



# ***INSTRUCTION'S AND PARTS MANUAL***

***Reducer-Inverter  
BER0120***





# 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 and keep it in your files for further reference.**

This manual has been prepared to assist the owner and operators in the safe operation and suitable maintenance of the equipment. 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 equipment into service. Familiarize yourself with the operating instructions **AND ALL THE SAFETY RECOMMENDATIONS** contained in this manual and those labeled on the equipment and on the machine. Follow the safety recommendations and make sure that those with whom you work follow them.

## **TO THE DEALER**

Give this manual to the owner upon delivery of the equipment.

## **TO THE PURCHASER AND THE DEALER**

### **Illustrations**

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

### **Direction Reference**

All references to right and left, forward or rearward are from the operator's seat.

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

**MODEL:** \_\_\_\_\_

**DATE OF PURCHASE:** \_\_\_\_\_

**DEALER NAME:** \_\_\_\_\_


**DEALER TELEPHONE NUMBER:** \_\_\_\_\_


# INTRODUCTION


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.

## 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 imminently 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.

# ASSEMBLY

**APPLICATION:** For SA92B, SA92TRCB, SA98B, SA98TRCB and SA102TRCB

## INSTALLATION

**IMPORTANT:** The reducer-inverter gearbox does not contain any oil. It must be filled with either SAE 80W90 oil, AGMA 5EP extreme pressure oil or the equivalent. If the reducer-inverter is operated without any oil the warranty will be nullified. The required quantity is 1.6L. It is recommended to change the oil after the first 50 hours, then every 1000 hours or once a year.

**NOTE:** Before proceeding with the installation, check the type of PTO on the tractor and if needed, order the appropriate yoke (Fig. 2, item 1) from your distributor. If this is a 1 3/4" 20 spline type, install the 8203 kit.

**NOTE:** (Figure 1) This kit allows to reduce the rotation speed coming from the tractor's PTO socket. It also allows you to reverse the direction of the rotation. To do this, simply install the driveline on input (B) of the reducer-inverter. To do this, you must move the protective cap (item 1) from the input (B) to (A)

1. Park the tractor on a flat surface, put in neutral, put on the parking brake, disengage the PTO, lower the snowblower to the ground, turn off the engine and remove the ignition key from the tractor.
2. **Figure 2:** Remove the driveline (item 4) from the tractor.
3. Remove the snowblower from the tractor.
4. **Figure 2:** Remove the drive line (item 4) from the snowblower.
5. **Figure 2:** To make installation easier, it is recommended to remove the upper hitch (item 2) as well as the left and right hitches (item 3).
6. **Figure 2:** Remove the PTO protector (item 5); it will no longer be used with the reducer inverter.
7. **Figure 2:** Remove the cover plate (item 6) temporarily.
8. **Figure 2:** Before installing the reducer-inverter gearbox make sure the right and left lower hitches (item 7) are in the **1A** position as shown in the figure, in order to have the snowblower as far from the tractor as possible.

Figure 1

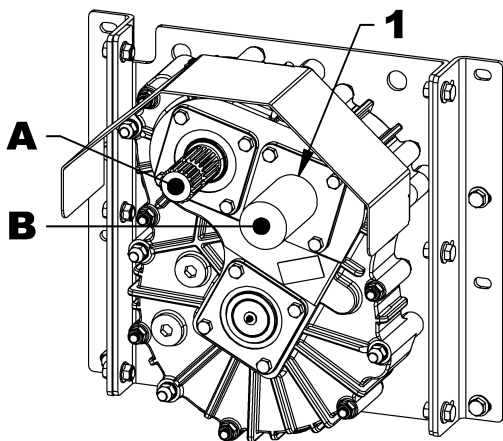
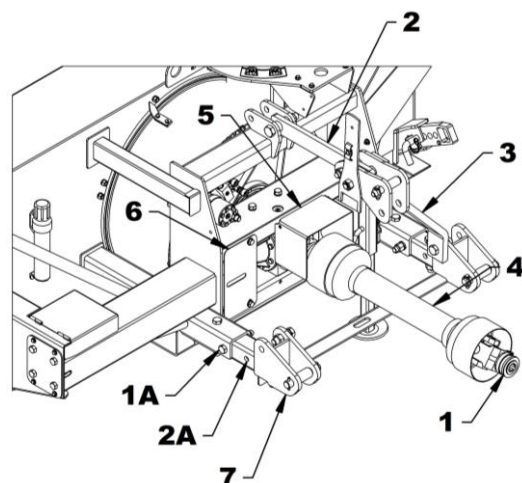


Figure 2



# ASSEMBLY

**ATTENTION:** The assembled reducer-inverter gearbox weighs more than 150lb; it is therefore recommended to install wooden blocks under the snowblower input shaft (item 1) to support the reducer-inverter gearbox during installation.

