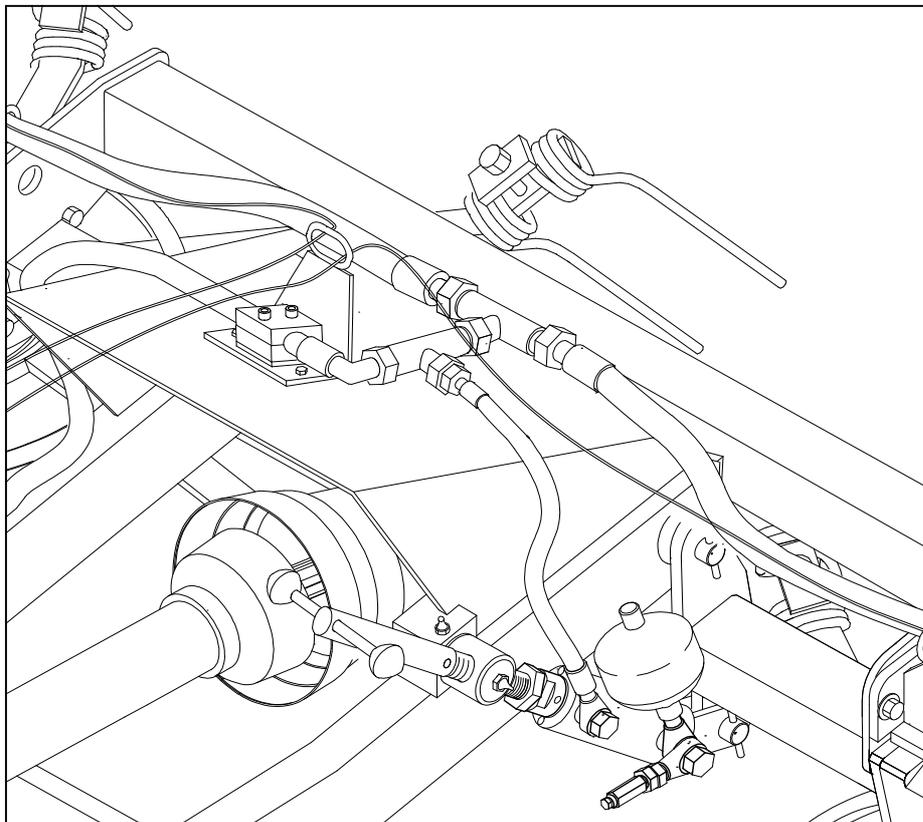
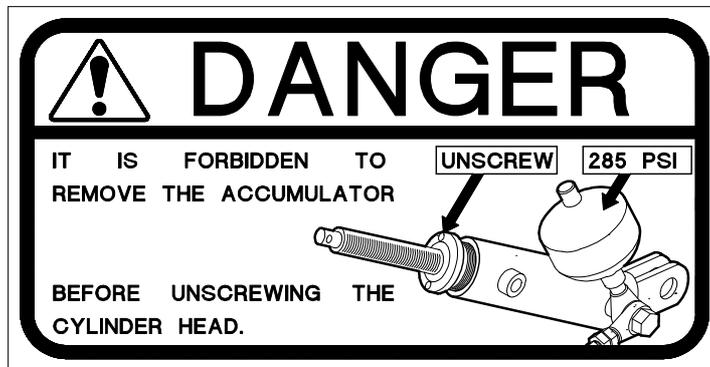




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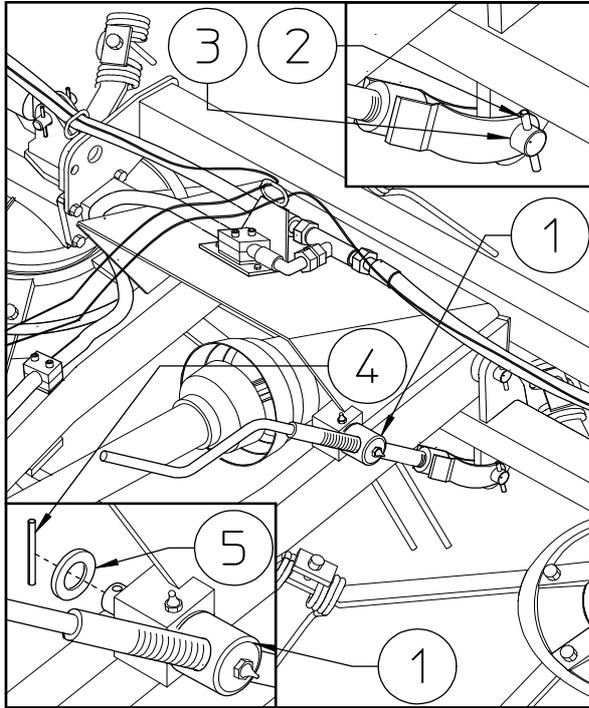
ASSEMBLY, USE AND MAINTENANCE SPARE PARTS LIST ACCUMULATOR KIT FOR TEDDER



02/2012

ACCUMULATOR KIT ASSEMBLY

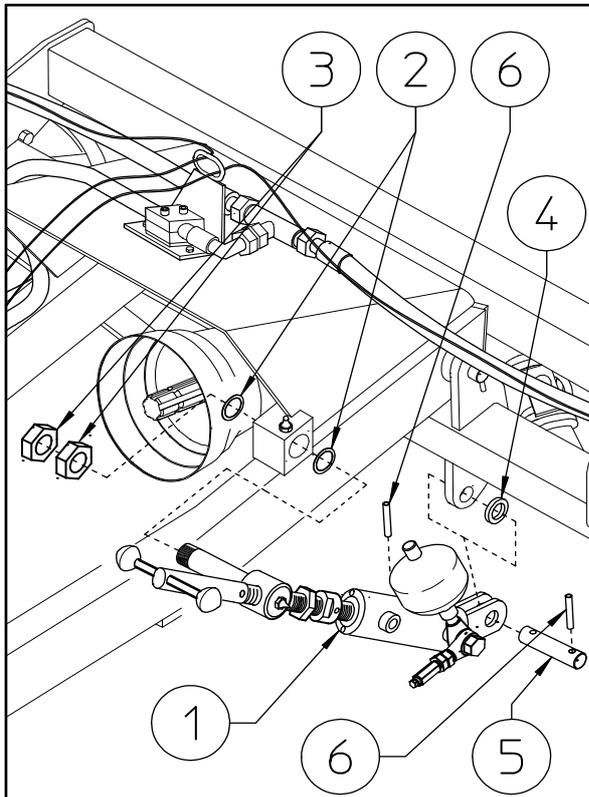
WARNING: Please be careful when working with the accumulator, because its pressure is 20 bar/285 psi and it may be potentially dangerous.



