



## How to change a belt on a three-rotor bucket



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This guide will help you change a belt on all the three rotor buckets. This is done the exact same way on both sides of the bucket on each of the model sizes.

If upon removing any items in this guide you find more components damaged contact your local dealer for replacement parts. If the reason for this guide is a belt snapping please check all components for damage incurred by it.

If there are any terms you are unfamiliar with, please see the glossary at the back.

To complete the belt change you will need the following equipment.

You will need:

- A new belt
- An 8mm Allen key
- A 3mm Allen key
- Bearing puller
- lock tight
- cleaning apparatus
- hammer
- ½ inch socket bar

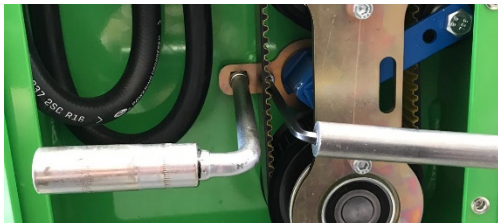
*Assuming the door has already been removed.*

### Loosen the “roster” bolts a belt tensioner

The roster, more commonly known as a belt tensioner (Gy200-050) is held in with two bolts (Gy100-069). These bolts have been highlighted in red.

Using an 8mm Allen key move the roster bolt, in a counter clockwise motion, and remove the bolt securing it in its current position. This has been highlighted in yellow.

The roster will move upon removing the bolt, this releases the tension, to stop the roster moving too much use a ½ inch socket bar to hold it in position.



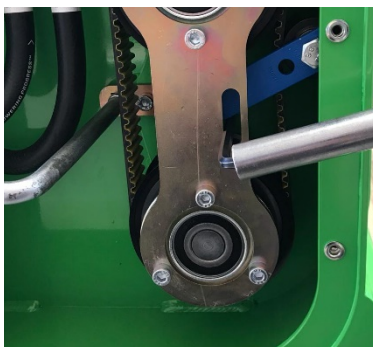
### loosen the other bolt

The second bolt securing the roster, shown below highlighted in red, can be loosened using an 8mm Allen key in a counter clockwise motion.



This shows the bolt is situated from the yellow highlight.

It is important to note it is not necessary to remove this bolt yet as the roster cannot be removed from such a small gap.



Use a ½ inch socket bar to secure the roster so it does not move and use the 8mm Allen key to loosen the bolt.

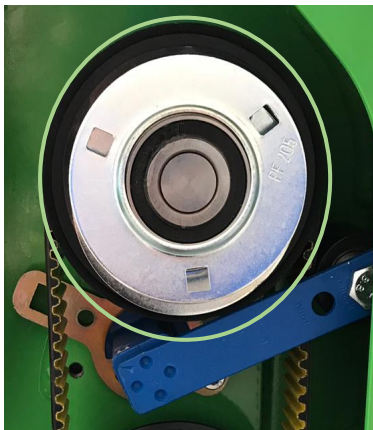
### Removing the “spectacle” or bearing support plate.

To do this, remove the three bolts (Gy100-068) securing the plate and the bearings together, using an 8mm Allen key in a counter clockwise motion.



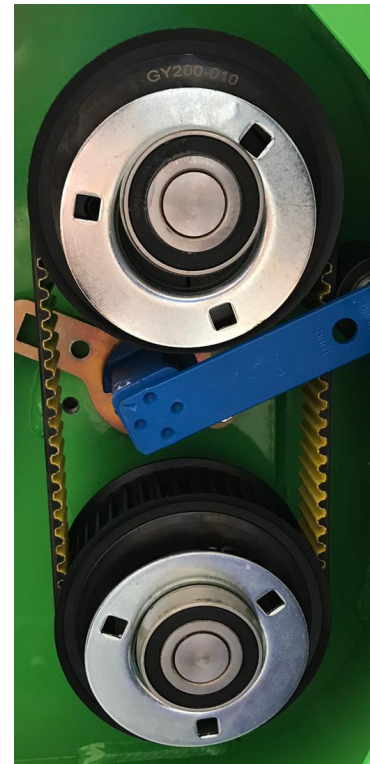
Do this to the top and bottom of the spectacle (Gy200-041) so that it can be removed.

