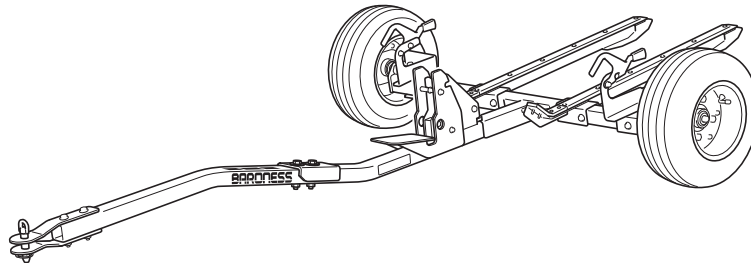


# ***TR50***

EZ Carry

## Owner's Operating Manual



Serial No. TR50 : 10376-

"Required reading"  
Read this manual before using the machine.

---

**BARONNESS**<sup>®</sup>  
Quality on Demand

Ver.1.2

TR50

# Greeting

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Thank you for purchasing the Baroness product.  
This manual describes the proper handling,  
adjustment, and inspection of your product.  
We hope you will use the product safely, and take  
advantage of its best performance.

Read this manual carefully to ensure that you thoroughly understand how to properly operate and maintain the product, and to avoid causing injury to yourself or others.

The operator is responsible for operating the product properly and safely.

Maintenance service for this machine should be performed by a mechanic with expertise.

If you have any questions concerning maintenance or genuine parts, please contact a Baroness dealer or Kyoisha.


When making inquiries about the product, please specify the product's model designation and serial number.

When loaning or transferring the product, please also provide this manual together with the product.

Kyoisha Co., Ltd.

## Warning Symbols


This manual uses the following warning symbols for handling precautions that are important for your safety.

|   |                       |
|---|-----------------------|
|  <p>696cq5-001</p>   | <p>Warning symbol</p> |
| <p>This symbol indicates the articles regarding “Danger,” “Warning,” or “Caution.” Those articles describe important safety precautions and so read them carefully to understand completely before operating the machine.<br/>Failure to adequately follow these safety precautions may cause an accident.</p>  |                       |
| <p><b>⚠ Danger</b><br/>This symbol indicates that serious injury or death will occur if the warning is ignored.</p> <p><b>⚠ Warning</b><br/>This symbol indicates that serious injury or death may occur if the warning is ignored.</p> <p><b>⚠ Caution</b><br/>This symbol indicates that injury or damage to property may occur if the warning is ignored.</p> <p><b>Important</b><br/>This symbol indicates precautions on the mechanism of the machine.</p> |                       |

# Introduction

---

## Precautionary Statement

 **Caution**

The information described in this manual is subject to change for improvement without prior notice.

When replacing parts, be sure to use genuine Baroness parts or parts designated by Kyoisha.

Note that the Baroness product warranty may not apply to defects caused by the use of parts from other companies.

Prior to use, carefully read the following manuals to thoroughly understand the contents for safe and correct operation.

- Baroness Owner's Operating Manual

## Purpose

This machine is intended for transporting Baroness walk behind reel mower.  
(LM18/56/66/101 series)

Do not use this machine in any way other than its intended purpose, and do not modify the machine.

Operating this machine for other purposes and modifying it may be very dangerous and may cause damage to the machine.

In addition, this machine do not operate it on public roads.

|  |                 |
|--|-----------------|
| <b>Safety</b> .....                      | <b>Page 1-1</b> |
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TR50

# Contents

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Preparation ..... Page 1-2

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Towing ..... Page 1-2



# Safety

Failure to adequately follow these safety precautions may cause an accident resulting in injury or death.

## Danger

This product is designed to ensure safe operation and has been tested and inspected thoroughly before shipment from the factory. The product is equipped with safety devices to prevent accidents.

However, whether the product demonstrates its original performance level depends on the manner in which it is operated and handled, as well as the manner in which it is managed on a daily basis.

Inappropriate use or management of the product may result in injury or death.

Observe the following safety instructions to ensure safe operation.

## Safe Operating Practices

### Training

1. Read this manual and other training material carefully.  
Be familiar with the controls, safety signs, and the proper use of the equipment.
2. If the operator or mechanic can not read the language used in this manual, it is the owner's responsibility to explain this material to them.
3. All operators and mechanics should seek and obtain professional and practical instruction.  
The owner is responsible for training the users.
4. Never allow people unfamiliar with these instructions to use or service the machine.
5. The owner/user can prevent and is responsible for accidents or injuries occurring to themselves, other people, or property.
6. Keep in mind that the owner, operator, and mechanic are responsible for accidents or hazards occurring to other people or their property.
7. You can find additional safety information where needed throughout this manual.
8. Determine the left and right sides of the machine from the normal operating position.

### Preparation

1. Evaluate the terrain to determine what accessories and attachments are needed to properly and safely perform the job.  
Only use accessories and attachments approved by the manufacturer.
2. Inspect the area where the equipment is to be used and remove all objects such as rocks, toys and wire which can be thrown by the machine.

### Operation

1. Take care when loading or unloading the machine into a trailer or a truck.  
Load or unload the machine in a flat and safe place.  
Before loading or unloading, set the parking brake on the truck or trailer, stop the engine, and chock the wheels.  
Fasten the machine to the truck with a rope or other suitable restraining device that has sufficient strength.  
When using a running board, select one with sufficient strength, length, and width and that will not cause the machine to slip.

### Maintenance

1. Never allow untrained personnel to service machine.
2. Implement the following work before adjusting, cleaning or repairing.  
[1] Stop the machine on level ground.
3. Appropriately manage and correctly use the tools necessary for servicing or adjusting the machine.
4. Keep all parts in good working condition and all hardware tightened.  
Replace all worn or damaged decals.
5. Keep all nuts, bolts and screws tight to be sure the equipment is in safe working condition.
6. Carefully release pressure from components with stored energy.

### Towing

1. Follow the manufacturer's recommendation for weight limits for towed equipment and towing on slopes.



**Recycle and Waste Disposal ..... Page 2-2**

About Recycle .....Page 2-2

About Waste Disposal ..... Page 2-2

Disposal

# Disposal

---

## Recycle and Waste Disposal

### About Recycle

Recycling battery etc. is recommended for environmental conservation and economical use of resources.

It may be required by local laws.

### About Waste Disposal

Make sure that waste generated when servicing or repairing the machine is disposed of in accordance with local regulations. (e.g. waste oil, antifreeze, rubber products, and wires etc.)

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Specifications .....Page 3-2

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# Product Overview

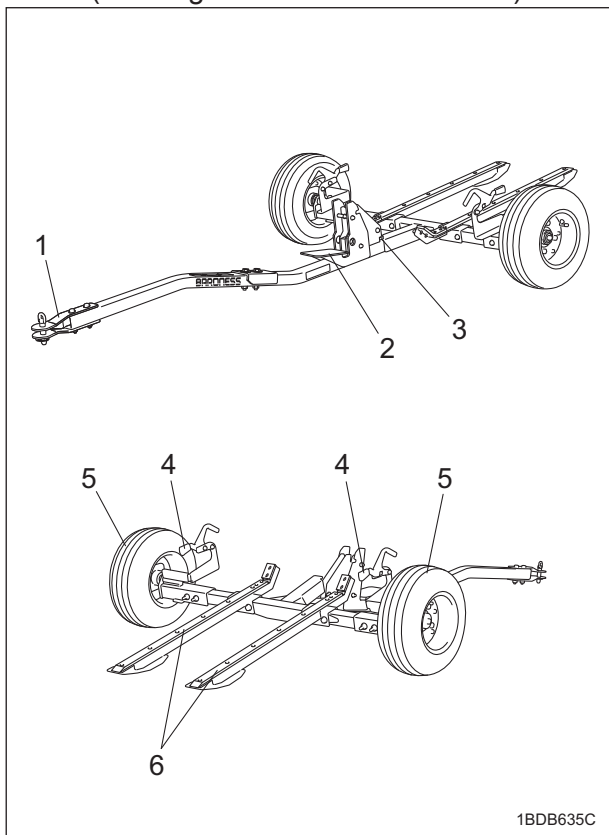
## Specifications

### Specifications

|                                   |                 |                                    |                   |             |           |
|-----------------------------------|-----------------|------------------------------------|-------------------|-------------|-----------|
| Model                             |                 | TR50                               |                   |             |           |
| Type (Loading method)             |                 | Mower drums                        |                   | Mower tires |           |
| Dimensions                        | Total length    | 266 cm                             | 104.72 in         | 273 cm      | 107.48 in |
|                                   | Total width     | 18" mower                          | 138 cm            | 54.33 in    | ←         |
|                                   |                 | 22" mower                          | 147 cm            | 57.87 in    | ←         |
|                                   |                 | 26" mower                          | 157 cm            | 61.81 in    | ←         |
| Total height                      | Tire            | 41 cm                              | 16.14 in          | ←           |           |
| Weight                            |                 | 58 kg                              | 127.87 lb         | 69 kg       | 152.12 lb |
| Maximum inclination for operation |                 | 15 degrees                         |                   |             | ←         |
| Tire size                         |                 | 16 x 6.50-8                        |                   |             | ←         |
| Tire pneumatic pressure           |                 | 200 kPa (2.0 kgf/cm <sup>2</sup> ) | 29.01 psi         | ←           |           |
| Applicable towing vehicle         | Towing capacity | 200 kg or more                     | 440.92 lb or more | ←           |           |

## Names of Each Section

TR50 (Loading method : Mower drums)

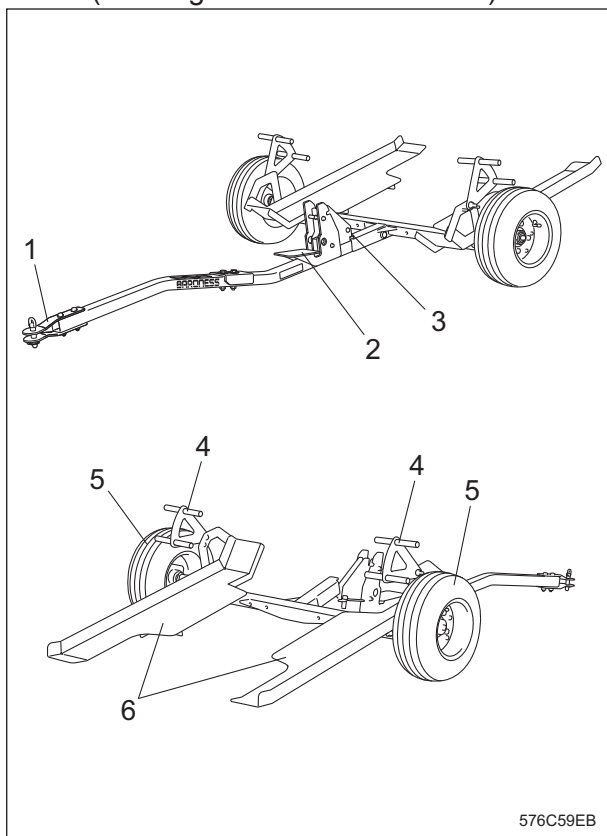


|   |                       |
|---|-----------------------|
| 1 | Hitch                 |
| 2 | Pedal                 |
| 3 | Axle lock lever       |
| 4 | Drum shaft lock lever |
| 5 | Tire                  |
| 6 | Tilting table         |

1BDB635C

Names of Each Section\_001

TR50 (Loading method : Mower tires)



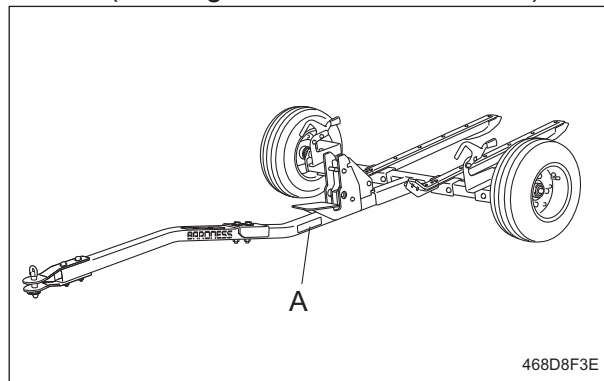
Names of Each Section\_002

|   |                       |
|---|-----------------------|
| 1 | Hitch                 |
| 2 | Pedal                 |
| 3 | Axle lock lever       |
| 4 | Mower tire lock lever |
| 5 | Tire                  |
| 6 | Tilting table         |

