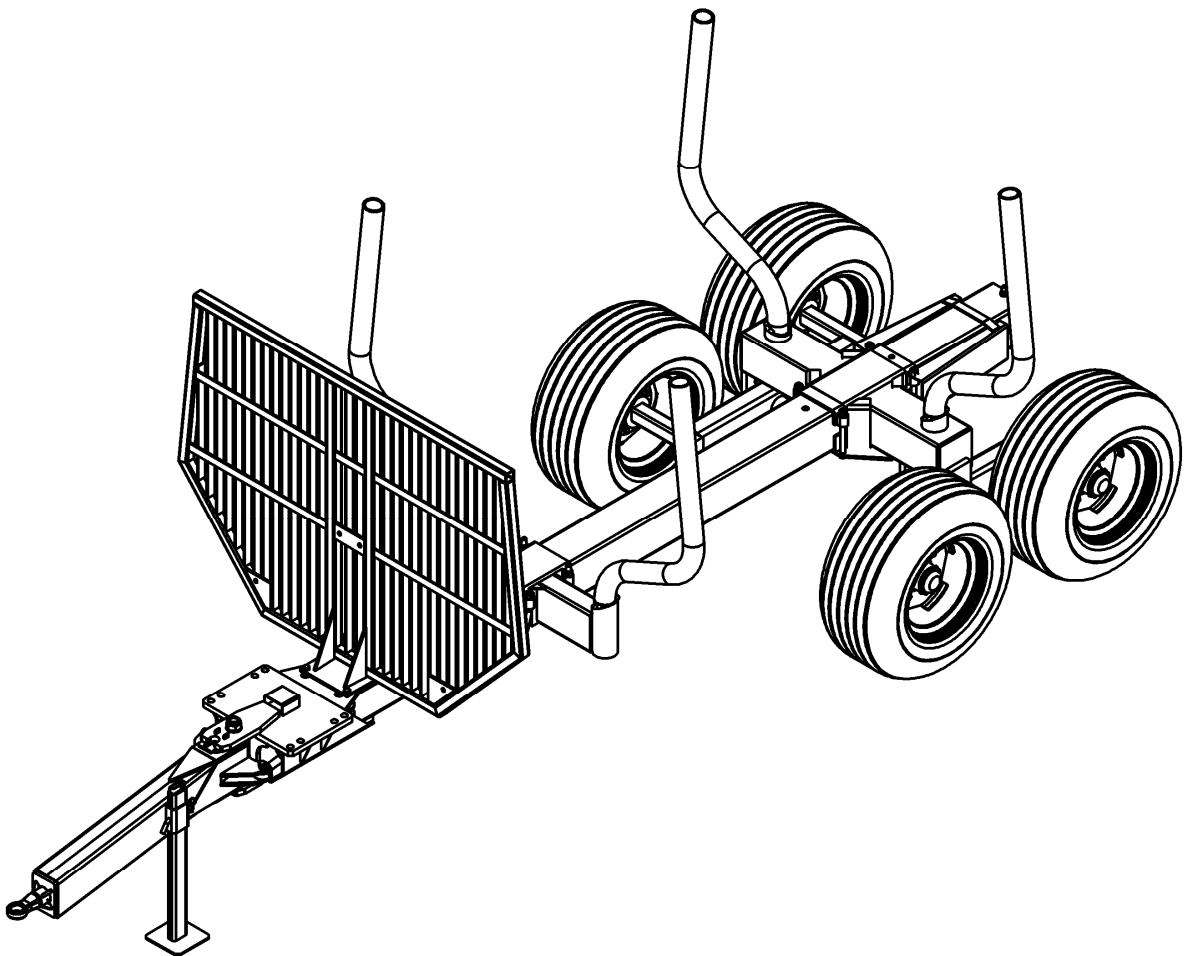


USER MANUAL



FOREST TRAILER PALMS 101

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TABLE OF CONTENTS

1.	INTRODUCTION	2
2.	SAFETY.....	3
3.	BASIC COMPONENTS	5
4.	ACCESSORY	6
5.	TECHNICAL DATA	7
6.	HYDRAULIC SYSTEM.....	9
7.	ASSEMBLY AND MOUNTING.....	9
8.	OPERATING INSTRUCTIONS.....	11
9.	STORAGE INSTRUCTIONS	12
10.	MAINTENANCE	13
11.	SPARE PARTS	14
12.	WARRANTY.....	18

1. INTRODUCTION

This manual gives you detailed overview about forest trailer **Palms 101**. Read the manual carefully before you start using this machine. The manual contains essential directions for efficient and safe use of forest trailer. These instructions should always be followed.

This forest trailer is constructed to transport raw wood material from forest as well for transportation of treated wood. Forest trailer is build for use with agricultural tractors. It has an unified connection junction for mounting Palms forest cranes. This machine meets all technical standards and safety regulations of valid EU Machinery Directive and its amendments. Forest trailer is fitted out with CE marking.

User of forest trailer is obliged to be aware of and strictly follow all safety precautions and instructions described in this manual. In addition to this, instructions of local occupational safety authorities, as well national laws, regulations and highway codes, must be followed. Using the machine for other tasks, than those for which it is intended or exceeding its performance, is not allowed. The manufacturer/dealer is not responsible for damage caused by misuse of the forest trailer.

Pay attention to regular maintenance. In case there will occur problems during use of forest trailer, which are not covered in this manual, contact authorized dealer or manufacturer.

2. SAFETY

2.1 General

Read the manual carefully before you start using forest trailer. Use forest trailer only for purposes, what it is made for. Driver must have proper valid licence to drive tractor in connection with trailer and has sufficient training for that. Notice, avoid and prevent all potentially hazardous situations.

