



1400
HYDRAULIC WINCH

OPERATION
MAINTENANCE
SPARE PARTS

PATU 1400 Hydraulic winch

From serial number 289001

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1. SUMMARY

Patu 1400 winch is engineered mainly as accessory for Patu Loaders. It can also be mounted elsewhere, if the mounting points are strong enough for the winch.

READ AND STUDY THESE INSTRUCTIONS CAREFULLY BEFORE MOUNTING AND COMISSING THE WINCH.

2. TECHNICAL DATA

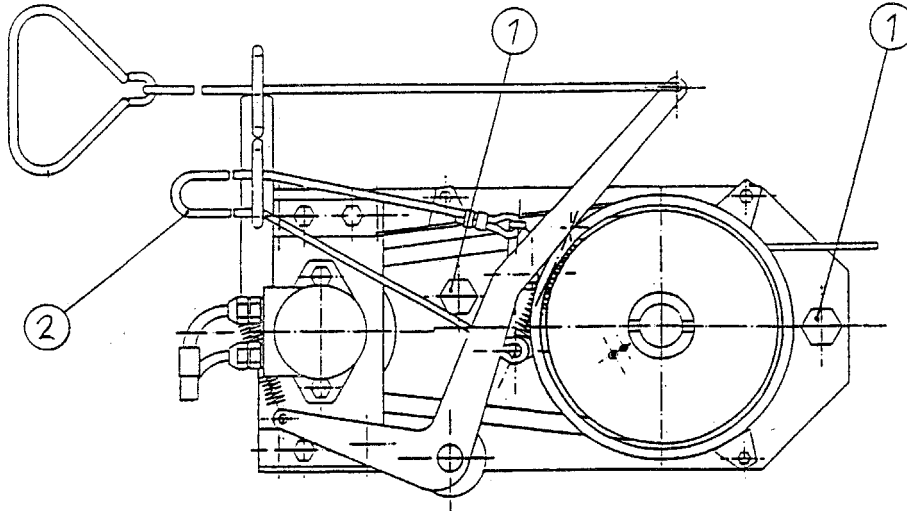
| | |
|----------------------|--------------------------|
| <i>Pulling force</i> | <i>1400 kg / 175 bar</i> |
| <i>Speed</i> | <i>19 –36 m / min</i> |
| <i>Wire rope</i> | <i>Ø 6mm / 40m</i> |
| <i>Weight</i> | <i>65,4 kg</i> |

3. CONTENTS OF DELIVERY

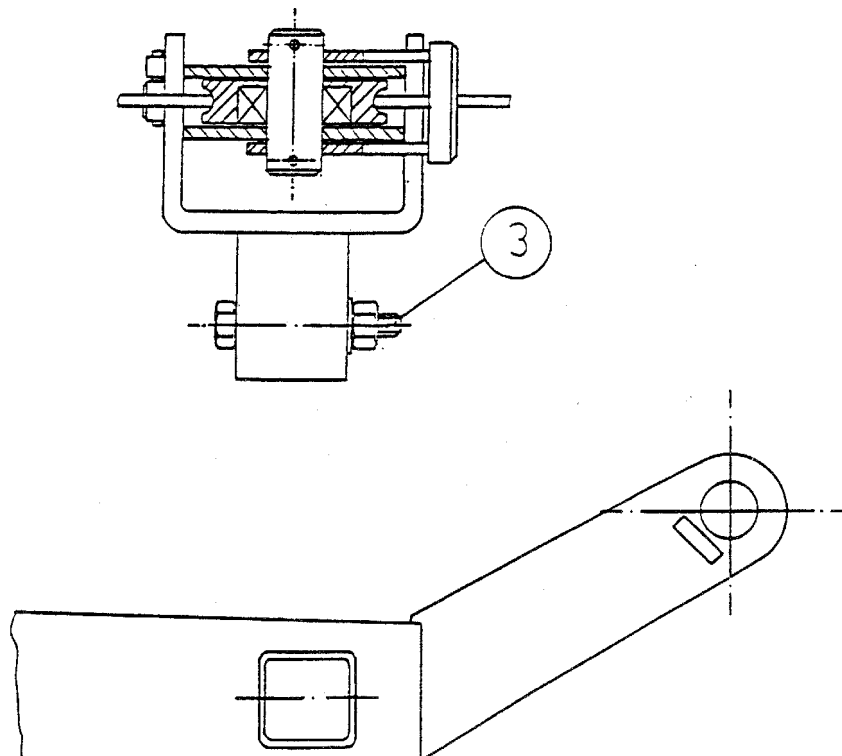
Mounting screws for Patu –loaders are included in delivery. With the winch there are also couplings, so that it can be connected directly to fast couplings of tractor.

