

OPERATOR'S AND PARTS MANUAL

GR2700B

***FUN CONNECT HITCH - KUBOTA CANADA
SURE CONNECT HITCH - KUBOTA TRACTOR***

GR2704A – Mid PTO Drive Kit

For GR2020 and GR2120 Tractors

SERIAL NO. 21303175 AND UP

TABLE OF CONTENT

INTRODUCTION – TO THE PURCHASER.....	3
SAFETY PRECAUTIONS	4
Before Operation.....	4
Notice.....	5
The Implements	5
Before Operation	5
Operating the Implements	6
The Tractor.....	7
General Information.....	7
Operating the Tractor	7
During Operation	7
Maintenance.....	8
Transporting	8
Storage	8
ASSEMBLY.....	9
Assembling the Fun/Sure Connect Hitch.....	9
Attaching the Hitch to the Subframe.....	9
Installing the Drive Kit – GR2704A	10
Assembling the UHMW Guides	10
Assembling the Engagement Mechanism	10
Driveline Installation	12
Installing the Driveshaft Guard	13
Attaching the Subframe to the Tractor	14
Installing the Driveline under the Tractor.....	14
Installation of the Hydraulic Components.....	15
Tractor Preparation and Hose Installation.....	16
For the GR2120 Tractor (diesel).....	16-17-19
For the GR2020 Tractor (gas)	16-18-19
Removing the Subframe from the Tractor	20
OPERATION - MAINTENANCE.....	21
Operation – Up and Down Control.....	21
Maintenance	21
Storage	21
K.R.A. System Override Mode.....	22

TABLE OF CONTENT

PARTS	23
Introduction	23
Hitch	24
Drive Kit – GR2704A.....	26
Hydraulic Components.....	28
Driveline - 77700-03438	29
Driveline - 77700-03433.....	30
AVAILABLE EQUIPMENT	31
TORQUE SPECIFICATION TABLE.....	32

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 implements. The information was 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 an implement into service. Familiarize yourself with the operating instructions and all the safety recommendations contained in this manual and those labelled on the implements and on the tractor. Follow the safety recommendations and make sure that those with whom you work follow them.

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

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 reference to right and left, forward or rearward, are from the operator's seat, facing the steering wheel.

TRACTOR

IMPLEMENT

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 unit.



DANGER : Indicates an immediately 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 equipment 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 equipment and all safety precautions. Failure to do so could result in serious personal injury or equipment damage. If you have any questions, consult your dealer.

BEFORE OPERATION

Children



WARNING: In order to avoid serious injury and death:

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 attachment 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 an implement. Please read the following section and pay particular attention to all safety recommendations contained in this manual and those labelled on the implements and on the tractor.

THE IMPLEMENTS

Before Operation



WARNING: In order to avoid serious injury and death:

1. Read and understand both the tractor and the fun/sure connect hitch operator's manual before using the three point hitch. Know how to operate all controls and how to stop the unit and disengage the controls quickly. Lack of knowledge can lead to accidents.
2. Never wear loose, torn, or bulky clothing around the tractor and the implements. It may catch on moving parts or controls, leading to the risk of accident.
3. Before and during seasons, thoroughly inspect the area where the equipment is to be used and remove all objects that may be thrown or cause damage to the equipment.
4. Set transmission to neutral and disengage clutch, if equipped, before starting the engine.
5. Do not operate equipment 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 equipment as well as the tractor operator's manual. Working with unfamiliar equipment can lead to accidents. Be thoroughly familiar with the controls and proper use of the equipment.
7. Replace all missing, illegible, or damaged safety and warning decals. See list of decals in the operator's manual.
8. Do not modify or alter this equipment or any of its components, or any equipment function without first consulting your dealer.
9. Keep safety decals clean of dirt and grime.

SAFETY PRECAUTIONS - continued

Operating the Implements



WARNING: In order to avoid serious injury and death:

THE FOLLOWING PRECAUTIONS ARE SUGGESTED BEFORE OPERATING EACH OF THE IMPLEMENTS TO HELP PREVENT ACCIDENTS:

1. Never operate the implements without good visibility and lighting.
2. Do not make mechanical adjustments while the unit is in motion, the implements are raised, or the engine is running.
3. Do not put hands or feet near rotating parts.
4. Never allow anyone to sit or stand on the equipment at any time.
5. Before leaving the tractor unattended, take all necessary precautions. Park the tractor/implement on level ground, place the transmission in neutral, set the parking brake, disengage the driving system, lower the equipment to the ground, place all levers including auxiliary control levers in neutral, shut off the engine and remove the ignition key.
6. Exercise extreme caution when operating on or crossing a gravel drive, walks, or roads. Stay alert for hidden hazards or traffic. Do not carry passengers.
7. 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.
8. Do not attempt to operate on steep slopes or near embankments.
9. Never operate machine at high transport speeds on a slippery surface.
10. Use extra caution when backing up.
11. 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.
12. Always wear eye protection during operation (face shield, etc.).
13. Never allow anyone to operate the equipment until they read the manual completely and are thoroughly familiar with basic tractor and equipment operation.
14. Make sure the tractor is counterweighted as recommended by your dealer. Weights provide the necessary balance to prevent tip-over or loss of traction or steering.
15. Always make sure all equipment components are properly installed and securely fastened BEFORE operating.

SAFETY PRECAUTIONS - continued

THE TRACTOR

General Information



WARNING: In order to avoid serious injury and death:

1. Read the operator's manual carefully before using tractor. Lack of operating knowledge can lead to accidents.
2. Do not permit anyone but the operator to ride on the tractor. There is no safe place for extra riders.

Operating the Tractor

1. Never run the tractor engine in a closed building without adequate ventilation, as the exhaust fumes are very dangerous.
2. Never allow an open flame near the fuel tank or battery.
3. Always bring the tractor to a complete stop, shut off the engine, lower the implement to the ground and remove the ignition key before leaving the tractor.
4. Never park the tractor on a steep slope.
5. Do not attempt to operate on steep slopes.
6. Always drive the tractor at speeds compatible with safety, especially when operating over rough ground, crossing ditches, or when turning.
7. Handle fuel with care, as it is highly flammable.
8. Use approved fuel container.
9. Never add fuel to a running engine or a hot engine.
10. Fill fuel tank outdoors with extreme care. Never fill fuel tank indoors. Replace fuel cap securely and wipe up spilled fuel.
11. Never allow anyone to operate the equipment until they are thoroughly familiar with basic tractor and equipment operation.
12. Always make sure all components are properly installed and securely fastened BEFORE operation.

During Operation

1. Do not allow anyone to ride on the tractor/equipment at any time. There is no safe place for passengers on this equipment. The operator **MUST** sit in the tractor seat.
2. Eye and hearing protection is recommended when operating the equipment.
3. Operate only during daylight hours, or when the area is well lit with bright artificial light.
4. Set the parking brake, lower the implement to the ground, shut the engine off and remove the key **BEFORE** leaving the operator's seat.
5. Inspect the equipment after striking any foreign object to assure that all equipment parts are safe and secure and not damaged.

SAFETY PRECAUTIONS - continued

MAINTENANCE

 **WARNING:** In order to avoid serious injury and death:

ALWAYS USE GENUINE PARTS WHEN REPLACEMENT PARTS ARE REQUIRED

1. Park the tractor/equipment on level ground, set the parking brake, disengage the driving system, lower the equipment to the ground, place all levers including auxiliary control levers in neutral, shut off the engine and remove the ignition key **BEFORE** making any equipment adjustments.
2. Securely support tractor or any machine elements 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.
3. Make sure all shields and guards are securely in place following all service, cleaning, or repair work.
4. To avoid injury, do not adjust, unclog or service the equipment with the tractor engine running. Making sure rotating components have completely stopped **BEFORE** leaving the operator's seat.
5. Keep the tractor/equipment clean. Environmental build-up can lead to malfunction or serious personal injury.
6. Always wear eye protection when cleaning or servicing the equipment.
7. Do not modify or alter this equipment or any of its components or operating functions. If you have questions concerning modifications, consult your dealer.

TRANSPORTING

 **WARNING:** In order to avoid serious injury and death:

1. If the tractor/equipment 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. Be alert for all other traffic when driving the tractor/equipment on public roads or highways.

STORAGE

 **WARNING:** In order to avoid serious injury and death:

Before storing the subframe, certain precautions should be taken to protect it from deterioration:

1. Clean subframe 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. When the implements are dry, oil all moving parts. Apply oil liberally to all surfaces to protect against rust.
6. Store in a dry place.

ASSEMBLY

ASSEMBLING THE FUN/SURE CONNECT HITCH



WARNING: In order to avoid serious injury and death

Remove the front cover of the tractor housing before starting the installation and remove the lawnmower by following the instruction in the tractor manual.

NOTE 1: For the GR2020 Gasoline Tractors, the installation of the heat shield GR2720 is necessary before proceeding with the installation of the Hitch.

NOTE 2: For the GR2120-2 Diesel Tractors, the installation of the heat shield GR2730 is necessary before proceeding with the installation of the Hitch.

IMPORTANT: DO NOT discard the original heat shield which is supplied with the tractor. If you decide to permanently remove the subframe GR2700B, re-install the original heat shield on the exhaust of the tractor if you have no intent of re-installing the subframe GR2700B ever.

Attaching the Hitch to the Subframe (Figures 1-1A)

1. **Figure 1:** Apply grease to the outside of the pivot bushings (item 5) and in the holes of the hitch's rear arms (item 1).
2. **Figure 1:** Attach the front hitch (item 1) to the subframe (item 2) with two 5/8"NC x 2" lg. Bolts (item 3), four 5/8" flat washers (item 4), two pivot bushings (item 5), two lock washers (item 6) and two 5/8"NC nylon insert nuts (item 7).
3. **Figure 1A:** Apply grease to the subframe pin (item 2) and the hitch pin (item 3).
4. **Figure 1A:** Attach the cylinder (item 1) to the subframe pin (item 2) and the hitch pin (item 3) with two 1/2" flat washers (item 4), and two 1/8" x 1" cotter pins (item 5).
5. **Figure 1A:** Attach the two lift levers (item 6) as shown with four 1/2" flat washers (item 4), and four 1/8" x 1" cotter pins (item 5).

