

# OMEGA FLL

SCRAPER



ISO 9001:2008



En

USER MANUAL  
*Omega*  
SPARE PART LIST



For Better Farming



## *DEAR CLIENT*

We thank you for choosing İLĞİ TARIM , which is in service for more than 45 years without sacrificing its quality.

You have bought one of our products by choosing it from our wide product range. First of all, enjoy your new product; we are sure it will contribute to your agricultural activities.

Control the machine you received basing on the dispatch note and receive it in full.

Before the first use, please pay attention to the warnings and instructions specified in this manual. Demand your spare parts from the spare parts list by its part number. Make your machine's maintenances regularly as it is specified in the manual.

Dear client; our manuals are being updated regularly. Please make contributions by your proposals. You can convey us all kind of suggestions and complaints by mail, fax etc.

May you have wide crop.

*İLĞİ TARIM*

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# 1. SECURITY MEASURES

## 1.1 Before starting to use

Learn what all the warning and information signs mean on the machine. Read and learn carefully the maintenance instructions manual. Dangerous consequences may occur in case of false and inattentive use of the equipment..



**READ AND CARRY OUT CAREFULLY THE SECTIONS WHERE THIS SIGN IS AVAILABLE**



Read the manual carefully and make sure you understand it! Do not stand between the equipment and the tractor. Wear suitable working clothes.

## 1.2 Warning signs

Machine's Serial Number Label



**ILG 210**



Before starting to use the machine, read the maintenance instructions manual carefully

**ILG 203**

The CE Mark, indicates that the machine is in accordance with the EU legislations.



**ILG 207**



The risk to squeeze your hand or foot between the parts.

Don't put any of your organs between shearing moving parts in the signed area.

**ILG 205**

The risk to get squeezed between the tractor and the equipment

Don't enter between the tractor and the equipment.



**ILG 208**



The risk of slipping and falling from the chassis of the machine.

Please don't step up onto the machine or to use as a platform.

**ILG 209**

The risk of hit of the turning, folding that is to say moving parts. This danger may result in injuring or death risk.

Don't enter the movement area of the parts during the running of the machine



**ILG 206**



In case of spotting oil leakage on the hydraulic components the power source must be stopped

Control and prevent all the leakages in the hydraulic circuit.

**ILG 204**

The oil leakages on the hydraulic circuit must be controlled carefully as there is high pressure in that circuit. The pressurized oil may harm your body or skin. Don't try to control and to close the oil leakages manually. Prevent the leakage by carefully reading the instruction manual. Appeal to a health organization in case of any injury.



**ILG 201**



Obey all the work safety rules and take precautions during all your installations and repair works. Otherwise there is the risk of injury and death.

Take precautions against the slipping and starting to work by itself. Read the relevant sections on the instructions manual and pay attention to the warnings.

**ILG 202**

The maximum working pressure of the hydraulic system is 200 bars.



**ILG212**



The pieces (stone, clay, machine piece etc.) which can pop out from the machine can cause to injuries.

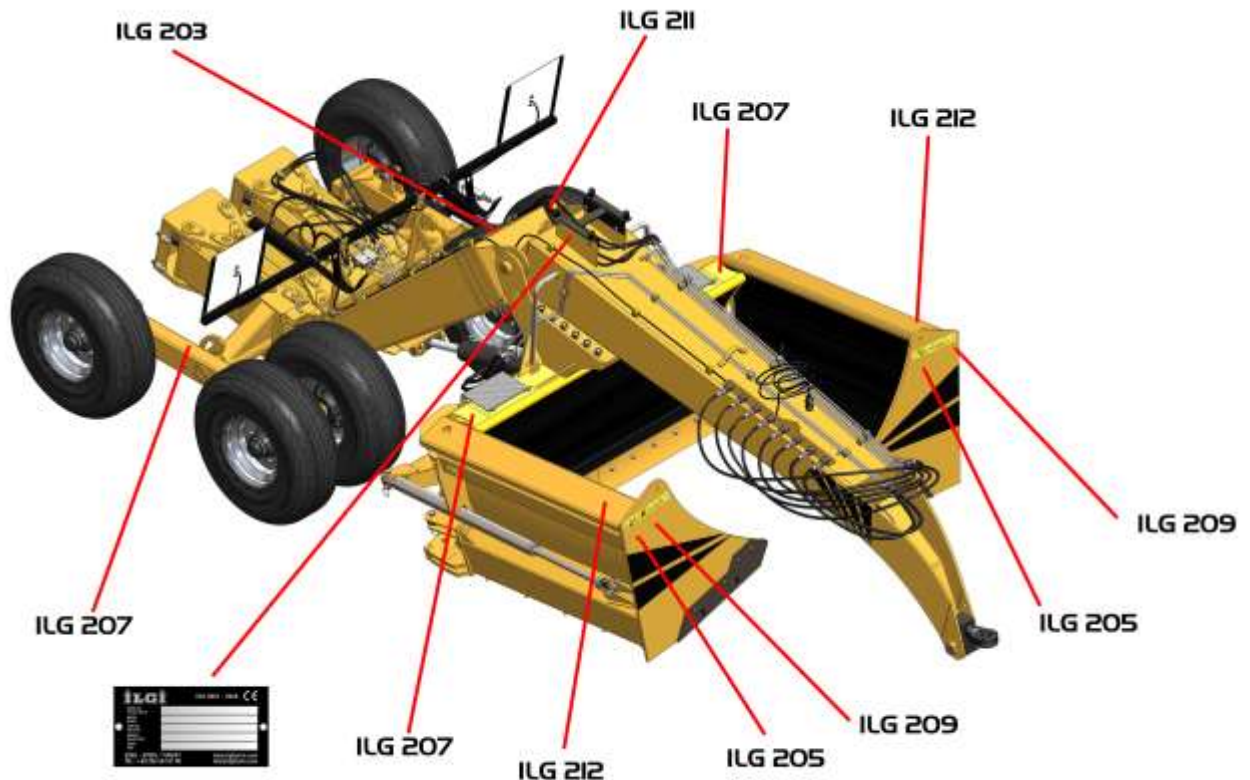
Don't get to the machine much closer than the safety distance.

**ILG 211**

During the machine's embarkation or transportation, it must be elevated from the points where there are this sign.



### 1.3 Warning signs settlement plan



### 1.4 Work Safety Before Operation:

Figure 1

- If you use the machine for the first time, read all instructions carefully. If you doubt any subject, seek to technical assistance of our firm.
- Rules for the prevention of accidents and safety which are effective in trade associations should be observed as well as the statements in the instruction books on the machine.
- Warning and descriptive labels suited on the machine introduce significant descriptions for risk-free working. To comply with these labels serve to your safety. Renew the damaged warning and descriptive labels immediately.
- Before working it is necessary to be sure about all orders and working parts as well as their functions. Otherwise it may be so late in case of operation.
- Obey the necessary traffic rules when you attach your machine to tractor and take the road. Take safety precautions. Comply exactly with the instructions for safety use and rules for the prevention of accidents.
- In case of the transportation of your machine to another place, pay attention to lift the machine from the lifting points stated on machine. When the machine is lifted by a crane, stay never under the machine or near it.

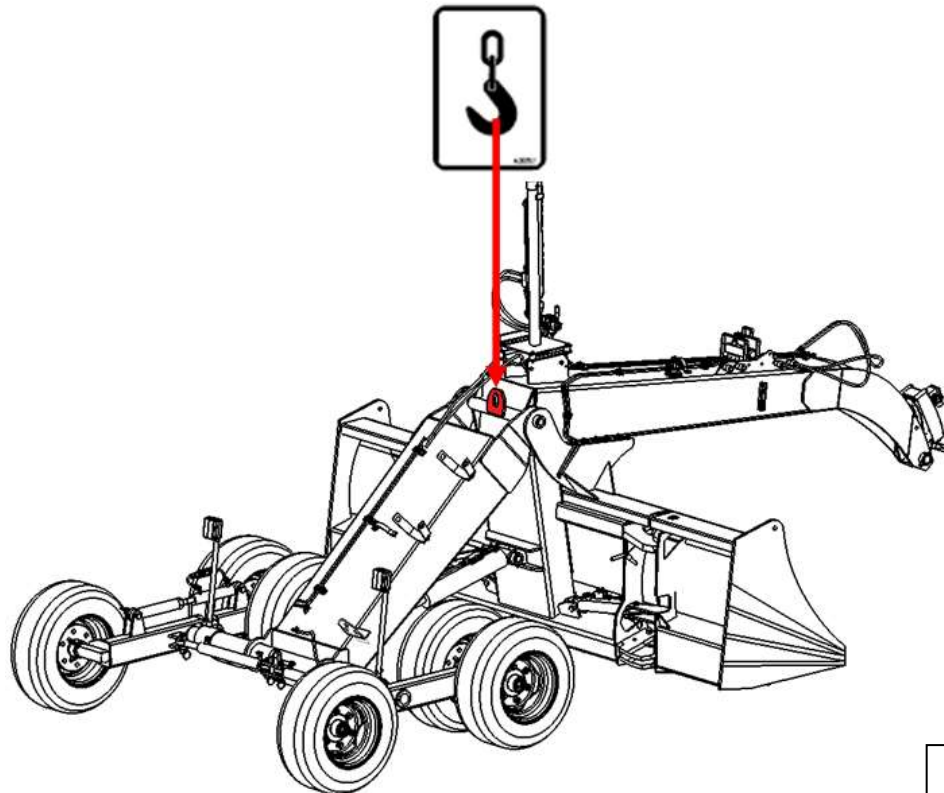
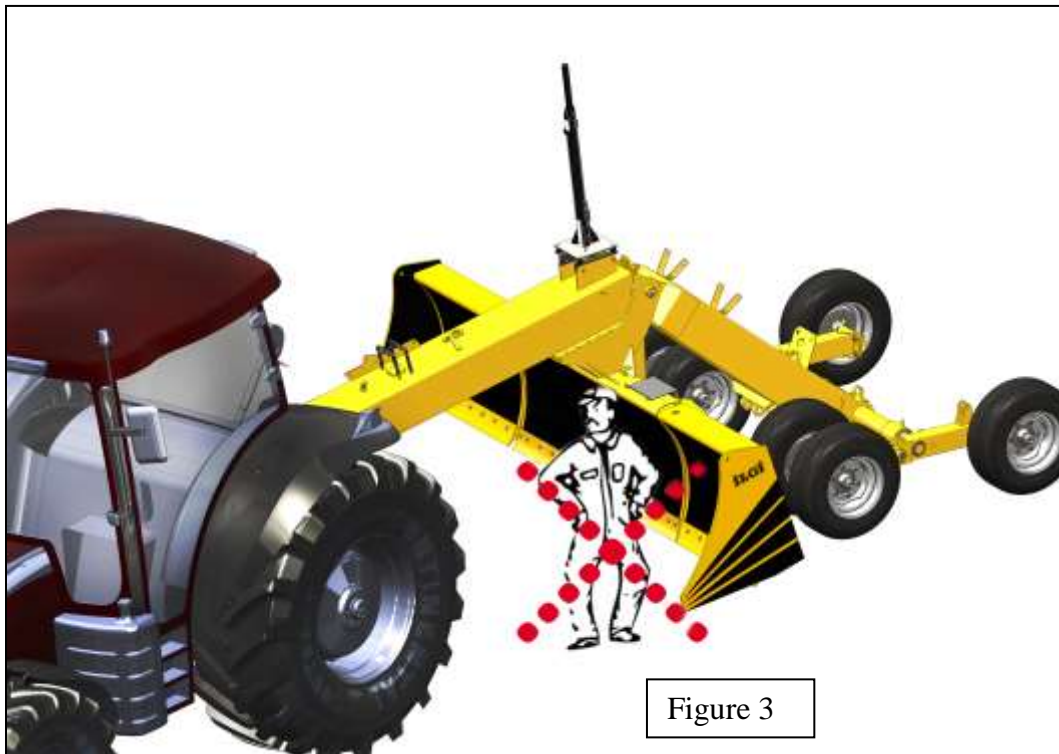


Figure 2

- Since laser leveling machine manufactured by our firm is a heavy and bulky machine, it should be placed into carrier (Truck etc.) and fixed safely to it. Loading and unloading operations should be made by a crane etc. if possible. While loading and unloading, necessary safety precautions should be taken.
- Please make sure that the operator using the tractor to which your machine is attached is licensed, experienced and well-trained driver.
- Exhaust gas is toxic, thus tractor shouldn't be operated in inappropriate and closed areas.
- Before removing the hydraulic hoses and pipes, it is necessary to make sure completely that circuit is not under pressure. An oil leakage under pressure is dangerous. While searching leakages in order to prevent serious injuries, it is necessary to use protective glasses and gloves. Before working with hydraulic system oil pressure should be decreased. Make sure that hydraulic hoses are attached to the right outlets.
- Don't attempt to run and maneuver the tractor without sitting on driver's seat.
- Make sure that control panel in the tractor should be set off in comings and goings
- Make sure that hydraulic pipes, electrical connections and pump-transmission combination are mounted in the comings from and goings to the field otherwise these pipes or cables may be damaged. Furthermore considering their rotational areas these pipes and electrical cables should be fixed to their places by holding it at enough distance.
- Stop lamps of machine and beacon lamps should be turned on permanently in comings from and goings to the field as well as vehicle moving especially in dark weather and at the evening hours.
- Remind that the machine fixed to tractor will change the some functions of tractor (breaking distance, steer ability, center of gravity etc.).
- Please check the tire pressures before departing
- Power take-off of tractor shouldn't be operated while vehicle moving (Coming-Going).
- Don't let anyone to sit on the machine not only the comings from or goings to the field but also during operation on the field.
- Set the parking brake of tractor and shift the gear to neutral before fixing your machine to tractor.



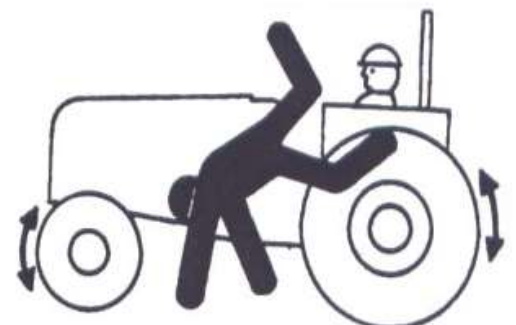
- Make sure that no one stay between machine and tractor while machine is attached to or removed from tractor.
- Start to work after taking all safety precautions in your machine and tractor.
- Attach your machine to a tractor with appropriate tractive force and hydraulic lifting order.
- Pay attention to the area where hydraulic lifting arms are operated. This area is dangerous.
- Tractor-machine connection should be done via the safety chains integrated onto the machine later. (Figure 3)



- Make sure that there is no one especially children and domestic animals is around the machine before running it. Take necessary precautions in order to see around comfortably
- Obstacles like tree roots and wastes like cloth, nylon etc. should be considered and obstacles on field should be removed.
- Very stony and grassy fields shouldn't be processed.
- Fields under heavy rain and very muddy fields shouldn't be processed in order not to damage the surface of field, because the earth leveled is adhered to shovel and prevents leveling by preventing it from staying at intended place.
- Machine should be kept clear against fire danger.
- Check and connect handling equipment, lighting, warning orders as well as protection orders.
- Make sure that machine is taken to road position while coming from and going to the field.
- It is necessary to drive slowly on uneven and stony roads, bends and in the event that machine is shaken too much.

**During Operation**

- Clutch is controlled softly and then tractor should be run. Rapid and stern departures may cause springs and under draughts especially while going up or pulling.



- When an abnormal voice is heard while machine is working, machine should be stopped.
- Don't touch any moving and rotating part in any way.
- Wait that they completely stop before touching the parts of machine.
- Don't force the limits of machine like the capacity, running speed etc.
- Don't add weight onto and don't let anybody to sit on the machine while running.
- Blades of shovel shouldn't be kept close too much to the border of field and leveling operation shouldn't be done therein.
- Don't be close to the machine while working and don't let anybody to be close to the machine.
- Don't let anybody to stay on tractor or machine except operator.
- Don't work with the machine excessive rainy and windy days.
- If your tractor is running, never leave the driver's cab.
- Never drive back when shovel contacts with the earth while working.
- Don't stay in the rotational and oscillation area of machine
- Crushed and cut spaces occur in the sections operated with hydraulic or spring forces. Pay attention to these points.
- Don't put your arm and leg between tractor and machine or don't hold it during operation

### **After Operation**

- Before leaving tractor, take down the machine connected to hydraulic system. After switching off the engine, set the parking brake and turn off the ignition key.
- If possible tractor should be parked on a level surface and put into any gear and set the parking brake. If it will be parked on an inclined surface, first gear should be put at uphill and reverse gear should be put at downhill and parking brake should be set in both positions.
- Perform the settings and repairs of your machine only when tractor engine is switched off and shovel equipment is taken down. Before starting maintenance, adjustment and repair, bring the ignition key of tractor.
- Broken parts should be replaced with the original parts. Part taken from anywhere can't be in compliance with the machine. It may cause failures and great material damages. Use original spare parts as much as possible.
- While taken the machine from working position to road position or from road position to working position, these operations should be done slowly. If it will be done stationary, make sure that no one is around the machine.

### **Risks of jamming and cutting**

- While working under the machine lifted, prevent machine from slipping thanks to the strong bases.
- Don't stay under the part lifted via hydraulic cylinder use the support leg for it.
- Parts operated by hydraulic control system may fall down as a result of the rupture of hydraulic lines.
- Don't make any settlement while tractor is running or machine is moving.
- Don't stay close to moving or rotating parts.

### Risks in hydraulic hoses and pipes

- Don't bend the hose or pipe under high pressure.
- Don't use jammed, crushed or deformed hydraulic transmission lines and replace them immediately.
- When you see an oil leakage, stop immediately hydraulic pump and tractor and replace the leaking line.
- When contact with the skin high pressure oil may cause serious injuries, penetrate into skin. Don't check leakage by your hands, seek to doctor in case of accident.
- Check all hydraulic lines periodically tighten the loosened connection points at recommended torque, use appropriate toolkit.
- Don't bend the hose or pipe under high pressure.
- Don't use jammed, crushed or deformed hydraulic transmission lines and replace them immediately.
- When you see an oil leakage, stop immediately hydraulic pump and tractor and replace the leaking line.
- When contact with the skin high pressure oil may cause serious injuries, penetrate into skin. Don't check leakage by your hands, seek to doctor in case of accident.
- Check all hydraulic lines periodically tighten the loosened connection points at recommended torque, use appropriate toolkit.