1)

To assemble the accumulator kit on a tedder, first the manual adjustment link 1 must be removed.

Note: keep in mind the danger resulting from the removal of the link 1, because once the machine no longer has the connection between the drawbar and the rear part of the frame, it tends to open out, constituting a potential serious danger. Stabilize the parts. At this point, to remove the adjustment link 1, it is necessary to remove the pins 2 and the pin 3 on the fork side and pin 4 and washer 5 on the adjustment screw side.



2)

Fasten the adjustment screw part of the accumulator kit 1 onto the drawbar using shims 2 and nuts 3. Fasten the fork part of the kit to the frame using shim 4, pin 5 and spring pins 6.

Note: shim 4 goes on the side shown in the drawing.

In this step, you will use:

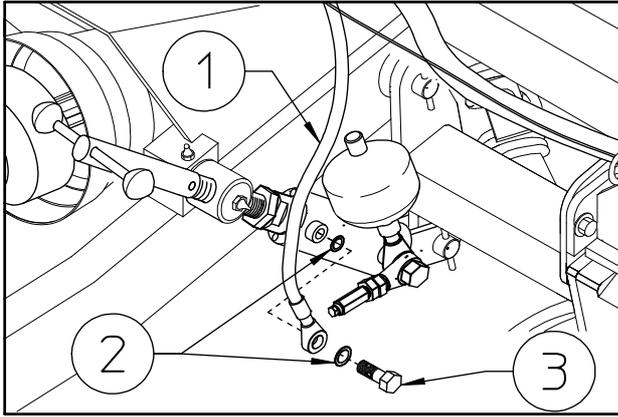
Item 2: 2 shims $\varnothing 30.5-40 \times 1$ ($\varnothing 1.2''-1.57'' \times 0.039''$)

Item 3: 2 nuts M30

Item 4: 1 shim $\varnothing 20.5-40 \times 6$ ($\varnothing 0.81''-1.57'' \times 0.24''$)

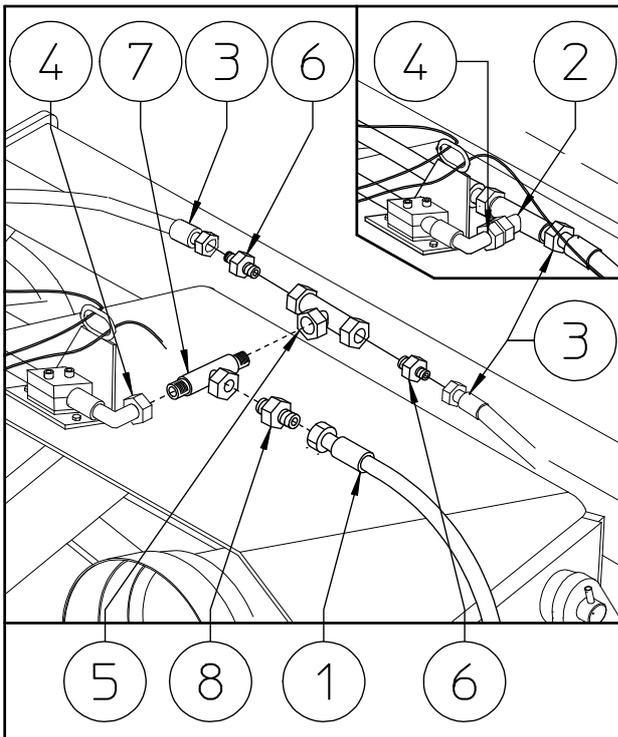
Item 5: 1 pin $\varnothing 20 \times 70$ ($0.79'' \times 2.76''$)

Item 6: 2 spring pins $\varnothing 6 \times 35$ ($0.24'' \times 1.38''$)



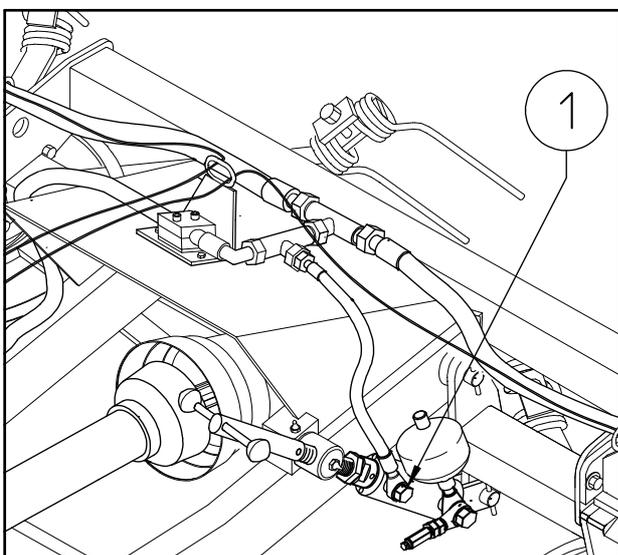
3)
 Now connect the hose 1 to the cylinder using washers 2 and screw 3. At this point do not fully tighten the screw 3.

In this step, you will use:
 Item 1: 1 hose L.520 - (20.5")
 Item 2: 2 copper washers 3/8"



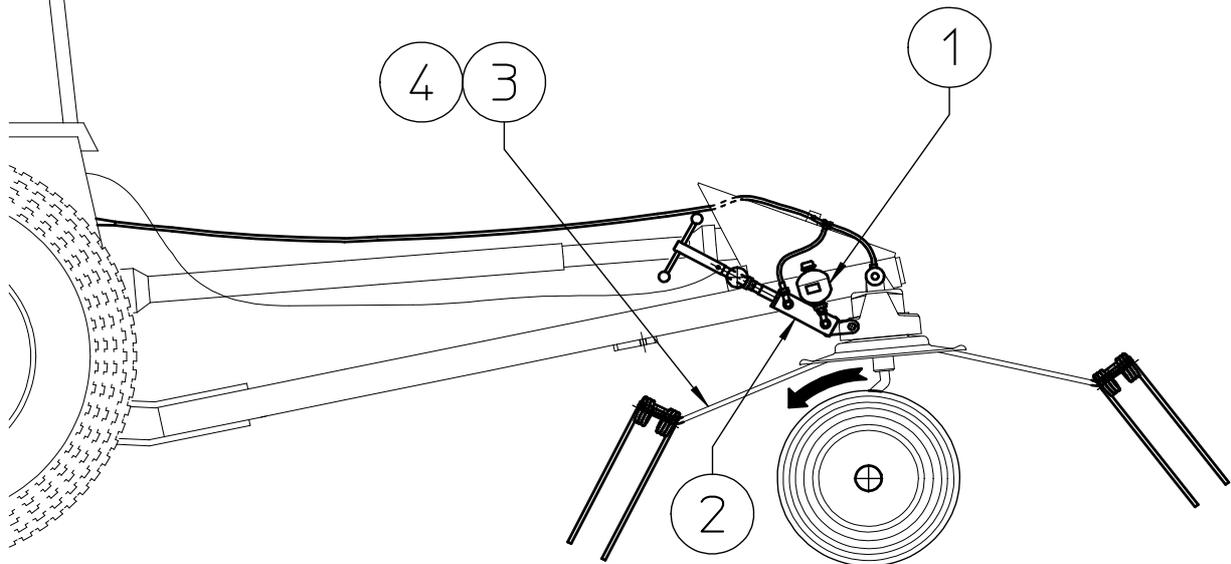
4) To connect the other end of the hose 1 to the hydraulic system, detach fitting 2 (which will not be reused), hoses 3 and hose 4. Attach the adapters 6 to the "T" connector 5 (female), then connect hoses 3 to it. Connect the "T" connector 7 (male/female) to the "T" connector 5 (female). Attach hose 4, the reducer nipple 8 and hose 1 to the "T" connector 7 (male/female).