## Regulation Decals

### Positions of Regulation Decals

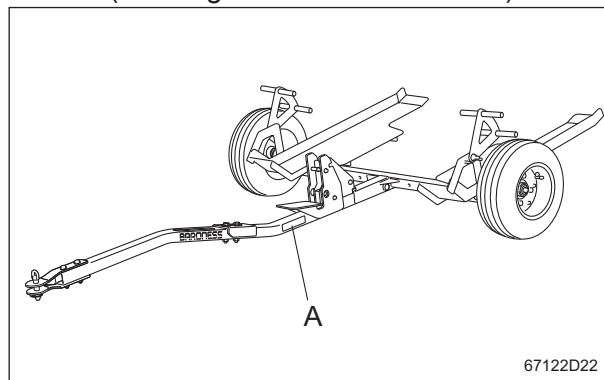
TR50 (Loading method : Mower drums)



Positions of Regulation Decals\_001

|   |                     |
|---|---------------------|
| A | Serial number plate |
|---|---------------------|

TR50 (Loading method : Mower tires)



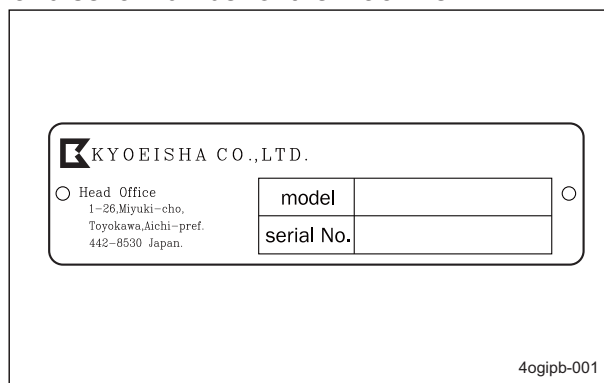
Positions of Regulation Decals\_002

|   |                     |
|---|---------------------|
| A | Serial number plate |
|---|---------------------|

### Description of Regulation Decals

#### Serial Number Plate

The serial number plate indicates the model and serial number of the machine.



Serial Number Plate\_001

# Product Overview

## Safety Signs and Instruction Signs

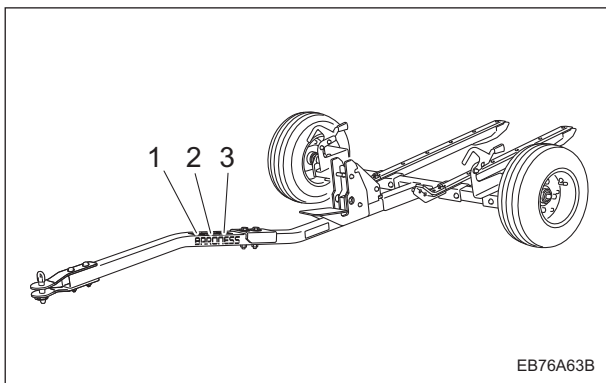
### About Safety Signs and Instruction Signs

**Important**

Safety decals and instruction decals are attached to this product. Make sure that they are preserved in their entirety. If they are damaged, become dirty, or peel off, replace them with new ones.

Part numbers for decals that need to be replaced are listed in the parts catalog. Order them from a Baroness dealer or Kyoisha.

### Positions of Safety Decals and Instruction Decals



Positions of Safety Decals and Instruction Decals\_001

|   |                              |
|---|------------------------------|
| 1 | DECAL, READ OWNERS MANUAL    |
| 2 | DECAL, ATTENTION AT SLOPE    |
| 3 | DECAL, PROHIBITED TO RIDE ON |

### Description of Safety Decals and Instruction Decals

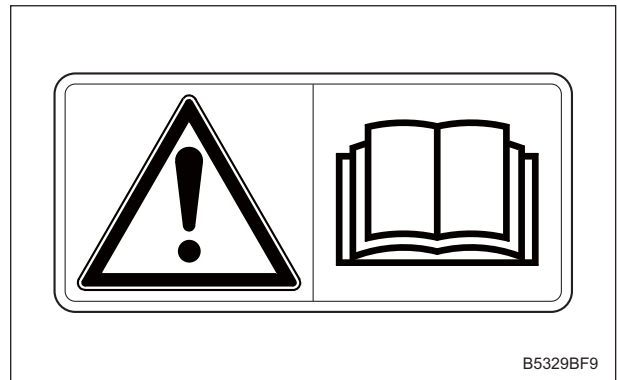
Decal on Reading Owner's Operating Manual

K4205002160

Decal, read Owner's Operating Manual

**Warning**

Read the Owner's Operating Manual.



B5329BF9

Decal on Reading Owner's Operating Manual\_001

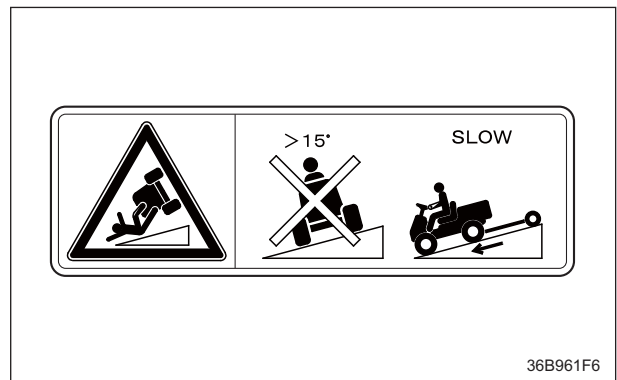
### Caution Slope Decal

K4205002170

Decal, caution slope

**Warning**

Rollover - Never travel on slopes of 15 degrees or more. Otherwise, there is a possibility of rollover. When you descend a slope, drive at low speed.



36B961F6

Caution Slope Decal\_001

## Prohibited Ride Decal

K4205002180

Decal, prohibited to ride on



Caution

Never allow a person to ride on the trailer while traveling. Otherwise, the person may fall and get injured.

Do not load and transport any machine other than the Baroness walk-behind reel mower series LM18/56/66/101.



Prohibited Ride Decal\_001

# Product Overview

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# Handling Instructions

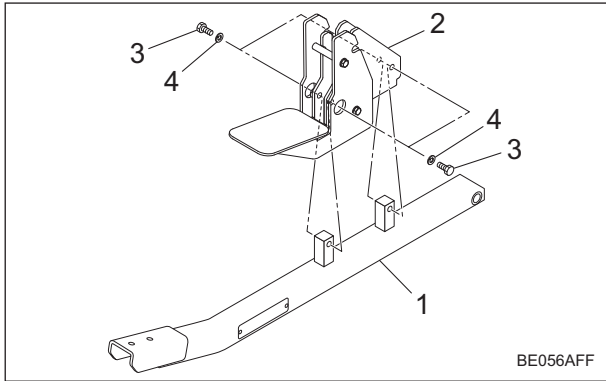
|   |                  |                                |                  |
|---|------------------|--------------------------------|------------------|
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# Handling Instructions

## Preparation for Use

### Assembling Towing Section

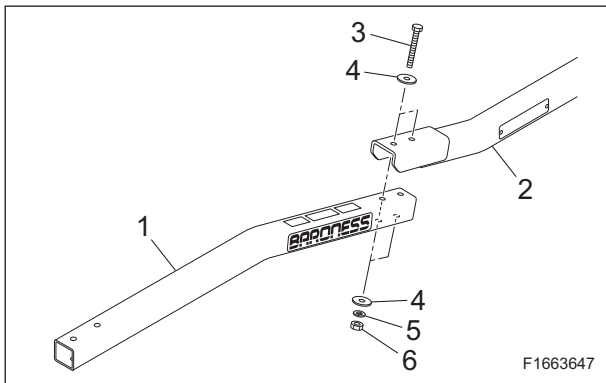
1. Attach the pedal hook to the rear traction bar.



Assembling Towing Section\_001

|   |                   |
|---|-------------------|
| 1 | Rear traction bar |
| 2 | Pedal hook        |
| 3 | Bolt              |
| 4 | Spring washer     |

2. Align the holes of front and rear traction bars.
3. Install the bolts to the aligned holes on the traction bars and fix them with the nuts.



Assembling Towing Section\_002

|   |                    |
|---|--------------------|
| 1 | Front traction bar |
| 2 | Rear traction bar  |
| 3 | Bolt               |
| 4 | Washer             |
| 5 | Spring washer      |
| 6 | Nut                |

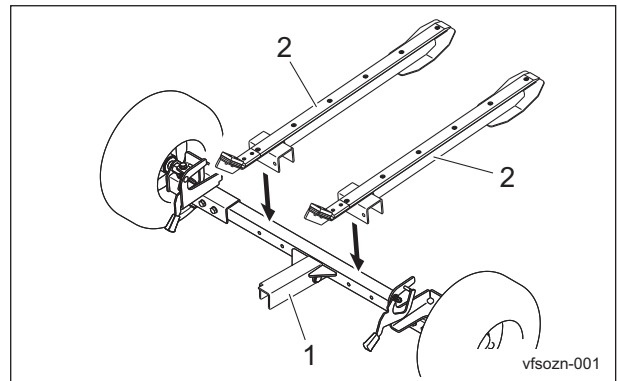
### Connection between Axle Section and Tilting Tables

#### Connection between Axle Unit and Tilting Tables (Mower Drums)

Note:

Depending on the specifications, this function may not be available.

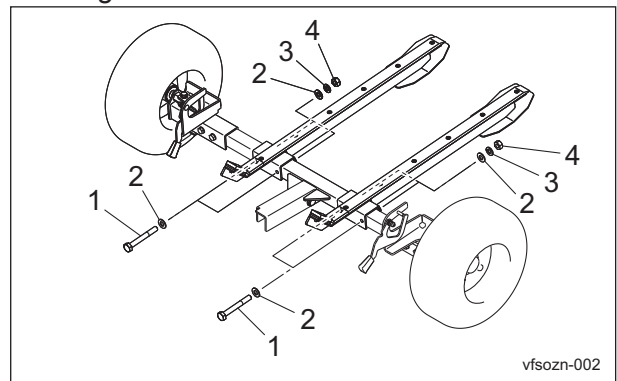
1. Fit the tilting tables onto the axle unit.
2. Align the holes in the tilting tables and axle unit.



Connection between Axle Unit and Tilting Tables (Mower Drums)\_001

|   |               |
|---|---------------|
| 1 | Axle unit     |
| 2 | Tilting table |

3. Install the bolts to secure the axle unit and tilting tables.



Connection between Axle Unit and Tilting Tables (Mower Drums)\_002

|   |               |
|---|---------------|
| 1 | Bolt          |
| 2 | Washer        |
| 3 | Spring washer |
| 4 | Nut           |

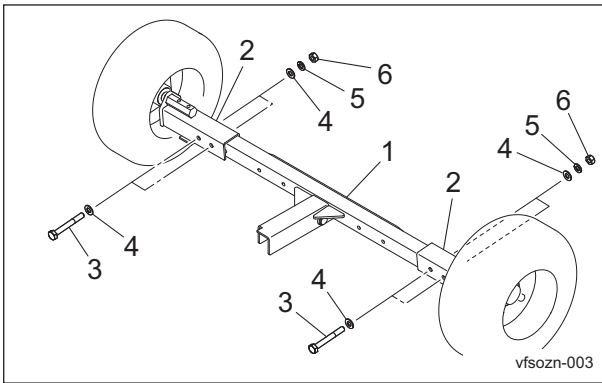
# Handling Instructions

## Connection between Axle Section and Tilting Tables (Mower Tires)

**Note:**

Depending on the specifications, this function may not be available.