### Driving safety on highway

- Safety max. speed limit on highway is **25 km/h**
- Machine should be taken to road position in a manner blades are closed and blade safety pins are locked.
- Appropriate gear should be preferred at downhill
- Speed should be decreased on turns
- Another vehicle should be passed only when the road is empty, side projections of machine should be considered.
- Speed should be reduced in rainy days.
- It should be stopped only in the appropriate areas permitted.
- Tire pressures should be at recommended levels.

### Service safety

- Machine should be taken down completely in case of repair and maintenance,
- There should be no pressure in hydraulic circuit.
- Safety should be ensured by placing a wedge under the shovel in case of the replacement of the parts like shovel blade.
- Appropriate toolkit should be used.



## **2. DESCRIPTION OF MACHINE**

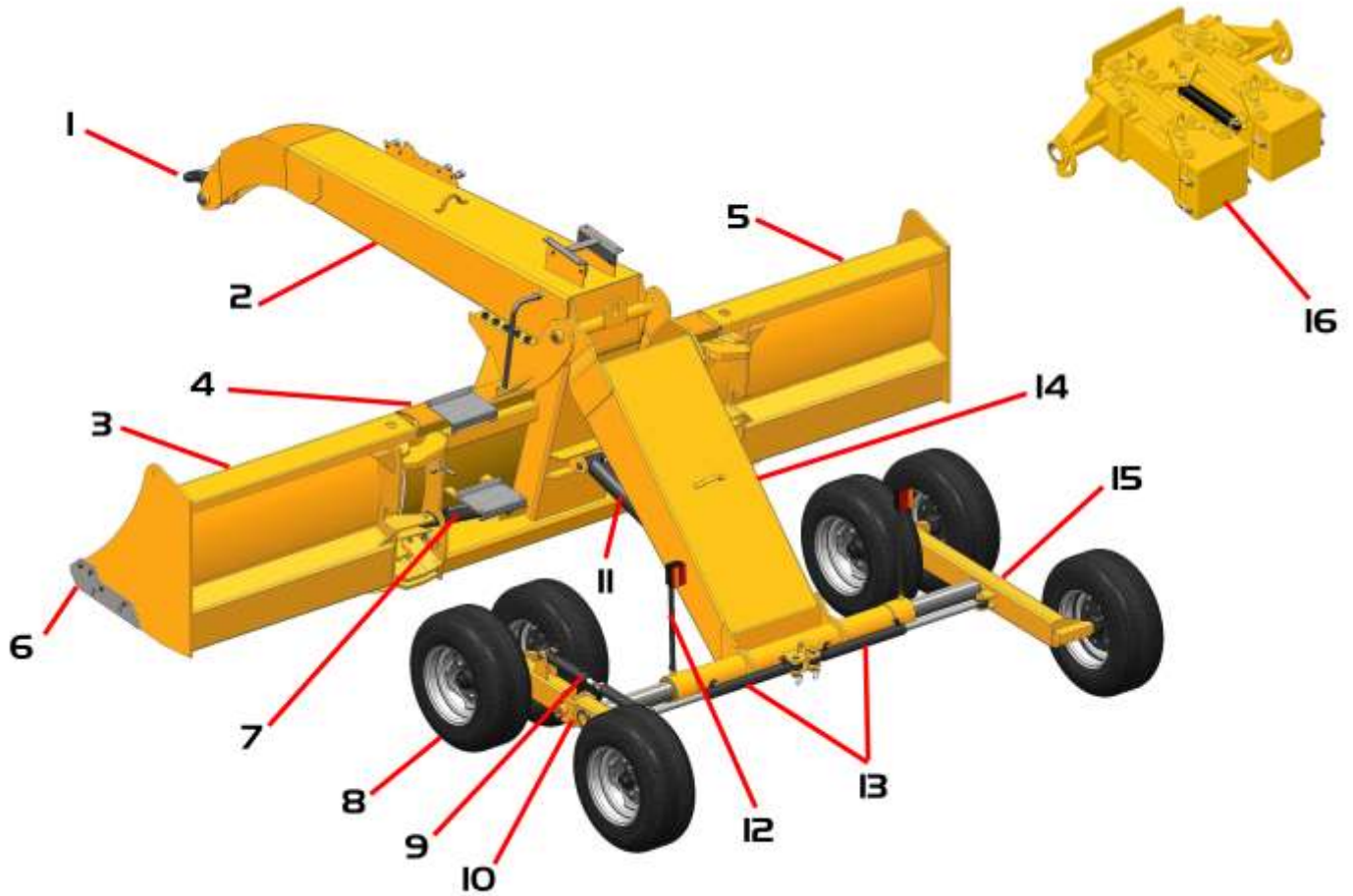
### **2.1 Descriptive and basic information on the features of machine**

- Laser leveling machine is a soft field leveling machine running with reference to laser light. Since it performs leveling operation automatically (mechanic scraper, leveling machine etc.) as compared with other machines, there is no possibility of making a mistake.
- It has a great work success since it is drawn at higher speed and working width is larger than other leveling machine. Leveling cost is low.
- It is easy to assemble and operate it.
- The most important advantage of the FLL is to increase the productivity of the field which is leveled.
- You may measure the level of your field without seeking to any measuring device or engineer.
- It is possible to run more than one machine via a laser transmitter at the same time,
- It is more productive to irrigate the leveled field and product may be raised uniformly at the every point of the field.
- Most important benefit of Laser Leveling Machine is the productivity increased in the leveled areas.

### **Costs of production decrease and your profitability increases, because**

- Production labor force decreases
- Less fertilizers are applied,
- Less seeds are used,
- Irrigation water is distributed orderly on the field, plants develop uniformly
- Less irrigation water is used,
- Soil loss caused by erosion is prevented,
- Higher productivity is obtained.

## 2.2 General Structure and parts of Machine



1. Draw bolt
2. Arrow and oil reservoir
3. Left side shovel
4. Middle shovel
5. Right side shovel
6. Router Blade
7. Main hydraulic cylinder
8. Wheel
9. Adjustment piston
10. Adjustable axle
11. Main piston
12. Signal stop lamp
13. Axle piston
14. Back frame
15. Fixed axle
16. Accordion foldable system

**Chassis:**

Appropriate material for heavy duty vehicle is used for chassis. It is designed to resist to heavy excavation works.

**Draw bolt:**

Draw bolt has been manufactured as rotary in two axes, thus adjusted excavation height doesn't change in the lies of the field and machine works in compliance with the surface of the field.

**Sectional foldable shovel:**

Total width which is in compliance with road condition is ensured by side shovels. Side shovels may be folded hydraulically, thus total road width is lower than 3m.

**Parallel blade adjusting mechanism:**

Alignment of the blade to ground may be adjusted by hydraulic control mechanism in working position. Tower hydraulic cylinder and tilt adjusting hydraulic cylinder are connected to the hydraulic circuit of tractor with quick couplings, circuit will be changed on the three-way valve in accordance with the one to be used.

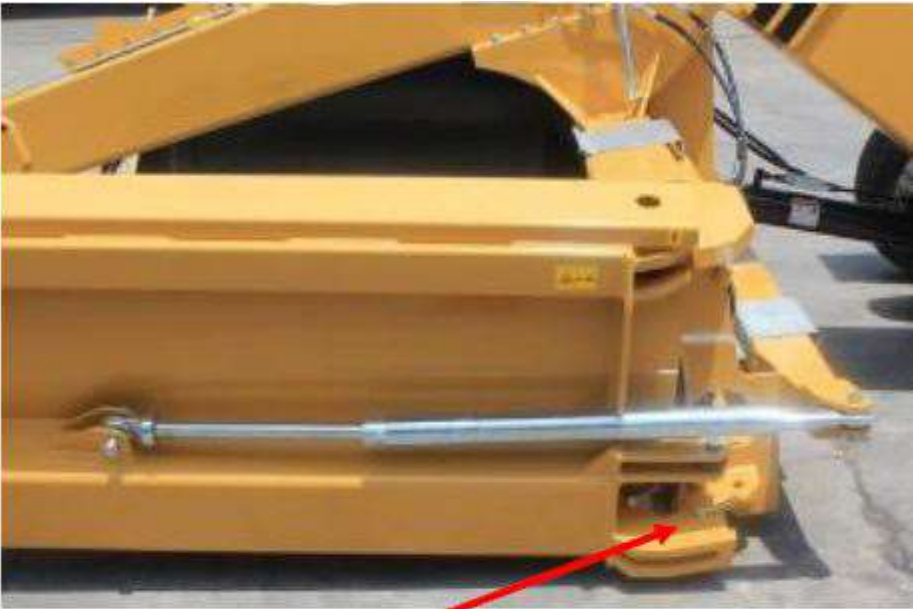
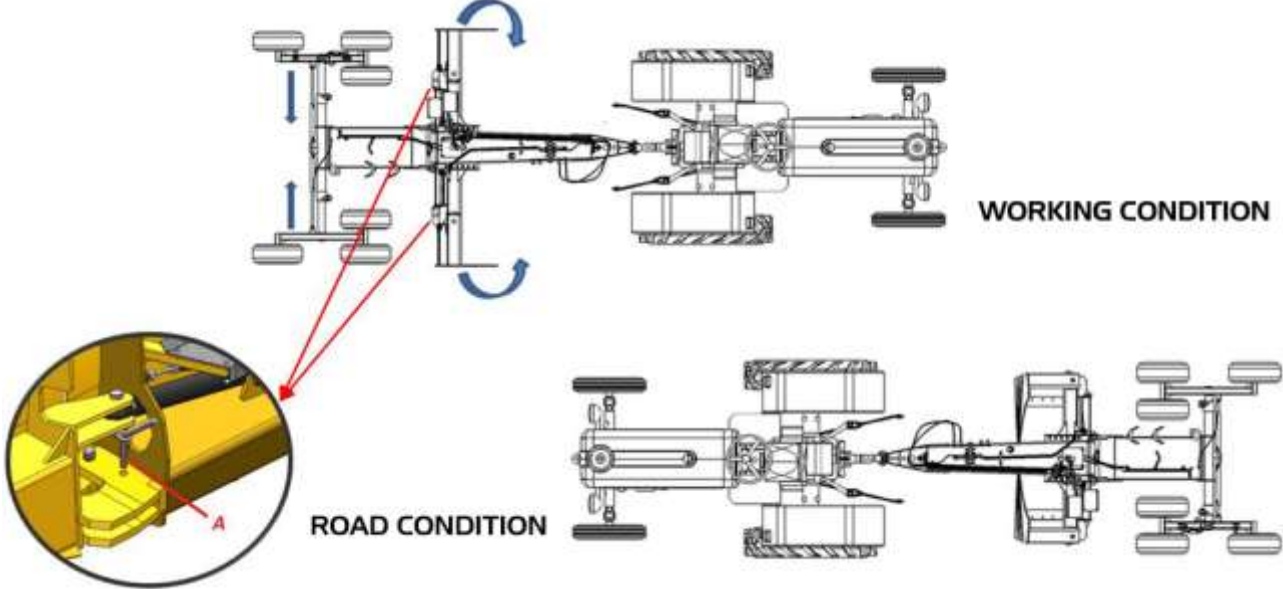
**Blade:**

Blades for heavy construction equipment's which are manufactured from special alloy steel hardened 45-50 HRC are used in our machine.

There are 400 BSD hardness blades in the equipment.

### 3. USAGE INFORMATION AND SETTLEMENTS

#### 3.1 Taking the machine to work and road positions



Transport /Operating Lock Pins

### Order of Transactions in passing from work position to road position

1. Remove safety pins of side shovels (A)
2. Fold axis slipping system and side shovels connected to same hydraulic circuit by the use of tractor hydraulic control.
3. Lock the safety pin again at the end of movement.

Reverse the abovementioned order to take it from road position to work position

## 3.2 Preliminary Preparations for Usage and Rules to be

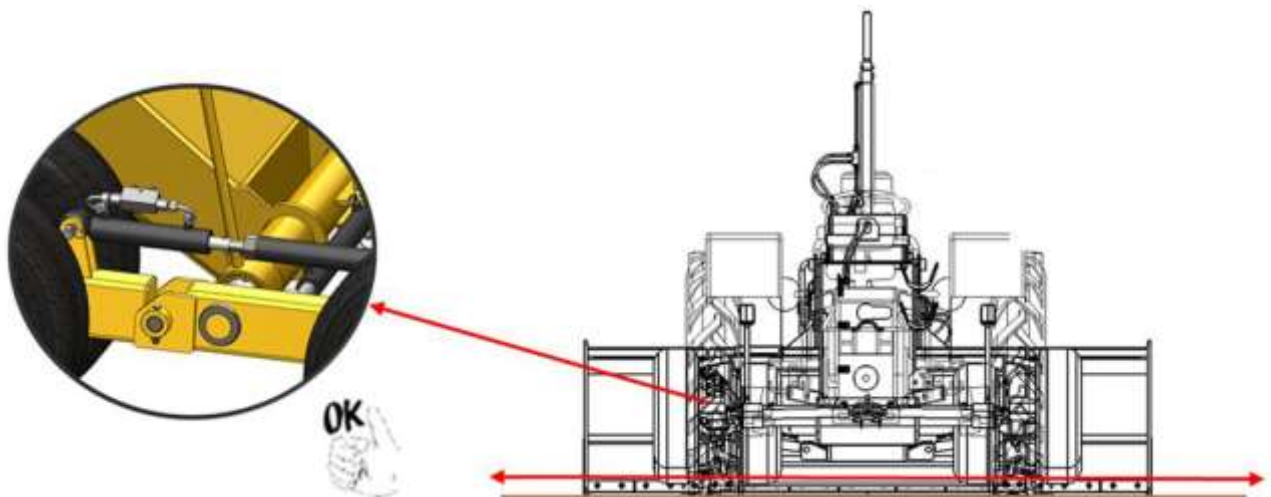
Before leveling via laser controlled leveling machine

- Check tire pressures
- Check parallel blade adjustment
- Pay attention to the respects stated in safety rules before working
- If the soil to be leveled is hard and compacted it should be loosened with chisel or plow process

## 3.3 Parallel blade adjustment

For adjustment:

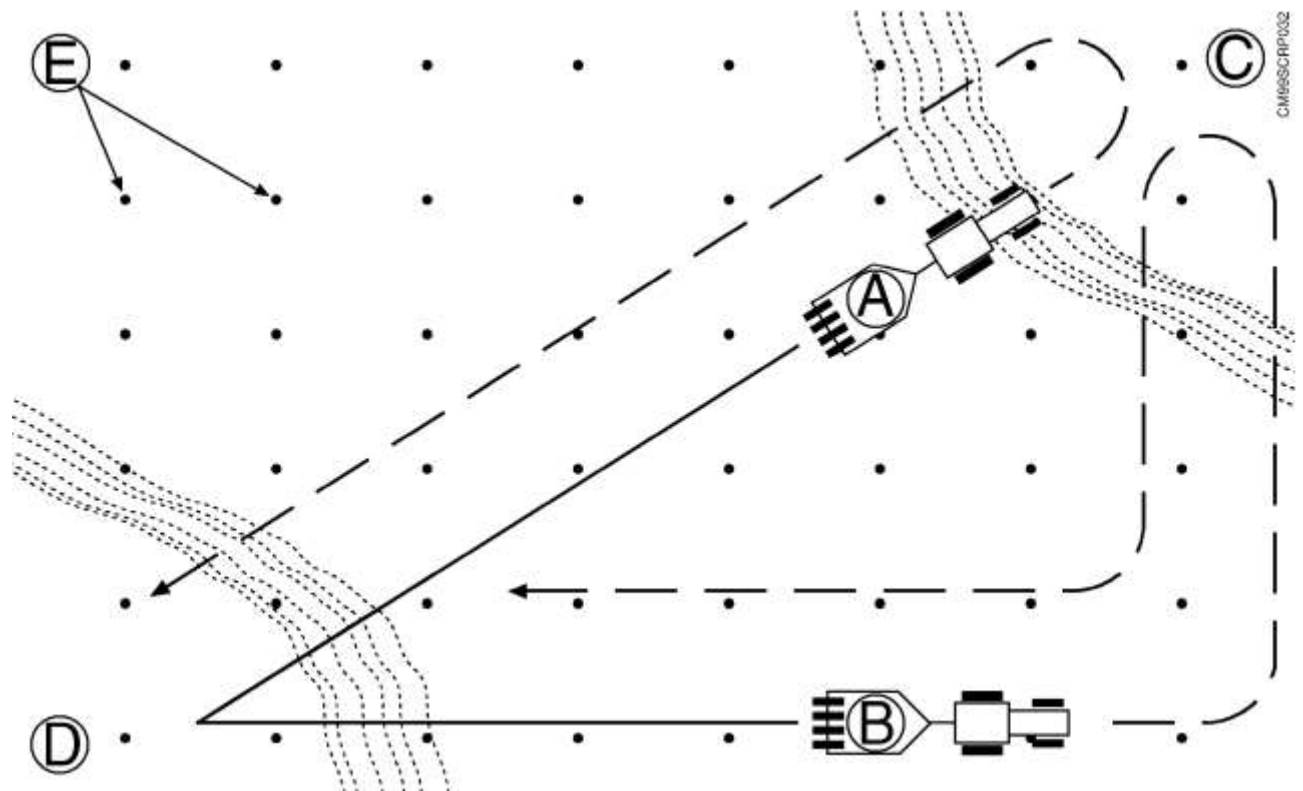
1. Position FLL scraper on flat level surface
  2. Raise blade approximately 2-3" above surface
  3. Measure far left corner of blade
  4. Measure far right corner of blade \*Both measurements equal, blade is level\* \*Both measurements not equal, proceed to step 5\*
  5. Connect two hydraulic lines that operate leveling cylinder to tractor
  6. Adjust leveling cylinder until blade is level
  7. Confirm level, by repeating steps 3 & 4
  8. Disconnect hydraulic lines from tractor
- \*\*\*Note: Leveling cylinder has mechanical adjustment on cylinder rod for minor correction to level\*\*\*





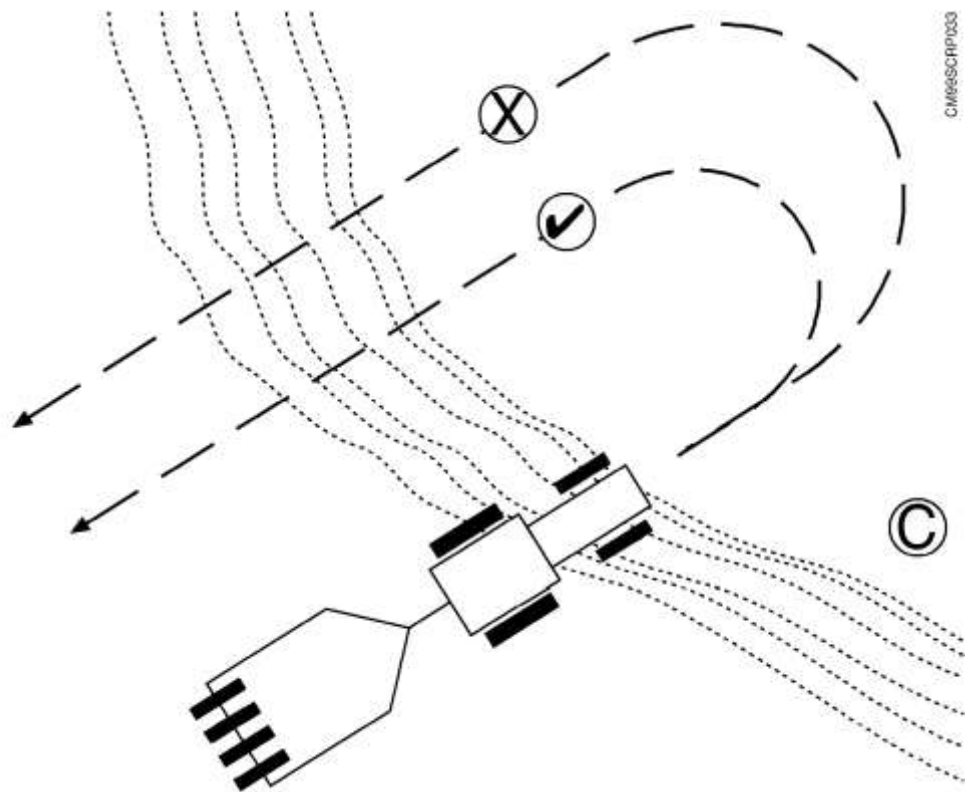
## 4. LEVELING OPERATION

### 4.1 Effective Scraper Traffic Patterns



Because Scraper (B) traveled with the stake row (E), it **must** travel over 30 percent far-ther to do the same work as Scraper (A).

