

HTSV

LAND LEVELER



ISO 9001:2008



En

USER MANUAL

SPARE PART LIST

ilgi

For Better Farming



DEAR CLIENT

We thank you for choosing İLGİ TARIM MAKİNA, 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.

İLGİ TARIM

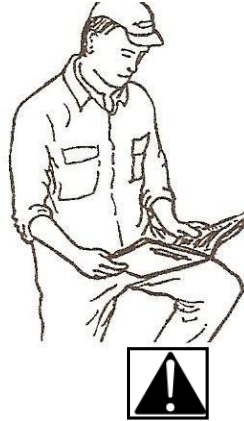
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1. SECURITY MEASURES

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.

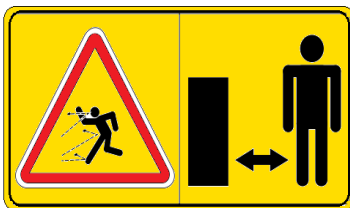
Take precautions against the slipping and starting to work by itself. Read the relevant sections on the instructions manual and pay attention to the warnings.

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

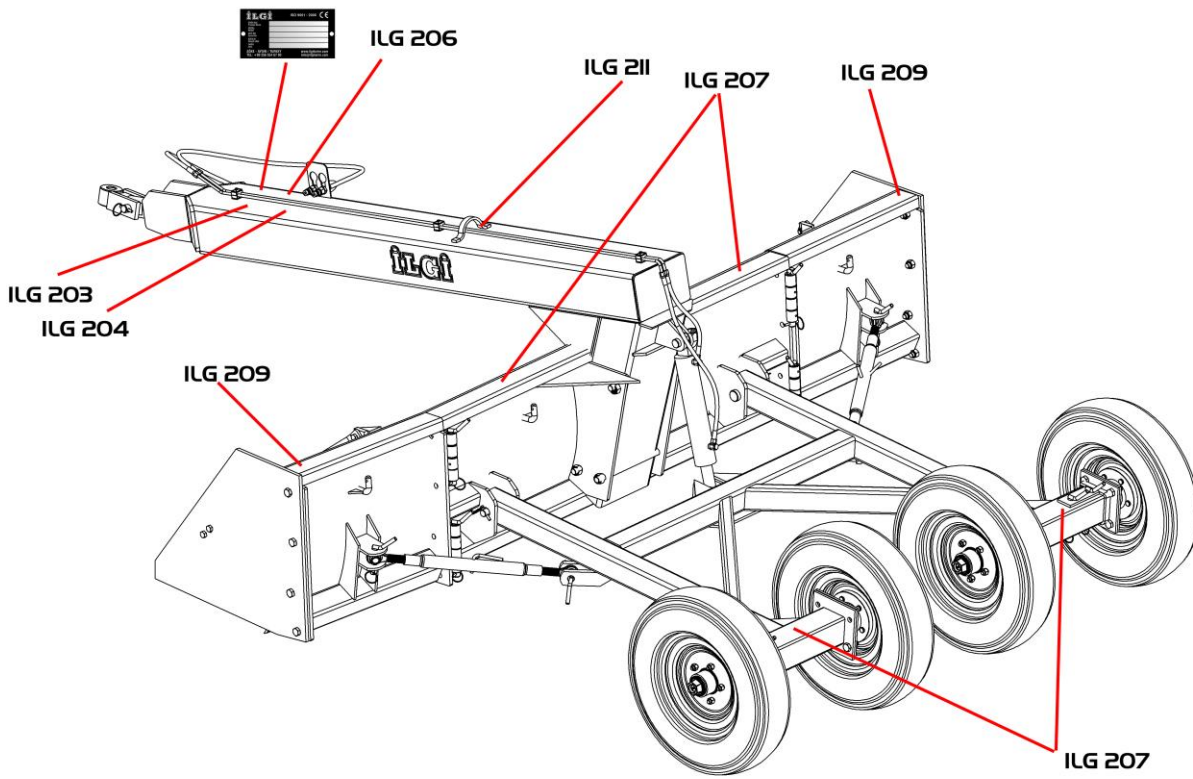


Figure 1

1.4 Work Safety

Before Operation:

- 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.

