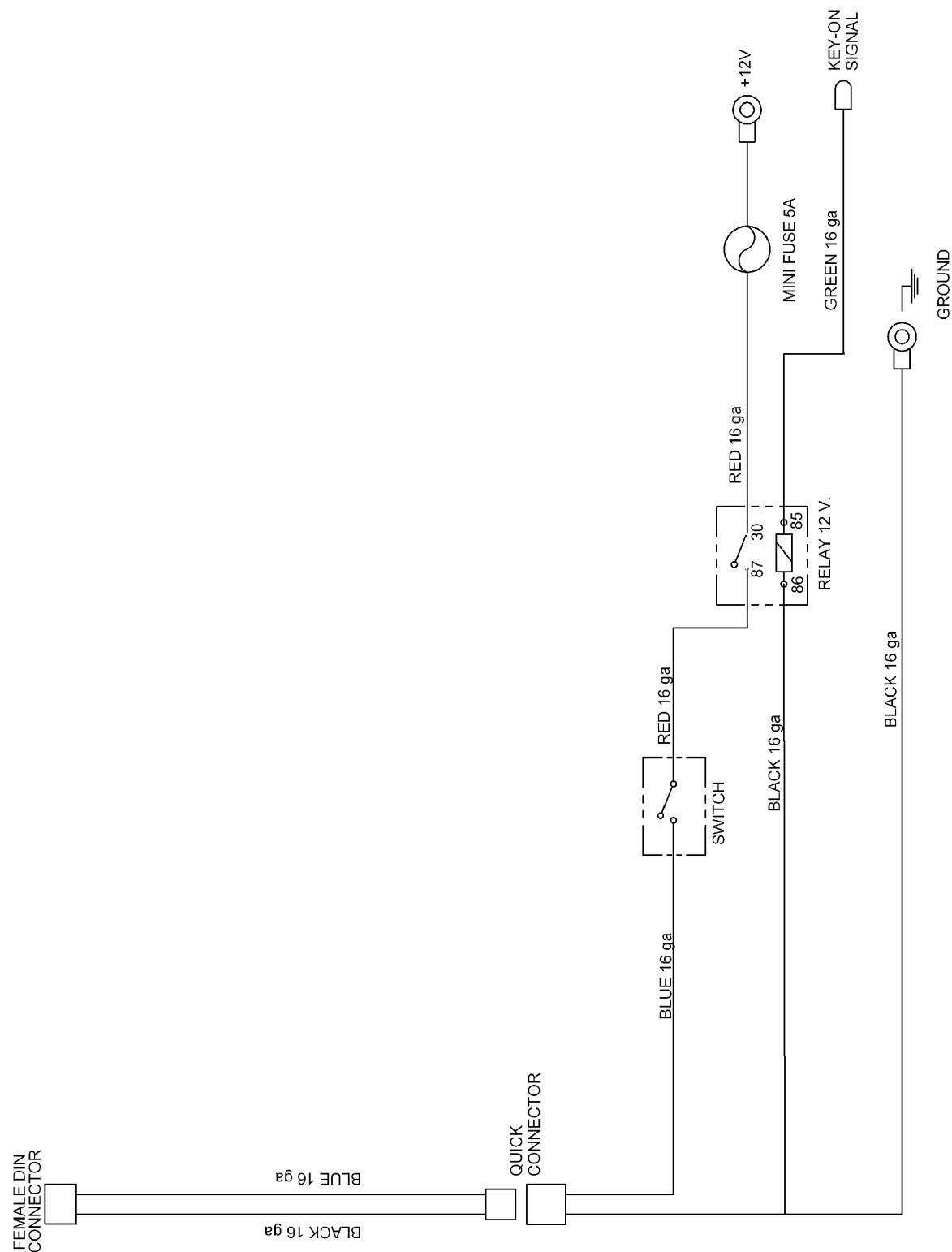
DESCRIPTION	INTERVAL	LUBRICATION REQUIRED
Driveline	40 hours	Grease each universal joint
	40 hours	Separate the sliding parts and cover each one of them with grease
Driving chain	4 hours and after each operation	Lubricate with chain saw lubricant
Reduction box & Gearbox	Once a month	Check oil level. If needed, add AGMA 5EP extreme pressure oil, SAE 80W90 gear oil or equivalent.
	Once a year	Replace oil
Chain idler	24 hours of operation	Grease idler fitting
Chute	16 hours of operation	Oil the pivots
	24 hours of operation	Grease the grease fittings on the hinge pins
Bearing	24 hours of operation	Grease each auger bearing and drive shaft bearing





# ELECTRICAL DIAGRAM

## ELECTRICAL DIAGRAM



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# PARTS

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## 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.

Right hand and left hand are determined by those seen by the conductor standing behind the equipment.

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

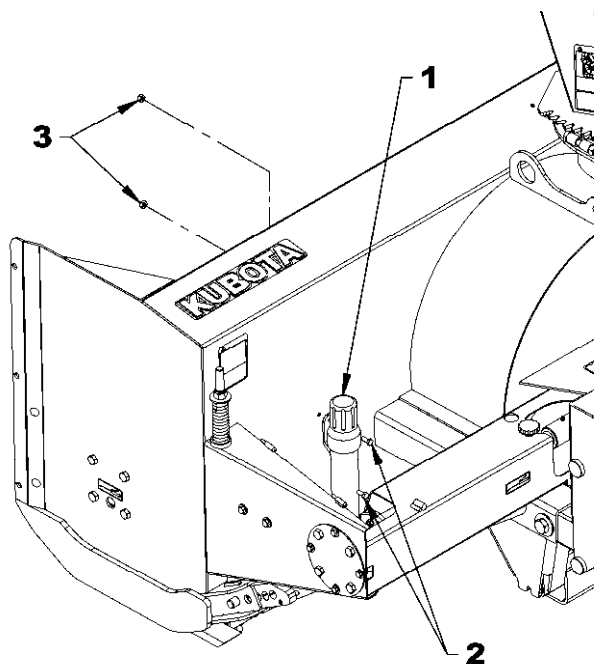
The manufacturer reserves the rights to change, modify, or eliminate from time to time, for technical or other reasons, certain or all data, specifications, or the product or products themselves, without any liability or obligation.

The parts listed here are available through your local dealer.

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## MANUAL HOLDER – ALL MODELS