9. **Figure 3:** Remove the 1/2" x 1" serrated flange nuts (item 2) and the 1/2" nuts (item 3) already installed on the support brackets (item 4).

10. **Figure 3:** Slightly loosen the six 1/2" nuts (item 5) holding the support brackets (item 4) to the support (item 6).

For snowblowers with serial number 21400001 and above, the bolts must be in **position B**.

For snowblowers with serial number lower than 21400001, the bolts should be in **position A**.

11. Lubricate the snow blowers input shaft.

12. **Figure 3:** Install the assembled reducer-inverter gearbox on the snowblower carefully aligning the input shaft (item 1) with the gearbox shaft.

13. **Figure 3:** Slide the reducer-inverter shield (item 7) between the left bracket (item 4) and the snowblower to its original position.

14. **Figure 3:** Make sure that the sides of the support brackets (item 4) are as vertical as possible and secure with the 1/2" x 1" serrated flange nuts (item 2) and the 1/2" nuts (item 3). Tighten the bolts at 88 ft-lb or 119 N-M.

15. **Figure 3:** Push the reducer-inverter gearbox towards the front of the snowblower until it rests completely against the snowblower and tighten the six 1/2" nuts (item 5) holding the brackets (item 4) to the support (item 6). Tighten the bolts at 88 ft-lb or 119 N-M.

16. **Figure 2:** Install the upper hitch (item 2) as well as the left and right hitches (item 3).

**IMPORTANT:** Before installing the driveline, it is very important to recheck its length to ensure it is not too long. This operation is necessary since the snowblower input shaft is now closer to the tractor. Refer to the snowblower's manual for more details.

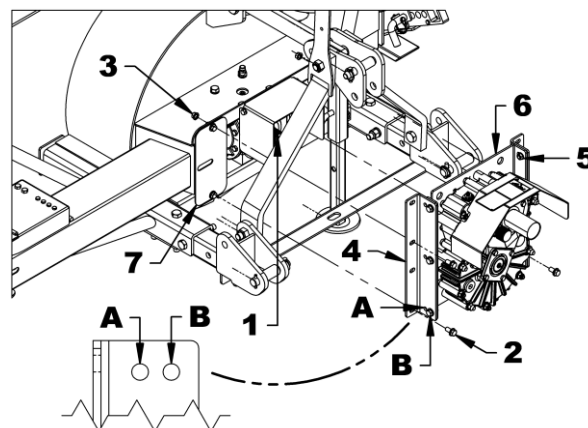
17. Replace the driveline shear bolt M12 x 65 gr.8.8 by a 7/16" x 2 1/2" gr.2 bolt.

