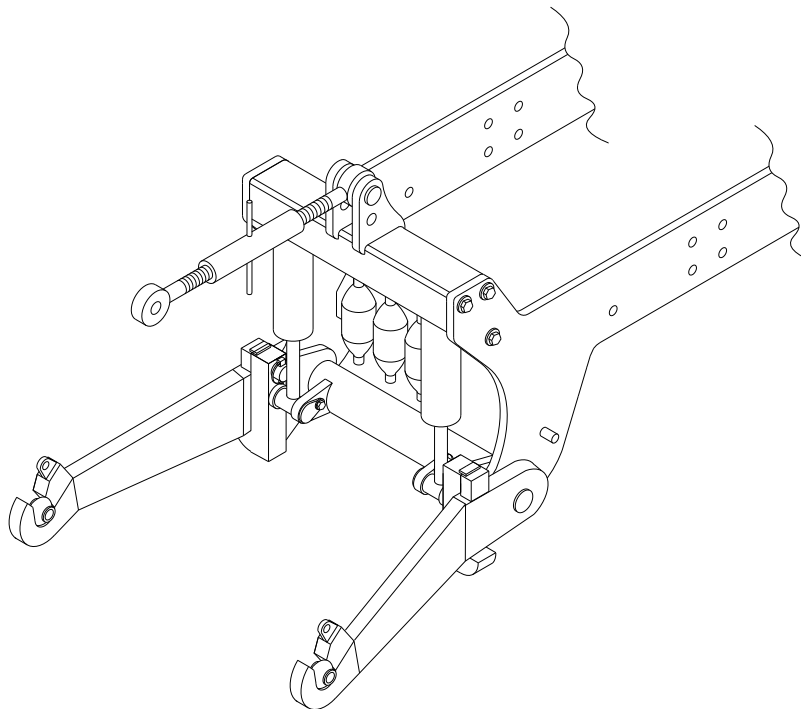




UK

Assembly Instruction
Operating Instruction
Spare Parts List



Front-Lift
Type 15.01

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EC DECLARATION OF CONFORMITY

in accordance with the EU Machinery Directive 2006/42/EC
applicable as from December 29th 2009:

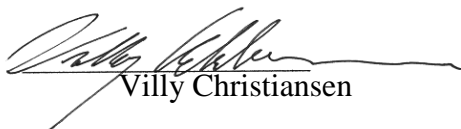
HE-VA ApS
N. A. Christensensvej 34,
DK-7900 Nykøbing Mors

hereby confirms that the following machine has been manufactured in accordance with the Council
Directive 2006/42/EC.

The declaration comprises the following machine:

Front-Lift 15.01

Nykøbing the 29th December 2009


Villy Christiansen

The undersigned is furthermore authorised to compile technical documentation for the above machine.

HE-VA ApS does not assume any responsibility for damages to the tractor.

1. Delivery Check

Both on delivery to the distributor/supplier and to the customer, the Front-Lift must be checked on any damages.

Check the hydraulic hoses on cuts and squeezing damages. Check that the other hydraulic components have not been damaged in transit.

2. Maschine Description

2.1. Application

The Front-Lift is for mounting at the front of tractors. The Front-Lift is developed for a variety of various tractor models and may be equipped with short or long side members according to the tractor design. Absorbers, spring suspension and double-acting hydraulics can be fitted as accessories. In the Front-Lift, different tools can be fitted: roller, land-packer, harrow, sweeper, snow plough, etc. With the Front-Lift, the tools can be lifted and lowered and put in the required working position. When working with swinging land-packers, etc., causing considerable torsional stresses in the Front-Lift and the tractor, the additional support of the lift arms must be used. HE-VA delivers such additional support as accessories. **If the tractor is exposed to such torsional stresses, HE-VA does not assume any responsibility for damages to the tractor.**

NOTICE! The front-lift must not be used for passenger transport.

2.2. Technical Specifications

Lifting capacity at an oil pressure of 210 bar	1.500 kg
Maximum load in coupling eyes	1.500 kg
Quick-couplings standard	1/2" kegletype ISO 7241
Hydraulic oil: The system is filled up	Agip OSO 32
Noise level	under 70 dB (A)

The Front-Lift complies with DS/ISO 8759/2, Nov. 86 as regards the dimensions, locations and lifting height (category II) of the coupling points. 825 mm between the quick-couplings/Ø28 mm pin.

3. Assembly Instruction

3.1 Generally

As standard the Front-Lift is supplied with a complete mounting kit consisting of bolts, nuts, washers, hydraulic hoses, quick-couplings and cable binders/strips.

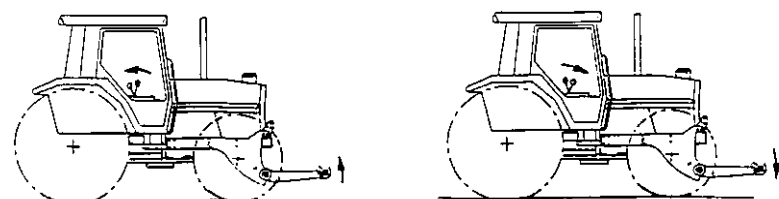
3.2 Mounting of Front-Lift

The following mounting instruction is a general instruction in the mounting of a HE-VA Front-Lift. There may be deviations in special cases, and if in doubt, please contact HE-VA.

1. Dismantle the basic weight of the tractor.
2. Dismantle the lift in one side so that the side plates can pass the front block.
3. Mount the first side plate and tighten slightly.
4. Mount the second side plate and tighten slightly.
5. Mount the top lever attachment, cylinders and lifting console.
6. Now tighten all bolts. Remember it is very important that the bolts are lubricated in order to achieve adequate tightening. See the table.
7. Fit the hydraulic hoses to the hydraulic tractor PTO. The hoses must not hang loose but must be attached e.g. by means of strong cable binders/strips. The hoses may not touch any sharp edges, which may damage them. Pay special attention in connection with the movements of the front end.
8. With Front-Lifts with spring system the manometer with test hose must be fitted to a place visible from the driver's seat (e.g. on the guard).
9. It may be necessary to adjust the control swing after the mounting of the Front-Lift depending on the tyre fitting and wheel distance.