4. MOUNTING

4.1 Patu 1400 hydraulic winch will be mounted on right side of Patu –Loader main lifting boom. Winch is fastened with two M20 screws and spring washers (screws 1.) Tightening torque of screws is 370Nm

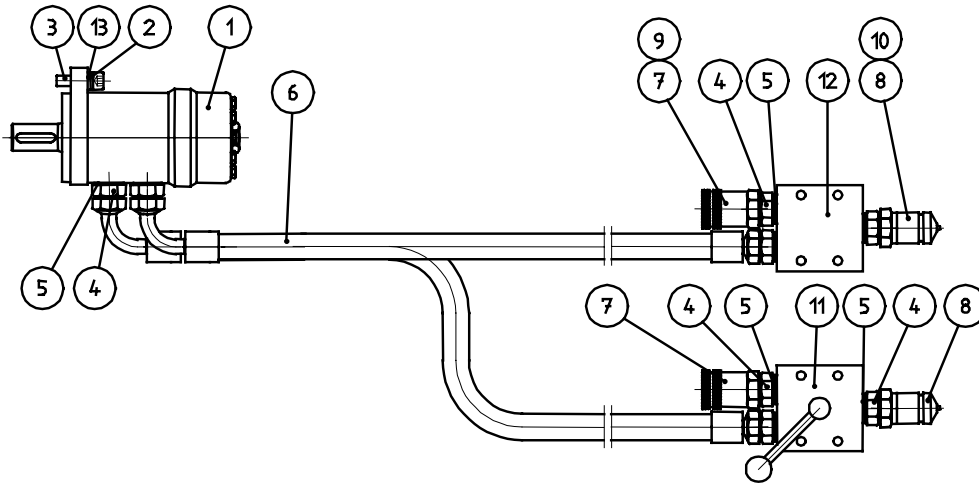


4.2 Mount the guiding roller to the end of the main boom with M16 screw and nut (screw 3.)



4.3. The hydraulic motor of the winch is equipped with hoses. At the one end there is a 3-way valve and at the other end a T-block with fast couplings. The 3-way valve will be connected to the fast coupling of the tractor (supply). The supply hose of the loader will be connected to female coupling of 3-way valve.

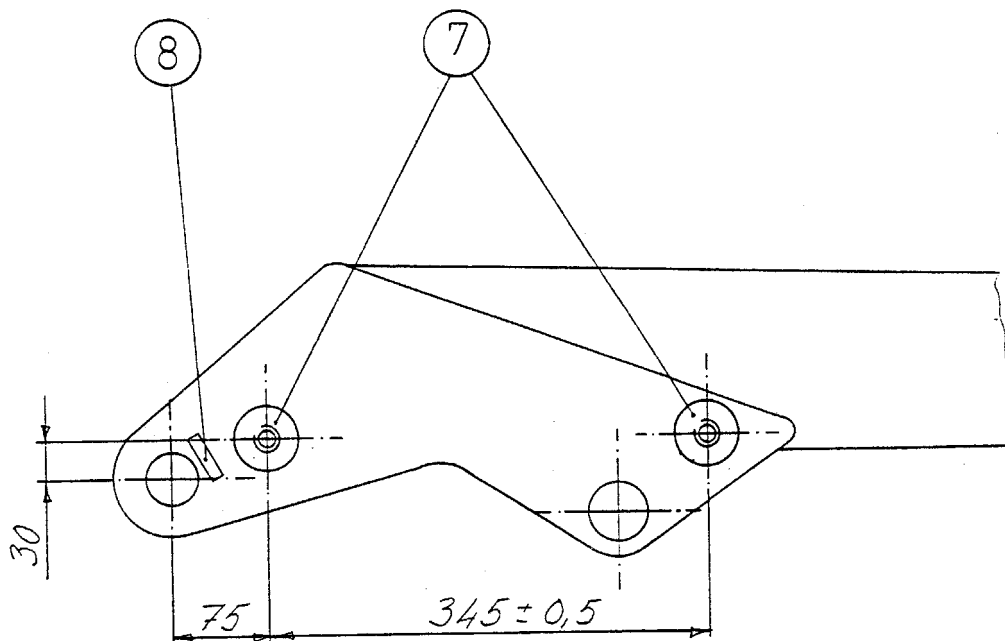
The T-coupling will be connected to the return line with the fast coupling of the tractor. If the hydraulics of the tractor is single-acting, the connection must be made directly to oil tank, underneath oil level.



