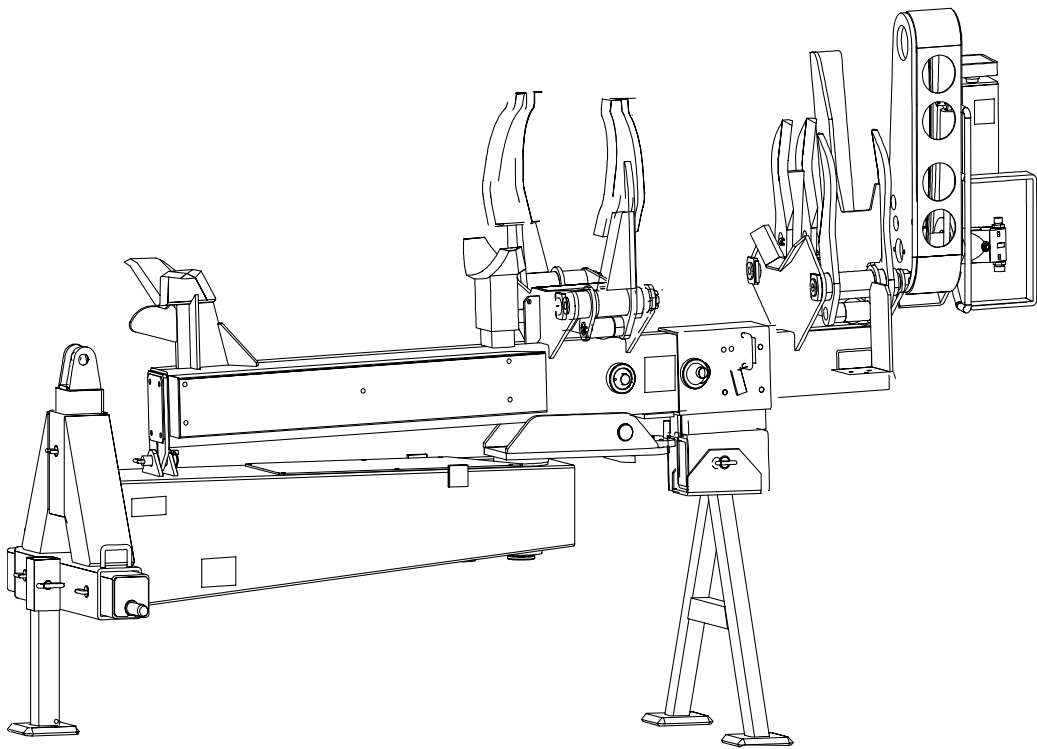




KESLA PATU

STROKE DELIMBER



OPERATION
MAINTENANCE
SPARE PARTS

PATU STROKE DELIMBER

CONTENTS

<i>1</i>	<i>GENERAL</i>	<i>2</i>
<i>2</i>	<i>TECHNICAL SPECIFICATION.....</i>	<i>3</i>
<i>2.1</i>	<i>MAIN PARTS.....</i>	<i>4</i>
<i>3</i>	<i>MOUNTING</i>	<i>5</i>
<i>4</i>	<i>OPERATION</i>	<i>6</i>
<i>5</i>	<i>SERVICE.....</i>	<i>8</i>
<i>6</i>	<i>HYDRAULIC SYSTEM</i>	<i>9</i>
<i>7</i>	<i>TERMS OF WARRANTY.....</i>	<i>10</i>
<i>8</i>	<i>EU-DECLARATION OF CONFORMITY FOR MACHINERY</i>	<i>11</i>
<i>9</i>	<i>WARRANTY.....</i>	<i>12</i>
<i>10</i>	<i>BILL OF DELIVERY.....</i>	<i>13</i>
<i>10.1</i>	<i>BILL OF DELIVERY / OWNERS / POSSESSORS ASSURANCE OF HAVING READ AND UNDERSTOOD THE MANUAL</i>	<i>13</i>

1 GENERAL

Patu Stroke Delimber is well-suited for self-employed forest owners or light contracting use.

Work is conducted on the skidroad and the stems are fed in from both sides of the skidroad.

Patu Stroke Delimber delimbs, cross-cuts and piles the timber along the skidroad ready for forwarding.