NOTICE! No hydraulic hoses may be fitted in the driver's cab.

When connecting the hydraulics there must be accordance between the movements of the hydraulic lever and the movement of the Front-Lift!



<i>Metrical Thread</i>		Maximum Tightening Torques in Nm		
	Grade 8.8	Grade 10.9	Grade 12.9	
M12	81	114	136	
M14	128	181	217	
M16	197	277	333	
M18	275	386	463	
M20	385	541	649	
M22	518	728	874	
M24	665	935	1120	

3.3 Mounting of Absorber, Spring Suspension and Double-acting Hydraulics

Generally

As standard the Front-Lift is equipped with single-acting hydraulics and **not** equipped with absorber, spring suspension and double-acting hydraulics. These are available as accessories. HE-VA supplies the accessories in sets, which are thus ready for mounting.

The purpose of the absorber (ST) is to absorb the hardest impacts when driving with lifted tools on uneven surfaces. With double-acting hydraulics, the weight can be transferred from the tractor onto the tool. In this connection we recommend that the Front-Lift is equipped with a spring suspension system (AF), thus achieving a shock-absorbing connection with the tractor and the tool.

3.4 Mounting of Double-acting Hydraulics

When mounting double-acting hydraulics, the filter plugs are removed from the cylinders, and fittings and hydraulic hoses are fitted. The cylinders are prepared for the double-acting system.

3.5 Mounting of Absorber (ST)

The accumulator (1 pc.) is fitted on the lifting side of the cylinders in accordance with the diagrams.

3.6 Mounting of Spring Suspension (AF)

The accumulators (2 pcs.) are fitted with 1 pc. on the lifting side and 1 pc. on the lowering side of the cylinders in accordance with the diagrams

Important !

Before the hydraulic system is dismantled, the system must be depressurised. Be especially careful if the Front-Lift is equipped with accumulators (ST-AF).

When a dismantling of the hydraulic system is required, the Front-Lift must be totally lowered. Any tools must be placed on a firm support. Stop the tractor and move the control handles of the Front-Lift backwards and forwards until no more oil is flowing to back to the tractor.

Important !

After the mounting of accessories, the Front-Lift hydraulic system must be flushed so that shavings from the used cutting ring fittings are removed and will not cause any damage to the tractor hydraulic system.

4. Operating Instructions

4.1 Lift Arms

The rest position of the lift arms may either be vertical or backwards and depends on the tractor design. For vertical rest position the supplied lock fittings must be used and fitted when the lift is lowered. The lift arms will be locked when the lift is lifted to top position.

In rest position backwards, the arms must be tipped manually up until they hit the limit stop, and no locking fittings must be used.

4.2 Coupling of Tool

Fit the balls on the tool, drive the tractor into position and lift the Front-Lift so that the quick-couplings catch the tool.

4.3 Uncoupling of Tool

We recommend that you place the tool on a plane ground. The locking mechanism is released when the tool is hanging freely and then the Front-Lift is lowered.

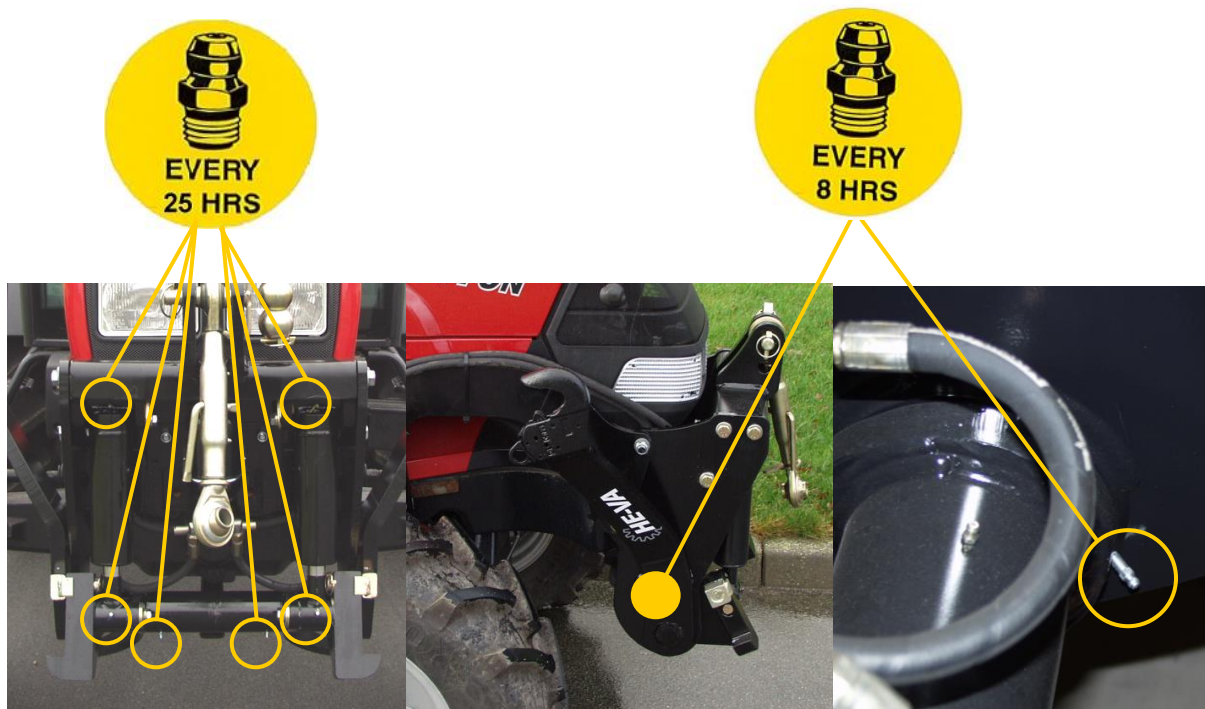
Warning !