HYDRAULIC EQUIPMENT

| Pos. | Spare part # | Description | Pcs |
|------|--------------|---|-----|
| 1 | 3120008 | Hydraulic motor OMP200 | 1 |
| 2 | 3030018 | Spring washer M12 DIN 127 | 2 |
| 3 | 3010246 | Hexagon screw M12x30 8.8 DIN 912 | 2 |
| 4 | 3090019 | Double nipple R 1/2" | 8 |
| 5 | 3110042 | Bonded seal Usit USIT R 1/2" | 12 |
| 6 | 3130334 | Hydraulic hose 5751-08/SAE 100 R2T-08/5701-08 L=2800 | 2 |
| 7 | 3090062 | Fast coupling C23071-08 | 2 |
| 8 | 3090024 | Fast coupling C23072-08 | 2 |
| 9 | 3090281 | Shield plug C26915-08 | 2 |
| 10 | 3090253 | Shield plug C26914-08 | 2 |
| 11 | 21410233 | 3-way valve KT 1/2" | 1 |
| 12 | 3120025 | T-block R 1/2" | 1 |
| 13 | 3030047 | Washer M12 DIN 126 | 2 |

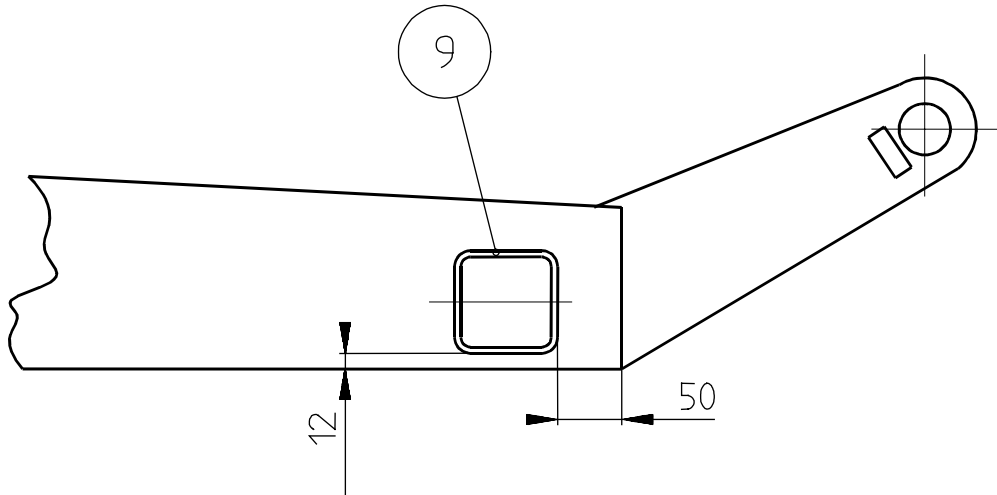
4.4. When mounting Patu 1400 hydraulic winch to loader, which has no winch mounting parts, they must be welded to the main hoisting boom as following drawing.



Weld the threaded sleeves (item 7) to the bracket using the winch as jig. Winch will be mounted horizontally so, that wire rope goes straight and free to rope sheave. If needed the pin of main hoisting boom must be turned so that the nut is in the opposite side of loader. Also the stopper (item 8) must be moved to right the side of the loader.

In some cases under foremost threaded sleeve must be welded reinforcement by size of about 80x80. Reinforcement plate must also be cut to proper the shape. The thickness of the reinforcement is equal to the bracket thickness.

Weld mounting the bracket for rope sheave (item 9) to the end of the main lifting boom as the drawing shows. Check that the rope goes free to sheave.



Final mounting will be made as above.

5. OPERATION

Always use stabilizers, when using the winch.

Check stability, so that the pulling force of the winch will not fell the combination.

Free the wire reel by pulling rope #2. The latch remains in free position. Before the transportation, pull the rope to another direction and the latch will be locked.

Ensure that the winch rotates into right direction.

Winching is effective, when pulling the rope (item 5). The V-belts will tighten and the wire rope reels in.

Pulling force is optimal, when the pressing roller is turned with high force about 20mm from the drive pulley.

Adjust the right tightness of the V-belts by loosing the screws (item 6) and moving the motor. Tighten the screws again.