1. Remove the bolts securing the axle section and tire section.



Connection between Axle Section and Tilting Tables (Mower Tires)\_001

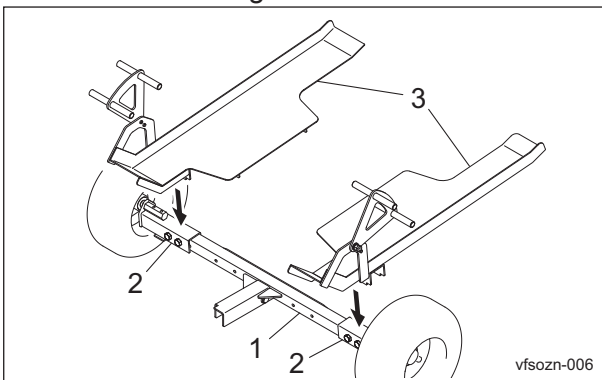
|   |               |
|---|---------------|
| 1 | Axle section  |
| 2 | Tire section  |
| 3 | Bolt          |
| 4 | Washer        |
| 5 | Spring washer |
| 6 | Nut           |

2. Adjust the tread width.

**Note:**

The factory default position is that for a 22-inch mower.

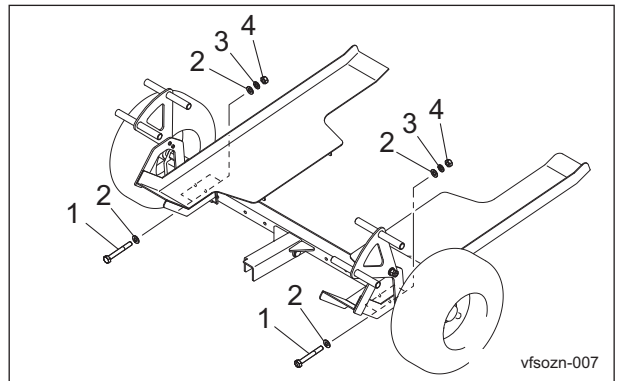
3. Fit the tilting tables over the tire section.
4. Align the holes in the axle section, tire section and tilting tables.



Connection between Axle Section and Tilting Tables (Mower Tires)\_002

|   |               |
|---|---------------|
| 1 | Axle section  |
| 2 | Tire section  |
| 3 | Tilting table |

5. Install the bolts removed in step 1 to secure the tilting tables, axle section and tire section.

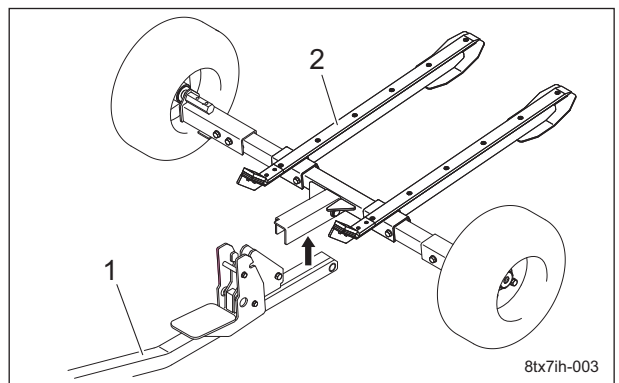


Connection between Axle Section and Tilting Tables (Mower Tires)\_003

|   |               |
|---|---------------|
| 1 | Bolt          |
| 2 | Washer        |
| 3 | Spring washer |
| 4 | Nut           |

## Connection between Towing Section and Axle Section

1. Fit the towing section into the axle section.
2. Align the holes in the axle section and towing section.



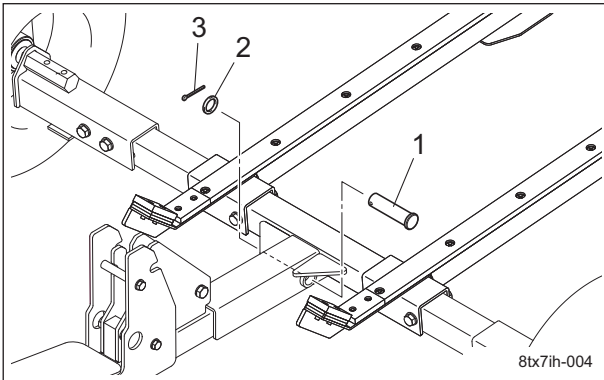
Connection between Towing Section and Axle Section\_001

|   |                |
|---|----------------|
| 1 | Towing section |
| 2 | Axle section   |

3. Apply grease to the pin, and then insert the pin through the holes of the axle section and towing section.
4. Install the washer.

# Handling Instructions

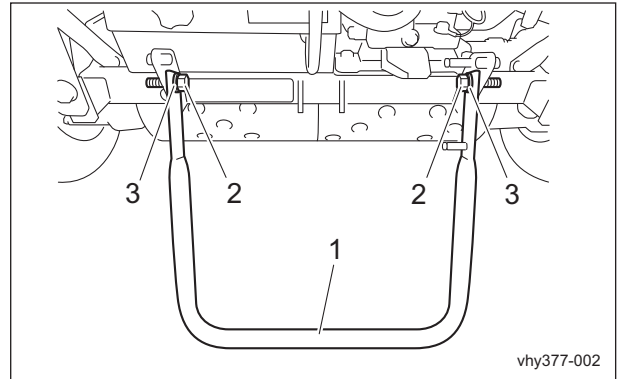
5. Insert the cotter pin through the hole in the pin.



Connection between Towing Section and Axle Section\_002

|   |            |
|---|------------|
| 1 | Pin        |
| 2 | Washer     |
| 3 | Cotter pin |

2. Insert long fulcrum bolts B.



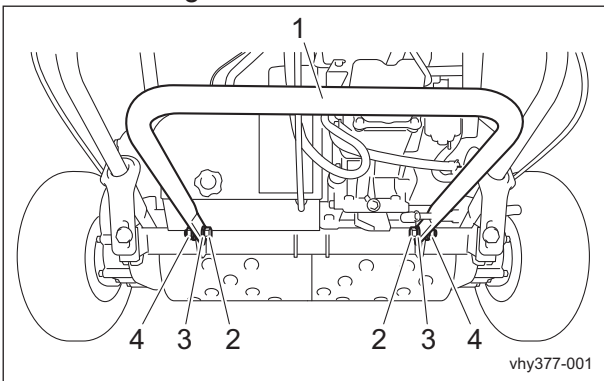
Installation of Greens Mower Fixture\_002

|   |                |
|---|----------------|
| 1 | Stand          |
| 2 | Fulcrum bolt B |
| 3 | Washer         |

## Installation of Greens Mower Fixture

For the included parts to be installed on the greens mower, refer to the parts catalog of this machine.

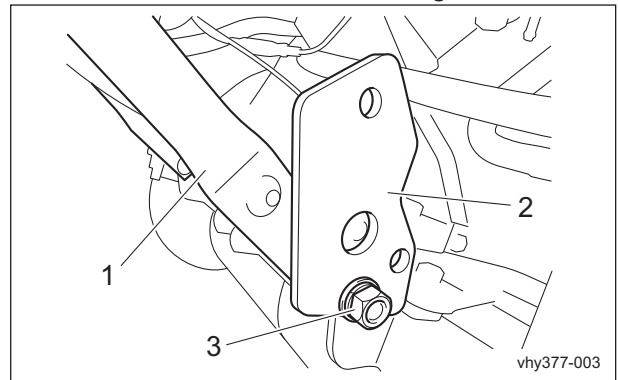
1. Remove fulcrum bolts A and the nuts for the stand of the greens mower to be loaded.



Installation of Greens Mower Fixture\_001

|   |                |
|---|----------------|
| 1 | Stand          |
| 2 | Fulcrum bolt A |
| 3 | Washer         |
| 4 | Nut            |

3. Temporarily install the side plate with the fulcrum bolt B and nut for the right side.



Installation of Greens Mower Fixture\_003

|   |            |
|---|------------|
| 1 | Stand      |
| 2 | Side plate |
| 3 | Nut        |

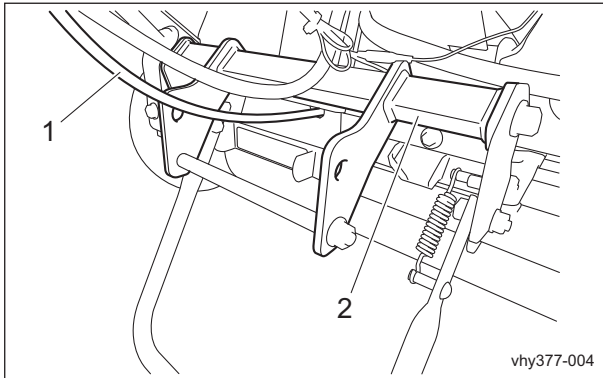
# Handling Instructions

**Important**

The position for passing the clutch wire differs depending on the model of the greens mower. Be sure to pass the clutch wire at the correct position.

**LM101**

Pass the clutch wire below the fixture.

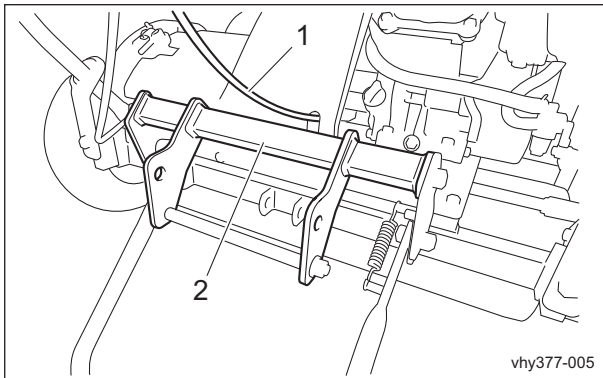


Installation of Greens Mower Fixture\_004

|   |             |
|---|-------------|
| 1 | Clutch wire |
| 2 | Fixture     |

**LM18/56/66 series**

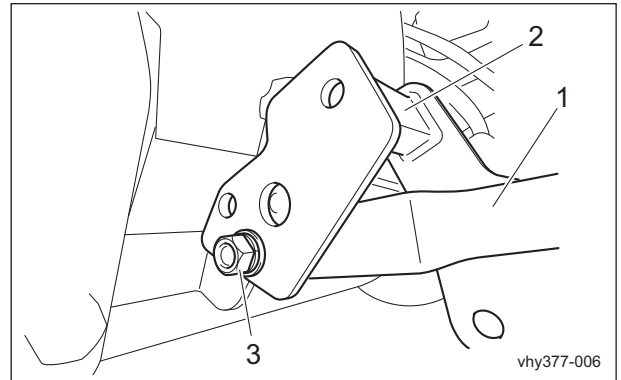
Pass the clutch wire above the fixture.



Installation of Greens Mower Fixture\_005

|   |             |
|---|-------------|
| 1 | Clutch wire |
| 2 | Fixture     |

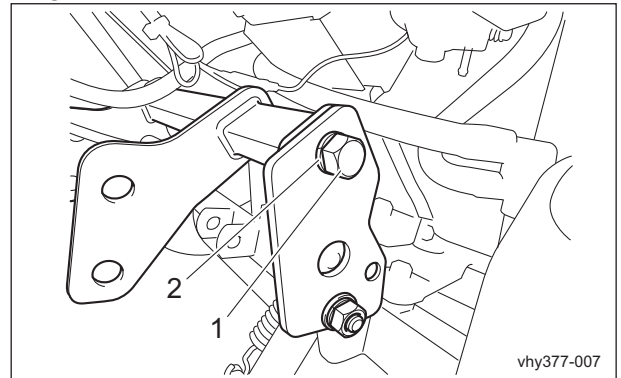
4. Temporarily install the fixture with the fulcrum bolt B and nut for the left side.



Installation of Greens Mower Fixture\_006

|   |         |
|---|---------|
| 1 | Stand   |
| 2 | Fixture |
| 3 | Nut     |

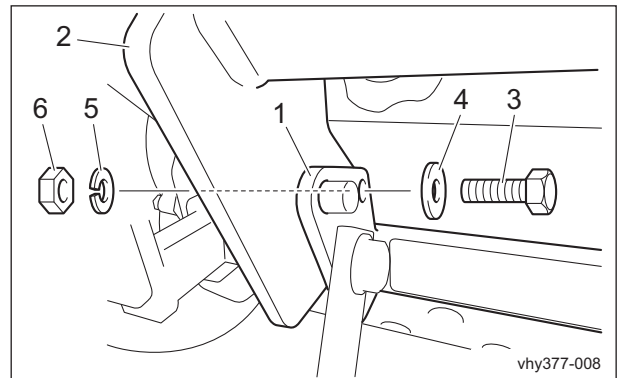
5. Secure the fixture to the side plate on the right side with the bolt.