When the tractor motor is started, no persons may stay within the reach of the tractor, Front-Lift or mounted Tool.

4.4 Lubrication

When lubricating the Front-Lift and any mounted tool, lower the Front-Lift, brake the tractor, stop the motor and remove the ignition key!

There are 6 lubricating points on the Front-Lift, which must be lubricated after every 25 hours of operation, and 2 lubricating points on the Front-Lift, which must be lubricated after every 8 hours of operation, and after each cleaning in order to press any water out of the bearings.



4.5 Maintenance

Retighten all bolts after the first 10 hours of operation. Check cylinders, hoses and fittings on leaks and retighten.

Then check that the Front-Lift bolts are tightened and that the hydraulic system does not leak oil.

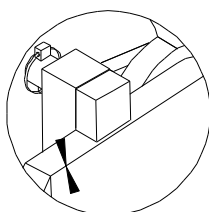
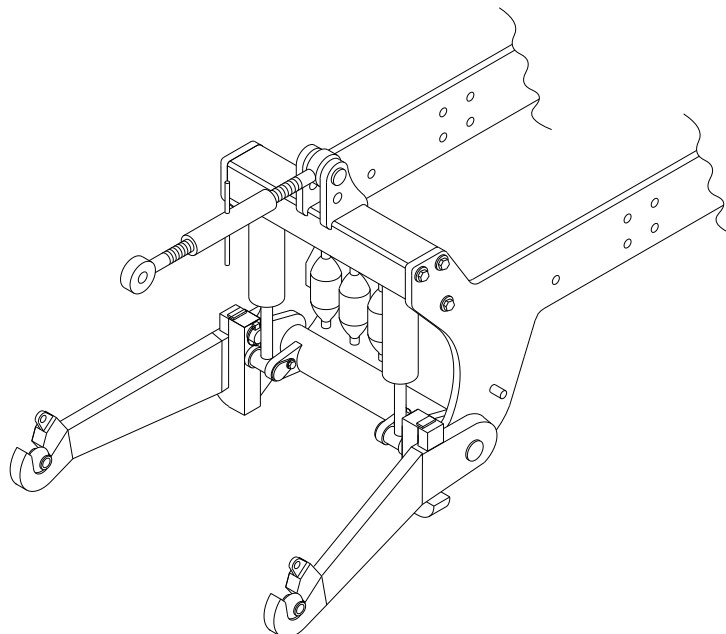
In case of a standstill of some duration the Front-Lift should be lifted to protect the piston rods. If this is not possible (if a tool has been mounted), the protruding part of the piston rods should be lubricated in grease.

4.6 Locking Pin for Lift Arms

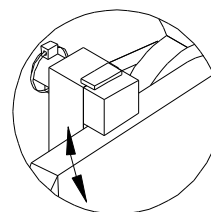
By fitting the locking pin in various ways, the movability of the arms can be determined. On page 9 the various possibilities are shown.

Front-Lift 15.01

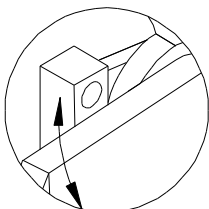
Locking Pin for Lift Arms



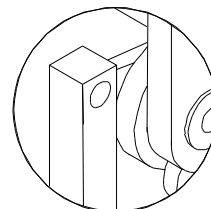
The lift arms are locked.
No mutual movability.



Turn the locking pin $\frac{1}{4}$ turn.
Then there is mutual movability, however limited.