IT IS STRONGLY FORBIDDEN:



- to use forest trailer in state of intoxication by alcohol, drugs or other psychoactive substances
- to exceed maximum loading values
- to use forest trailer for transporting people
- to rebuild forest trailer
- to use repairing materials without the producer's permission

BEFORE YOU START LOADING, MAKE SURE THAT:

- forest trailer is fully in working condition
- you have full visibility over all the working area
- forest trailer is placed on even ground
- parking brake is engaged

2.2 Safety distances

General safety distance for working with forest trailer is 20 metres!

Follow special safety distance when working close to live electrical conductors:

Rated voltage, kV	Safety area, m
Up to 0,5	2
Up to 20	10
35 – 110	25
220 – 330	40

Table 1. Safety area

2.3 Hydraulic system



- Hydraulic system must be serviced by qualified and experienced hydraulics mechanic only
- Continually inspect the condition of hydraulic system. Repair all safety endangering defects immediately
- Before starting repair work or maintenance make sure, there is no pressure in hydraulic system
- Use safety goggles and gloves during repair work and maintenance
- Use original spare parts or parts recommended by the manufacturer
- Prevent oil dripping to the ground to avoid environment pollution
- In ecologically sensitive areas use bio-oil

2.4 Operation



- Ensure, that forest trailer is in good working condition
- Operating with damaged or defective machine is prohibited
- Ensure, that you have control over all the working area
- Prevent entering unauthorized persons to the working area
- Support legs must be used while forest trailer is being loaded
- Be sure not to endanger anyone while lowering the support legs
- Use parking brake while loading
- Do not load over the upper edge of safety screen
- Loading short logs be shure they are supported at least with two pairs of bolsters
- Follow strictly load limits stated by the manufacturer for certain trailer
- Pull the support legs up before moving forest trailer
- Release parking brake
- Pay extra attention driving with unlocked drawbar
- Prevent any hoses between trailer and tractor to be squashed on sharp turns
- For driving on roads lock drawbar in straight position with locking shaft
- Make shure signal lights are unfolded and working for driving on public roads
- Follow traffic regulations
- Max speed by manufacturer for certain forest trailer is 40 km/h
- Manufacturer is not responsible for damage or loss, caused by misuse or incorrect, careless and inappropriate use of the machine