Installation of Greens Mower Fixture\_007

|   |               |
|---|---------------|
| 1 | Bolt          |
| 2 | Spring washer |

6. Align the holes in the stand mounting plate and in the fixture, and then secure them with the bolt and nut.



Installation of Greens Mower Fixture\_008

Handling Instructions

# Handling Instructions

|   |                      |
|---|----------------------|
| 1 | Stand mounting plate |
| 2 | Fixture              |
| 3 | Bolt                 |
| 4 | Washer               |
| 5 | Spring washer        |
| 6 | Nut                  |

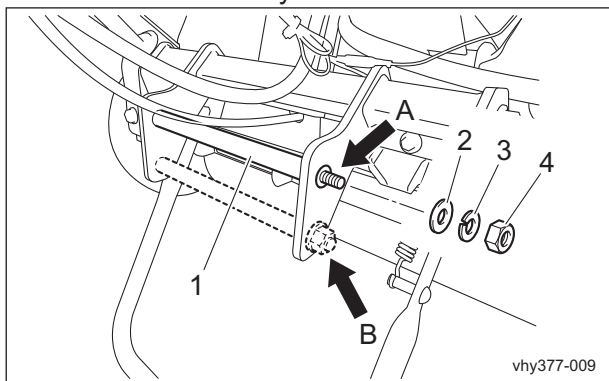
7. Tighten all bolts and nuts used to temporarily install the side plate and the fixture.

**Important**

The position for attaching the stand stay differs depending on the type of mower trailer that is used.

Attach it at the correct position.

8. Install the stand stay with the nuts.



Installation of Greens Mower Fixture\_009

|   |  |
|---|--|
| 1 | Stand stay                                     |
| 2 | Washer   |
| 3 | Spring washer                                  |
| 4 | Nut  |
| A | Position of stand stay for mower drums loading |
| B | Position of stand stay for mower tires loading |

## Precautions for Connecting the Mower Trailer

**Caution**

Be sure to connect and disconnect the mower trailer on a level surface.

**Important**

The total weight of the trailer and greens mower is approximately 200 kg (440.92 lb). Have a vehicle ready with the ability to tow more than this weight.

**Important**

Have a vehicle ready onto which the included pin (φ20) can be installed. If anything other than the included pin is used, the hitch may be damaged.

**Important**

Make sure that the towing vehicle hitch connected with the mower trailer is sufficiently strong.

# Handling Instructions

## Connection Method of Mower Trailer

**Warning**

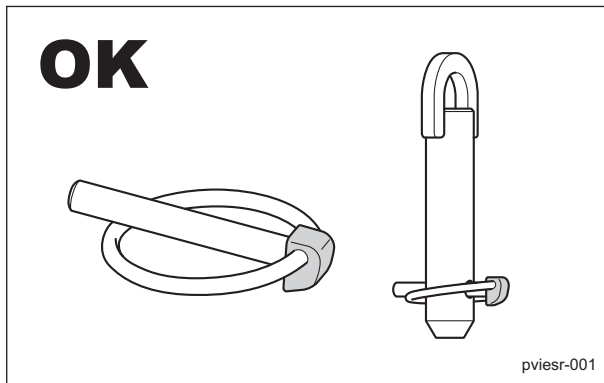
Be sure to install the clip pin so that the pin will not fall out during transportation.

**Important**

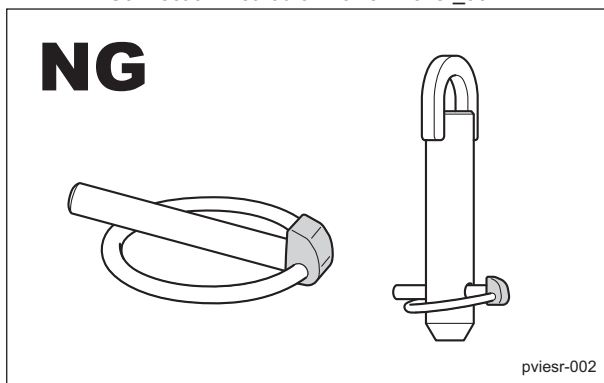
When connecting the mower trailer to the towing vehicle, adjust the trailer hitch so that the traction bar is parallel to the ground.

**Important**

The clip pin has a specific installation orientation. If the clip pin is installed with the wrong orientation, it may fall out.

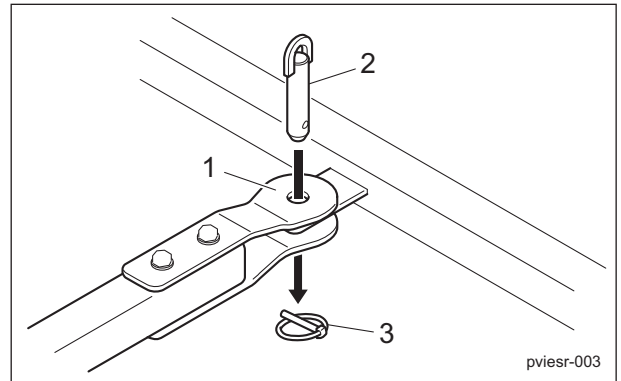


Connection Method of Mower Trailer\_001



Connection Method of Mower Trailer\_002

1. Install the included pin into the hitch.
2. Check the orientation of the clip pin, and then install it so that it will not fall out.



Connection Method of Mower Trailer\_003

|   |          |
|---|----------|
| 1 | Hitch    |
| 2 | Pin      |
| 3 | Clip pin |

## Inspections

Inspect the machine according to the maintenance schedule so that you will be able to take advantage of its optimum performance for a long period of time.

### Tire

#### Inspection of Tires

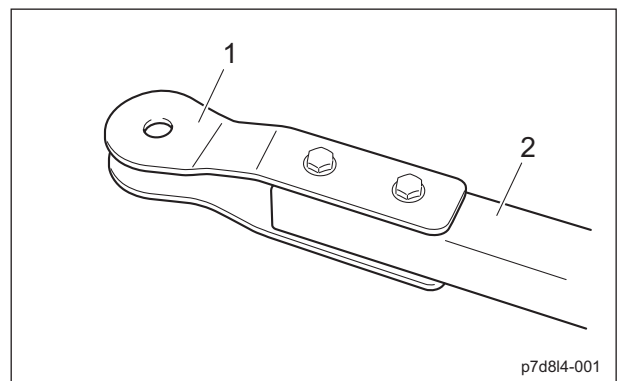
1. Check the pneumatic pressure of the tires.
2. Make sure that there are no cracks, damage or abnormal wear.

| Tire size   | Pneumatic pressure                 |
|-------------|------------------------------------|
| 16 x 6.50-8 | 200 kPa (2.0 kgf/cm <sup>2</sup> ) |

### Hitch

#### Inspection of Hitch

1. Make sure that there is no wear or deterioration of the hitch.
2. Make sure that there is no damage to the hitch.
3. Make sure that there is no deformation of the hitch.



Inspection of Hitch\_001

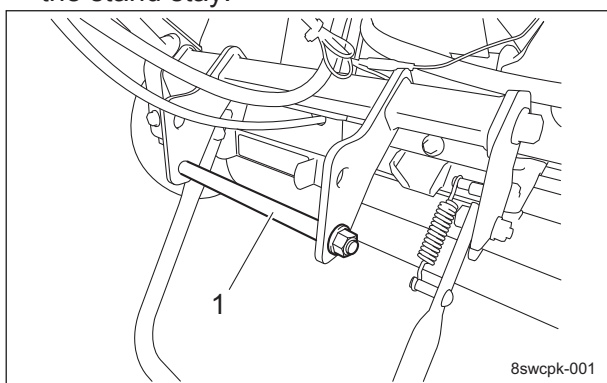
# Handling Instructions

|   |              |
|---|--------------|
| 1 | Hitch        |
| 2 | Traction bar |

## Stay

### Inspection of Stand Stay

1. Make sure that there is no wear or deterioration of the stand stay.
2. Make sure that there is no damage to the stand stay.
3. Make sure that there is no deformation of the stand stay.



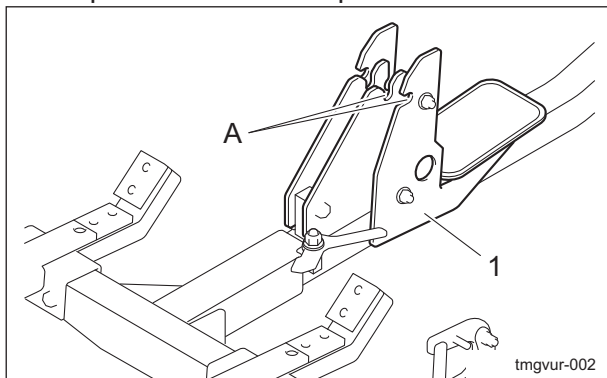
Inspection of Stand Stay\_001

|   |            |
|---|------------|
| 1 | Stand stay |
|---|------------|

## Pedal Hook

### Inspection of Pedal Hooks

1. Make sure that there is no wear or deterioration of the pedal hooks of the pedal and frame.
2. Make sure that there is no damage to the pedal hooks of the pedal and frame.
3. Make sure that there is no deformation of the pedal hooks of the pedal and frame.



Inspection of Pedal Hooks\_001

|   |       |
|---|-------|
| 1 | Pedal |
| A | Hook  |



## Tightening Torques

### Important

Refer to the Tightening Torque table.  
Note that the Baroness product warranty may not apply to defects caused by incorrect or overtorque tightening, etc.

## Standard Tightening Torques

### Bolts and Nuts

### Important

A number of bolts are used in each part of this machine.  
Be sure to re-tighten the bolts and nuts, because they may be loosened at the earlier stage of the use.

As to the bolts and nuts without any special instruction, tighten them in appropriate tightening torque with proper tool.

Too much tightening may cause the looseness or damage of the screw.

The strength of tightening is determined by types of screws, strength, the friction of thread face or base face and others.

The table below is for the galvanized or parkerized bolts.

In case that the strength of internal thread is weak, it is not applied.

Do not use rusty or sand attached "screw."

Otherwise, it may cause insufficient tightening even if you apply the specified tightening torque.

The friction of the screw face becomes higher and the tightening torque is canceled out by the friction, therefore sufficient tightening cannot be applied.

If "screw" is wet by water or oil, do not tighten it with normal tightening torque.

If the screw is wet, the torque coefficient will get smaller and it may result in too much tightening.


Too much tightening may cause looseness by the screw stretched or result in damage.



Do not use a bolt experienced too much burden.

Using the impact wrench requires the skill.

Do exercise as much as possible for steady tightening.