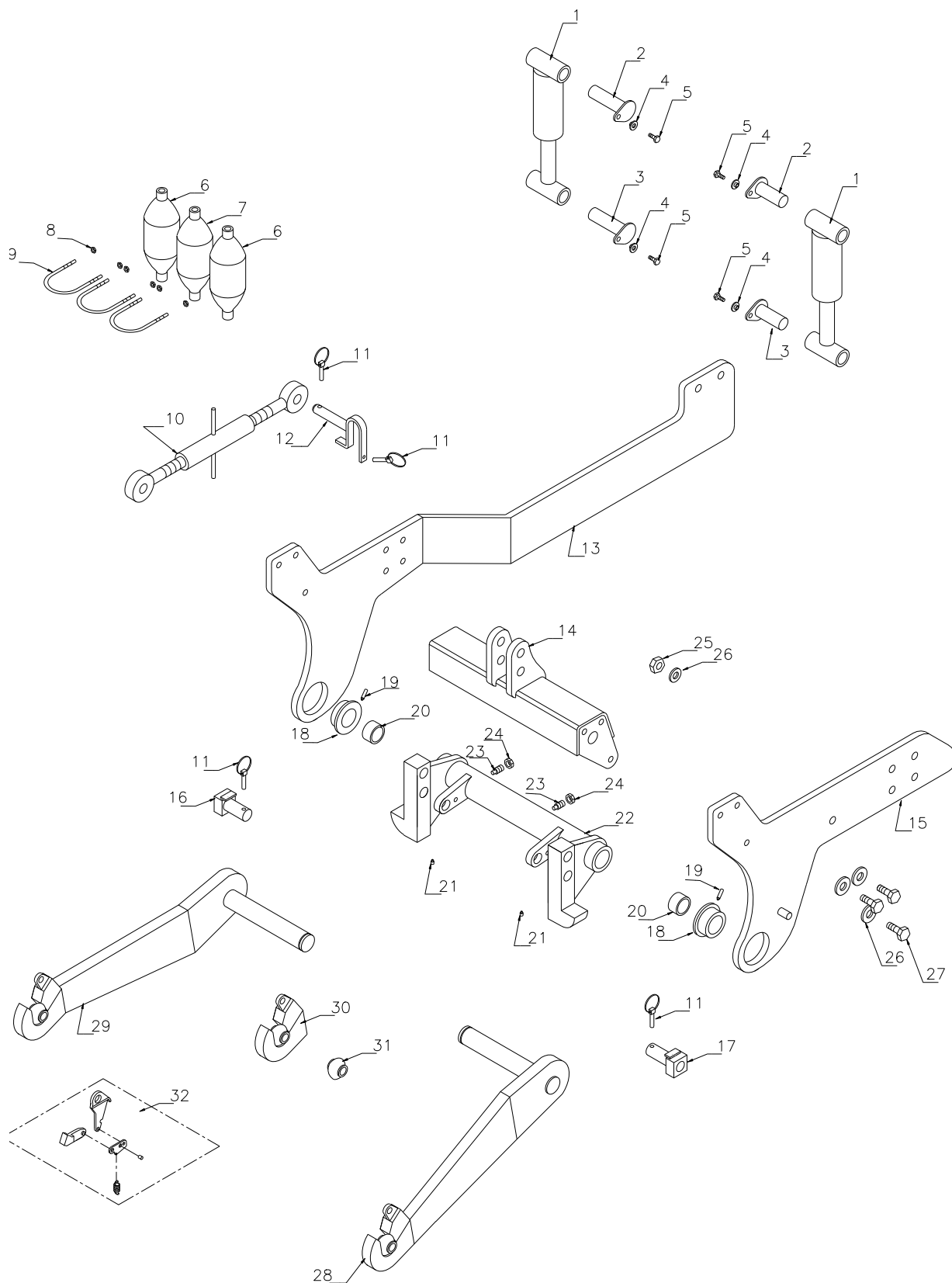


Remove the locking pin to achieve full movability. Place the pin in the bracket.
NOTICE now there is no height stop.



Put up the arms if the Front-Lift is not used for a period of some duration.

5. Spare Parts List



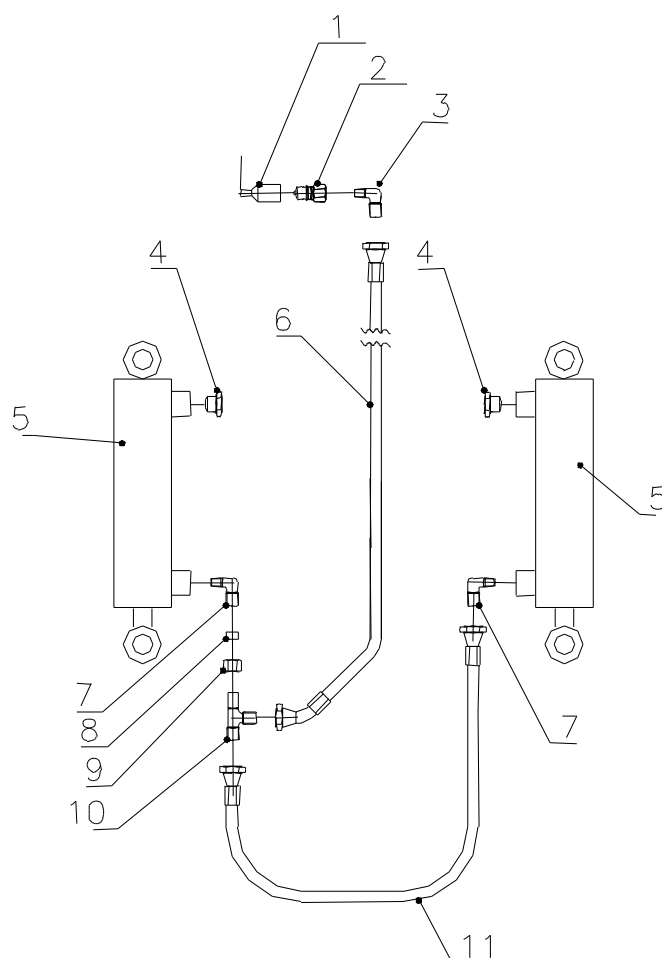
Front-Lift 15.01

Pos.	Pc.	Art No.	Description
1	2	690200150	Cylinder 60/30 x 130mm <i>Specify colour</i>
2	2	664004007	Cylinder pin Ø25 L=115
1a	2	690200076	Gasket kit 60/30 (Klinkby) before 2010
1a	2	690200077	Gasket kit 60/30 (Laizhou) after 2010 Screwed together. Item number marked in the guide bush
3	2	664004007	Cylinder pin Ø25 L=115
4	4	630532600	Lock Bush for nail
5	4	690101101	Bolt M12x25
6	2	690206403	Accumulator H700R – 15 bar <i>Specify colour</i>
7	1	690206430	Accumulator H700R – 100 bar <i>Specify colour</i>
8	6	690113004	Locking nut M8
9	3	690110001	U-bolt M8 x Ø92
10	1	690302009	Top Link
11	4	690134001	Pin Ø4,5
12	1	69525104B	Top link pin Ø25 L=112mm (new item number)
13	1	Contact	Side plate, Right, Complet <i>Specify colour</i>
14	1	664001000	Top link console <i>Specify colour</i>
15	1	Contact	Side plate, Left, Complet <i>Specify colour</i>
16	1	664004004	Locking pin for liftarm, Right
17	1	664004005	Locking pin for liftarm, Left
18	2	664004003	Bearing housing
19	2	690136002	Grease zerk M6 long
20	2	664004001	Bearing PM Ø65x30 DX
21	2	690136029	Grease zerk M8x1,25
22	1	664002000	Lifting console <i>Specify colour</i>
23	2	690104001	M16 stop screw w/stud
24	2	690112101	Lock-nut M16
25	2	690113008	M16 Self locking nut
26	8	690109011	Ø16 Plate with lock
27	6	690103133	M16x60 10.9 bolt
28	1	664003000	Liftarm, Left, Complet <i>Specify colour</i>
29	1	664003001	Liftarm, Right, Complet <i>Specify colour</i>
30	-	690106015	Automatic hook Kat. 2S
31	2	690134005	Linkball Kat. 2
32	-	690106012	Repair kit Kat. 2S

