



# FORESTRY MULCHER

## BM 230

### USER MANUAL



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## WARNING

READ MANUAL BEFORE OPERATING



**DO NOT OPERATE OR PERFORM MAINTENANCE ON YOUR FORESTRY MULCHER WITHOUT READING AND UNDERSTANDING THIS ENTIRE MANUAL FIRST.**

**IF THIS MANUAL IS LOST OR IF YOU HAVE ANY QUESTIONS, CONTACT US OR YOUR DEALER BEFORE YOU PROCEED.**

Understand the written instructions, rules and safety precautions:

- The written instructions, rules and safety precautions are outlined in this operation and safety manual.
- Check the rules and regulations at your location. The rules include employer's work safety regulations and local government guidelines and restrictions for safe operation of the equipment.

Perform application training with operator:

- Conduct field instruction with a trained Operator. Application training should include complete vehicle safety, operation training, complete mulching safety and application training.
- Know and understand your work conditions; hazards should be reviewed and terrain surveyed at this time as well as with all new work sites.
- Verify that the machine is in complete safe working order and prepared for your application.

# SAFETY

## General

The Forestry Mulcher is designed to process heavy organic material such as branches, stumps, heavy timber and brush.

## Safety first

With any piece of equipment, new or used, the most important part of its operation is SAFETY! We encourage you and your employees to familiarize yourselves with your new equipment and to STRESS SAFE OPERATION!

## Prior To operation

- Read the owner's manual in its entirety and follow all safety procedures.
- Check all grease points per the owner's manual.
- Inspect all fasteners for tightness with power off.
- Manually turn rotor to inspect tool bolts with engine off.
- Check gearbox oil (PTO models) for proper level per owner's manual.

## Forestry Mulcher – Description and Applications

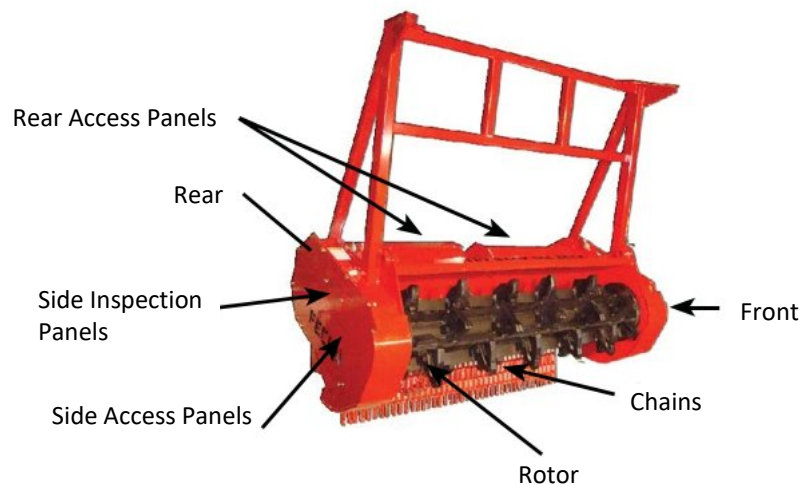
Forestry	Orchard Removal	Land Clearing
Transfer Stations	Stump Grinding	ROW Maintenance
Yard Waste Process	Forest Fire Prevention	Brush and Slash Piles

The versatile Forestry Mulcher was designed for shredding woody materials. The Forestry Mulcher excels at processing yard waste, land preparation and slash reduction. It has multiple uses for farmers, parks, golf courses, loggers, land clearing companies, ranchers, foresters and Silva culturists.

The Forestry Mulcher shreds material into a fine particle size by going over the shredded material until the desired texture is achieved. If left on the ground, the shredded material is beneficial to the soil. On steep slopes the output from the mulcher is ideal for interim erosion control.

### Operational Safety: The Work Area

For the sake of this manual, the front of the mulcher is the side with the rotor exposed. The rear has defection chains. For crawlers and rubber tire machines, when the mulcher is mounted on the front of the machine, the front of the mulcher is facing the same forward direction. If mounted on the rear, the front of the mulcher is facing away from the rear of the carrier. Mounting for excavators and other boom-type installations may vary but references to the front and rear of the mulcher remain the same.



## The hazard zone

 **DANGER**

**FLYING DEBRIS OR OBJECTS AND FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH**



**Improper operation and failure to follow safety precautions can cause serious injury or death. All personnel must be clear of the hazard zone while the Mulcher is in operation.**

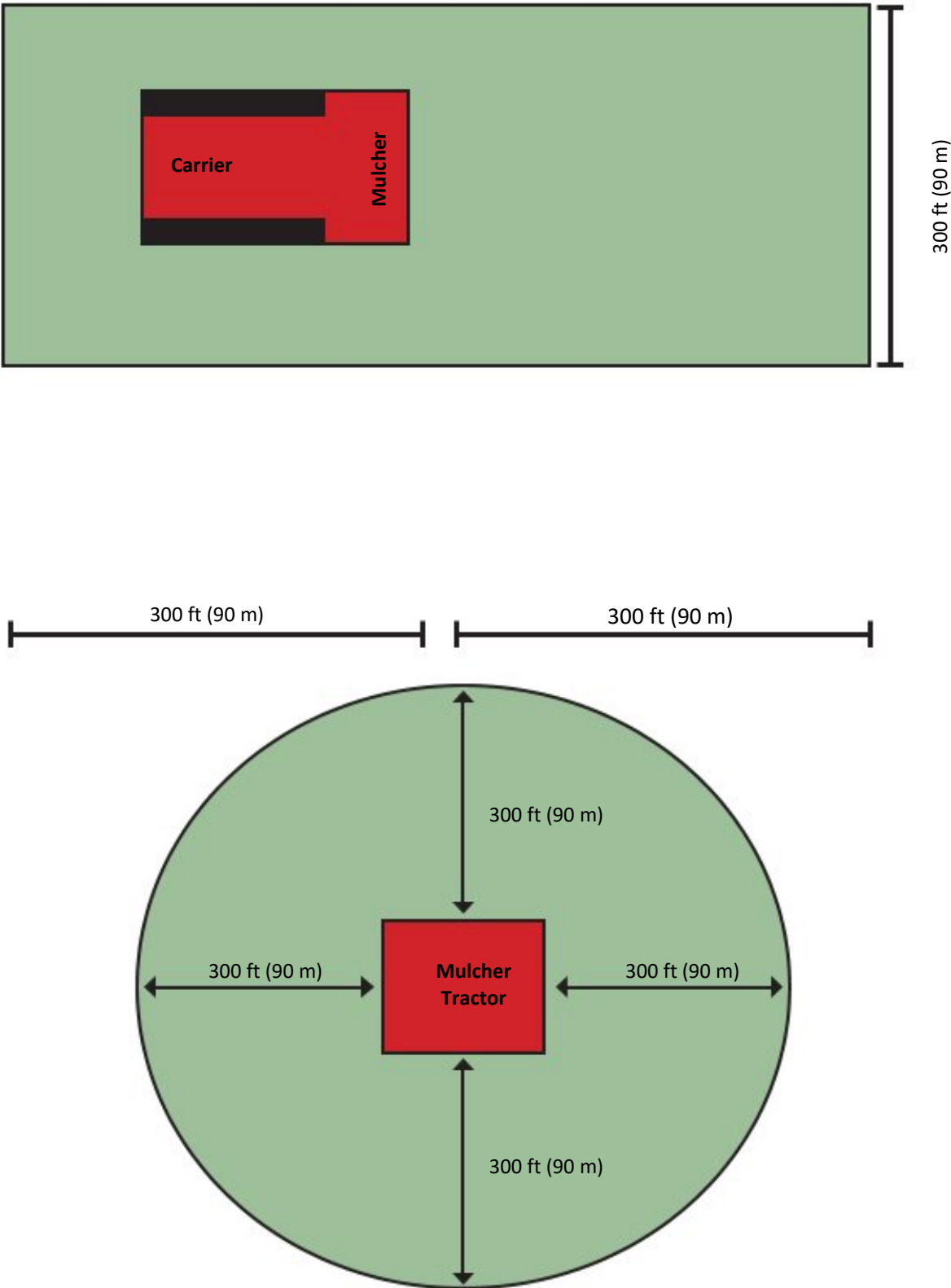
The Hazard Zone is illustrated in *Figure 1.1* on the following page. All personnel should be kept clear of this zone while the mulcher is operating.

