

IRON BALTIC

LEAF VACUUM TRAILER

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USER MANUAL



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Code 81.2000US

Version 18012024



Keep this manual for future reference!

If you need any spare parts, please send this packaging data to your local dealer or to Iron Baltic
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EC DECLARATION OF CONFORMITY

Manufactured by: Iron Baltic OÜ
Address: Põldmäe tee 1, Vatsla 76915
Product: **Leaf vacuum trailer**
Type: **6,5 hp**
Model: **81.2000**

Hereby we confirm that this product is in conformity with the requirements of Directive **2006/42/EC**, applicable to the safety and functionality of machinery, regarding the replaceable equipment and it is in compliance with the standard **EN12100** Safety of machinery – General principles for design – Risk assessment and risk reduction.

In witness whereof CE marking is attached to the product.

Place and date of issue of the declaration: 01.09.2019



.....
Tiit Norak
Member of the Board

INTRODUCTION

You have purchased the leaf vacuum trailer. The trailer with the leaf vacuum has been designed for private individuals or public utility companies for cleaning fallen leaves and collecting cuttings, debris/waste etc. from backyards/courtyards, parks, squares and roads.

This manual provides instructions on the configuration, safe operation and maintenance of the trailer and leaf vacuum. Unnecessary use of the trailer can result in economic damage and personal injury, so it is very important that the person using the product read and use this manual in accordance with the requirements. Any misuse of the product will release the manufacturer from liability for any damage or expense incurred.

NOTE. The photos and illustrations contained in the manual do not necessarily represent actual models or accessories. They are provided solely for reference and are based on the latest product information available at the time of publication.



This symbol is used throughout the manual and on the warning labels for warning of possible severe injuries. Prior to using the vehicle and the trailer with the leaf vacuum, carefully read the safety instructions and make sure that you have understood them. Strictly follow all the instructions and require adherence to them from all persons using the machine!

Retain this manual for the future reference.

Refer to the product specification and check whether you have received all parts of the supply package.

SAFETY PRECAUTIONS

The majority of accidents result from carelessness or negligence. Avoid unwanted accidents and follow the safety instructions below.

WORDING EXPLANATION

In this manual, the words "right" and "left" designate the directions from the point of view of the driver/operator sitting on his seat and looking forward.

TRAINING

1. Read thoroughly the safety instructions and terms of use. Learn how to stop the machine and quickly disable the controls.
2. Never allow children to operate the vehicle and the trailer with the leaf vacuum. Never allow adult persons to operate the vehicle and the trailer with the leaf vacuum, if they have not received the proper training.
3. Neither the vehicle nor the trailer with the leaf vacuum can be used while drunk or under the influence of the drugs that affect perception or reaction.
4. Make sure that there are no people, especially small children, or animals in the work area.



PROHIBITED ACTIONS

- Do not operate the trailer with the leaf vacuum before you have carefully read the whole operation manual.
- Never operate the trailer with the leaf vacuum without all the protective parts properly installed.
- Never operate the trailer with the leaf vacuum without all safety devices installed and properly used.
- Never adjust the engine settings without the manufacturer's approval.
- Never touch the engine or any moving or rotating part, when operating the leaf vacuum.
- Never attempt to perform any adjustment operations when the engine is running.
- Never operate the leaf vacuum without the required protective clothing, ear protectors and safety goggles.
- Never work wearing loose clothing – it can get trapped between the moving parts of the machine.
- Never carry any passenger on the trailer with the leaf vacuum.
- Never leave the operating trailer with the leaf vacuum unattended.
- Never operate the trailer with the leaf vacuum on overly steep slopes.
- Never operate the trailer with the leaf vacuum in the dark, unless you use artificial lighting.
- Never attempt to remove obstacles when the engine is running. Always make sure that the engine has stopped and the working shaft has stopped rotating before you start cleaning the trailer with the leaf vacuum.
- Never operate the trailer with the leaf vacuum in the presence of excessive vibration – stop the leaf vacuum immediately and determine the cause of the trouble.
- Never climb on the trailer with the leaf vacuum.
- Never modify any accessory or any part without the written approval of the manufacturer.
- Never drive faster than 20km/h, or what the vehicle manufacturer recommends (the lower speed must be observed)

MANDATORY ACTIONS

- Follow this instruction manual as well as the instructions of the vehicle manufacturer.
- Make sure that all bystanders are at a safe distance during operation of the trailer with the leaf vacuum. The danger area radius is 15 m from the trailer with the leaf vacuum.
- Maintain the trailer with the leaf vacuum regularly and check the machine every time before you start operating it.
- Remove from the operation area all possible dangerous objects, unauthorised people, children, animals and birds.
- Reduce the speed of the vehicle when driving on a hillside or uneven terrain, in order to prevent the trailer from overturning.
- Keep in mind that the components of the trailer with the leaf vacuum may be very hot after work.
- Always use the individual protective gear required for each kind of equipment (goggles, ear protectors, protective clothing).
- Always check that all components are properly installed.
- Check that the safety labels are in good condition and replace the damaged labels with new ones, if necessary.
- Keep your hands and feet away from the rotating parts.
- The load to the ATV hitch ball should not exceed 60kg, or the weight specified by the manufacturer of the vehicle.