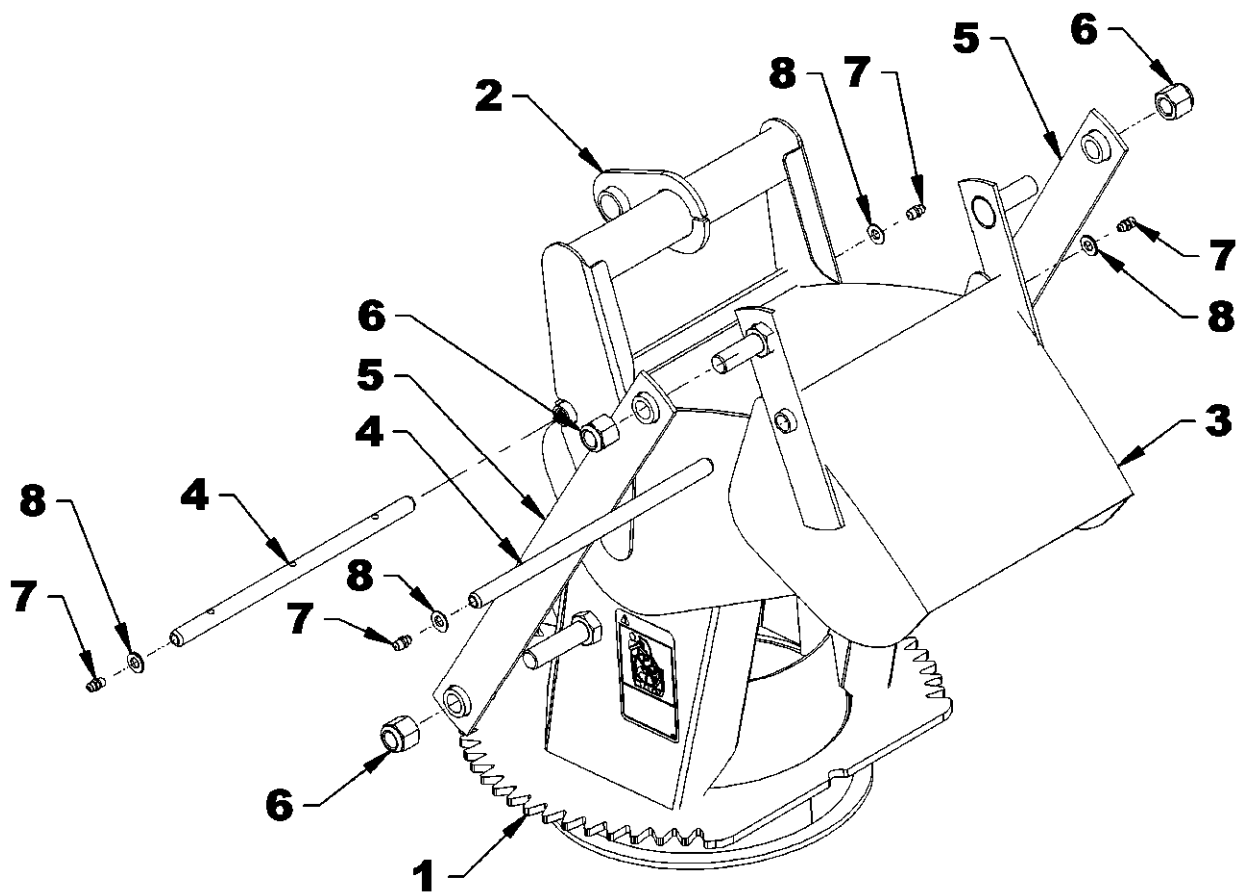
REF.	DESCRIPTION	QTY	PART #	CODE
1	Manual holder	1	77700-01998	4200030
2	Bolt hex. 5/16" NC x 3/4" lg gr. 5, PTD	2	75599-01215	0100018
3	Nut nylon insert 5/16" NC, PTD	2	75599-31912	1000005



# PARTS

## THREE PART CHUTE

REF.	DESCRIPTION	QTY	PART #	CODE
-	Chute ass'y with english decals	1	77700-04625	670538
1	Chute base	1	77700-01945	669036
2	Middle deflector	1	77700-01946	669037
3	Upper deflector	1	77700-01947	669038
4	Hinge pin	2	77700-01948	669039
5	Flat bar	2	77700-01949	669040
6	Nut, nylon insert 3/4" PQE	4	75599-31918	1000013
7	Grease fitting 1/8" NPT straight	4	70060-04174	656493
8	Flat washer 10mm PTD	4	70060-01942	1400019