The shaded area in the Hazard Zone must be considered OFF LIMITS TO ALL INDIVIDUALS! The operator should follow the PRECAUTIONS below before and during operation of the mulcher.

### **Hazard Zone Precautions**

- It is the OPERATORS RESPONSIBILITY to ensure that NO ONE ENTERS THE HAZARD ZONE!  
**WARN all persons in the area of the HAZARD ZONE**
- STAY ALERT for outsiders entering the work area who may not be aware of the HAZARD ZONE.
- Land clearing operations generally involve other machinery and people on the site. MAINTAIN an AWARENESS of all working traffic within 150 ft (45 m) (to each side) and 300 ft (90 m) (in front and behind) of the Mulcher operation.

FIGURE 1.1



## Operator Protection



# DANGER

**FLYING DEBRIS OR OBJECTS AND FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH**



- Install minimum of 1/2" thick (1.25cm) Lexan™ Polycarbonate cab windows.
- Install approved FOPS Falling Object Protection.
- Replace damaged or missing Polycarbonate windows or falling object protection components.

**Improper operation and failure to follow safety precautions can cause serious injury or death. All personnel must be clear of the hazard zone while the mulcher is in operation.**

### Take the following precautions!

The following precautions are recommended for operator protection. Additional guarding may be required to protect the carrier, such as belly pans or skid plates, etc. Always follow safety regulations and certifications for your specific industry. Check with the manufacturer of your carrier for recommended operator protection.

#### For PTO Carriers:

- A 1/2" (1.25cm) thick polycarbonate or equal, should be installed in place of or outside of the cab glass between the operator and the mulcher.
- A steel mesh screen of 2" (5cm) maximum openings and 1/4" (.6cm) diameter wire is recommended outside of the cab between the mulcher and the operator to protect Polycarbonate from scratches.

## Stopping the Rotor Before Exiting the Carrier

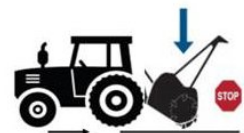


# WARNING

**Contact with moving rotor can cause serious injury or death. Do not exit the vehicle before the rotor stops.**

#### To stop rotor:

1. Lower the engine speed to Idle.
2. Shut off the mulcher circuit.
3. Push the rotor into the ground or other debris until rotor stops.



If there is no place to stop the rotor, wait for the rotor to stop before exiting the cab.



## MULCHER OPERATION



# DANGER

The following instructions will help to assure that your Forestry Mulcher is operated safely and effectively. Read this section carefully and use extreme caution at all times.

**FLYING DEBRIS OR OBJECTS AND FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH**

Exercise extreme caution to assure that all personnel are outside of the HAZARD ZONE as described in 'The hazard zone'.

### Pushworking

Raise the head above the work to be done or as high as possible. The hydraulic top link of the three-point hitch carriers or the tilt cylinders of loader arms on most hydraulic carriers are retracted to its innermost position. This rotates the entire machine and trap door upwards to maximize the rotor area to the work. Move the carrier forward to engage the work.

**Position the Mulcher so that:**

- If equipped with a trap door put it in the open position to allow maximum exposure of the mulcher tools to the work.
- Engage the work fully.
- Lower the head as the work allows. When RPM begins to drop, move carrier slowly back while continuing to lower the head. Rotate the head downward as the head approaches the ground using care not to rotate the head too quickly.

Gauge carrier speed and shredding depth by monitoring the engine RPM's in response to the mulcher tools contacting and grinding the work. Do not allow the engine to slow below its torque curve or beyond the engines ability to quickly recover when the load is removed.





# DANGER

### HAZARD ZONE

**FLYING DEBRIS OR OBJECTS AND FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH**



Exercise extreme caution to assure that all personnel are outside of the HAZARD ZONE as described in 'The hazard zone'.

Now the head is positioned properly for shredding the work you have taken down. A major factor in successful operation is learning how soon to start going back the way you came. It is in this mode that the finish work is performed.

- Begin shredding pullback when chains are slightly off the ground and the front corner of the mulcher shoes contact the ground. Note: for fine grind raise head slightly off ground AFTER contact.
- The mulcher is moved slowly back grinding the material repeatedly against the counter combs inside the body. Closing the trap door (if equipped) will retain as much material as possible within the mulcher shroud for safe operation and maximum shredding.

Just as in the Take Down Mode, work the lift slightly up and down in response to the carriers engine RPM's and proceed in low speed gear.

## Stump Grinding

### Out of Ground (loose) stumps

- The tilted-back cutter head is raised up and slowly brought down to plane a layer off the stump. Raise up and plane down.
- As a general rule, do not rotate the cutter head forward because the rotor might catch the loose stump and eject it towards the tractor.
- Sometimes it is better to dig a hole with the rotor to roll the stump into so that it can be pinned in one place to be ground down.
- Lower the mulcher to keep the stump engaged and pinned to the ground. Proceed grinding downward with the mulcher's tools climbing up and over the stump.
- Repeat this process as the mulcher works through the stump an inch or two at a time, taking great care not to eject the shrinking stump under the carrier.

### Fixed (in ground) stumps

- Grinding off stumps still in the ground simply requires the back- and forth motion of the tractor while the cutter head is being incrementally lowered.
- Stump grinding is most effective in the forward direction. This allows the rotor to walk over the stump as it grinds with the added force of gravity and positive kinetic energy in its favor.

**NOTICE:** A rotor that moves back and forth changes the angle of attack, changes the tool arc, has less total friction to overcome, tears the fiber laterally, and helps split the tree fibers horizontally.

## Finishing the Work

Now that the Material has been taken down, shredded and stumps have been removed you can do the finishing grind.