Always cut straight toward the fill area (C). There is no reason to follow stake rows (E) when traveling at a diagonal can save time. Finish the short hauls first to smooth the surface of the cut area (D) and remove trash so the succeeding long hauls can be made quickly and smoothly over the finished area.



Turn back as soon as possible when dumping in the fill area (C), even before all the dirt has fallen out. Since the scraper(s) decelerate as the tractor turns, dirt is thrown forward and out of the scraper buckets during turns. Sharp turns are more effective than gradual turns.

Try to start work on the sides of the field and finish near the middle, leaving surplus cut of fills centrally located where they will be easier to correct than if they were isolated at one side of the field.

**IMPORTANT:** Be sure to maintain drainage.

### **Finishing the Field (Manual Control)**

After the original cuts and fills have been roughed in, disc the entire field until it is loose to a uniform depth. On light soils a chisel plow will substitute for the disc, but a chisel compresses wet clay into hard clods.

Plane the entire field.

Reestablish a grid pattern and have the engineer issue a new cut and fill sheet showing the work necessary to perfect the field surface.

Make the required cuts and fills with scrapers.

Repeat the discing, planing, checking and dirt moving until the required degree of perfection is achieved.

If the soil is loose, clean and dry, don't miss the opportunity to plane the field repeatedly.

**NOTE: The only time a field is clean enough to plane properly is immediately after grading. Soil Damaged Caused by Leveling**

When we see uneven crop growth on freshly leveled land we are understandably disturbed, even though we may be looking at the field's first profitable crop in history and the growth may be more uniform than ever before. Of course we would like to raise nothing but healthy plants, but to do this we are going to have to change our way of doing things from start to finish. To make land-leveling most beneficial over the entire field surface we must pay attention to details before, during, and after leveling.

Before moving the first load of dirt we need to complete a layout drawing of proposed roads, fields boundaries, and ditches over the entire farm. Then we can concentrate on designing each field to fit this master plan.

Good engineering design strives to place soil of good farming texture over a field's entire surface. Failing in this, good design at least separates incompatible soils into different fields. For design purposes soil particle size is all we need to know about the soil. PH, color, and structure can all be changed later by various farming practices and by weathering of exposed subsoil. Cutting into soil of a different color does no permanent damage as long as the new soil is not of an undesirable particle size. In some cases a field can actually be improved by cutting deep to expose potentially good soil and by burying the original unproductive or hard to manage top soil.

In wet climates where drainage is all important some engineers design too much slope onto originally flat land. They specify deep cuts on the low end of the field and hauls to the other end of the row to increase the grade beyond what is needed. Where land-leveling is a new practice, some extra slope may be justifiable because it compensates in part for a rough finish. If you tilt a rough surface enough, most of the water will run off. However, extra cutting often exposes heavy clay at the lower end of the field. Besides this, the extra hauling packs the soil over which the loads are carried. Good design for experienced operators avoids this expensive and damaging extra work by specifying a precision finish to a flatter grade. There is a trend in the Mississippi Delta toward much flatter grades which help keep the lower ends of long fields being too low to drain. Many Delta farmers are exuberant over the farmability and productivity of accurately graded land as flat as 0.1' fall per 100'. Some of the area's best crop land has even less slope.

The much publicized "warped grade" field design reduces earth moving and therefore field damage to the absolute minimum. This system basically moves only enough soil to make each row drain. Hills are left relatively steep and flats are left relatively flat. Cross grades are usually left unchanged. We will probably see more warped grading as designers become more familiar with its uses.

Good preparation for leveling of clay land in humid climates includes drying the subsoil with vegetation to reduce soil compaction. A master plan of the farm grading program should specify the cropping program for each field so it will come out of crop or weeds just in time for leveling. This will leave the subsoil as dry as possible so it can support equipment well. It can also absorb rain water where it falls rather than shedding it into work-stopping puddles.

Since compacted soil at the bottom of a deep fill has no opportunity to be loosened by natural weathering, it presents a permanent barrier to internal drainage and root growth. For this reason every effort should be made to make deep clay fills with dry, trashy soil, and to minimize traffic over land which is to be covered with more than a few inches of fill.

To help keep compaction shallow and therefore repairable, short hauls should be made first so that the succeeding long hauls over the same area will compact only soil which will be left at the surface, exposed to weathering. This system of completing short hauls first avoids hauling across high soil and compacting it before it is finally picked up and placed into a fill.

Soil too wet to spread smoothly into fill can sometimes be dried by exposure before it is cut. If a large area of cut is available, skim only the dry crust from the surface of the entire area. As the surface dries, skim again. Stirring the soil with a disc, chisel or spring tooth will speed the drying.

The efficient field operating techniques described in the scraper operator's manual save a lot of travel over the field and therefore reduce damaging soil compaction. Also, using tandem scrapers instead of single, cuts tractor travel to just over half of that required when single scrapers are used. Because organic matter is stripped from the surface and buried during land grading, erosion may become a serious problem until the first crop growth protects the soil. In the meantime, listing the land has proven to be the best control measure for both wind and water. While the scrapers are still working, a chisel plow will help stop dust from blowing. Light soils should be listed as soon as grading is completed.

Stimulation of heavy crop growth is the most profitable means of bringing a field to its best condition after grading. Scalped areas on light land are short of the trash needed to store water and release nutrients. Soil tests will indicate the chemical amendments needed to temporarily correct water nutrient deficiencies. Leaf tests are necessary to detect and trace mineral deficiencies. Correcting all deficiencies the first year is the best way to get the crop residues needed to complete the soils recovery quickly and at a profit.

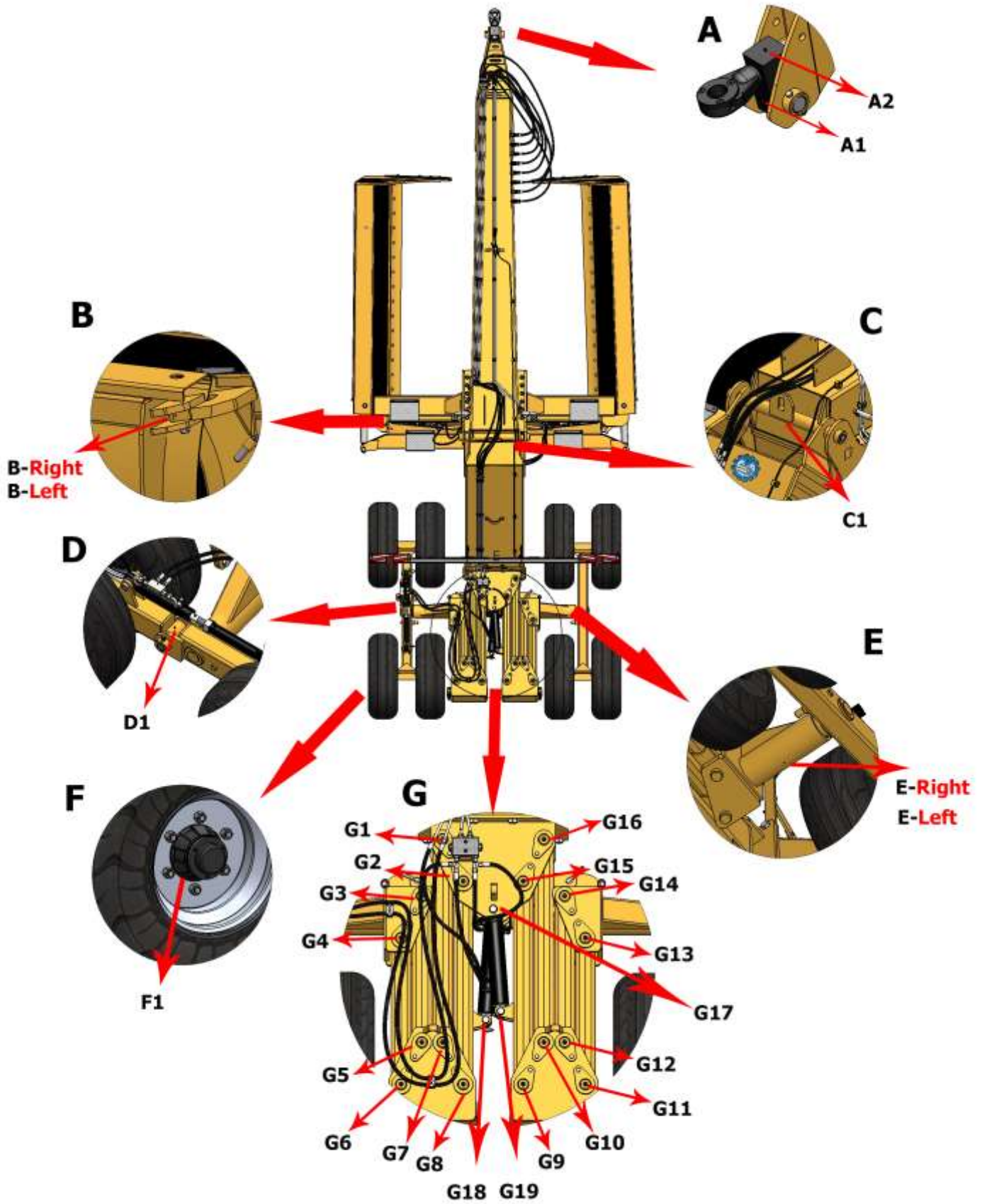
## 5. MAINTENANCE AND REPAIR

### 5.1 Maintenance-repair which may be done by User and Rules to be Observed

- Grease the points of machine to be greased periodically and after each pressure washing in accordance with lubrication chart. This is important in terms of trouble-free and permanent operation and decreasing repair costs.
- Periodic maintenance intervals may vary in accordance with working conditions, features of earth and operating speed and grease the required points regardless of its term (Table 1)
- Greasing should be done in turn in accordance with lubrication chart
- Tightness of all screws and bolts should be checked after first operation hour and at certain intervals through all season and should be tightened at recommended torque.
- Wheel nuts of carrying wheels should be checked after first departure. Tightening torque of wheel nut is 320 Nm
- Hydraulic cylinders and roller bearings should be cleaned with high pressure water. Otherwise seals may be damaged,
- Machine not to be used for a long time should be kept in a closed area.
- Hydraulic oil and gear box greases should be used at the amounts stated in greasing chart

#### Greasing chart

Greasing point		Greasing Period	Oil Type	Number of Greasing Points
A	Pulling socket	After the Operation	Grease	3
B	PIN	After the Operation	Grease	2
C	PIN	After the Operation	Grease	1
D	PIN	After the Operation	Grease	1
E	AXE PIPE	After the Operation	Grease	2
F	BEARING	After the Operation	Grease	6
G	PIN	After the Operation	Grease	19
A	Pulling socket	After the Operation	Grease	3
B	PIN	After the Operation	Grease	2
C	PIN	After the Operation	Grease	1



- During the repairing of the equipment, perform safe repairing by choosing the proper components for the equipment. When replacing the moving components, during the cutting works, use gloves and proper tools.
- Renew the grease zerks periodically.
- Use original spares as much as possible.
- Special attention should be paid to the position of blades in order to obtain high work safety and quality. For this reason, ensure that blades are in proper position before each operation. Bent, cracked, broken blades should be replaced immediately.
- The consumer may perform the replacements, which are referred in the periodic maintenance section. Consult with the technical service for other repairing works. Safe secured (lock) nuts, which are removed from the pin fixing sockets, should be replaced with a new one.
- Check the blade; if necessary, replace it.

**While the equipment is working, do not put weight on it, do not allow any one to climb on it, do not get close to it. Never go between the equipment and tractor or under the equipment. Perform the maintenance and repairing works, after tractor and equipment completely stop.**

Maintenance After the Operation:

**Coupling components:** check their tightness. Check the pins.

**Greasers:** Fill the grease oil into the greasers in the equipment.

**Shovels and blades:** Check the shovels and blades; do not work with broken blade or missing bolt-nut. Replace them with their originals.

**Hydraulic system:** Check the oil leakage. The dirt and oils on the hydraulic components in the equipment must be clean.

## 5.2 Defective Utilization

No defect should incur, if it is used in accordance with the user's manual. The greasers must be lubricated after each operation. Otherwise the components may be worn. While you are in process with the hydraulic components of the equipment do not force the hydraulic arms and after the pistons complete their movement, release the hydraulic arms. Otherwise leakage may incur from the hydraulic hoses or coupling places.

## 5.3 Season-End Maintenance

**Connection elements;** Check the tightness of them. Check whether pins are complete or not and whether safety pins are mounted.

**Tires;** Tire pressures should be controlled and if inadequate, they should be completed

**Grease Nipples;** Apply grease to grease nipples of machine

**Running Parts;** Grease the running parts of machine with protective grease.

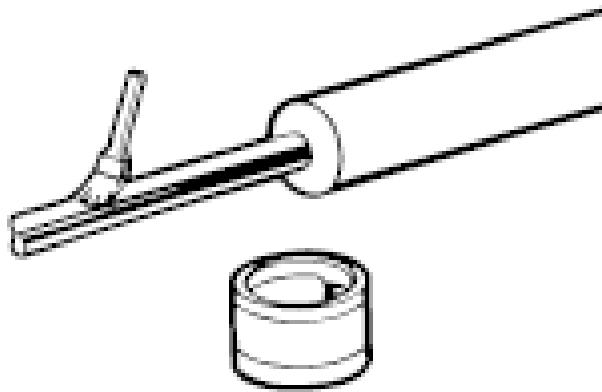
**Pump;** Check the oil level of pump gear box, if necessary add oil.

Max. 750 gr Oil No. 140 should be applied.

Check the suction filter operated as submerged to oil in the beginning of every season.

**Disconnect wheels from ground by putting a wedge under chassis**

**Surfaces of cylinder piston rods should be covered by protective grease against the corrosion in winter season**





## 5.4 Repair

Modifications stated in periodic maintenance section can be performed by user. Please refer to your firm or authorized services for other repairs.



**Tractor should be stopped while working with the hydraulic installment of machine and repair should be started after decreasing the pressure of circuit.**

### Use original spare parts :

- Use original spare parts as much as possible,
- wearing condition of blades should be taken into consideration in terms of work quality and work success of machine, blades should be controlled before every work and worn, bent and broken parts should be replaced quickly.
- Modifications stated in periodical maintenance can be done by consumer. It is necessary to seek to authorized service for other repairs,
- Replace removable intrinsically safe (fiber) bolts with new ones.
- At the beginning of every season check whether the suction pipe in tank is clean or not and if necessary replace the filter.