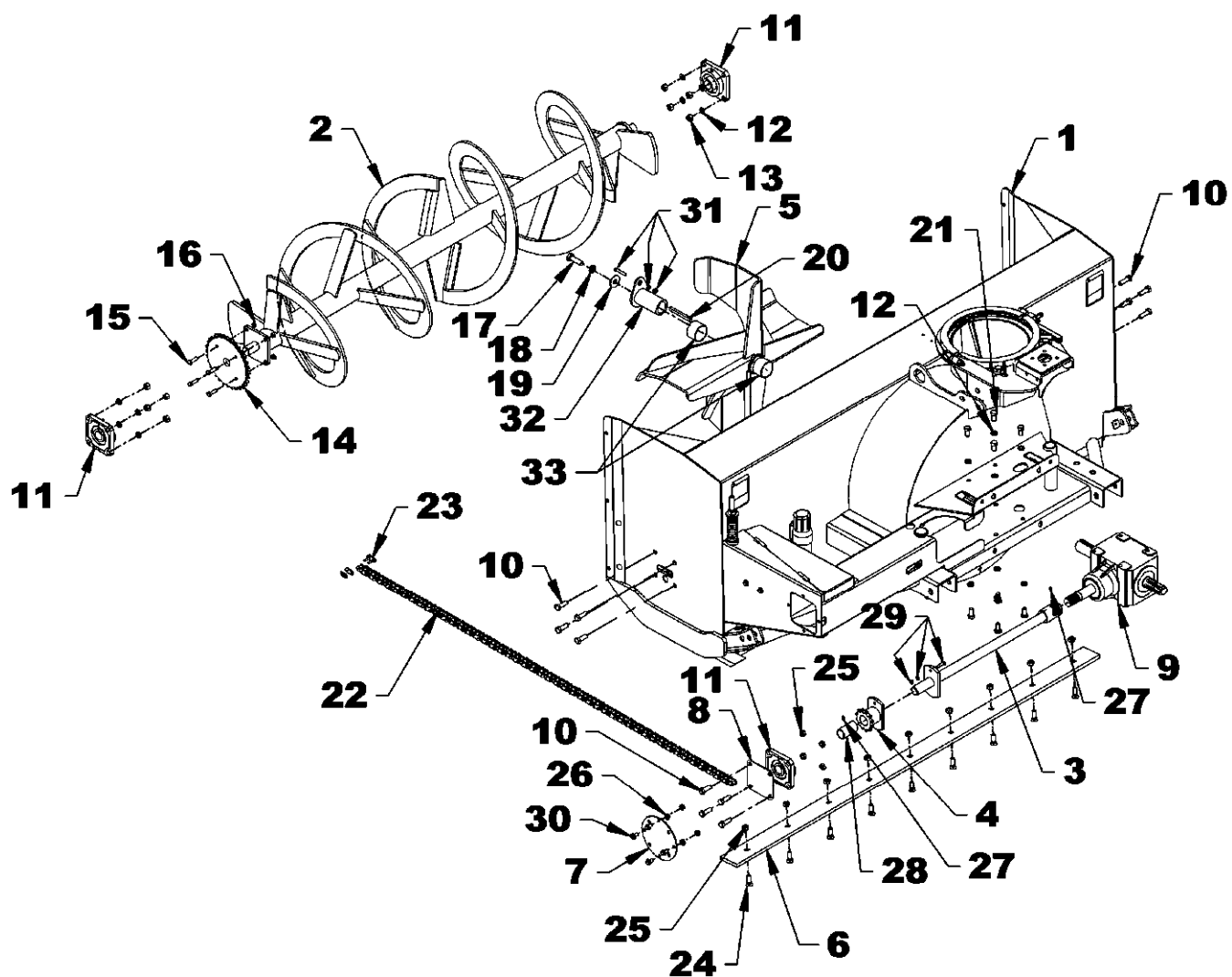


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# PARTS

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## SNOWBLOWER



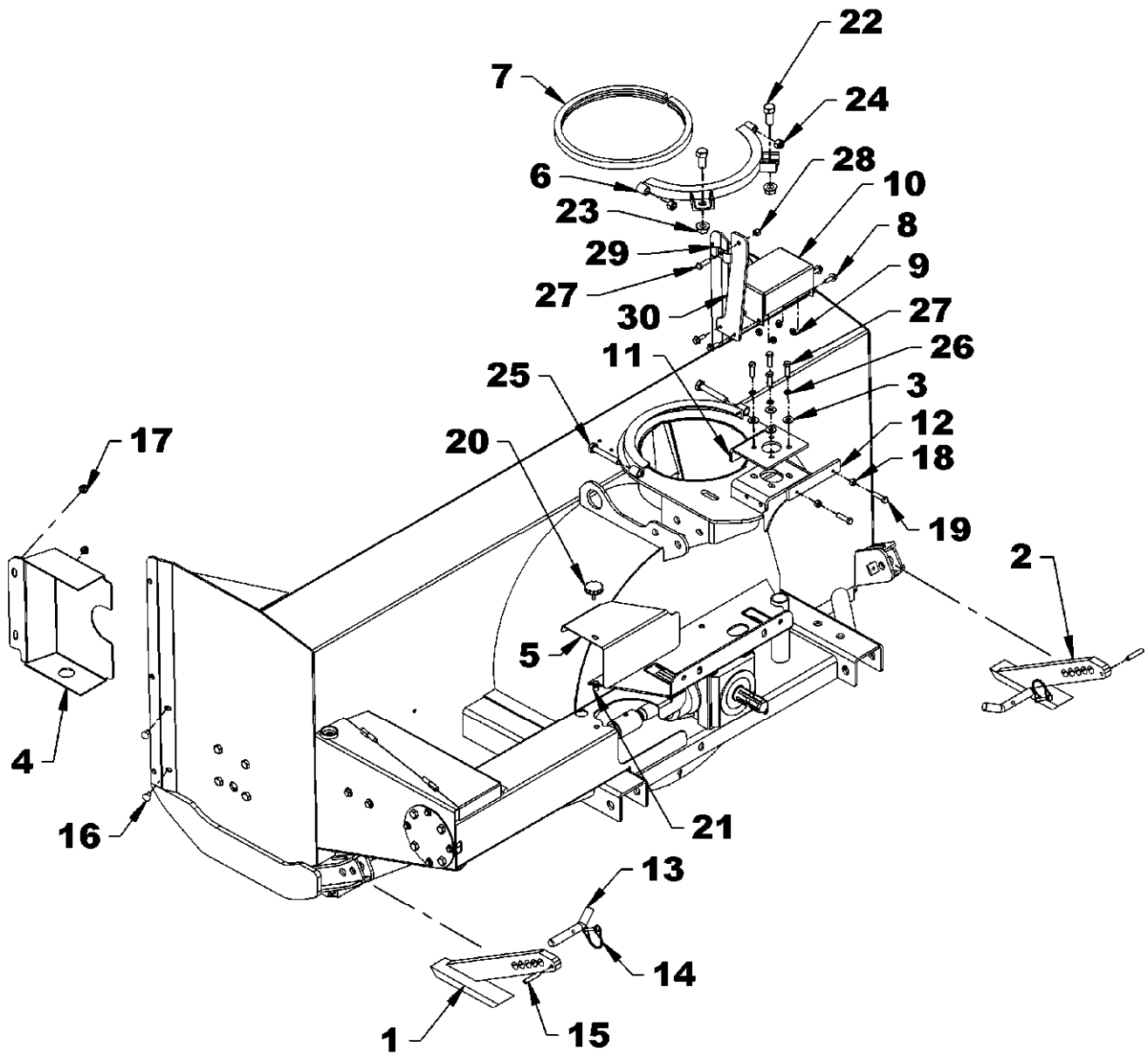
# PARTS

## SNOWBLOWER

REF.	DESCRIPTION	QTY	PART #	CODE
1	Housing - 74" - without gearbox	1	77700-03021	669800
	- 80" - without gearbox	1	77700-03022	669801
2	Auger - 74"	1	77700-01927	669004
	- 80"	1	77700-01928	669007
3	Driving shaft - 74"	1	77700-01954	669346
	- 80"	1	77700-01955	669347
4	Shear plate	1	77700-01952	669344
5	Fan	1	77700-04399	670410
6	Cutting edge - 74"	1	77700-01929	669012
	- 80"	1	77700-01930	669013
7	Driving shaft support	1	77700-01956	669356
8	Spacer plate	1	77700-02733	669694
9	Gearbox	1	77700-01615	662195
10	Bolt hex. 1/2"NC x 1 1/2", gr.5, PTD	12	75599-01530	0100070
11	Bearing 1 1/4", 4 holes with 2 grease fittings	3	70060-70373	4300001
12	Lockwasher 1/2" PTD	16	75599-33015	1200006
13	Nut, hex 1/2"NC PTD	8	75599-31015	0900006
14	Sprocket #60A32, 1 1/4" hole	1	70060-03304	654167
15	Bolt hex. 3/8"NC X 1 1/4" gr.5, PTD	4	75599-01325	0100039
16	Stover nut 3/8" NC PTD	4	75599-31933	1100003
17	Bolt hex. 5/8"NC X 2", gr.5, PTD	1	75599-01740	0100095
18	Lockwasher 5/8" PTD	1	75599-33017	1200007
19	Flat washer 5/8" (11/16" int.) PTD	1	75599-32017	1400008
20	Key 5/16" X 3/8" X 3 1/2" lg.	1	77700-04624	4500164
21	Bolt hex. 1/2"NC x 1" gr.5, PTD.	8	75599-01520	0100068
22	Chain #60H X 94 links (inc. connecting link.)	1	77700-02219	655788
23	Connecting link #60	1	70060-03313	654839
24	Bolt plow 1/2"NC x 1 1/2" gr.5, PTD – 74"	9	77700-01968	0400006
	Bolt plow 1/2"NC x 1 1/2" gr.5, PTD – 80"	11	77700-01968	0400006
25	Nut Stover 1/2" NC PTD – 74"	13	70060-02440	1100006
	Nut Stover 1/2" NC PTD – 80"	15	70060-02440	1100006
26	Nut serrated flange 3/8"NC PTD	4	70060-00791	0900035
27	Grease fitting 1/4"NF	2	70060-00940	654106
28	Oilite bushing 2 1/2" lg	1	77700-01965	4300072
29	Shearbolt 5/16" NC X 1 1/4" lg gr.5, inc. lock.& nut PTD	1	70060-04441	665548
30	Bolt, hex. serrated flange 3/8" NC X 3/4" lg PTD.	4	70060-02476	0200066
31	Shearbolt 5/16"NC X 1 3/4"lg inc. lock.& nut PTD	1	70060-04440	665547
32	Shear plate	1	77700-04500	670411
33	Oilite bushing 1 1/2" lg	2	77700-04508	4300092

# PARTS

## SNOWBLOWER (CONT'D)



# PARTS

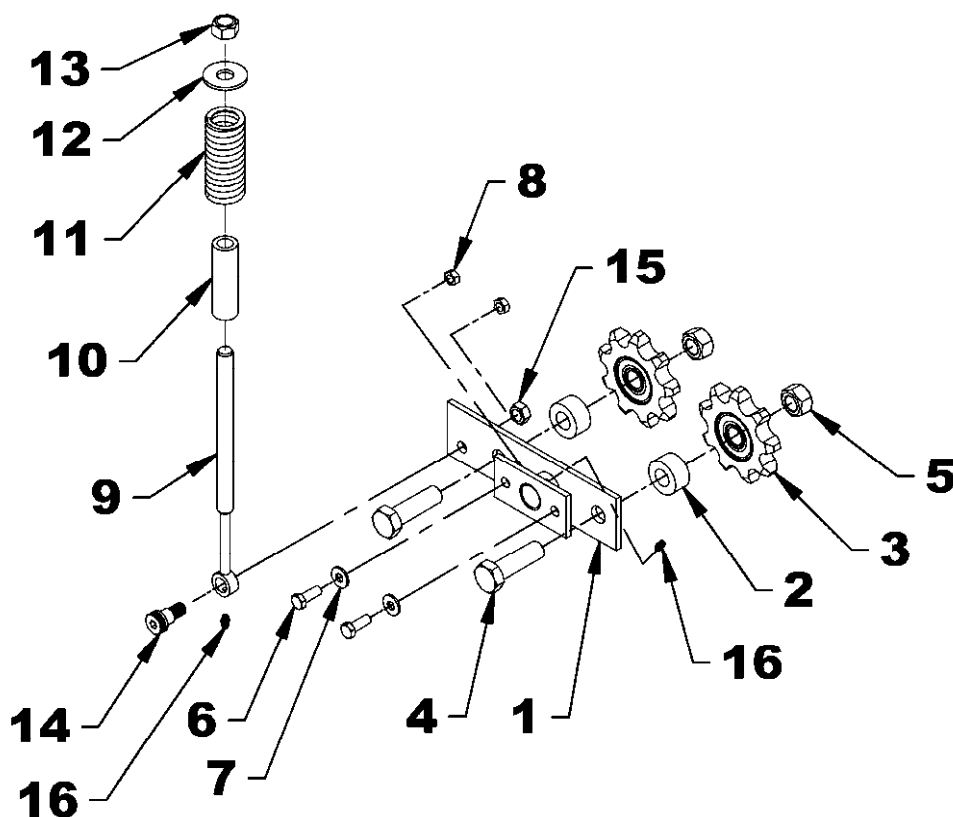
## SNOWBLOWER (CONT'D)