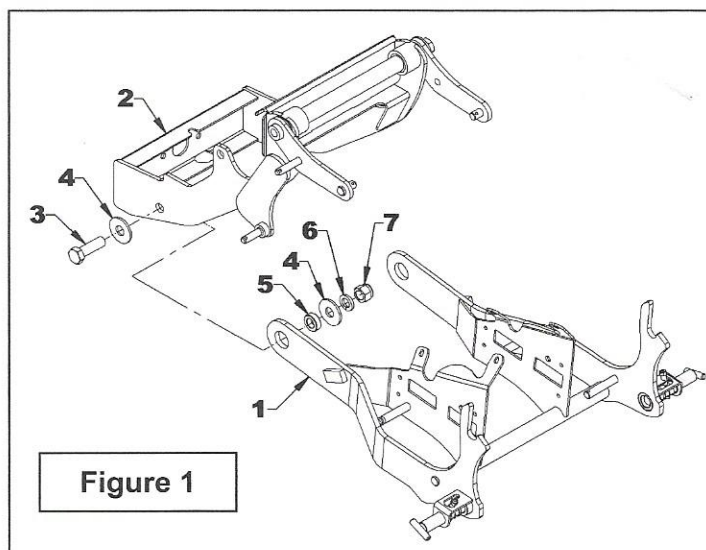


Figure 1

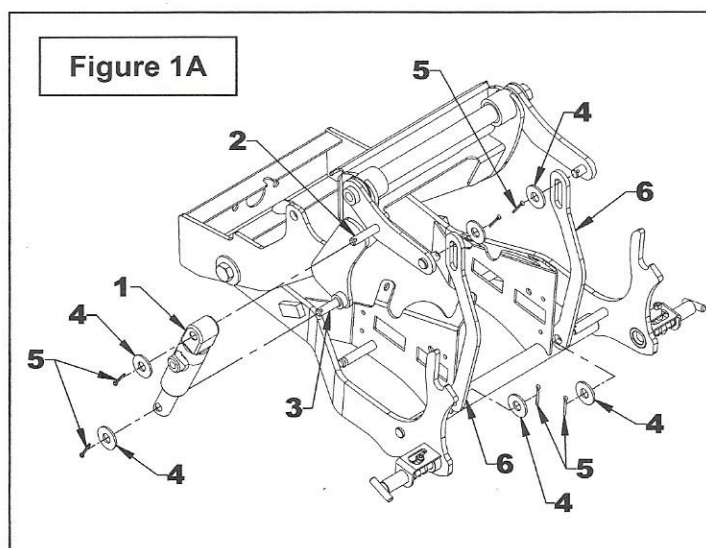


Figure 1A

ASSEMBLY

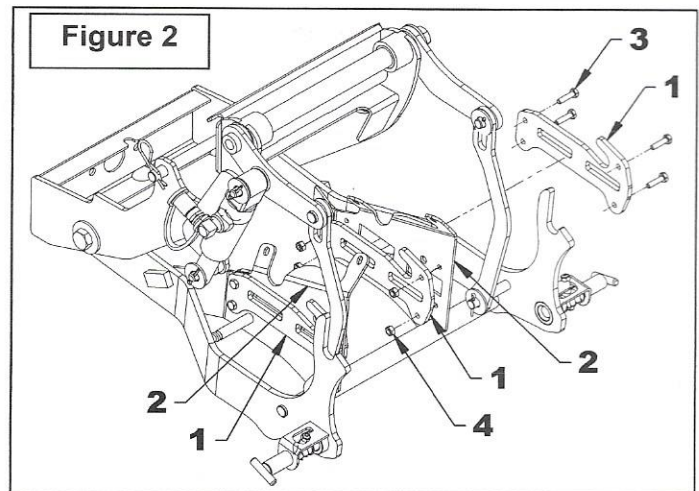
INSTALLING THE DRIVE KIT – GR2704A (OPTION)

Assembling the UHMW Guides

(Figure 2)

Attach the four UHMW guides (item 1) to the front hitch (item 2) with eight 1/4"NC x 1" lg hex bolts (item 3) and stover nuts 1/4"NC (item 4).

IMPORTANT: Make sure the 1/4"NC x 1" lg hex bolts (item 3) are installed as shown on figure.



Assembling the Engagement Mechanism

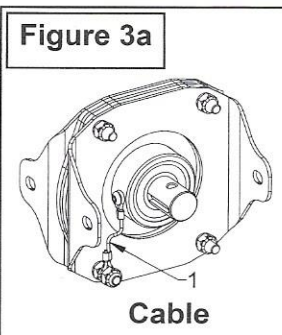
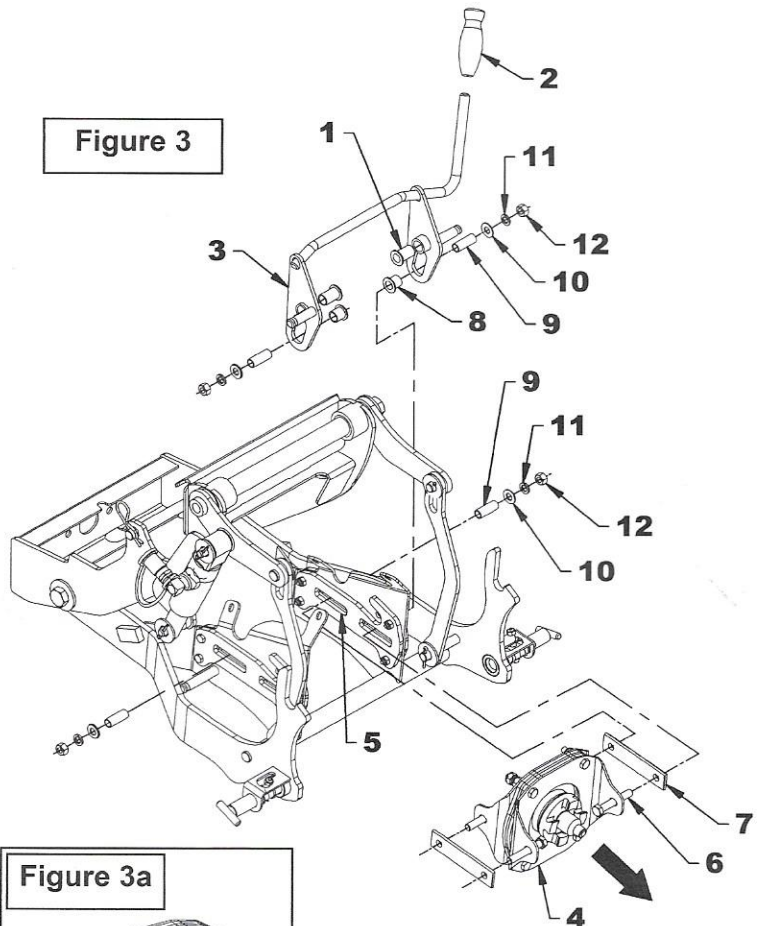
(Figures 3-4)

1. **Figure 3:** Insert the 1" lg shoulder bushings (item 1) and the 1/2" x 1 3/32"lg bushings (item 2) inside the engagement lever tubes (item 3).

2. **Figure 3-3a:** Insert the connection support (item 4) between the two UHMW guides (item 5) of the front hitch, positioning the serrated part in the direction of the arrow with the cable down (fig.3a, item 1). Then place the engagement lever (item 3) on the outside of the two UHMW guides.

3. **Figure 3:** Attach the front section of the connection support (item 4) with two 3/8"NC x 2 1/4" lg hex. bolts (item 6), spacers (item 7), 5/8" lg shoulder bushings (item 8), 1/2" x 1 11/32" lg. bushings (item 9), 10mm flat washers (item 10), 3/8" lockwashers (item 11) and. 3/8"NC hex nuts (item 12).

4. **Figure 3:** Attach the rear section of the connection support (item 4) with two 3/8"NC x 2 1/4" lg hex bolts (item 6), spacers (item 7), 1/2" x 1 11/32" lg. bushings (item 9), 10mm flat washers (item 10), 3/8" lockwashers (item 11) and. 3/8"NC hex nuts (item 12).

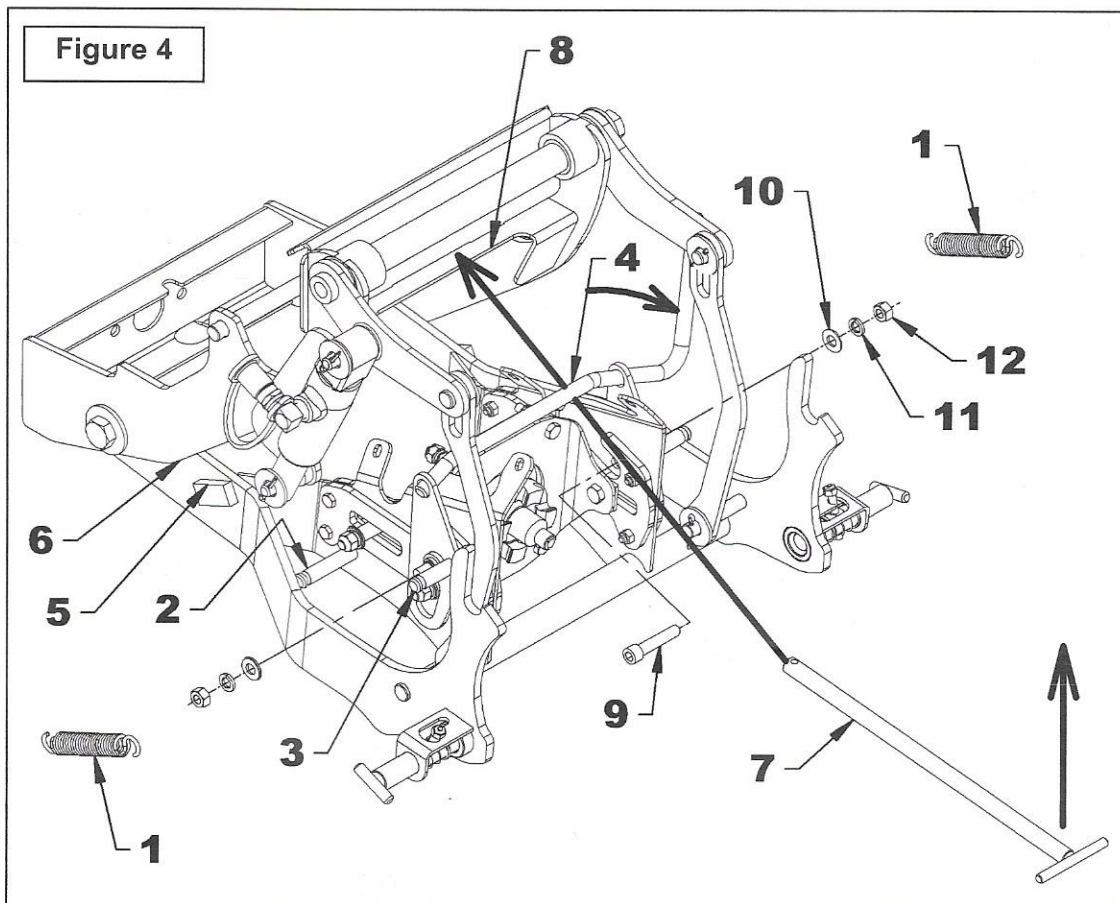


ASSEMBLY

5. **Figure 4:** Insert the two tension springs (item 1) on the hitch pins (item 2) and the engagement lever pins (item 3).
6. **Figure 4:** Move the engagement lever (item 4) completely forward.
7. **Figure 4:** Pivot the hitch so the stoppers (item 5) rest on the sides of the frame (item 6).
8. **Figure 4:** Align the holes of the lever pivot (item 4) with the holes of the hitch pivot avec. To make this operation easier, insert a pry bar or the "T" pin (item 7) under the engagement lever (item 4) and on the small plate of the frame (item 8) and lift the bar or pin (item 7) to complete the alignment.

9. **Figure 4:** Attach the engagement lever (item 4) to the hitch with two 3/8"NC x 1 3/4" lg allen socket head capscrew (item 9), 10mm flat washer (item 10), 3/8" lockwasher (item 11) and 3/8"NC hex. nut (item 12).

NOTE: Make sure the 1/2" dia. Bushings (fig. 3, item 2) are well in place in the shoulder bushings (fig. 3, item 1) during assembly.