# Handling Instructions

| Nominal diameter | General bolt  |                     |                     |
|------------------|---|---------------------|---------------------|
|                  | Strength classification 4.8   |                     |                     |
|                  | <br>tib3yb-001 |                     |                     |
|                  | N-m   | kgf-cm              | lb-in               |
| M5               | 3 - 5   | 30.59 - 50.99       | 26.55 - 44.26       |
| M6               | 7 - 9   | 71.38 - 91.77       | 61.96 - 79.66       |
| M8               | 14 - 19   | 142.76 - 193.74     | 123.91 - 168.17     |
| M10              | 29 - 38   | 295.71 - 387.49     | 256.68 - 336.34     |
| M12              | 52 - 67   | 530.24 - 683.20     | 460.25 - 593.02     |
| M14              | 70 - 94   | 713.79 - 958.52     | 619.57 - 831.99     |
| M16              | 88 - 112  | 897.34 - 1142.06    | 778.89 - 991.31     |
| M18              | 116 - 144   | 1,182.85 - 1,468.37 | 1,026.72 - 1,274.54 |
| M20              | 147 - 183   | 1,498.96 - 1,866.05 | 1,301.10 - 1,619.73 |
| M22              | 295   | 3,008.12            | 2,611.05            |
| M24              | 370   | 3,772.89            | 3,274.87            |
| M27              | 550   | 5,608.35            | 4,868.05            |
| M30              | 740   | 7,545.78            | 6,549.74            |

| Nominal diameter | Heat-treated bolt   |                     |                     |   |                     |                     |
|------------------|---|---------------------|---------------------|---|---------------------|---------------------|
|                  | Strength classification 8.8   |                     |                     | Strength classification 10.9  |                     |                     |
|                  | <br>tib3yb-002 |                     |                     | <br>tib3yb-003 |                     |                     |
|                  | N-m   | kgf-cm              | lb-in               | N-m   | kgf-cm              | lb-in               |
| M5               | 5 - 7   | 50.99 - 71.38       | 44.26 - 61.96       | 7 - 10  | 71.38 - 101.97      | 61.96 - 88.51       |
| M6               | 8 - 11  | 81.58 - 112.17      | 70.81 - 97.36       | 14 - 18   | 142.76 - 183.55     | 123.91 - 159.32     |
| M8               | 23 - 29   | 234.53 - 295.71     | 203.57 - 256.68     | 28 - 38   | 285.52 - 387.49     | 247.83 - 336.34     |
| M10              | 45 - 57   | 458.87 - 581.23     | 398.30 - 504.51     | 58 - 76   | 591.43 - 774.97     | 513.36 - 672.68     |
| M12              | 67 - 85   | 683.20 - 866.75     | 593.02 - 752.34     | 104 - 134   | 1,060.49 - 1,366.40 | 920.50 - 1186.03    |
| M14              | 106 - 134   | 1,080.88 - 1,366.40 | 938.21 - 1,186.03   | 140 - 188   | 1,427.58 - 1,917.04 | 1,239.14 - 1,663.99 |
| M16              | 152 - 188   | 1,549.94 - 1,917.04 | 1,345.35 - 1,663.99 | 210 - 260   | 2,141.37 - 2,651.22 | 1,858.71 - 2,301.26 |
| M18              | 200 - 240   | 2,039.40 - 2,447.28 | 1,770.20 - 2,124.24 | 280 - 340   | 2,855.16 - 3,466.98 | 2,478.28 - 3,009.34 |
| M20              | 245 - 295   | 2,498.27 - 3,008.12 | 2,168.50 - 2,611.05 | 370 - 450   | 3,772.89 - 4,588.65 | 3,274.87 - 3,982.95 |
| M22              | -   | -                   | -                   | 530   | 5,404.41            | 4,691.03            |
| M24              | -   | -                   | -                   | 670   | 6,831.99            | 5,930.17            |
| M27              | -   | -                   | -                   | 1,000   | 10,197.00           | 8,851.00            |
| M30              | -   | -                   | -                   | 1,340   | 14,628.78           | 11,860.34           |

**Note:**

The same values are applied to "fine screw thread."

# Handling Instructions

## Principal Tightening Torques

### Tightening Torque by Model

TR50

Tighten the following bolts and nuts at the torque specified in the table.

For thread locking adhesive, apply a middle strength thread locker (ThreeBond 1322 or equivalent anaerobic sealant).

| Location               | Code        | Part name       | Tightening torque |                 |                 | Thread locking adhesive |
|------------------------|-------------|-----------------|-------------------|-----------------|-----------------|-------------------------|
|                        |             |                 | N-m               | kgf-cm          | lb-in           |                         |
| Axle                   | K0013100802 | BOLT, HT M10-80 | 58 - 76           | 591.43 - 774.97 | 513.36 - 672.68 | -                       |
| Tilting Table          | K0013100802 | BOLT, HT M10-80 | 58 - 76           | 591.43 - 774.97 | 513.36 - 672.68 | -                       |
| Axle and tilting table | K0013100902 | BOLT, HT M10-90 | 58 - 76           | 591.43 - 774.97 | 513.36 - 672.68 | -                       |

# Handling Instructions

## Adjustment before Work

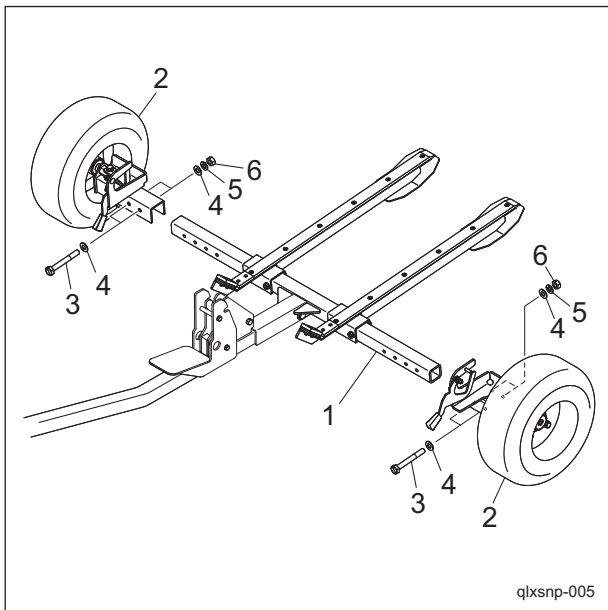
### Adjustment of Tread Width

#### Adjustment of Tread Width (Mower Drums)

Note:

Depending on the specifications, this function may not be available.

1. Remove the bolts securing the axle section and tire section.

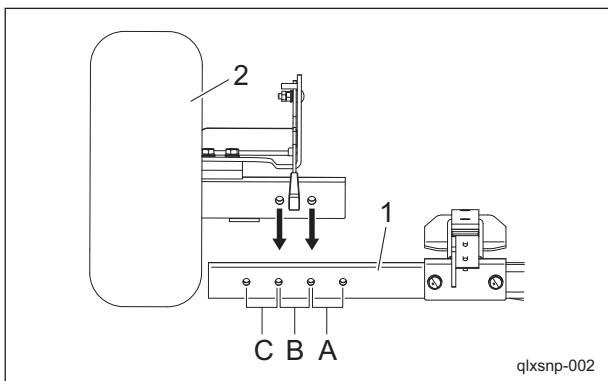


Adjustment of Tread Width (Mower Drums)\_001

|   |               |
|---|---------------|
| 1 | Axle section  |
| 2 | Tire section  |
| 3 | Bolt          |
| 4 | Washer        |
| 5 | Spring washer |
| 6 | Nut           |

2. The installation position of the axle holes differs depending on the greens mower to be loaded.

Align the appropriate holes in the axle section and tire section.



Adjustment of Tread Width (Mower Drums)\_002

|   |               |
|---|---------------|
| 1 | Axle section  |
| 2 | Tire section  |
| A | 18-inch mower |
| B | 22-inch mower |
| C | 26-inch mower |

3. Install the bolt removed in step 1 to secure the axle section and tire section.
4. Follow the same steps to adjust the opposite side.

Note:

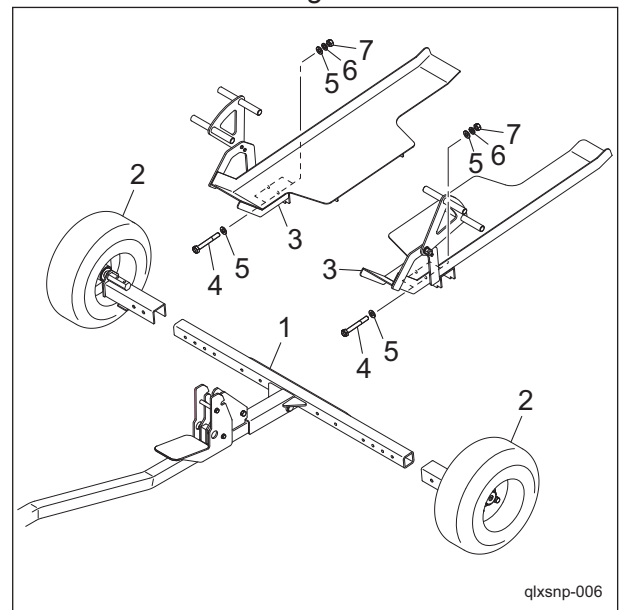
The factory default position is that for a 22-inch mower.

#### Adjustment of Tread Width (Mower Tires)

Note:

Depending on the specifications, this function may not be available.

1. Remove the bolts securing the axle section, tire section and tilting tables.

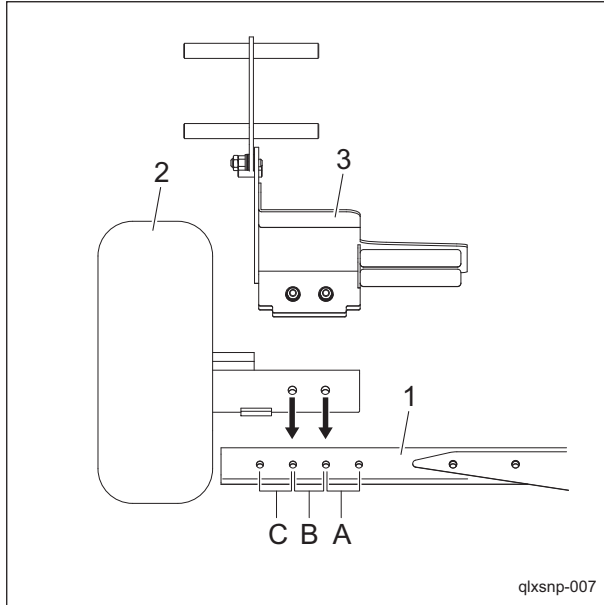


Adjustment of Tread Width (Mower Tires)\_001

|   |               |
|---|---------------|
| 1 | Axle section  |
| 2 | Tire section  |
| 3 | Tilting table |
| 4 | Bolt          |
| 5 | Washer        |
| 6 | Spring washer |
| 7 | Nut           |

# Handling Instructions

- The installation position of the axle holes differs depending on the greens mower to be loaded.  
Align the appropriate holes in the axle section, tire section and tilting table.



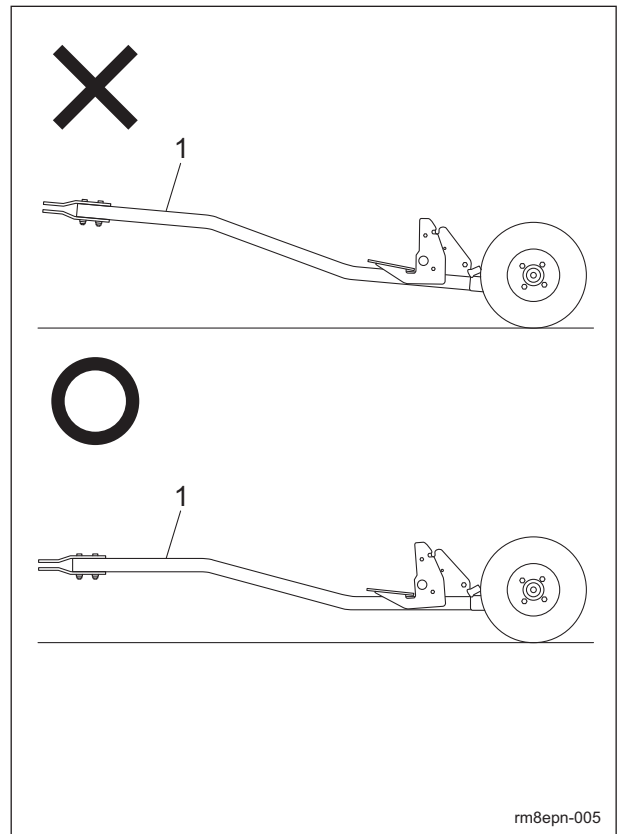
Adjustment of Tread Width (Mower Tires)\_002

|   |               |
|---|---------------|
| 1 | Axle section  |
| 2 | Tire section  |
| 3 | Tilting table |
| A | 18-inch mower |
| B | 22-inch mower |
| C | 26-inch mower |

- Install the bolt removed in step 1 to secure the axle section, tire section and tilting table.
- Follow the same steps to adjust the opposite side.

## Adjustment of Trailer Hitch

When connecting the mower trailer to the towing vehicle, adjust the trailer hitch if the traction bar is not parallel to the ground.