REF.	DESCRIPTION	QTY	PART #	CODE
1	Skid shoe - LH	1	77700-01937	669020
2	Skid shoe - RH	1	77700-01938	669021
3	Flat washer 3/8" (7/16" int.) PTD	4	75599-32014	1400004
4	Chain guard	1	77700-01940	669024
5	Rear guard	1	77700-01941	669026
6	Retaining plate	1	77700-01942	669030
7	Rotation bushing 5/8" x 3/4"	1	77700-01950	669042
8	Bolt serrated flange 5/16"NC x 1" lg. PTD	4	70060-01994	0200091
9	Nut serrated flange 5/16"NC PTD	4	70060-02135	0900036
10	Gear shield	1	77700-01623	667929
11	Anchoring plate	1	77700-01622	667338
12	Anchoring flat bar	1	77700-01924	667339
13	Pin 3/4" x 3 13/16" lg, bent PTD	2	77700-01925	667899
14	Wire lock pin 1/4", round	2	70060-01929	1900006
15	Spring pin 3/8" X 2" lg, black	2	77700-01961	1600024
16	Bolt carriage 3/8" NC x 3/4" lg PTD	2	70060-00788	0300007
17	Nut serrated flange 3/8"NC PTD	2	70060-00791	0900035
18	Nut hex. 3/8"NC PTD.	2	75599-31013	0900003
19	Bolt hex. 3/8"NC x 1 1/2" gr. 5 PTD	2	75599-01330	0100040
20	Knob 5/16"NC	1	70001-00517	661832
21	Nut knurled 5/16 NC X 0.690 lg	1	77700-01962	2401012
22	Bolt hex. 5/8"NC x 1 1/2" gr. 5 PTD	2	75599-01730	0100093
23	Nut serrated flange 5/8"NC PTD	2	77700-01971	0900073
24	Nut nylon insert 1/2"NC PTD	2	75599-31915	1000011
25	Bolt hex. 1/2"NC x 3 1/4" gr.5, PTD	2	75599-01565	0100078
26	Lockwasher 3/8" PTD	4	75599-33013	1200004
27	Bolt hex. 3/8"NC X 1 1/4" gr. 5 PTD	5	75599-01325	0100039
28	Nut nylon insert 3/8" NC PTD	1	75599-31913	1000006
29	Hose clamp - double	1	70060-02294	666583
30	Hose support	1	77700-04504	670429

# PARTS

## CHAIN IDLER

REF.	DESCRIPTION	QTY	PART #	CODE
1	Chain Idler	1	77700-01959	669406
2	Idler Spacer	2	77700-01960	669407
3	Idler sprocket 60A12	2	77700-00554	3300022
4	Bolt hex. 5/8" NC X 2" gr.5, PTD	2	75599-01740	0100095
5	Stover nut 5/8", PTD	2	75599-31937	1100007
6	Bolt hex. 3/8" NC X 1" gr.5, PTD	2	75599-01320	0100038
7	Flat washer 5/16" (3/8" hole), PTD	2	75599-32012	1400003
8	Stover nut 3/8", PTD	2	75599-31933	1100003
9	Idler Lever	1	77700-01958	669401
10	Spring guide PTD	1	77700-01957	669396
11	Compression spring	1	77700-01923	664876
12	Flat washer 5/8" (11/16" hole), PTD	1	75599-32017	1400008
13	Nylon insert locknut 5/8", PTD	1	77700-01199	1000012
14	Shoulder screw 5/8" x 1 1/2" lg x 1/2	1	77700-01232	3200023
15	Stover nut 1/2", PTD	1	75599-31935	1100006
16	Grease fitting 1/4" NF	2	70060-00940	654106