3. BASIC COMPONENTS

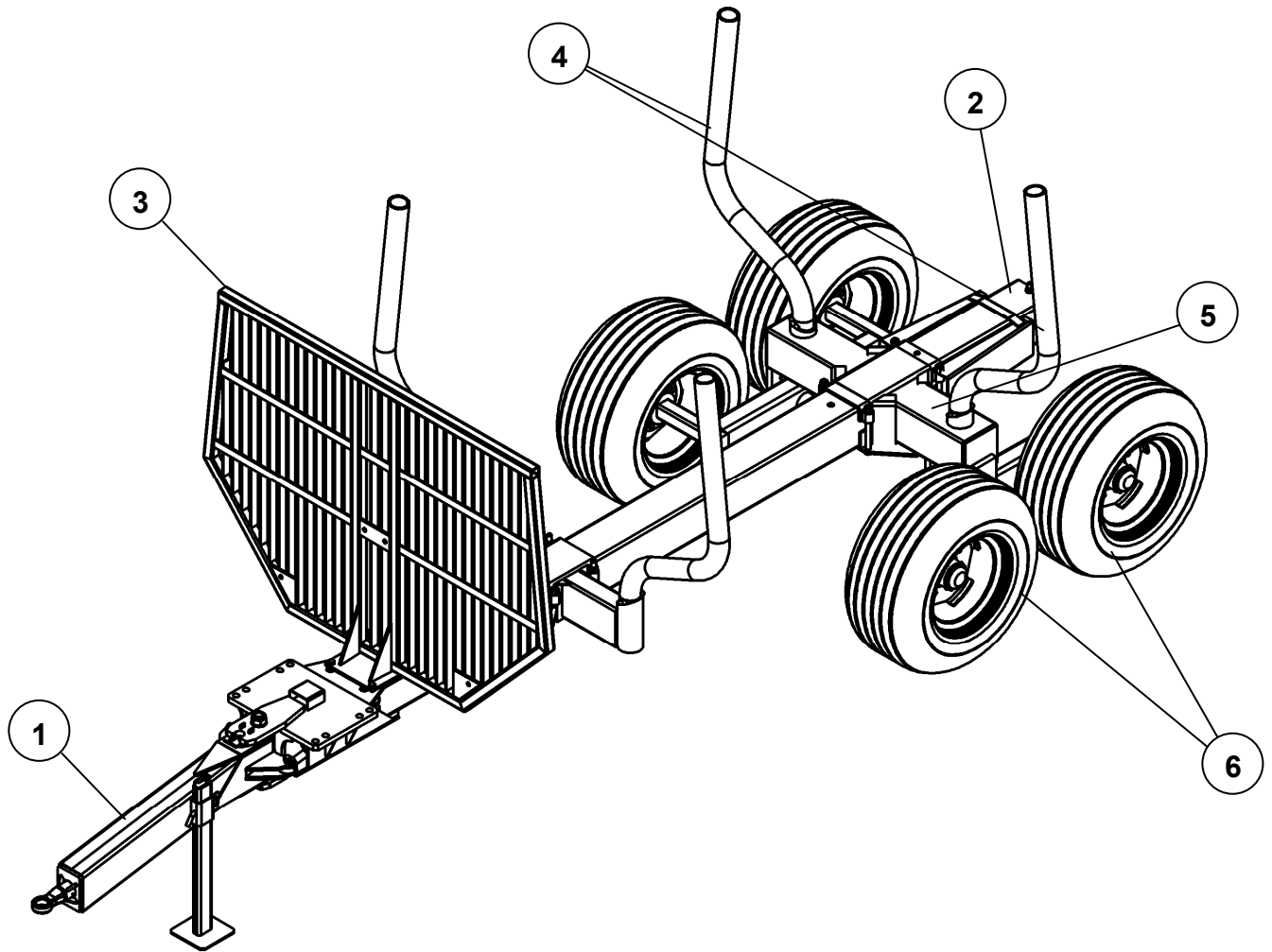


Figure 1. Basic components of Palms 101 forest trailer

1. Drawbar

2. Chassis

3. Safety screen

4. Bolsters

5. Boggie

6. Wheels, standard 11,5/80-11,3

4. ACCESSORY

4.1 Brakes

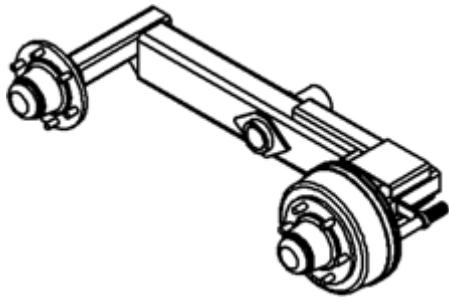


Figure 2. Brakes on one axle

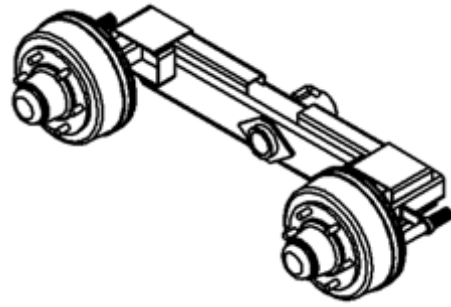


Figure 3. Brakes on two axles

4.2 Frame extension and signal lights

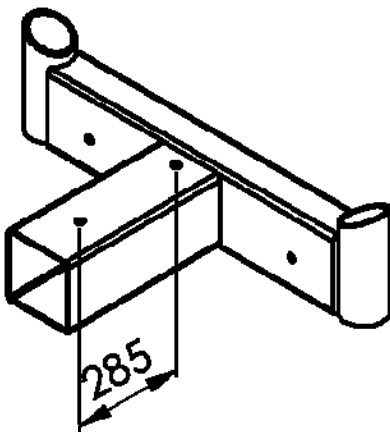


Figure 4. Frame extension

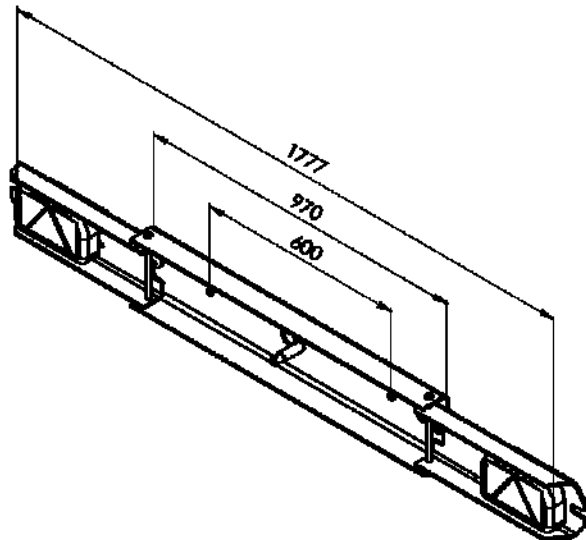


Figure 5. Signal lights

5. TECHNICAL DATA

5.1 Technical data of Palms 101 forest trailer

Load capacity ≤ 40 km/h	11 000 kg
Axles	70x70-6
Chassis	200x200x8
Loading area	2,3 m ²
Length of loading area, mm	3700
Total length, mm	5960
Clearance	
Brakes	
Width with standard wheels, mm	2180
Standard wheels	400/60-15,5
Drawbar cylinders	2
Drawbar turning angle to sides, °	± 40
Net weight, kg	1200
Max torque of installed crane, kNm	≤ 52

Table 2. Forest trailer Palms 101 technical data

Manufacturer reserves the right to change specifications without prior notice.