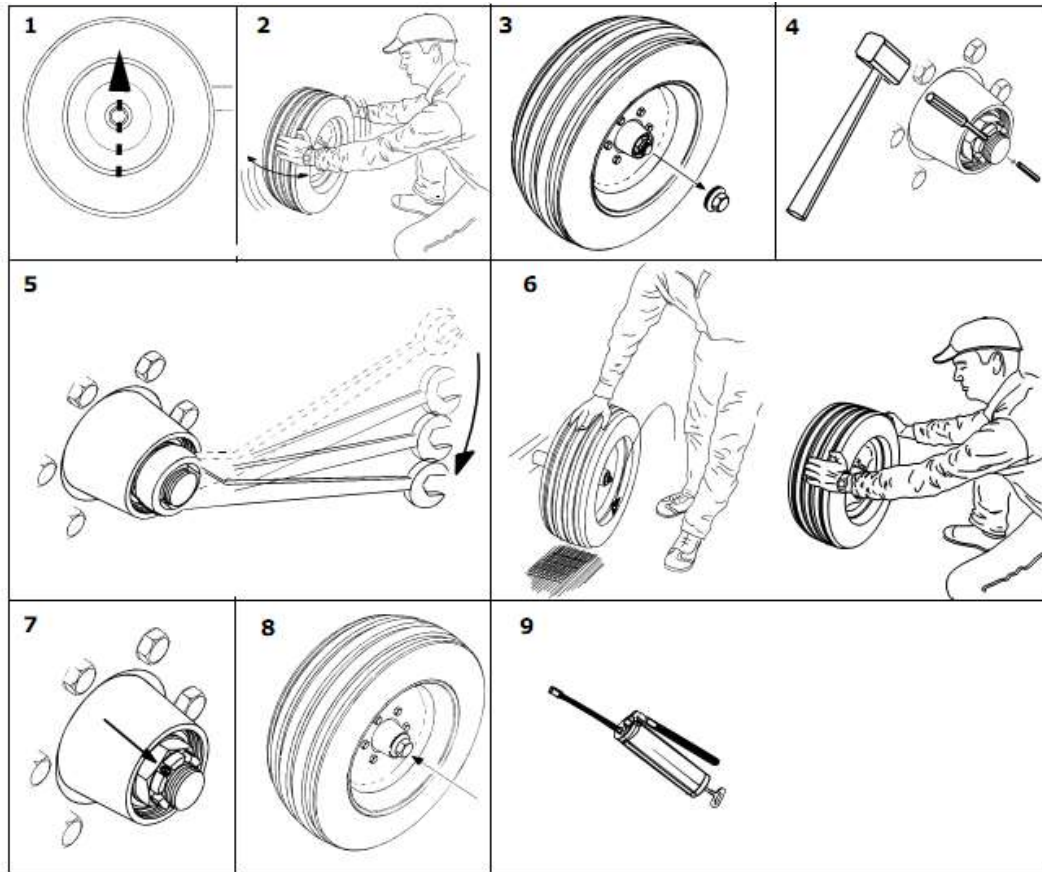
**In case of any problem encountered by you about maintenance, repair and usage, you may receive support after stating following information.**

- **Customer's name and address**
- **Machine model**
- **Date of purchase and area processed**
- **Details about the problem encountered**

## 5.5 Clearance control and adjustment for Wheels

Wheels are lifted and held from below and above. If clearance is too much, clearance adjustment is performed in following transaction order.

<b>Tire Size</b>	<b>Tire Pressure psi (bar)</b>
10 / 75 - 15,3	52 (3.6)
12,5/80 -15.3	54 (3.7)



### **Adjustment operation order**

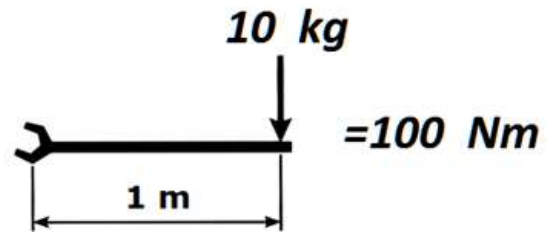
- 1- Wheels are taken up and disconnected from ground
- 2- Clearance is checked manually
- 3- If clearance is too much, hub cap is removed.
- 4- Crown nut's cotter pin is removed
- 5- Nut is tightened until clearance is removed
- 6- Turning freeness is checked by turning the wheel, if breaking is available, bolt is untightened little bit.
- 7- Cotter pin is locked.
- 8- Hub cap is covered
- 9- Grease is applied and then continued to be applied until fresh grease goes out from drain plug.

## 5.6 Bolt torch values

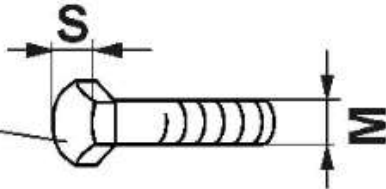


Meaning of torch values:

When we tight it by applying 10 kg-force with a 1-meter wrench, we apply a torque of 100 Nm



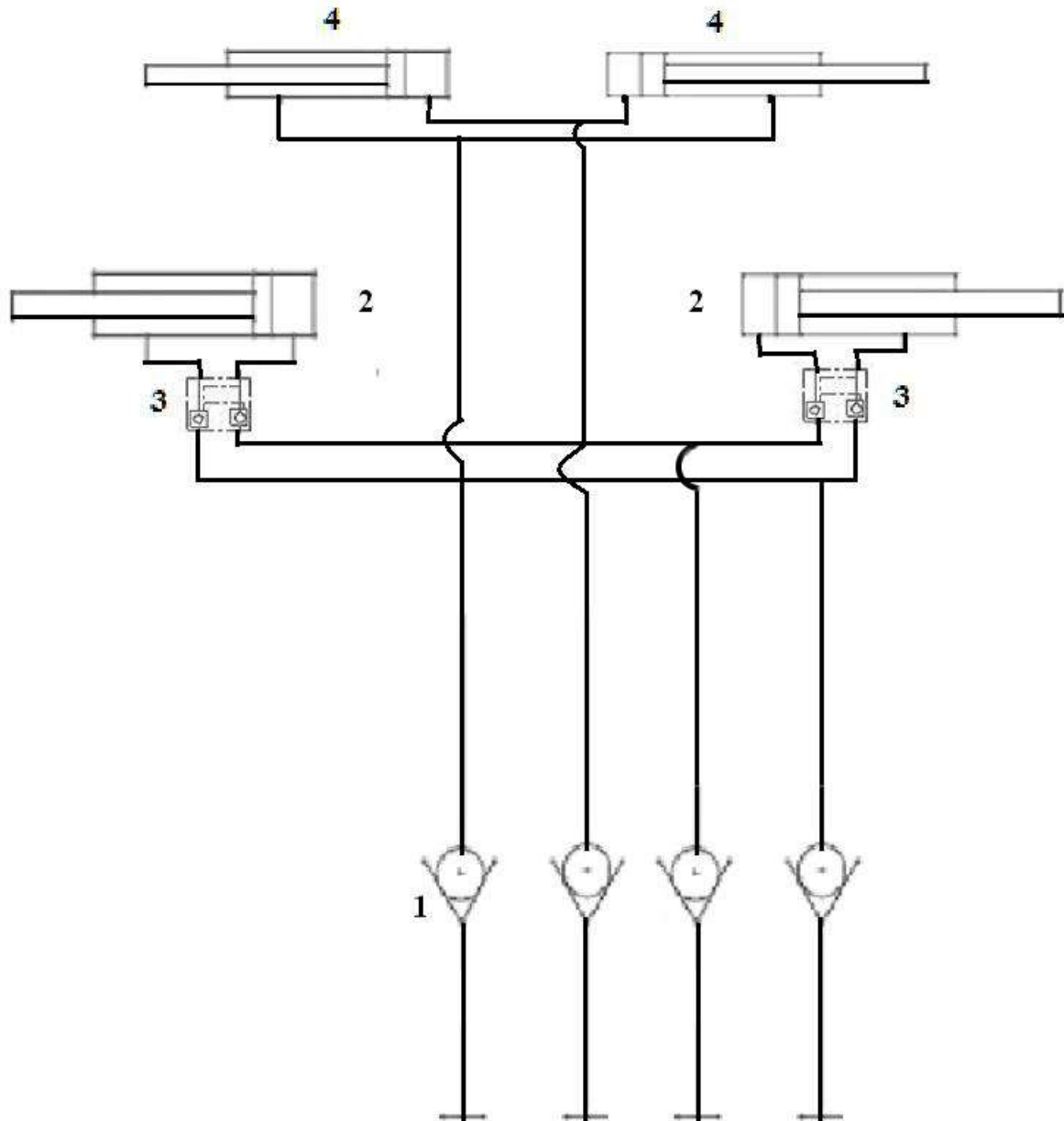
8.8  
10.9  
12.9



M	S	Nm		
		8.8	10.9	12.9
M 8	13	25	35	41
M 8x1		27	38	41
M 10	16 (17)	49	69	83
M 10x1		52	73	88
M 12	18 (19)	86	120	145
M 12x1,5		90	125	150
M 14	22	135	190	230
M 14x1,5		150	210	250
M 16	24	210	300	355
M 16x1,5		225	315	380
M 18	27	290	405	485
M 18x1,5		325	460	550
M 20	30	410	580	690
M 20x1,5		460	640	770
M 22	32	550	780	930
M 22x1,5		610	860	1050
M 24	36	710	1000	1200
M 24x2		780	1100	1300
M 27	41	1050	1500	1800
M 27x2		1150	1600	1950
M 30	46	1450	2000	2400
M 30x2		1600	2250	2700

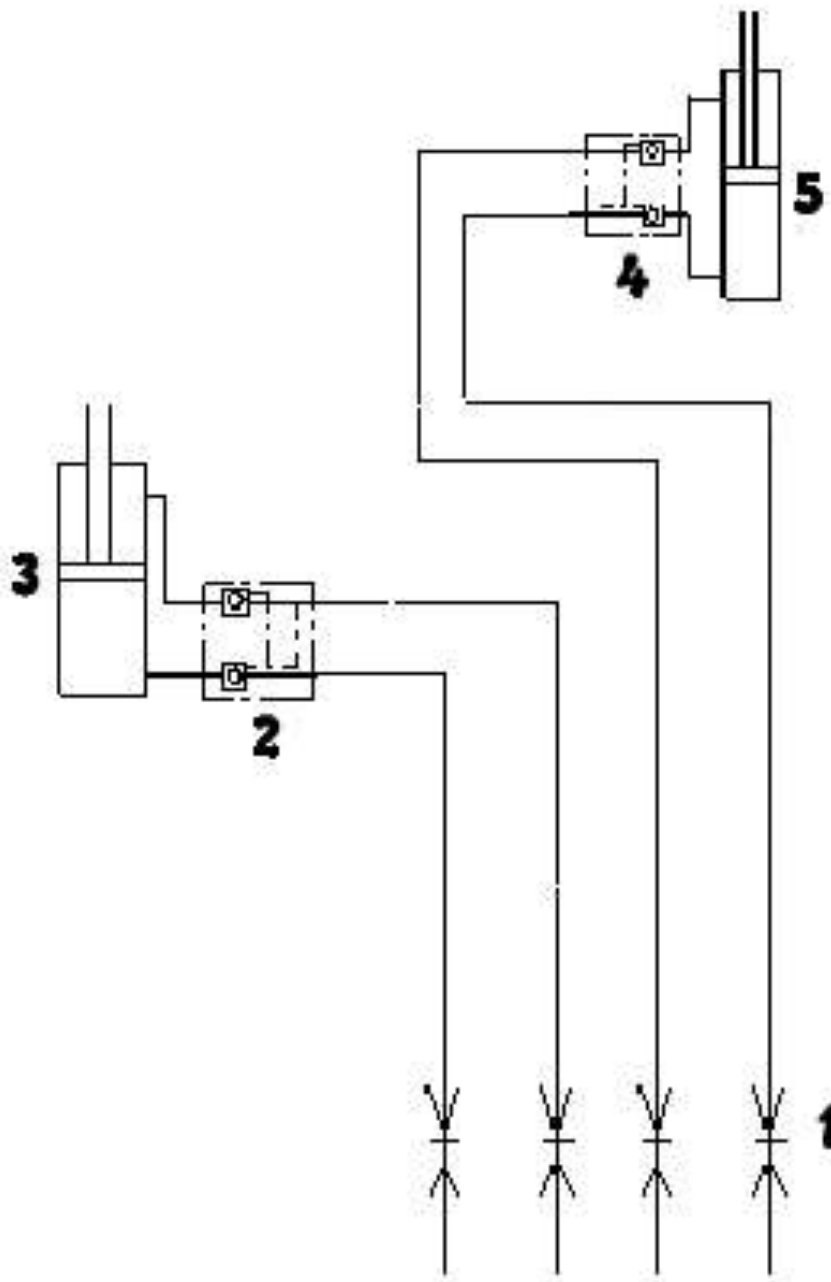
## 6. CIRCUIT CHARTS

### 6.1 Hydraulic Circuit Diagram for Impeller and Axis Folding



1. Tractor speed connection
2. Shovel impeller hydraulic cylinder
3. Interlocking valve
4. Axis folding system

## 6.2 Hydraulic circuit diagram for parallel blade adjustment and laser receiving tower.



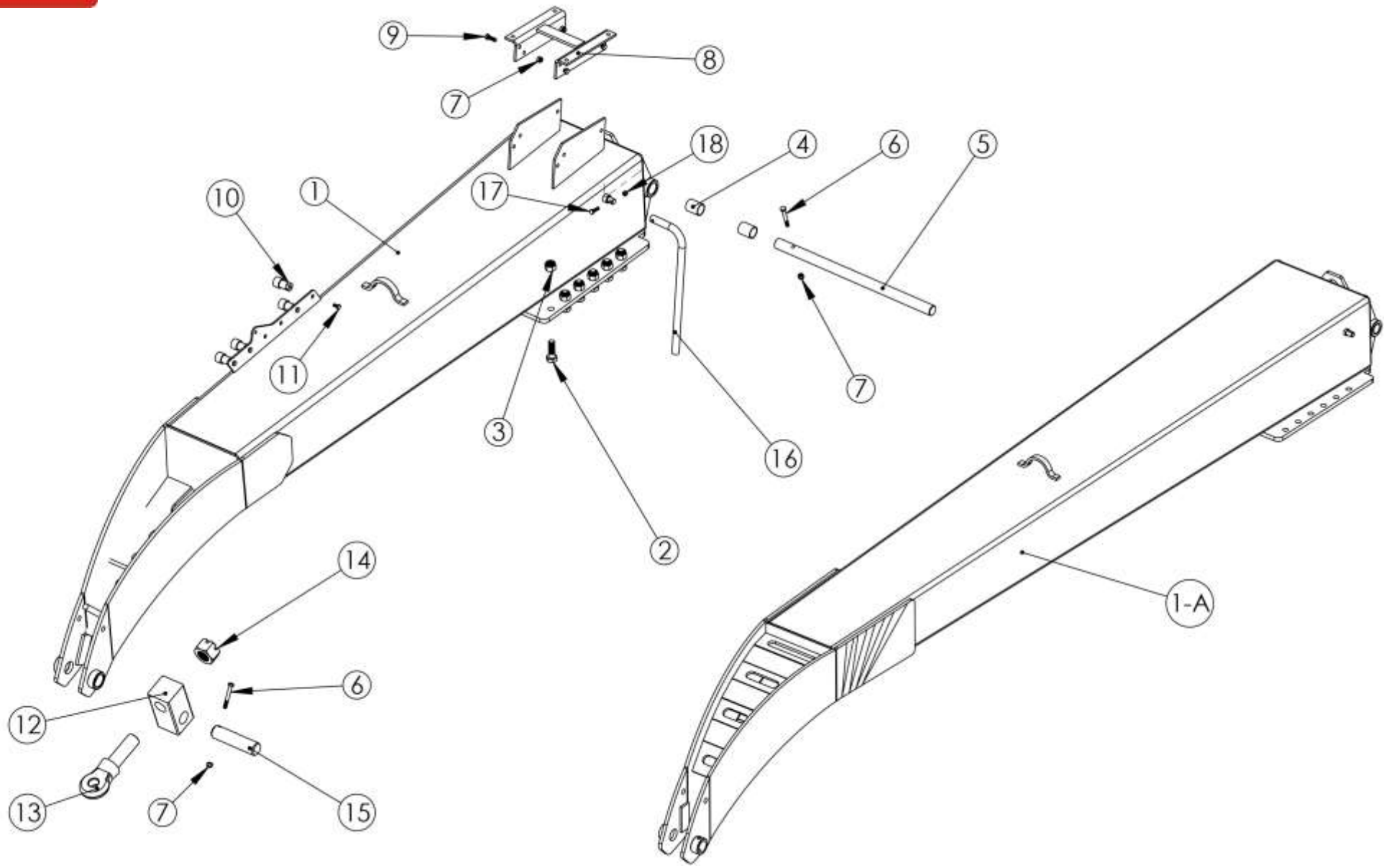
1. Tractor speed connection
2. Interlocking valve
3. Main cylinder
4. Interlocking valve
5. Parallel blade adjusting cylinder

## 7. TECHNICAL FEATURES

MODEL	WORKING WIDTH (CM)	CARRIAGE WIDTH (cm)	LENGTH (cm)	HEIGHT (cm)	WEIGHT (kg)	NECESSARY POWER (BG)
OMG FLL 50	500	250	570	300	2290	120-180
OMG FLL 16 - AC	500	250	570	300	3252	120-180
OMG FLL 60	600	250	570	300	2400	160-210
OMG FLL 20 - AC	600	250	570	300	3680	160-210
OMG FLL 24 – AC	730	250	570	300	4450	220-260

(\*)Our firm can make any modification in the technical features of the models without making any notification in advance.