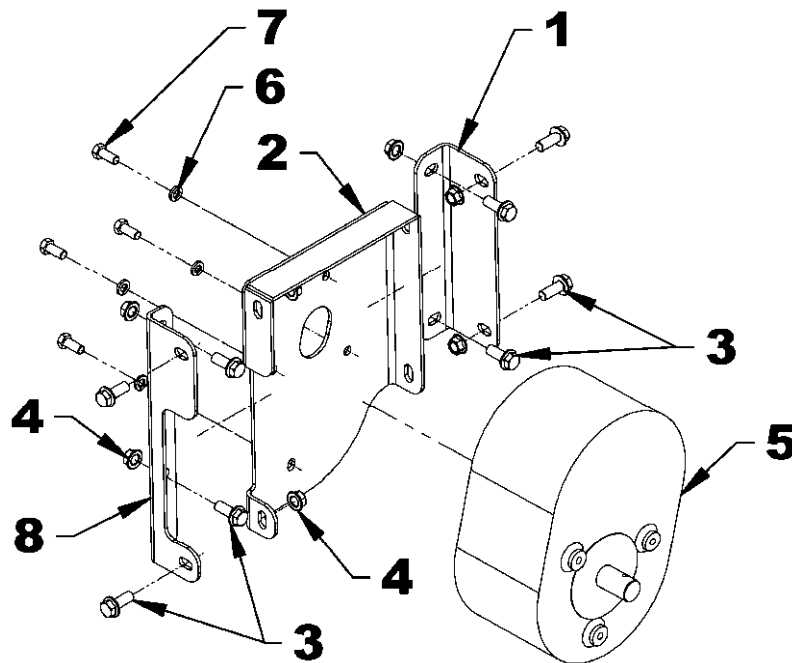




# PARTS

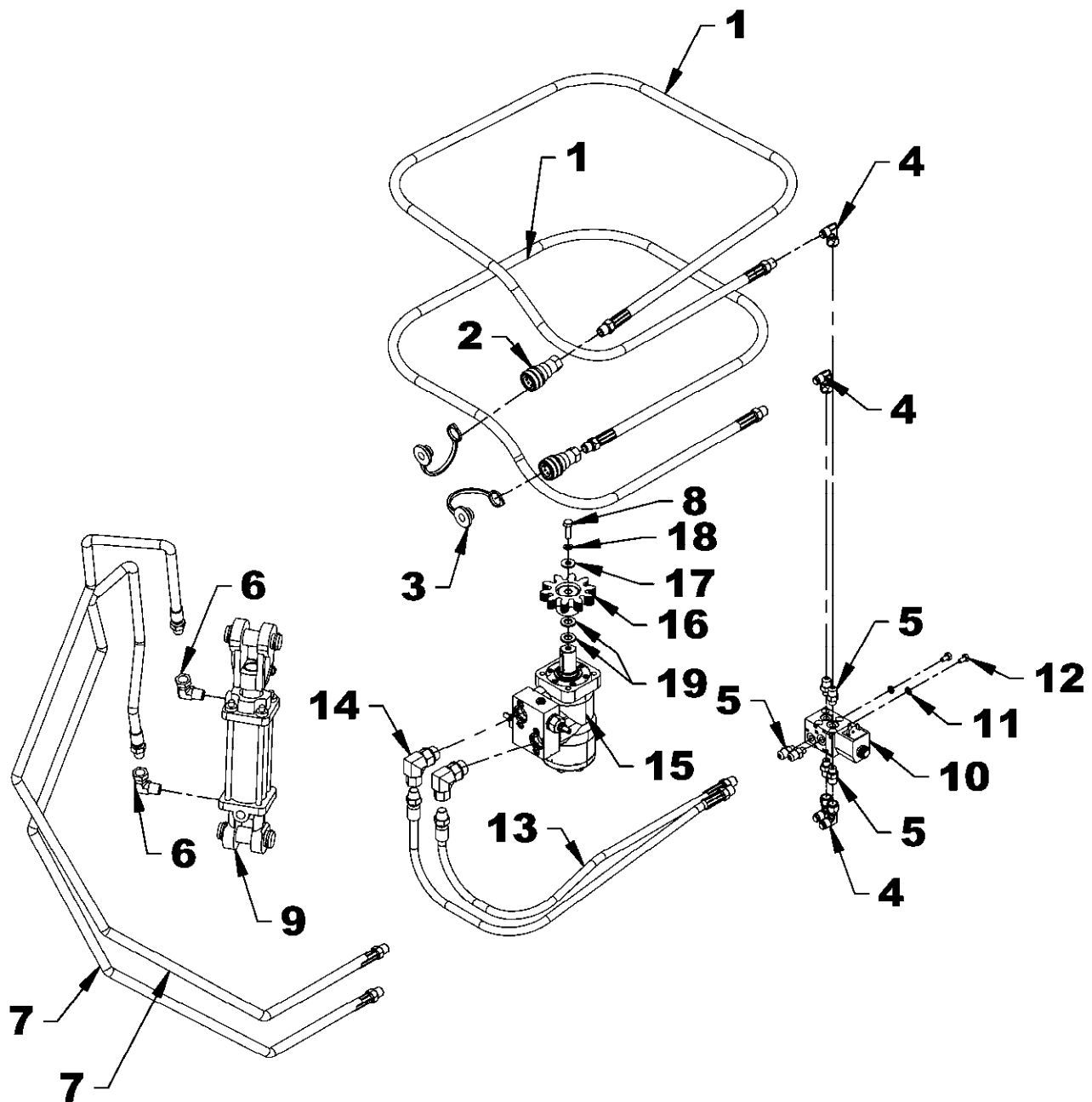
## REDUCER

REF.	DESCRIPTION	QTY	PART #	CODE
1	Support bracket - right	1	77700-04503	670428
2	Reduction box support	1	77700-04501	670412
3	Bolt serrated flange 1/2"NC x 1 1/4" gr.5 PTD	8	77700-02220	0200121
4	Nut serrated flange 1/2"NC PTD	8	70060-01992	0900046
5	Reduction box	1	77700-04509	4500162
6	Lockwasher 7/16" PTD	4	75599-33014	1200005
7	Bolt hex. 7/16"NC x 1" gr.5 PTD	4	77700-01242	0100056
8	Support bracket - left	1	77700-04502	670413



# PARTS

## HYDRAULIC SYSTEM



# PARTS

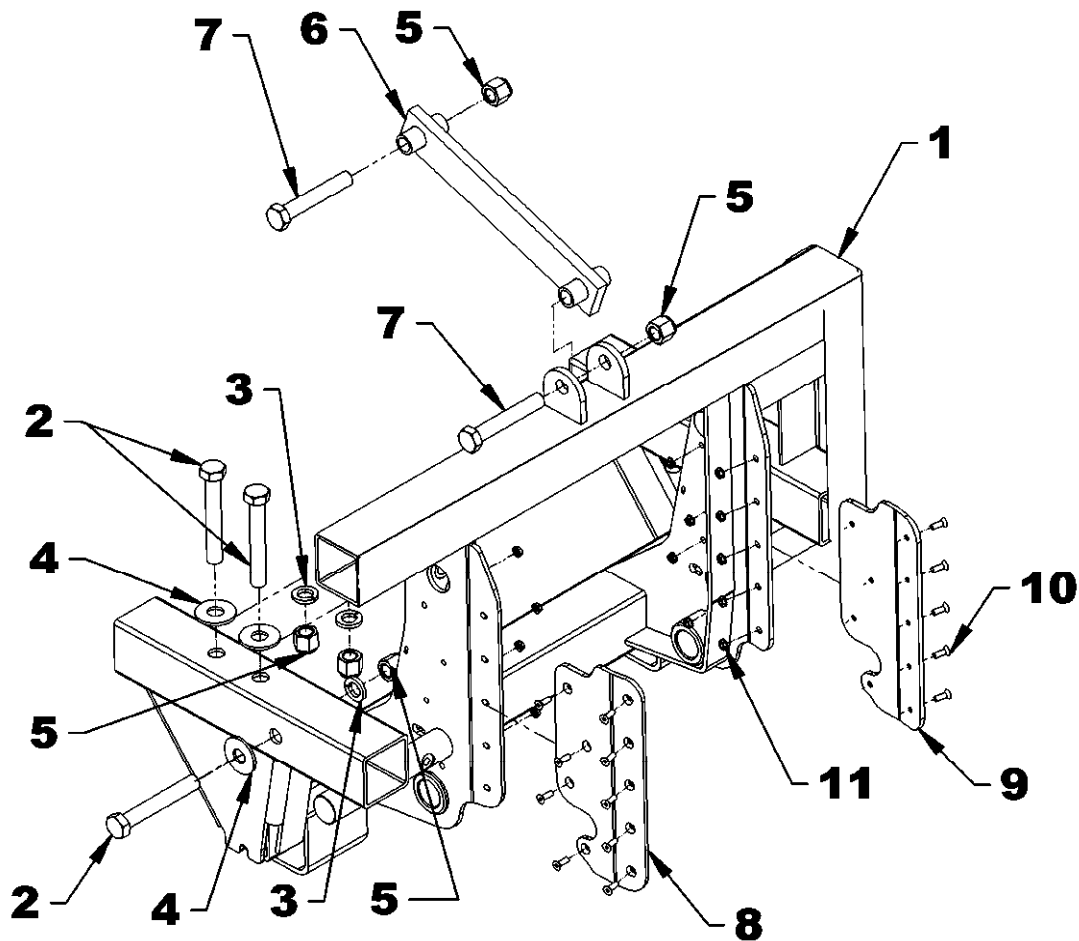
## HYDRAULIC SYSTEM

REF.	DESCRIPTION	QTY	PART #	CODE
<b><u>Items 1-2-3 are parts of L4433 Completion kit</u></b>				
1	Rubber hose 3/8" x 98" lg, 3/8NPT STM x 9/16JIC SWF	2	77700-01993	3700179
2	Female Quick coupler 3/8-18 NPT FEM	2	70000-02659	2600070
3	Dust plug 3/8" (non threaded)	2	70000-02660	2600071
-	-----	-	-	-
4	Elbow 90° - 9/16"JIC STM x 9/16"JIC SWV (2 elbows are parts of L4433 Completion kit)	4	70060-02751	2600114
5	Union 9/16"JIC STM x 7/16ORB M (2 unions are parts of L4433 Completion kit)	6	70060-02674	2600112
6	Elbow 90° - 3/8"NPT STM/SWF	2	70060-00914	654557
7	Hose 3/8" x 86" lg 3/8"NPT STM x 9/16"JIC SWF	2	77700-01992	3700178
8	Bolt hex 1/4"NC x 1"lg, PTD	1	75599-01120	0100004
9	Cylinder 2" x 4", rod 1 1/8"	1	77700-01995	3900447
	- Seal kit	1	70060-02126	3900205
10	Hydraulic selector	1	70060-02677	3900303
	- Solenoid valve	1	77700-03949	3900482
11	Lockwasher 1/4", PTD	2	75599-33011	1200002
12	Bolt hex. 1/4" NC X 1 1/2" gr.5, PTD	2	75599-01110	0100001
13	Rubber hose 3/8" x 28" lg, 3/8NPT STM x 9/16JIC SWF	2	77700-01991	3700176
14	Elbow 90° - 7/8ORB M x 3/8NPT SWF	2	77700-01630	2600185
15	Hydraulic motor with safety valve	1	77700-05072	3910103
	- Seal kit, relief valve o-rings incl.	1	77700-05073	3910104
	- Key 1/4" x 1/4" x 1" lg (not illustrated) - for motor	1	70060-00928	655379
	- Safety valve	1	77700-03993	3910100
16	Motor gear	1	77700-01618	665930
17	Flat washer 1/4" (5/16" hole), PTD	1	75599-32011	1400002
18	Lockwasher 1/4", PTD	1	75599-33011	1200002
19	Flat washer 12mm (13mm hole), PTD	2	77700-00946	1400030