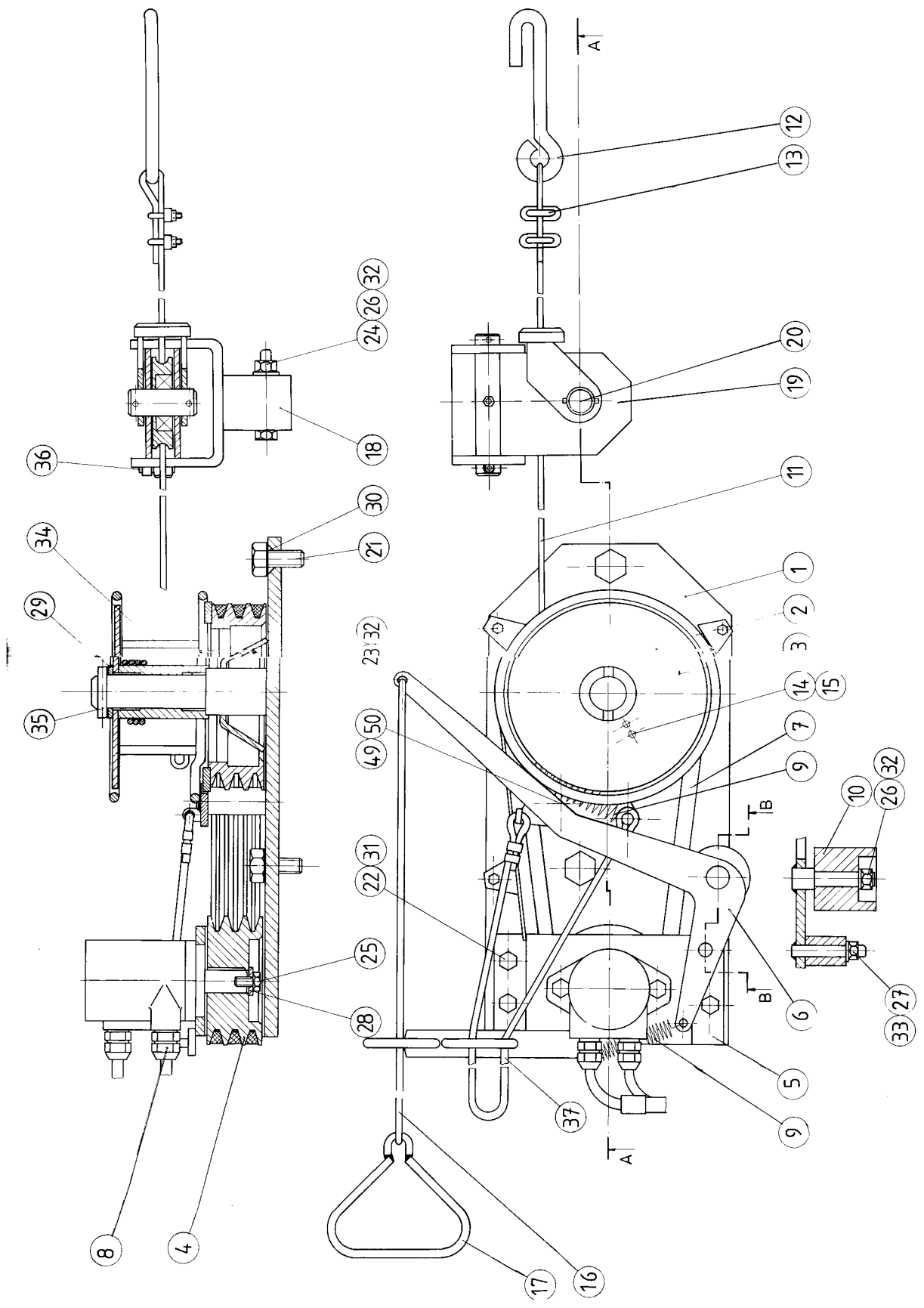
6. SAFETY INSTRUCTIONS

1. *When working in groups use agreed manual signs*
2. *Don't handle the wire rope with bare hands*
3. *Observe the condition of the wire rope regularly and replace it in time*
4. *Take care that the wire rope is always tightly reeled*
5. *Avoid winching in slopes*
6. *Choose the winching direction so, that you can't stay under the falling tractor or trailer.*
7. *Choose winching track so that the timber has free way.*

7. MAINTENANCE

Patu 1400 Winch is equipped with self-lubricated bearings. The only item that needs additional greasing is the rope sheave. Grease the sheave at least once during operating season.