ASSEMBLY

Driveline Installation (Fig. 5-6)

WARNING: To avoid serious injury: Park the tractor on level ground, set to neutral, apply parking brake, disengage drive pulley, place all control levers to neutral, shut off the engine, remove the ignition key and make sure all parts in rotation have stopped before installing the driveline under the tractor.

1. **Figure 5:** Attach the female part of the driveline (item 1A) to the male automatic clutch shaft (item 2) with the 1/4" x 1/4" x 1" lg key (item 3), 1/4"NC x 2" lg bolt (item 4) and 1/4"NC stover nut (item 5). Apply Loctite type adhesive on the 3/8"NC x 1/4" lg. setscrew (item 6) and screw firmly in the female driveline yoke (item 1A).
2. **Figure 5:** Place a bearing (item 8) on each side of the frame's rear plate (item 9) and insert the output shaft (item 7) in both bearings (item 8) and in the male driveline yoke (item 1B).

3. **Figure 5:** Secure the male driveline (item 1B) to the output shaft (item 7) with a 1/4" x 1/4" x 1" lg key (item 13), 1/4"NC x 2" lg bolt (item 14) and 1/4"NC stover nut (item 15). Apply Loctite type adhesive on the 3/8"NC x 1/4" lg. setscrew (item 16) and screw firmly in the male driveline yoke (item 1B).
4. **Figure 6:** Position the end of the splined section of the output shaft (item 1) at 5 7/16" from the frame's rear plate (item 2). Make sure the output shaft is at 90° with the frame's rear plate as shown on figure.
5. **Figure 5:** Secure the bearings with two 3/8"NC x 2" lg bolts (item 10), 3/8" lockwashers (item 11) and 3/8"NC hex nuts (item 12).
6. **Figure 5:** Apply Loctite type adhesive on the four 1/4"NF setscrews (item 8A) and screw firmly in the bearings (item 8).

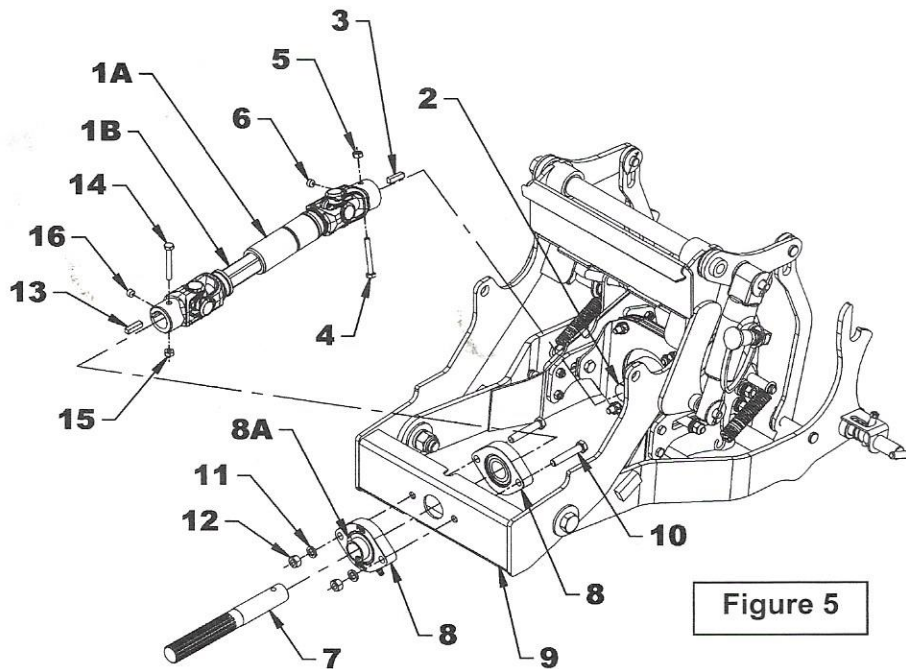


Figure 5

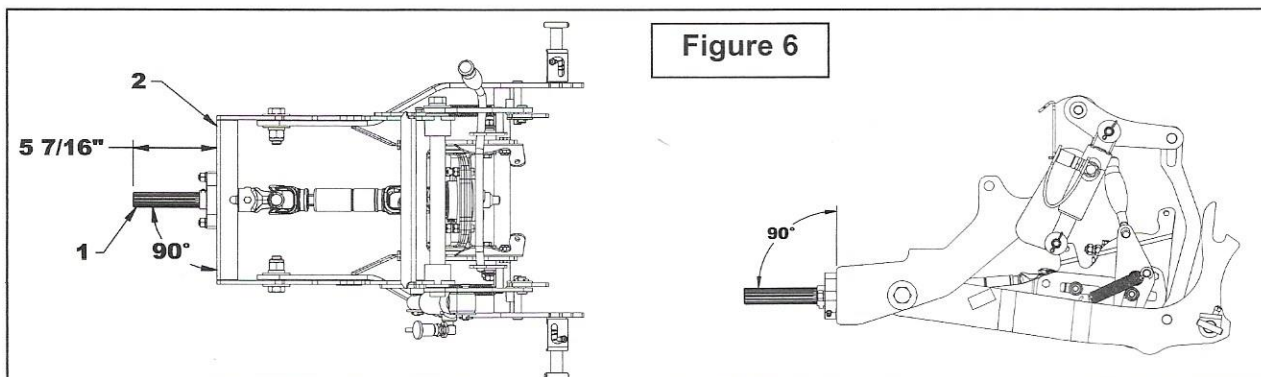
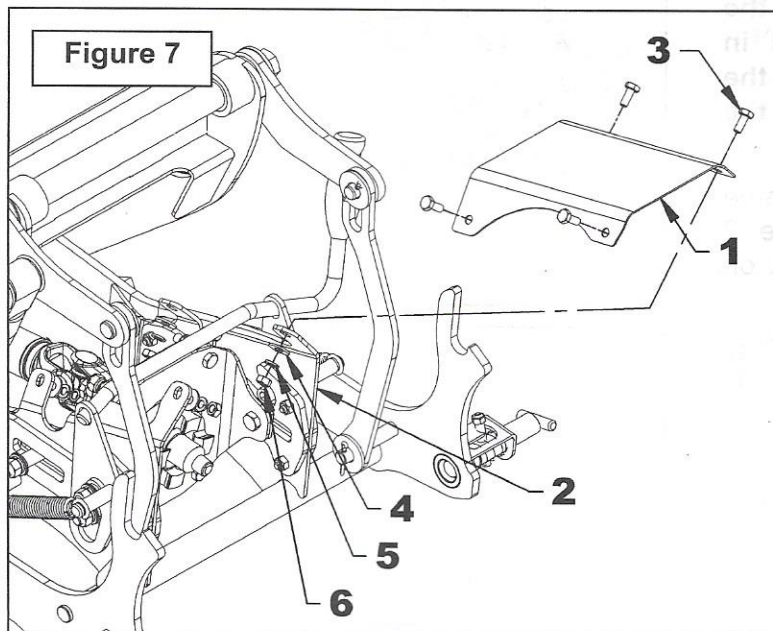


Figure 6

ASSEMBLY

Installing the Front Driveshaft Guard (Figure 7)

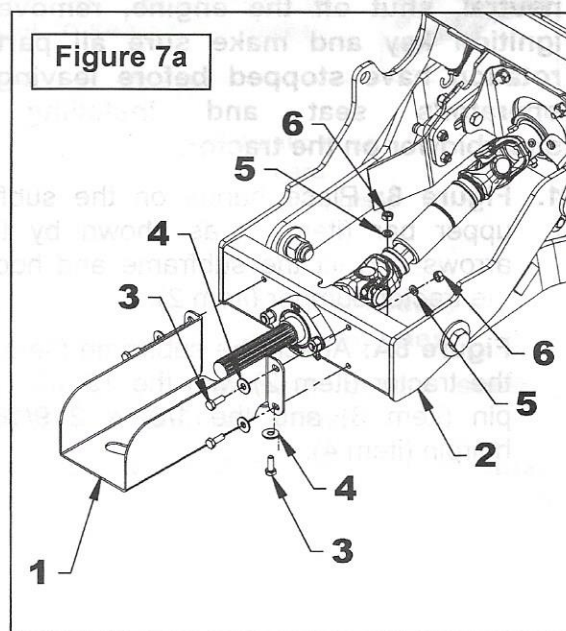
Attach the front driveshaft guard (item 1) to the tractor hitch (item 2) with four 1/4"NC x 5/8" lg. hex. bolt (item 3), 1/4" (5/16" hole) flat washers (item 4), 1/4" lockwashers (item 5) and 1/4"NC hex. nuts (item 6).



! WARNING: To avoid serious injury: This driveline turns up to 2600 r/min (RPM). If the yokes are not connected correctly to the output shaft and the tractor PTO, the driveline can come off with enough force to cause serious injuries or cause death.

Installing the Rear Driveshaft Guard (Figure 7a)

Attach the rear driveshaft guard (item 1) to the subframe (item 2) with five 1/4"NC x 3/4" bolts (item 3), 1/4" (5/16" hole) flat washers (item 4), 1/4" lockwashers (item 5) and 1/4"NC nylon insert locknut (item 6).



! WARNING: To avoid serious injury: Make sure that the quick connect yoke is securely locked in place on the tractor PTO. A "click" must be heard. If it's not attached firmly, the driveline will come off the splined shaft and spin out of control.

! WARNING: The driveline can be damaged and could cause serious personal injury if the quick hitch is not attached properly.

ASSEMBLY

Attaching the Subframe to the Tractor (Figures 8-8A)



WARNING: To avoid serious injury: Park the tractor on level ground, set to neutral, apply parking brake, disengage drive pulley, place all control levers to neutral, shut off the engine, remove the ignition key and make sure all parts in rotation have stopped before leaving the operator's seat and installing the snowblower on the tractor.

1. **Figure 8:** Place hands on the subframe upper bar (item 1) as shown by the 2 arrows and lift the subframe and hook on the tractor bumper (item 2).
2. **Figure 8A:** Attach the subframe (item 1) to the tractor (item 2) with the 12 1/2" lg "T" pin (item 3) and the 1/8" x 2 9/16" lg. hairpin (item 4).