5.2 Dimensions

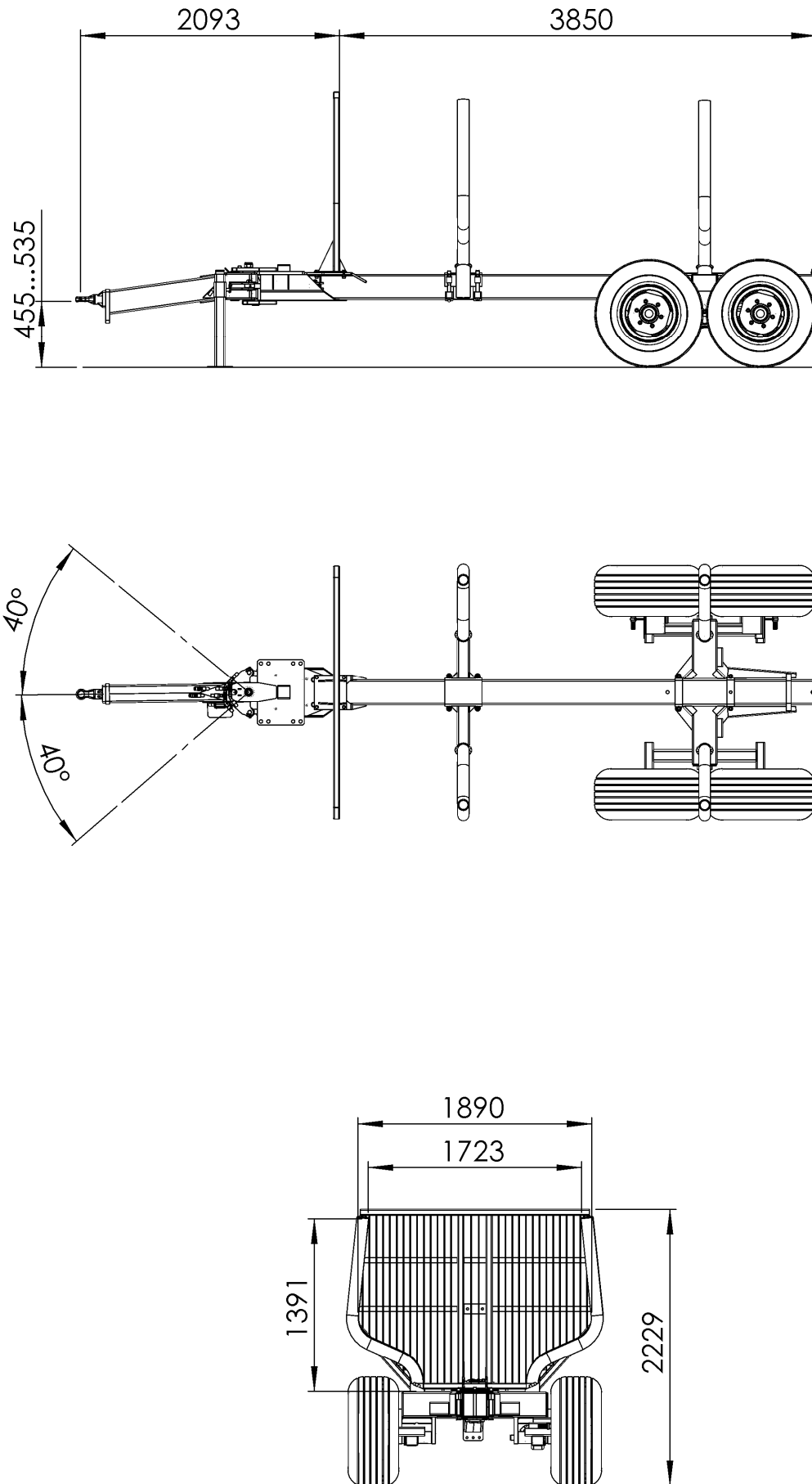


Figure 6. Dimensions of Palms 101 forest trailer

6. HYDRAULIC SYSTEM

6.1 Connection

Connect trailer's hydraulic hoses to one of sections of tractor's control valve. Be sure all connections are properly locked. Unlock drawbar by removing locking shaft. Using lever of control valve section, where you connected forest trailer's hydraulic hoses, work carefully thru extreme positions of drawbar to both sides until turning cylinders are working smoothly.

6.2 Basic components

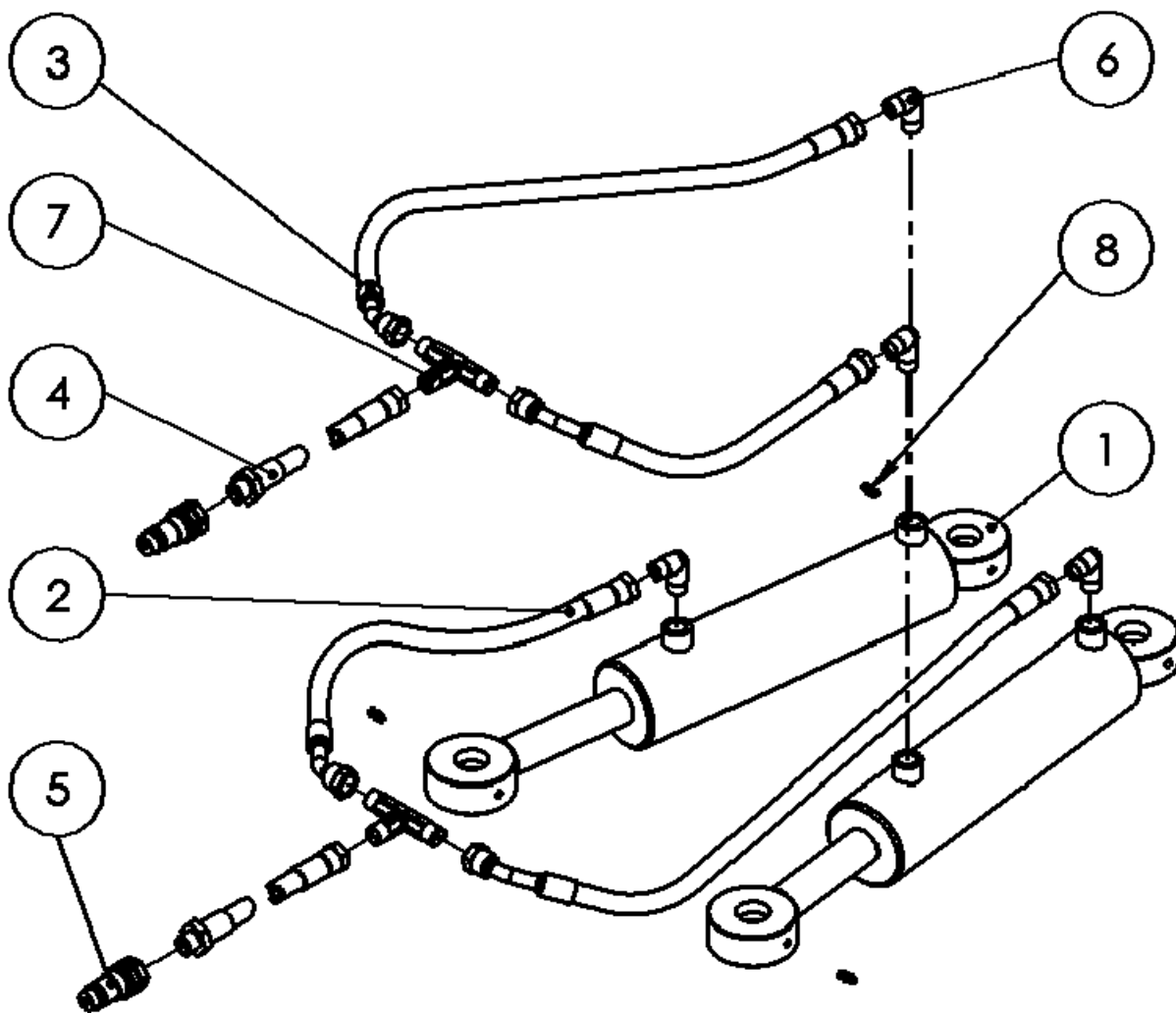


Figure 7. Turning cylinders.