Upon removal of the bolts the plate will become free, this will just come off with minimal force.



### Take out the bearing plates

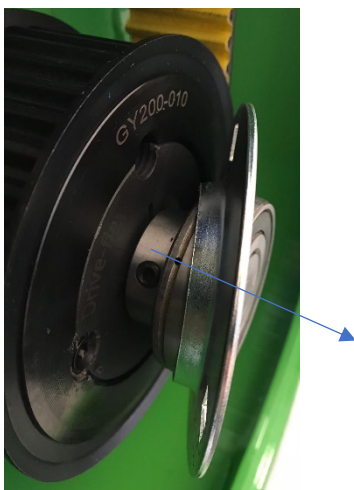
There are two plates, highlighted green, which surround the bearing (Gy200-037) keeping it onto the spectacle. The first of these can be removed to see the bearings. These will just slide off.



### Remove the bearing

Do the following on the bottom drive shaft only. Once removed the bearing is exposed. The bearing will contain one grub screw, before pulling the bearing remove this. Use a 3mm Allen key and twist in a counter clockwise motion.

Using a bearing puller to pull the bearing off the drive shaft. Then remove the second bearing plate.



The shaft should then look like this >





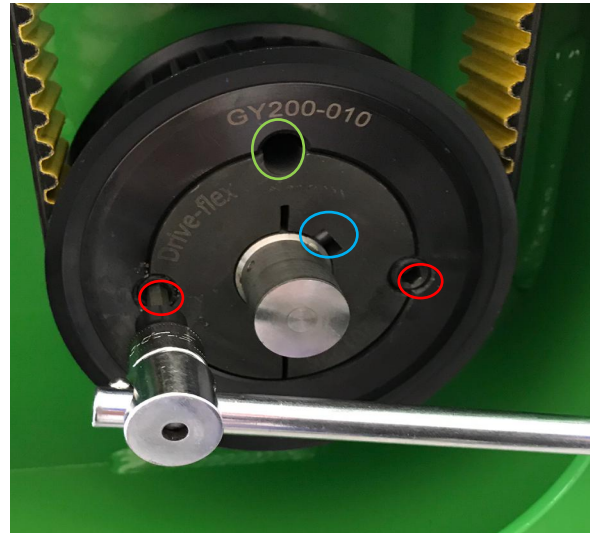
### Remove the bottom pulley

To remove the belt (Gy200-020) the pulley (GY200-010), the outside ring, needs the taper bush (Gy200-015), the inside ring, to be removed so that so that the belt has enough slack to be taken off.

Move the shaft so that the keyway, highlighted in blue, is as close to the top as possible.

To remove the taper, use an 8mm socket and begin to move in a counter clockwise motion. Do this to both grub screws.

Once removed use one grub screw and an 8mm socket to insert into the third hole, highlighted in green, in a clockwise motion.



Continue to do this even when the screw is submerged as eventually the taper will be popping outwards until it is completely free.





The belt will now be slack, remove the pulley.

#### Tip

The pulley and all the grub screws including the one on the bearing have been fitted with the application of Loctite. It would be advised to clean them before putting them back in.

#### Remove the roster

Remove the second bolt keeping the roster in position, using an 8mm Allen key in a counter clockwise motion, the bolt has been highlighted for you. This will loosen the roster which can be removed, if a belt snapped check for damage.



The belt can now be taken out and a new one put in its place.

Be careful that the key is not lost during this process.





### Adding a new belt in

Starting with a bare shaft add the new belt to the existing pulley.  
– hang the new belt over the second to last shaft.

Add Loctite to the newly cleaned pulley to the belt hanging it just inside.

Ensure the keyway is still inside the slot.



### Building up the pulley

Ensure the drive shaft has the keyway is facing upwards. Oil the thread and grub screws with activator and Loctite. Slip the assembly onto the shaft and locate a position that all the hole line up with one another with the keyway meeting as before. This has been highlighted in blue.