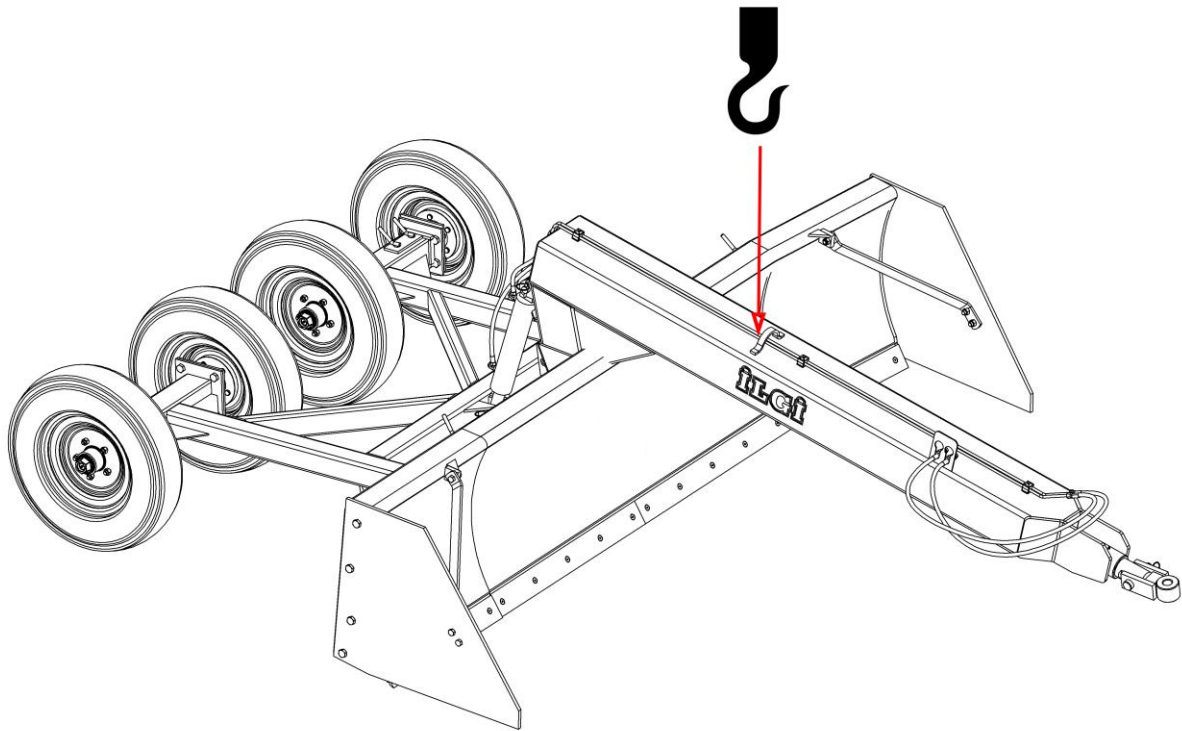


Figure 2

- 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
- 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 (braking 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)



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.

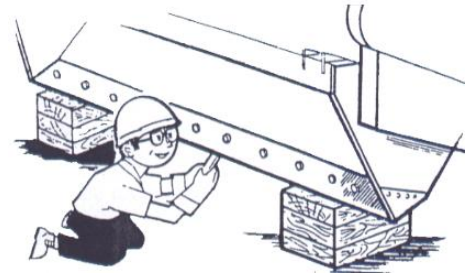


Driving safety on highway

- 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

- Precise leveling machine is used for manual excavation without laser system
- Success is higher because it is faster and easier to use than other leveling tools. Low cost of leveling
- Installation and operation is simple and easy
- With the precision leveling machine, the land can be leveled at the required slope
- The irrigation of the treated land is more efficient and the product is uniformly grown at every point of the land.
- The most important benefit of the machine is that efficiency is improving on the field.

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

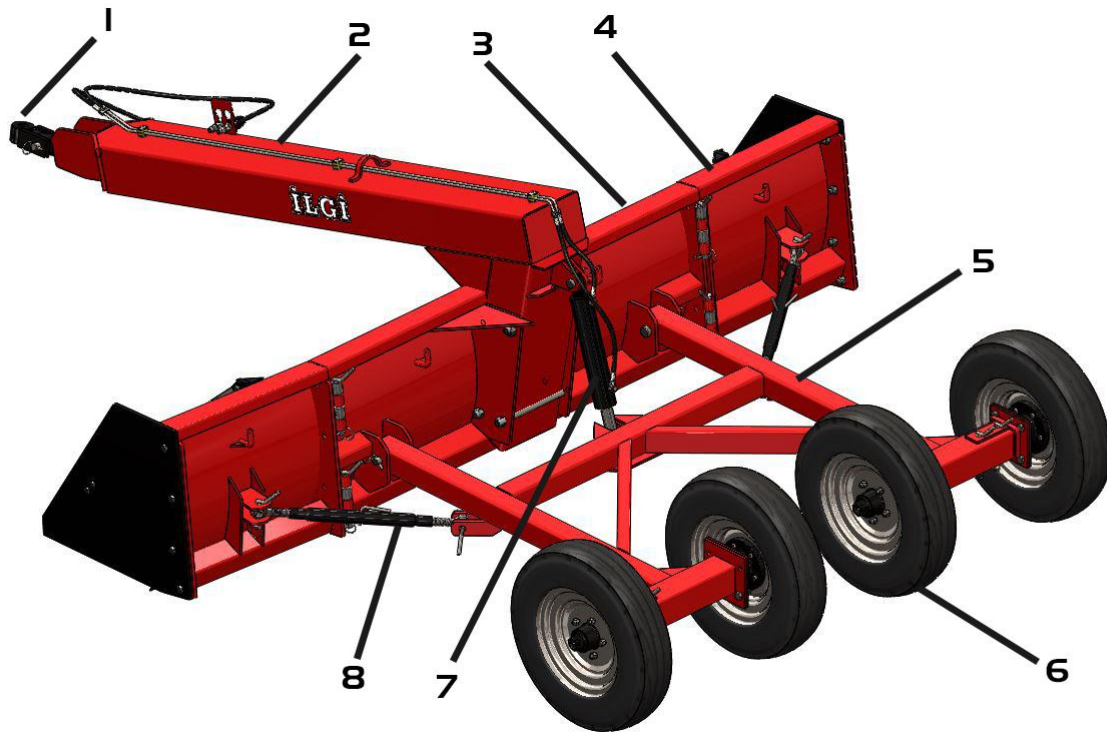


Figure 4

1. Draw bolt
2. Draw arrow
3. Middle shovel
4. Left-Right shovel
5. Axis
6. Wheel
7. Axle cylinder
8. Middle arm

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.

Parts of Hydraulic System:

1. Oil transmission pipes and hoses
2. Hydrolic cylinder

3. USAGE INFORMATION AND SETTLEMENTS

3.1 Attachment of Machine to Tractor

Machine is fixed to the tow hook of tractor and used so.