In this step, you will use:
 Item 1: 1 hose (see preceding step)
 Item 5: 1 "T" connector 3/8" gas female
 Item 6: 2 adaptor 3/8" gas-1/4" gas
 Item 7: 1 "T" connector 3/8" gas male - female
 Item 8: 1 reducer nipple 3/8"-3/8" gas

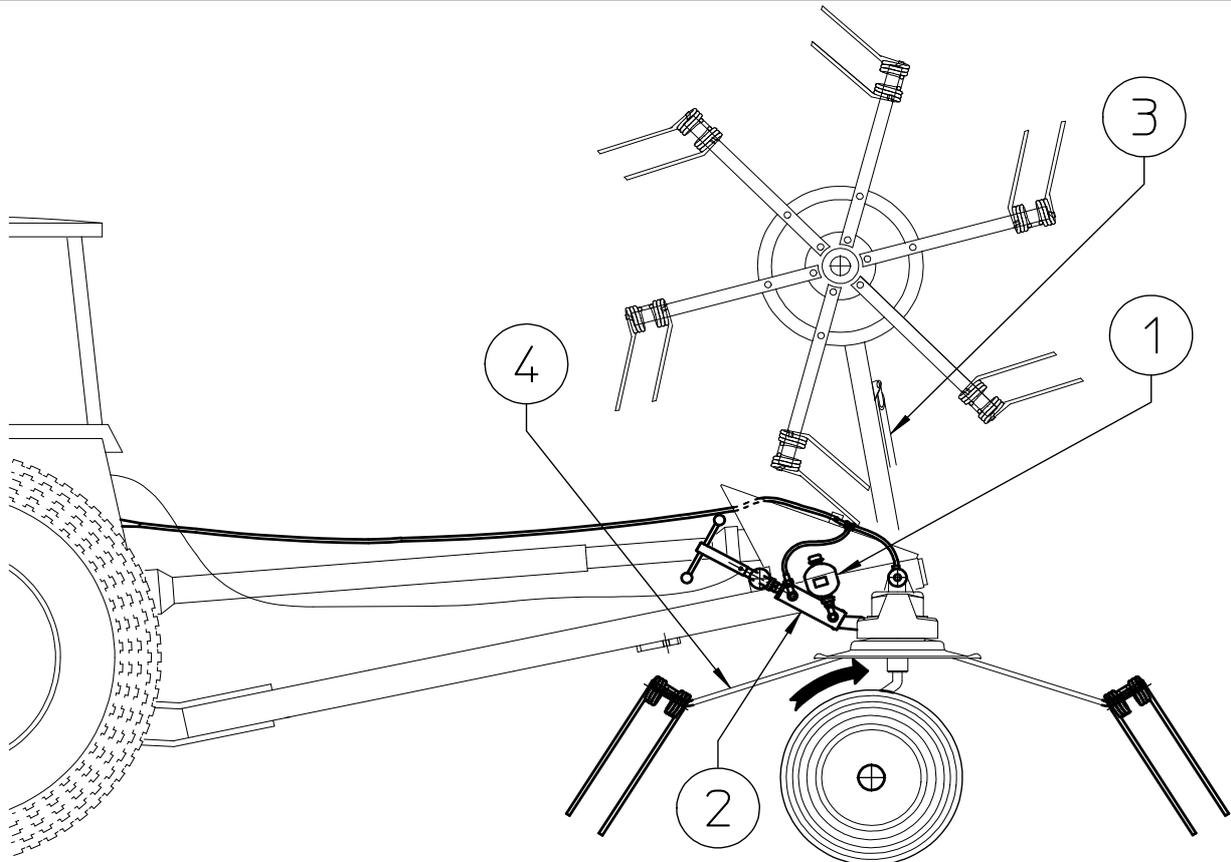


5) Now, after having arranged the hose previously connected in the best possible position, fully tighten screw 1.