SAFETY LABELS

The warning labels shall be present on your trailer with the leaf vacuum. If any of those labels is absent on your trailer with the leaf vacuum or gets damaged, contact your leaf vacuum set dealer in order to install new labels in place of the absent ones before operating the trailer with the leaf vacuum.

Meaning of safety labels

	Read the manual before use!
	Use safety gloves!
	Use safety footwear!
	Wear face shield mask!
	Make sure that all bystanders are at safe distance while working! Risk of collision!
	The risk of body injury! The device may only be adjusted with a stopped engine!
	The box may be installed and removed only with a the engine has stopped!
	The risk of injury to hands! Due to the moving parts of the device, there is a risk of crushing and injuring hands!
	Maximum permitted speed 20 km / h!
	Maximum load capacity 500 kg!

	Never carry any passenger on the trailer!
	It is forbidden to drive slopes over 15°!
	When lowering the box, ensure that the limbs do not fall between the box and the frame!
	Trace the surroundings when tilting the load and make sure it is safe!
	Read the manual before use!

PRODUCT DESCRIPTION

A trailer with a leaf vacuum is a durable one-axle trailer that can be attached to the ATV / UTV, suitable for cleaning leaves, lawns, smaller branches, trash, etc. in the yard, parks, squares, roads, etc.

The trailer is designed for ATVs and UTVs to be used off-road, but can be towed with any other vehicle equipped with a 50 mm hitch ball. Trailer does not cause notable damage to the terrain and is easily maneuverable between trees, allowing access to places outside the reach of larger rigs.

The leaf vacuum trailer is equipped with a 6 hp Briggs & Stratton engine.

The vacuum cleaner and the trailer cover are removable, which allows the product to be used like a regular trailer. The trailer box can be tilted manually.

Standard equipment :

- Trailer
- Leaf vacuum with engine
- Suction hose
- Support leg

Optional extras :

- 360° rotating hitch

Product	Leaf vacuum trailer
Model	81.2000US
Dimensions	2900 x 1200 x 1400 mm
Capacity	1,2 m ³
Load capacity	500 kg
Weight	220 kg
Engine	6 HJ Briggs&Stratton
Flow capability	70 m ³ /min
Hose diameter	18 cm
Hose lenght	3,5 m

Table 1: Leaf vacuum trailer technical data

OPERATOR INSTRUCTIONS

Note

Prior to operating the trailer with the leaf vacuum, carefully read this instruction manual!



Note

Prior to operating the trailer with the leaf vacuum, carefully read the instruction manual for the vehicle (ATV)!



PREPARATION

1. Carry out the initial assembly (see the chapter: Initial Assembly) and the set completeness check.
2. Carefully inspect the planned operation area and remove all animals, birds, branch wood, foreign objects, etc. from there.
3. Never use the trailer with the leaf vacuum without putting on the required outer garments. Avoid wearing loose clothes, which could get trapped between the moving parts. Wear footwear that reduces the risk of slipping.
4. Never attempt to perform any adjustment operations when the engine is running.
5. Never attempt to operate the trailer with the leaf vacuum if the required covers, plates or other safety devices are not installed.
6. Always check that all components are properly installed (the leaf vacuum is firmly in place and the hose is fastened at its both ends).
7. Never modify any accessory or any part without the written approval of the manufacturer.

OPERATOR INSTRUCTIONS

1. Before ride check the towing coupling securely connected with tow ball (check the indicator on tow coupling), check tow coupling connection to the tow beam, make sure the trailer stand is up, check tire pressure (the exact tire pressure is marked on the side of the tire) and check tension of the wheel bolts.
2. Never place your hand or foot close to, under or between any rotating/moving parts.
3. Be extremely careful when working on or crossing gravel roads, pavements or motorways. Consider the potential traffic hazards. Never take on board any passengers.
4. After a collision, stop the vehicle engine and the leaf vacuum engine. Thoroughly inspect the trailer with the leaf vacuum with a view to finding possible damage and correct the faults before starting the unit again and operating it.
5. If the unit starts vibrating abnormally, stop the engine and immediately determine the cause of the vibration. Vibration usually indicates some problem.
6. Take all possible measures of safety when leaving the vehicle. Stop the leaf vacuum engine, set the vehicle gear to neutral, activate the parking brake, stop the vehicle engine and remove the ignition key.
7. Never operate the trailer with the leaf vacuum when moving along a slope; work with it moving downhill. Be extremely cautious when operating the unit on slopes. Never attempt to clean a steep slope.
8. Keep unauthorised persons away from the operating area. Never direct the stream of waste thrown out by the unit to people nearby, because some pieces of gravel or waste can fly in the air and injure people or cause material damage.
9. Never operate the unit at a high speed on a slippery surface. Be cautious when reversing.
10. Never take on board any passengers.
11. When the leaf vacuum is transported or not in use, stop its engine.
12. Keep the trailer with the leaf vacuum away from heating units and open flames.
13. Stop the leaf vacuum engine before emptying the trailer box and apply vehicle handbrake.



IF SOMETHING HAPPENS DURING THE WORK THAT COULD DAMAGE THE PRODUCT, AN INSPECTION OF THE DEVICE MUST BE CARRIED OUT TO IDENTIFY POSSIBLE DAMAGE. DAMAGE (CRACKS IN CONSTRUCTION OR WELDS, DEFORMED PARTS) CAN ENDANGER PROPERTY AND HUMAN HEALTH. THE DEVICE MUST NOT BE USED BEFORE THE DAMAGE IS REMOVED.