# PARTS

## 4-POINT HITCH

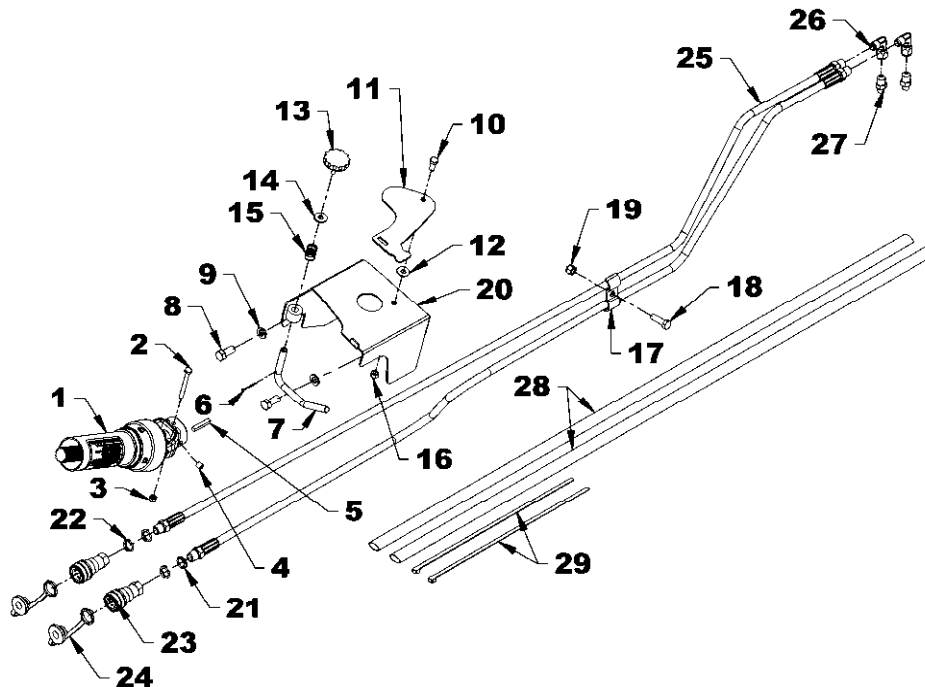
REF.	DESCRIPTION	QTY	PART #	CODE
1	4-point Hitch	1	<a href="#">77700-04398</a>	670408
2	Bolt hex. 3/4"NC x 5" gr.5 PTD	6	75599-01880	0100126
3	Lockwasher 3/4" PTD	6	70010-00753	1200008
4	Flat washer 3/4" (13/16" hole) PTD	6	77700-00990	1400010
5	Nylon insert locknut 3/4"NC PTD	8	75599-31918	1000013
6	Upper Hitch	1	77700-05079	670748
7	Bolt hex. 3/4"NC x 4 1/2" gr.5 PTD	2	77700-02222	0100125
8	Left hitch protector	1	77700-04279	670329
9	Right hitch protector	1	<a href="#">77700-04278</a>	670328
10	Allen setscrew flat head 1/4" x 3/4" PTD	18	77700-00967	0700016
11	Stover lock nut 1/4" PTD	18	70060-02441	1100001



# PARTS

## SNOWBLOWER COMPLETION KIT – L4433

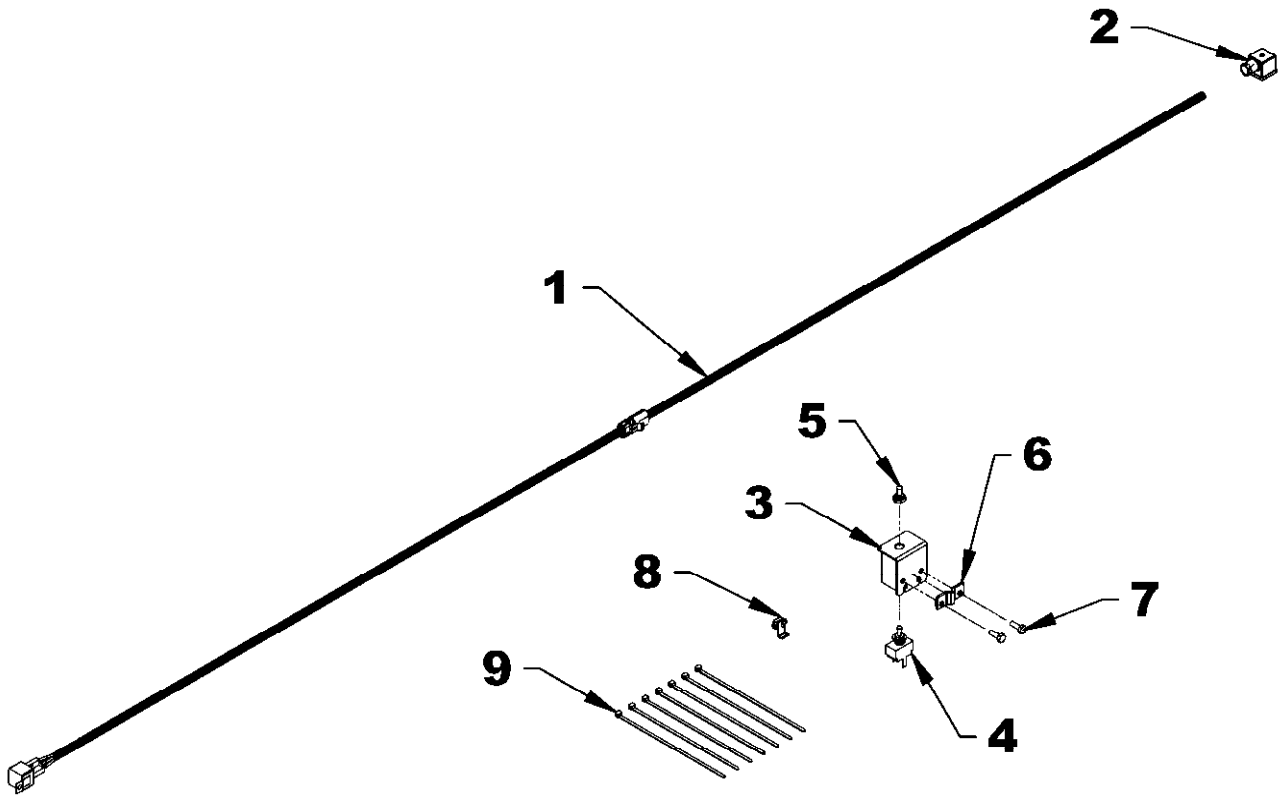
REF.	DESCRIPTION	QTY	PART #	CODE
1	Male driveline	1	77700-04340	4700267
2	Bolt hex. 1/4"NC x 2 1/2" gr.5 PTD	1	75599-01150	0100012
3	Nylon insert lock nut 1/4"NC PTD	1	75599-31911	1000003
4	Allen set screw 3/8"NC x 3/8" gr5 black	1	77700-00593	0500017
5	Key 1/4" x 1/4" x1 1/4"lg	1	70060-00814	654643
6	Cotter pin 3/32 x 1"	1	77700-01720	1500002
7	Driveline support rod	1	77700-04348	670336
8	Bolt hex. 7/16" NC x 3/4" gr.5 PTD	2	75599-02430	0100268
9	Lockwasher 7/16" NC PTD	2	75599-33014	1200005
10	Bolt hex. 5/16"NC x 3/4" gr.5 PTD	1	75599-01215	0100018
11	Grease panel	1	77700-04349	670337
12	Nylon washer 11/32" hole	1	70060-03052	658467
13	Knob 5/16"NC	1	70001-00517	661832
14	Flat washer 5/16" (3/8" hole) PTD	1	75599-32012	1400003
15	Compression spring 0.526" x 1"lg	1	77700-04353	2200038
16	Stover nut 5/16"NC PTD	1	70001-00794	1100002
17	Hose clamp	1	70060-02294	666583
18	Bolt hex. 3/8" NC X 1 1/4" gr.5 PTD	1	75599-01325	0100039
19	Nylon insert lock nut 3/8"NC PTD	1	75599-31913	1000006
20	Driveline shield	1	77700-04370	670374
21	Yellow plastic identification ring	2	70060-01569	658206
22	Green plastic identification ring	2	70060-01570	658209
23	Quick coupler 3/8"NPT	2	70000-02659	2600070
24	Dust plug 3/8	2	70000-02660	2600071
25	Rubber hose 3/8" x 98" lg 3/8NPT STM x 9/16JIC SWF	2	77700-01993	3700179
26	Elbow 90° - 9/16JIC RM x 9/16JIC PFV	2	70060-02751	2600114
27	Union 9/16"JIC STM x 7/16"ORB M	2	70060-02674	2600112
28	Protective nylon sheath	2	77700-00978	668821
29	Nylon tie wrap 15" lg	2	77700-01137	2100006