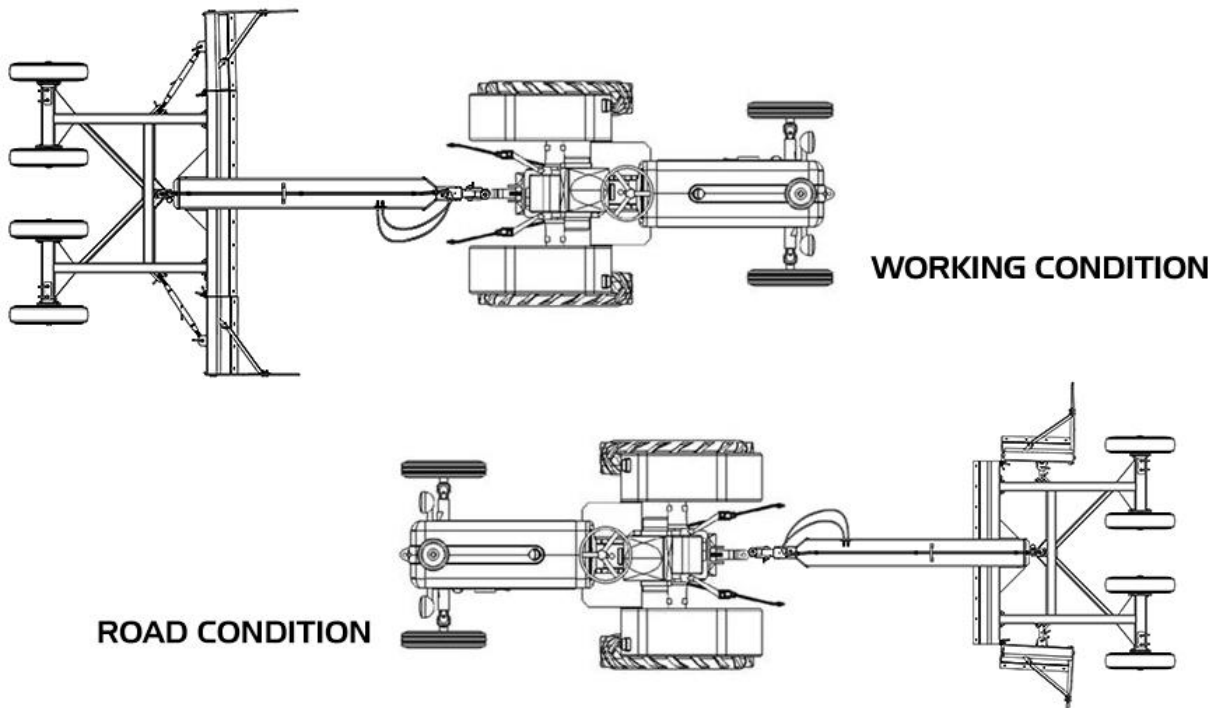
Order of Transactions

1. Bring machine and tractor on a flat surface
2. Ground clearance of tractor should be minimum 50cm
3. Make tractor approach to machine with back maneuver
4. Your machine is ready for leveling



Grease nipples should be greased in the periods stated in the instruction books of laser leveling machine and hydraulic oil level should be checked accordingly.

3.2 Taking the machine to work and road positions



Order of Transactions in passing from work position to road position

1. Remove the joint and pin from the side paddle and the axle case
2. Close the side shovels towards the rear
3. Attach the joint and pin to the side paddle and the middle paddle.

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

3.3 Preliminary Preparations for Usage and Rules to be

Before leveling via machine

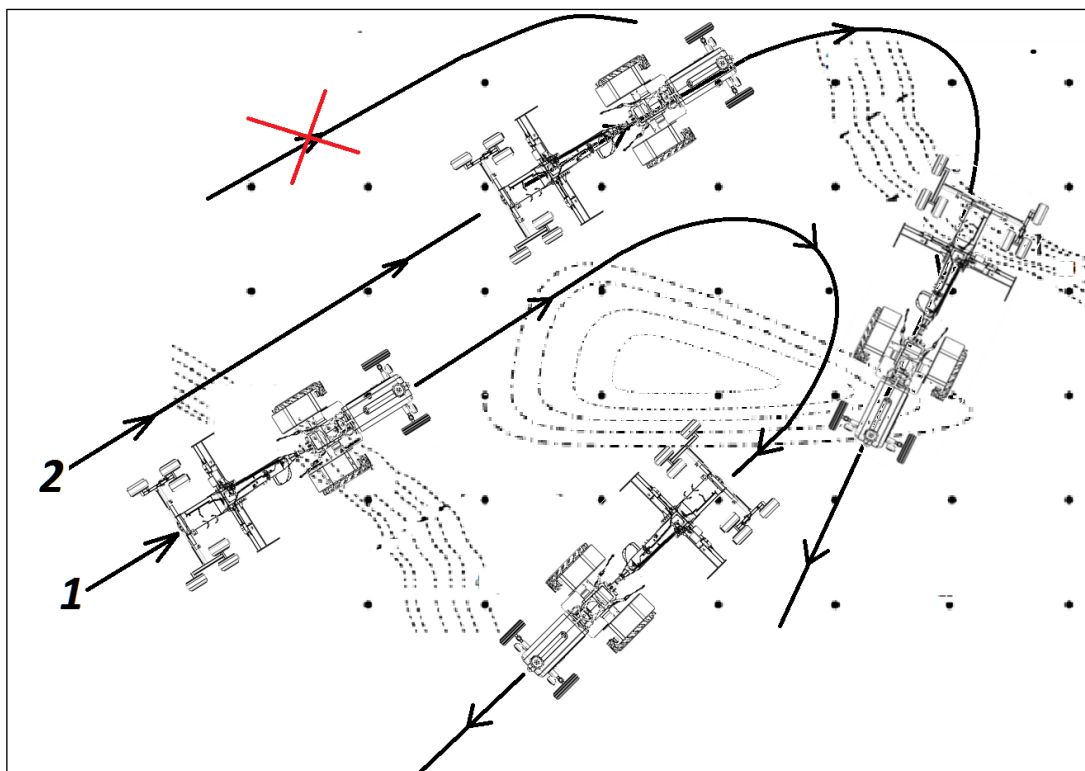
- Check tire pressures
- Check parallel blade adjustment
- Turn around the machine and check whether there is any hydraulic oil leakage or loosened bolt etc.
- Pay attention to the respects stated in safety rules before working
- If the soil to be leveled is hard and compacted it should be loosened with chisel or plow process

3.4 Parallel blade adjustment

For Adjustment;

1. Take the machine to a flat surface by tractor
2. Parallel adjustment for complete blade in accordance with ground plane is controlled and adjusted.
3. We may perform this control so: Approximately 1-2 cm excavation is made through 20 m on a plane surface. When we enter the excavation depth again without changing it, it means that parallel blade adjustment is failed, adjustment is controlled again.

4. LEVELING OPERATION



1. When reached from the excavated area to the area to be filled, soil in the shovel is laid on the area to be filled.
2. Precise leveling works by digging rough soil and filling and preparing the field before laser leveling and providing economical and time-saving process.
3. In order that leveling operation is affordable and its cost is decreased, following respects should be considered:
 - Operation should be done always from excavation to filling
 - Field traffic should be adjusted from excavation area to filling area
 - When shovel bearing capacity is full at the end of excavation, road should be taken to filling area.
 - Excavation operation should be next to previous excavation in a manner that working width of machine will cover the previous one at $\frac{1}{4}$ rate in second passes and no entry should be done from a different point.
4. When adjusted levels are reached with latest passes, blade stops making excavation and this shows that leveling is over.