Brief explanation of how the accumulator kit works

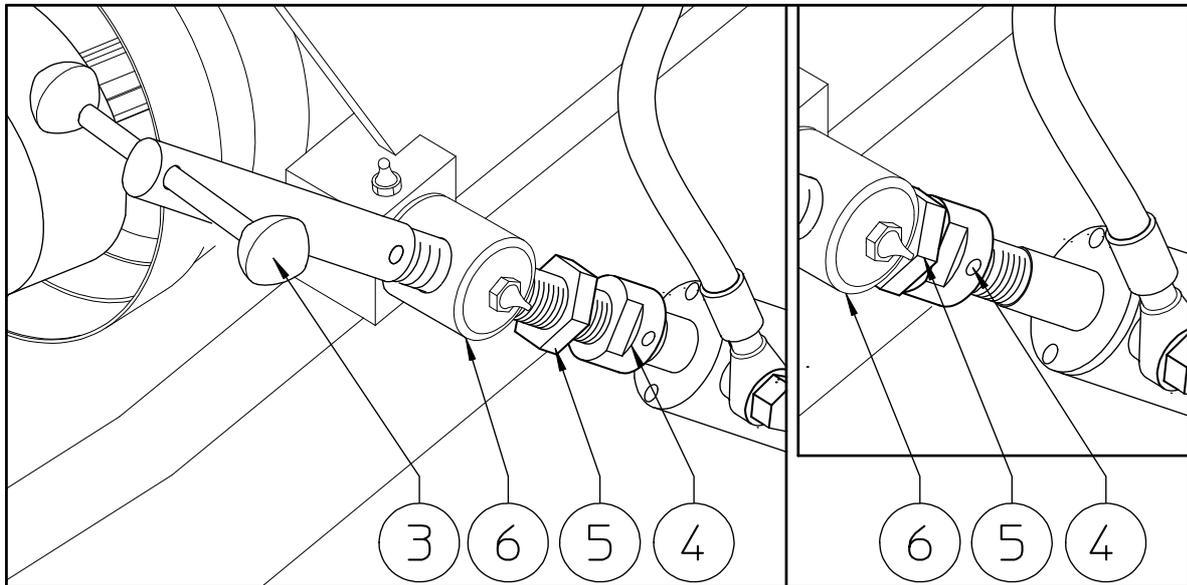
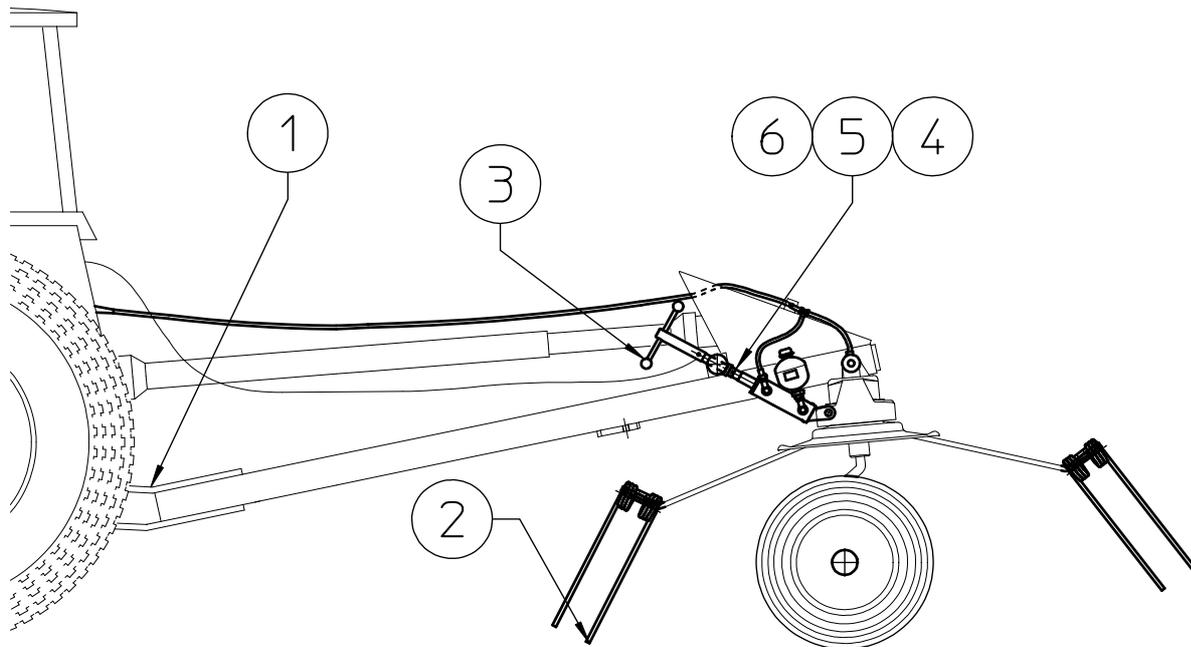


6) Work stage: with the side arms lowered and the tractor hydraulic circuit inactive, the accumulator 1 pushes the oil stored inside it into cylinder 2, making the rod come out. The extending of cylinder 2 causes the rotor-arms-tines assembly 3-4 to rotate downward at the front of the machine. Note: there should not be pressure on the tractor-machine connection hose with the circuit inactive. This is the working position.



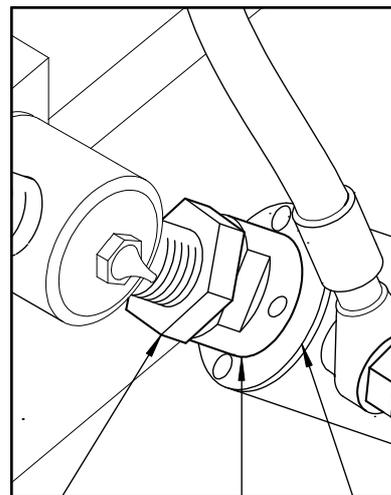
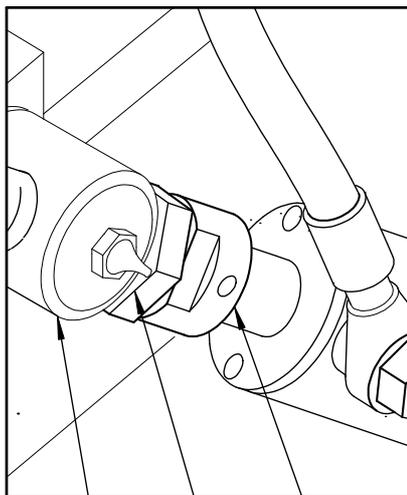
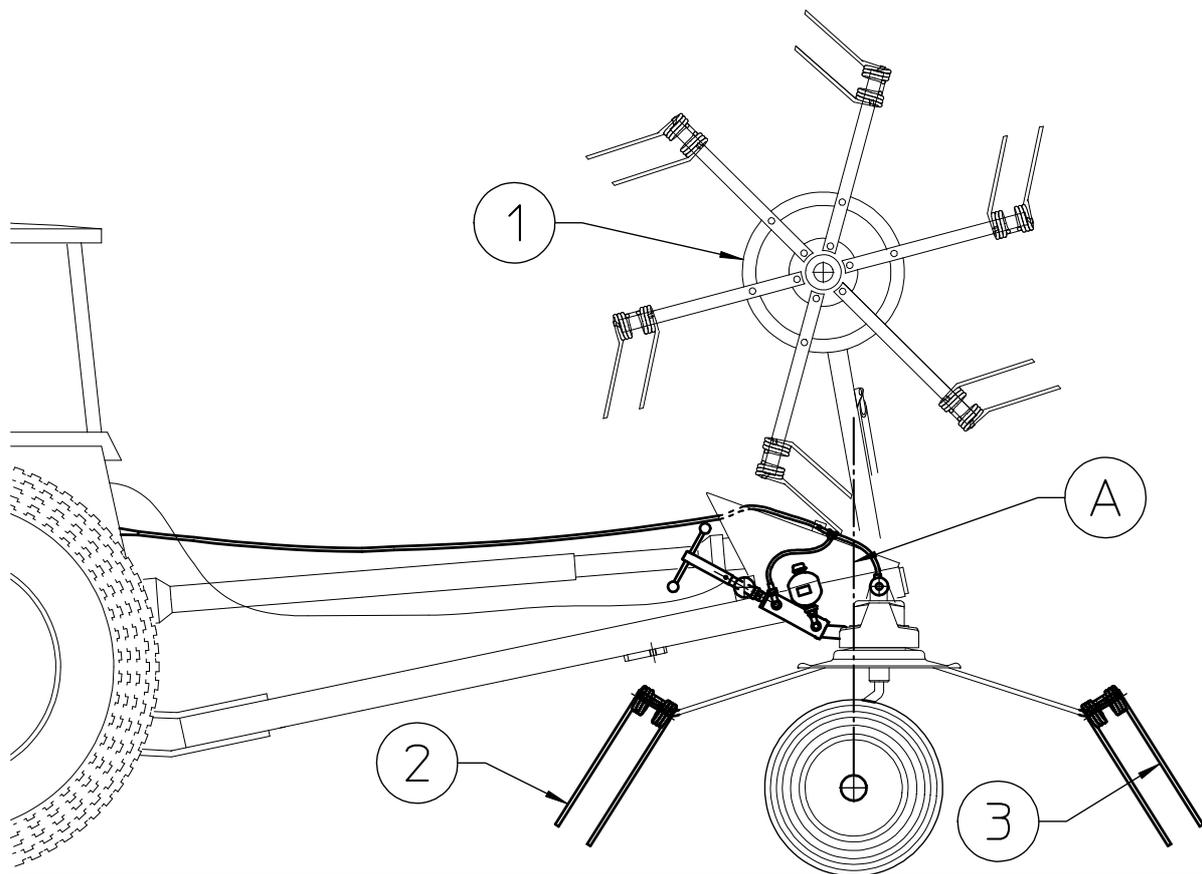
7) Transport stage: when the hydraulic circuit is activated, sending oil to the cylinders of the side rotor-arms-tines assembly 3, to raise them the oil also goes to cylinder 2 on the opposite side of the accumulator 1. The pressure of the oil sent from the tractor exceeds that of the accumulator, causing the rod to retract and shortening the cylinder 2. This rotates the central rotor-arms-tines assembly 4 upwards. This is the transport position.