# PARTS

## ELECTRICAL PARTS

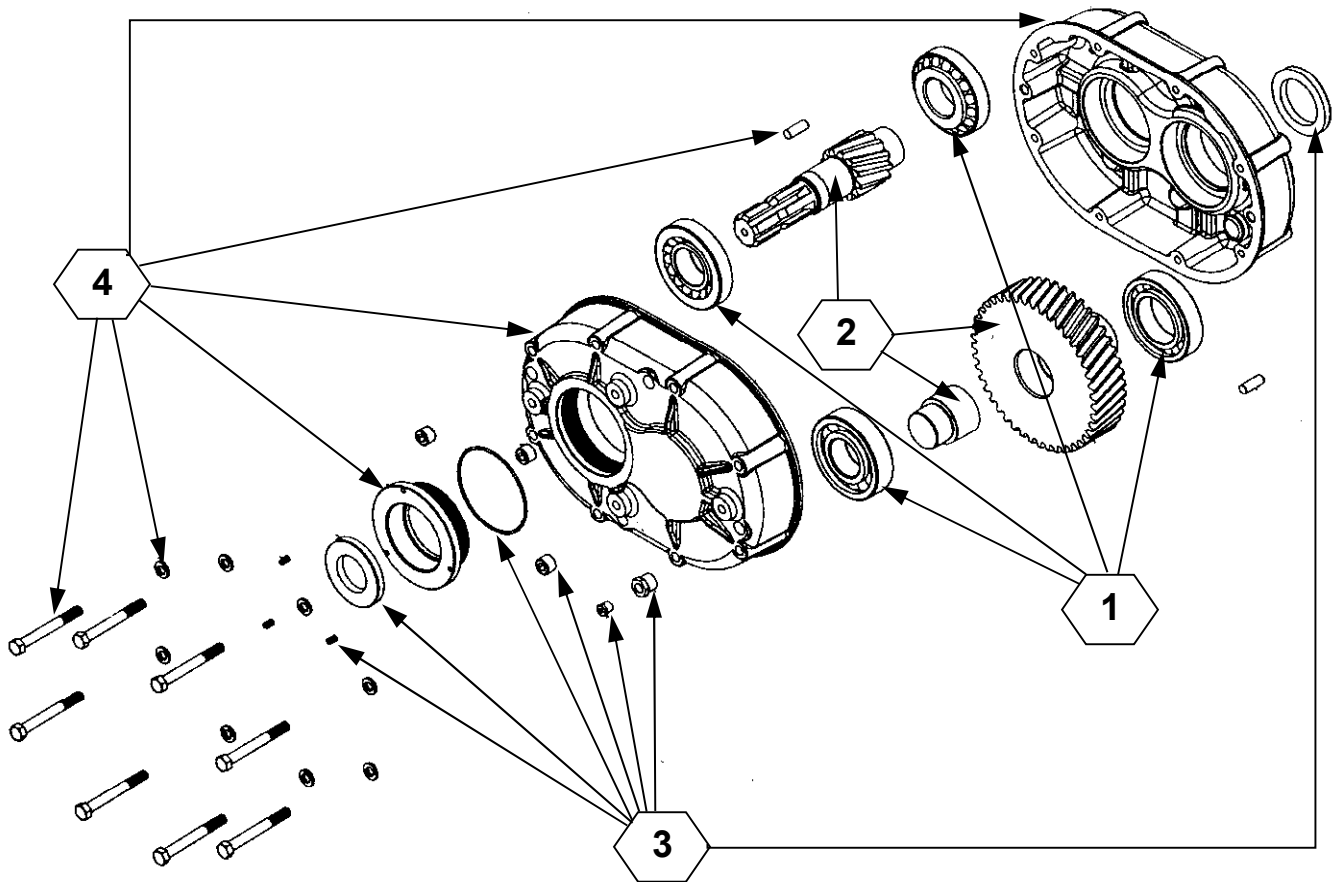
REF.	DESCRIPTION	QTY	PART #	CODE
1	Wiring harness ass'y	1	77700-04562	4000109
2	Connector female DIN (included in 77700-04562)	1	70060-02680	4000062
3	Switch box	1	70060-02669	667557
4	Switch 2 blades	1	70060-02679	4000061
5	Rubber cap for switch	1	70060-01700	658666
6	Switch box clamp	1	70060-02670	667558
7	Bolt, hex. 1/4"NC x 3/4", gr. 5 PTD	2	75599-01115	0100003
8	Tap connector	1	70060-03482	656665
9	Tie wrap 8" lg x 4.8mm, black	7	70060-02398	2100003
	Fuse 5 AMP.	1	77700-01268	4000060
	Relay, 12V plastic	1	77700-00951	4000028



# PARTS

## REDUCTION BOX - 77700-04509

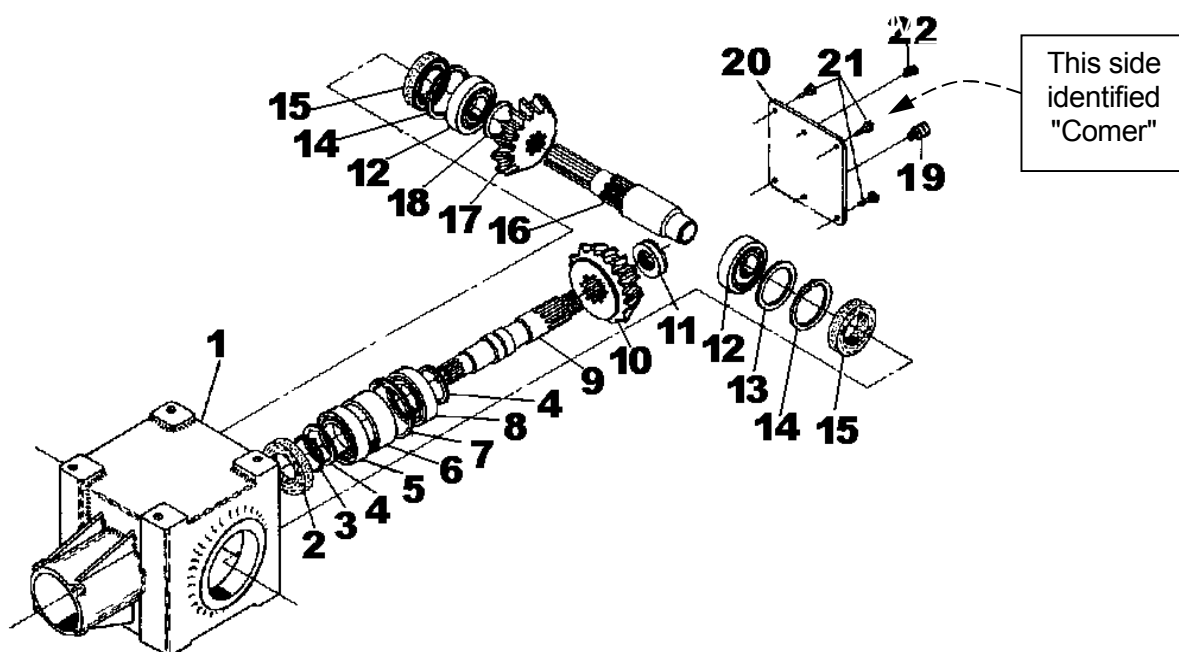
REF.	DESCRIPTION	QTY	PART #	CODE
-	Reduction Box	1	77700-04509	4500162
1	Bearing kit	1	77700-02200	4500132
2	Gear kit	1	N/A	N/A
3	Seal kit	1	77700-02202	4500134
4	Housing kit	1	77700-02203	4500135