- All final grinding should be done in the backward direction. Raise the head clear of the materials and move forward to begin each finishing pass.
- Begin shredding pullback when chains are slightly off the ground and the front corner of the mulcher shoes contact the ground. Note: for fine grind raise head slightly off ground AFTER contact.
- The slower the carrier speed, the finer the grind.

## Hydraulic Push Bar Operation (Optional Equipment)

### For smaller trees

- The push bar leans small trees over so that when they engage the mulching rotor, they do not fall on the carrier.

### For larger trees

- Retract the hydraulic top link or hydraulic cylinders of loader arms to rotate the mulcher back far enough so that all the tools contact the tree and begin to cut through it.
- When a majority portion of the trunk has been cut (e.g. 7" (18cm) of a 12" (30cm) tree) extend the push bar cylinders to push the tree away from the carrier as the rest of the tree is cut through.

### The Optional Rake Teeth

- Rake Teeth attach to the hydraulic tilting push bar (optional).
- Rake teeth are rotated down to near ground level when lowering push bar.
- Rake teeth are helpful when material lies on inaccessible or uneven areas, e.g. slopes, embankments, etc., and pulls it to level ground for shredding.
- Rake teeth can be used to disengage piles of brush, making it possible to cut and build up mulch layers neatly, one layer at a time.

## Trap Door (Optional Equipment)

### The Trap Door

- Opens to maximize exposure of the mulching tools while in the takedown mode.
- Closes to contain the whirling brush within the mulcher shroud for maximized shredding in the pull-working and finishing modes.



Closed  
Trap Door



Open  
Trap  
Door

# CAUTION

TRAP DOOR MUST BE OPEN WHEN TAKING DOWN TREES AND HEAVY BRUSH! THE DOOR WILL BE DAMAGED IF RAMMED.

## PREVENTATIVE MAINTENANCE

Proper preventive maintenance will help ensure that the Mulcher will perform to its full capabilities and eliminate unnecessary breakdowns due to neglect.

**THE MANUFACTURER'S WARRANTY IS CONDITIONAL UPON FOLLOWING ALL MAINTENANCE RECOMMENDATIONS.**

- Dismantle the machine only on flat and firm ground.
- Uncouple the cardan shaft and place it in the holding chain. (On PTO drive machines only.)
- To elevate the rotor above ground level, adjust the depth shoes down or position the depth shoes on firm blocks. This will allow the rotor to be rotated for cleaning, replacing belts, and replacing tools. While performing maintenance, only rotate the rotor manually!
- Always double-check the stability of the mulcher before reaching under or into the machine!
- The weight of the mulcher lightens the carriers rear wheel weight. When transporting the unit, at least 20% of the carriers unladen weight has to lie on the front axle to assure reliable steering and avoid tipping backwards. Weight the carrier front accordingly.
- Use only original replacement parts for repairs

### Rotor Power Belts

(The mulching rotor is driven by power drive belts.)



- Shut-off the engine. Put carrier in depressurized state.
- Wait until all machine components have completely stopped before touching them.
- Use lockout/tagout procedure (29CFR 1910.147) during any inspection or maintenance.
- Secure lifting cylinder with locking device before getting in hazardous area.
- Insert safety lock before getting in hazardous area. Attach support before getting into hazardous area.

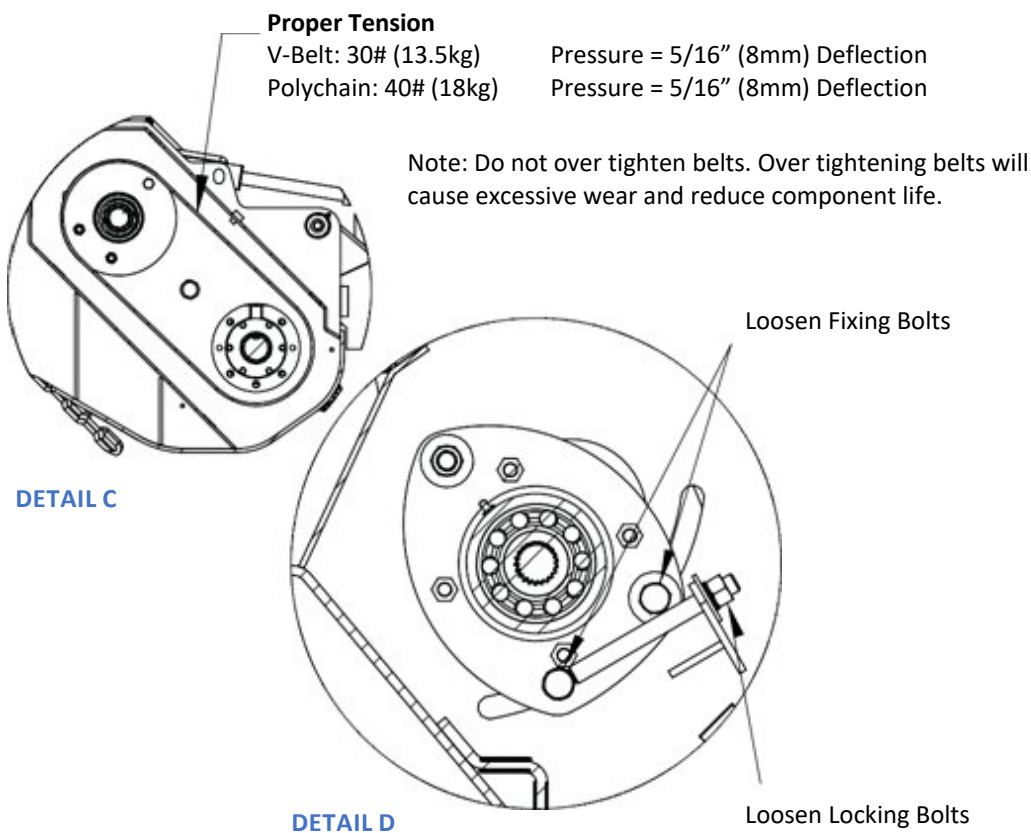
**Refer to the Safety Section in this manual for more information.**

#### Adjusting Rotor Drive Belt Tension (See Figure 6.1)

- After first 8 hours of operation re-tension belts.
- Should be checked every 10-20 working hours and more frequently in the first 24 to 48 hours of operation.
- Remove the inspection plates from the side access panels to check belt tension.
- Open the access doors at the rear of the mulcher to expose the adjustment bolt and fixing screws.

- Loosen the fixing screws until the bearing housing can be moved with the adjusting bolt.
  1. Ideal tension is the lowest tension at which the belt will not slip under peak load conditions. Refer to Figure 6.1 for belt deflection at the center of the span between pulleys.
  2. Over tensioning shortens belt and bearing life.
  3. Keep belts free from foreign material, which may cause slip- page.
  4. Never apply belt dressing as this will damage the belt and cause early failure.
- When proper tension is achieved:
  - Lock the adjusting bolt.
  - Tighten the fixing screws.
- To Replace Drive Belts Follow the same procedure as stated above for adjusting belts except:
  - Remove entire side access panels.
  - It is not necessary to remove side inspection plates which are mounted to the access panels.