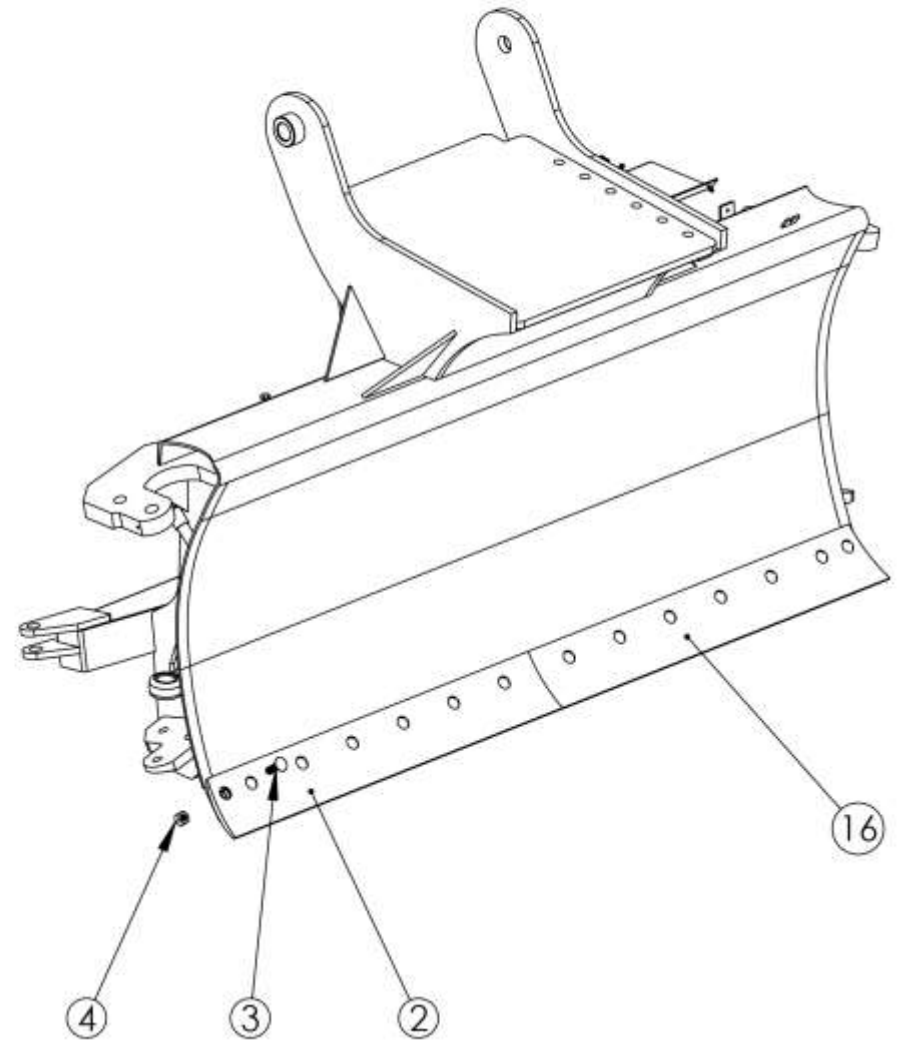
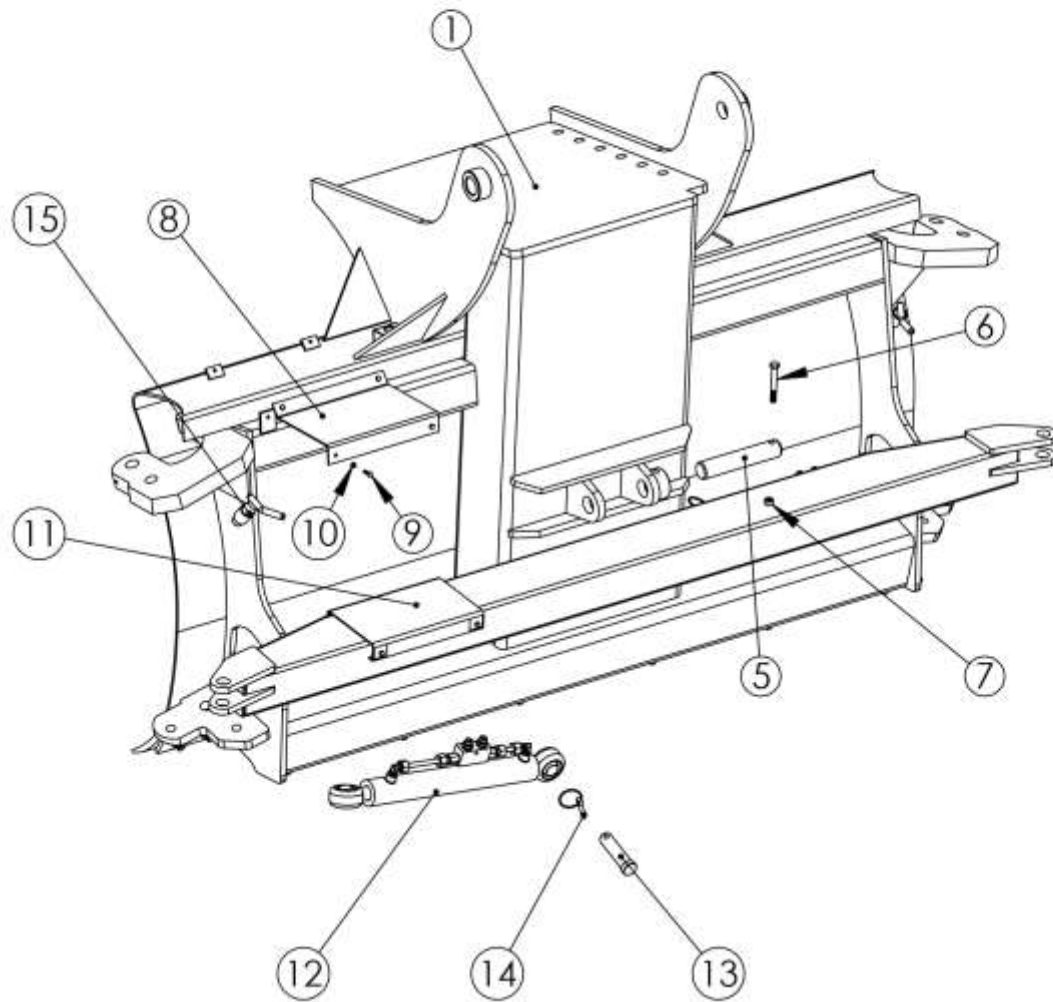
(\*\*)Power requirement of machine can change in accordance with the character of processed soil.



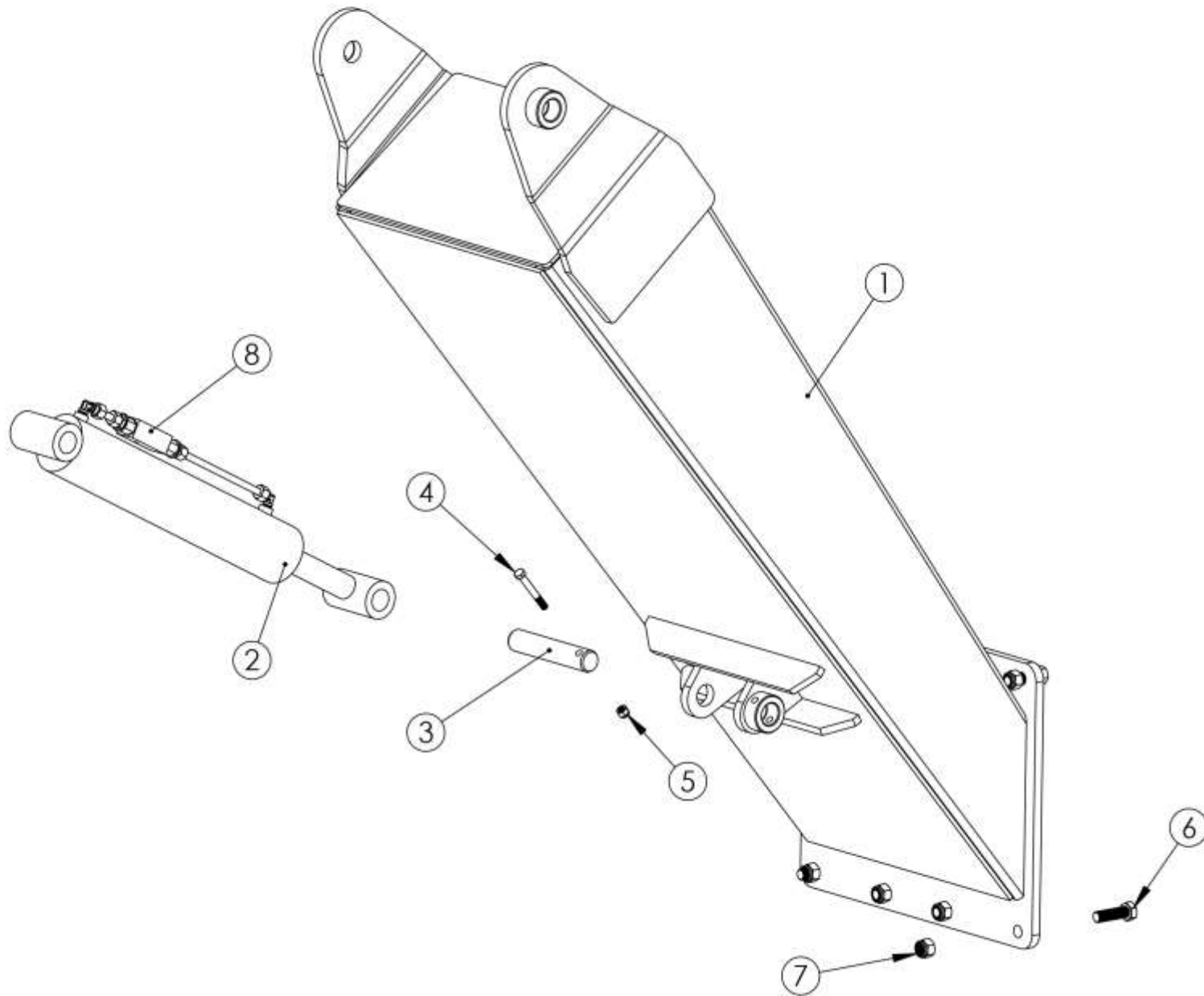
### DRAW BAR

NO	PART CODE	NAME & DESCRIPTION
1	2.OMG.104.03.000.0	DRAW BAR FRAME FLL 16-20-50
1-A	2.OMG.160.01.000.0	DRAW BAR FRAME FLL 24
2	7.4.18.1235	BOLT M22x60 DIN 931
3	7.4.23.1042	NUT M22 DIN 985
4	7.2.4.1007	BUSHING 45x40x55 mm
5	7.2.5.OMG.0007	BACK DRAW JOIN PIN
6	7.4.18.1129	BOLT M12x90 DIN 931
7	7.4.23.1037	NUT M12 DIN 985
8	2.OMG.104.01.000.0	LASER BUTTOM PLATE
9	7.4.18.1119	BOLT M12x35 DIN 933
10	7.4.2.1139	QUICK COUPLING 1/2" FEMALE
11	7.4.18.1093	BOLT M10x20 DIN 933
12	2.OMG.000.00.005.0	DRAW BAR BILLET
13	2.OMG.000.00.013.0	DRAW BAR TOWING ROD EYE
14	7.4.23.1075	SLOTTED NUT M38x3,5mm
15	7.2.5.1055	DRAW BAR PIN
16	2.OMG.000.00.009.0	STAIR PIPE
17	7.4.18.1096	BOLT M10x35 DIN 933
18	7.4.23.1036	NUT M10 DIN 985



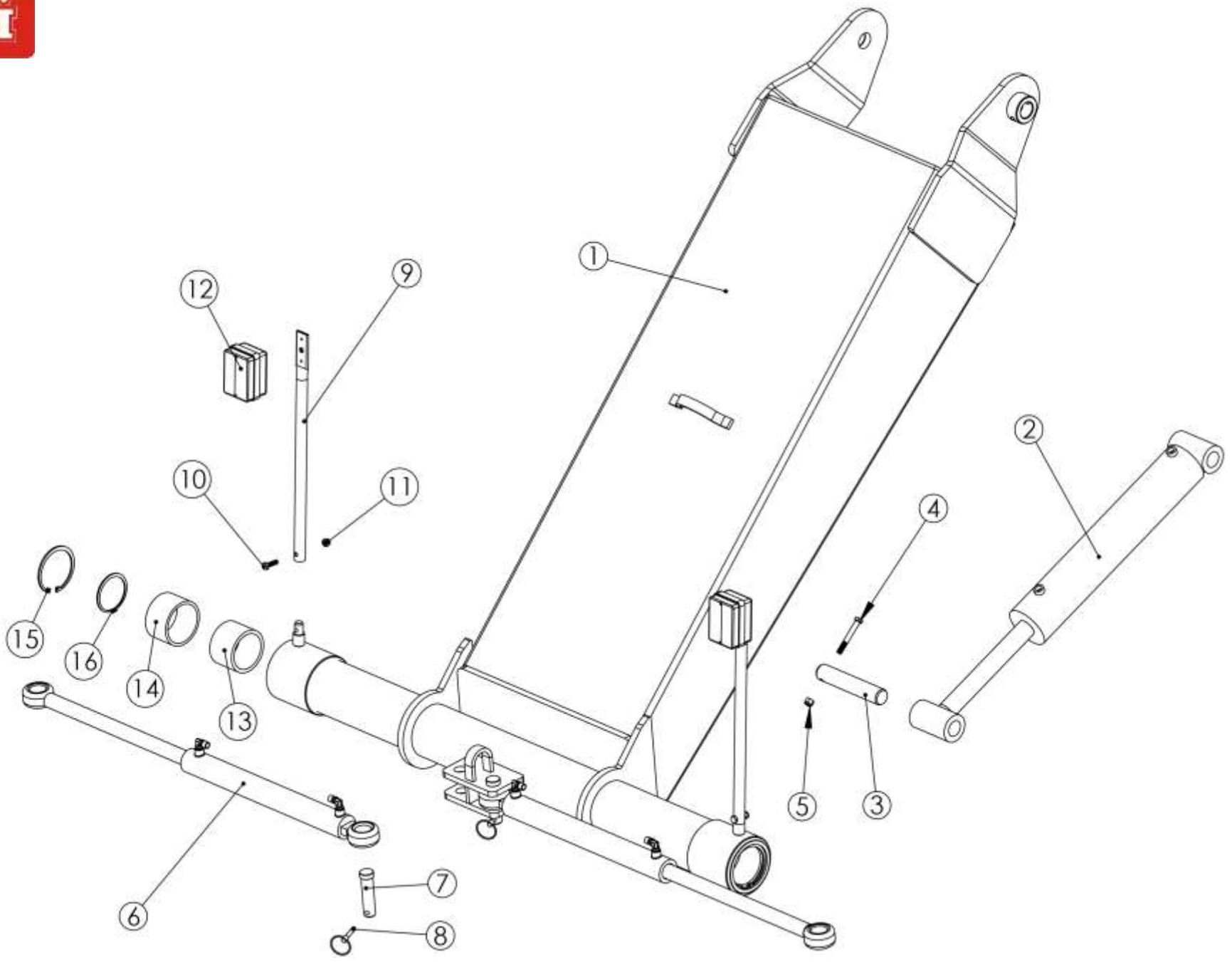


<b>MIDDLE PADDLE</b>		
<b>NO</b>	<b>PART CODE</b>	<b>NAME &amp; DESCRIPTION</b>
1	2.OMG.143.01.000.0	MIDDLE PADDLE FRAME 2M
	2.OMG.144.01.000.0	MIDDLE PADDLE FRAME 2,5M
	2.OMG.161.01.000.0	MIDDLE PADDLE FRAME 2,5M FLL24
2	2.OMG.101.00.003.0	MIDDLE PADDLE RIGHT BLADE 2M
	2.OMG.101.00.001.0	MIDDLE PADDLE RIGHT BLADE 2,5M
3	7.4.18.2220	5/8"x51mm SQUARE NECK BOLT DIN 603
4	7.4.23.1067	NUT 5/8"
5	7.2.5.OMG.0008	MAIN PISTON PIN
6	7.4.18.1129	BOLT M12x90 DIN 985
7	7.4.23.1037	NUT M12 DIN 985
8	2.OMG.101.00.033.0	TOP STAIR PLATE
9	7.4.18.1032	BOLT M6x20 DIN 933
10	7.4.23.1033	NUT M6 DIN 985
11	2.OMG.143.00.006.0	BUTTOM STAIR PLATE
12	7.4.3.1003	WING PISTON FLL 16-50
	7.4.3.1003-1	SEAL KIT WING CYLINDER
	7.4.3.1049	WING PISTON FLL 20-24
	7.4.3.1049-1	SEAL KIT WING CYLINDER
13	7.2.5.1057	GENERAL PISTON PIN
14	7.4.28.1001	SPRING PIN Ø10
15	7.2.5.1058	HINGE LOCKER PIN
16	2.OMG.101.00.004.0	MIDDLE PADDLE LEFT BLADE 2M
	2.OMG.109.00.002.0	MIDDLE PADDLE LEFT BLADE 2,5M



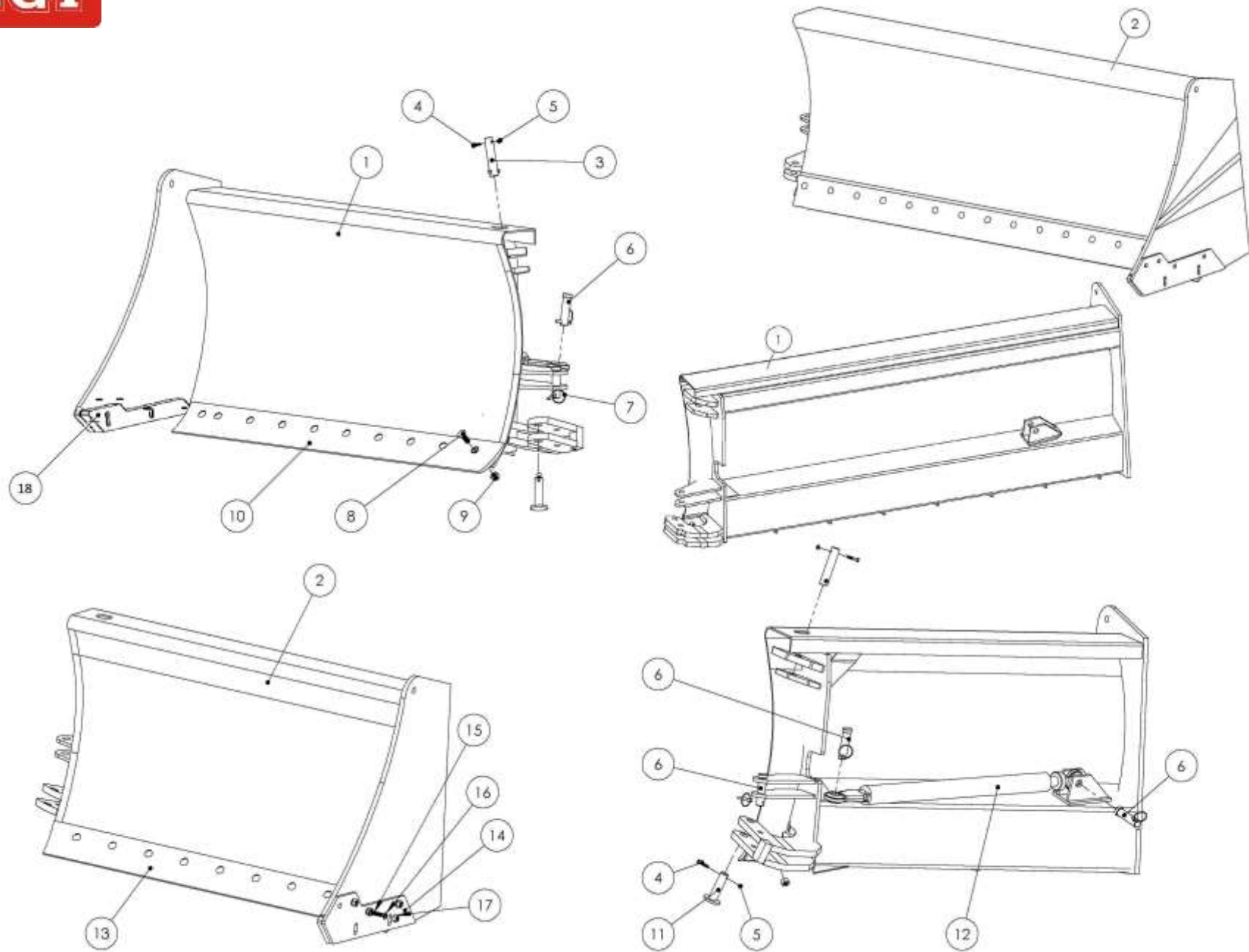
**BACK FRAME FLL 16-20-24**

<b>NO</b>	<b>PART CODE</b>	<b>NAME &amp; DESCRIPTION</b>
1	2.OMG.130.00.000.0	BACK FRAME
2	7.4.3.1001	MAIN PISTON
3	7.2.5.OMG.0008	MAIN PISTON PIN
4	7.4.18.1129	BOLT M12x90 DIN 931
5	7.4.23.1037	NUT M12 DIN 985
6	7.4.18.1235	BOLT M22x60 DIN 931
7	7.4.23.1042	NUT M22 DIN 933
8	7.4.2.1011	CHECK VALVE TWIN 3/8L VBPDE