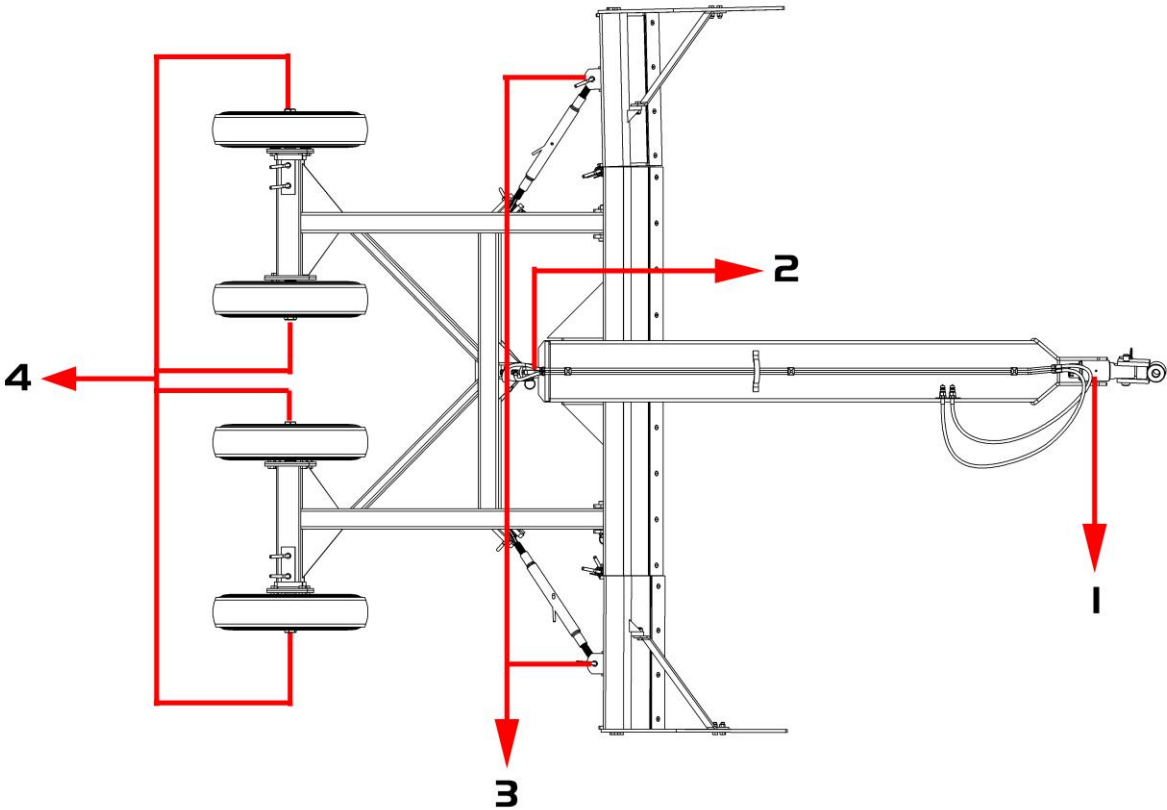
Make sure that wheels don't fallow into the pits greater than tire radius in order for the chassis not to be damaged during work.

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.

Greasing chart



Greasing point		Greasing Period	Oil Type	Number of Greasing Points
1	<i>Tow place</i>	<i>After each leveling</i>	<i>Grease</i>	<i>1</i>
2	<i>Axis Cylinder</i>	<i>After each leveling</i>	<i>Grease</i>	<i>1</i>
3	<i>Impeller hinge</i>	<i>After each leveling</i>	<i>Grease</i>	<i>2</i>
4	<i>Wheel grease cap</i>	<i>After each leveling</i>	<i>Grease</i>	<i>4</i>

5.2 Season-End Maintenance

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

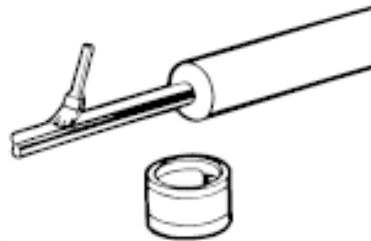
Tires; Tire pressures should be controlled and if inadequate, they should be completed

Grease Nipples; Apply grease to grease nipples of machine

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

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



5.3 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.



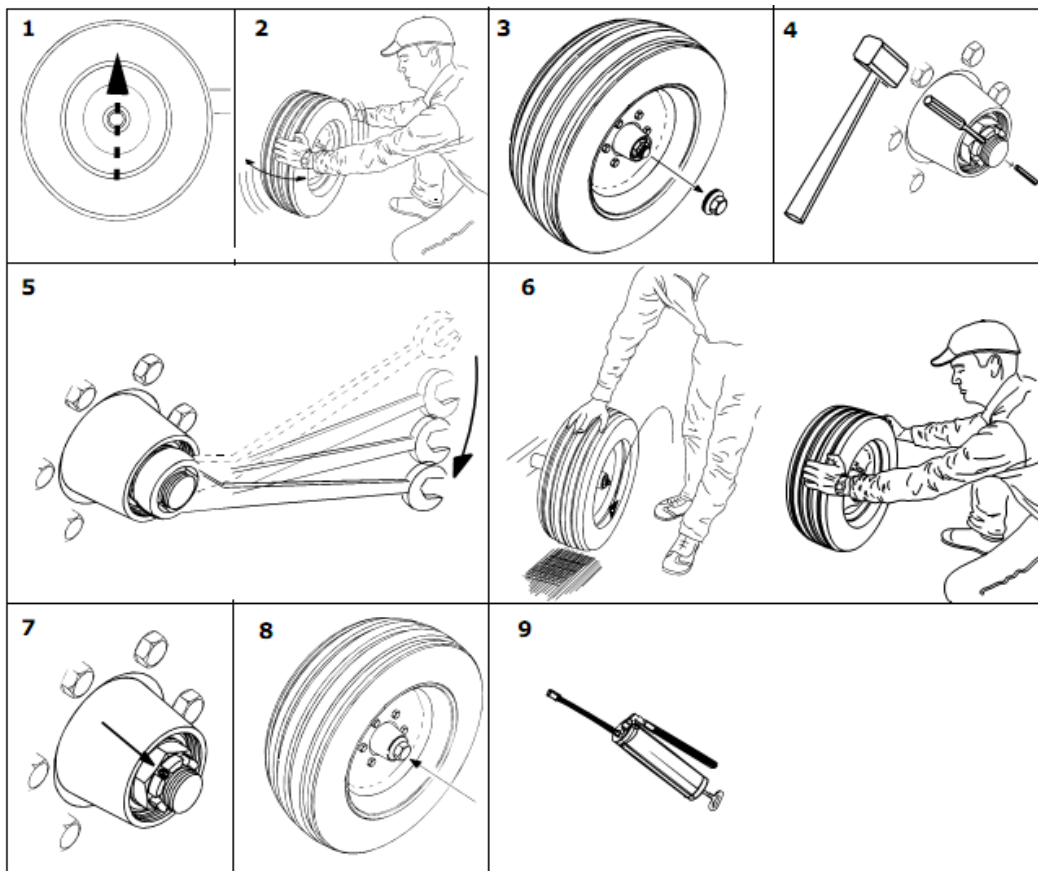
In case of any problem encountered by you about maintenance, repair and usage, you may receive support after stating following information.