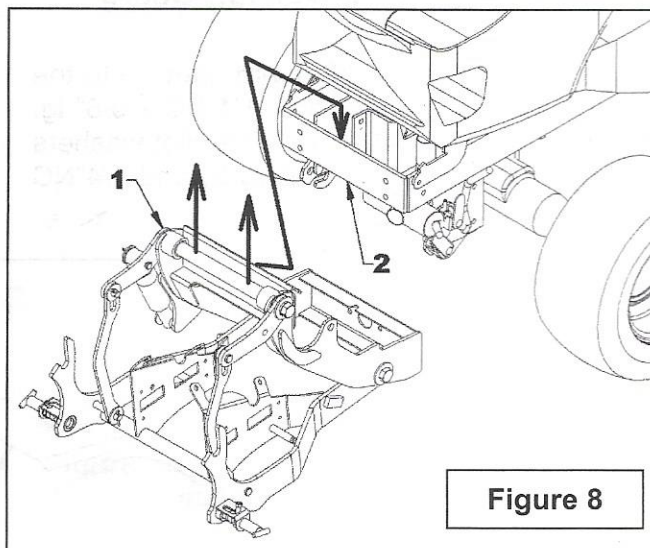


Figure 8

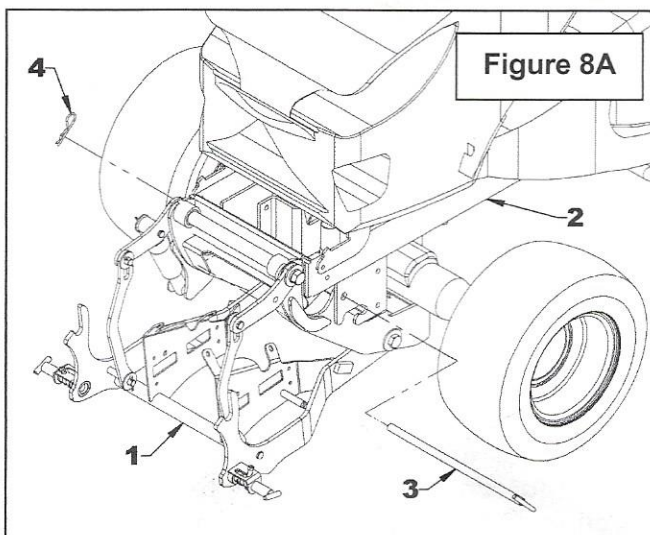


Figure 8A

Installing the Driveline under the Tractor (Figure 9)

After having attached the quick connect hitch to the tractor, connect the driveline's longest yoke (item 1) to the hitch's output shaft and the quick connect yoke (item 2) to the tractor PTO.

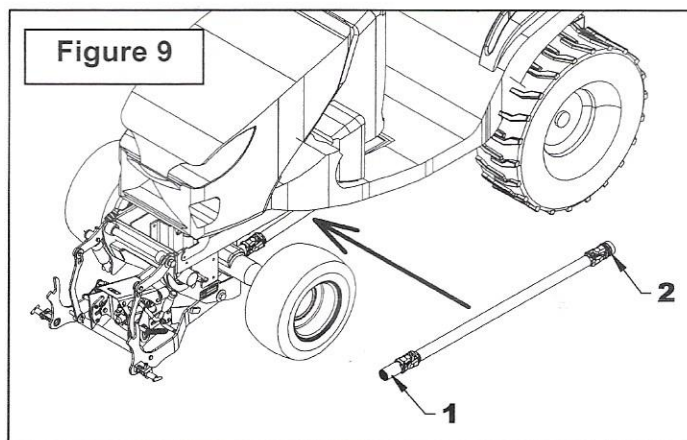


Figure 9

ASSEMBLY

Installation of the Hydraulic Components (Figures 10-10A)

IMPORTANT: To avoid contamination of the hydraulic system, make sure the hydraulic components are clean and the dust caps and plugs are installed on the hydraulic couplers when the hoses are disconnected.

- **Figure 10-10A:** Apply 2 turns of thread sealant the both ends of the 90° 1/4" NPT elbows (item 1). Screw the elbow tightly on the cylinder port (item 4) at a 90° position. Place the dust cap (item 3) on the other end of the 90° elbow and screw 1/4" NPT male quick coupler tightly (item 2).

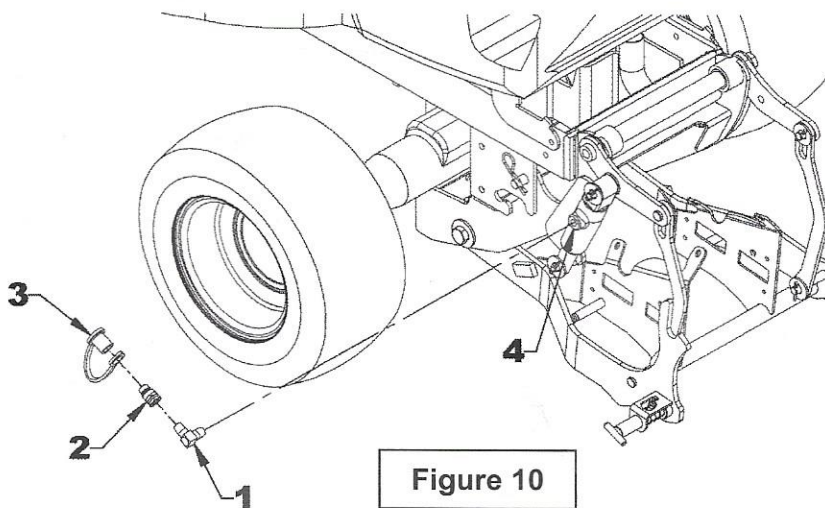


Figure 10

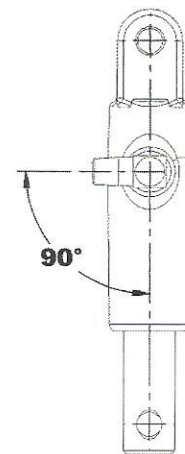


Figure 10A

ASSEMBLY

Tractor Preparation and Hose Installation **(Figure 11)**

NOTE: The mower must be removed from the tractor. Follow the instructions described in the tractor operator manual.



WARNING:

To avoid serious personal injury: Park the tractor on level ground, place the transmission in neutral, set the parking brake, disengage the drive system, place all controls in neutral, shut off the engine, remove the ignition key and make sure all movement has stopped **BEFORE** installing the hoses under the tractor.

1. Before installing the hoses, activate the lever of the hydraulic system by pressing on the mower lifting arms to empty oil from the hydraulic cylinder of the mower lifting system.
2. Installation begins from the rear left side of the tractor and finishes to the front right side.

3. **Figure 11 - GR2120 or GR2020:** Disconnect the hose section attached to the hydraulic cylinder (item 7) of the mower lift system. Then pass it inside the tractor frame.

4. **Figure 11 - GR2120 or GR2020:** Connect the 7/16" JIC female end of the 75" hose (item 2) to the 1/4" NPT male 90° elbow (item 8) already installed on the hydraulic cylinder (item 7). Pass the hose that comes from the tractor (item 9) over the tractor frame behind the rear left wheel.



_ATTENTION: To avoid serious personal injury wear protective glasses **BEFORE** lying under the tractor because hydraulic fluids may be still present in the hose coming from the tractor.

5. Lie down under the tractor.
6. **Figure 11 - GR2120 or GR2020:** Connect the 7/16" JIC male end of the 60" hose (item 1) to the hose that comes from the tractor (item 9).

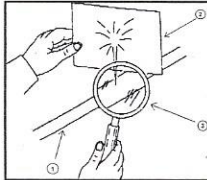
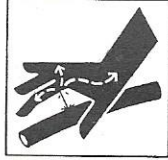
ASSEMBLY

FOR THE GR2120 TRACTOR (diesel) (Figures 11, A, B, below)



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.

7. Pass the two hoses along the frame on the left side, with one tractor hose (item 10). Attach without tightening with a tie wrap at the place indicated by the letter **A** on figure 11A.

8. Look for the steel tubes of the tractor hydraulic system (item 11) and pass the two hoses close. Attach without tightening with a tie wrap the two hoses (item 1 & 2) to the steel tubes of the tractor hydraulic system (item 11) at the place indicated by the letter **B** on figure 11B.

9. Then pass the hoses on the right side of the tractor following the electric system loom (item 12). Attach without tightening with a tie wrap the two hoses (item 1 & 2) to the electric system loom (item 12) at the place indicated by the letter **C** on figure 11B.

10. Bring out the hoses (item 1 & 2) from the free space behind the motor support (item 13).

11. Get out from under the tractor and go to the right front side of the tractor. Pull out a 30" average length of the 60" hose (item 1) and a 12" average length of the 75" hose (item 2). Attach the hoses individually with a tie wrap to the frame plate of the tractor indicated by the letter **D** on figure 11A.

12. Install the 23" lg protective nylon sheath (item 14) over the 60" hose (item 1).

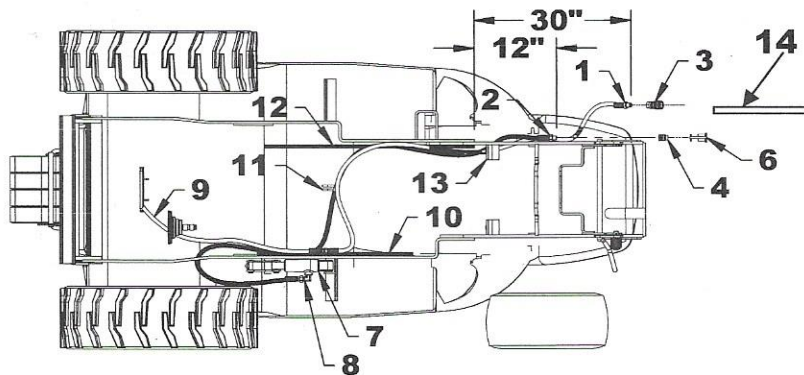


Figure 11 - GR2120 - diesel

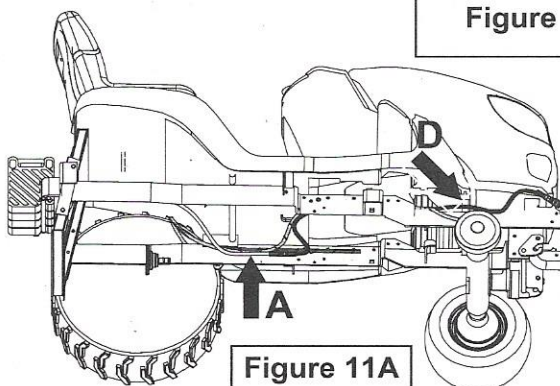


Figure 11A

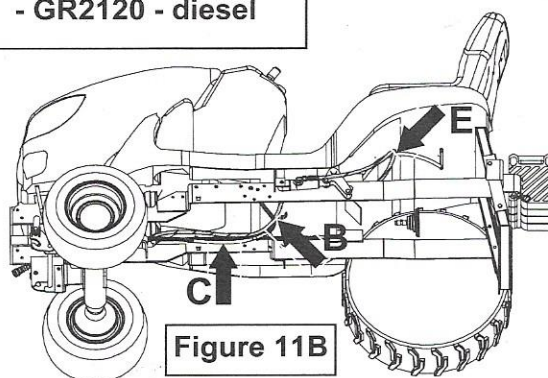


Figure 11B

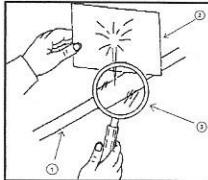
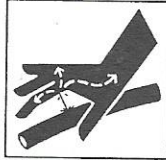
ASSEMBLY

FOR THE GR2020 TRACTOR (gas)
(Figure 11, C, below)



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.

7. Pass the two hoses along the frame on the left side, with one tractor hose (item 10). Attach without tightening with a tie wrap to the plate that fixes steel tubes of the tractor hydraulic system (item 14) at the place indicated by the letter G on figure 11C.

8. Look for the rod of the tractor brake system (item 15) and pass the two hoses close. Attach without tightening with a tie wrap the two hoses (item 1 & 2) to the rod of the tractor brake system (item 15) at the place indicated by the letter H on figure 11C.
9. Bring out the hoses under the tractor frame and attach without tightening to the frame plate indicated by the letter I on figure 11C.
10. Get out from under the tractor and go to the right front side of the tractor. Pull out a 30" average length of the 60" hose (item 1) and a 12" average length of the 75" hose (item 2).
11. Attach the hoses individually with a tie wrap to the frame plate of the tractor indicated by the letter K on figure 11C.
12. Install the 23" lg protective nylon sheath (item 17) over the 60" hose (item 1).