18. Install the driveline on the snowblower.

19. Install the snowblower on the tractor

20. Install the driveline on the tractor.

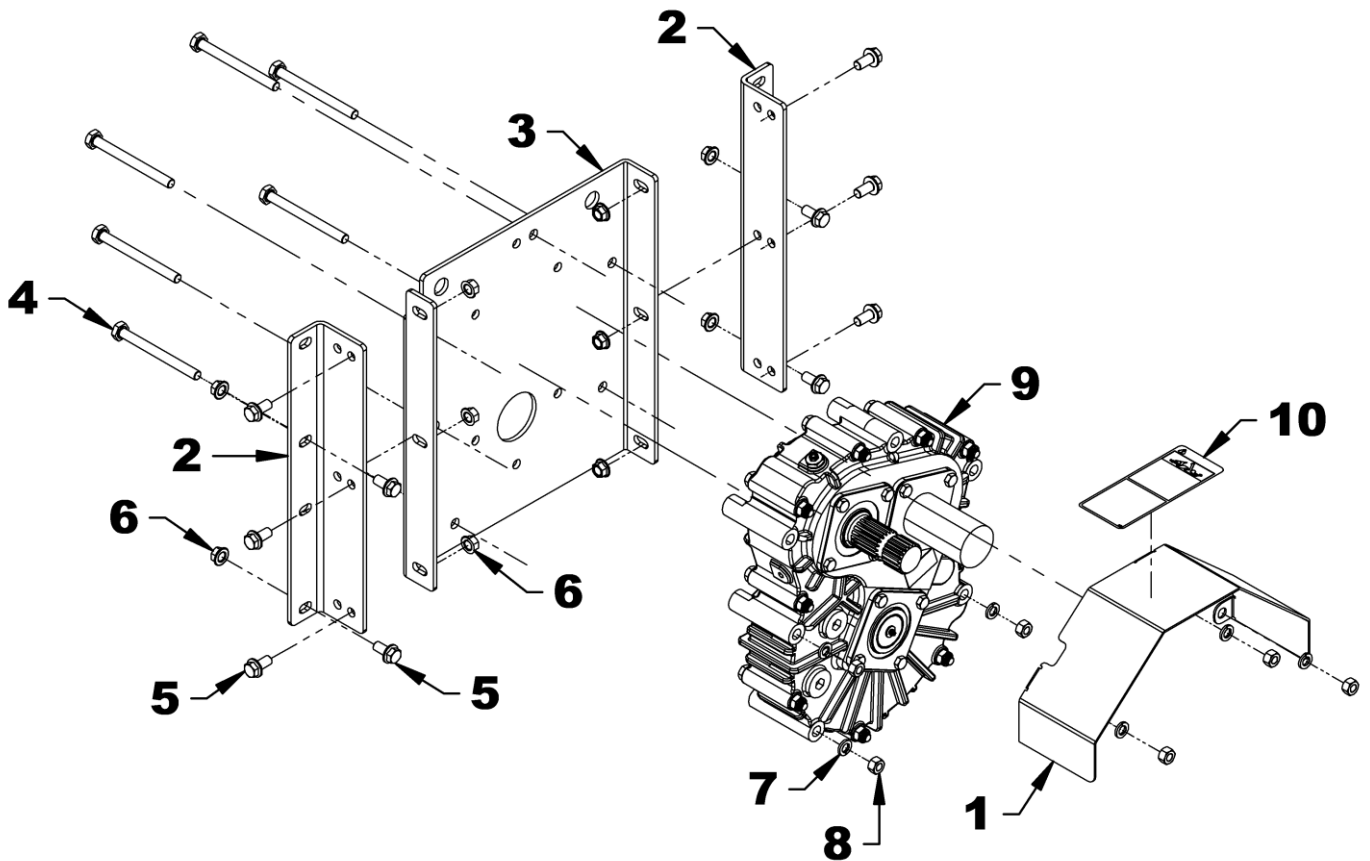
21. Move the snowblower up and down to make sure the driveline is the right length and has enough crossover.



# ASSEMBLY

## PARTS

REF.	DESCRIPTION	QTY	PART#
1	Reducer-inverter shield	1	671470
2	Reducer-inverter support bracket	2	671173
3	Reducer-inverter support	1	671174
4	Bolt hex 1/2"NC x 5 1/2" gr.5 PTD	6	O/L
5	Bolt serrated flange 1/2"NC x 1" gr.5 PTD	10	O/L
6	Nut serrated flange 1/2"NC PTD	10	O/L
7	Lockwasher 1/2" PTD	9	O/L
8	Hex nut $\varnothing$ 1/2"NC PTD	6	O/L
9	Reducer-inverter gearbox 1000 @ 540 - 1 3/4" 20 splines	1	4500167
10	Danger decal #652	1	2500792



# ASSEMBLY

## REDUCER INVERTER – 4500167

REF.	DESCRIPTION	QTY	PART #
1	Bearing 32011	4	4500171
2	Bearing 32013	2	4500172
3	Oil seal 55 x 90x 8	2	4500173
4	Oil seal 65 x 90x 8	2	4500174
5	Rubber end cap 90 x 8	2	4500175
6	Pressure vent 5PSI 1/2"NPT	1	4500176
7	Magnetic plug 1/2"NPT	1	4500177
8	Allen plug 1/2"NPT	3	4500178
9	Allen plug 3/4"NPT	2	4500179
-	Shims kit (not shown)	1	4500180