OPERATION

1. Make sure that the trailer box is in the lowered position and locked.
2. Make sure that nothing prevents the moving parts from operation, remove stuck debris with a rake or brush before using the device.
3. Working with device consider the people living in the work area and avoid using the device at inappropriate times. If work environment is dusty, water the work area before using the device. Watch the surroundings, look out for children, pets, open windows and cars.
4. Hold the suction hose and its end in such way that the air flow is directed as close to the ground as possible.
5. Take trash to the trash container.
6. When manoeuvring, stop the leaf vacuum engine, fasten the leaf vacuum hose to the pipe clamp and the hose spout to the trailer drawbar. Make sure that you have enough space for manoeuvring and will not put anybody in danger!

Note

In the transport position, do not travel faster than 20 km/h.

Never operate on a slope with a grade of over 15%.



EMPTYING THE TRAILER BOX

During the cleaning, the debris, leaves, etc. are collected in the trailer box.

In the course of the cleaning operations, check the filling level of the trailer box and empty it from time to time.

If the trailer box is full or so heavily loaded that it obstructs the normal operation of the machine, the trailer box should certainly be emptied.



To empty the trailer box, stop the leaf vacuum engine and wait until all moving parts have stopped.

After arriving to the place of the trailer box dumping:

1. Apply vehicle handbrake.
2. Release the edge rubber cord of the rear curtain from the cord holders and unlock the turn locks.
3. Lift up the rear curtain.
4. Remove the rear hatch from the box.
5. Release the trailer box lock.



When releasing the trailer box lock, stay at a safe distance from the trailer box. Depending on the content in the box, the trailer box can tip by itself.

6. Tilt the trailer box to dump the box contents.
If the contents do not move out:
 - a. Release the edge rubber cords of the side curtains from their cord holders and unlock the turn locks.
 - b. Lift up the side curtains.

That will improve access and you can take action to advance the dumping of the box, if necessary.



Depending on the content in the box, the trailer box can tip by itself.

After dumping the box contents:

1. Lock the trailer box.
2. Lock the turn locks of the cover.
3. Fasten the edge rubber cords of the trailer cover to their cord holders.
4. Empty the leaf vacuum hose and the discharge pipe.

MAINTENANCE

Note

Before the maintenance, assembly or disassembly of the trailer with the leaf vacuum:

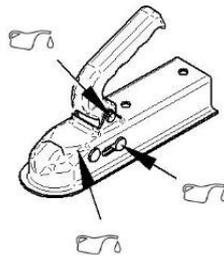
- Shut down the engine.
- Activate the vehicle parking brake.
- Stop the vehicle engine, remove the ignition key.
- Make sure that all moving parts have stopped.
- Wait 5 minutes for all parts to cool.



MAINTENANCE SCHEDULE

Maintenance activity:	Before and after work	Weekly	Monthly	Seasonally
Clean the trailer and its components (impeller, etc)	•	•	•	•
Tire pressure, wheel bolts, tow coupling connection check	•	•	•	•
Visual inspection of parts fastening	•	•	•	•
Checking the condition of all connecting parts		•	•	•
Inspection of safety labels		•	•	•
Inspection of safety parts		•	•	•
Change the air filter and spark plug			•	•
Lubricate the tow coupling			•	•
Checking the wear rate of metal parts			•	•
Clean the air filter and spark plug				•

- If the tow coupling moves difficultly, add oil to places shown on the diagram or contact manufacturer or licenced reseller.