Pos	Pcs	Part	Pos	Pcs	Part
1	2	Drawbar turning cylinder	5	2	1/2 quick coupling
2	2	Hydraulic hose 3/8 - 3/8 135 L - 300	6	4	3/8 L-nipple
3	2	Hydraulic hose 3/8 - 3/8 135 L - 550	7	2	3/8 T-nipple
4	2	Hydraulic hose 3/8 - 1/2 TR L - 2600	8	4	Lubrication nipple M6 DIN 71412

Table 3. Basic hydraulic components of Palms 101 forest trailer

7. ASSEMBLY AND MOUNTING

Read these instructions before starting any assembly or mounting work. Improper mounting can cause hazards during use of the forest crane. Mounting, carried out in a manner other than specified in this manual, can expose the user to danger and will void the manufacturer's warranty.

7.1 Mounting forest crane to Palms trailer

Mounting of forest crane should be performed at the dealer service center or by person authorized by the manufacturer or dealer. Mounting/detaching the crane can also be made by end user, if professional equipment is used, all safety regulations are followed and at least one qualified mechanic is in present during all the mounting/detaching process.

Strength class for mounting bolts of support legs - trailer (pos. 1, fig. 5) has to be 12.9 (DIN912). Use self-locking nuts M24. Tightening torque for the mounting bolts is 1220 Nm.



Retighten bolts after test run and after first 8 hours of use! Check after 40 working hours, tighten if needed. Later on do visual check.

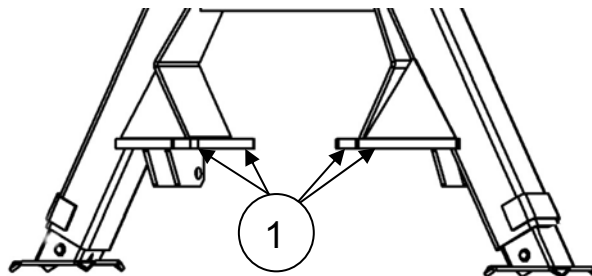


Figure 7. Connection junction on A- support legs

8. OPERATING INSTRUCTIONS

8.1 Connecting forest trailer to tractor

Before you hook up trailer with tractor ensure, that:

- tractor is enough powerful for this trailer
- tractor's hitch is in perfect working condition
- trailer is on even ground and fixed with wheel chocks
- trailer is in perfect working condition
- all hydraulic hoses on trailer are properly connected

Before you start transport forest trailer ensure, that:

- forest trailer is hooked up and locked to tractor properly
- hydraulic hoses between trailer and tractor are connected properly
- trailer's brakes are released
- wheel chocks have been removed
- there is right air pressure in trailer's tyres
- drawbar is locked in straight position while driving on roads
- signal lights cable is connected to the tractor and lights are working properly



Adjust speed according to the road and weather conditions. Do not exceed the speed limit! Driving with the load be especially careful on turns!

9. STORAGE INSTRUCTIONS



Always switch the pump off before disconnecting hydraulic hoses from tractor's hydraulic system!

- Clean forest trailer and if necessary, touch up any points, where paint has peeled off
- Lubricate forest trailer thoroughly (see lubricating instructions)
- Release pressure from the cylinders
- Protect draw bar turning cylinder's piston rods with grease
- Store forest trailer in a sheltered area (under the roof), avoid direct contact with ground

10. MAINTENANCE

10.1 Lubrication

Using the appropriate lubricants like Beacon EP2, Multipurpose GR Moly, Mobilux EP2, Mobil Grease MP Special, Energrease LS-EP2 or similar. Right lubricants guarantee the troublefree operation of the machine.