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

5.4 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.

Tire Size	Tire Pressure psi (bar)
10 / 75 - 15,3	52 (3.6)



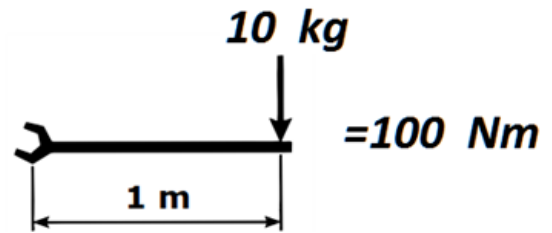
Adjustment operation order

- 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.

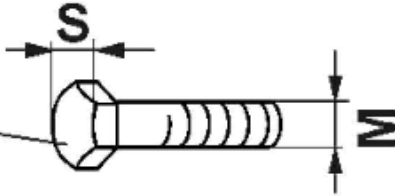
5.5 Bolt torch values



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



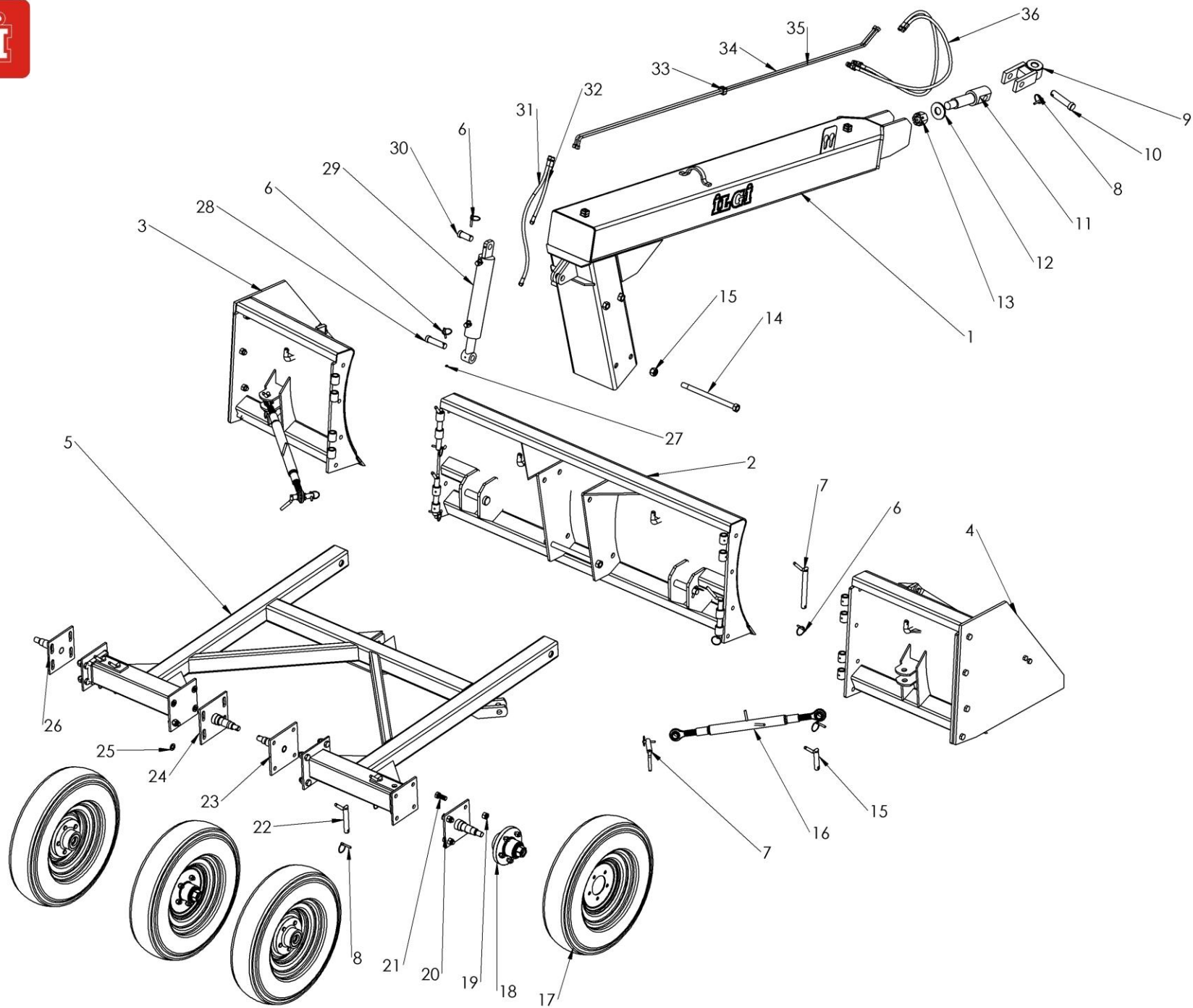
M	S	Nm		
		8.8	10.9	12.9
M 8	13	25	35	41
M 8x1		27	38	41
M 10	16 (17)	49	69	83
M 10x1		52	73	88
M 12	18 (19)	86	120	145
M 12x1,5		90	125	150
M 14	22	135	190	230
M 14x1,5		150	210	250
M 16	24	210	300	355
M 16x1,5		225	315	380
M 18	27	290	405	485
M 18x1,5		325	460	550
M 20	30	410	580	690
M 20x1,5		460	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. TECHNICAL FEATURES