Instructions for use and adjustments



8)

The attaching of the drawbar 1 to the tractor hitch already brings the machine into an initial position, and normally this makes it possible to make the adjustments required for the working and transport stages. Sometimes tractors that have a hitch that is too high or too low may cause the machine adjustment to be unsatisfactory. If this is the case, take appropriate countermeasures. If the drawbar 1 is hooked to the bar of the tractor lift, the height can be adjusted at any time and therefore adjustments to the machine are easier. Normally you have good working conditions when the tines 2 at the front of the machine brush against the ground. If after the machine has been put in the working position the tines 2 are too far from the ground or dig too deep into the ground, make the proper adjustments using the lever 3. Before moving lever 3, the bush 4 and the nut 5 must be moved away from the joint pin 6 so as to allow the movement of the adjustment screw connected to the lever 3. Now move lever 3 to bring tine 2 so that it brushes against the ground. At this point bring nut 5 back into contact with joint pin 6 and bush 4 into contact with nut 5. Before tightening them to each other, make the adjustments in the next step.



9) Now, sending oil from the tractor hydraulic circuit, raise the side rotors 1. The correct transport position (or maneuvering position when in the field) is when tine 2 at the front of the machine and tine 3 at the back are approximately the same distance from the ground. Note: for reasons of stability, the weight of the machine with regard to wheel axle A must always be unbalanced with more weight at the front, to avoid having the machine tip backwards when it is detached from the tractor due to it being heavier at the back. Therefore it must be unbalanced toward the front even if tine 2 is slightly closer to the ground than tine 3. When the correct transport position is reached, bring bush 4 into contact with the front face of cylinder 7, bring nut 5 into contact with the bush 4 and tighten them together. With this adjustment the machine is ready for working and for transport.

Accumulator kit malfunctioning, possible causes and remedies.

Before doing any work on the accumulator, keep in mind that it is a reservoir with a pressure of 20 bar/285 psi and thus is potentially dangerous. Follow the instructions and information given on the label attached to the accumulator as well as the instructions given in the following pages.

Before proceeding with any work it is essential to understand if the problem lies with the accumulator or with the hydraulic circuit and/or its components.

Basically, the accumulator does not function if it is not filled with the right quantity of oil, if the precharge gas has totally or partially escaped because it was released externally due to a defect or tampering with the charge valve or because it was released internally due to the rupture of the membrane, or if there is a leak inside the cylinder or a leak outside the cylinder and/or various components of the circuit.

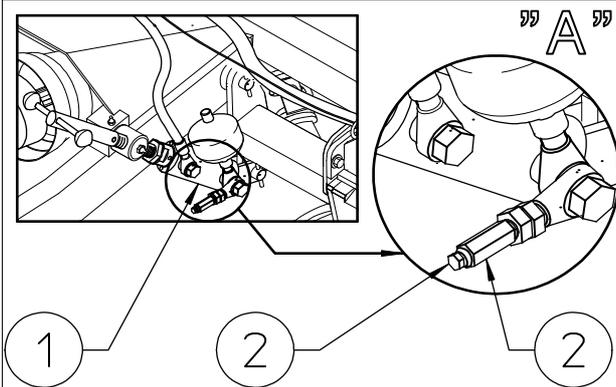
If the oil or gas precharge is insufficient, once the machine is in the working position the cylinder 7 does not extend completely, and thus the tine 2 at the front of the machine (see step 8) does not go back to brushing against the ground or it goes back with a very instable contact. If you are certain that the failure of tine 2 to reach the correct position does not depend on other factors, such as new adjustments made in the meantime using lever 3 (see step 8), then it can be assumed that either the oil level is low, or the membrane has ruptured, or the gas charge valve has broken or been tampered with and caused the gas to escape. In this case, whatever the cause of the malfunctioning, given that without specific tools and instruments (in particular a connector and pressure gauge to be connected to the accumulator charge valve) it is not possible to check if the precharge is at the right pressure and thus deduce that the problem regards only the lack of oil, it is necessary to refill the oil according to the instructions given in the following pages. NOTE: if the membrane has ruptured and during the refilling you have put in so much oil as to have filled the accumulator and cylinder, once you try to send oil from the tractor to the cylinder it will not move. If instead the oil is refilled to the right amount but the membrane is ruptured the cylinder will tend to remain instable.

If instead the loss of contact between tine 2 and the ground happens after you have been working for a while, then it is likely that there is a leak inside the cylinder, and in this case the seal kit must be replaced. The replacement of the seals means that the cylinder must be opened, and therefore follow the same procedure and take the same precautions as for the restoring of the correct fill of oil. If the leaks are outside, they can be easily spotted. Once they are found, repair them and then refill the oil.

