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VARMOLIFT SUPER

FODDER DISTRIBUTION WAGON

OPERATING, MAINTENANCE AND SAFETY MANUAL

NOT FAMILIAR WITH THESE INSTRUCTIONS ARE PROHIBITED TO USE THE MACHINE



TP SILVA DY Haapajärvi, finland

www.varmolift.fi

***** +358 8 7727 300

Translation

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General safety instructions

When operating this wagon the operator must exercise sufficient care to ensure that no damage is caused to the operator, other persons, animals, the environment or any structures.

The VARMOLIFT SUPER Fodder distribution wagon is intended to distribute fodder preserved using various preservation methods (roll bales, flat hoppers, bunkers) and fresh fodder to animals.

Operating the wagon

Before operating the wagon the operator must carefully study these operating, maintenance and safety instruction. The wagon must not be operated by children and persons not familiar with these instructions.



General information on commissioning of equipment

All the functions of the machine are hydraulic. The operations are controlled by the machine's valve unit according to the provided diagram. Before starting to distribute fodder test the functions of the machine without fodder with the engine running.



Commissioning of an electric machine

REVERSE

Before connecting the plug in the socket outlet it is necessary to check the cable; monitor the cable during operations to ensure that it is not damaged in a way that could cause an electric shock. It is strictly prohibited to use a damaged plug, socket outlet or cable. When using the machine it is necessary to ensure that humidity does not cause an electric shock hazard. The cooling holes of the motor must be kept clean. When washing the machine care must be taken to prevent penetration of water in the electric equipment of the machine. When the machine is working care must be taken to ensure that the cable is guided back to the reel accurately without causing any damage. There is ca 30 m of cable on the reel, and it is necessary to check its running out. Stop the machine when the cable is fully unrolled save of ca two loops. When the plug is inserted in or taken out from the socket outlet it is necessary to grasp the cable by hand so securely, that the cable does not rip itself loose and wind freely back on the reel.

Connect the plug in the socket as shown in the adjacent figure, fixing the cable clamp to the hook allowing to tighten the cable. The cable must hang on the clamp, and under no circumstances on the plug, when the plug is connected to the socket. The cable between the socket and the clamp must be loos.

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Connect the plug in the socket as shown in the adjacent figure, fixing the cable clamp to the hook allowing to tighten the cable. The cable must hang on the clamp, and under no circumstances on the plug, when the plug is connected to the socket. The cable between the socket and the clamp must be loos.



Start the electric motor using the switch on the machine. Immediately check the motor rotation direction. If the machine does not function when its control equipment, i.e. the valve unit is operated, the rotation direction is incorrect. In such case stop the motor immediately, because such incorrect rotation direction can damage the machine's hydraulic pump. The motors rotation direction must be switched to a correct one and this can be performed only by a person with appropriate authorisation.

Cable guide rolls

The cable reel is equipped with cable guide rolls. The rolls are attached to the rod that can be articulated 180 degrees. Articulation allows positioning the socket outlet either in front or behind the operator. If the socket outlet is positioned in front of the operator and the cable runs over the load section it is necessary to take care during work that the cable is not crushed between machine parts.



Driving the machine

Special care must be exercised when driving the machine. Before moving off it is necessary to ensure that there are no objects, animals or persons under or around the machines or on its driving path, who could be harmed by moving off or driving the machine. Moreover, it is necessary to ensure that the machine is not too close to any buildings or structures in order to avoid hitting them when the machine sets off.

Before moving off it is necessary to ensure that the direction of the drive engine wheel is appropriate, so that the machine is not going to bump into objects, buildings, people or animals. When the wheel is placed at a 90 degrees angle in respect to its longitudinal axis it is necessary to be particularly careful when moving the machine off, particularly when the machine is loaded with fodder. When the machine sets off the control lever must be used in a manner preventing any damages, i.e. it is necessary to ensure that the machine does not bump into any obstacles. At curves and corners the driving speed must be adjusted to prevent crushing of the machine against obstacles and overturning. It is absolutely prohibited to drive the machine on slopes where the machine can overturn. It is forbidden to drive over possible obstacles on the path of the machine pointing straight up. When driving the machine the driver must be on the driving bridge and the safety rib must be down and locked. When driving care must be taken to avoid bumping of the machine into any milking, air conditioning etc. pipelines.