# PARTS

## WORM GEAR BOX - IDENTIFIED COMER

REF.	DESCRIPTION	QTY	PART #	CODE
	Gear Box assembly	1	77700-01615	662195
1	Casing	1	77700-01910	656640
2	Seal kit 35 x 72 x 10	1	70060-03354	659845
3	External retaining ring	1	70060-03365	656652
4	Spacer	2	70060-03353	656649
5	Bearing	1	70060-03850	659844
6	Spacer	1	77700-01916	656648
7	Internal retaining ring	1	70060-03355	656654
8	Bearing	1	70060-04536	656647
9	Shaft	1	77700-01917	656651
10	Gear	1	77700-01914	656645
11	External retaining ring	1	77700-01915	656646
12	Bearing	2	77700-01911	656641
13	Spacer	1	77700-01913	656644
14	Internal retaining ring	2	70060-03347	656642
15	Seal kit 40 x 80 x 12	2	77700-01912	656643
16	Shaft	1	77700-01921	662212
17	Gear	1	77700-01918	656657
18	Spacer	1	70060-03796	661146
19	Plug	1	70060-03343	656662
20	Cover	1	77700-01920	656660
21	Bolt hex. M10 x 14 gr.8.8	4	77700-01919	656659
22	Plug 3/8" NPT	2	70060-03345	655259

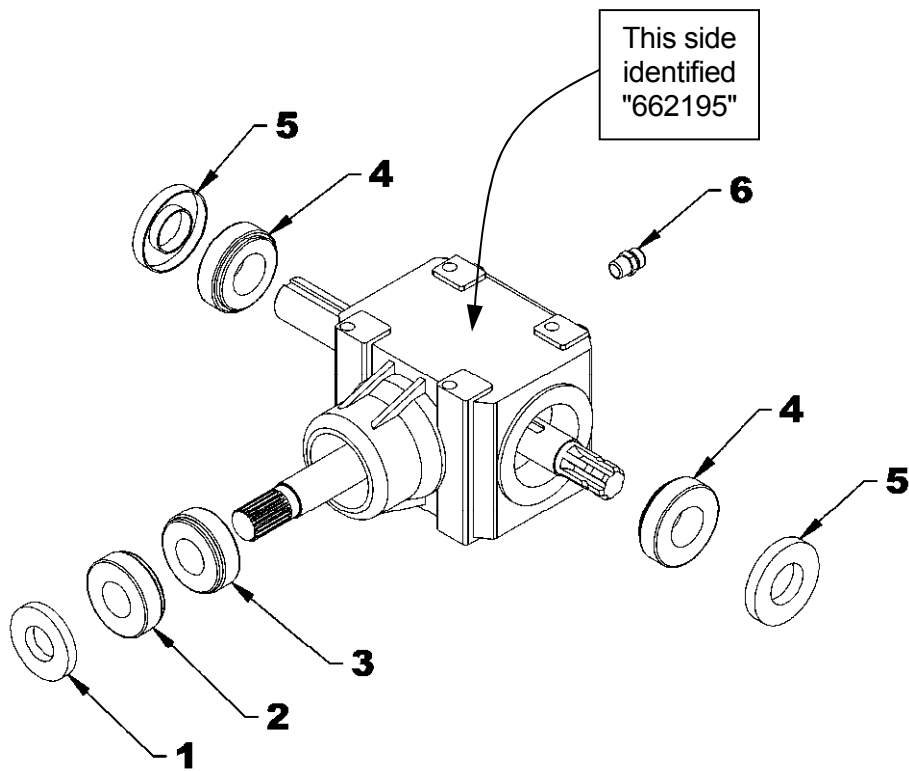




# PARTS

## WORM GEAR BOX

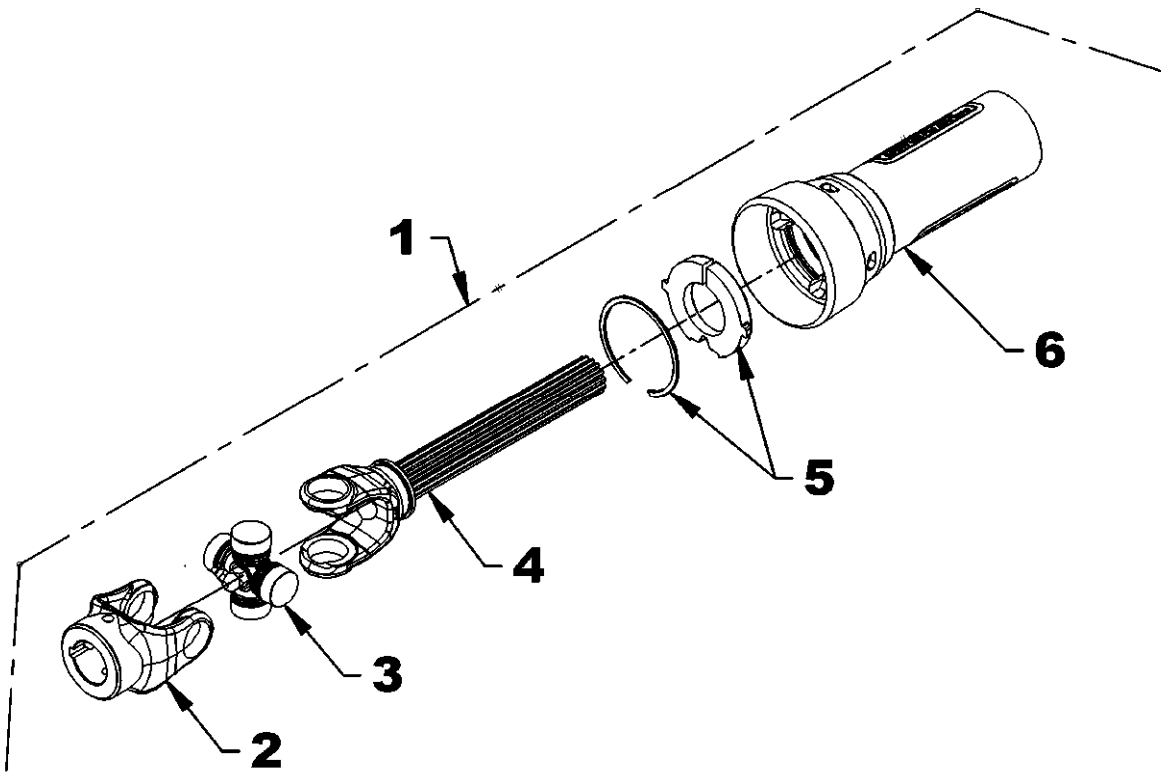
REF.	DESCRIPTION	QTY	PART #	CODE
	Gear Box assembly	1	77700-01615	662195
1	Seal kit 35 x 72 x 10	1	70060-03354	659845
2	Bearing	1	70060-03850	659844
3	Bearing	1	70060-04536	656647
4	Bearing	2	77700-01911	656641
5	Seal kit 40 x 80 x 12	2	77700-07061	4500170
6	Plug	1	77700-07060	4500169



# PARTS

## MALE DRIVELINE – 77700-04340

REF.	DESCRIPTION	QTY	PART#	CODE
1	Driveline ass'y – male part	1	77700-04340	4700267
2	Quick disconnect yoke ass'y	1	70060-03431	660149
3	Universal joint - journal cross	1	77700-00576	4700130
4	Yoke and male shaft	1	77700-04341	4700268
5	Repair kit	1	77700-04343	4700270
6	Outer shield - plastic	1	77700-04342	4700269









# TORQUE SPECIFICATION TABLE

## GENERAL SPECIFICATION TABLE

### USE THE FOLLOWING TORQUES WHEN SPECIAL TORQUES ARE NOT GIVEN

Note: These values apply fasteners as received from supplier dry, or when lubricated with normal engine oil. They do not apply if special graphited or moly disulphide 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.

## BOULON HEAD IDENTIFICATION

INCHES Boulon Size	 Grade 2		 Grade 5		 Grade 8		METRIC Boulon Size	 Class 5.8		 Class 8.8		 Class 10.9	
	in-tpi <sup>1</sup>	N-m <sup>2</sup>	lbs-ft <sup>3</sup>	N-m	lbs-ft	N-m		lbs-ft	mm x pitch <sup>4</sup>	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	<div><div>1 in-tpi = nominal thread diameter in inches-threads per inch</div><div>2 N-m = newton-meters</div><div>3 lbs-ft= pounds-foot</div><div>4 mm x pitch = nominal thread diameter in millimeters x thread Pitch</div></div>						
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

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