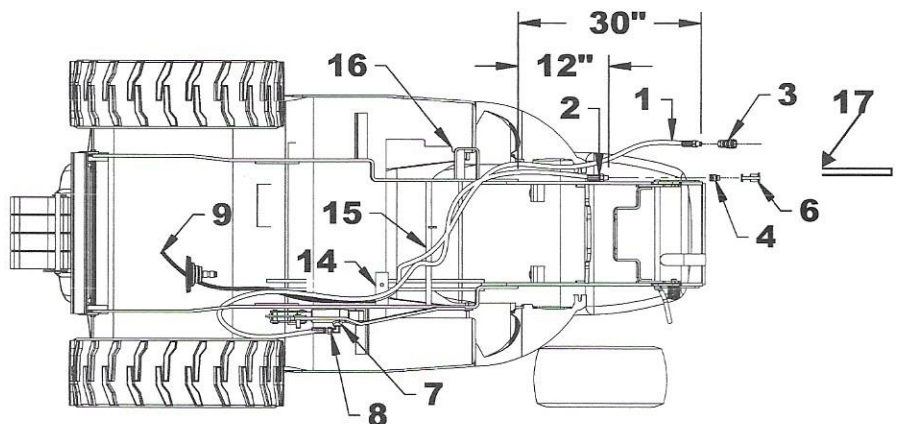


Figure 11 - GR2020 - gas

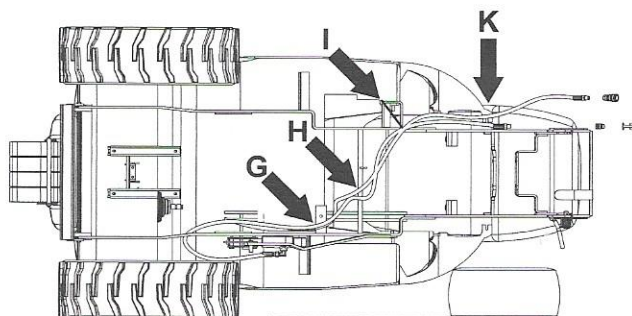


Figure 11C

ASSEMBLY

12. **GR2120 or GR2020:** Go back under the tractor and tighten each tie wrap in the reverse order of the installation. Cut off the excess length.

13. **Figure 11 - GR2120 or GR2020:** Get out from under the tractor and go to the rear left side of the tractor. Attach with a tie wrap the 75" hose (item 2) with the hose coming from the tractor (item 9) at the place indicated by the letter E on figure 11B to prevent interference with the rear tire. Cut off the excess length of the tie wrap.

14. **Figure 11 - GR2120 or GR2020:** Apply thread sealant on the 1/4"NPT end of the 75" hose (item 2) and install the male 1/4"NPT quick coupler (item 4) on the 75" hydraulic hose (item 2).

15. **Figure 11 - GR2120 or GR2020:** Apply thread sealant on the 1/4"NPT end of the 60" hose (item 1) and install the female 1/4"NPT quick coupler (item 3) on the 60" hose (item 1).

16. Attach the 1/4"NPT female quick coupler to the 1/4"NPT male quick coupler of the cylinder elbow.

17. Start the tractor and activate the hydraulic system to open the cylinder, which is used to lift the hitch. Lower the hitch to close the cylinder, turn off the engine and set the parking brake.

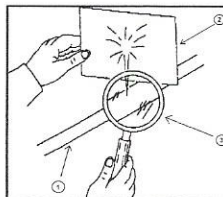
18. Check the transmission oil level and add some if needed. Always use the type of oil recommended by Kubota in tractor's Operating manual.

19. After the first use, check for fluid leaks by following the procedure that follows.



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.

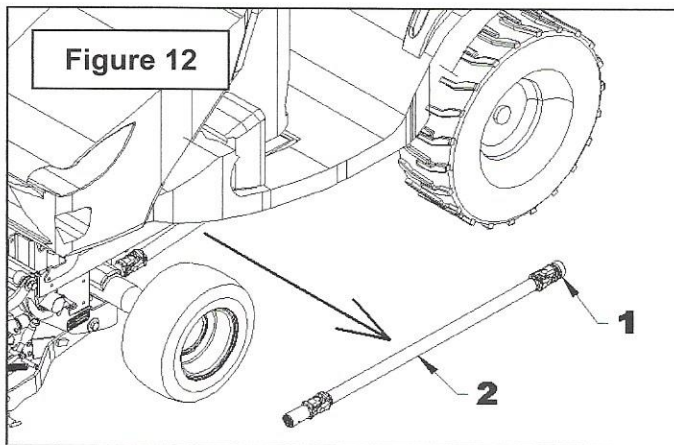
ASSEMBLY

Removing the Subframe from the Tractor (Figures 12-12A)

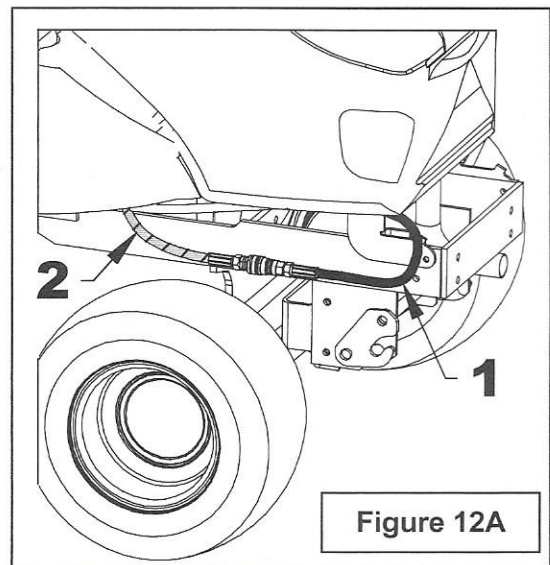


WARNING: To avoid serious injury: Park the tractor on level ground, set to neutral, apply parking brake, disengage drive pulley, place all control levers to neutral, shut off the engine, remove the ignition key and make sure all parts in rotation have stopped before leaving the operator's seat and removing the subframe from the tractor.

1. Remove the equipment (snowblower, broom or blade) from the subframe by following the instructions in the equipment manual.
2. Lower the hitch as much as possible using the tractor valve lever to empty the oil from the cylinder.
3. **Figure 12:** If applicable, disconnect the quick connect yoke (item 1) from the tractor PTO. Remove the fixed driveline (item 2) from under the tractor.



4. If applicable, disconnect the electrical connectors used with the snowblower by following the instructions in the equipment manual.
5. **Figure 12A:** To reactivate the lawnmower's lift cylinder, disconnect the cylinder hose's 1/4"NPT female quick coupler (item 1), remove the dust cap from the hose's 1/4"NPT male quick coupler (item 2) on the side of the tractor frame and connect the 1/4"NPT female quick coupler to the 1/4"NPT male coupler. Attach the hydraulic hose (item 1) to the tractor frame with a tie wrap.
6. **Figure 10, item 3:** Install the dust cap on the 1/4"NPT male quick coupler of the cylinder elbow.
7. Engage the hydraulic system to open the hydraulic cylinder. Check the transmission oil lever and add some if needed. Always use the type of oil recommended by Kubota in tractor's Operating manual. Then check for fluid leaks by following the procedure described on the previous page.



OPERATION - MAINTENANCE

OPERATION

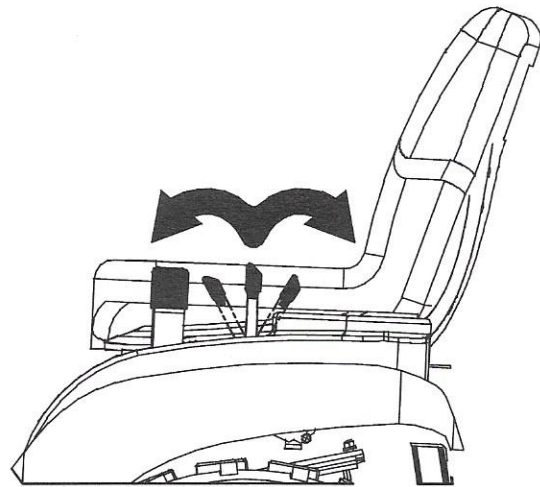
Up and Down Control

The hydraulic system of the hitch is the same as the one for the tractor mower.

Push the lawnmower latch located on the left side of the driver seat:

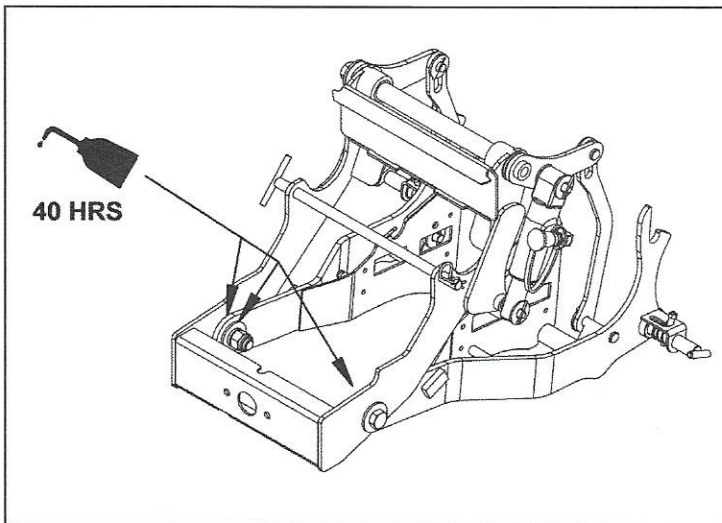
- **Backward:** to raise the equipment.
- **Forward:** to lower the equipment.

When the lifting lever is released, it goes back to its initial position at the center.



MAINTENANCE

1. Check the torque of the bolts holding the hitch together after the first 8 hours of use and after every 80 hours afterwards.
2. Lubricate the pivot points with chainsaw oil every 40 hours and before the annual storage.



STORAGE

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

1. Clean the subframe and implement 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. Lubricate the subframe and implement as instructed under "**Lubrication**" section.
6. When the subframe and implement are dry, oil all moving parts. Apply oil liberally to all surfaces to protect against rust.
7. Store in a dry place.
1. If equipment has hydraulic components, install protective plugs and caps on the quick couplers

OPERATION

K.R.A. SYSTEM OVERRIDE MODE

(For lawn tractors equipped with K.R.A. system)

! WARNING: To avoid serious personal injury: Before and when backing, look down and behind the machine to be sure no bystanders, especially children, have entered the area.