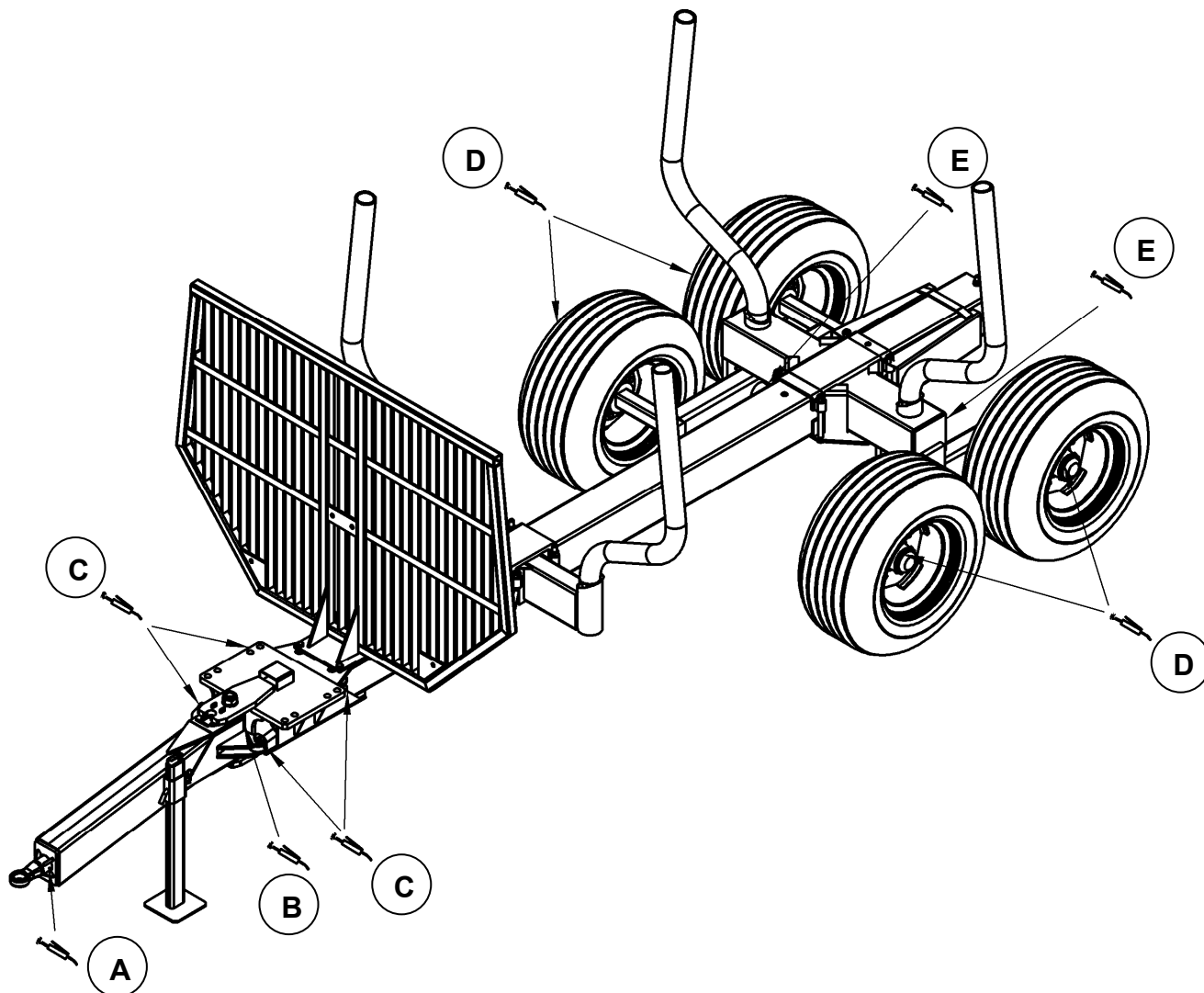


Figure 8. Lubrication points of Palms 101 forest trailer

Lubrication point	Pcs	Lubricant	Interval, working hour	Additional information
1. Drawbar eyelet, A	1	Grease	8	2% molybdensulfide
2. Shaft of the drawbar, B	1	Grease	8	
3. Turning cylinder eyelet, C	4	Grease	8	
4. Rollerbearings of wheels, D	4	Grease	Once a year	
5. Shaft of the bogie, E	2	Grease	8	