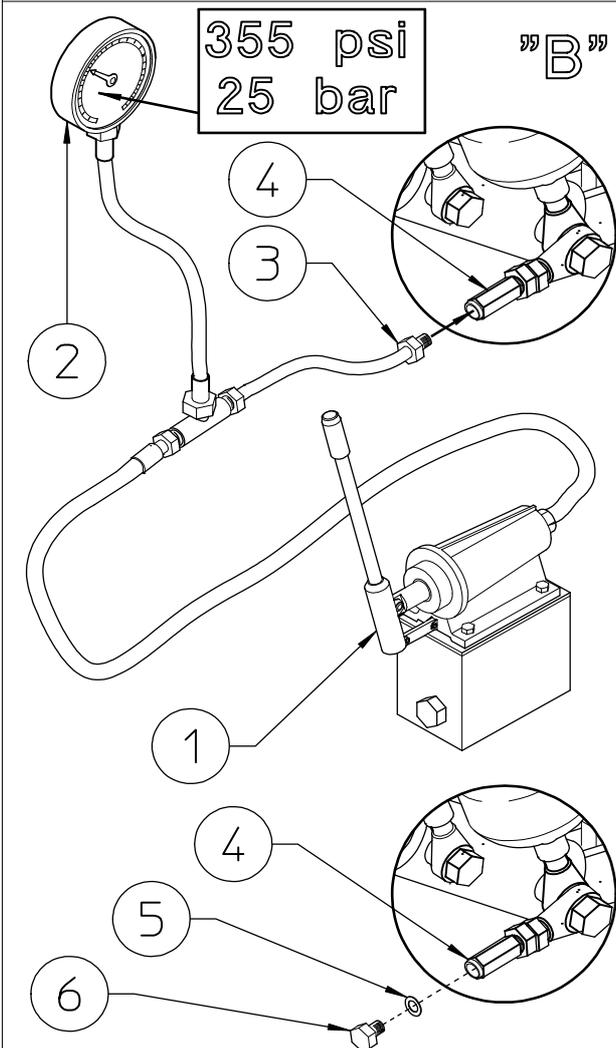
If during a fairly long transport or after a break in work the tines at the front of the central rotors tend to come into contact with the ground, this could be normal because with some tractors, as there is no pressure in the hydraulic circuit, the pressure of the accumulator is able to send the cylinder oil to the tractor. This can be solved either by detaching the tractor supply hose or by putting in a valve that can be closed during breaks or during transport.

Instructions for the oil filling of the accumulator cylinder assembly

WARNING: Please be careful when working with the accumulator, because its pressure is 20 bar/285 psi and it may be potentially dangerous.



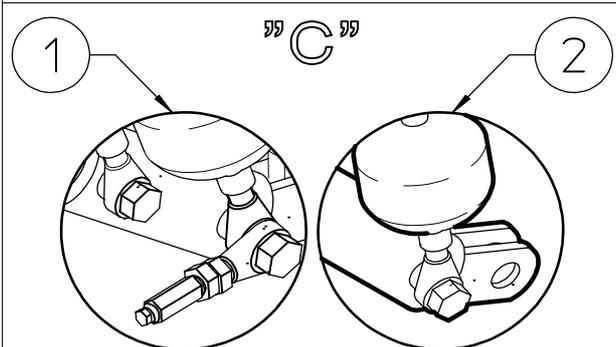
A) If you have a small manual simple-effect hydraulic pump, a pressure gauge and related pipes and joints, you may fill the accumulator set with oil without dismantling it from the machine. First of all, remove plug 2 and related bush from unidirectional valve 3.



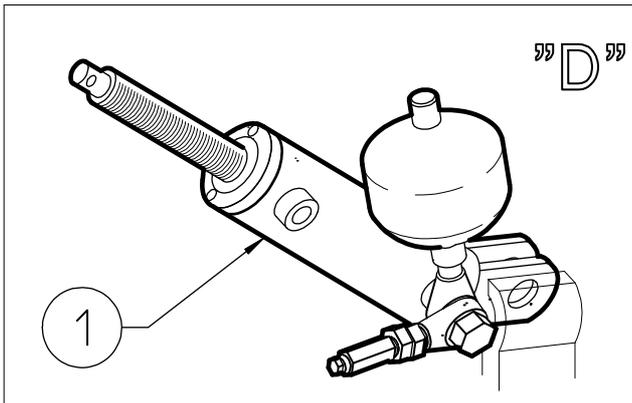
B) As mentioned, you will need manual pump 1, pressure gauge 2 and connector 3 that will be connected to the seat of the 1/4" gas valve 4 and related connection tubes.

At this point, use pump 1 to send oil to the cylinder in the accumulator assembly and to control pressure as measured by pressure gauge 2. Oil filling is achieved when the pressure gauge displays 25 bar/355 psi (a pressure assuring the right accumulator charge at 20 bar/285 psi). Note: when a simple-effect pump is used, pressure gauge 2 displays pressure values only when pump 1 is in delivery mode, because the circuit is closed by valve 4 as soon as oil delivery ends.

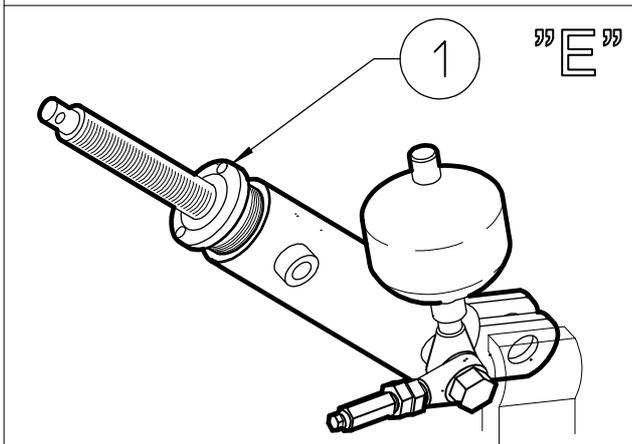
When oil filling is complete, disconnect connector 3 from valve 4 and replace bush 5 and safety plug 6.