MODEL	WORKING WIDTH (CM)	LENGTH (cm)	HEIGHT (cm)	WEIGHT (kg)	NECESSARY POWER (BG)
HTSV 30	300	450	120	1100	70-80
HTSV 35	350	450	120	1045	90-100
HTSV 40	400	450	120	1200	110-130
HTSV 50	500	450	120	1310	140-160
HTSV 60	600	450	120	1420	180-200

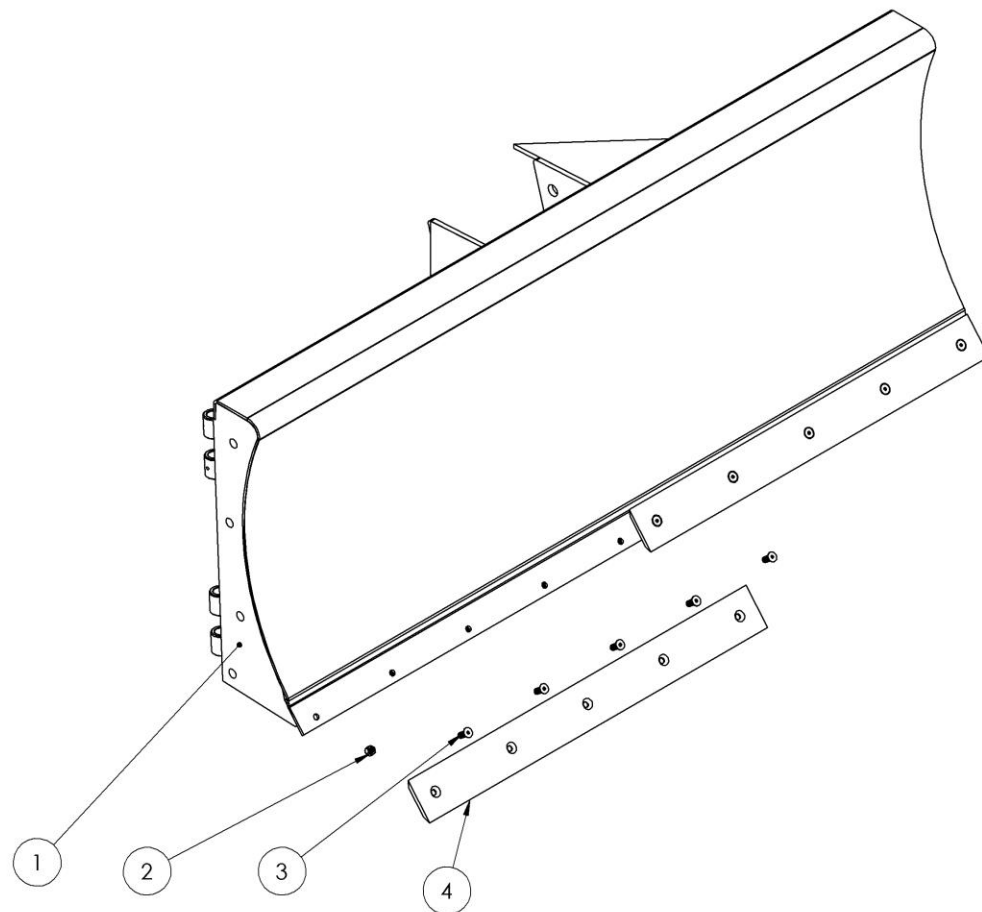
(*)Our firm can make any modification in the technical features of the models without making any notification in advance.