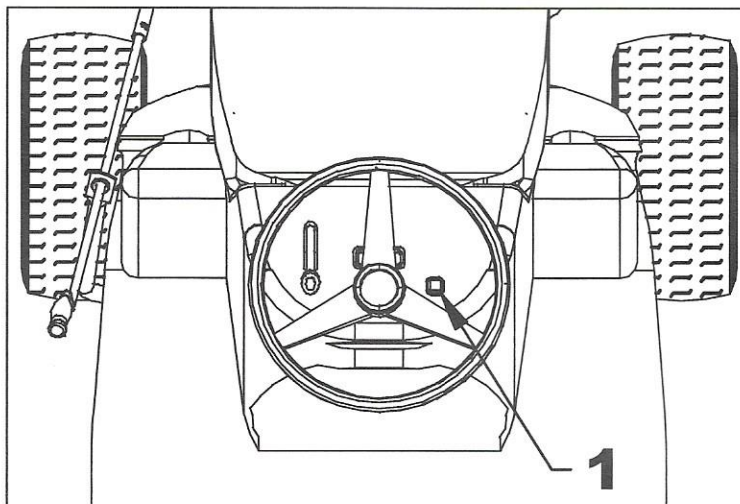
NOTE: K.R.A. System override switch allows the operator to maneuver in reverse with the PTO engaged and operating implements in reverse if the operator deems it absolutely necessary and safe to do so (i.e. the operator should make sure that no bystanders, especially children, have entered the area.)

If the owner does not wish certain operators to use the override switch allowing maneuvering with implement operation in reverse, then he or she may remove the fuse from the system to prevent override.

1. Start the engine.
2. Set the throttle to the "FAST" position
3. Push the PTO lever to the "ENGAGED" position.
4. Stop the machine (set the speed control pedal to NEUTRAL) or depress the speed control pedal forward.

5. Push the K.R.A. System override switch. (See figure below)
6. Look down and behind the machine to be sure that no bystanders, especially children have entered the area.
7. Depress the speed control pedal with the heel of your right foot to move in the reverse direction.

NOTE: Refer to your tractor operator's manual for more detailed information.



PARTS

INTRODUCTION

All parts are illustrated in "exploded views" which show the individual parts in their normal relationship to each other. Reference nums are used in the illustrations. These nums correspond to those in the "Reference Num" (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.

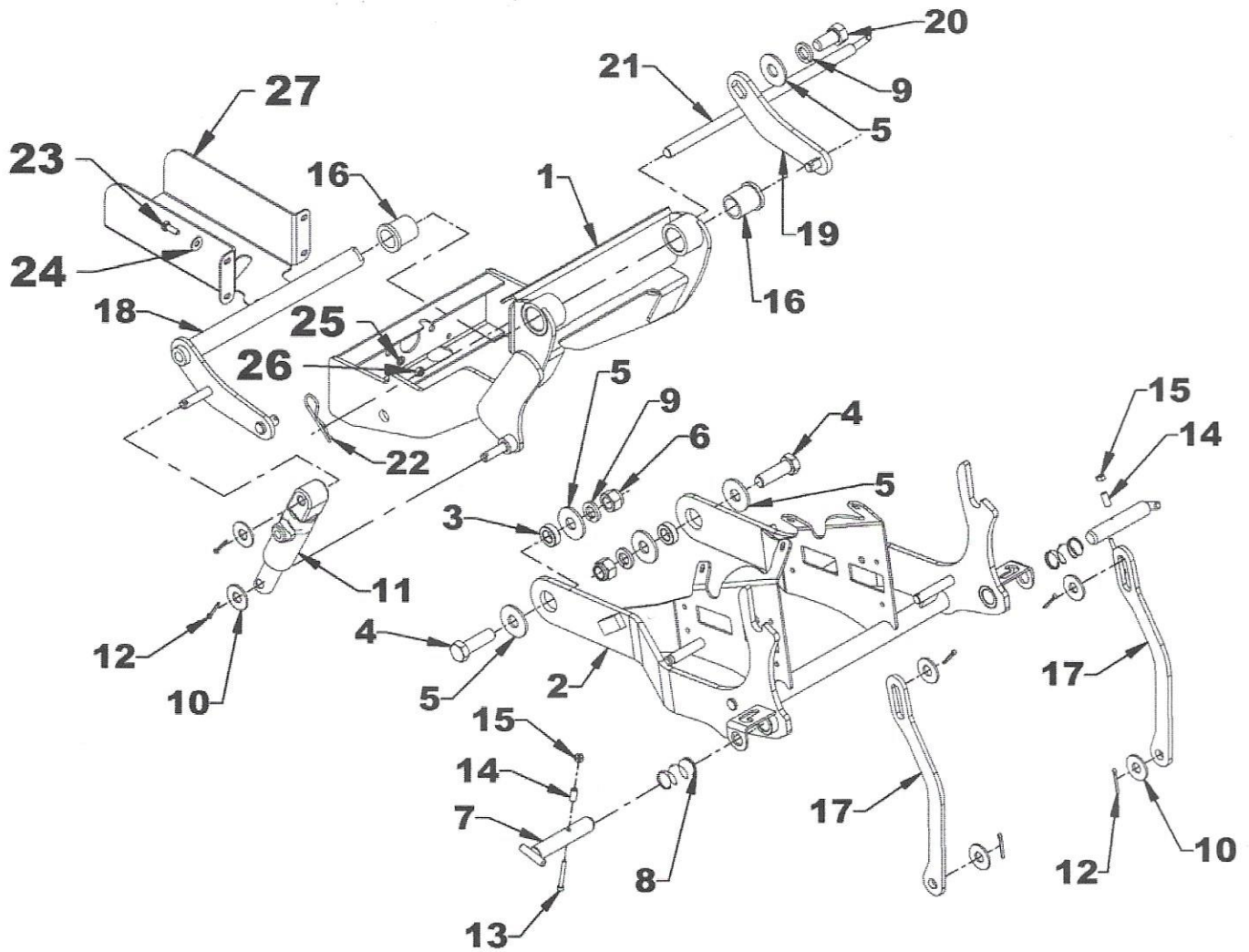
Orders must give the complete description, correct part num, the total amount required, the serial num, the method of shipment and the shipping address.

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

HITCH



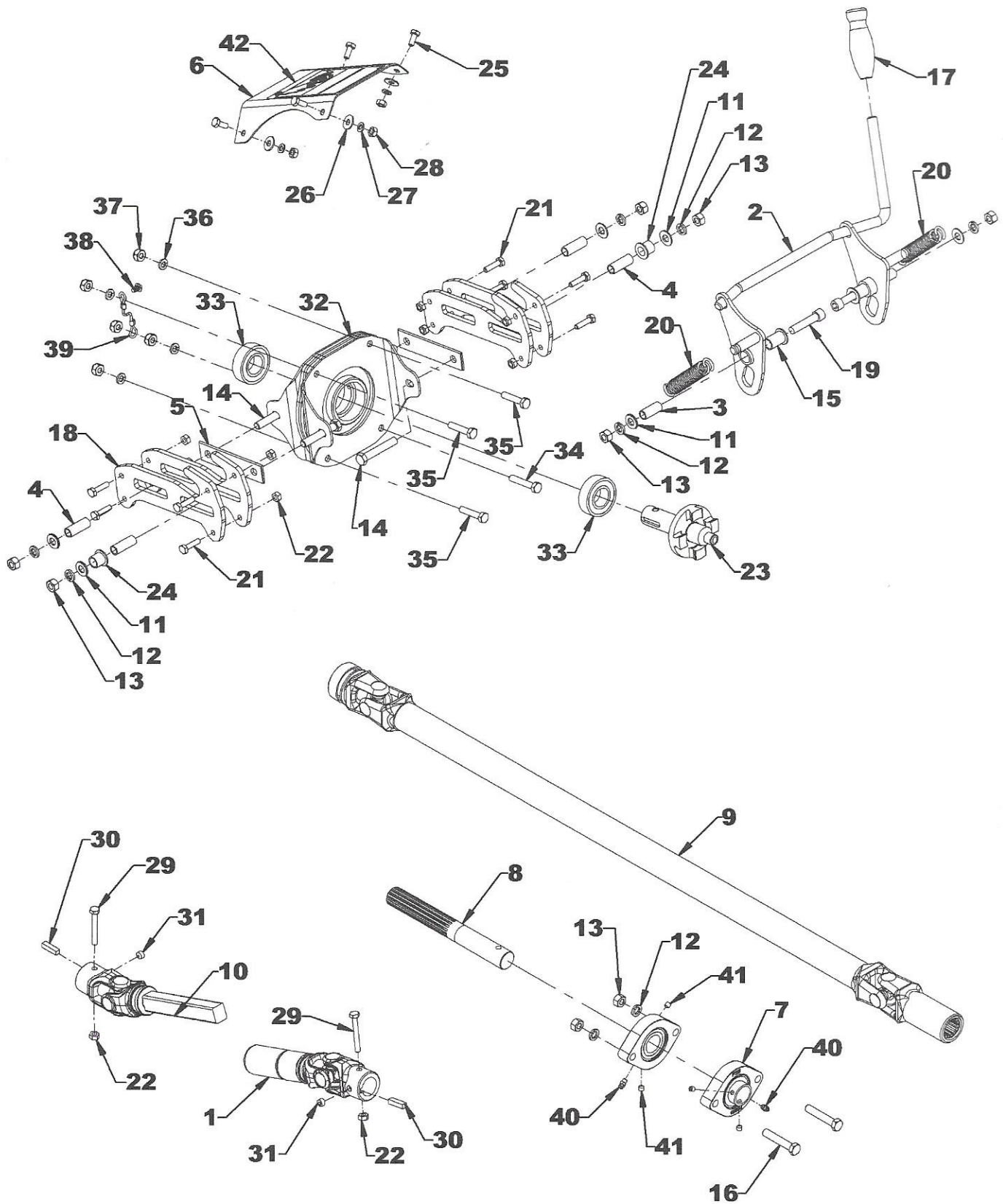
PARTS

HITCH

REF.	DESCRIPTION	QTY	PART #	CODE
1	Subframe	1	77700-04097	670103
2	Front hitch	1	77700-04098	670104
3	Bushing 1 1/8" x 3/8" thick PTD	2	77700-04107	670110
4	Hex bolt 5/8"nc x 2", gr. 5, PTD	2	75599-01740	0100095
5	Flat washer 5/8" (11/16" int.) PTD	5	75599-32017	1400008
6	Nylon insert lock nut 5/8" NC PTD	2	77700-01199	1000012
7	"T" bolt 3/4"	2	77700-04105	670108
8	Compression spring	2	77700-04110	2200028
9	Lockwasher 5/8" PTD	3	70001-00804	1200007
10	Flat washer 1/2" (9/16" int.) PTD	6	75599-32016	1400006
11	Cylinder simple action	1	70060-02473	3900295
12	Cotter pin 1/8" x 1"	6	75599-53173	1500016
13	Allen socket head cap screw 10-24 x 1 3/4" gr.5	2	77700-01167	0800018
14	Lock dowel	2	77700-04108	670111
15	Nylon insert lock nut 0-24 NC PTD	2	77700-00991	1000002
16	Shoulder bushing 1 1/4" x 1 1/2"lg	2	77700-04111	4300100
17	Lifting arm	2	77700-04104	670107
18	Upper lever	1	77700-04102	670105
19	Left lever	1	77700-04103	670106
20	Hex bolt 5/8"nc x 1 1/4" gr.5 PTD	1	75599-01725	0100092
21	"T" pin 12 1/2" lg	1	77700-04106	670109
22	Hairpin 3mm x 65mm (1/8" x 2 9/16" lg)	1	70060-00000	1800004
23	Hex. bolt 1/4" NC x 3/4" gr.5 PTD	4	75599-01115	0100003
24	Flat washer 1/4" (5/16" int.) PTD	4	75599-32011	1400002
25	Lockwasher 1/4" PTD	4	75599-33011	1200002
26	Hex. nut 1/4"NC PTD	4	75599-31011	0900001
27	Rear Driveshaft guard	1	77700-05012	670699