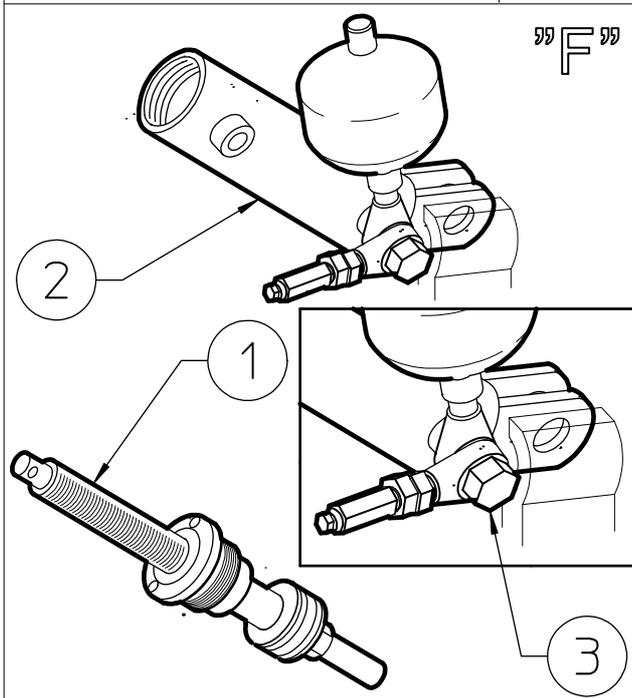
C) If you have an accumulator assembly with valve 1, but not the needed tools, or if you have an accumulator assembly type 2 (without a valve), please follow the procedure described below.



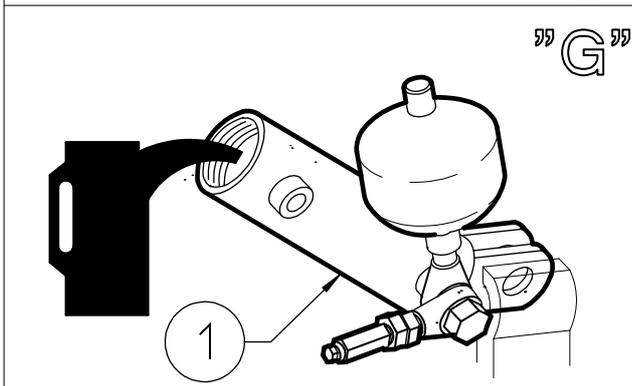
D) Remove cylinder assembly 1 from the machine and set it on a grip in a quasi-vertical position.



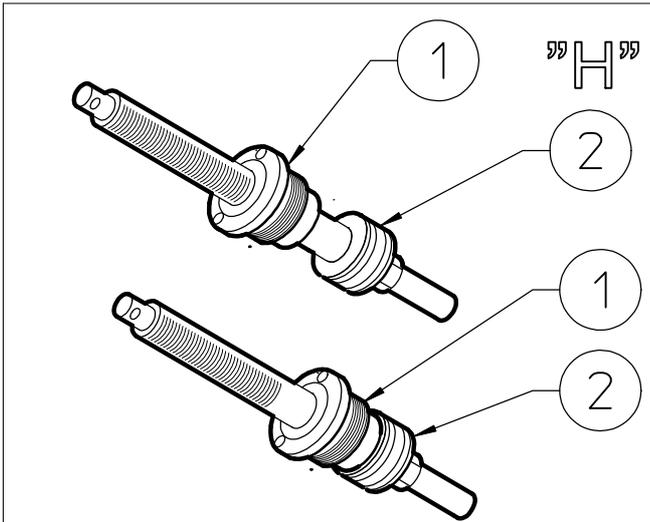
E) Unscrew head 1 from cylinder.



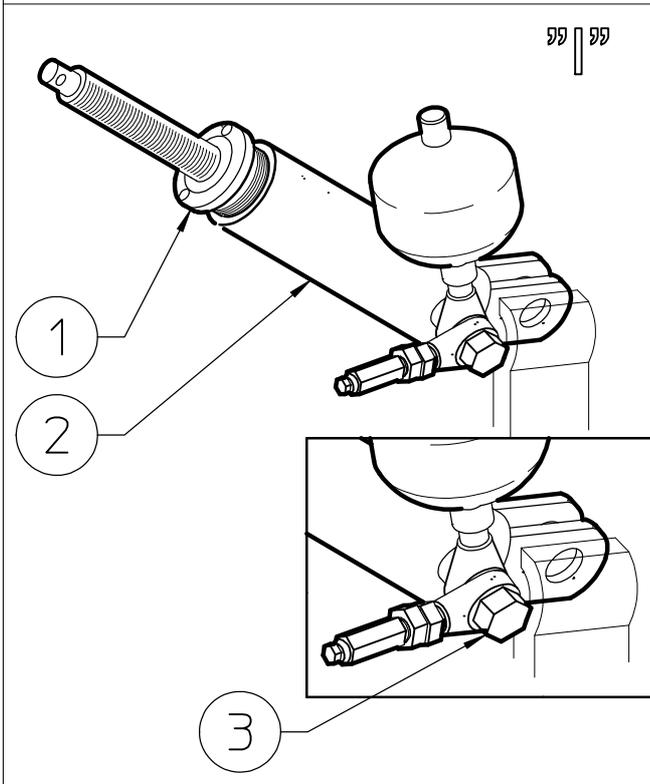
F) Extract stem 1 from cylinder 2 and remove oil residues from the cylinder body. Measure the position of the accumulator with respect to the side of cylinder 2, so that the same position may be recovered at the end of work. Then loosen screw joint 3 and place the accumulator at contact with the side of cylinder 2. (If you have to replace the accumulator, extract screw joint 3 completely along with the other joints that keep it fixed and mount them in the same position on the new accumulator, then proceed as follows).



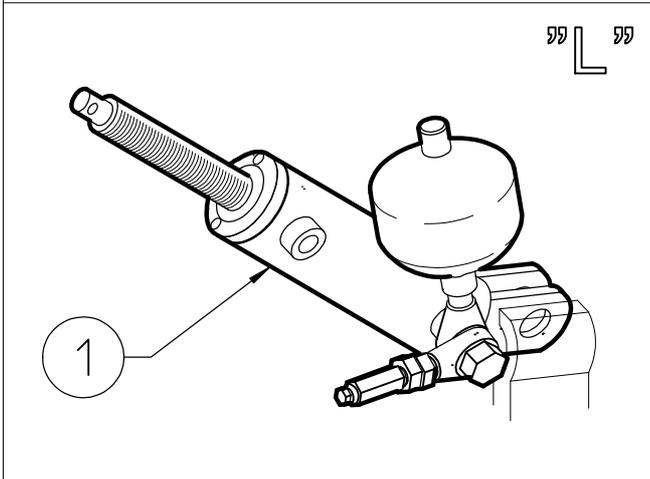
G) Introduce 0.38 litres / 0.1 gallons of hydraulic oil in the body of cylinder 1. If too much oil seeps out from the loosen screw connection, tighten it a little.