During the operation season the winch can be stored outside, if there is no risk of freezing. When storing the winch for longer periods, it must be protected against rain and snow.



SPARE PARTS

| Pos. | Spare part # | Description | Pcs. |
|-------------|---------------------|---|-------------|
| 1 | 21410101 | Frame | 1 |
| 2 | 21410102 | Shield | 1 |
| 3 | 21410103 | Reel | 1 |
| 4 | 21410104 | V-belt pulley | 1 |
| 5 | 21410105 | Mounting plate of motor | 1 |
| 6 | 21410106 | Tightening lever | 1 |
| 7 | 3300323 | V-belt, profile B, L=1210 | 3 |
| 8 | 21410108 | Hydraulic equipment | 1 |
| 9 | 3300023 | Spring 2.5x22x80 | 2 |
| 10 | 21410109 | Pressing roller | 1 |
| 11 | 3190045 | Wire rope 6-40m | 1 |
| 12 | 21401119 | Hook | 1 |
| 13 | 3190066 | Rope clip D=6 DIN741 | 2 |
| 14 | 3300076 | U-screw M5 | 1 |
| 15 | 3020092 | Hexagon nut M5 DIN 985 | 2 |
| 16 | 3300014 | Rope | 1 |
| 17 | 21401114 | Grip | 1 |
| 18 | 21410110 | Fastener | 1 |
| 19 | 21410111 | Rope sheave | 1 |
| 20 | 21410112 | Pin | 1 |
| 21 | 3010003 | Hexagon screw M20 x 40 8.8 zn DIN 933 | 2 |
| 22 | 3010048 | Hexagon screw M12 x 30 8.8 zn DIN 912 | 3 |
| 23 | 3010253 | Hex socket screw M8 x 20 8.8 zn DIN 912 | 3 |
| 24 | 3010139 | Hexagon screw M16 x 100 8.8 zn DIN 931 | 1 |
| 25 | 3010014 | Hexagon screw M8 x 20 8.8 zn DIN 933 | 1 |
| 26 | 3020010 | Hexagon nut M16 zn DIN 985 | 2 |
| 27 | 3020005 | Hexagon nut M12 zn DIN 985 | 1 |
| 28 | 21410113 | Space plate | 1 |
| 29 | 21410114 | End ring | 1 |
| 30 | 3030049 | Spring washer 20,5 zn DIN 74361 | 2 |
| 31 | 3030018 | Spring washer M12 zn DIN 126 | 3 |
| 32 | 3030043 | Spring washer M8 zn DIN127 | 3 |
| 33 | 3030006 | Washer M16 zn DIN 126 | 2 |
| 34 | 3100156 | Slide bearing MB 4030 DU | 2 |
| 35 | 3040014 | Spring cotter 10x60 DIN 1481 | 1 |
| 36 | 3040017 | Spring cotter 8-50 zn DIN 1481 | 2 |
| 37 | 3300222 | Rope | 1 |
| 38 | 3280070 | Machine plate | 1 |
| 39 | 3280089 | Decal | 1 |
| 40 | 3070001 | Rivet | 2 |
| 41 | 3030047 | Washer | 1 |
| 42 | 21410224 | Clevis | 1 |
| 43 | 21041216 | Ropey pulley | 1 |
| 44 | 21401217 | Pin | 1 |
| 45 | 21401218 | Guide | 1 |
| 46 | 3100026 | Ball bearing | 1 |
| 47 | 3040017 | Spring cotter | 2 |
| 48 | 3050003 | Grease nipple | |
| 49 | 21410115 | Catch | 1 |
| 50 | 3060008 | Lock ring | 1 |

TERMS OF WARRANTY

A manufacturer's warranty of six (6) months from the date of delivery is given to the products named in the enclosed Bill of Delivery.

The warranty will cover any defects in the machine or equipment due to faulty raw materials, structural failures and faulty workmanship.

The warranty shall not apply to any faults or defects arising from normal wear, negligence or improper operation, faulty installation or incorrect or inadequate maintenance. The manufacturer will not assume any liability for any economical losses or for any consequential damage to persons or property which may incur through product failure.

The warranty shall be invalidated, if any repairs to the warranted product have been made by others than the manufacturer or a service shop authorized by the manufacturer or if the equipment has been altered.

***KESLA OYJ
Metsolantie 2
SF-59800 KESÄLAHTI***

tel. 358 13 682841