ACQUAINT YOURSELF CAREFULLY WITH THESE INSTRUCTIONS and you will avoid unnecessary troubles and downtime. Teach yourself to operate the processor correctly and you will find it a safe and efficient machine to work with.

2 TECHNICAL SPECIFICATION

<i>Length</i>	<i>minimum 2440 mm (8')</i>	<i>maximum 3690 mm (12' 1")</i>
<i>Width</i>	<i>840 mm</i>	
<i>Height</i>	<i>1350 mm (4' 5")</i>	<i>with parking legs 1700 mm (5' 7")</i>
<i>Weight</i>	<i>540 kg (1190 lbs)</i>	

To be mounted on Patu loader A-frame or tractor 3-point hitch. The control valve of the processor to be serial connected with the valve of the loader.

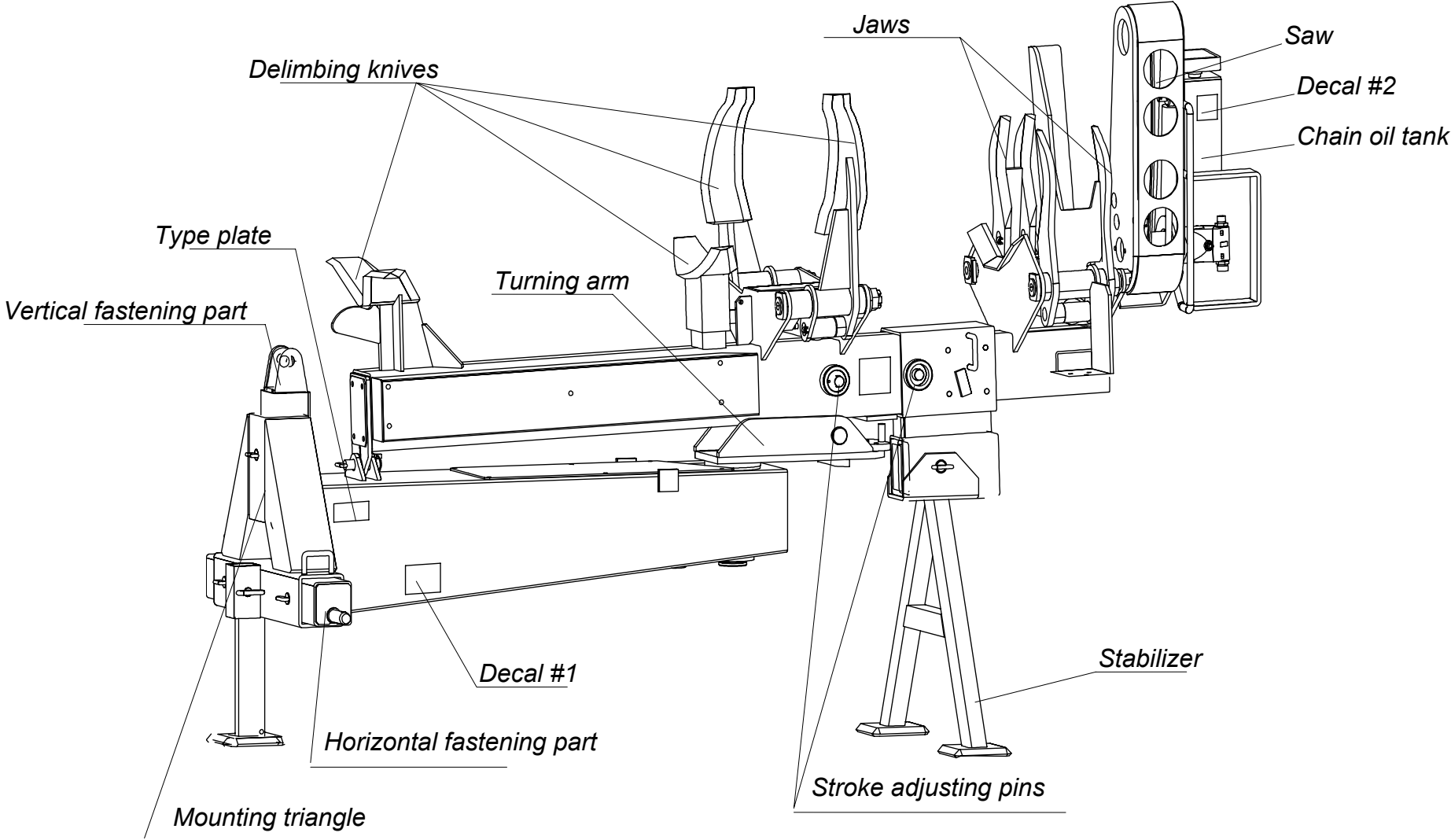
<i>Working pressure max</i>	<i>210 bar (3000 PSI)</i>
<i>min</i>	<i>175 bar (2500 PSI)</i>
<i>Oil flow</i>	<i>50 – 60 l/min (11 – 13 GPM, UK 13 – 15 GPM US)</i>
<i>Stroke of delimiting cylinder</i>	<i>1000 mm / 1220 mm (4') / 1250 mm</i>
<i>Slewing angle</i>	<i>260°</i>
<i>Slewing torque</i>	<i>1100 – 2200 Nm (800 – 1600 lbft)</i>
<i>Tilting angle knife end</i>	<i>15°</i>
<i>saw end</i>	<i>5°</i>
<i>Cutting diameter max.</i>	<i>400 mm (16")</i>
<i>Delimiting diameter max.</i>	<i>350 mm (14")</i>
<i>Cross-cutting saw</i>	
<i>- bar</i>	<i>16"</i>
<i>- chain</i>	<i>.404"</i>