**BACK FRAME FLL 50**

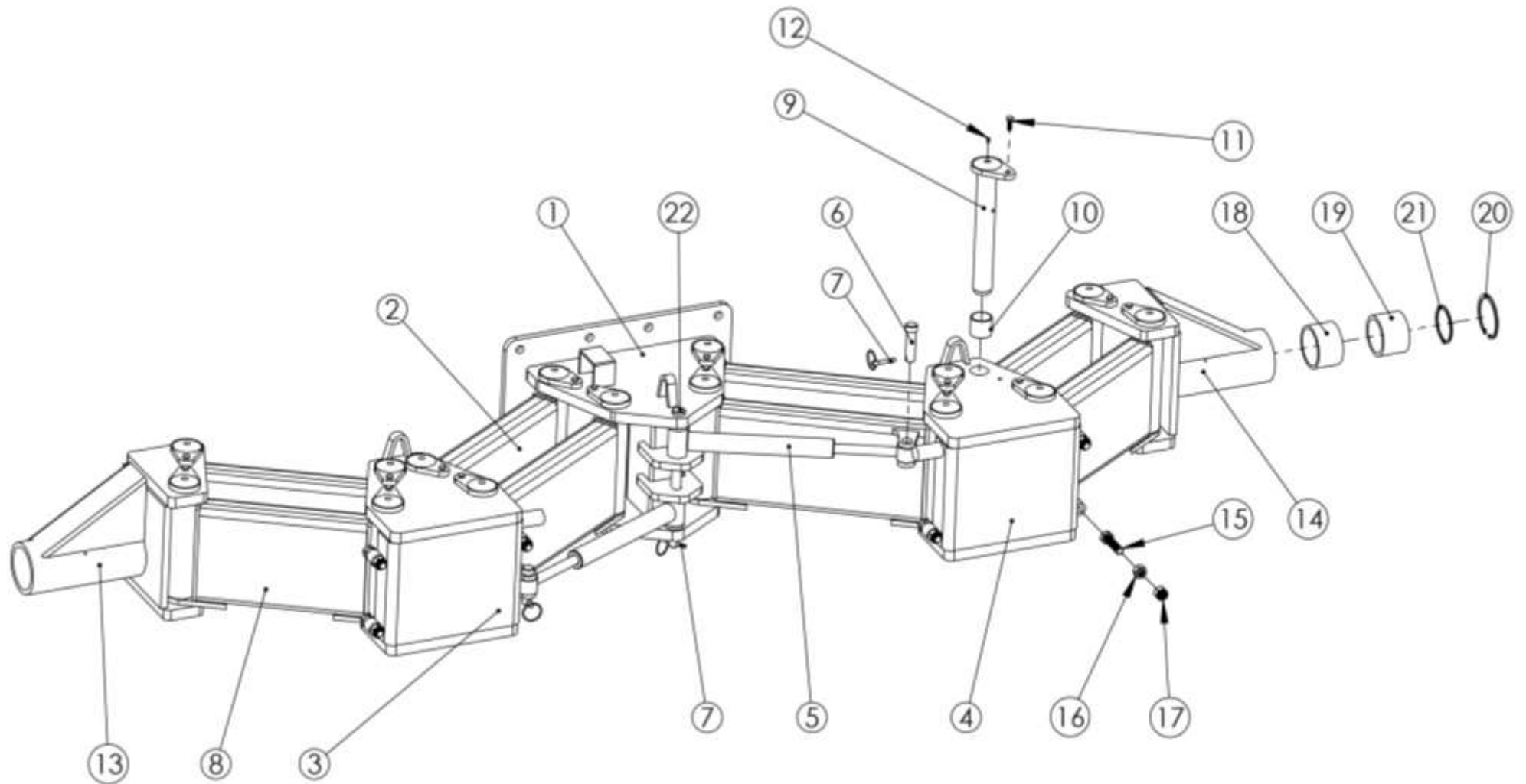
<b>NO</b>	<b>PART CODE</b>	<b>NAME &amp; DESCRIPTION</b>
1	2.OMG.107.01.000.0	BACK FRAME FLL 50
2	7.4.3.1001	MAIN PISTON
3	7.2.5.OMG.0008	MAIN PISTON PIN
4	7.4.18.1129	BOLT M12x90 DIN 931
5	7.4.23.1037	NUT M12 DIN 985
6	7.4.3.1026	AXLE PISTON FLL 50
7	7.2.5.1057	GENERAL PISTON PIN
8	7.4.28.1001	SPRING PIN Ø10
9	2.OMG.107.00.001.0	LAMB PIPE
10	7.4.18.1096	BOLT M10x35 DIN 933
11	7.4.23.1036	NUT M10 DIN 985
12	7.4.27.1001	SIGNAL STOP LAMB
13	2.OMG.000.00.004.0	AXLE PA BUSHING OUTLET
14	2.OMG.000.00.003.0	AXLE BUSHING INLET
15	7.4.4.1003	CIRCLIP DIN 472 Ø115
16	7.4.4.1004	CIRCLIP DIN 471 Ø90



**RIGHT LEFT PADDLE**

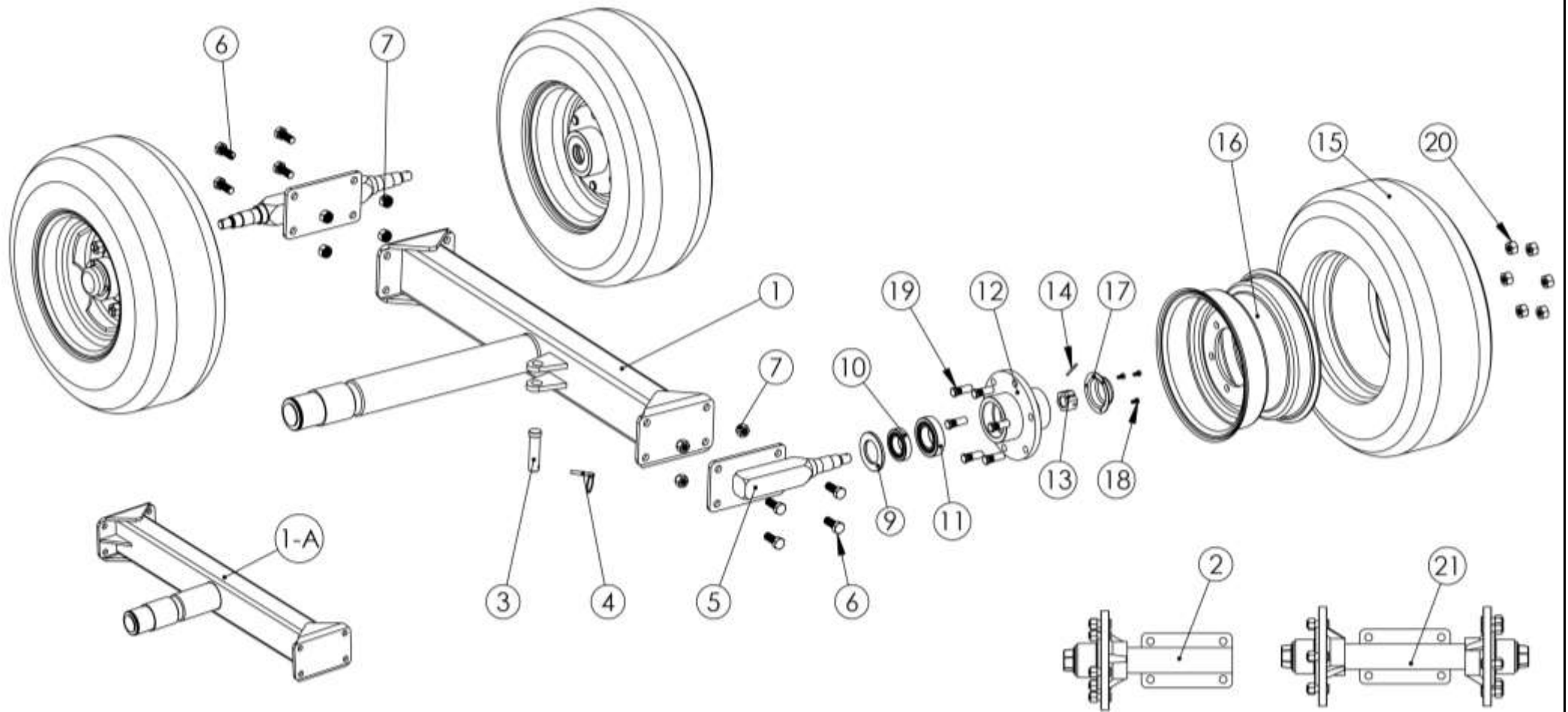
<b>NO</b>	<b>PART CODE</b>	<b>NAME &amp; DESCRIPTION</b>
1	2.OMG.133.01.000.0	RIGHT PADDLE 1,5M
	2.OMG.119.01.000.0	RIGHT PADDLE 1,75M
	2.OMG.163.01.000.0	RIGHT PADDLE 2,4M
2	2.OMG.132.01.000.0	LEFT PADDLE 1,5M
	2.OMG.116.01.000.0	LEFT PADDLE 1,75M
	2.OMG.162.01.000.0	LEFT PADDLE 2,4M
3	7.2.5.1060	TOP HINGE PIN
4	7.4.18.1072	BOLT M8x45 DIN 931
5	7.4.23.1035	NUT M8 DIN 985
6	7.2.5.1057	GENERAL PISTON PIN
7	7.4.28.1001	SPRING PIN Ø10
8	7.4.18.2220	BOLT 5/8"x51mm SQUARE NECK DIN 603
9	7.4.23.1067	NUT 5/8"
10	2.OMG.117.00.001.0	RIGHT BLADE 1,5M
	2.OMG.118.00.001.0	RIGHT BLADE 1,75M
	2.OMG.163.00.001.0	RIGHT BLADE 2,4M
11	7.2.5.1059	PADDLE BUTTOM HINGE PIN
12	2.OMG.142.00.000.0	SUPPORT ARM
	2.OMG.155.00.000.0	SUPPORT ARM FLL 24
13	2.OMG.113.00.001.0	LEFT BLADE 1,5M
	2.OMG.114.00.001.0	LEFT BLADE 1,75M
	2.OMG.162.00.001.0	LEFT BLADE 2,4M
14	2.OMG.150.00.000.0	ROUTER BLADE LEFT
15	7.4.18.2200	BOLT M14x45 SQUARE NECK DIN 603
16	7.4.24.1008	SPRING WASHER M14 DIN 127/B
17	7.4.23.1012	NUT M14 DIN 934





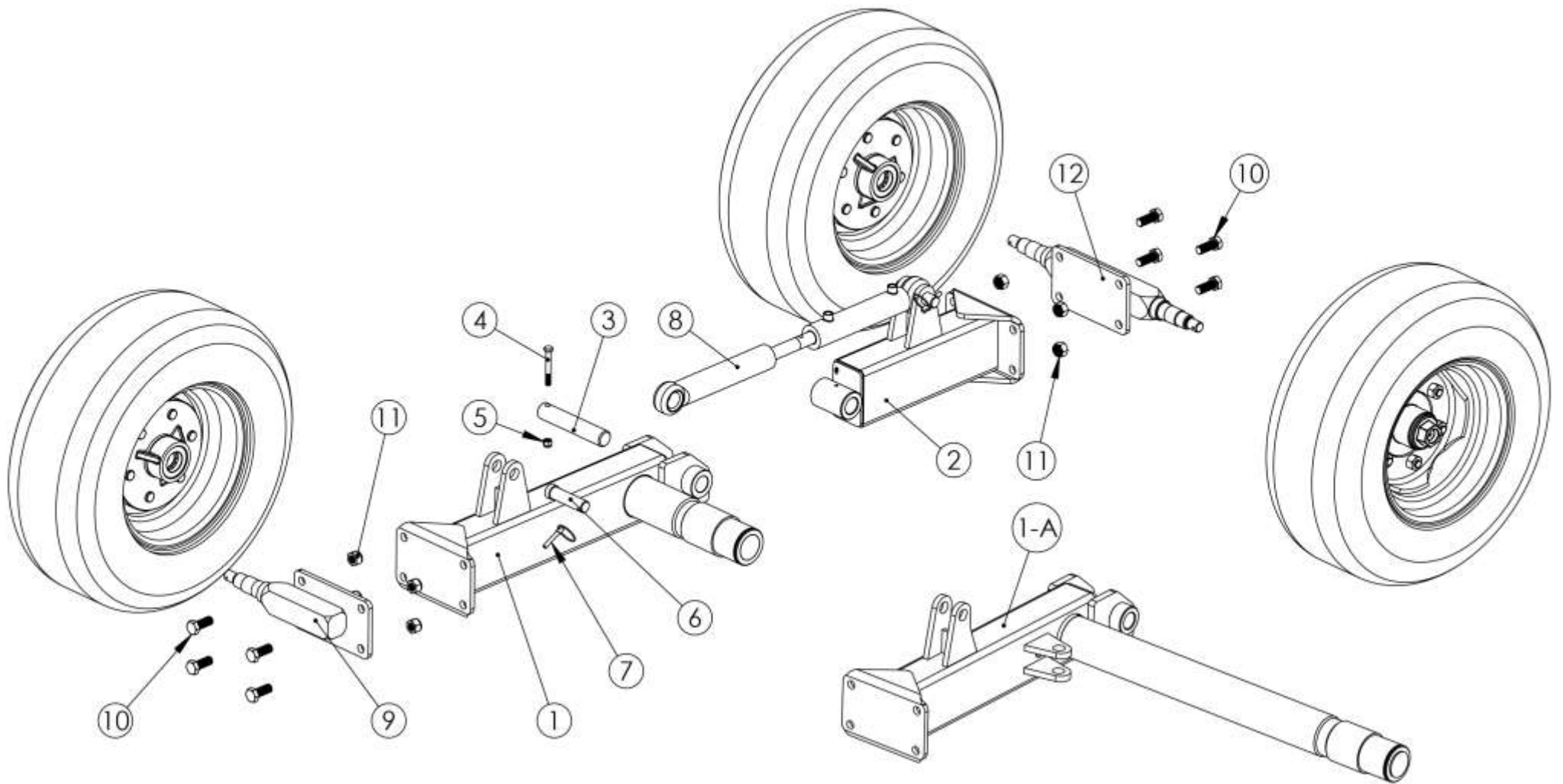
## ACCORDION FOLDABLE SYSTEM FLL

NO	PART CODE	NAME & DESCRIPTION
1	2.OMG.125.01.000.0	FOLD AXLE GROUP MIDDLE
2	2.OMG.125.04.000.0	FOLDING AXLE TUBE GROUP 620 FLL 16
	2.OMG.131.01.000.0	FOLDING AXLE TUBE GROUP 870 FLL 20-
3	2.OMG.125.07.000.0	GEAR BOX GROUP LEFT
4	2.OMG.125.02.000.0	GEAR BOX GROUP RIGHT
5	7.4.3.1027	FOLDING SYSTEM PISTON
6	7.2.5.1051	CYLINDER JOIN PIN
7	7.4.28.1001	SPRING PIN Ø10
8	2.OMG.125.05.000.0	FOLDING AXLE TUBE GROUP 515 FLL 16
	2.OMG.125.04.000.0	FOLDING AXLE TUBE GROUP 620 FLL 20-
9	2.OMG.130.00.009.0	MAIN HINGE PIN
10	7.2.4.1003	BUSHING 55x50x50
11	7.4.18.1095	BOLT M10x30 DIN 933
12	7.4.38.1001	GREASE NIPPLE 5/16"
13	2.OMG.125.03.000.0	AXLE TUBE JOIN LEFT
	2.OMG.135.01.000.0	AXLE TUBE JOIN LEFT FLL24
14	2.OMG.125.06.000.0	AXLE TUBE JOIN RIGHT
	2.OMG.135.02.000.0	AXLE TUBE JOIN RIGHT FLL24
15	7.4.18.1218	BOLT M20x80 DIN 931
16	7.4.23.1015	NUT M20 DIN 934
17	7.4.23.1041	NUT M20 DIN 985
18	2.OMG.000.00.004.0	AXLE PA BUSHING OUTLET
19	2.OMG.000.00.003.0	AXLE PA BUSHING INLET
20	7.4.4.1003	CIRCLIP DIN 472 Ø115
21	7.4.4.1004	CIRCLIP DIN 471 Ø90
22	2.OMG.130.00.006.0	CENTRE CYLINDER JOIN PIN