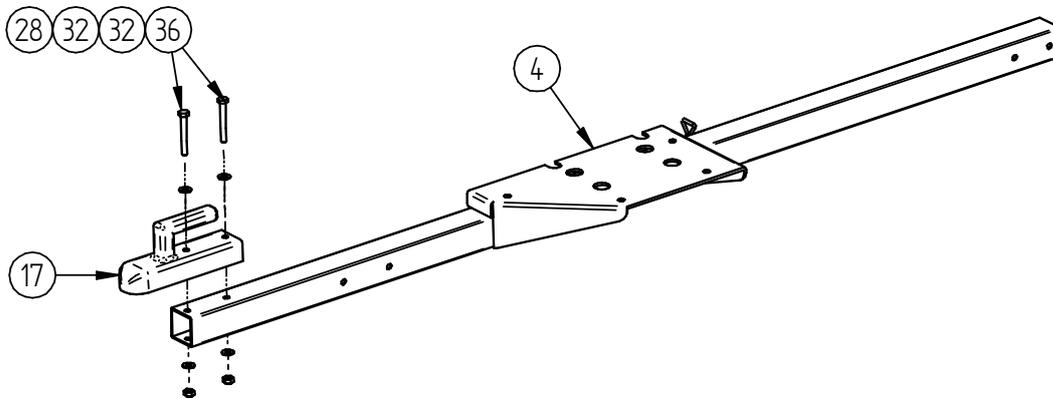


STORAGE

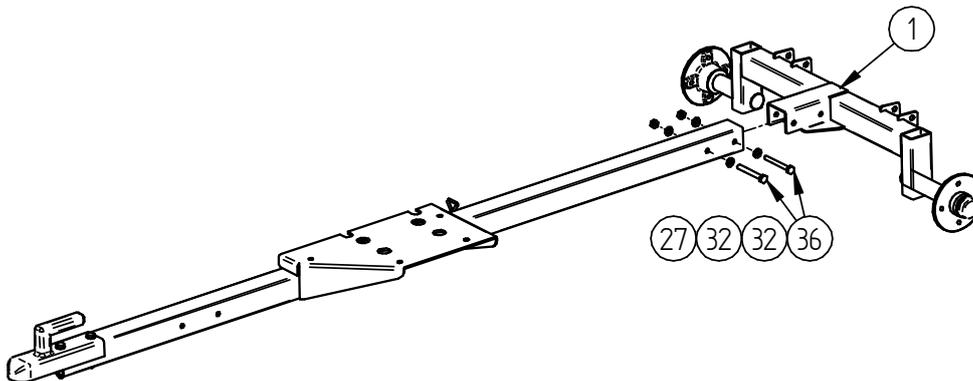
1. Thoroughly clean the trailer with the leaf vacuum.
2. Mark all the parts that need replacement for the next season.
3. Paint over all those parts on which the paint coating is worn out.
4. If you do not want to use the leaf vacuum on the trailer, remove the leaf vacuum from the trailer drawbar and place it on the transport pallet of the leaf vacuum.
5. If you do not want to use the cover on the trailer box, remove the cover, tubes, beams and posts.
6. Store the leaf vacuum, cover, tubes, beams and posts when dry in a dry place.
7. Order spare parts for the parts to be replaced for the next season.

INITIAL ASSEMBLY

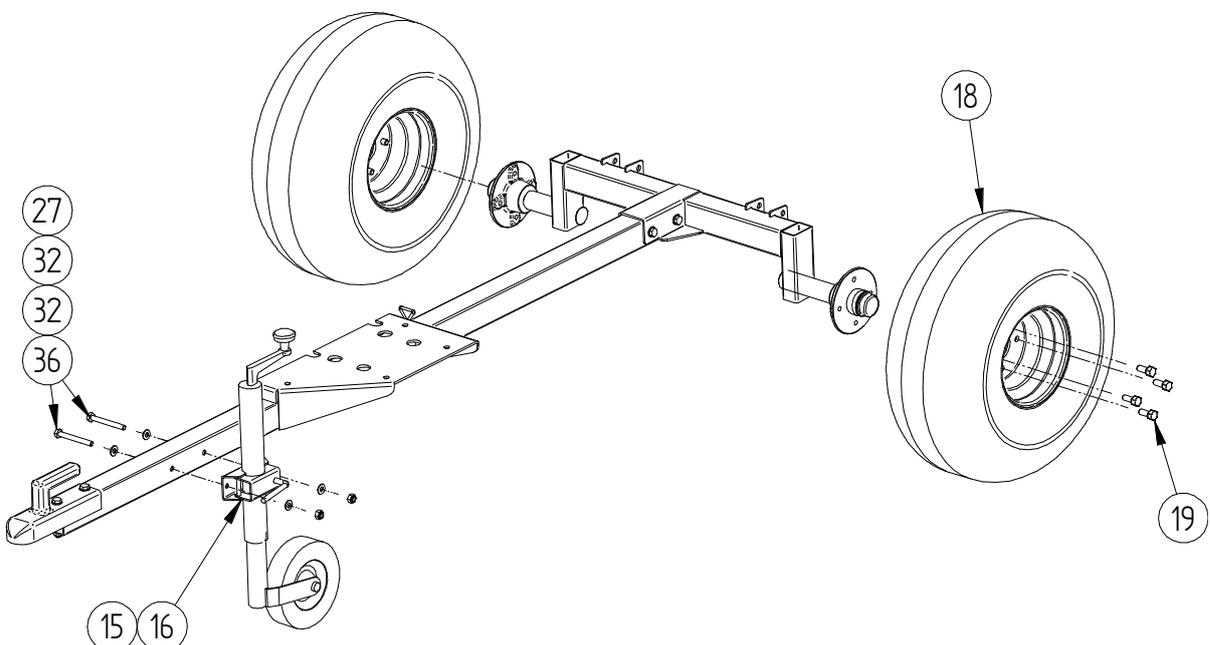
Step 1 Install tow coupling (Pos.17) to the tow beam (Pos. 4)



Step 2 Install tow beam to the axle (Pos. 1).

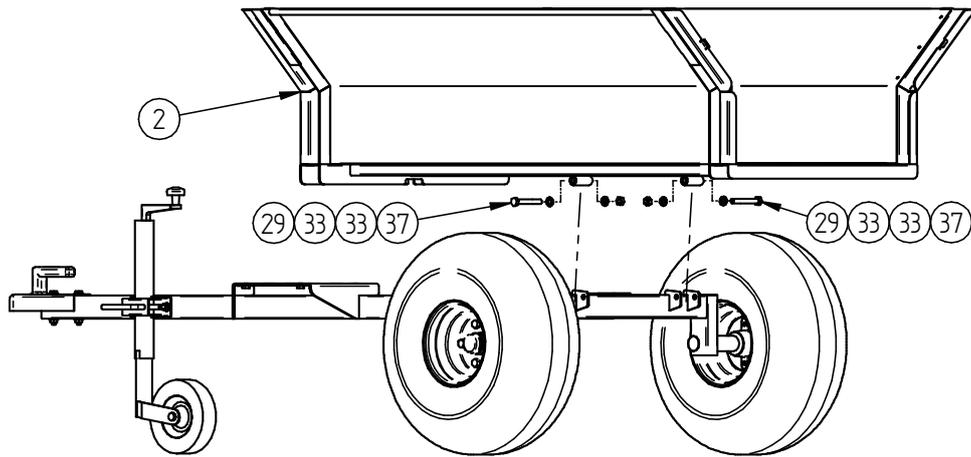


Step 3 Install wheels (Pos. 18) and carrier wheel (Pos.16) together with wheel clamp (Pos.15). NB! Make sure that the valve will face outwards! Adjust the carrier wheel to such a height that the trailer is in a horizontal position.