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

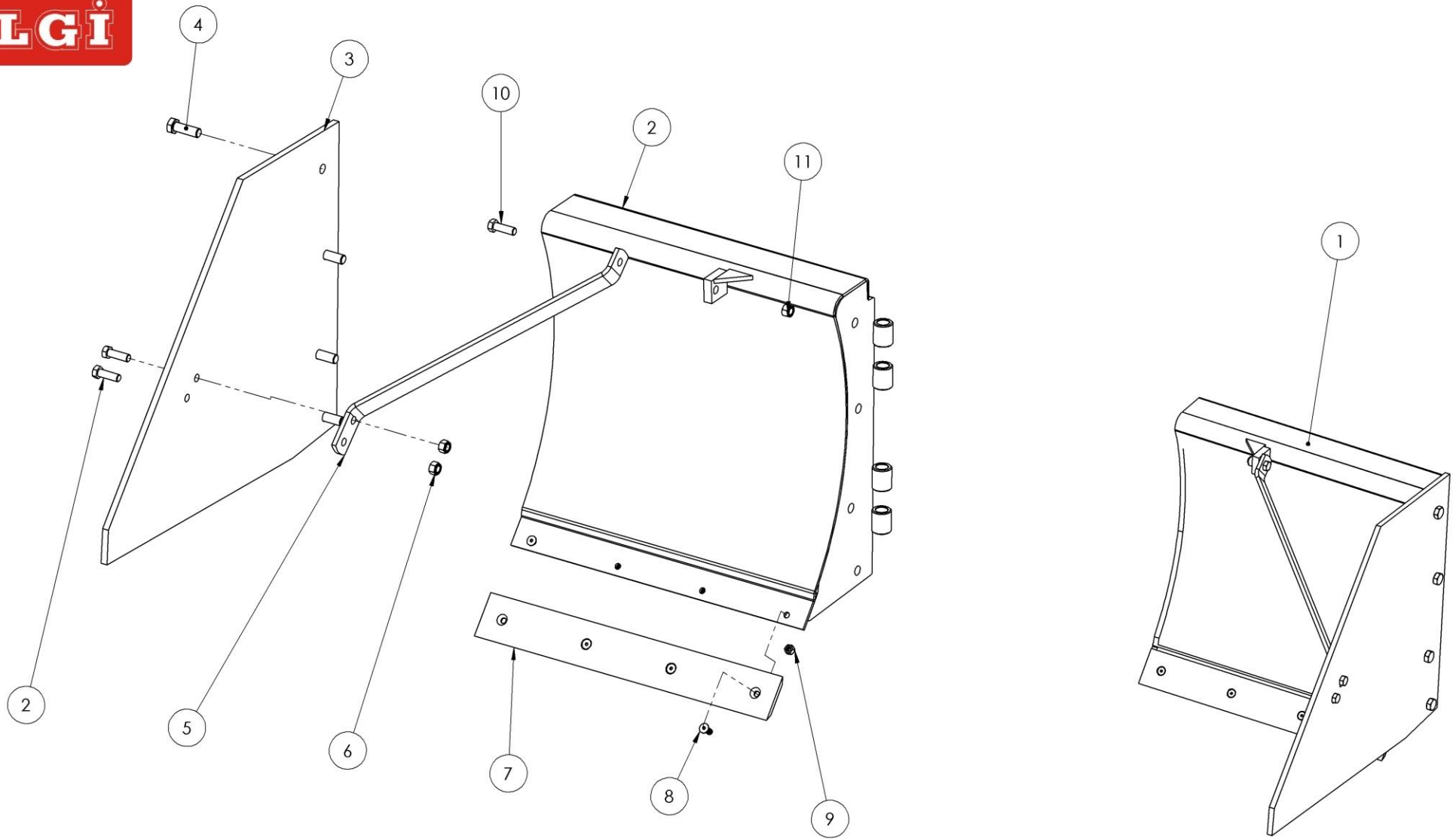


GENERAL ASSEMBLY

NO	PART CODE	NAME & DESCRIPTION
1	2.HTSV.110.00.000.0	DRAW BAR
2	2.HTSV.112.00.000.0	MIDDLE PADDLE HTSV 2 M
	2.HTSV.109.00.000.0	MIDDLE PADDLE HTSV 2,5 M
	2.HTSV.115.00.000.0	MIDDLE PADDLE HTSV 3 M
3	2.HTSV.101.01.000.0	LEFT PADDLE HTSV 0,50 M
	2.HTSV.102.01.000.0	LEFT PADDLE HTSV 0,75 M
	2.HTSV.114.01.000.0	LEFT PADDLE HTSV 1 M
	2.HTSV.113.01.000.0	LEFT PADDLE HTSV 1,25M
4	2.HTSV.101.00.000.0	RIGHT PADDLE HTSV 0,50 M
	2.HTSV.102.00.000.0	RIGHT PADDLE HTSV 0,75 M
	2.HTSV.114.00.000.0	RIGHT PADDLE HTSV 1 M
	2.HTSV.113.00.000.0	RIGHT PADDLE HTSV 1,25M
5	2.HTSV.111.00.000.0	AXLE-HTSV
	2.HTSV.111.01.000.0	AXLE 5 M HTSV
	2.HTSV.111.02.000.0	AXLE 6 M HTSV
6	7.4.28.1002	SPRING PIN Ø8
7	7.2.5.JNR.0006	HTSV PADDLE PIN
8	7.4.28.1001	SPRING PIN Ø10
9	2.JNR.101.03.000.0	DRAW BAR NECT
10	7.2.5.JNR.0007	DRAW BAR PIN
11	7.2.5.JNR.0004	DRAW BAR SHAFT
12	7.4.20.1034	WASHER.M38
13	7.4.23.1075	NUT SLOTTED.M38X3,5
14	7.2.5.JNR.0003	ASSEMBLY BOLT
15	7.4.23.1043	NUT M24 DIN 985
16	7.2.2.1016	MIDDLE ARM 550MM MF285
17	7.4.13.1007	WHELL 6.50 - 16
18	2.AGB.291.00.000.0	HUB GROUP
19	7.4.23.1041	NUT M20 DIN 985
20	2.HTSV.103.02.000.0	RIGHT AXLE (A)
21	7.4.18.1212	BOLT M20x50 DIN 931
22	7.2.5.HTSV.0005	HTSV AXLE PIN
23	2.JNR.103.02.000.0	RIGHT AXLE (B)
24	2.JNR.103.03.000.0	LEFT AXLE (A)
25	7.4.20.1011	WASHER M20 DIN 126
26	2.HTSV.103.03.000.0	LEFT AXLE (B)
27	7.4.38.1005	GREASE NIPPLE 5/16 H1
28	7.2.5.HTSV.0002	CYLINDER LONG PIN
29	7.4.3.1025	CYLINDER 70-45 H:300
30	7.2.5.HTSV.0001	CYLINDER SHORT PIN
31	7.4.2.1367	1/4" R2 L55CM M16*1,5 FEMALE-MALE HOSE
32	7.4.2.1131	1/4" R2 L85CM M16x1,5 FEMALE-MALE HOSE
33	7.4.1.1001	DOUBLE TWIN CLAMP Ø10
34	7.4.2.1456	HTSV.2 NO Ø10x1,5 250CM 2 HYD.PIPE
35	7.4.2.1455	HTSV.1 NO Ø10x1,5 250CM 2 HYD.PIPE
36	7.4.2.1056	1/4" R2 L150CM M16*1,5 R1/ MALE CAPLIN