Table 3. Lubrication

11. SPARE PARTS

11.1 Basic parts

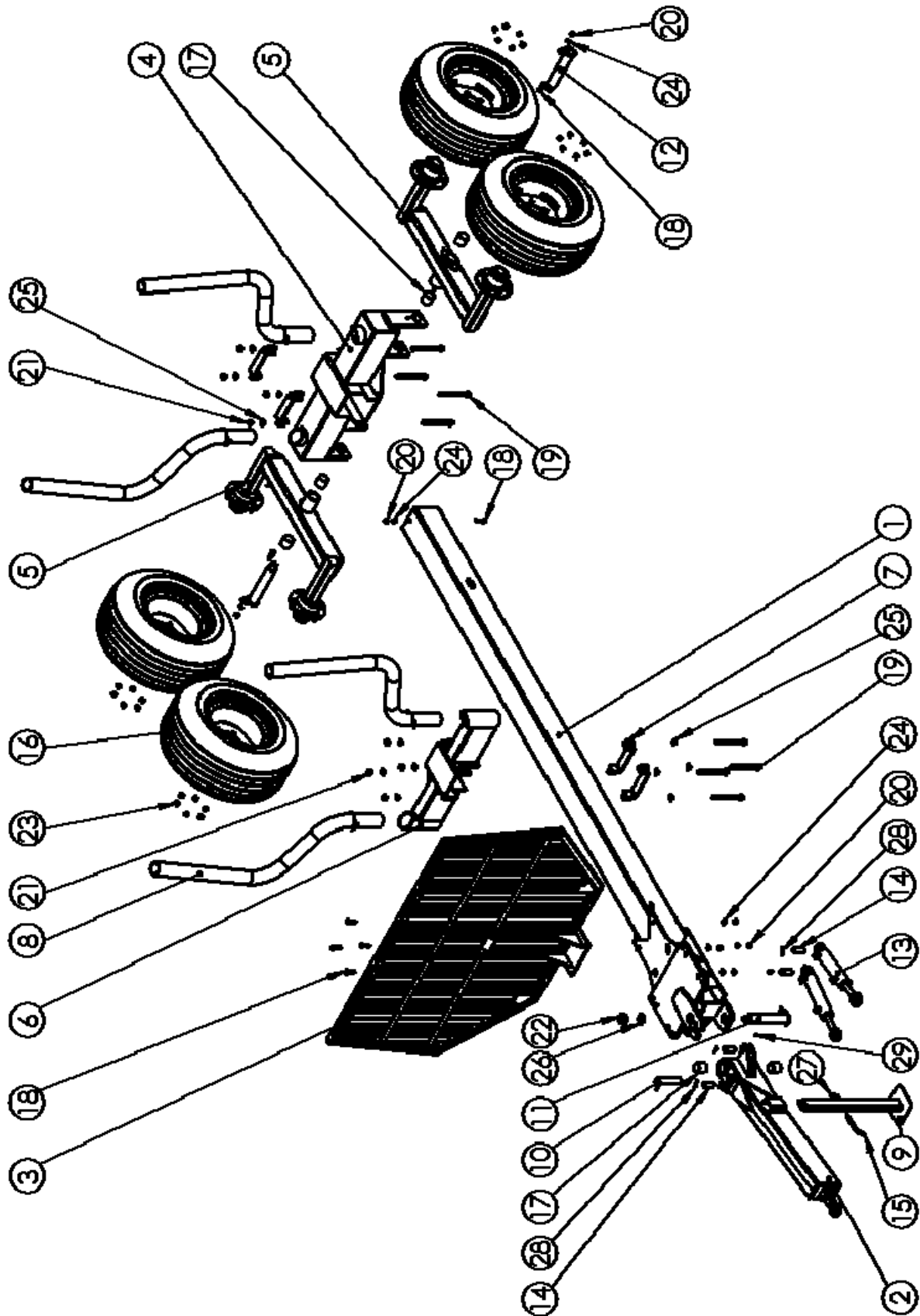


Figure 9. Spare parts of Palms 101 forest trailer

Pos	Qty	Part №	Part name
1	1	1101000101	Palms 101 frame
2	1	1112000201	Palms 101 drawbar
3	1	1101000301	Palms 101 front safety barrier
4	1	1101000401	Palms 101 boggie bunk
5	2	1101000501	Palms 101 boggie
6	1	1101000601	Palms 101 bunk
7	4	2101000701	Palms 101 clamp
8	4	2112001101	Palms 101 post
9	1	2112001001	Parking leg
10	1	2112000801	Drawbar locking pin
11	1	2112000601	Palms 101 drawbar pin
12	2	2112000501	Palms 101 boggie pin
13	2	3703202030	Drawbar turning cylinder
14	4	2112001201	Cylinder pin
15	1	2112001301	Parking leg locking pin
16	4	*	Wheel
17	6	5800606065	Bearing bush 60-65X60 WB800
18	7	7933160600	Screw M16 x 60 DIN 931
19	8	7933202200	Screw M20 x 220 DIN 931
20	7	7985160000	Nut M16 DIN 985
21	8	7985200000	Nut M20 DIN 985
22	1	7985360000	Nut M36 DIN 985
23	24	7000018015	Wheel nut M18 x 1,5
24	7	7125160000	Washer 16 DIN 125
25	12	7125200000	Washer 20 DIN 125
26	1	7125360000	Washer 36 DIN 125
27	1	7110244075	Cotter pin 4 x 75 DIN 11024
28	4	7148110050	Pin 10 x 50 DIN 1481
29	3	7714120600	Grease nipple M6 DIN 71412