FIGURE 6.1



## WARNING

### DO NOT OPERATE WITHOUT GUARDS

DO NOT OPERATE THE MULCHER WITHOUT ALL GUARDS IN PLACE. SIDE ACCESS PANELS MUST BE RE-INSTALLED PRIOR TO RUNNING! SEE SAFETY PANEL IDENTIFICATION.

## Lubrication Points

# NOTICE

### LUBRICATION TYPE

The manufacturer's warranty is conditional upon using a quality #2 lithium based grease.

# WARNING



- Shut-off the engine. Put carrier in depressurized state.
  - Wait until all machine components have completely stopped before touching them.
  - Use lockout/tagout procedure (29CFR 1910.147) during any inspection or maintenance.
  - Secure lifting cylinder with locking device before getting in hazardous area.
  - Insert safety lock before getting in hazardous area. Attach support before getting into hazardous area. Refer to the Safety Section in this manual for more information.
- 
- Rotor Bearings – Grease Daily. Use 1 pump of grease for each hour of operation. For best results and to ensure long component life grease 4 pumps after every 4 hours of operation.



Rotor Bearing Grease Point

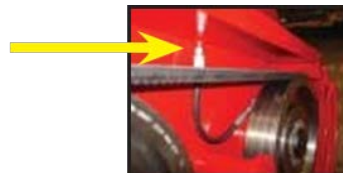
Optional: Trap Door Grease Point



Rotor Bearing Grease Point

Optional: Pushbar Grease Point

Notice: If grease is noticed inside the belt housing, decrease the frequency of lubrication.



## OVER LUBRICATING DRIVE BEARING

# CAUTION

**Over-lubricating sealed drive bearings will cause premature seal failure resulting in bearing failure, premature shaft wear and/or hydraulic motor shaft failure.**

### **Tighten All Bolts!**

The mulcher is assembled with superior grade fasteners with locking nuts where applicable and torqued to their proper range. All precautions are taken to keep bolts tight but with the forces exerted by the mulcher the potential for loosening bolts exists.

- Go over the machine and check all bolts for tightness after the first 10 hours.
- Check all bolts daily thereafter

## Rotor maintenance

### CAUTION

#### Visual Inspection

- Safely Position the machine as instructed in Section 6.1 so that the rotor turns freely.
- Check the tools daily for:
  - Lateral clearance
  - Bolt tightness (See model specific parts manual for torque value.
  - Condition of carbide tips

**After 20 to 40 hours of operation all tools must be checked for proper torque. Failure to check torque after initial 20 to 40 hours can result in tool and tool holder failure. Note: See rotor specific parts manual for torque specifications.**

### NOTICE

#### Tool Replacement

- Remove fixing bolts.
- Remove old tool and insert new tool.
- Torque new fixing bolts and torque to factory specifications (see your specific model parts manual). Use only factory supplied high strength bolts.

**Always use new hardware to ensure proper torque.**

## Disposal procedure

- Do not discard into municipal waste stream.
- Disassemble and contain hydraulic components in approve container. Discard through a licensed processing facility.

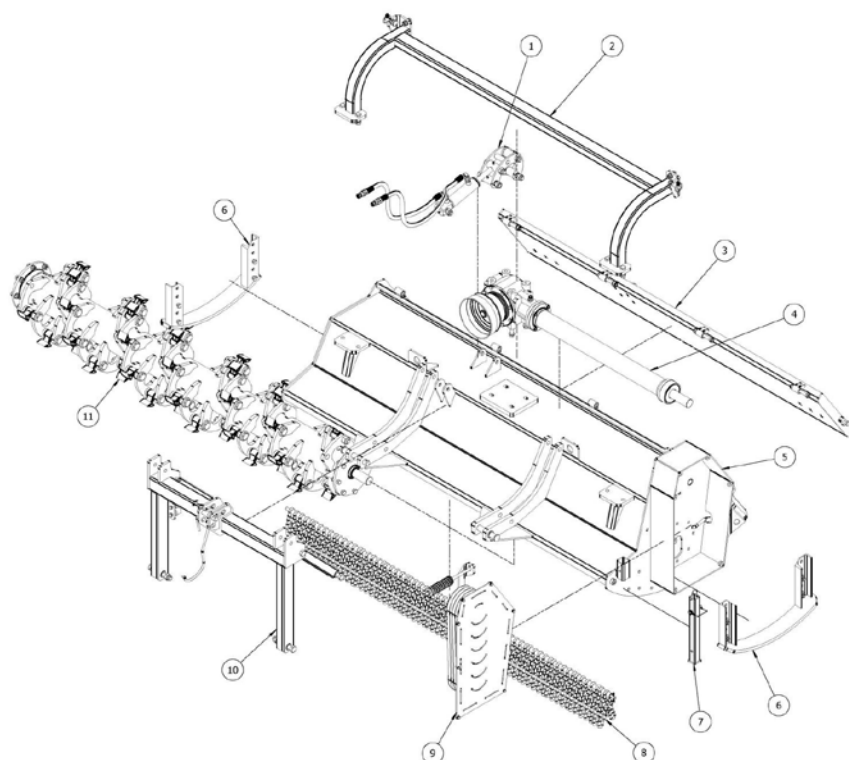


## PARTS LIST

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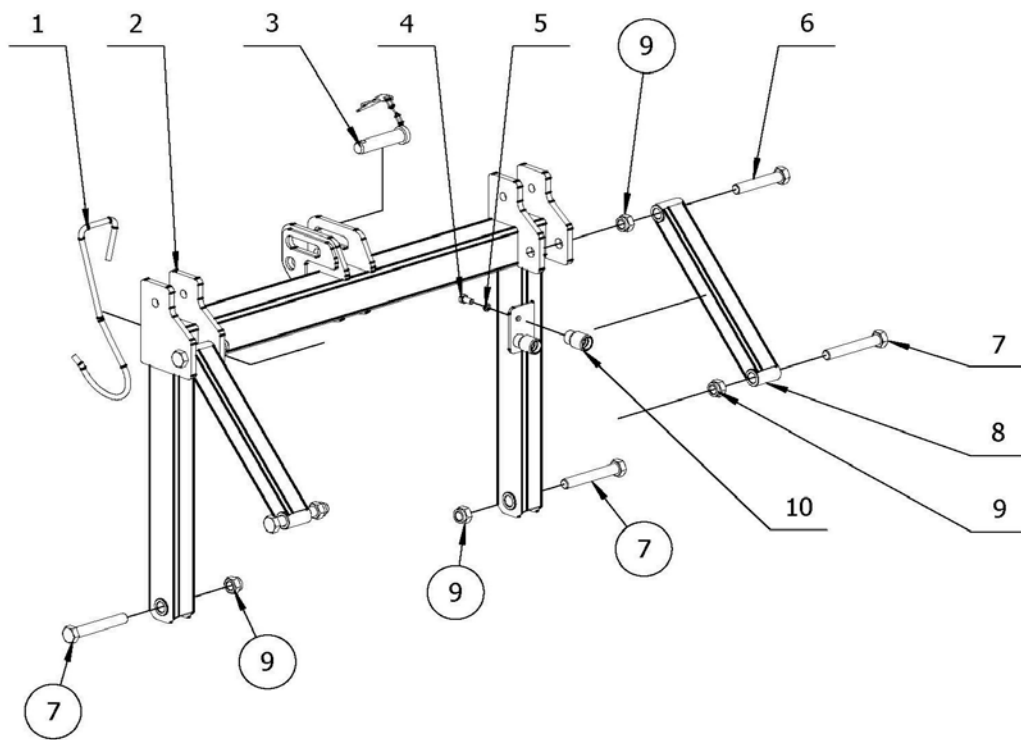