The following valves with pressure 175 bar (2500 PSI) and flow 50 l/min (11 GPM UK, 13 GPM US)

<i>- delimiting power</i>	<i>21500 N (4800 lbs)</i>
<i>- delimiting speed, stroke out</i>	<i>0,66 m/s (26" /s)</i>
<i>- delimiting speed, stroke in</i>	<i>1,20 m/s (47" /s)</i>
<i>- saw power</i>	<i>12 kW (16 hp)</i>
<i>- chain speed</i>	<i>38 m/s (125' /s)</i>

PATU STROKE DELIMBER

2.1 MAIN PARTS



3 MOUNTING

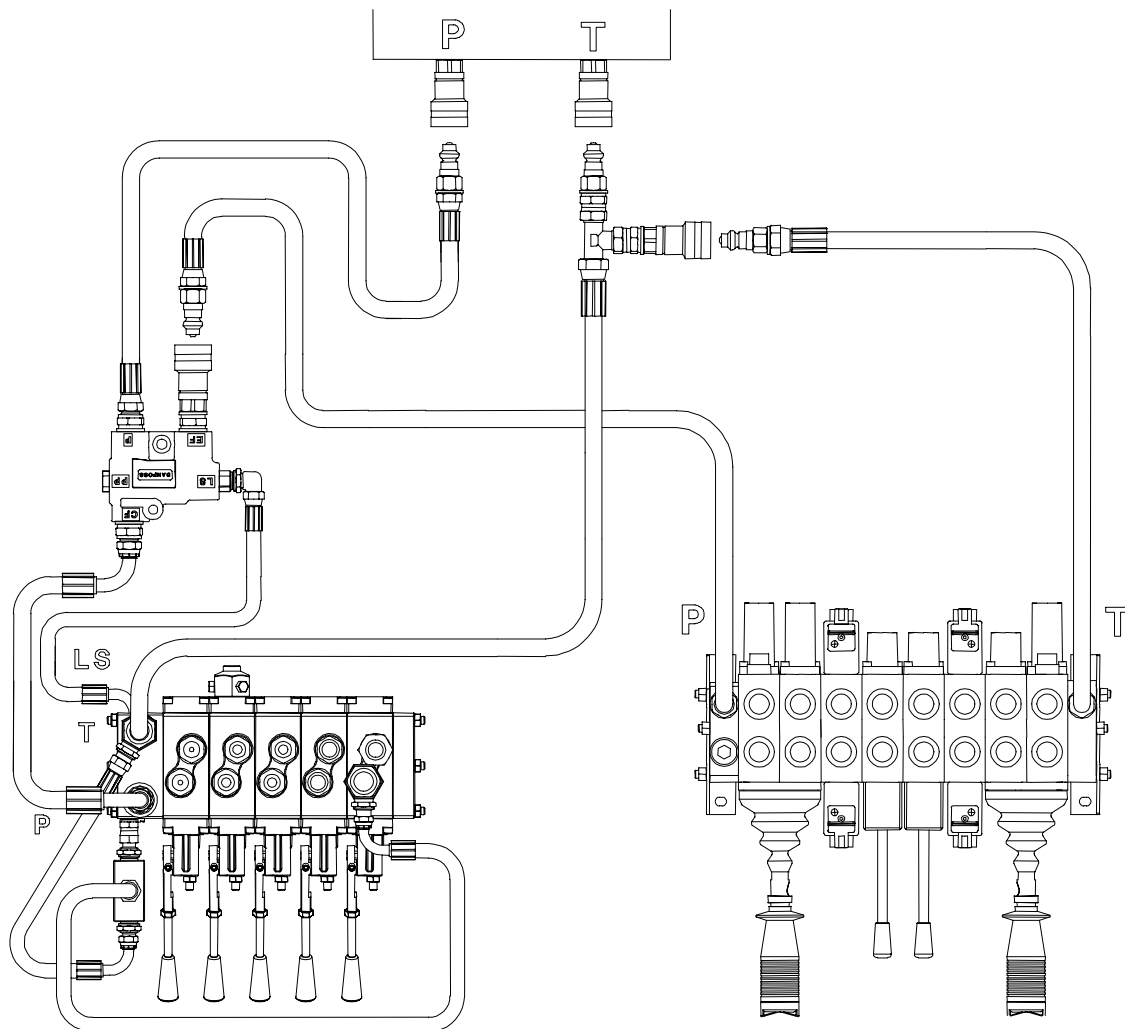
The lower frame of the processor has turnable mounting heads for mounting either on a Patu loader A-frame or a tractor 3-point hitch. The mounting parts fit on the Patu 203/203T A-frame.