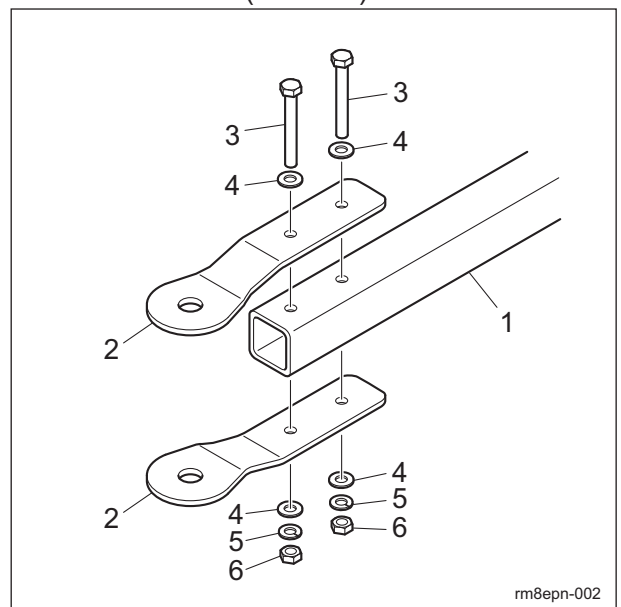


Adjustment of Trailer Hitch\_001

|   |              |
|---|--------------|
| 1 | Traction bar |
|---|--------------|

The hitch can be adjusted to one of three heights.  
Remove the bolt securing the hitch, and then install the hitch at the height that fits the towing vehicle.

- Standard hitch installation  
The height from the ground to the trailer hitch is 299 mm (11.77 in).



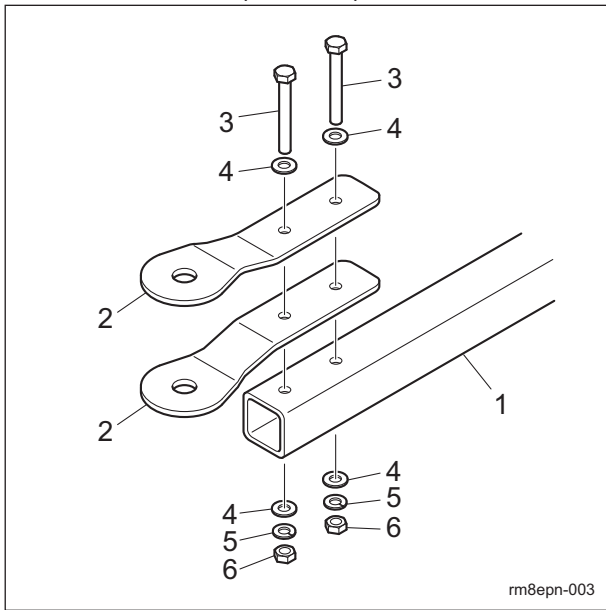
Adjustment of Trailer Hitch\_002

# Handling Instructions

|   |               |
|---|---------------|
| 1 | Traction bar  |
| 2 | Hitch         |
| 3 | Bolt          |
| 4 | Washer        |
| 5 | Spring washer |
| 6 | Nut           |

• High hitch installation

The height from the ground to the trailer hitch is 329 mm (12.95 in).

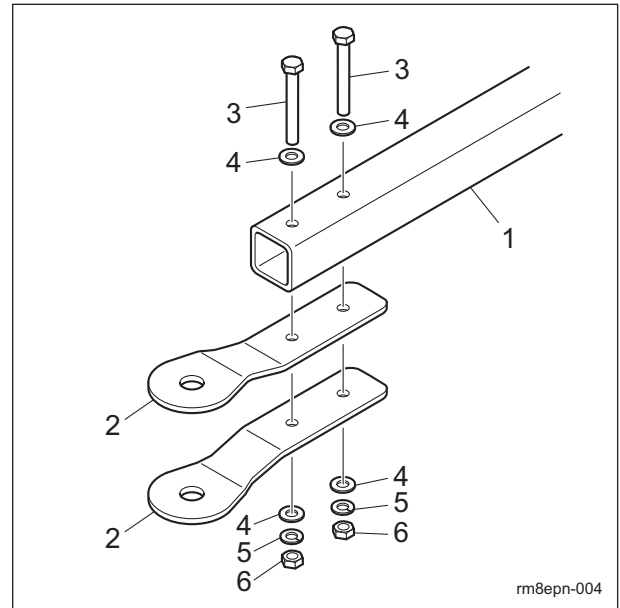


Adjustment of Trailer Hitch\_003

|   |               |
|---|---------------|
| 1 | Traction bar  |
| 2 | Hitch         |
| 3 | Bolt          |
| 4 | Washer        |
| 5 | Spring washer |
| 6 | Nut           |

• Low hitch installation

The height from the ground to the trailer hitch is 270 mm (10.63 in).



Adjustment of Trailer Hitch\_004

|   |               |
|---|---------------|
| 1 | Traction bar  |
| 2 | Hitch         |
| 3 | Bolt          |
| 4 | Washer        |
| 5 | Spring washer |
| 6 | Nut           |

Note:

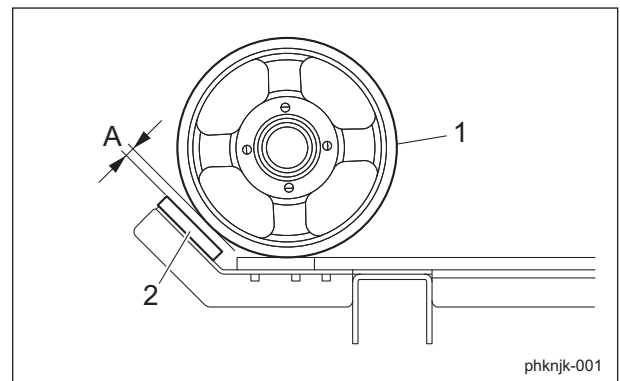
The factory default position is the standard hitch installation.

## Adjustment of Drum Stopper

Note:

Depending on the specifications, this function may not be available.

When a greens mower is loaded onto the mower trailer, adjust the gap between the drum and drum stopper if it is 4.5 mm (0.177 in) or more.

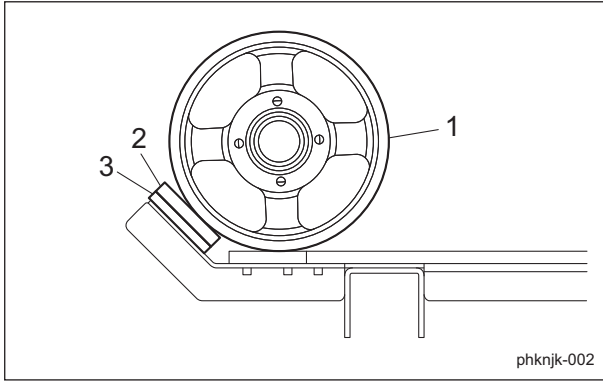


Adjustment of Drum Stopper\_001

# Handling Instructions

|   |              |
|---|--------------|
| 1 | Drum         |
| 2 | Drum stopper |
| A | Gap          |

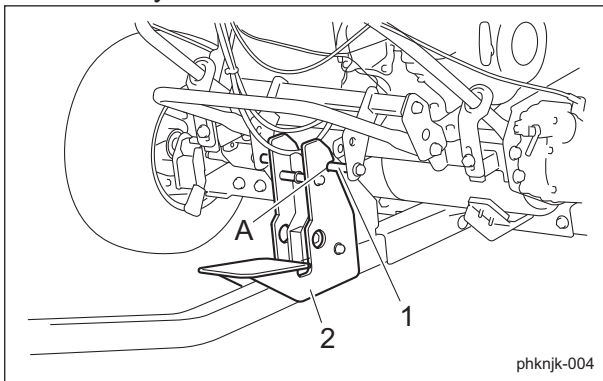
1. Remove the screw securing the drum stopper, and then add the spacer.



Adjustment of Drum Stopper\_002

|   |              |
|---|--------------|
| 1 | Drum         |
| 2 | Drum stopper |
| 3 | Spacer       |

2. Make sure that the stand stay can be secured by the hooks.



Adjustment of Drum Stopper\_003

|   |            |
|---|------------|
| 1 | Stand stay |
| 2 | Pedal      |
| A | Hook       |

## Operation Method

### Precautions for Operating the Machine

**Caution**

Under any circumstances drive the machine at such a speed that you can stop it immediately for emergencies.

### Cautions for When You Leave the Machine

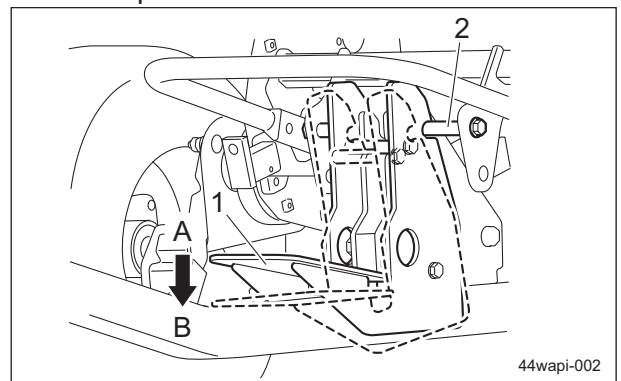
**Caution**

Use wheel stoppers to secure the trailer.

### Pedal

The pedal is used to release the connection between the greens mower stand stay and the pedal hooks of the mower trailer.

To release the connection between the greens mower stand stay and the pedal hooks of the mower trailer, depress the pedal to set it to the "Release" position.



Pedal\_001

|   |            |
|---|------------|
| 1 | Pedal      |
| 2 | Stand stay |
| A | Lock       |
| B | Release    |

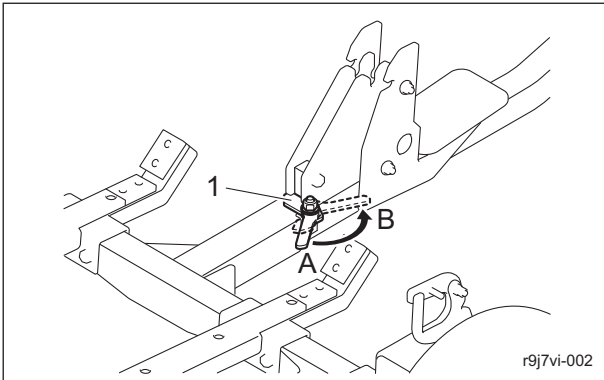
# Handling Instructions

## Axle Lock Lever

The axle lock lever secures the angle of the tilting tables.

When loading the greens mower onto the mower trailer for towing, set the lever to the "Lock" position.

When unloading the greens mower from the mower trailer, set the lever to the "Release" position.



Axle Lock Lever\_001

|   |                 |
|---|-----------------|
| 1 | Axle lock lever |
| A | Lock            |
| B | Release         |

## Drum Shaft Lock Lever

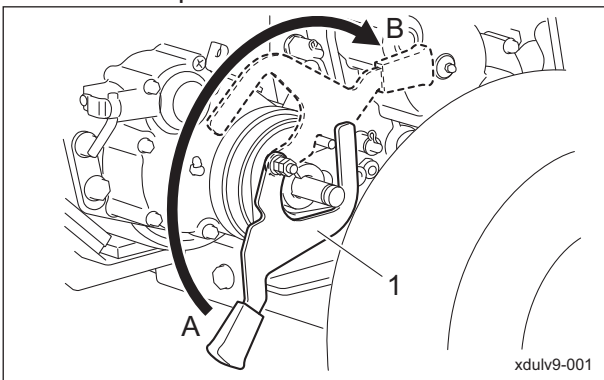
Note:

Depending on the specifications, this function may not be available.

The drum shaft lock lever prevents the greens mower from falling from the mower trailer.

When loading the greens mower onto the mower trailer for towing, set the drum shaft lock lever to the "Lock" position.

When unloading the greens mower from the mower trailer, set the drum shaft lock lever to the "Release" position.



Drum Shaft Lock Lever\_001

|   |                       |
|---|-----------------------|
| 1 | Drum shaft lock lever |
| A | Lock                  |
| B | Release               |

## Mower Tire Lock Lever

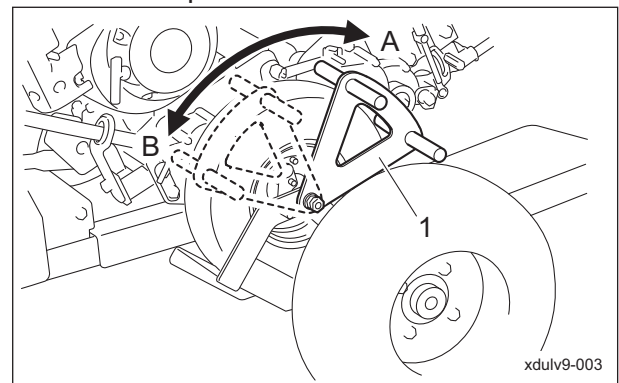
Note:

Depending on the specifications, this function may not be available.