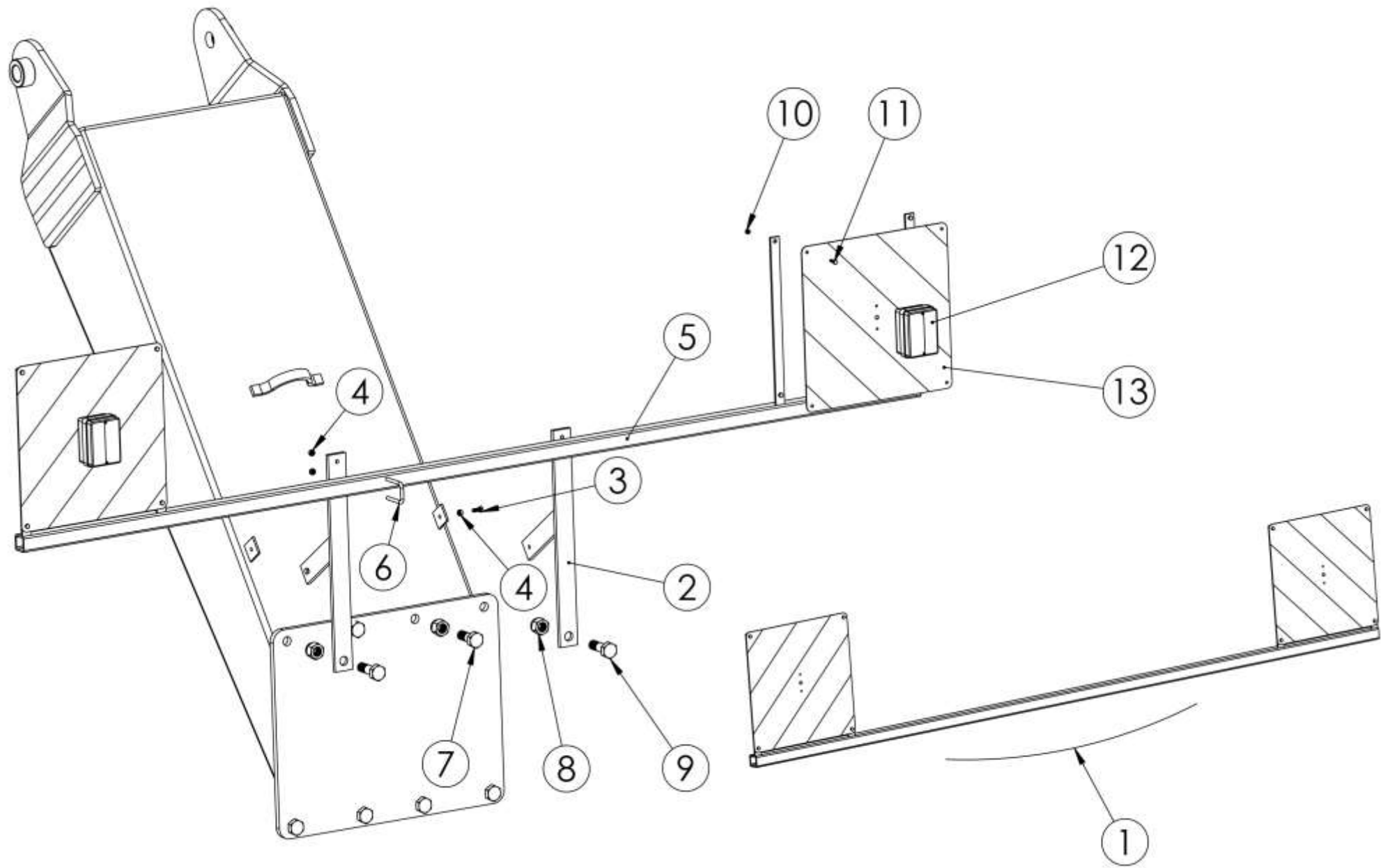
### STATIC AXLE

NO	PART CODE	NAME & DESCRIPTION
1	2.OMG.152.01.000.0	FIXED AXLE GROUP FLL 50
1-A	2.OMG.128.01.000.0	FIXED AXLE GROUP FLL 16-20
	2.OMG.164.01.000.0	FIXED AXLE GROUP FLL 24
2	2.OMG.148.03.000.0	BACK SHAFT GROUP ASSY
3	7.2.5.1057	GENERAL PISTON PIN
4	7.4.28.1001	SPRING PIN
5	2.OMG.106.04.000.0	BACK SHAFT
6	7.4.18.1211	BOLT M20x50 DIN 931
7	7.4.23.1041	NUT M20 DIN 985
8	2.OMG.106.03.000.0	FRONT DOUBLE SHAFT
9	7.4.16.1036	SEAL 65x110x7
10	7.4.15.1028	BEARING 32210
11	7.4.15.1029	BEARING 32212
12	7.2.1.1044	10-12 HUB
13	7.4.23.1084	SLOTTED NUT M39x2mm
14	7.4.19.1070	SPLIT PIN Ø6x70 DIN 94
15	7.4.13.1004	TIRE 10.0/75-15,3
	7.4.13.1012	TIRE 12.5/80-15,3
16	7.4.14.1007	RIM 900x15,3
17	7.2.2.1450	END WHEEL CAP
18	7.4.18.1031	BOLT M6x16 DIN 84
19	7.4.18.2203	BOLT WHEEL 3/4"
20	7.4.23.1002	WHEEL NUT 3/4"
21	2.OMG.148.02.000.0	FRONT DOUBLE SHAFT GROUP ASSY



### ADJUSTABLE AXLE FLL

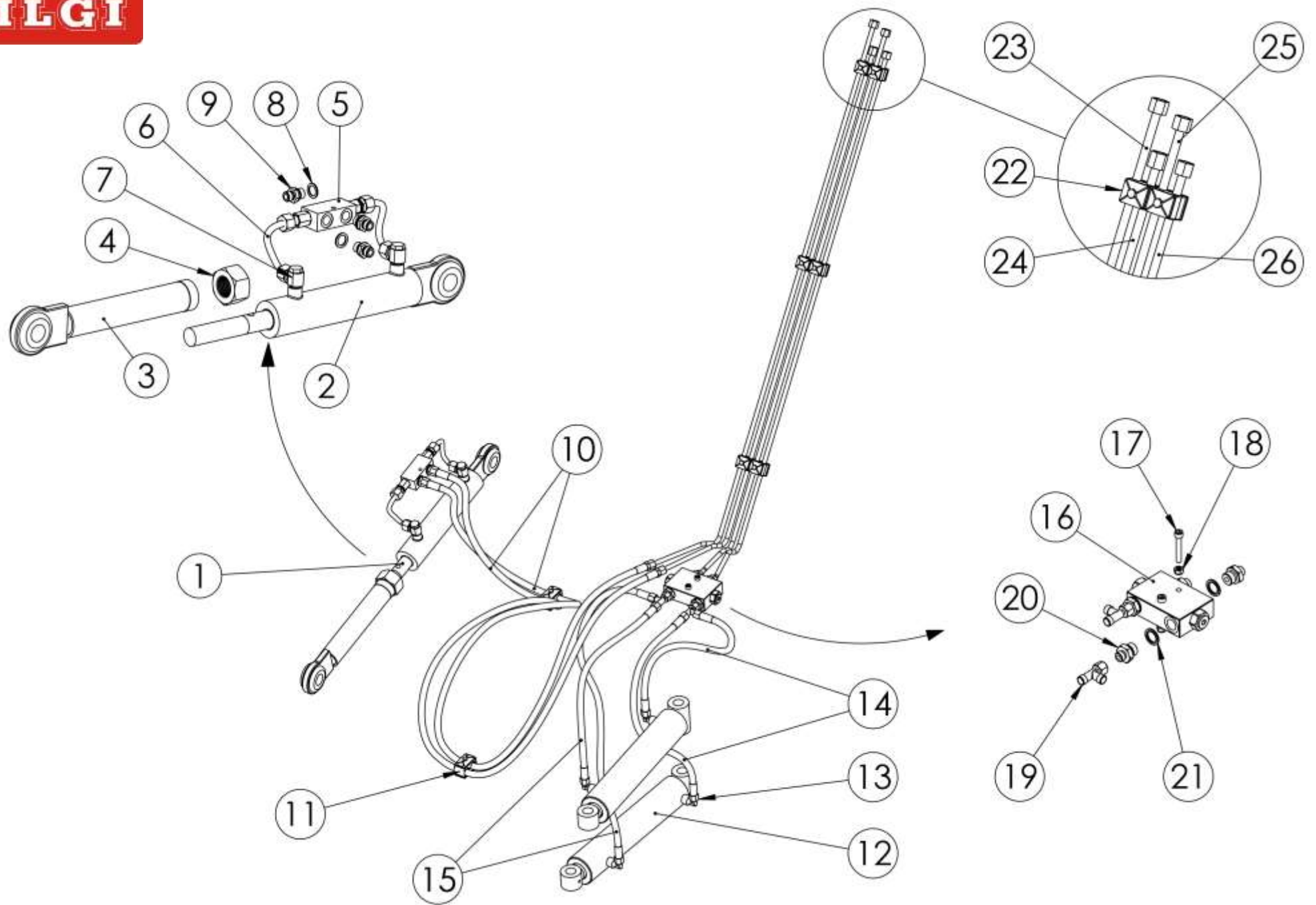
NO	PART CODE	NAME & DESCRIPTION
1	2.OMG.129.01.000.0	ADJUSTABLE AXLE GROUP BACK FLL 16-20
	2.OMG.165.01.000.0	ADJUSTABLE AXLE GROUP BACK FLL 24
1-A	2.OMG.122.01.000.0	ADJUSTABLE AXLE GROUP BACK FLL 50
2	2.OMG.106.05.000.0	ADJUSTABLE AXLE GROUP FRONT
3	7.2.5.OMG.0008	MAIN PISTON PIN
4	7.4.18.1129	BOLT M12x90 DIN 931
5	7.4.23.1037	NUT M12 DIN 985
6	7.2.5.1057	GENERAL PISTON PIN
7	7.4.28.1001	SPRING PIN Ø10
8	2.OMG.106.06.000.0	ADJUSTMENT PISTON GROUP ASSY
9	2.OMG.148.03.000.0	BACK SHAFT GROUP
10	7.4.18.1211	BOLT M20x50 DIN 931
11	7.4.23.1041	NUT M20 DIN 985
12	2.OMG.106.03.000.0	FRONT DOUBLE SHAFT



**TRAFFIC JOIN GROUP**

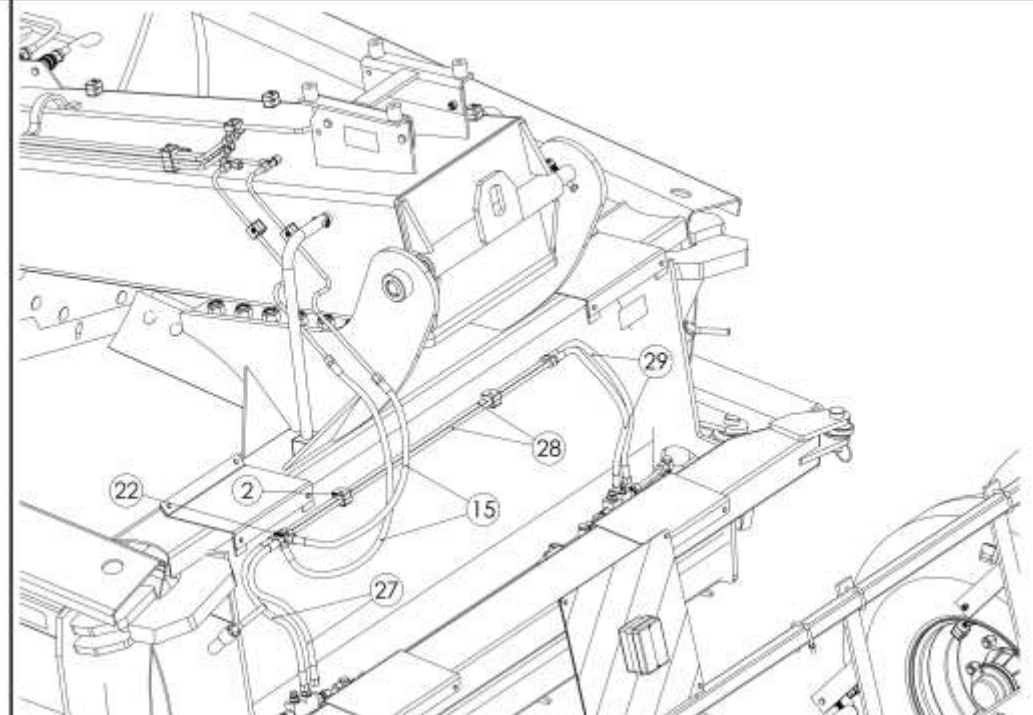
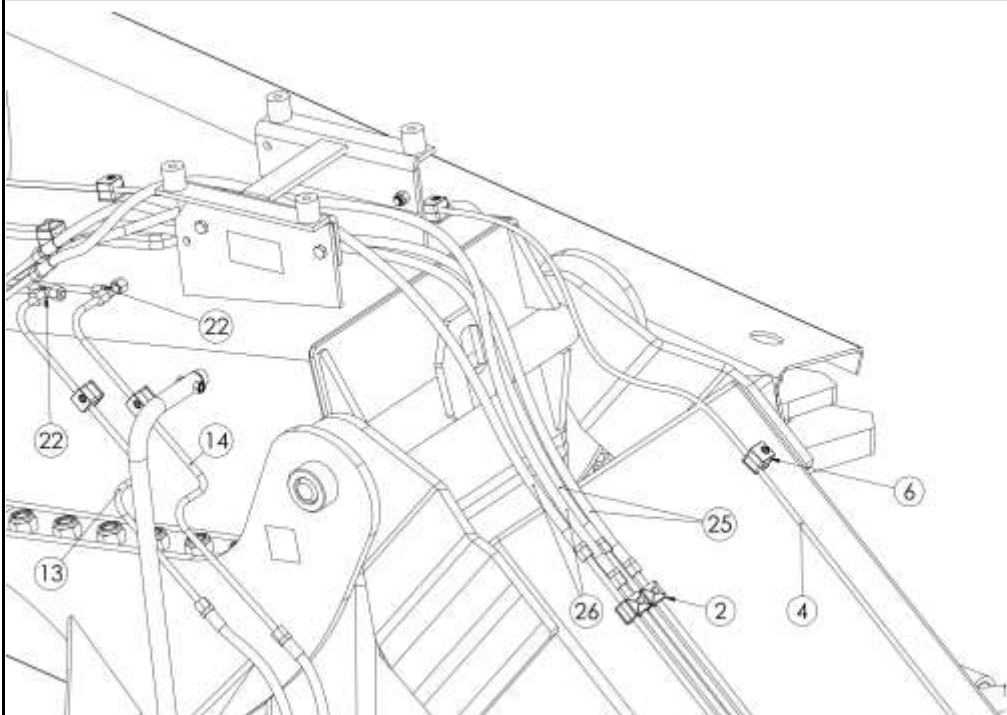
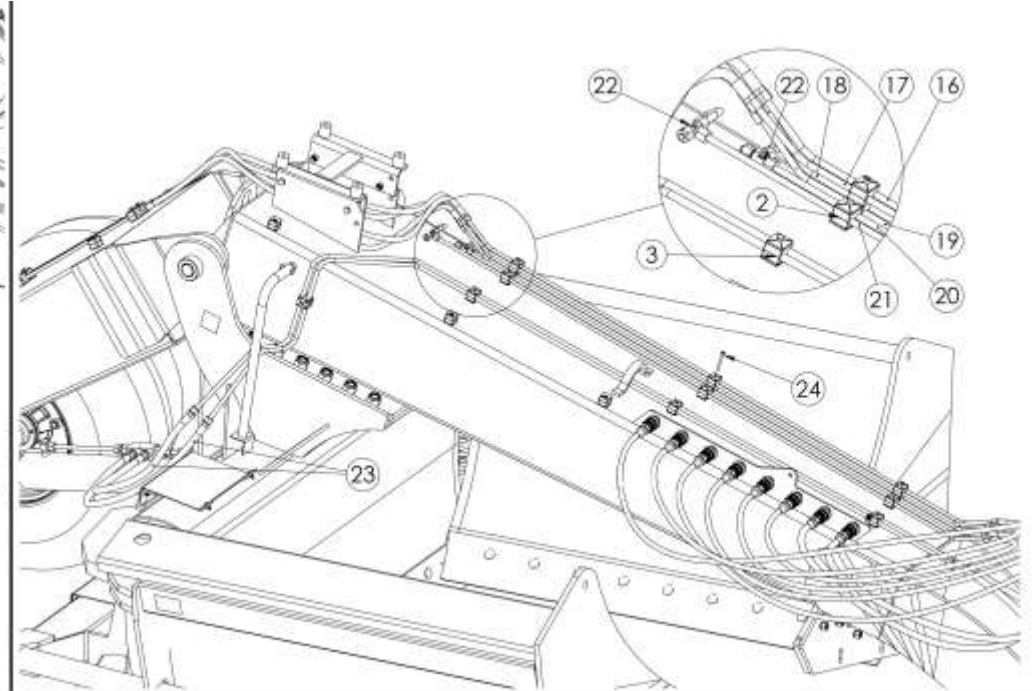
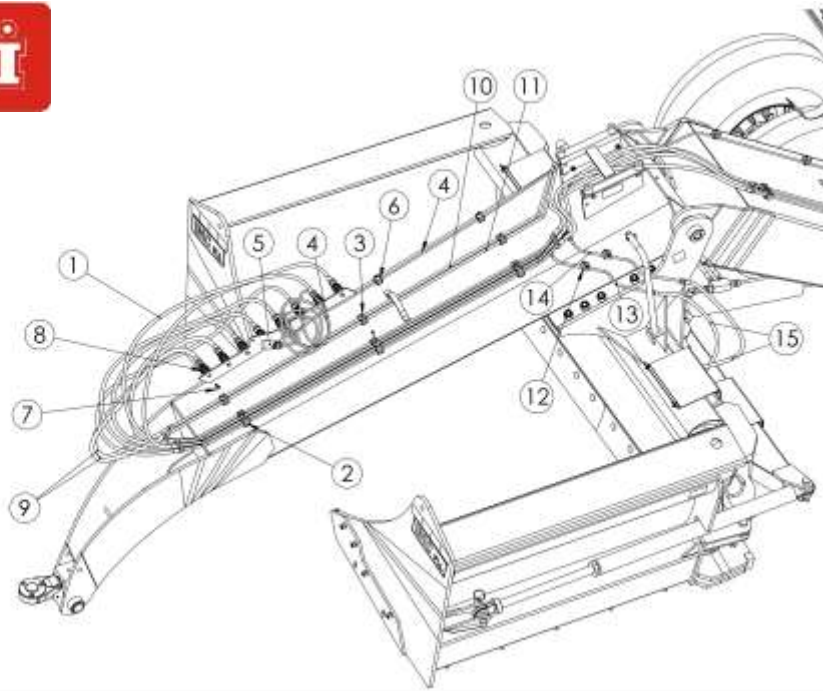
<b>NO</b>	<b>PART CODE</b>	<b>NAME &amp; DESCRIPTION</b>
1	2.OMG.127.00.000.0	TRAFFIC PLATE GROUP
2	2.OMG.126.00.005.0	PLATE GROUP JOIN BAR
3	7.4.18.1068	BOLT M8x20 DIN 933
4	7.4.23.1035	NUT M8 DIN 985
5	2.OMG.127.02.000.0	PLATE GROUP FRAME
6	7.4.18.2302	U BOLT M8x40
7	7.4.18.1235	BOLT M22x60 DIN 931
8	7.4.23.1042	NUT M22 DIN 985
9	7.4.18.1236	BOLT M22x70 DIN 931
10	7.4.23.1033	NUT M6 DIN 985
11	7.4.18.1032	NUT M6x20 DIN 933
12	7.4.27.1001	SIGNAL STOP LAMB
13	7.4.29.1001	TRAFFIC PLATE