Tighten the screws alternately using an 8mm Allen Key in a clockwise motion. Hammer against the large end of the taper bush using a hammer and block sleeve alternately continuing to tighten the screws until they can be no more. Fill the holes with grease.



### Add the roster

Using the second bolt fix the roster to the belt box wall. Attach to the yellow highlighted hole in a clockwise motion using an 8mm Allen key ensure that the roster roller lies on the outside of the belt.



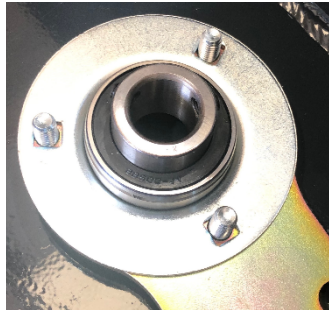
### Build up the “spectacle”

Using the bearing, three support plates, 6 nuts and bolts reassemble the bottom half of the spectacle.

Insert the nuts onto the spectacle on the highlighted side and add a bearing plate. When putting in make sure the slot is on the right-hand side.



The bearing plate must go on with the ridge facing into the circle. The plate will not sit properly otherwise and the bearing will not sit on top.



Place the bearing on top as shown in the following photo.



Add the second plate so that the curve bends upwards in line with the bearing. The circle will not fit on any other way.

Add the flange nuts to the bolts in a clockwise motion.



Note only half of the spectacle will be made up. The other half will be made while re-attaching to the shaft.

### Adding the spectacle in

Place the remaining ring around the top bearing. You must do this first once the spectacle is on it will be very difficult to do this step.

Attach the bottom of the spectacle to the shaft to do this tap it on with a hammer. once secure push the three bolts through the holes and secure them individually with a flange nut moving in the clockwise direction; tighten them using an 8mm Allen key. Continue to do the to all the spectacle bolts.

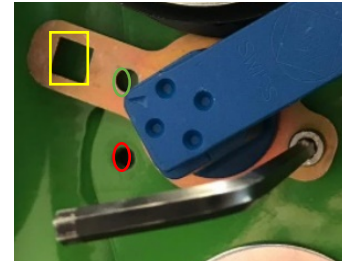
Add lock tight to the bearing's grub screw, using a 3mm Allen key and a clockwise motion insert into the bearing.





### Tighten the roster

Using a pull down on the box of the roster, highlighted yellow using a ½ inch socket bar, until the green and red circles align. Using an 8mm Allen key insert the bolt in a clockwise motion. Proceed to tighten the other bolt. Check that when tension is added the roller covers the belt, does not miss or over hang.



Run up your bucket and check for any leaks, loose components which could cause impairments or further issues with your bucket.

### Add the door back on

Clear out any dirt or residue left in the belt box of the bucket as this can damage the bucket.

Place the door inline with the holes, add the top and bottom screws first followed by the rest in any order, alternately tighten them until the door is secure.



## Glossary

### Three rotor bucket

Term used to describe the Gyru-star bucket models ranging from 3-60-3-150.

### Roster

A belt adjuster/ belt tensioner

Part number: Gy200-050                      quantity 1 per belt

### Roster bolts

The bolts use in the roster

Part number: Gy100-069                      quantity two per roster.

### Spectacle

Bearing support plate used to ensure the bearings align properly

Part number: Gy100-41                      quantity 1 per belt

### Bearing plate

Cylindrical plate used to hold bearings onto the spectacle.

Part of bearings                      quantity 4 per spectacle

### Spectacle bolts

Part number: Gy100-068                      quantity 6 per spectacle

### Spectacle nut-flange nut

Part number: Gy100-067                      quantity 6 per spectacle

### Grub screw

Small headless screw used to attach a handle to a cam or spindle. Used in the tapers and bearings.

There is no part number for these. There are two per pulley and one per bearing.

### Pulley

Used to connect the rotating components

Part number: Gy200-010                      quantity 2 per belt                      model 3-100-3150

### Bearings

Part number: Gy200-037                      quantity: 2 per spectacle                      model: all

### Belts

Part number: Gy200-020                      quantity: 1 per spectacle                      model: 3-100-3-150

### Taper bush

Part number: Gy200-015                      quantity: 1 per pulley