6. Hydraulic diagram

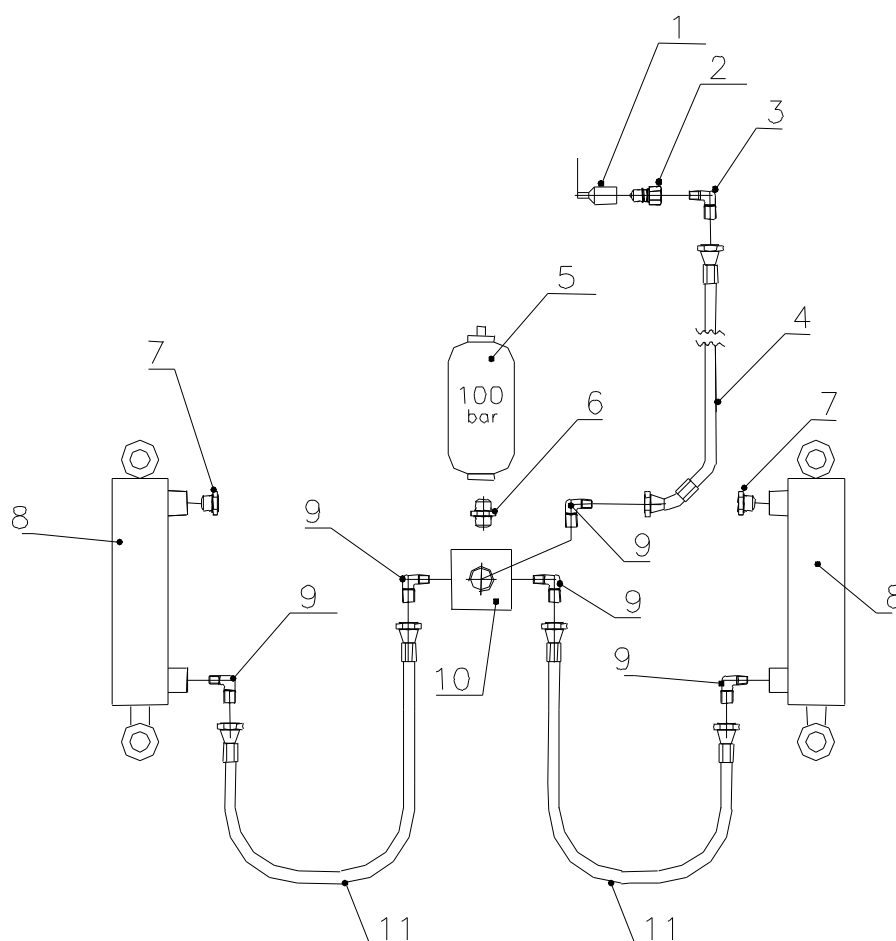
6.1 Single acting hydraulic

Pos.	Pc.	Art No.	Description
1	1	690210001	Dust cap blue
2	1	690203001	Quick couplung, male E402
3	1	690203107	Angle fitting, 12-1/2" BSP
4	2	690206001	Filterplug, 3/8"
5	2	690200150	Cylinder 60/30 x 130mm <i>Specify colour</i>
5a	2	690200076	Gasket kit 60/30 (Klinkby) before 2010
5a	2	690200077	Gasket kit 60/30 (Laizhou) after 2010
6	1	690201310	Hydraulic hose 5500 mm 3/8" st/45
7	1	690203106	Angle fitting 12-3/8" BSP
8	1	690203110	Cutting ring Ø12 mm
9	1	690203111	Union nut Ø12 mm
10	1	690203017	Fitting T12L, med O-ring
11	1	690201207	Hydraulic hose 400 mm 3/8" st/st



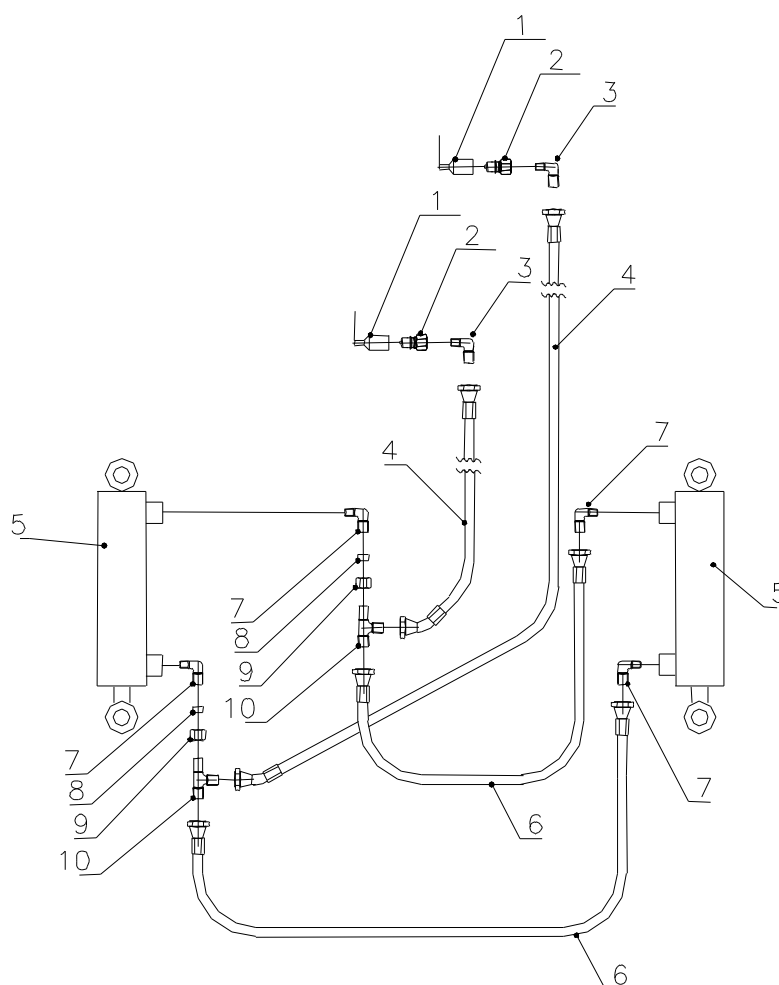
6.2 Single acting hydraulic with absorber