## Forest machine (picture A)



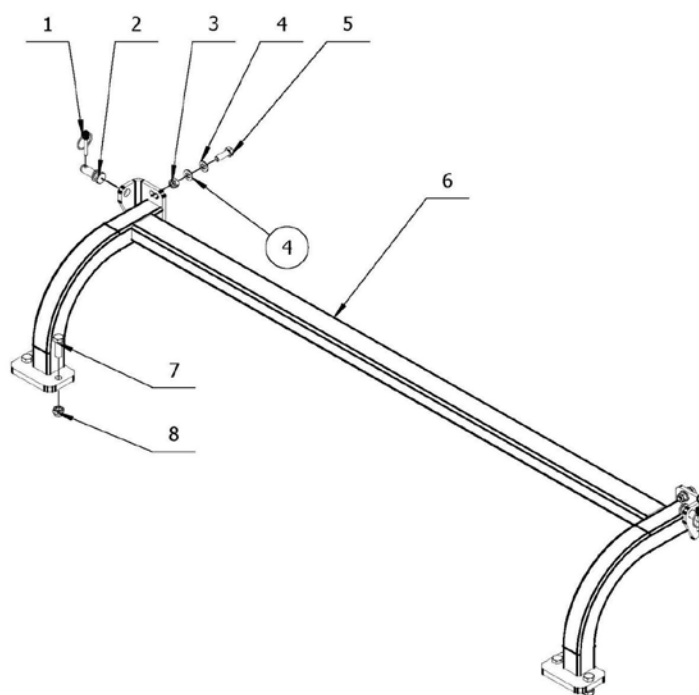
Forest machine (picture A)				
Item	Part no.	Name	Qty	Remark
1	1JL226-0000-0000-3	Parts -3	1	Corresponding (picture 3)
2	1JL226-0000-0000-2	Parts -2	1	Corresponding (picture 2)
3	1JL226-0000-0000-5	Parts -5	1	Corresponding (picture 5)
4	1JL226-0000-0000-4	Parts -4	1	Corresponding (picture 4)
5	1JL226-0000-0000-11	Parts -11	1	Corresponding (picture 11)
6	1JL226-0000-0000-6	Parts -6	2	Corresponding (picture 6)
7	1JL226-0000-0000-7	Parts -7	1	Corresponding (picture 7)
8	1JL226-0000-0000-8	Parts -8	1	Corresponding (picture 8)
9	1JL226-0000-0000-9	Parts -9	1	Corresponding (picture 9)
10	1JL226-0000-0000-1	Parts -1	1	Corresponding (picture 1)
11	1JL226-0000-0000-10	Parts -10	1	Corresponding (picture 10)
12	1JL226-0000-0000-12	Parts -12	1	Corresponding (picture 12), not listed in picture A

### Forest machine (picture 1)



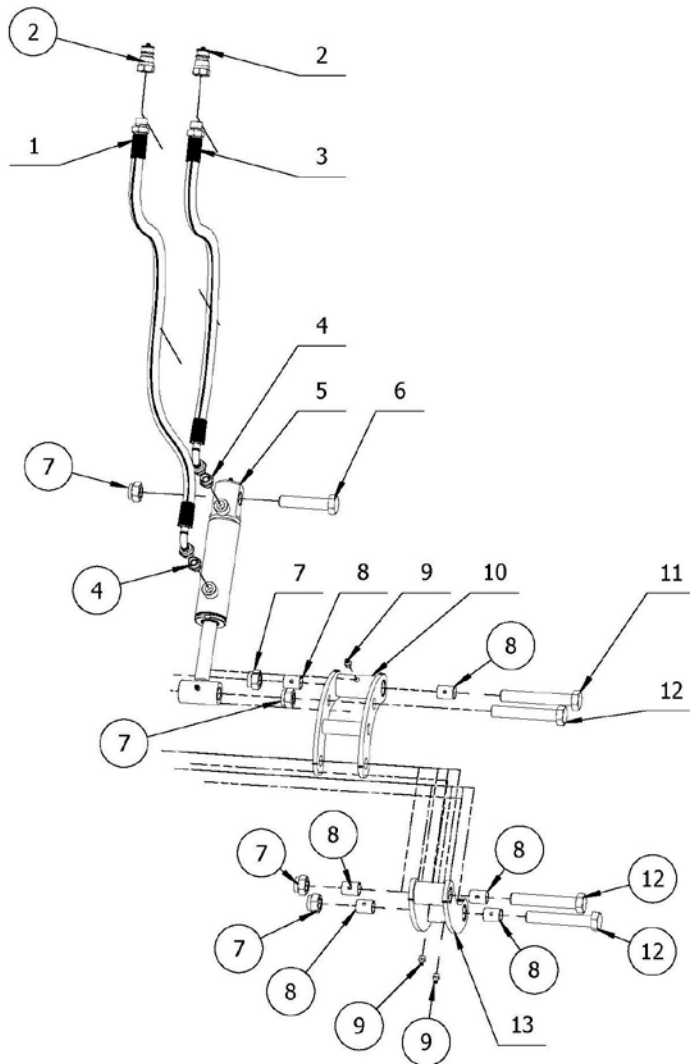
Forest machine (picture 1)					
Item	Article no.	Parts no.	Name	Qty	Remark
1	710730003	1JL226-0000-0001	hook	1	
2	810730066	1JL226-0300-0000	Suspension frame	1	
3	805760001	1G-180-00-019	Upper suspension pin	1	
4	501011111	GB5783-M10X20	Full thread bolt	2	
5	506030036	GB93-10	Spring washer	2	
6	501010808	GB5782-M20X110	Half thread bolt	2	
7	501010810	GB5782-M20X130	Half thread bolt	4	
8	810730116	1JL226-1500-0000	Suspension pull rod	2	
9	503010767	DIN985-M20	Hexagon lock nut	6	
10	809820065	AGFR245-2500-00	Fixing sleeve	2	