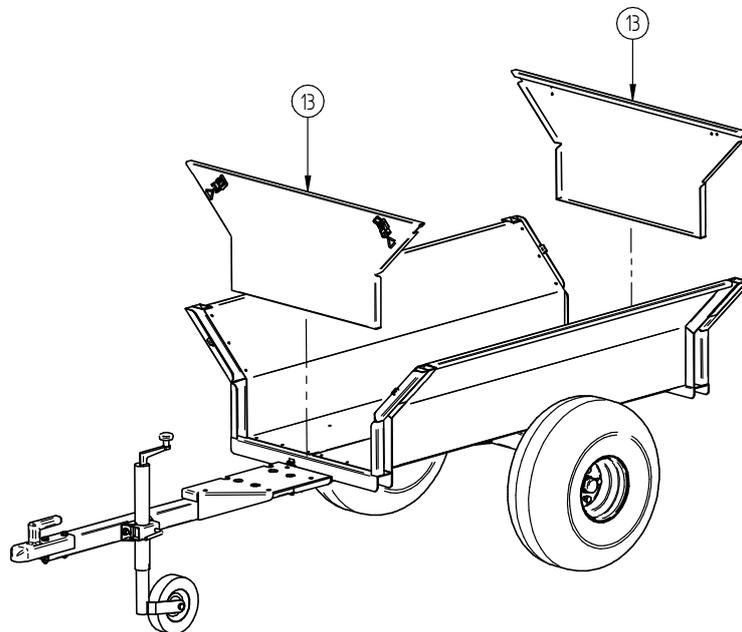
Step 4

Mount (with the help of several people or with the use of a lifting device) trailer box (Pos.2) to the axle. Lock the box, adjust the locking latch if necessary



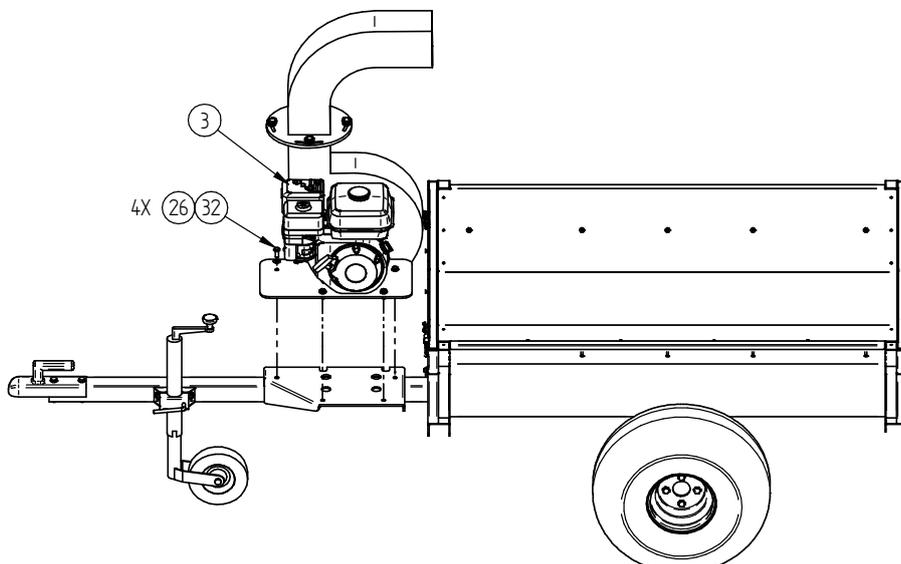
Step 5

Install front and rear ports (Pos. 13). Adjust the locking latches if necessary.