THE DRIVER MUST ENSURE THAT DURING DRIVING NO BODY PART OF THE DRIVER CAN HIT ANY STRUCTURES OR BUILDINGS ABOVE OR BESIDE THE MACHINE.

Loading of roll bales from the floor

If a roll bale is wrapped in plastic remove the cover as shown on the figure.

- 1. Cut the plastic on around the bottom of the bale.
- 2. Cut the ends of the bale open.

3. Remove the plastic, cut the cords or the net and remove them.

4. Slip the forks under the bale and lift the bale on the machine in the same way as when loading chunk fodder.



5. When the bale is loaded return the forks by 10 cm back using the *Moving the forks forward* lever. This helps to remove any loose plastic and cords on the bottom of the bale.

6. After operation 4, when a suitable quantity of fodder has been moved for cutting, return the forks by ca 5 cm. Thus fodder between the forks and the cutting blade is freed and cutting is easier, and fodder is not squashed between the forks and the cutting blade.

7. Do not move the fodder too much to the cross conveyor of the cutting blade, because too much fodder can make the cutting and distributing of fodder more difficult. The proper cutting quantity is a slice of ca 5-10 cm cut from the chunk or the bale, which amounts to ca 3-5 single portions for the animals.

8. Return forks approx 5 cm from handle Forks down

9. Cut pieces by using lever Cutting down

10. Lift blade approx 10 cm from lever *Cutting up*. In this way You prevent the feed table from moving unnecessaruly.

11. Distribute the wanted amount of fodder by using lever distribution to the direction You want feed to so to repeat points 7, 8, 9, 10 and 11. You can load 2 bales on machine.

WARNING!

MOVE THE ROLL BALE SECURELY ON THE PLATFORM TO PREVENT IT FROM ROLLING BACK ON THE FORKS, WHEN YOU MOVE THE FORKS BACK. A BALE THAT ROLLS BACK ON THE FORKS CAN CAUSE A DANGEROUS SITUATION.

BEFORE CUTTING A SLICE OF THE BALE ALWAYS MOVE THE FORKS BACK BY CA 10 CM. FAILURE TO MOVE THE FORKS BACK CAN CAUSE DEFORMATION OF THE FORKS.



Loading and distributing a chunk or a roll bale



1. Lowering the forks



2. Slipping the forks under fodder



3. Loading of fodder



5. Cutting fodder



4. Moving of fodder on the cutting blade



6. Fodder feeding for animals from both sides

Storing the machine

When preparing the machine for storage:

- Always lower its cutting blade.
- The loading forks must stay in the bed in an upright position.
- The plug of an electrically powered machine must be removed from the socket.

- The ignition key of an internal combustion engine powered machine with a starter must always be kept in a place where children cannot have an access to it.

- The hand brake of the machine must be switched on if the machine is left in a warehouse or left alone even for a moment.

Machine maintenance

Sharpening of the cutting blade

Keep the cutting blade of the cutter sharp and sharpen it when necessary according to the instructions given.



Removed replace / air pressure of drive wheel Max. pressure for vehicle tires 5 bar Release pressure while removing or installing time for safety purposes



Lubrication and maintenance points of the machine

Lubricate the points indicated on the figure with Vaseline once a year.

Check the hydraulic oil level in the hydraulic tank of the machine using the dipstick on its cover. The correct oil volume is 30 l. Change the oil once a year. Normal hydraulic oil can be used in the hydraulic system. Change the oil filter once a year.

Other maintenance

- Keep the internal combustion engine or electric motor compartment always clean to prevent fires.

- Add fuel in the internal combustion engine tank when the engine is cold

- Keep the cross conveyor chain properly tightened, i.e. the bottom chain must be at a distance of ca cm from the bottom plate.