Table 4. Spare parts list of Palms 101 forest trailer

11.2 Hydraulic brakes on one(front) axle

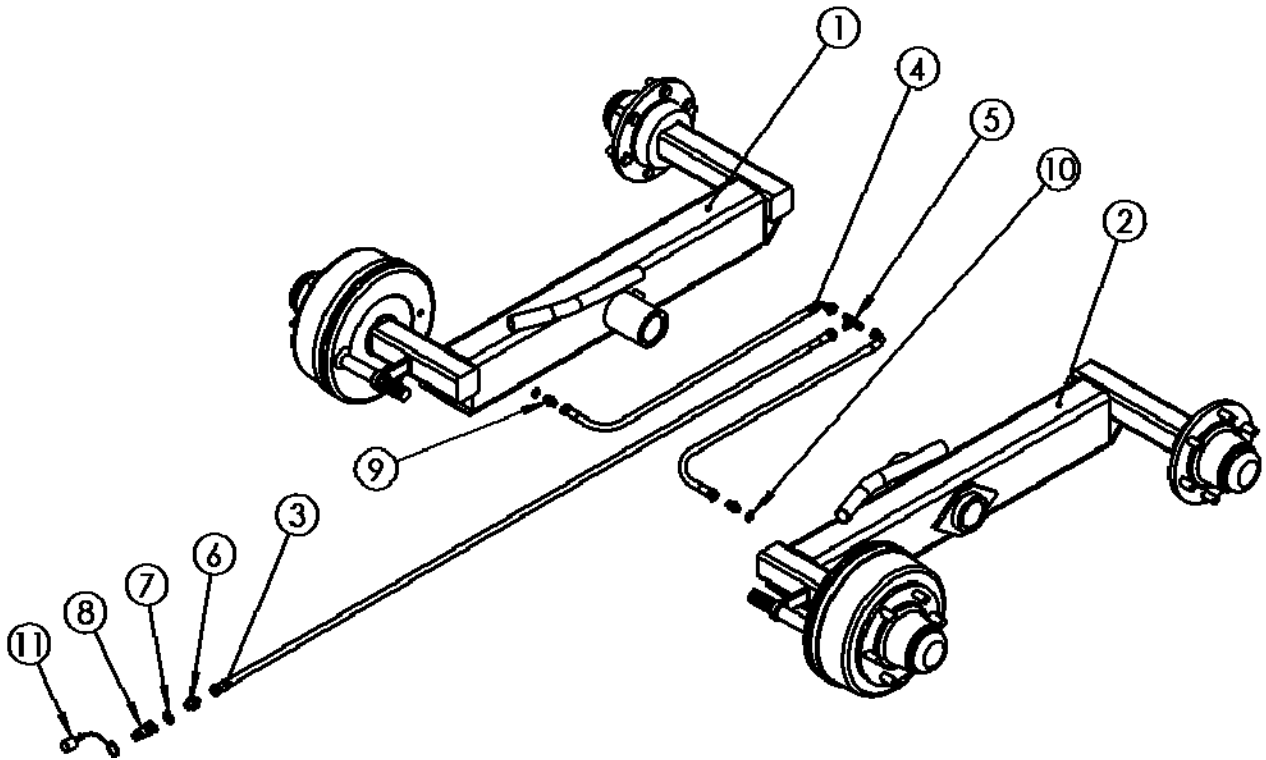


Figure 10. Hydraulic brakes on front axle

Pos	Qty	Part №	Part name
1	1	11220101	Boggie
2	1	11220201	Boggie
3	1	11220301	hydraulic hose 1/4 - 1/4 L -
4	2	11220401	hydraulic hose 1/4 - 1/4 90 L -
5	1	11220501	1/4 T-union
6	1	11220601	1/2 - 1/4 nipple
7	1	11220701	1/2 usit-seal
8	1	11220801	1/2 quickcoupling
9	2	11220901	1/4 double nipple
10	2	11221001	1/4 usit-seal
11	1	11221101	1/2 cover

Table 5. Spare parts list of hydraulic brakes on one axle

11.3 Hydraulic brakes on two(front and rear) axles

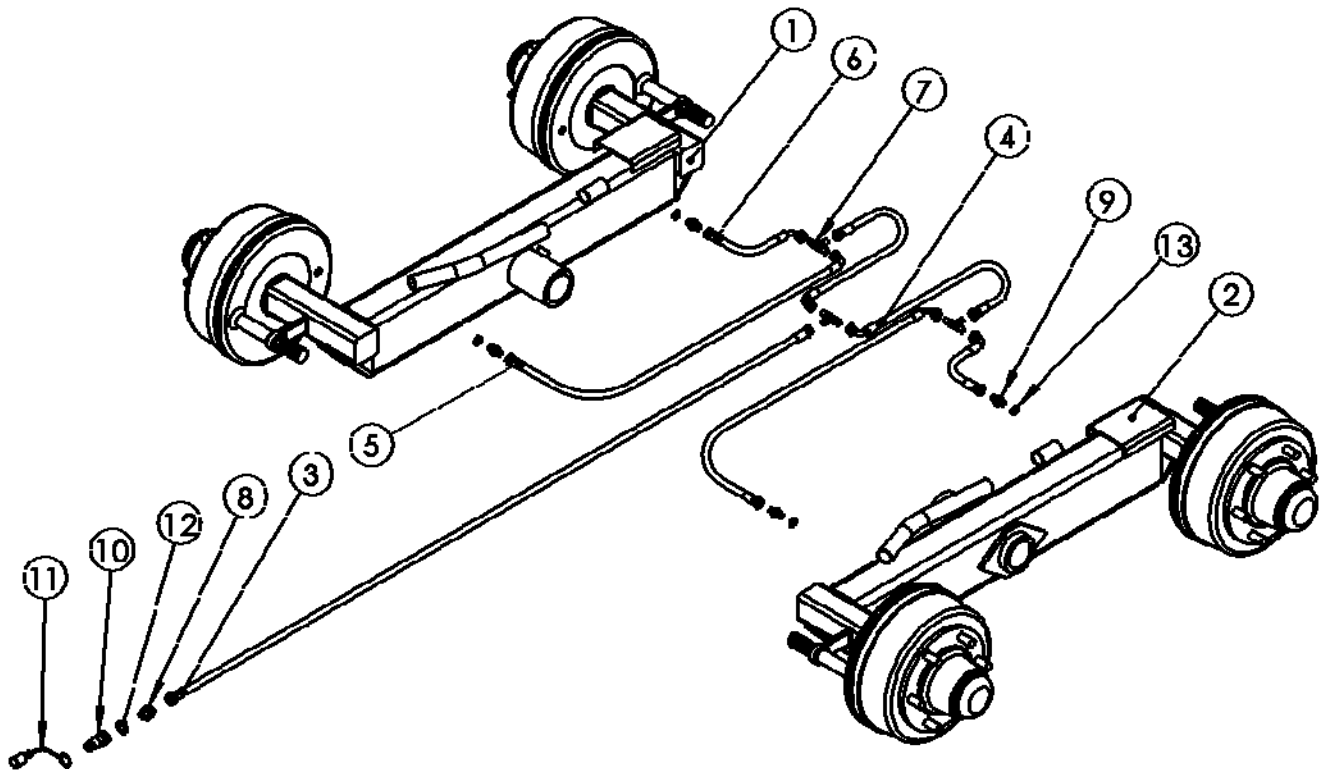


Figure 11. Hydraulic brakes on both axles

Pos	Qty	Part №	Part name
1	1	11230101	Boggie
2	1	11230201	Boggie
3	1	11230301	hydraulic hose 1/4 - 1/4 L -
4	2	11230401	hydraulic hose 1/4 - 1/4 90 L -
5	2	11230501	hydraulic hose 1/4 - 1/4 90 L -
6	2	11230601	hydraulic hose 1/4 - 1/4 90 L -
7	1	11230701	1/4 T-union
8	1	11230801	1/2 - 1/4 nipple
9	2	11230901	1/4 double nipple
10	1	11231001	1/2 quickcoupling
11	1	11231101	1/2 cover
12	1	11231201	1/2 usit-seal
13	2	11231301	1/4 usit-seal

Table 6. Spare parts list of hydraulic brakes on both axles

12. WARRANTY

Product warranty is valid for one year starting from the date of delivery or issuing an invoice. Product warranty is valid only if:

- all instructions in this manual were followed
- during the maintenance original spare parts were used
- maintenance work was performed by the qualified specialist
- forest trailer was not overloaded
- proper pressure was used in the hydraulic system

Product warranty is **NOT VALID** in case of user's incompetence and/or irrespective handling of the equipment. Warranty does not cover transportation cost or loss of profit due to normal abrasion or product failure.

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