PARTS

DRIVE KIT – GR2704A



PARTS

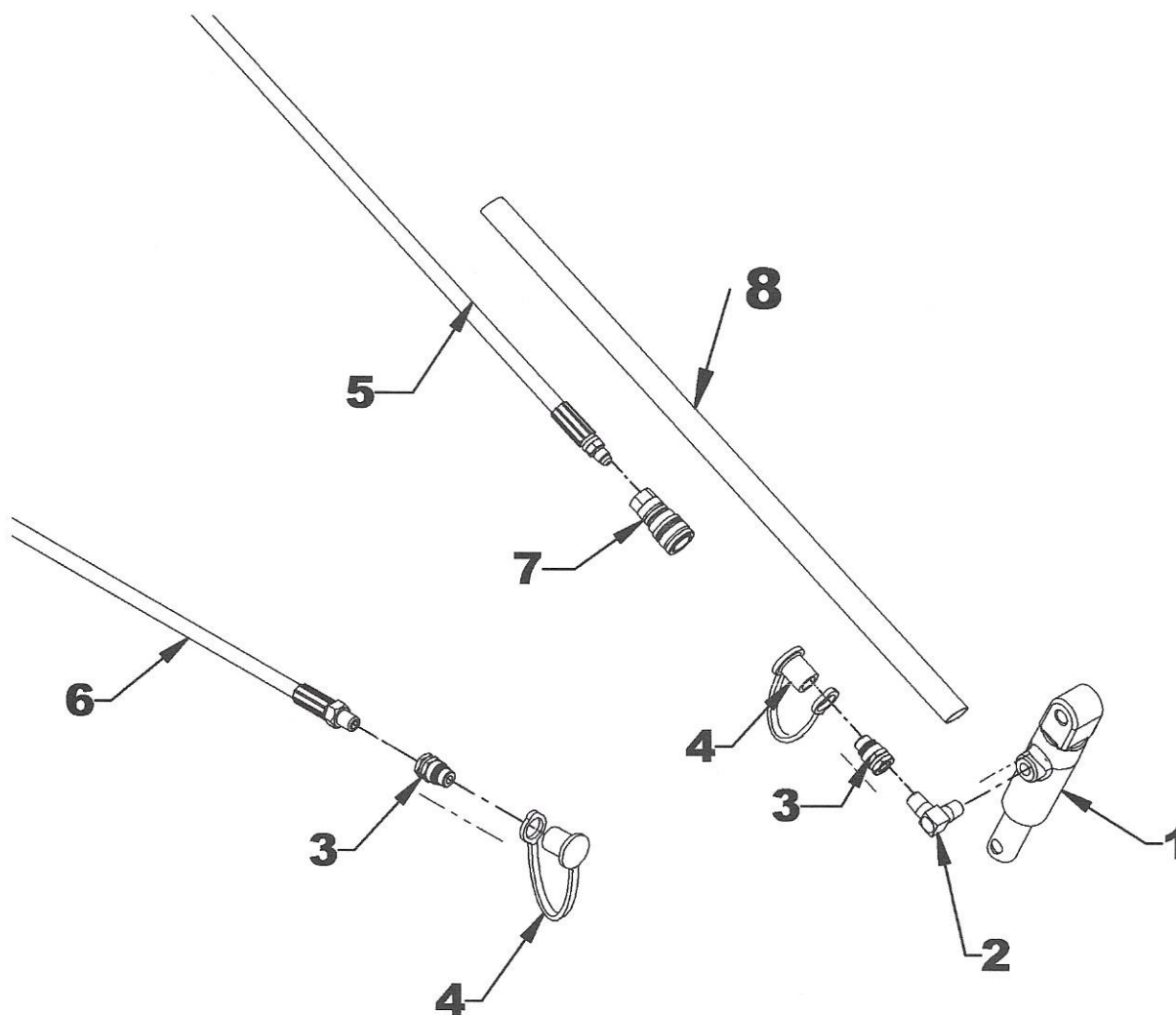
DRIVE KIT – GR2704A

REF.	DESCRIPTION	QTY	PART #	CODE
	Hardware bag (not illustrated)	1	77700-04378	670387
1	Driveline – female part	1	77700-03436	4700241
2	Engagement lever	1	77700-04377	670386
3	Bushing 1/2" x 1 3/32"lg	2	77700-04141	670121
4	Bushing 1/2" x 1 11/32" lg	4	77700-04142	670122
5	Spacer 2 holes	2	77700-04139	670118
6	Front Driveshaft guard	1	77700-04143	670124
7	Bearing 1"	2	70060-02699	4300054
8	Output shaft 1" x 8 1/16" lg	1	77700-04149	4700245
9	Driveline, 07E series, 36" lg. c/c	1	77700-03438	4700243
10	Driveline – male part S07 x 7.438" - 1"	1	77700-03434	4700239
11	Flat washer 10mm (10,5 int.) PTD	6	70060-01942	1400019
12	Lockwasher 3/8" PTD	8	75599-33013	1200004
13	Hex. Nut 3/8" nc PTD	8	75599-31013	0900003
14	Hex. Bolt 3/8" NC x 2 1/4"	4	75599-01345	0100043
15	Bushing 5/8OD x 1" lg with shoulder	2	77700-04148	4300103
16	Hex. Bolt 3/8"NC x 2", gr.5 PTD	2	75599-01340	0100042
17	Plastic handle 1/2" x 3" lg	1	70060-01318	656797
18	UHMW guide	4	77700-04140	670120
19	Allen socket head capscrew 3/8"NC x 1 3/4" lg, black	2	77700-00596	0800040
20	Tension spring 0.9" dia. ext. X 5 1/2"lg	2	77700-04383	2200039
21	Hex. Bolt 1/4"NC x 1" gr.5 PTD	8	75599-01120	0100004
22	Stover nut 1/4" NC PTD	10	70060-02441	1100001
23	Male automatic clutch shaft 1"	1	77700-04150	4700246
24	Bushing 5/8OD x 5/8" lg with shoulder	2	77700-04147	4300102
25	Hex. Bolt 1/4" NC x 5/8" gr.5 PTD	4	75599-01112	0100002
26	Flat washer 1/4" (5/16" int.) PTD	4	75599-32011	1400002
27	Lockwasher 1/4" PTD	4	75599-33011	1200002
28	Hex. Nut 1/4"NC PTD	4	75599-31011	0900001
29	Hex. Bolt 1/4"NC x 2" gr.5 PTD	2	75599-01140	0100010
30	Key 1/4" x 1/4" x 1" lg	2	70060-00928	655379
31	Allen setscrew 3/8"NC x 1/4" gr.5 black	2	77700-02236	0500030
32	Connection support ass.	1	77700-04138	670117
33	- Bearing 1" int.	2	70001-00566	663916
34	- Hex. Bolt 5/16" NC x 1 3/4" lg. PTD	1	77700-04136	0100022
35	- Hex. Bolt 5/16" NC x 1 1/2" lg. Gr.5 PTD	3	75599-01230	0100021
36	- Lockwasher 5/16" PTD	4	75599-33012	1200003
37	- Nylon insert locknut 5/16"NC PTD	5	75599-31912	1000005
38	- Allen button head capscrew 1/4" NC x 3/8" lg. Gr.5	1	77700-04145	0800051
39	- Cable 3/32" x 4 3/16" lg	1	77700-04178	2200030
40	Grease fitting 1/4" NF (incl. In 4300054)	2	70060-00940	654106
41	Allen setscrew 1/4"NC x 1/4" gr.5 black (incl. In 4300054)	4	77700-02662	0500002
42	Decal #703 "Danger" Clutch	1	77700-03908	2500865

PARTS

HYDRAULIC COMPONENTS

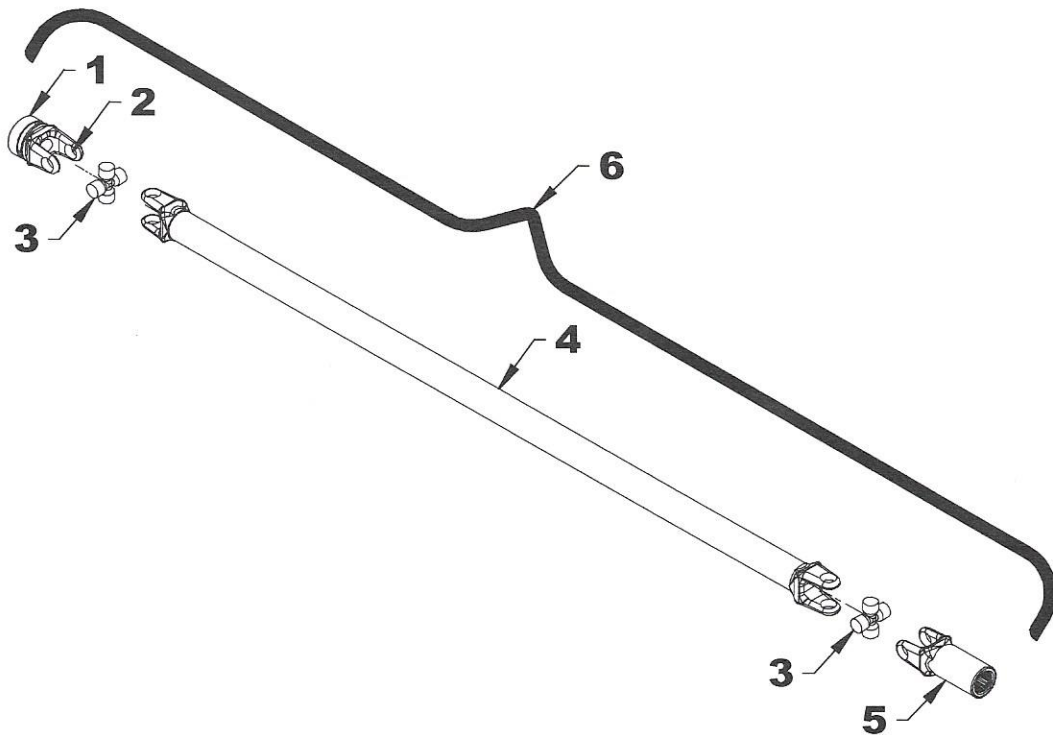
REF.	DESCRIPTION	QTY	PART #	CODE
1	Cylinder	1	70060-02473	3900295
2	Elbow 90° 1/4"NPT rig. male both ends	1	70060-02449	663348
3	Quick coupler 1/4"NPT male	2	70060-01568	657094
4	Dust cap 1/4"NPT	2	70060-04362	2600052
5	Hose 60" lg - 1/4"NPT rig. male X 7/16" JIC rig. male	1	70060-02472	3700078
6	Hose 75" lg - 1/4"NPT rig. male X 7/16" JIC piv. fem.	1	70060-02471	3700077
7	Quick coupler 1/4"NPT female	1	70060-01549	656902
8	Protective nylon sheath 23" lg	1	77700-05069	670700