- Inspect the machine's hydraulic system to find any possible leaks and if problems are discovered, eliminate them forthwith.

- The hydraulic pressure is adjusted at the manufacturing plant and it must not be changed without the manufacturer's consent.

- If you wish to adjust the pressure, do it as shown on the adjacent figure.



Pressure adjustment screw. Clockwise – pressure is increased; counter-clockwise – pressure is reduced. 13 mm ring spanner and 4 mm hexagonal spanner are required to ad-

just the pressure

VarmoLift Super

HYDRAULIC DIAGRAM OF THE VARMOLIFT SUPER

- 1. Oil tank
- 2. Return filter
- 3. Double pump 16+11 el.
- 3. Double pump 8+6 combustion engine
- 4. Pressure limiter
- 5. Driving engine valve
- 6. Conveyor valve
- 7. Cutter valve
- 8. Chunk moving valve
- 9. Driving engine

- 10. Conveyor engine
- 11. Cutter cylinder
- 4. Chunk moving cylinder
- 5. Drive overload valve
- 6. Drive pressure control valve RF/G (not in use)
- 7. Distribution valve PRD80/7
- 8. Control valve HKUS63/5
- 9. Steering cylinder



Wiring diagram of an electric wagon

The direction of rotation of the motor changes when the R and T wires are interchanged.





25046 K-nut M8

Spare part list

| Varmolift S | aper |
|-------------|------|
|-------------|------|

| | | Fodder wagon | | 25047 K-screw M8x60 | 6 |
|---|--------|------------------------------|----|-----------------------------------|---|
| ľ | Nr | Items | Pc | 25048 Fixing bar | 2 |
| 2 | 25001 | Frame | 1 | 25049 Rubber flap | 2 |
| 2 | 25002 | Shield | 1 | 25050 Draw spring | 1 |
| 2 | 25003 | Back plate (option) | 1 | 25051 Joint | 1 |
| 2 | 25004 | Driving bridge | 1 | 25052 Adjusting joint | 1 |
| 2 | 25005 | Lifting fork | 1 | 25053 Valve SD5/4 | 1 |
| 2 | 25006 | Moving frame | 1 | 25053a Valve SD4/1 | 1 |
| 2 | 25007 | Joint pin 20x75 | 2 | 25053b Valve SD5/1 | 1 |
| 2 | 25008 | Lock ring A20 | 6 | 25054 Cylinder 90/45-480 | 1 |
| 2 | 25009 | Hydr.hose 1/2" 0.75m | 2 | 25055 Cutting blade | 1 |
| 2 | 25011 | Back plate | 1 | 25056 Spring cotter | 1 |
| 2 | 25012 | Cylinder 70/40/32 | 1 | 25057 Bearing 6205 RS | 4 |
| 2 | 25013 | Hydr.hose 3/8" 1.8m+0.3m | 1 | 25058 Hand brake lever | 1 |
| 2 | 25014 | K-screw M12x40 | 20 | 25059a Clutch, diam.85 el | 1 |
| 2 | 25015 | K-screw M12 Nyloc | 20 | 25059b Clutch rubber el | 1 |
| 2 | 25016 | Hydr.pipe 12 | 1 | 25060a center housing el. | 1 |
| 2 | 25017 | Hydr.hose 3/8" 0.7m | 3 | 25061a Hydr.pump 16+11 el | 1 |
| 2 | 25018 | Hydr.hose 3/8" 1m | 4 | 25061b Hydr.pump 8+ 6 Lomb. | 1 |
| 2 | 25019 | Hydr.hose 3/8" 1.2m | 1 | 25061c Hydr.pump 25 reel | 1 |
| 2 | 25019a | Hydr.hose 3/8" 1.4m | 1 | 25062 Filler can R 1 $1/2$ " | 2 |
| 2 | 25020 | Hydr.hose 3/8" 0.8m | 2 | 25062 Filter FIO 50/3 | 1 |
| 2 | 25021 | Hydr.hose 3/8" 2m | 2 | 25064 Filter element CR50 P25 | 1 |
| 2 | 25022 | Basic connector DL12 | 1 | 25065 Limiter M16x50 | 2 |
| 2 | 25023 | Coupler | 1 | 25066 Wheel bolt M12x1 5x42 | 5 |
| 2 | 25024 | Usit seal 3/8" | 16 | 25067 Steering wheel | 1 |
| 2 | 25025 | Double nipple 3/8" | 16 | 25068 Job button | 1 |
| 2 | 25026 | Usit seal 1/2" | 8 | 25069 Steering shaft | 1 |
| 2 | 25027 | Double nipple 1/2"-3/8" | 8 | 25070 Bearing 6204 2RS | 5 |
| 2 | 25028 | Hydr.motor EPM 160 | 1 | 25071 Control valve HKUS 63 | 1 |
| 2 | 25029 | Coupling sleeve | 1 | 25072 Distribution valve PRT 80 | 1 |
| 2 | 25030 | Wedge 7x8 | 4 | 25073 Steering cylinder 50/32-130 | 1 |
| 2 | 25031 | Locking screw | 1 | 25074 Cylinder bracket | 1 |
| 2 | 25032 | Chain sprocket 8 teeth | 4 | 25075 Hvdr.hose 3/8" 0.4m | 1 |
| 2 | 25033 | Drive shaft | 1 | 25076 Hydr.hose 3/8" 0.2m | 1 |
| 2 | 25034 | Kolswa chain nr 57 | 6m | 25077 Suction hose int diam 25 | 1 |
| 2 | 25035 | Rake | 12 | 25080 Drive wheel 8"x190 | 1 |
| 2 | 25036 | Bearing UCFL 205 | 4 | 25080a Tvre | 3 |
| 2 | 25037 | Shaft | 1 | 25080b Inner tube | 3 |
| 2 | 25038 | Tensioner | 2 | 25081 Drive shaft | 1 |
| 2 | 25039 | K-screw M12x100 fullthreaded | 2 | 25082 Steering frame | 1 |
| 2 | 25040 | Joint pin 35 | 2 | 25083 Bearing 6210 2RS | 4 |
| 2 | 25041 | Joint pin 35 | 2 | 25084 Lock ring A50 | 2 |
| 2 | 25042 | Lock ring A35 | 4 | 25085 Overload valve | 1 |
| 2 | 25043 | Oil tank | 1 | 25088 Connecting bar | 1 |
| 2 | 25044 | Cap 3/8" | 1 | 25089 Shear pin 2.5x25 | 1 |
| 2 | 25045 | K-screw M8x20 | 18 | 25090 Wheel 8"x190 | 2 |
| | | | | | |