H) Bring head 1 at contact with piston 2.

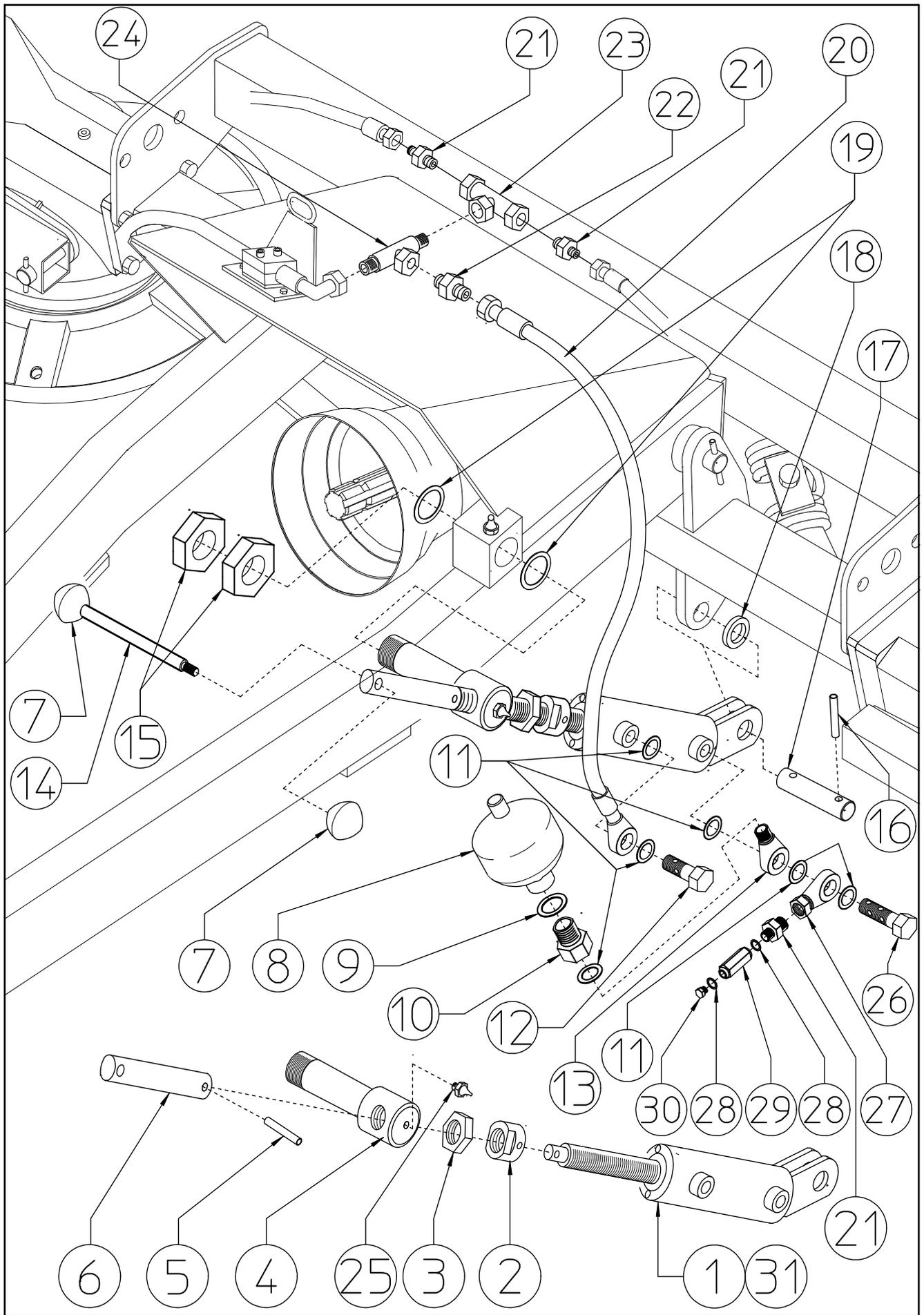


I) Introduce the stem set on the body of cylinder 2 and screw head 1 for 1 turn or 2. Tighten joint 3 taking care that the accumulator is in the right position with respect to the side of cylinder 2, which must be at a distance of approx. 5-8 mm / 0.2" – 0.3". Screw head 1 to the end. Bear in mind that screwing head 1 may be difficult following the first turns, because you have to overcome the accumulator's calibration pressure. Use proper tools and be careful not to damage the head 1.

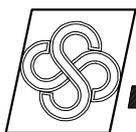


L) Now the assembly is ready to be reassembled on the machine.

SPARE PARTS LIST



ACCUMULATOR KIT FOR RT/5200-RT/5800 PART NO 230.064/a				
ITEM	Qty	PART NO	DESCRIPTION	NOTE
1	1	230.090	CYLINDER	
2	1	230.130	BUSH	
3	1	620.465	NUT (M27 UNI 7474)	
4	1	230.129	PIN	
5	1	620.468	SPRING PIN (ø8x30)	
6	1	230.128	BUSH	
7	2	620.464	KNOB	
8	1	620.458	ACCUMULATOR WITH MEMBRANE	Danger (285 PSI-20 bar)
9	1	630.048	COPPER WASHER (1/2")	
10	1	600.428	FITTING (1/2" MALE-3/8" FEMALE)	
11	6	620.452	COPPER WASHER (3/8")	
12	1	600.040	SCREW 3/8"	
13	1	610.930	FITTING 3/8"	
14	1	230.127	LEVER	
15	2	610.813	NUT (M30 UNI 5589)	
16	2	600.538	SPRING PIN (ø6x35)	
17	1	220.828	PIN	
18	1	230.018	SHIM	
19	2	200.273	SHIM	
20	1	620.466	HOSE 1/4"	
21	3	600.883	NIPPLES (3/8"-1/4")	
22	1	200.192	REDUCER FLOW (3/8"-3/8")	
23	1	620.467	"T" CONNECTOR 3/8" FEMALE	
24	1	600.977	"T" CONNECTOR 3/8"	
25	1	600.124	GREASE NIPPLE M6	
26	1	610.858	SCREW 3/8" (DOUBLE)	
27	1	630.315	FITTING 3/8"	
28	2	630.376	COPPER WASHER 1/4"	
29	1	630.574	DIRECTIONAL VALVE 1/4"	
30	1	630.575	PLUG 1/4"	
31	1	620.022	SET OF GASKET	



AGRICULTURAL MACHINERY
sitrex® Spq .

Zona Industriale-Viale Grecia, 8
06018 TRESTINA-(Perugia)-ITALY
Tel. +39.075.8540021-Telefax +39.075.8540523
e-mail: sitrex@sitrex.it www.sitrex.com