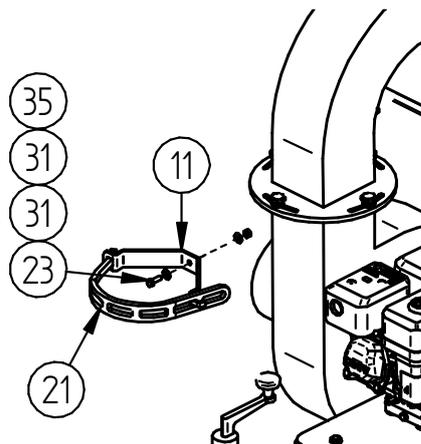
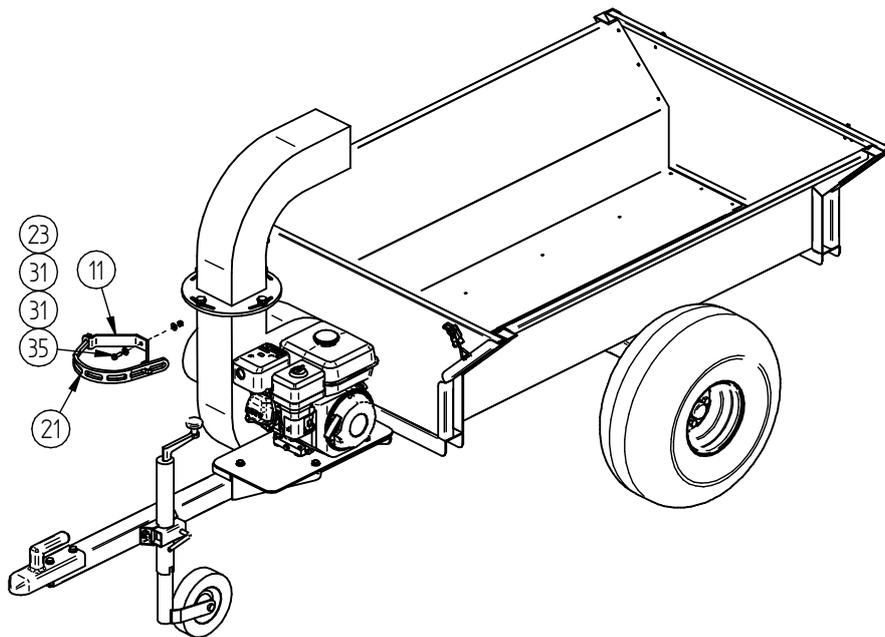
Step 6

Mount (with the help of several people or with the use of a lifting device) the leaf vacuum (Pos. 3) on the trailer drawbar. Retain the leaf vacuum transport pallet. It will be needed later for storing the leaf vacuum.



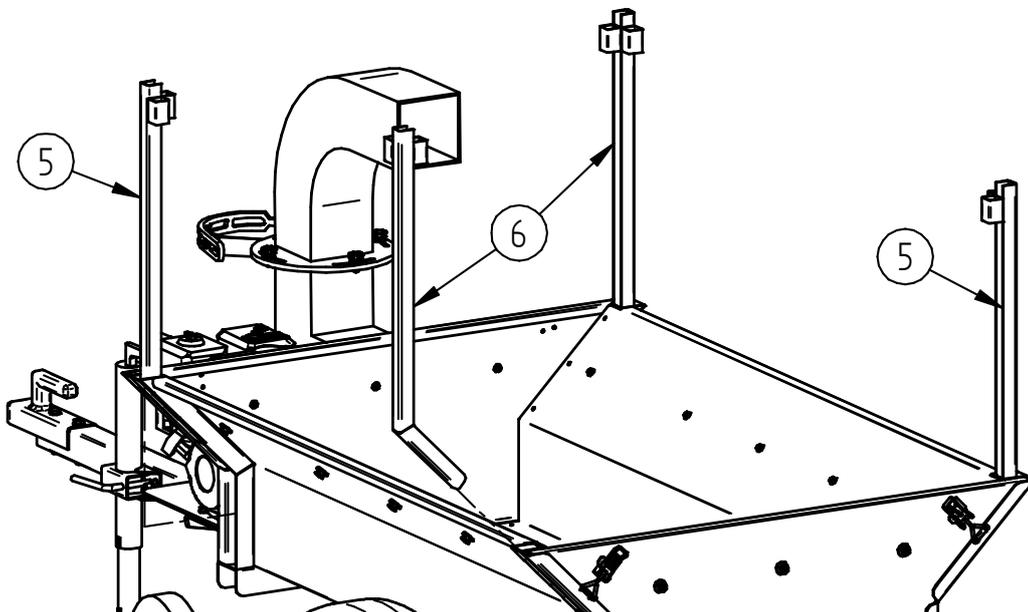
Step 7

Mount the pipe clamp (pos.11) and the holding strap (pos.21) on the leaf vacuum.