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| 25091 | Hose tensioner | 2 |
|------------------|----------------------------------|-----|
| 25092 | Hydr.motor EPRM 400 | 1 |
| 25093 | Cable guide | 1 |
| 25094 | Roll, diam.40 | 2 |
| 25095 | Roll. diam60 | 2 |
| 25096 | Roll shaft | 2 |
| 25097 | Cable reel | 1 |
| 25098 | Cable 5x2.5 | 30m |
| 25099 | Plug 5x32A | 1 |
| 25100 | El motor 7 5kW/1500 | 1 |
| 25101 | Safety switchr | 1 |
| 25102a | Protection cover (diesel) | 1 |
| 25102h | Protection cover (el) | 1 |
| 251020 25103a | Work lamp el | 1 |
| 25103h | Work lamp combustion engine | 1 |
| 251030 | Cable fastener | 1 |
| 25104 | Cable | 1 |
| 25100 | Cable | 1 |
| 25107 | Cover of al motor | 1 |
| 25108 | Rettery case | 1 |
| 25106a | Dattery case | 1 |
| 251109 | Compution anging Lombardini) | 1 |
| 251100 | Conformation engine Lonibardini) | 1 |
| 25111 | Cooler Engine brocket | 1 |
| 25112 | Engine bracket | 4 |
| 25112a | Engine mount rubber | 4 |
| 25115a | Vaccum pipe | 1 |
| 25114 | Vaccum elbow | 1 |
| 25114a | Comb.engine smeld (Lomb.) | 1 |
| 25115 | Pump attachment housing (Lomb.) | 1 |
| 25110 | | 1 |
| 25117 | | 1 |
| 25118 | K-nut M10 Nyloc | 1 |
| 25119 | Hose fastener | 1 |
| 25120 | Hose fastener | 2 |
| 25121 | Exhaust pipe (Lombardini) | 1 |
| 25122 | Fuel tank | 1 |
| 25123 | Hose connecting nipple | 2 |
| 25124 | Seat | 1 |
| 25125 | Seat bracket | 1 |
| 25126 | Pin | 1 |
| 25127 | Slip pin | 1 |
| 25128 | Intermediate bar | 1 |
| 25129 | Joint | 1 |
| 25130 | Drive pedal | 1 |
| 25131 | Pin | 1 |
| 25132 | T-coupler | 2 |
| 25133a | Chain 1/2" | 1 |
| 25134 | Hydr.motor attachment bracket | 1 |
| 25135 | Shield | 1 |
| 25136 | Chain sprocket 1/2" | 2 |
| 25136b | Sprocket bracket | 1 |