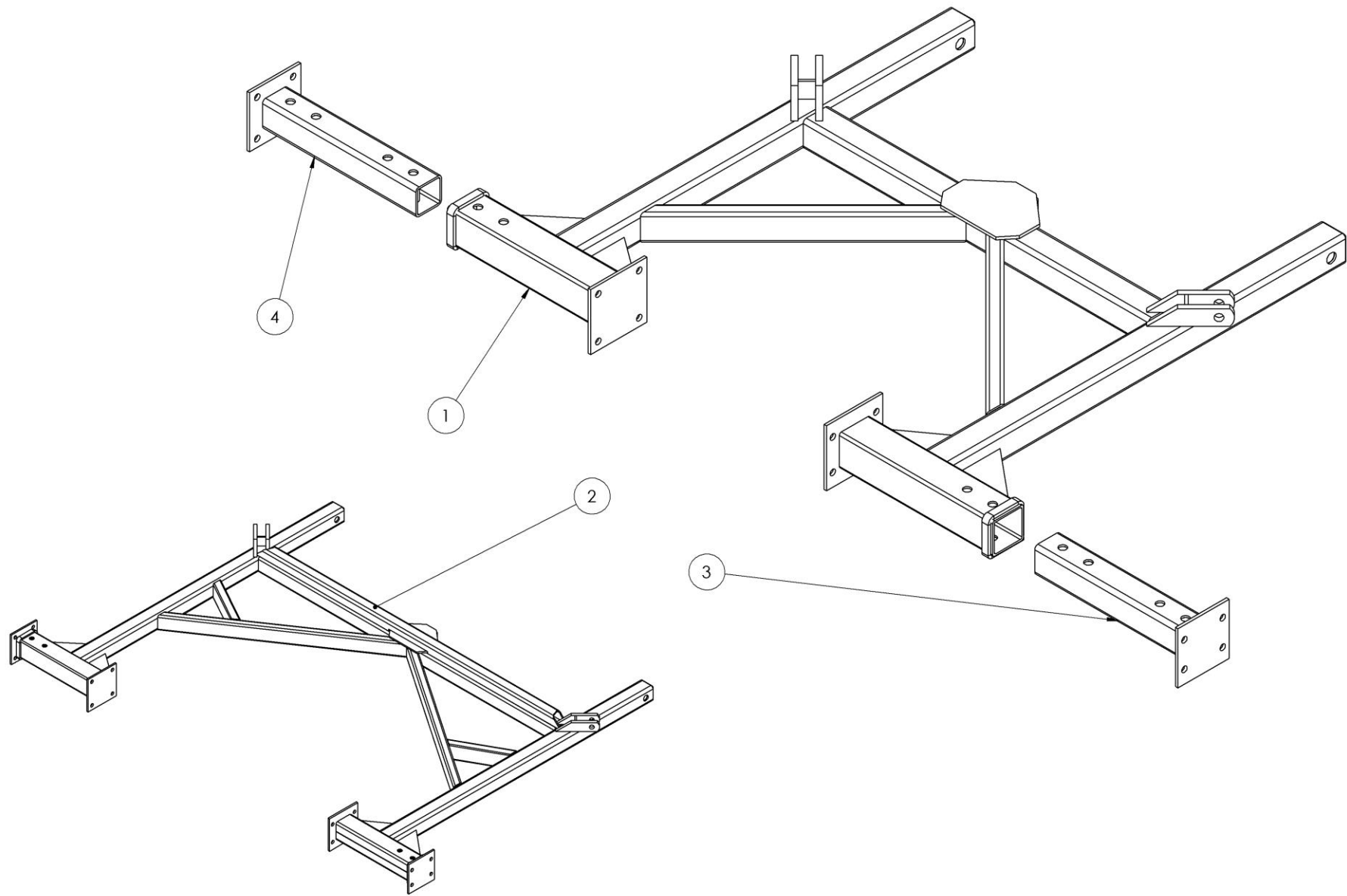


MIDDLE PADDLE		
NO	PART CODE	NAME & DESCRIPTION
1	2.HTSV.112.01.000.0	MIDDLE PADDLE FRAME HTSV 2 M
	2.HTSV.109.01.000.0	MIDDLE PADDLE FRAME HTSV 2,5 M
	2.HTSV.115.01.000.0	MIDDLE PADDLE FRAME HTSV 3 M
2	7.4.23.1037	NUT M12 DIN 985
3	7.4.18.1766	HEX HEAD BOLT M12x30
4	2.HTSV.112.00.013.0	BLADE 1 M
	2.HTSV.112.00.016.0	BLADE 1,25 M
	2.HTSV.112.00.015.0	BLADE 1,5 M



RIGHT – LEFT PADDLE

NO	PART CODE	NAME & DESCRIPTION
1	2.HTSV.101.01.000.0	LEFT PADDLE HTSV 0,50 M
	2.HTSV.102.01.000.0	LEFT PADDLE HTSV 0,75 M
	2.HTSV.114.01.000.0	LEFT PADDLE HTSV 1 M
	2.HTSV.113.01.000.0	LEFT PADDLE HTSV 1,25M
2	2.HTSV.101.00.000.0	RIGHT PADDLE HTSV 0,50 M
	2.HTSV.102.00.000.0	RIGHT PADDLE HTSV 0,75 M
	2.HTSV.114.00.000.0	RIGHT PADDLE HTSV 1 M
	2.HTSV.113.00.000.0	RIGHT PADDLE HTSV 1,25M
3	2.HTSV.102.00.003.0	MARKER HTSV
4	7.4.18.1214	BOLT M20x60 DIN 931
5	2.HTSV.113.00.009.0	PLATE JOIN
6	7.4.23.1041	NUT M20 DIN 985
7	2.HTSV.112.00.017.0	BLADE 0,50 M
	2.HTSV.112.00.014.0	BLADE 0,75 M
	2.HTSV.112.00.013.0	BLADE 1 M
	2.HTSV.112.00.016.0	BLADE 1,25 M
	2.HTSV.112.00.015.0	BLADE 1,5 M
8	7.4.18.1766	HEX HEAD BOLT M12x30
9	7.4.23.1037	NUT M12 DIN 985
10	7.4.18.1170	BOT M16x50 DIN 931
11	7.4.23.1039	NUT M16 DIN 985



AXLE CHASSIS		
NO	PART CODE	NAME & DESCRIPTION
1	2.HTSV.111.00.000.0	AXLE-HTSV
	2.HTSV.111.01.000.0	AXLE 5 M HTSV
2	2.HTSV.111.02.000.0	AXLE 6 M HTSV
3	2.HTSV.111.11.000.0	MOVING RIGHT AXIS
4	2.HTSV.111.10.000.0	MOVING LEFT AXIS

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