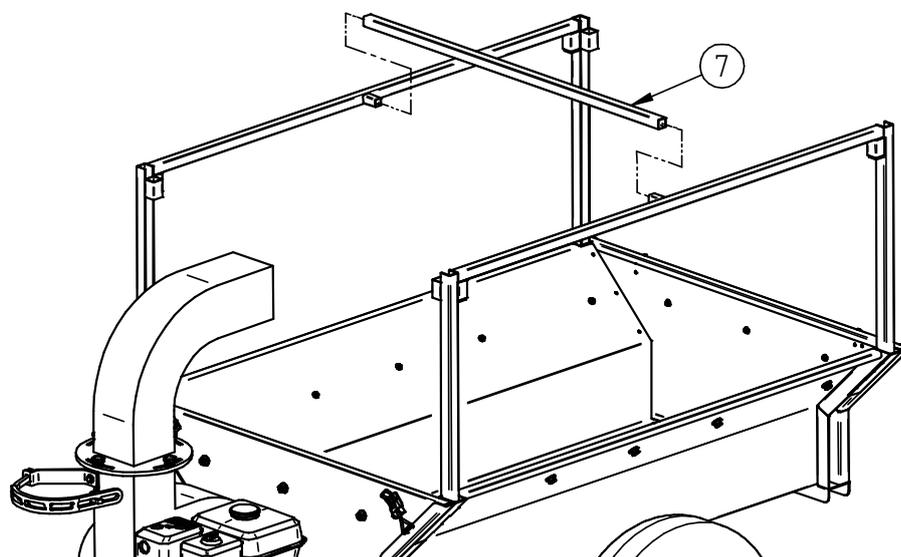
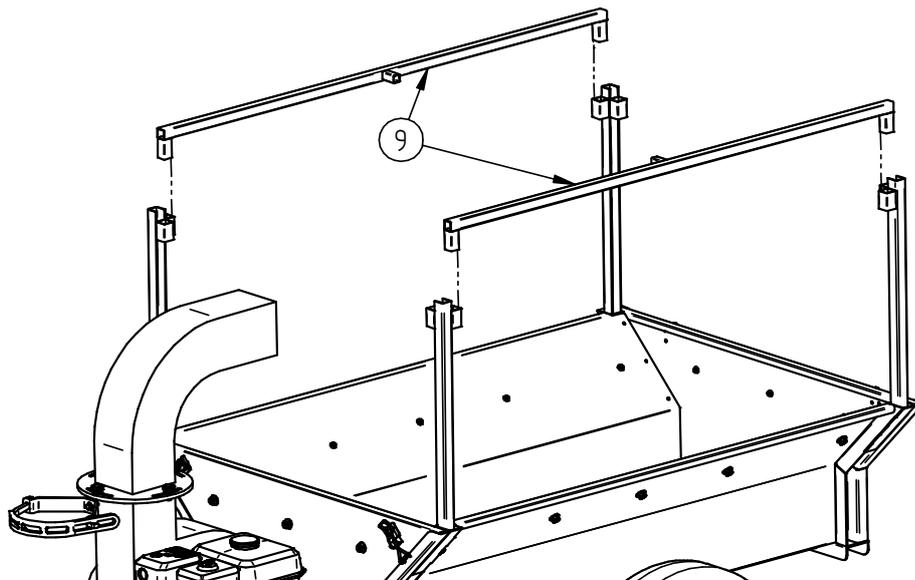
Step 8

Mount the posts (pos. 5 and pos. 6) on the trailer box.



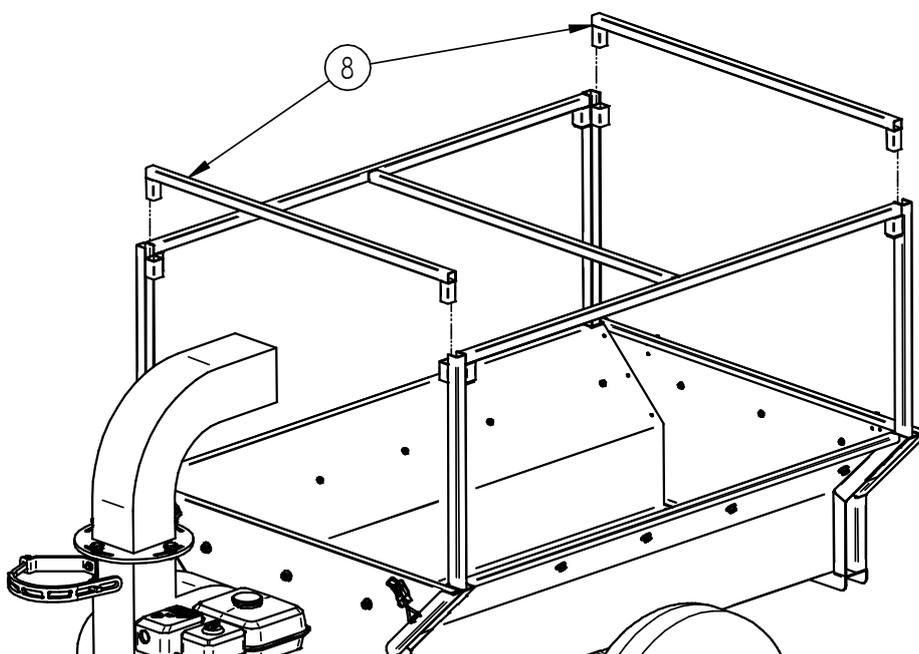
Step 9

Assemble the beams (pos. 9) and the pipe (pos. 7) between them.



Step 10

Assemble the beams (pos. 8).



Step 11

Install the cover (pos. 12). When installing the cover, first lock the cover turn locks on the front side. Put the discharge end of the leaf vacuum through the pipe-shaped part of the cover. If necessary, turn the leaf vacuum discharge end. After that, lock the remaining cover turn locks. Fasten the rubber cords to the cord holders on the trailer. Assemble the leaf vacuum hose to the device.