| Fine fodde | |
|---------------------------|--|
| loading bucket (option) | 1 |
| Spare forks (option) | 2tai4 |
| Lombard.oil filter (D) | 1 |
| Lombard air filter (D) | 1 |
| Lombard.muffler | 1 |
| Catalyst (diesel) option | 1 |
| Reel spring | 2 |
| K-screw M10x100 | 1 |
| Fuel filter (Lomb.) | 1 |
| Adjustment valve RVP | 1 |
| Exhaust pipe (Lombardini) | 1 |
| Fuel hose (gauge) | 1 |
| Hose tensioner | 4 |
| Fuel hose (return) | 1 |
| Fuel hose (vaccum) | 1 |
| Motor heater (Lombard. | |
| option) | 1 |
| | Fine fodde loading bucket (option) Spare forks (option) Lombard.oil filter (D) Lombard air filter (D) Lombard.muffler Catalyst (diesel) option Reel spring K-screw M10x100 Fuel filter (Lomb.) Adjustment valve RVP Exhaust pipe (Lombardini) Fuel hose (gauge) Hose tensioner Fuel hose (return) Fuel hose (vaccum) Motor heater (Lombard. option) |

OPERATING, MAINTENANCE AND SAFETY MANUAL OF A DIS-TRIBUTING REEL ATTACHED TO A VARMOLIFT DISTRIBUTING WAGON

General

A person who is not familiar with the operating, maintenance and safety instructions applicable to the wagon and the distributing reel must not be permitted to operate the distribution wagon equipped with a distributing reel.

Fodder distribution

1. Lift the reel in the topmost position by moving the reel height lever upwards.

2. Move the fodder on the distributing conveyor under the reel by pulling the reel height adjustment lever towards yourself. Stop the move when there is ca 10 cm of fodder on the conveyor.

3. Lower the reel down to the fodder by pushing the reel height adjustment lever down.



4. Start the reel's rotation by pushing the right side of the reel starting pedal. When the reel starts to rotate it moves the fodder over itself on the distributing conveyor.



5. When the fodder is fed on the distributing conveyor distribute it to the intended side by adjusting the distributing conveyor control lever while driving forward.

6. The lowered and rotating reel feeds the fodder on the distributing conveyor and reaches finally the bottom of the bed, which means that the fodder fed on the reel has been distributed.

7. Keep the reel down, move a new batch of fodder, ca 10 cm, towards the reel as described in p. 2, while the reel is rotating continuously.

8. Lift the reel up and keep the reel rotating, see p. 1. This moves the reel on the distributing conveyor, which allows feeding the fodder to the desired side, see p. 5.

9. When the reel has reached its uppermost position or a position wherefrom it does not reach the fodder any more, resume the operations from p. 1 until you have distributed all the fodder in the bed.



10. If required you can change the reel rotating direction by pushing the left side of the pedal controlling reel rotation.