PARTS

DRIVELINE- 77700-03438

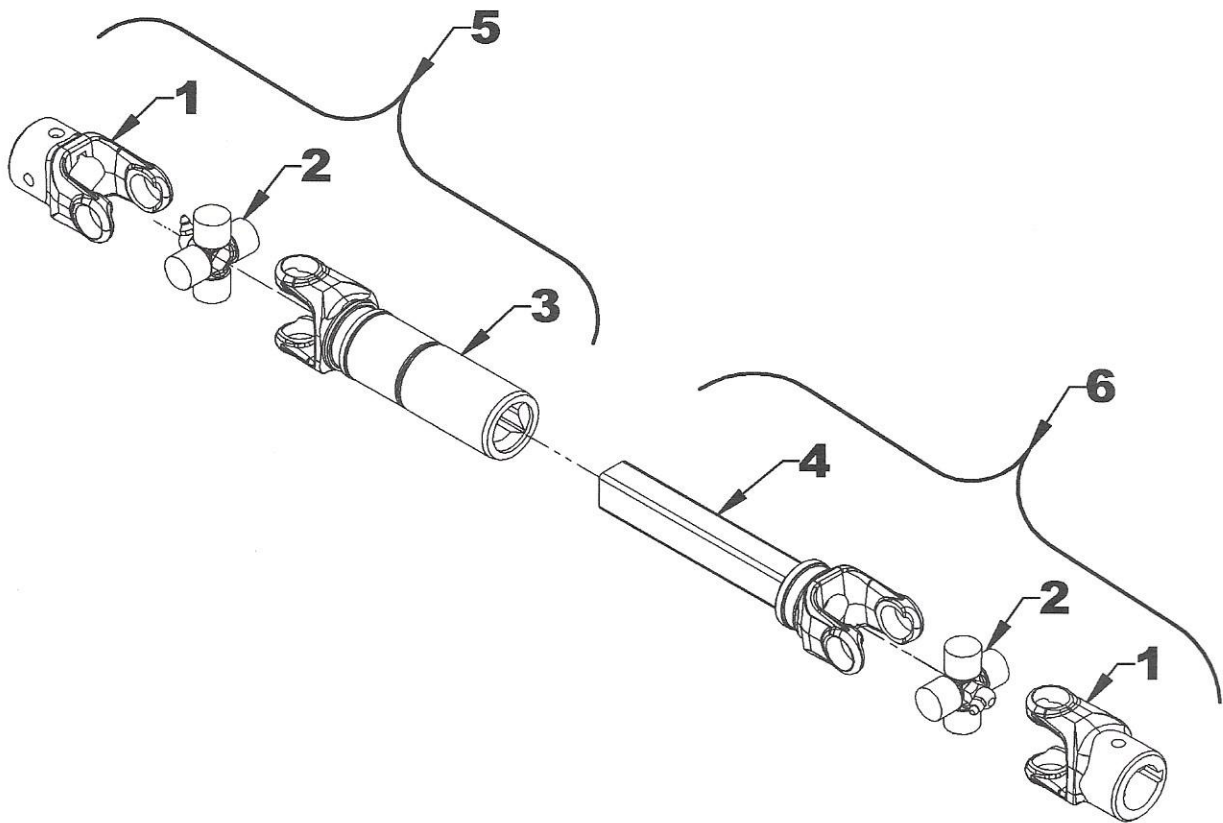
REF.	DESCRIPTION	QTY	PART #	CODE
1	Repair Kit For Yoke	1	70060-02515	4700094
2	Quick Connect Yoke Ass'y	1	70060-02513	4700092
3	Universal Joint Kit	2	70060-02335	4700066
4	Yoke & Shaft	1	77700-03439	4700244
5	Yoke For Shaft With Splines	1	70060-02337	4700068
6	Driveline 36" C/C	1	77700-03438	4700243



PARTS

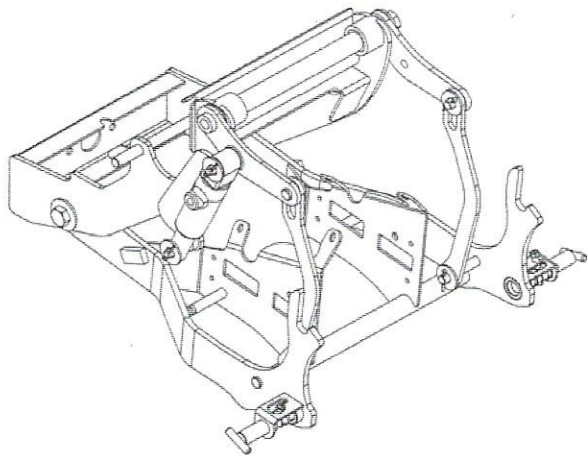
DRIVELINE - 77700-03433

REF.	DESCRIPTION	QTY	PART #	CODE
1	Yoke 1" dia. With keyway	1	70060-02348	4700072
2	Universal joint	1	70060-02335	4700066
3	Yoke and female shaft 5 15/16"	1	77700-03437	4700242
4	Yoke and male shaft 7 3/8"	1	77700-03435	4700240
5	Driveline – female part	1	77700-03436	4700241
6	Driveline – male part	1	77700-03434	4700239



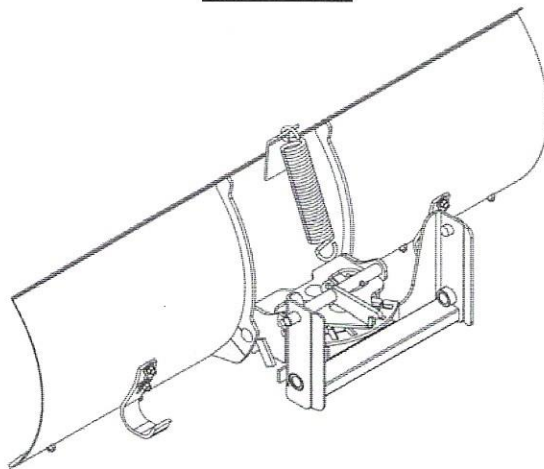
AVAILABLE EQUIPMENT

Fun/Sure Connect Hitch



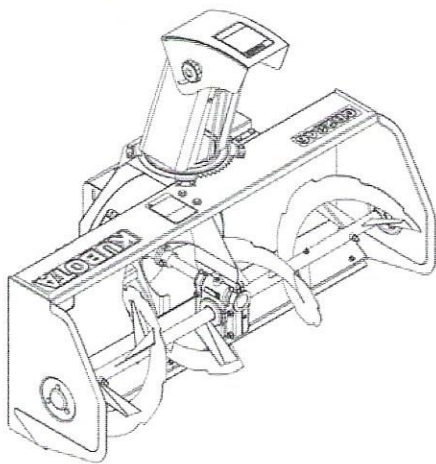
GR2700B

48" Blade



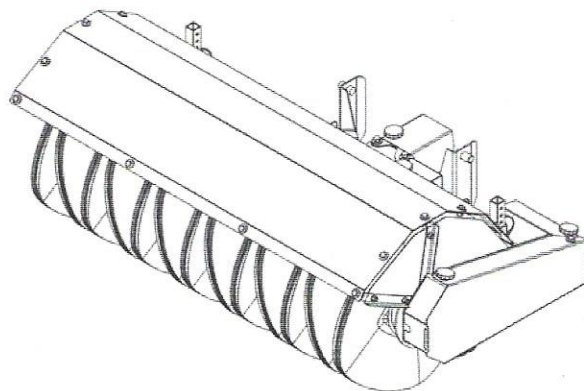
GR2848

46" Snowblower



GR2846A

47" Rotary Broom



GR2847







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

- 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

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

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ASSEMBLY OF GR2700B KIT

140416

QTY	DESCRIPTION	PART #
2	Lifting arm	77700-04104
1	"T" pin ø9/16" X 12 1/2"	77700-04106
1	Subframe assembly	
1	Front hitch assembly	
1	Hydraulic hose 75"lg	70060-02471
1	Hydraulic hose 60"lg	70060-02472
1	Hydraulic cylinder	70060-02473
1	Hardware bag	77700-04109
1	Rear drive shaft guard	77700-05012
1	Operator manual - english	
1	Packing list	

ASSEMBLÉ DE GR2700B

QTÉ	DESCRIPTION	# PIÈCE
2	Levier	77700-04104
1	Goupille en "T" ø9/16" X 12 1/2"	77700-04106
1	Sous-châssis assemblé	
1	Attache avant assemblée	
1	Boyau hydraulique 75"lg	70060-02471
1	Boyau hydraulique 60"lg	70060-02472
1	Cylindre simple action	70060-02473
1	Sac de quincaillerie	77700-04109
1	Garde d'arbre d'entraînement arrière	77700-05012
1	Manuel d'opérateur - anglais	
1	Liste d'emballage	

ASSEMBLY OF GR2700B KIT

181220

QTY	DESCRIPTION	PART #
<u>HARDWARE BAG</u>		
2	Bushing ø1 1/8" X 3/8"lg	77700-04107
2	Dust cap 1/4"NPT	70060-04362
1	Female quick coupler 1/4"NPT	70060-01549
2	Male quick coupler 1/4"NPT	70060-01568
1	90° elbow 1/4"NPT RM	70060-02449
5	Hex. bolt 1/4"NC X 3/4", PTD	75599-01115
1	Protective nylon sheath	77700-05069
1	Packing list	
1	<u>NUTS & BOLTS BAG</u>	
2	Hex. bolt 5/8"NC X 2", PTD	75599-01740
2	Nylon insert locknut 5/8"NC, PTD	77700-01199
2	Lockwasher 5/8", PTD	70001-00804
6	Flat washer 9/16", PTD	75599-32016
4	Flat washer 11/16", PTD	77700-32017
6	Cotter pin ø1/8" X 1"	75599-53173
1	Hairpin 3mm X 65mm	70060-00000
6	Tie-wrap 15" X 1/4"lg	70060-02719
5	Flat washer 1/4", PTD	75599-32011
5	Lockwasher 1/4, PTD	75599-33011
5	Hex. nut 1/4"NC, PTD	75599-31011

ASSEMBLÉ DE GR2700B

QTÉ	DESCRIPTION	# PIÈCE
<u>SAC QUINCAILLERIE</u>		
2	Coussinet ø1 1/8" X 3/8"lg	77700-04107
2	Capuchon protecteur 1/4"NPT	70060-04362
1	Accouplement rapide femelle 1/4"NPT	70060-01549
2	Accouplement rapide mâle 1/4"NPT	70060-01568
1	Coude 90° 1/4"NPT RM	70060-02449
1	Gaine protectrice de nylon 23"	77700-05069
1	Liste d'emballage	
1	<u>SAC BOULONNERIE</u>	
2	Boulon hex. 5/8"NC X 2", PQE	75599-01740
2	Écrou hex. à bague de nylon 5/8"NC, PQE	77700-01199
2	Rondelle de blocage 5/8", PQE	70001-00804
6	Rondelle plate 9/16", PQE	75599-32016
4	Rondelle plate 11/16", PQE	77700-32017
6	Goupille fendue ø1/8" X 1"	75599-53173
1	Goupille en épingle 3mm X 65mm	70060-00000
6	Attache de nylon 15" X 1/4"lg	70060-02719
5	Boulon hex. 1/4"NC X 3/4", PQE	75599-01115
5	Rondelle plate 1/4", PQE	75599-32011
5	Rondelle de blocage 1/4, PQE	75599-33011
5	Écrou hexagonal 1/4"NC, PQE	75599-31011