Pos.	Pc.	Art No.	Description
1	1	690210001	Dust cap blue
2	1	690203001	Quick couplung, male E402
3	1	690203107	Angle fitting, 12-1/2" BSP
4	1	690201310	Hydraulic hose, 5500 mm 3/8" st/45
5	1	690206435	Accumulator H700R-100 bar <i>Specify colour</i>
6	1	690203102	Straight fitting 12x3/8" med O-ring
7	2	690210001	Filterplug, 3/8"
8	2	690200150	Cylinder 60/30 x 130mm <i>Specify colour</i>
8a	2	690200076	Gasket kit 60/30 (Klinkby) before 2010
8a	2	690200077	Gasket kit 60/30 (Laizhou) after 2010 Screwed together. Item number marked in the guide bush
9	5	690203106	Angle fitting 12-3/8" BSP
10	1	660501400	Three square fitting 3x3/8" BSP thread
11	2	690201219	Hydraulic hose 350 mm 3/8" st/st



6.3 Double acting hydraulic

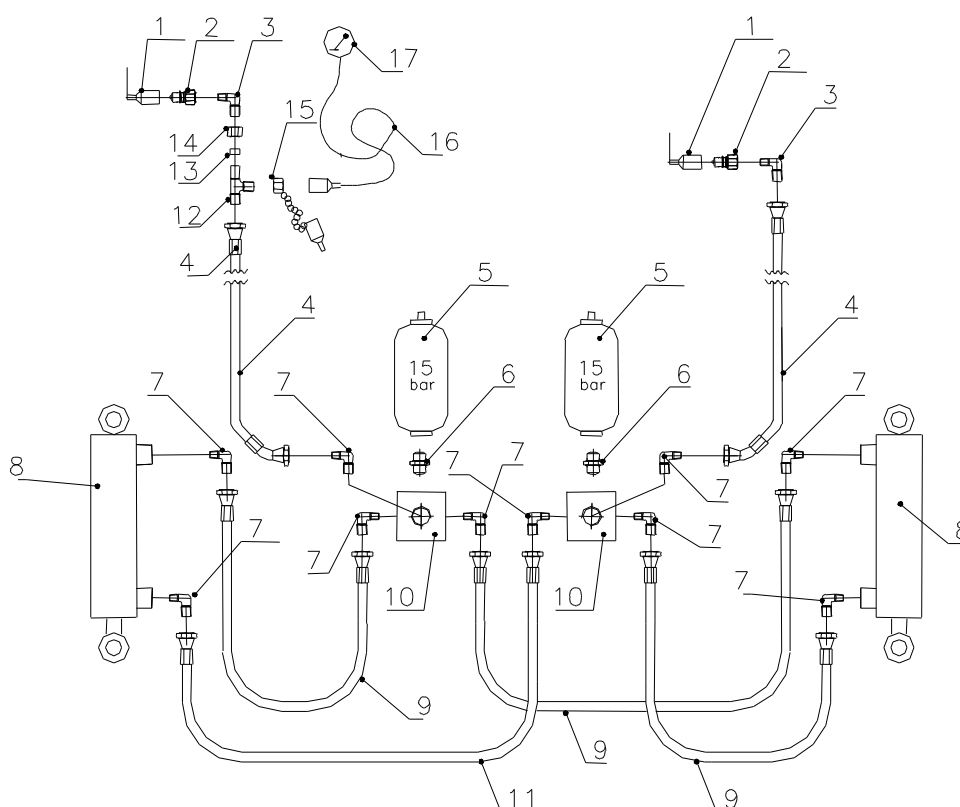
Pos.	Pc.	Art No.	Description
1	2	690210001	Dust cap, blue
2	2	690203001	Quick couplung, male E402
3	2	690203107	Angle fitting, 12-1/2" BSP
4	2	690201310	Hydraulic hose, 5500 mm 3/8" st/45
5	2	690200150	Cylinder 60/30 x 130mm <i>Specify colour</i>
5a	2	690200076	Gasket kit 60/30 (Klinkby) before 2010
5a	2	690200077	Gasket kit 60/30 (Laizhou) after 2010 Screwed together. Item number marked in the guide bush
6	2	690201207	Hydraulic hose, 400 mm 3/8" st/45
7	4	690203106	Angle fitting 12-3/8" BSP
8	2	690203110	Cutting ring Ø12 mm
9	2	690203111	Union nut Ø12 mm
10	2	690203017	Fitting T12L, with O-ring