The control valve (5 spindles) is to be serial connected with the valve of the loader with help of a priority valve.

Make sure that the hydraulic system has a pressure or a return filter (Filtering efficiency of 0.01 mm). The filter must be changed frequently.

MAKE SURE THAT STRICT CLEANLINESS AND CAUTION IS ALWAYS OBSERVED WHEN HANDLING HYDRAULIC COMPONENTS .

Figure 1



Processor control valve

Loader control valve

4 OPERATION

Fill the chain oil tank (capacity about 2 litres).

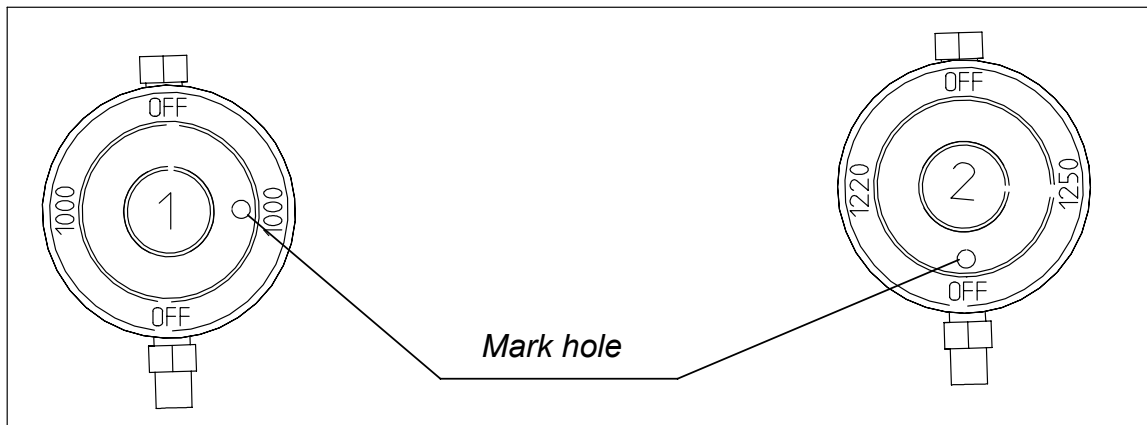
Because the lubrication oil is transferred to the chain by gravity the oil must be thin enough in cold conditions. Normal mineral based chain oil is too viscous already in temperatures below +10°C (48°F).

Use by preference ecological chain oil.

Choose the stroke length 1000 mm, 1220 mm (4') or 1250 mm (figure 2).

Don't forget to set the pins at both sides of the frame.

Figure 2



In the figure the stroke is adjusted at 1000 mm.