## Forest machine (picture 2)



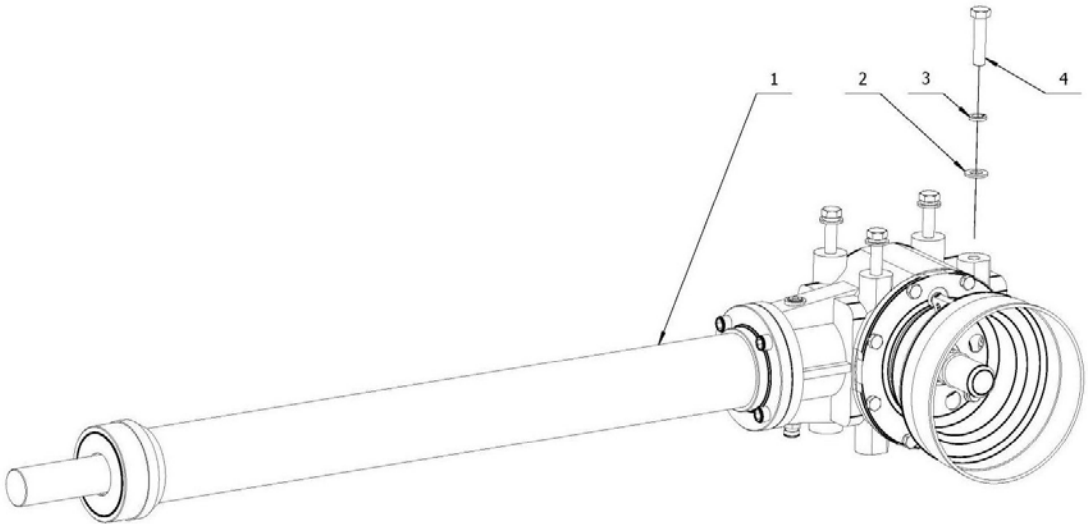
Forest machine (picture 2)					
Item	Article no.	Parts no.	Name	Qty	Remark
1	804750219	1LTF-550-G11004	Lock pinΦ8	2	
2	710730160	1JL226-0000-0022	Fixing pin 1	2	
3	503010764	DIN985-M14	Hexagon lock nut	2	
4	506010058	GB97.1-14	Plain washer	4	
5	501011142	GB5783-M14X40	Full thread bolt	2	
6	810730061	1JL226-0200-0000	Back shield frame	1	
7	501011160	GB5783-M16X50	Full thread bolt	4	
8	503010765	DIN985-M16	Hexagon lock nut	4	

### Forest machine (picture 3)



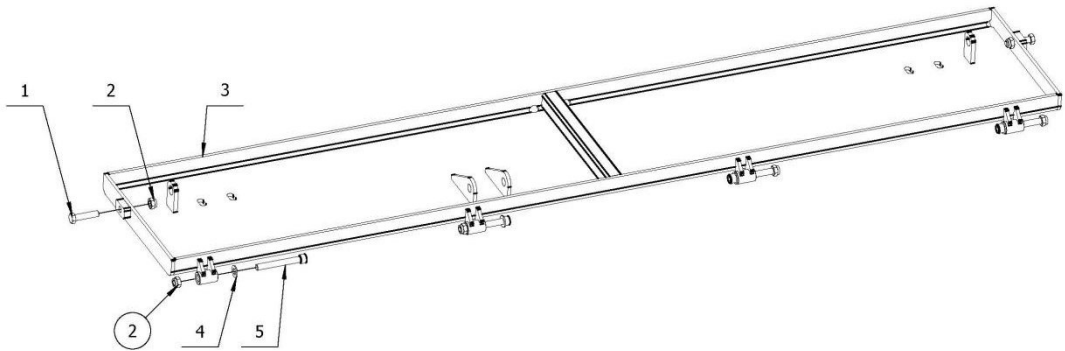
Forest machine (picture 3)					
Item	Article no.	Parts no.	Name	Qty	Remark
1	810730115	1JL226-1400-0000	Oil pipe	1	
2	703820055	QUICK-COUPLING-G1/2-G	Quick pin end G1/2	2	
3	810730114	1JL226-1300-0000	Oil pipe	1	
4	700250036	1CB-18-06WD	Adapter M18X1.5-G3/8	2	
5	810730113	1JL226-1200-0000	Cylinder	1	
6	501010806	GB5782-M20X90	Half thread bolt	1	
7	503010767	DIN985-M20	Hexagon lock nut	5	
8	710730025	1JL226-0000-0017	Bearing COB 02 2030	6	
9	509010009	GB1152-M10X1	Oil cup	3	
10	810730103	1JL226-0900-0000	Cylinder pull set2	1	
11	501010810	GB5782-M20X130	Half thread bolt	1	
12	501010809	GB5782-M20X120	Half thread bolt	3	
13	810730107	1JL226-1000-0000	Cylinder pull set1	1	

**Forest machine (picture 4)**



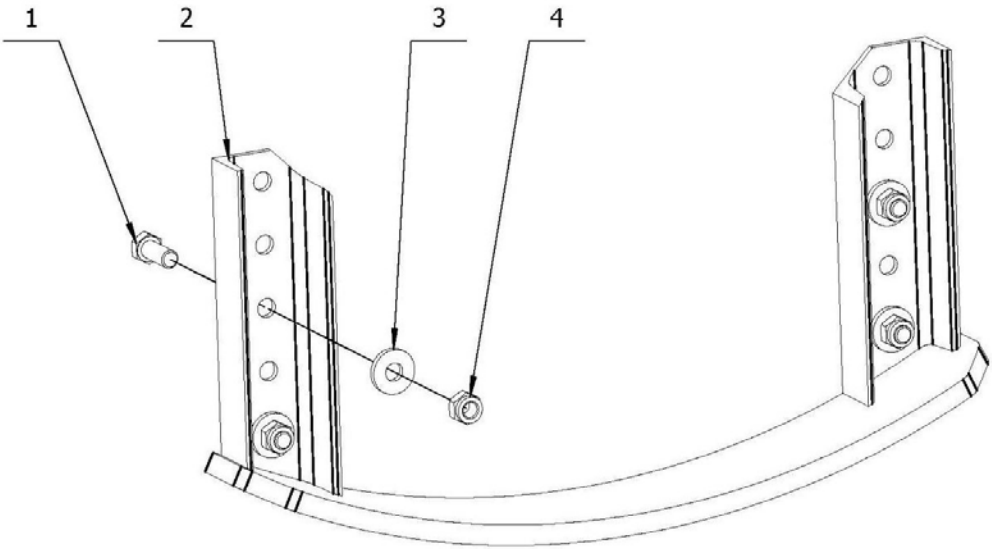
Forest machine (picture 4)					
Item	Article no.	Parts no.	Name	Qty	Remark
1	810730074	1JL226-0400-0000	Transmission assembly	1	
2	506010058	GB97.1-14	Plain washer	4	
3	506030038	GB93-14	Spring washer	4	
4	501010768	GB5782-M14X60	Half thread bolt	4	