THE DISTRIBUTING REEL STOPS WHEN ITS CONTROL PEDAL IS RELEASED IN THE CENTRAL POSITION!

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WARNING!!!

NEVER! DRIVE AN ELECTRIC MACHINE IN SUCH A POSITION WHERE THE CABLE FROM THE CABLE REEL RUNS OVER THE DISTRIBUTING REEL AND THE BED. ∠ 3

> NEVER! WHEN THE MACHINE IS RUNNING NEVER PUT YOUR HAND OR ANOTHER BODY PART ON THE DISTRIBUTING REEL OR ITS VICINITY.



Maintenance of the distributing reel Adjusting the tension of the distributing reel drive chain



5. Release the bolts locking the chain tensioner, 3



IT IS PROHIBITED TO OPERATE THE REEL IF IT BECOMES ENTANGLED IN LONG FODDER OR ANY MATERIAL OTH-ER THAN FODDER. THIS MATERIAL MUST BE REMOVED BEFORE RESUMING THE USE OF THE MACHINE AND THE REEL!

- 1. Lift the distributing wheel
- up

2. Remove the fastening bolts of the chain shield

- 3. Remove the chain shield
- 4. Lower the distributing reel

6. Turn the protective cover of the cross conveyor to the side





Correct tension of the chain = the chain moves ca 15 mm, if pressed down at the midpoint of the chain section between the sprockets.

- 7. Release the adjuster's lock.
- 8. Adjust the chain tension.
- 9. Lock the adjuster bolts with nuts.
- 10. Tighten the lock bolts referred to in p. 5
- 11. Lift the reel to the topmost position and install the chain shield.
 YarmoLift Super
 12. Lubricate the reel bearings with Vaseline at the point marked with this yellow symbol once a month.

Hydraulic diagram of the loading fodder distribution wagon + distributing reel



WARRANTY TERMS

We are providing the machines manufactured by us a warranty subject to the following terms and conditions:

1. The warranty covers any defects caused by poor workmanship and material quality, with the exception of defects of such machine components that are classified as wear parts.

2. The warranty is valid for the first buyer of the machine from the purchasing date during a period of one (1) year, however not longer than 1000 operating hours.

3. The warranty is cancelled if the machine has been used contrary to the operating instruction or for any purpose other than the purpose intended by the manufacturer, of if other than original spare parts have been used on the machine, or if maintenance procedure prescribed by the instruction manual have been neglected.

4. Any warranty claim must be submitted to the vendor of the machine or the manufacturer in writing and forthwith after the trouble has been discovered. In order to be eligible for warranty repairs the customer must present a reliable proof of the warranty being valid.

5. Normal adjustment, operating training, upkeep, maintenance or cleaning procedures are not covered by the warranty.

6. In order to be eligible for warranty repairs it is essential that no repairs of the machine or a part thereof have started before the vendor, the manufacturer or the importer have been notified of the trouble discovered.

7. Only a repair staff authorised by the manufacturer or the importer may carry out the warranty repair work. Any washing and cleaning, oil or fuel used during the said warranty repair operations are not covered by the warranty.

8. Repair work related expenses are compensated according to the rates set by the manufacturer.

9. The manufacturer shall not compensate for any travel expenses possibly stemming from the repair work.

10. New parts are delivered free of charge by a transport vehicle that is normally used for such type of deliveries, within an established timeframe.

11. Any expenses related to special deliveries, i.e. courier mail, shall be covered by the recipient of the delivery.

EC Declaration of Conformity for the machine

(Machinery Directive 2006/42/EC, Appendix II A)

Manufacturer: TP Silva Oy Address: Valimotie 1, FI-85800 Haapajärvi

Name and address of the person who is authorised to compile the technical file:

Name: Timo Jussila

Address: Valimotie 1, FI-85800 Haapajärvi

The aforementioned person assures that

Varmo Lift Super, Fodder distribution wago Serial number:

is compliant with the applicable regulations of the Machinery Directive (2006/42/EC). ٠

Location and date: Haapajärvi, 1. October 2020

Signature:

Anssi Westerlund **Business Unit Director**