Front-Lift 15.01

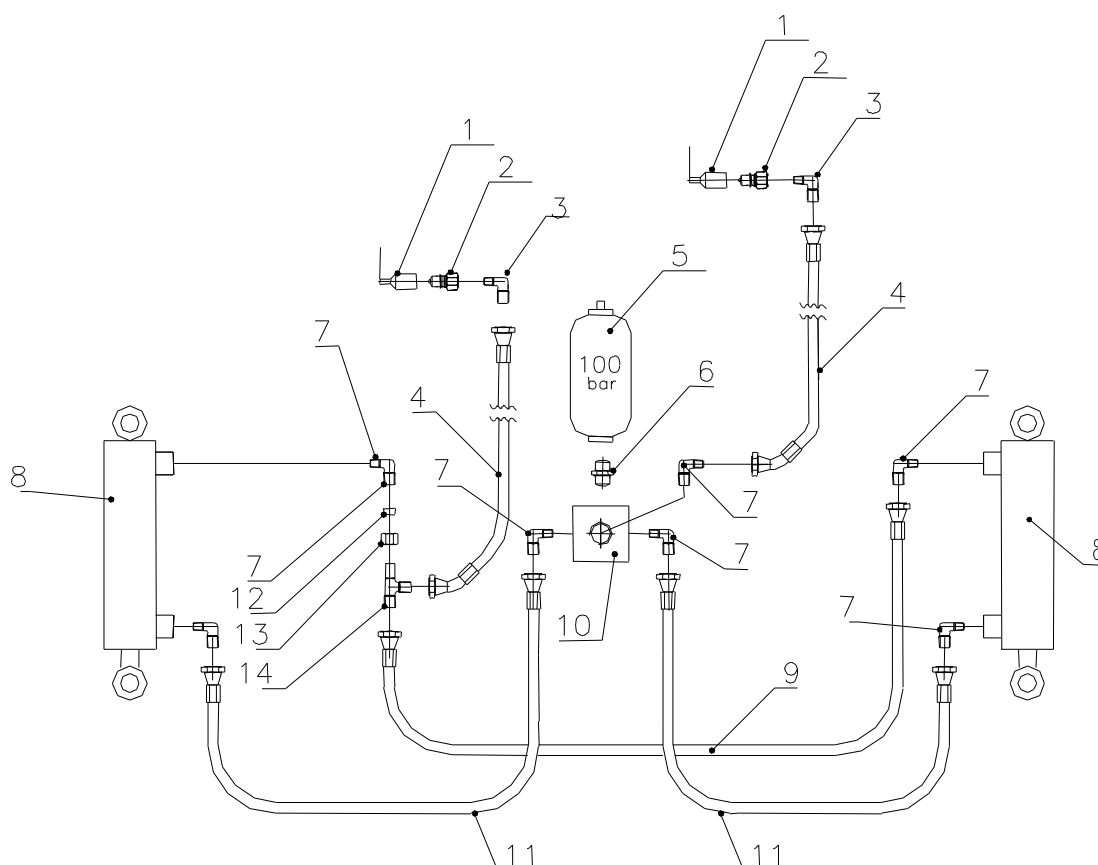
6.4 Double acting hydraulic with spring suspension

Pos.	Pc.	Art No.	Description
1	2	690210001	Dust cap, blue
2	2	690203001	Quick couplung, male E402
3	2	690203107	Angle fitting, 12-1/2" BSP
4	2	690201310	Hydraulic hose, 5500 mm 3/8" st/45
5	2	690206403	Accumulator H700R-15 bar <i>Specify colour</i>
6	2	690203102	Straight fitting 12x3/8" with O-ring
7	10	690203106	Angle fitting, 12-3/8" BSP
8	2	690200150	Cylinder 60/30 x 130mm <i>Specify colour</i>
8a	2	690200076	Gasket kit 60/30 (Klinkby) before 2010
8a	2	690200077	Gasket kit 60/30 (Laizhou) after 2010 Screwed together. Item number marked in the guide bush
9	3	690201223	Hydraulic hose 500 mm 3/8" st/st
10	2	660501400	Four square fitting 4x3/8" BSP thread
11	1	690201213	Hydraulic hose 300 mm 3/8" st/st
12	1	690203017	Fitting T12L, with O-ring
13	1	690203110	Cutting ring Ø12 mm
14	1	690203111	Union nut Ø12 mm
15	1	690203007	Test nipple for pressure gauge
16	1	690203008	Test hose for pressure gauge
17	1	690206802	Pressure gauge G63-D250B



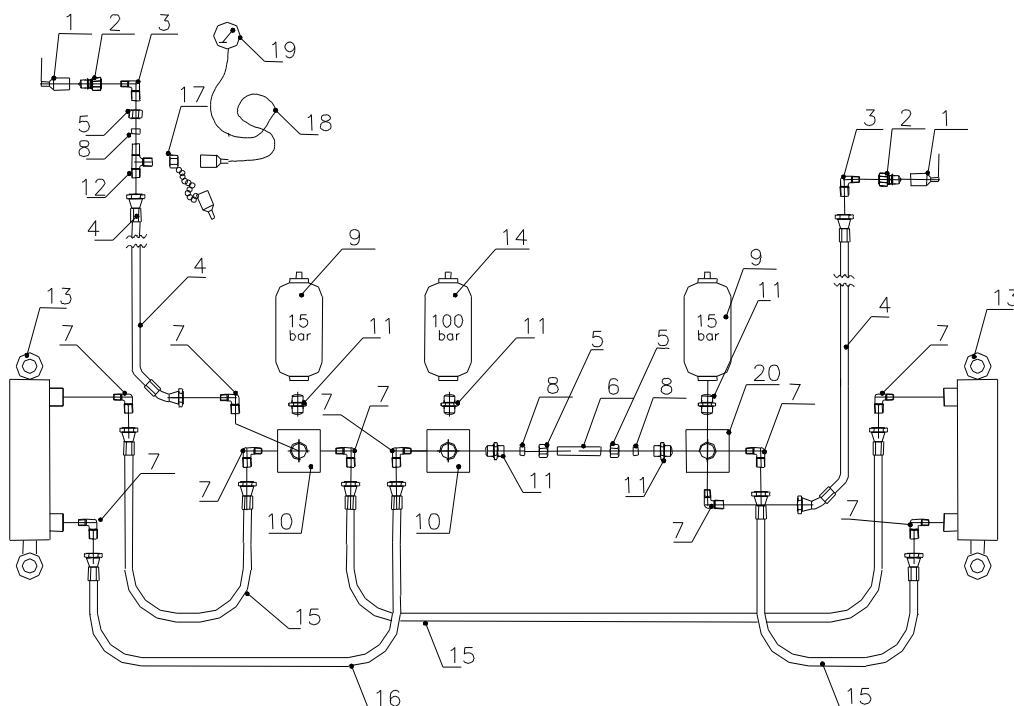
6.5 Double acting hydraulic with absorber