**Forest machine (picture 5)**



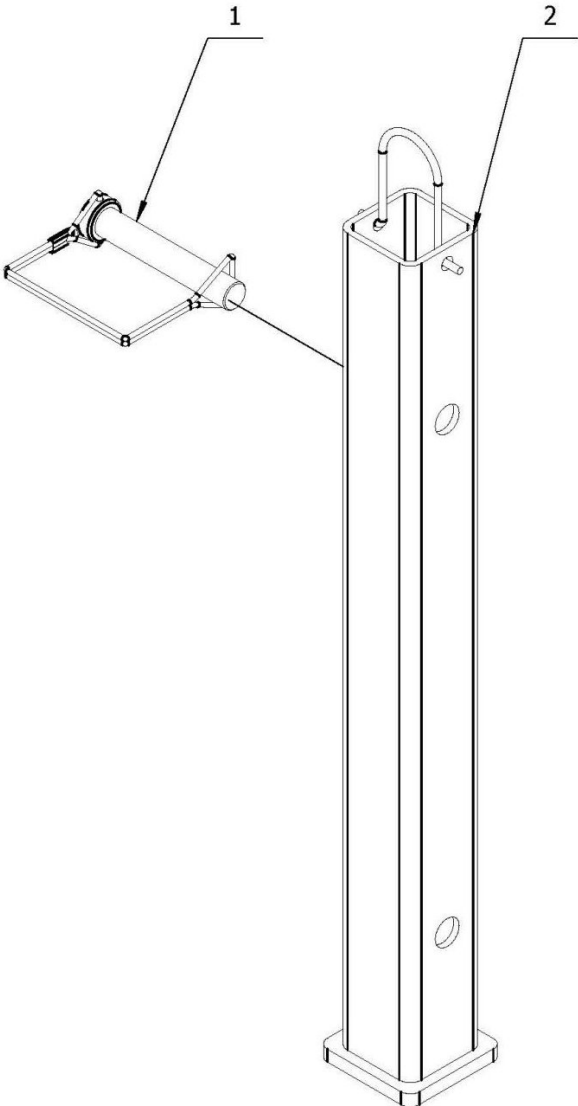
Forest machine (picture 5)					
Item	Article no.	Parts no.	Name	Qty	Remark
1	501010768	GB5782-M14X60	Half thread bolt	2	
2	503010764	DIN985-M14	Hexagon lock nut	6	
3	810730096	1JL226-0800-0000	Rear cover 1	1	
4	506010058	GB97.1-14	Plain washer	4	
5	505011471	GB70.1-M14X110	Screw	4	

**Forest machine (picture 6)**



Forest machine (picture 6)					
Item	Article no.	Parts no.	Name	Qty	Remark
1	501011141	GB5783-M14X35	Full thread bolt	4	
2	810730086	1JL226-0500-0000	Sliding rail 1	1	
3	710730010	1JL226-0000-0008	Sliding rail pad 1	4	
4	503010764	DIN985-M14	Hexagon lock nut	4	

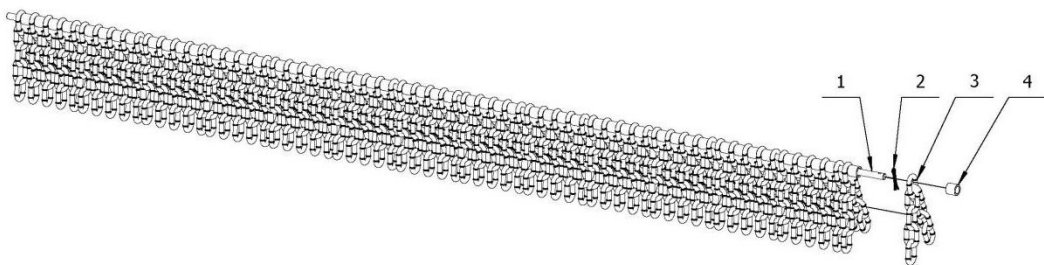
**Forest machine (picture 7)**



<b>Forest machine (picture 7)</b>					
Item	Article no.	Parts no.	Name	Qty	Remark
1	800920101	EF100.00.111A	D square pin	1	
2	810730091	1JL226-0700-0000	Brace assembly	1	

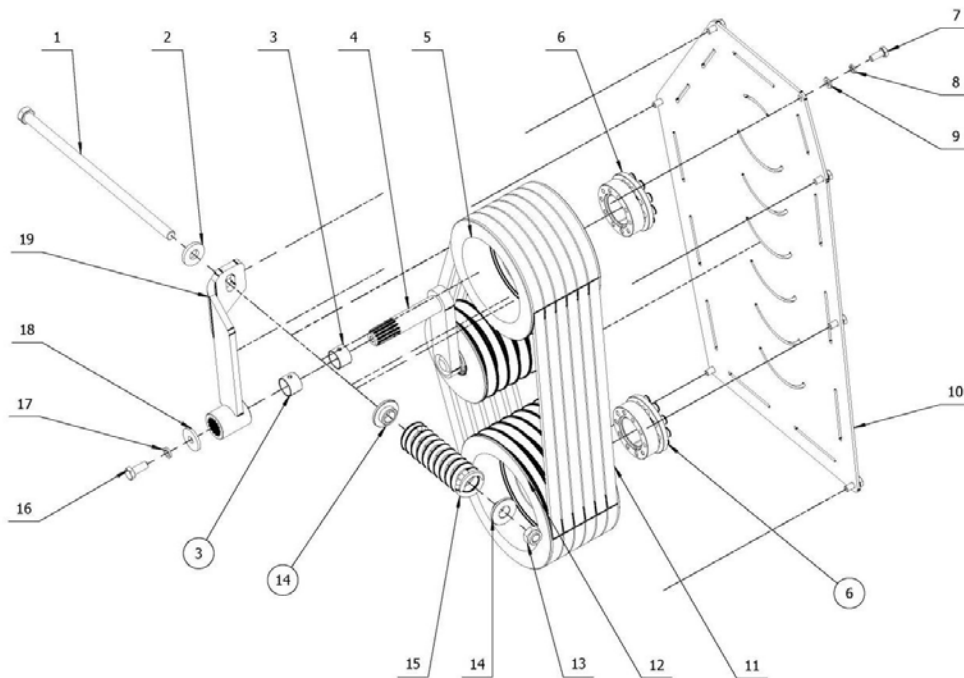


**Forest machine (picture 8)**



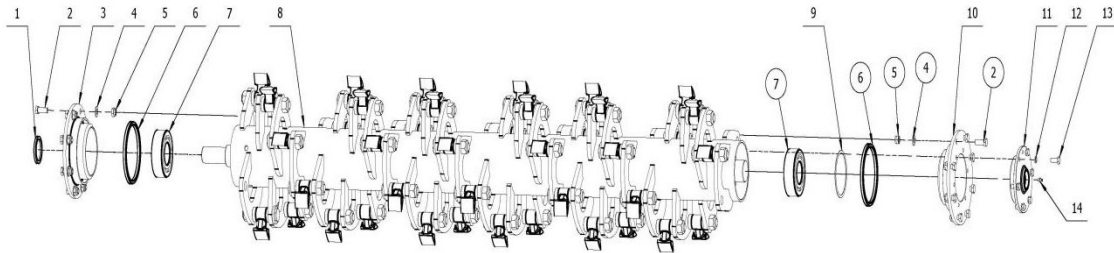
Forest machine (picture 8)					
Item	Article no.	Parts no.	Name	Qty	Remark
1	710730011	1JL226-0000-0009	Chain pole 1	1	
2	508050100	GB91-5X40	Cotter pin	1	
3	810730090	1JL226-0600-0000	chain	67	
4	710730004	1JL226-0000-0002	Spacer bush 1	54	