The mower tire lock lever prevents the greens mower from falling from the mower trailer.

When loading the greens mower onto the mower trailer for towing, set the mower tire lock lever to the "Lock" position.

When unloading the greens mower from the mower trailer, set the mower tire lock lever to the "Release" position.



Mower Tire Lock Lever\_001

|   |                       |
|---|-----------------------|
| 1 | Mower tire lock lever |
| A | Lock                  |
| B | Release               |

## Move

### Traveling Procedure

1. Lift up the tilting tables.
2. Secure the axle with the axle lock lever.
3. Move the mower trailer by pulling the traction bar so that the tilting tables do not touch the ground.



# Handling Instructions

## Loading and Unloading

### Loading procedure of Greens Mower

**⚠ Caution**

Before loading or unloading, chock the wheels of the mower trailer on a level surface in a safe location.

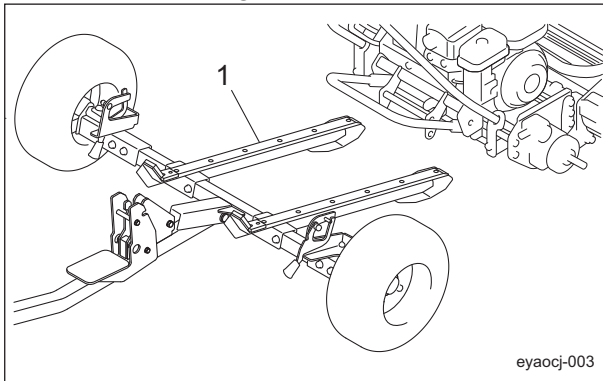
**⚠ Caution**

Be careful not to catch your foot on the mower trailer and fall.

**⚠ Caution**

Since the tilting tables may bounce up, make sure that there are no people around the machine.

1. Set the axle lock lever to the "Release" position, and then lower the tilting tables to the ground.
2. Place the greens mower facing backward towards the tilting tables.

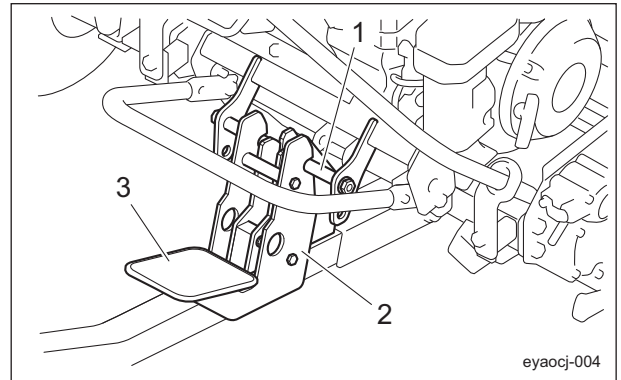


Loading procedure of Greens Mower\_001

|   |               |
|---|---------------|
| 1 | Tilting table |
|---|---------------|

3. Move the greens mower backward to load it onto the tilting tables of the mower trailer.

4. Insert the stand stay of the greens mower into the pedal hooks to secure it.



Loading procedure of Greens Mower\_002

|   |            |
|---|------------|
| 1 | Stand stay |
| 2 | Pedal hook |
| 3 | Pedal      |

5. Set the axle lock lever to the "Lock" position.
6. Set the drum shaft lock lever or mower tire lock lever to the "Lock" position.
7. Set the fuel cock of the greens mower to the "Close" position.

# Handling Instructions

## Unloading Procedure of Greens Mower

**⚠ Caution**

Before loading or unloading, chock the wheels of the mower trailer on a level surface in a safe location.

**⚠ Caution**

Be careful not to catch your foot on the mower trailer and fall.

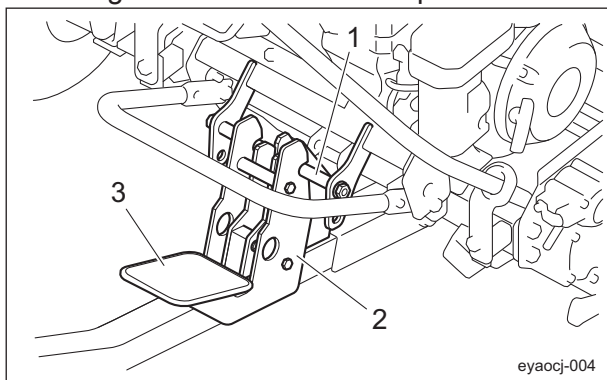
**⚠ Caution**

Make sure that there are no people around the machine.

**⚠ Caution**

When unloading the greens mower, be extremely careful as it may suddenly pull on your hand.

1. Set the drum shaft lock lever or mower tire lock lever to the "Release" position.
2. Set the axle lock lever to the "Release" position.
3. Depress the pedal to release the stand stay of the greens mower from the pedal hooks.



Unloading Procedure of Greens Mower\_001

|   |            |
|---|------------|
| 1 | Stand stay |
| 2 | Pedal hook |
| 3 | Pedal      |

4. Bring the front roller into contact with the tilting tables, and then lower the tilting tables to the ground.
5. Move the greens mower forward to unload it from the mower trailer.

## Towing

### Precautions for Towing

**⚠ Warning**

When towing, travel at a speed no more than 20 km/h.

Travel slowly over bad roads and uneven surfaces.

**⚠ Warning**

Make turns at a low speed.

Making quick turns may cause the towing vehicle to roll over.

**⚠ Caution**

Since the towing vehicle and the mower trailer articulate at the hitch, a large turning radius difference occurs in curves.

Be mindful of the risk of collisions caused by a turning radius difference.

**⚠ Caution**

Before traveling in reverse, make sure that there are no people behind you.

Travel in reverse at low speed while carefully observing the movement of the trailer.

**⚠ Caution**

Be careful that the tow vehicle does not make contact with the trailer and overturn while going backward with turning on a slope.

### Towing Procedure

1. Make sure that the pedal hooks are secured onto the stand stay of the greens mower.
2. Make sure that the drum shaft lock lever or mower tire lock lever is set to the "Lock" position so that the greens mower will not fall.
3. Make sure that the axle lock lever is set to the "Lock" position so that the tilting tables do not touch the ground.
4. Make sure that the towing vehicle and mower trailer are securely connected.
5. Start moving the towing vehicle slowly, and then maintain the traveling speed.

## Transporting

### Transporting Procedure

Before loading into a truck or trailer for transporting, disconnect from the towing vehicle.

When using a running board:

When loading into a truck or trailer for transporting, pull the traction bar. When unloading, push the traction bar.

When using a pallet:

When using a truck or trailer for transporting, place the mower trailer on the pallet before loading or unloading it.

## Storage

### Before Long-Term Storage

1. Cleaning
  - Completely remove dirt, grass clippings, debris, oil stains, etc.
2. Greasing and lubricating
  - Supply oil and apply grease to appropriate parts.
3. Tire pneumatic pressure
  - Set the tire air pressure slightly higher than normal, and then place the machine on a board to avoid humidity.
4. Storage
  - Cover the machine and store it in a dry place where it will not be exposed to rain.
  - Lower the tilting tables to the ground.
  - Unload the greens mower from the mower trailer.
  - Before disconnecting from the towing vehicle, use wheel stoppers to secure the trailer.

# Handling Instructions

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|  |                 |
|--|-----------------|
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## Maintenance Precautions

### Warning

The chapter "Maintenance" in this manual describes practical measures which should be performed by a mechanic with expertise. The owner should instruct the mechanic with expertise to perform maintenance service for this machine.

### Caution

First, learn well the maintenance operations you plan to perform.

### Important

Use tools appropriate for each maintenance operation.

### Important

For the safe and best performance of your machine, use Baroness genuine parts for replacement and accessories. Please note that our product warranty may be void if you use non-genuine parts for replacement or accessories.

Maintain the machine according to the maintenance schedule so that you will be able to take advantage of its optimum performance for a long period of time.

## Maintenance Schedule

Follow the maintenance schedule below.

○ . . . Inspect, adjust, supply, clean

● . . . Replace (first time)

△ . . . Replace

| Maintenance Item  | Before Work | When Required | Remarks |
|---|-------------|---------------|---------|
| Check tire pressures and condition  | ○           |               |         |
| Check wear and damage of hitch  | ○           |               |         |
| Check wear and damage of pedal hook   | ○           |               |         |
| Check wear and damage of stand stay   | ○           |               |         |
| Check damaged parts   | ○           |               |         |
| Check tightening bolts and nuts   | ○           |               |         |
| Lubricate all moving parts  |             | ○             |         |
| Adjustment of operating force of mower tire lock lever (loading method : mower tires) |             | ○             |         |
| Adjustment of operating force of drum shaft lock lever (loading method : mower drums) |             | ○             |         |
| Adjustment of operating force of axle lock lever                                      |             | ○             |         |

· The values for consumables are not guaranteed.

### Adjusted Value

|  |                                |
|--|--------------------------------|
| Operating force of axle lock lever       | 15 - 30 N-m (153 - 306 kgf-cm) |
| Operating force of drum shaft lock lever | 30 - 50 N-m (306 - 510 kgf-cm) |
| Operating force of mower tire lock lever | 40 - 60 N-m (408 - 612 kgf-cm) |

# Maintenance

## Lubrication

### About Lubrication

It is necessary to lubricate moving parts so that they will not become stuck or damaged.

The locations where lubricant is used are indicated in "Lubricating Points".

Apply the lubricant.

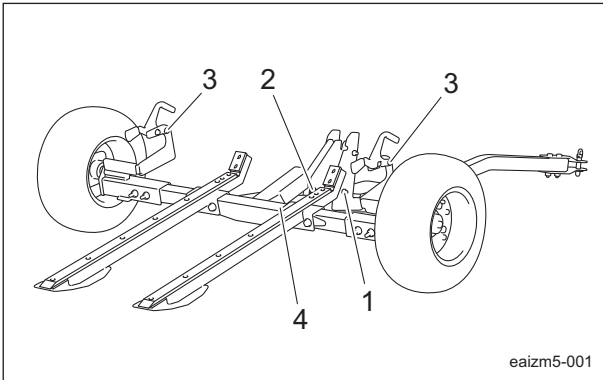
### Lubricating Points

#### Lubricating Points (Mower Drums)

Note:

Depending on the specifications, this function may not be available.

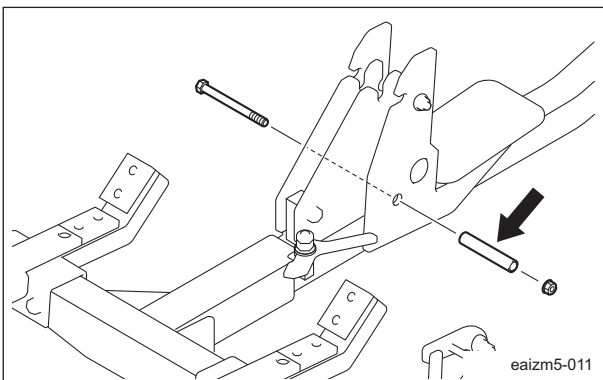
Apply lubricant at the following locations as necessary.