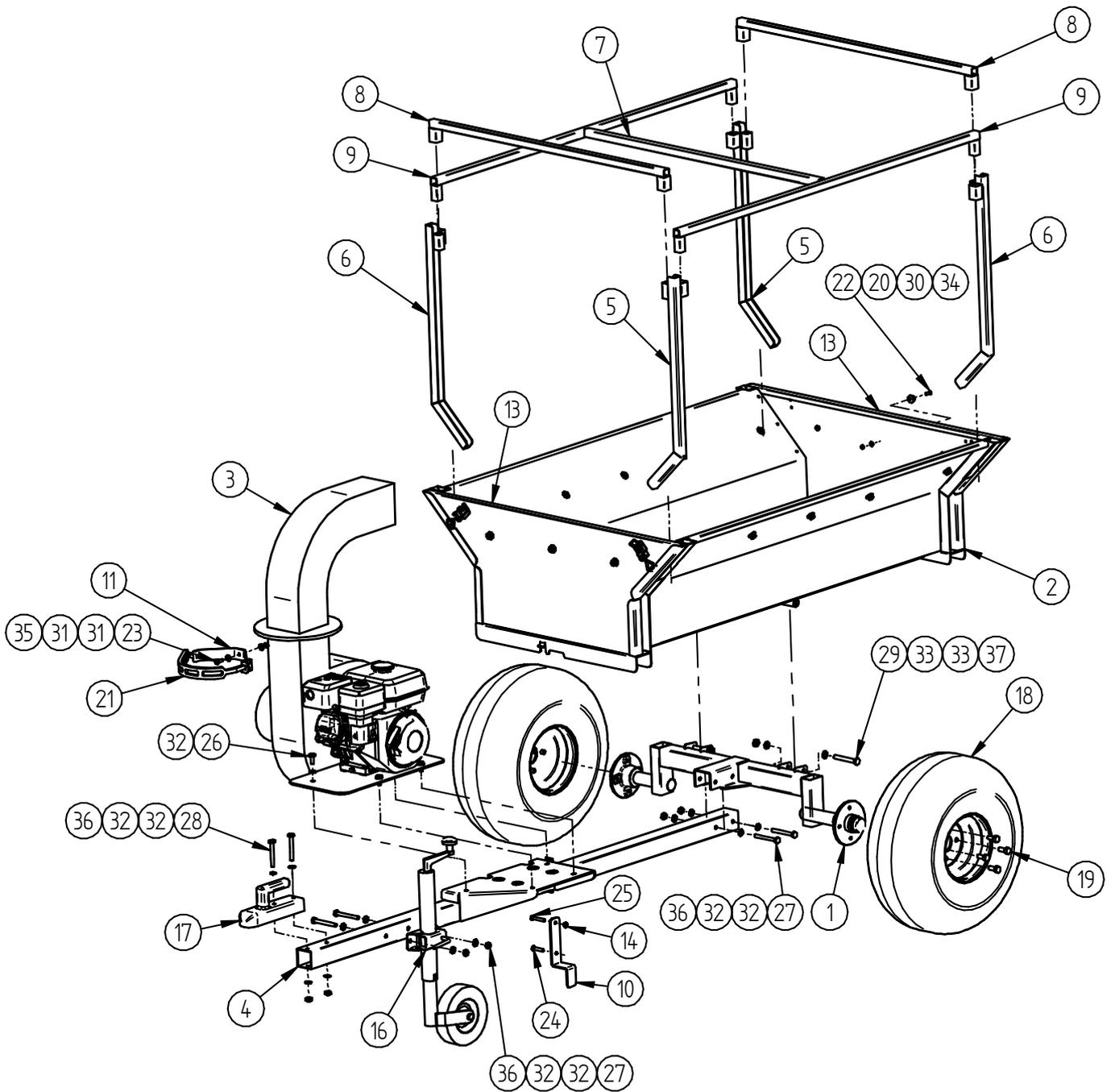


Step 12

When driving the trailer with the leaf vacuum on it, fasten the leaf vacuum hose spout to the drawbar and the hose to the pipe clamp.

SPECIFICATION

Pos.	Description	Code	Amount
1	Axle	61.1200K	1
2	Trailer box	61.1400K	1
3	Leaf vacuum 6 hp	81.1000	1
4	Drawbar	81.2601S	1
5	Post 2	81.2603K	2
6	Post 1	81.2604K	2
7	Pipe 25x25x1,5 L996mm	81.2605	1
8	Beam 1	81.2605K	2
9	Beam 2	81.2606K	2
10	Spout hanger	81.2609	1
11	Pipe clamp	81.2610	1
12	Cover with mesh	81.2611	1
13	Trailer port	23.2040	2
14	Distance bush	05.5406	1
15	Carrier wheel clamp	OT.10.02.055	1
16	Carrier wheel	OT.10.02.056	1
17	Rotating tow coupling 2"	23.1120US	1
18	Wheel 22x11x8	OT.10.03.010	2
19	Wheel bolt	OT.02.09.010	8
20	Rubber cord holder	OT.10.15.010	16
21	Holding strap 380 mm	OT.10.15.020	1
22	Bolt M6x20 ISO7380	OT.02.03.030	16
23	Bolt M8x25 DIN933	OT.02.02.190	1
24	Bolt M8x45 DIN933	OT.02.02.230	1
25	Bolt M8x50 DIN933	OT.02.02.240	1
26	Bolt M10x25 DIN933	OT.02.02.317	4
27	Bolt M10x90 DIN931	OT.02.01.050	4
28	Bolt M10x80 DIN931	OT.02.01.048	2
29	Bolt M12x90 DIN931	OT.02.01.120	2
30	Washer Ø6/15 SFS3738	OT.04.03.020	16
31	Washer Ø8/20 SFS3738	OT.04.03.030	2
32	Washer 10 DIN125	OT.04.01.040	16
33	Washer 12 DIN125	OT.04.01.050	4
34	Nyloc nut M6 DIN985	OT.03.02.030	16
35	Nyloc nut M8 DIN985	OT.03.02.040	1
36	Nyloc nut M10 DIN985	OT.03.02.050	6
37	Nyloc nut M12 DIN985	OT.03.02.060	2



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