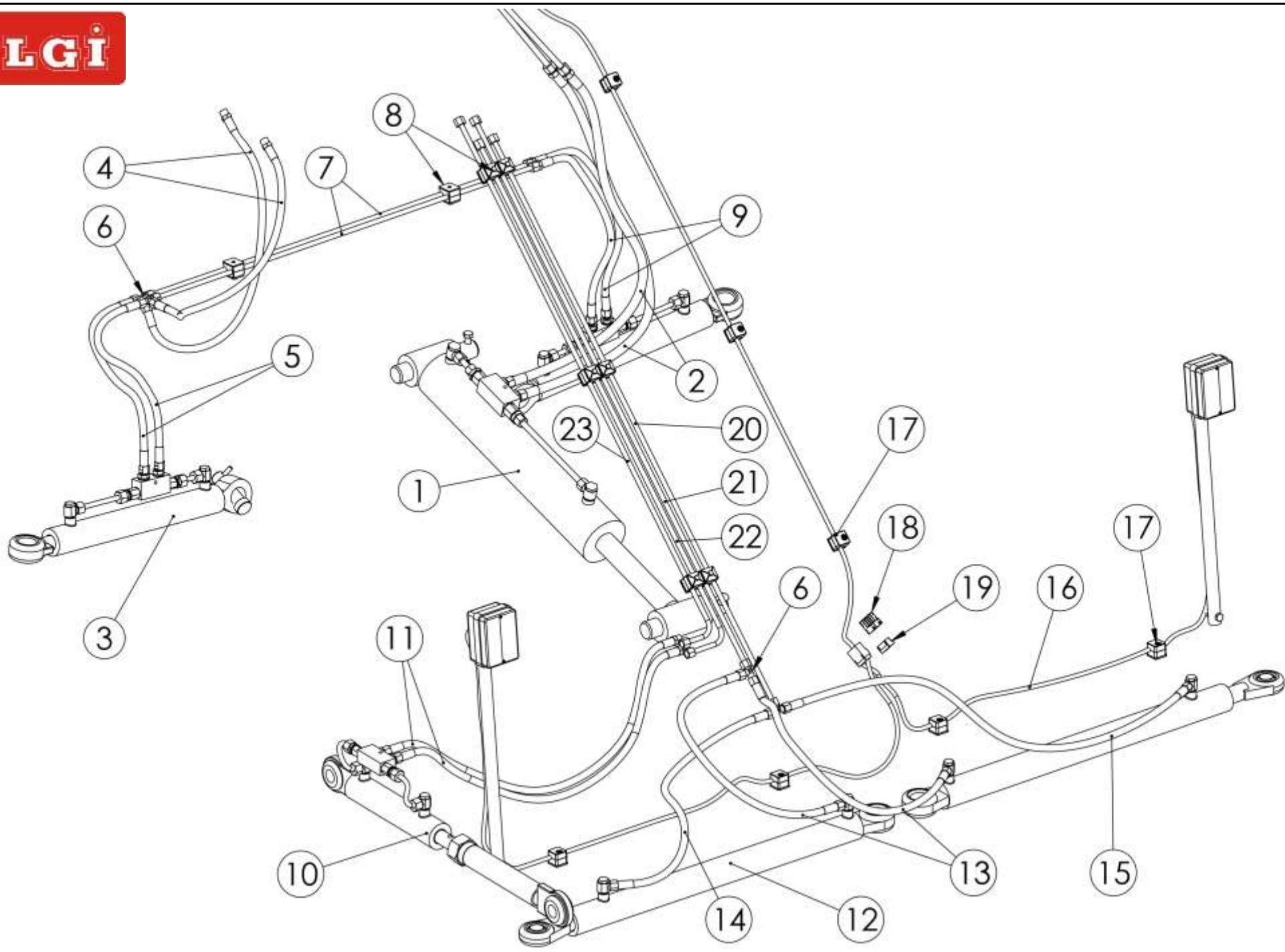
## ACCORDION BACK HYDRAULIC

NO	PART CODE	NAME & DESCRIPTION
1	2.OMG.106.06.000	ADJUSTMENT PISTON GROUP ASSY
2	7.4.3.1005	ADJ. PISTON CYLINDER
	7.4.3.1005-1	SEAL KIT ADJ. PISTON
3	2.OMG.106.07.000	ADJ. PISTON ROD GROUP
4	7.4.3.1005-2	NUT M38 FINE PITCH
5	7.4.2.1011	LOCKER VALVE 3/8" L VBPDE
6	2.OMG.106.06.001	HYD. PIPE Ø10x1,5 mm
7	7.4.2.1006	1/4" SWIVELLING ELBOW 10L
8	7.4.2.1194	WASHER 3/8"
9	7.4.2.1066	3/8" UNION R M16x1,5 10L
10	7.4.2.1137	1/4" R2 285cm M16x1,5 MALE HOSE
11	7.4.1.1002	CLAMP Ø16 mm DOUBLE
12	7.4.3.1027	FOLDING SYSTEM PISTON
	7.4.3.1027-1	SEAL KIT FOLDING SYSTEM PISTON
13	7.4.2.1103	1/4" SWIVELLING ELBOW DUAL PITCH
14	7.4.2.1129	1/4" R2 75cm M16x1,5 HOSE
15	7.4.2.1366	1/4" R2 85cm M16x1,5 HOSE
16	7.4.2.1010	LOCKER VALVE 1/2" A VBPDE
17	7.4.18.1466	HEX SOCKET HEAD BOLT M8x50 DIN 912
18	7.4.23.1035	NUT M8 DIN 985
19	7.4.2.1214	UNION SIDE M16x1,5 10L
20	7.4.2.1092	1/2" UNION 10L
21	7.4.2.1192	WASHER 1/2"
22	7.4.1.1001	CLAMP Ø10 DOUBLE
23	7.4.2.1425-A	HYD. PIPE Ø10x1,5 144,5cm 3 BEND
24	7.4.2.1426-B	HYD. PIPE Ø10x1,5 138cm 2 BEND
25	7.4.2.1425-B	HYD. PIPE Ø10x1,5 144,5cm 3 BEND
26	7.4.2.1426-A	HYD. PIPE Ø10x1,5 138cm 2 BEND



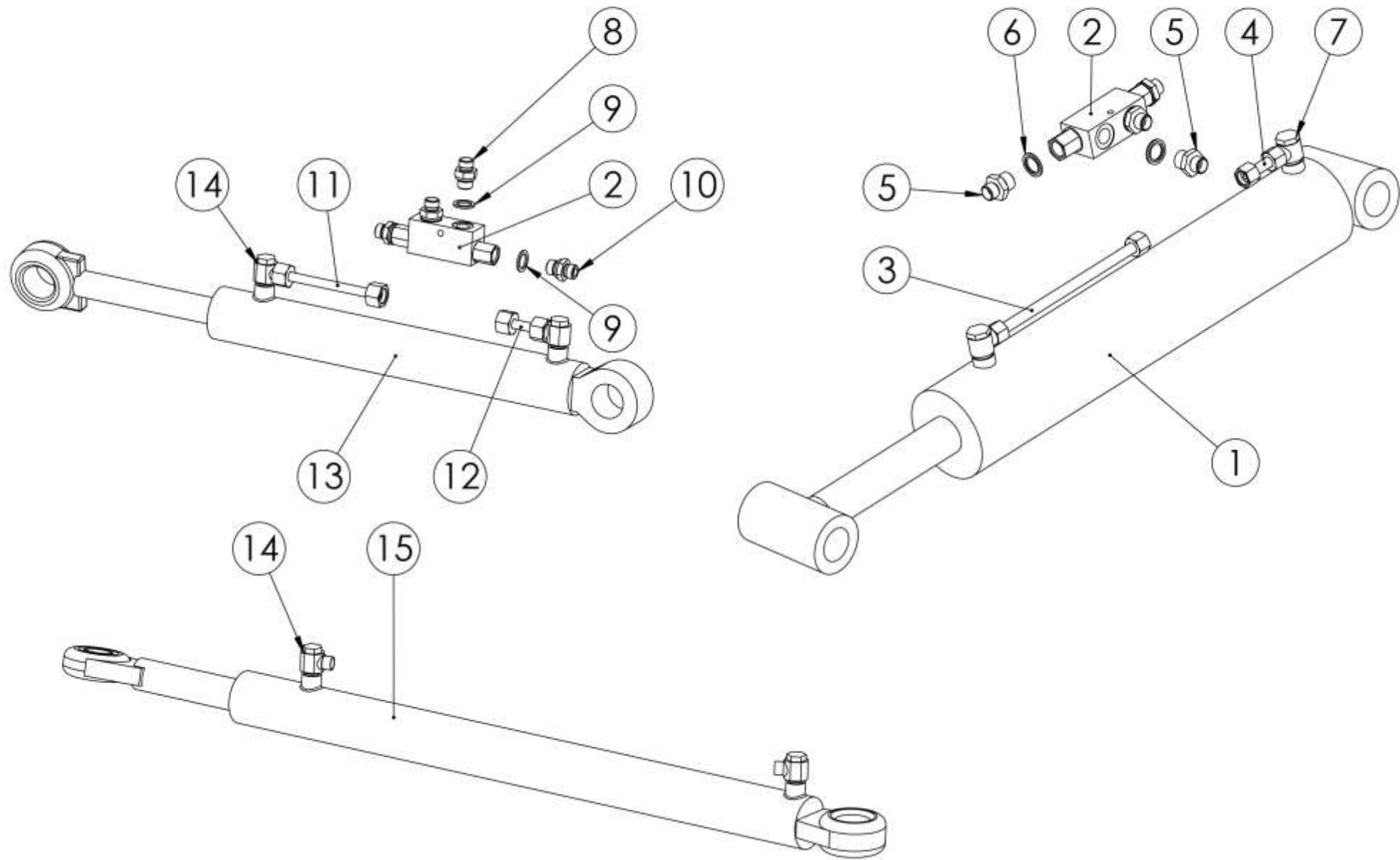
## GENERAL HYDRAULIC

NO	PART CODE	NAME & DESCRIPTION
1	7.4.2.1054	1/4" R2 200cm M16x1,5 MALE R1/2MALE
2	7.4.1.1001	CLAMP Ø10 mm DOUBLE
3	7.4.1.1005	CLAMP Ø12 mm DOUBLE
4	7.4.27.1002	CABLE Ø7 x 1 mm <sup>2</sup> YSLY-JZ 7 m
5	7.4.29.1004	MALE PLUG 14-002 7 PINS
6	7.4.1.1034	CLAMP Ø8 mm SINGLE
7	7.4.18.1093	BOLT M10x20 DIN 933
8	7.4.2.1139	1/2" COUPLING FEMALE
9	7.4.2.1504	3/8" R2 L200cm M18x1,5 MALE R1/2MALE
10	7.4.2.1502	HYD. PIPE Ø12x1,5 277cm 4 BEND
	7.4.2.1549	HYD. PIPE Ø12x1,5 392cm 4 BEND FLL24
11	7.4.2.1503	HYD. PIPE Ø12x1,5 276,5cm 4 BEND
	7.4.2.1550	HYD. PIPE Ø12x1,5 391,5cm 4 BEND FLL24
12	7.4.1.1003	CLAMP Ø10 mm SINGLE
13	7.4.2.1081	HYD. PIPE Ø10x1,5 59,5cm 3 BEND
14	7.4.2.1080	HYD. PIPE Ø10x1,5 61cm 3 BEND
15	7.4.2.1057	1/4" R2 70cm M16x1,5 MALE HOSE
16	7.4.2.1085	HYD. PIPE Ø10x1,5 188,5cm 2 BEND
	7.4.2.1552	HYD. PIPE Ø10x1,5 303,5cm 2 BEND FLL24
17	7.4.2.1074	HYD. PIPE Ø10x1,5 188,5cm 2 BEND
	7.4.2.1553	HYD. PIPE Ø10x1,5 303,5cm 2 BEND FLL24
18	7.4.2.1161	HYD. PIPE Ø10x1,5 188,5cm 2 BEND
	7.4.2.1554	HYD. PIPE Ø10x1,5 303,5cm 2 BEND FLL24
19	7.4.2.1158	HYD. PIPE Ø10x1,5 188,5cm 2 BEND
	7.4.2.1555	HYD. PIPE Ø10x1,5 303,5cm 2 BEND FLL24
20	7.4.2.1073	HYD. PIPE Ø10x1,5 188,5cm 1 BEND
	7.4.2.1556	HYD. PIPE Ø10x1,5 303,5cm 2 BEND FLL24
21	7.4.2.1072	HYD. PIPE Ø10x1,5 200cm 1 BEND
	7.4.2.1551	HYD. PIPE Ø10x1,5 315cm 1 BEND FLL24
22	7.4.2.1095	T UNION M16x1,5 10L (1 SIDE BLIND)
23	7.4.2.1053	3/8" R2 95cm M18x1,5 MALE HOSE
24	7.4.18.1438	HEX SOCKET BOLT M6x60 DIN 912
25	7.4.2.1388	1/4" R2 130cm M16x1,5 MALE HOSE
26	7.4.2.1125	1/4" R2 130cm M16x1,5 MALE MALE HOSE
27	7.4.2.1049	1/4" R2 65cm M16x1,5 HOSE
28	7.4.2.1427	HYD. PIPE Ø10x1,5 100cm
29	7.4.2.1395	1/4" R2 65cm M16x1,5 MALE HOSE



### FLL 50 BACK HYDRAULIC

NO	PART CODE	NAME & DESCRIPTION
1	7.4.3.1001	MAIN PISTON
	7.4.3.1001-1	SEAL KIT MAIN CYLINDER
2	7.4.2.1053	3/8" R2 95cm M18x1,5 MALE HOSE
3	7.4.3.1003	WING PISTON FLL 50
	7.4.3.1003-1	SEAL KIT WING CYLINDER
4	7.4.2.1057	1/4" R2 70cm M16x1,5 MALE HOSE
5	7.4.2.1049	1/4" R2 65cm M16x1,5 MALE HOSE
6	7.4.2.1095	T UNION M16x1,5 10L
7	7.4.2.1427	HYD. PIPE Ø10x1,5 100cm
8	7.4.1.1001	CLAMP Ø10 DOUBLE
9	7.4.2.1395	1/4" R2 65cm M16x1,5 MALE HOSE
10	2.OMG.106.06.000.0	ADJUSTMENT PISTON GROUP
11	7.4.2.1164	1/4" R2 175cm M16x1,5 MALE HOSE
12	7.4.3.1026	AXLE PISTON FLL 50
	7.4.3.1026-1	SEAL KIT AXLE PISTON
13	7.4.2.1050	1/4" R2 60cm M16x1,5 HOSE
14	7.4.2.1127	1/4" R2 100cm M16x1,5 HOSE
15	7.4.2.1048	1/4" R2 80cm M16x1,5 HOSE
16	7.4.27.1002	CABLE Ø7 x 1 mm <sup>2</sup> YSLY-JZ 6 m
17	7.4.1.1034	CLAMP Ø8 SINGLE
18	7.4.29.1006	FEMALE CONNECTOR
19	7.4.29.1005	MALE CONNECTOR
20	7.4.2.1078	HYD. PIPE Ø10x1,5 135cm
21	7.4.2.1077	HYD. PIPE Ø10x1,5 130cm
22	7.4.2.1076	HYD. PIPE Ø10x1,5 134cm 1 BEND
23	7.4.2.1075	HYD. PIPE Ø10x1,5 130cm 1 BEND



### PISTON FITTING

NO	PART CODE	NAME & DESCRIPTION
1	7.4.3.1001	MAIN PISTON
	7.4.3.1001-1	SEAL KIT MAIN PISTON
2	7.4.2.1010	LOCKER VALVE 1/2" A VBPDE
3	7.4.2.1251	HYD. PIPE Ø12x1,5 - 240 mm
4	7.4.2.1251-A	HYD. PIPE Ø12x1,5 - 50 mm
5	7.4.2.1272	1/2" UNION M18x1,5 12L
6	7.4.2.1192	WASHER 1/2"
7	7.4.2.1007	3/8" SWIVELLING ELBOW 12L
8	7.4.2.1086	3/8" UNION 10L ORIFICE
9	7.4.2.1194	WASHER 3/8"
10	7.4.2.1066	3/8" UNION M16x1,5 10L
11	7.4.2.1291	HYD. PIPE Ø10x1,5 - 130 mm
12	7.4.2.1291-A	HYD. PIPE Ø10x1,5 - 50 mm
13	7.4.3.1003	WING PADDLE PISTON
	7.4.3.1003-1	SEAL KIT WING CYLINDER
14	7.4.2.1006	1/4" SWIVELLING ELBOW 10L
15	7.4.3.1026	AXLE PISTON FLL 50
	7.4.3.1026-1	SEAL KIT AXLE PISTON





A series of 25 horizontal dashed lines for writing.



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