Lubricating Points (Mower Drums)\_001

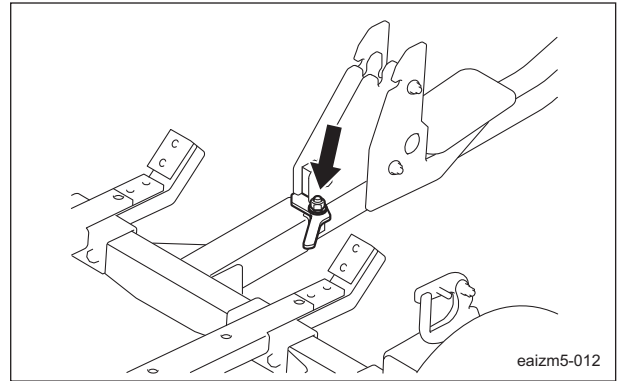
|   |                       |   |
|---|-----------------------|---|
| 1 | Pedal fulcrum         | 1 |
| 2 | Axle lock lever       | 1 |
| 3 | Drum shaft lock lever | 2 |
| 4 | Axle coupling pin     | 1 |

#### 1. Pedal fulcrum



Lubricating Points (Mower Drums)\_002

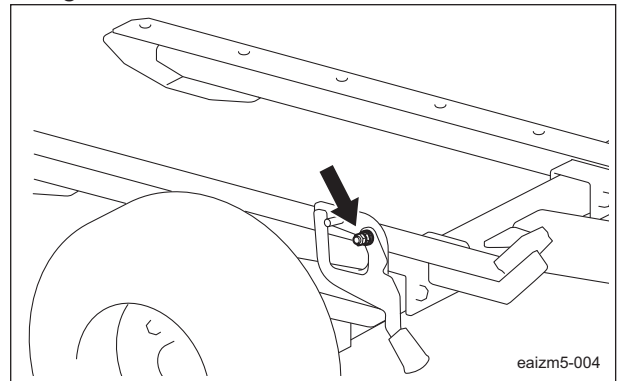
#### 2. Axle lock lever



Lubricating Points (Mower Drums)\_003

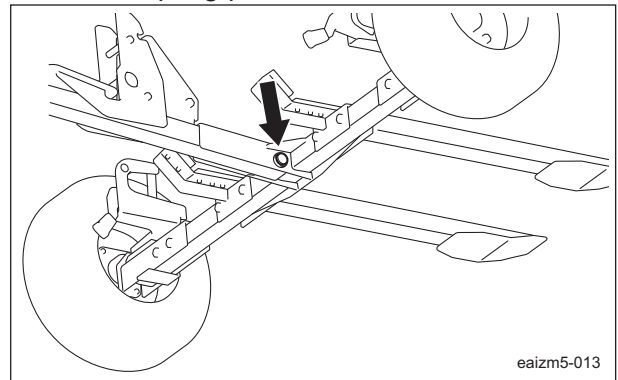
#### 3. Drum shaft lock lever

There is one point each on the left and right.



Lubricating Points (Mower Drums)\_004

#### 4. Axle coupling pin



Lubricating Points (Mower Drums)\_005

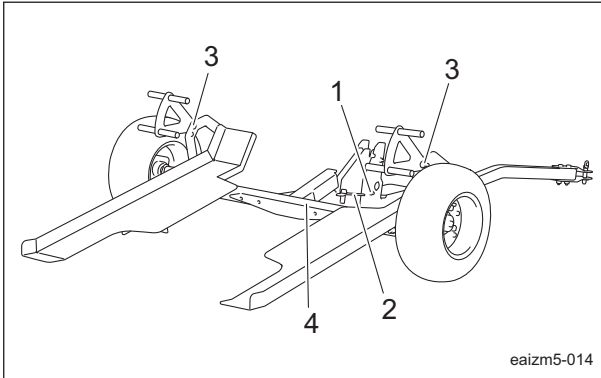


## Lubricating Points (Mower Tires)

Note:

Depending on the specifications, this function may not be available.

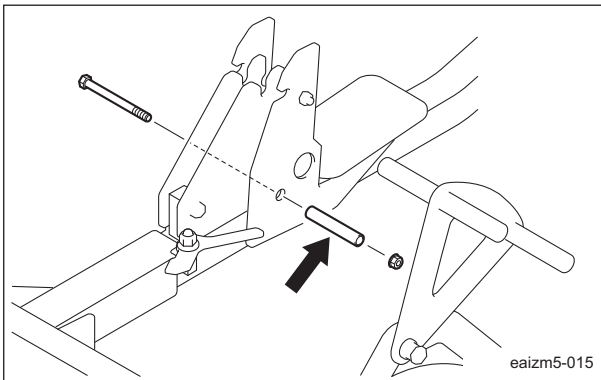
Apply lubricant at the following locations as necessary.



Lubricating Points (Mower Tires)\_001

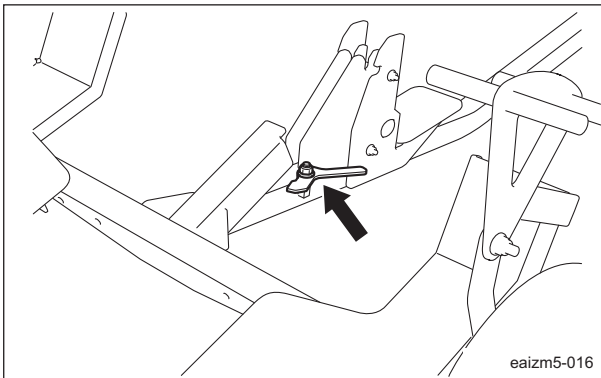
|   |                       |   |
|---|-----------------------|---|
| 1 | Pedal fulcrum         | 1 |
| 2 | Axle lock lever       | 1 |
| 3 | Mower tire lock lever | 2 |
| 4 | Axle coupling pin     | 1 |

### 1. Pedal fulcrum



Lubricating Points (Mower Tires)\_002

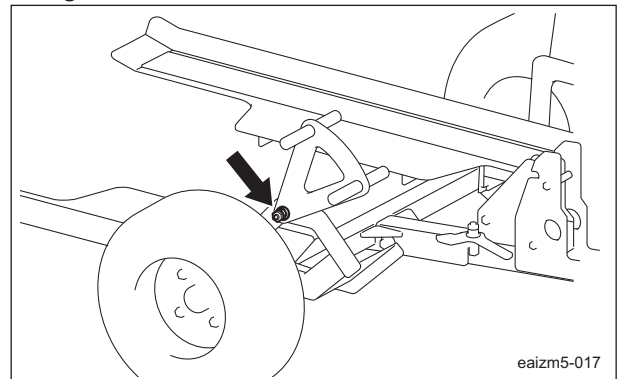
### 2. Axle lock lever



Lubricating Points (Mower Tires)\_003

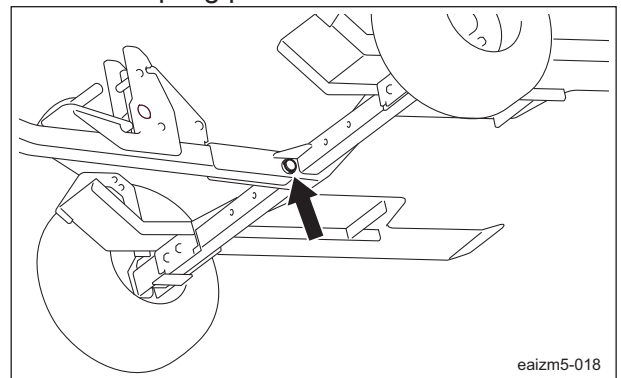
### 3. Mower tires lock lever

There is one point each on the left and right.



Lubricating Points (Mower Tires)\_004

### 4. Axle coupling pin



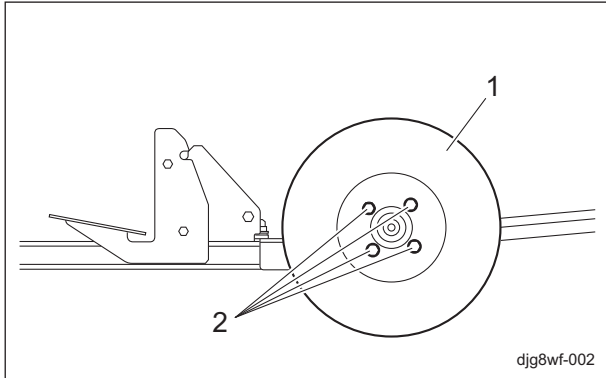
Lubricating Points (Mower Tires)\_005

## Maintenance Work

### Removing/Installing Tires

Follow the steps below to remove the tires.

1. Remove the bolts.



Removing/Installing Tires\_001

|   |      |
|---|------|
| 1 | Tire |
| 2 | Bolt |

2. While lifting the tire up, pull it toward you to remove it from the wheel mounting seat.
3. Follow the same steps to remove the tire on the opposite side.

#### Caution

Refer to the Tightening Torque table. Note that the Baroness product warranty may not apply to defects caused by incorrect or overtorque tightening, etc.

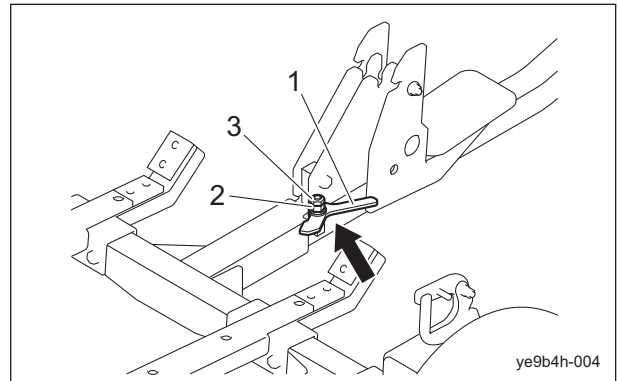
#### Important

Tighten the bolts in the tightening order (diagonally).

For installing the tires, reverse the removing procedure.

### Adjustment of Axle Lock Lever

Adjust the axle lock lever so that it moves when pushed with a finger. The operating force of the axle lock lever is 15 - 30 N-m (153 - 306 kgf-cm). Adjust by tightening the nut.



Adjustment of Axle Lock Lever\_001

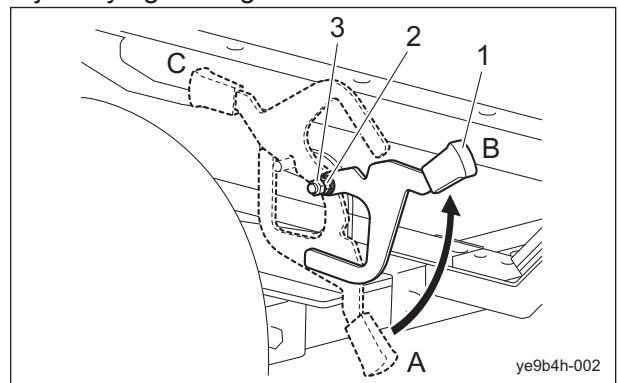
|   |                 |
|---|-----------------|
| 1 | Axle lock lever |
| 2 | Nut             |
| 3 | Lock nut        |

### Adjustment of Drum Shaft Lock Lever

Note:

Depending on the specifications, this function may not be available.

Adjust the drum shaft lock lever so that it will not move by its own weight when lifted 90° from the "Lock" position, then released. The operating force of the drum shaft lock lever is 30 - 50 N-m (306 - 510 kgf-cm). Adjust by tightening the nut.



Adjustment of Drum Shaft Lock Lever\_001

|   |                       |
|---|-----------------------|
| 1 | Drum shaft lock lever |
| 2 | Nut                   |
| 3 | Lock nut              |
| A | Lock                  |
| B | 90-degree position    |
| C | Release               |

## Adjustment of Mower Tire Lock Lever

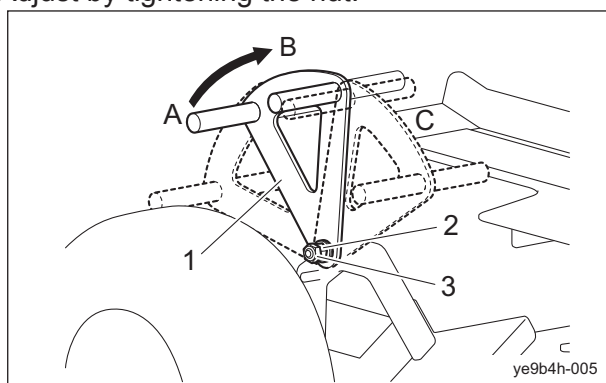
### Note:

Depending on the specifications, this function may not be available.

Adjust the mower tire lock lever so that it will not move by its own weight when moved 30° from the "Lock" position, then released.

The operating force of the mower tire lock lever is 40 - 60 N-m (408 - 612 kgf-cm).

Adjust by tightening the nut.



Adjustment of Mower Tire Lock Lever\_001

|   |                       |
|---|-----------------------|
| 1 | Mower tire lock lever |
| 2 | Nut                   |
| 3 | Lock nut              |
| A | Lock                  |
| B | 30-degree position    |
| C | Release               |



**BARONESS**<sup>®</sup>  
Quality on Demand

 **KYOEISHA CO., LTD.**  
Head Office 1-26, Miyuki-cho, Toyokawa-city, Tel :+81-533-84-1390  
Aichi-pref, 442-8530 JAPAN Fax:+81-533-84-1220