Pos.	Pc.	Art No.	Description
1	2	690210001	Dust cap , blue
2	2	690203001	Quick couplung, male E402
3	2	690203107	Angle fitting, 12-1/2" BSP"
4	2	690201310	Hydraulic hose, 5500 mm 3/8" st/45
5	1	690206435	Accumulator H700R-100 bar <i>Specify colour</i>
6	1	690203102	Straight fitting 12x3/8" with O-ring"
7	7	690203106	Angle fitting, 12x3/8 BSP
8	2	690200150	Cylinder 60/30 x 130mm <i>Specify colour</i>
8a	2	690200076	Gasket kit 60/30 (Klinkby) before 2010
8a	2	690200077	Gasket kit 60/30 (Laizhou) after 2010 Screwed together. Item number marked in the guide bush
9	2	690201207	Hydraulic hose 400 mm 3/8" st/st
10	1	660501400	Four square fitting 4x3/8" BSP thread
11	2	690201219	Hydraulic hose 350 mm 3/8" st/st
12	1	690203110	Cutting ring Ø12 mm
13	1	690203111	Union nut Ø12 mm
14	1	690203017	Fitting T12L, with O-ring



6.6 Double acting hydraulic with absorber and spring suspension

Pos.	Pc.	Art No.	Description
1	2	690210001	Dust cap, blue
2	2	690203001	Quick couplung, male E402
3	2	690203107	Angle fitting, 12-1/2" BSP
4	2	690201310	Hydraulic hose, 5500 mm 3/8" st/45
5	3	690203111	Union nut Ø12 mm
6	1	662000801	Hydraulikrør ø12 l= 35 mm
7	10	690203106	Angle fitting, 12-3/8" BSP
8	3	690203110	Cutting ring Ø12 mm
9	2	690206403	Accumulator H700R-15 bar <i>Specify colour</i>
10	2	660501300	Three square fitting 3x3/8" BSP thread
11	5	690203102	Straight fitting 12x3/8" with O-ring
12	1	690203017	Fitting T12L with O-ring
13	2	690200150	Cylinder 60/30 x 130mm <i>Specify colour</i>
13a	2	690200076	Gasket kit 60/30 (Klinkby) before 2010
13a	2	690200077	Gasket kit 60/30 (Laizhou) after 2010 Screwed together. Item number marked in the guide bush
14	1	690206435	Accumulator H700R-100 bar <i>Specify colour</i>
15	3	690201223	Hydraulic hose 500 mm 3/8" st/st
16	1	690201219	Hydraulic hose 350 mm 3/8" st/st
17	1	690203007	Test nipple for pressure gauge
18	1	690203008	Test hose for pressure gauge
19	1	690206802	Pressure gauge G63-D250B
20	1	660501400	Four square fitting 4x3/8" BSP thread



7. Security

Ved kørsel med sneplov og lignende:

Lås snapkoblinger med bolte

When operating a snow plough or similar equipment:

Lock the Quick Couplings with bolts

Pour l'emploi d'un chasse-neige ou outils pareils:

Verrouiller l'accouplement rapide avec boulons

Beim Betrieb einen Schneepflug oder ähnliche Geräte:

Verriegeln Sie die Schnellkupplungen mit Schrauben



Snapkobling LÅST

Quick Coupling LOCKED

Accouplement rapide VERROUILLÉ

Schnellkupplung VERRIEGELT



Snapkobling LÅST OP

Quick Coupling UNLOCKED

Accouplement rapide DÉVERROUILLÉ

Schnellkupplung ENTRIEGELT

Ved kørsel med sneplove og lignende skal snapkoblinger låses, for at forhindre skader på plov/redskaber og lift.

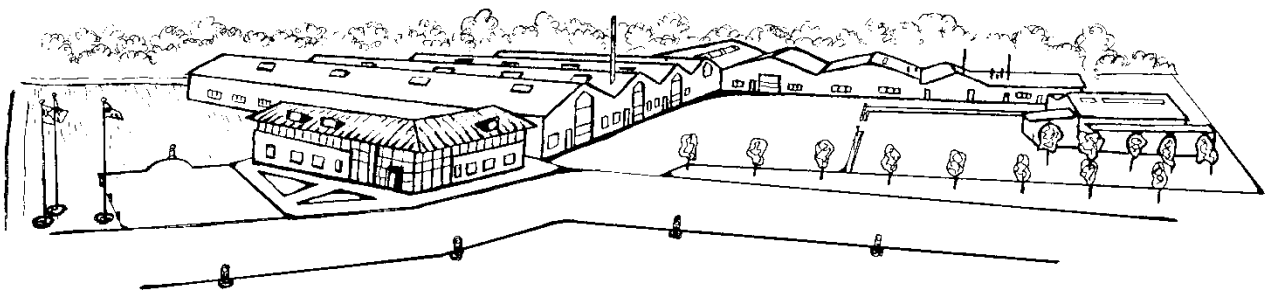
When operating a snow plough or similar equipment, the quick couplings must be locked to prevent damage to the equipment and the Frontlift.

Pour l'emploi d'un chasse-neige ou outils pareils, l'accouplement rapide doit être verrouillé pour éviter d'endommager l'outil et le relevage avant.

Beim Betrieb einer Schneepflug oder ähnliche Geräte, die Schnellkupplungen müssen verriegelt sein, um Schäden am Gerät und dem Frontkraftheber zu verhindern.

Front-Lift - Relevage avant Front-Lift - Frontkraftheber Front-Lift	8.01	15.01	25.01.	36.01	55.01
Bolt - skiver - møtrikker Bolts – washers - nuts Boulons – rondelles - écrous Bolzen - Scheiben - Muttern	M6 x 50	M6 x 50	M8 x 50	M8 x 50	M8 x 60

8.Notes



We reserve the right to make design modifications without previous notice.