Adjusting to e.g. 1250 mm:

Remove the lock screws of all the four pins. Pull out and turn the pins no.1 so, that the mark hole (Ø 5 mm) points to OFF. Push in and turn the pins no.2 so, that the mark hole points to 1250. If stroke length 1220 mm (4') is chosen, the pin has to be turned so, that the mark hole points to 1220. In the end mount all the lock screws.

Open the chain oil faucet (the faucet is open when it is vertical). Open the jaws and the delimiting knives by control valve levers. Lift the stems with the loader onto the processor table, between the jaws and the delimiting knives.

If the butt of the stem is past the cross-cutting saw, close the knives and push the sliding boom out so that the saw bar is at the end of the stem. Then close the jaws.

While delimiting, press the knives against the stem all the time. When the stem has heavy limbs, press also the jaws with the lever while delimiting.

When returning the saw blade with the lever movement after cross-cutting make sure that it comes all the way up.

Always cross-cut the timber when the sliding boom is out, then the pile will be formed away from the tractor wheels.

Use of the firewood splitter:

- Mount the boom and the splitting knife.

- Adjust the firewood length.

- If the limbs are not very heavy, delimiting and splitting can be made simultaneously. If the limbs are too heavy, open the jaws and make a separate splitting movement.

The splitting power is usually sufficient for stems with about 25 cm (10") diameter.

5 SERVICE

The service need of the hydraulic system is normally very little, when the oil is clean enough and impurities are prevented from entering the system. Take care of cleanliness when servicing the hydraulic components.

Greasing

Grease the 13 greasing points (grease fittings) of the processor a couple of times a week, depending on use. Use general purpose grease. Grease the teeth of the slewing mechanism with grease for open teeth, e.g. molybdene sulphide based:

Esso Surret Fluid 30 F

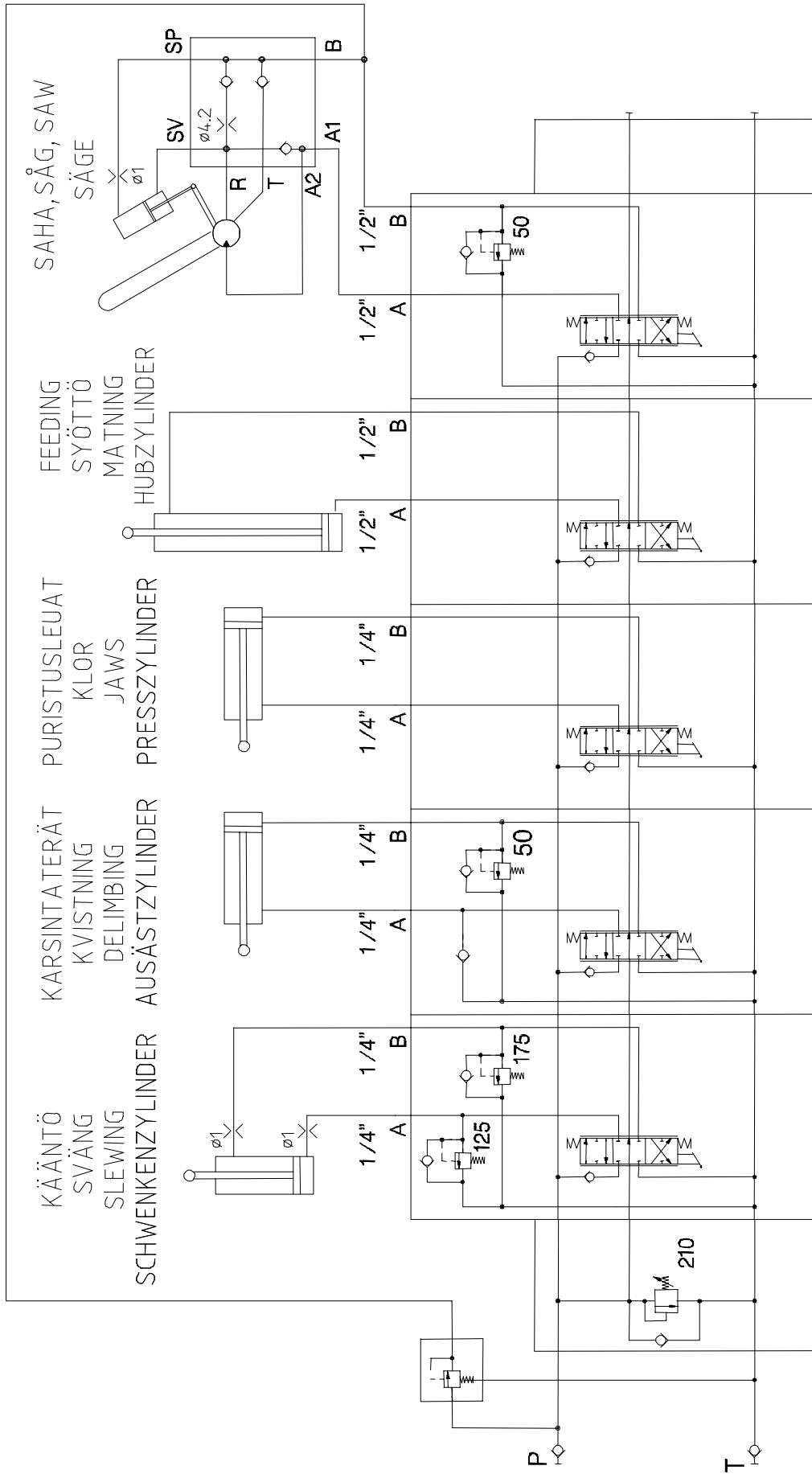
Shell Cardium EP Fluid H

Mobil Dorcia 30

Grease the sliding boom once a day with general purpose grease, e.g. Esso Beacon EP 2.

6

HYDRAULIC SYSTEM



7 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 defective part of the machine or equipment is replaced free of charge with a new or reconditioned part by the guarantor.

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 the equipment has been altered.

The warranty will apply provided that the enclosed combined Bill of Delivery and Possessor's/Owner's Assurance of having read and understood the manual is returned to the manufacturer within fourteen (14) days from delivery.

A written warranty claim must be submitted to the guarantor without delay, within fourteen (14) days at most after the fault appeared.

RESPONSIBILITY FOR DAMAGE

Kesla Oyj will not be responsible for any damage caused by the machine, if the instructions and safety instructions in the manual are not followed. The machine shall not be taken into use before the manual is thoroughly read and understood.

The responsibility of Kesla Oyj for damage shall apply only, when the enclosed combined Bill of Delivery and Possessor's/Owner's Assurance of having read and understood the manual is returned to the manufacturer within fourteen (14) days from delivery.

KESLA OYJ
59800 KESÄLAHTI
FINLAND
Phone +358 13 682 841

8 EU-DECLARATION OF CONFORMITY FOR MACHINERY

**We,
KESLA OYJ
Metsolantie 2
FIN-59800 KESÄLAHTI**

declare solely at our own risk that the following product:

*Type: **PATU STROKE DELIMBER***

Serial number:

is in conformity with the requirements and provisions of the following directives: Machinery Safety Directive 98/37/EU as well as Directive on Electromagnetic Compatibility 89/336/EEC, amended with directives 92/31/EEC and 93/68/EEC.

If the product is retrofitted, the person in charge of the fitting must before implementation of the product affirm that the fitting conforms to the requirements of the above directives, and a new declaration of conformity must be made in so far as the fitting is concerned, and a CE marking must be attached.



Name: Juha Karjalainen

Position: R&D Manager

Date: Kesälahti, Finland, 22 September 2004

9 WARRANTY

_____ / _____ 20_____

SERIAL NUMBER _____

SELLER:

10 BILL OF DELIVERY

_____ / _____ 200 _____

Product _____	Owner/Possessor _____
Serial number _____	Building/Street _____
Accessories _____	Postcode and town _____
_____	_____
_____	Phone _____
_____	Seller _____

KESLA OYJ
Metsolantie 2
FIN 59800 KESÄLAHTI
FINLAND
Puh. +358 13-682841 Fax. +358 13-6828100

To be sent back to the manufacturer

10.1 BILL OF DELIVERY / OWNERS / POSSESSORS ASSURANCE OF HAVING READ AND UNDERSTOOD THE MANUAL

_____ / _____ 200 _____

Product _____	Owner / Possessor _____
Serial number _____	Building / Street _____
Accessories _____	Postcode and town _____
_____	_____
ASSURANCE I have read and understood the user's intructions and safety instructions of the manual	Phone _____
_____	Seller _____