## Forest machine (picture 9)



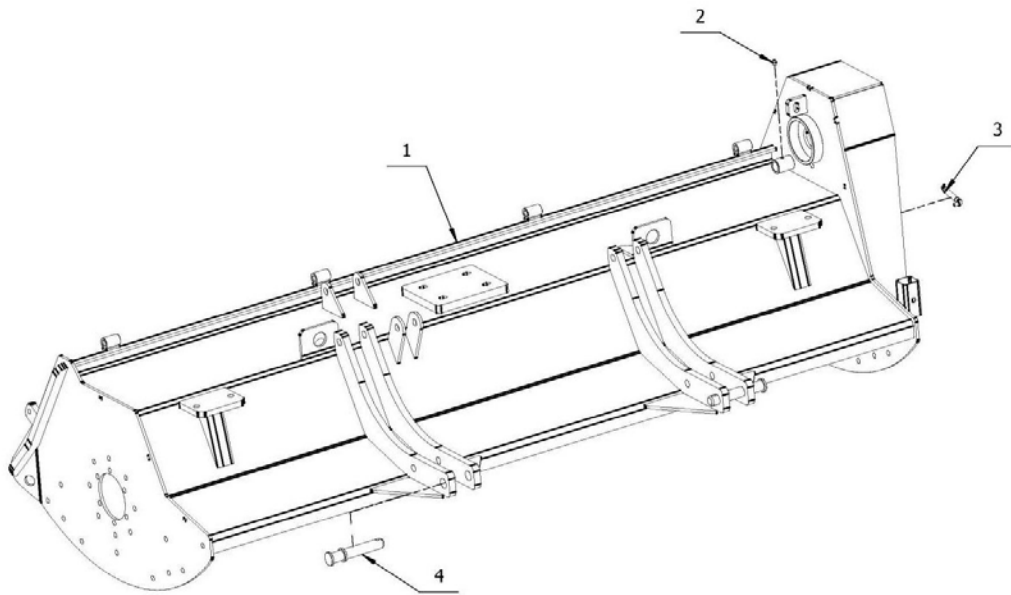
Forest machine (picture 9)					
Item	Article no.	Parts no.	Name	Qty	Remark
1	710730028	1JL226-0000-0020	Tensioning bolt 1	1	
2	710730007	1JL226-0000-0005	Tensioning washer	1	
3	710730026	1JL226-0000-0018	Bearing COB 02 2520	2	
4	810730131	1JL226-1700-0000	Assemble part	1	
5	710730012	1JL226-0000-0010	Small belt pulley	1	
6	515010011	REACH15-45X80	Cover	2	
7	501011099	GB5783-M8X20	Full thread bolt	7	
8	506030035	GB93-8	Spring washer	7	
9	506010055	GB97.1-8	Plain washer	7	
10	710730005	1JL226-0000-0003	Belt pulley cover	1	
11	710730016	1JL226-0000-0012	Belt (XPB-1470)	6	
12	710730014	1JL226-0000-0011	Big belt pulley	1	
13	503010764	DIN985-M14	Hexagon lock nut	1	
14	710730008	1JL226-0000-0006	Spring check ring	2	
15	710730009	1JL226-0000-0007	Spring	1	
16	501011112	GB5783-M10X25	Full thread bolt	1	
17	506030036	GB93-10	Spring washer	1	
18	710730006	1JL226-0000-0004	Tensioning washer 2	1	
19	810730110	1JL226-1100-0000	Tensioning frame	1	

## Forest machine (picture 10)



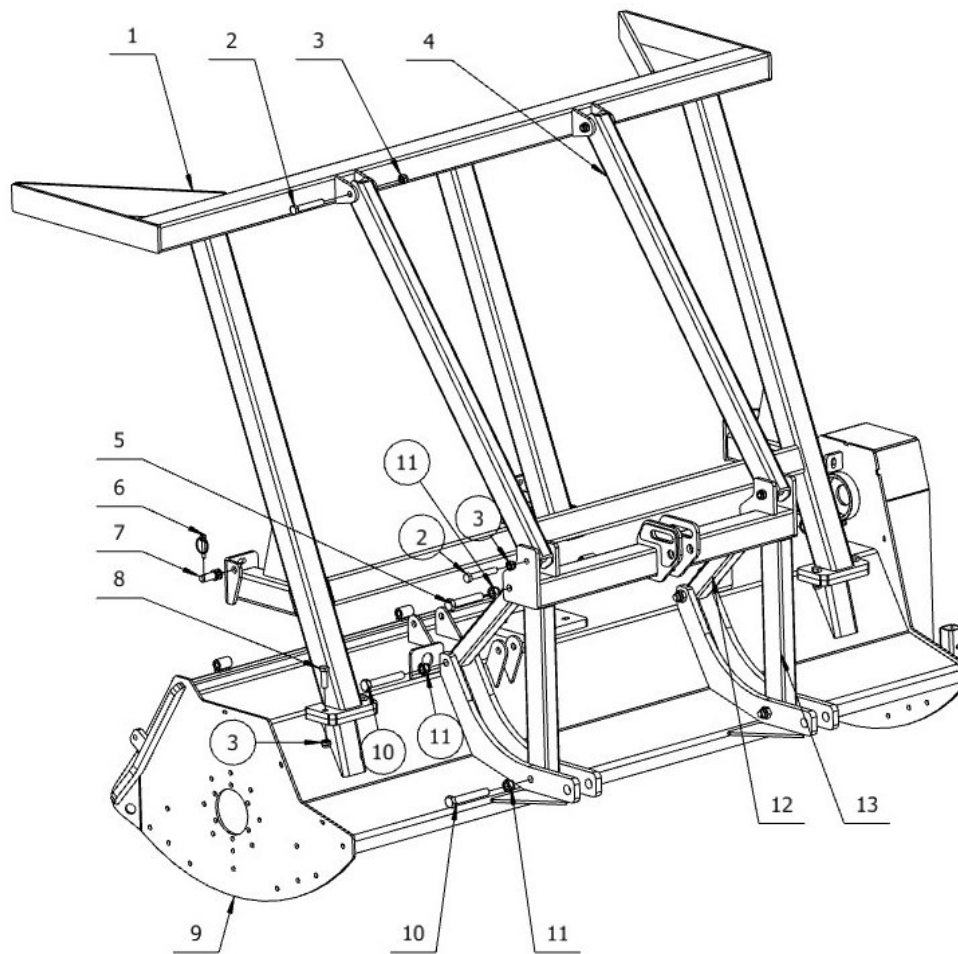
Forest machine (picture 10)					
Item	Article no.	Parts no.	Name	Qty	Remark
1	510020707	GB13871-FB-60X75X8	FB oil seal	1	
2	501011142	GB5783-M14X40	Full thread bolt	16	
3	710730017	1JL226-0000-0013	Bearing seat1	1	
4	506010058	GB97.1-14	Plain washer	16	
5	503010764	DIN985-M14	Hexagon lock nut	16	
6	710730027	1JL226-0000-0019	Sealing felt collar1	2	
7	511011101	GB288-22312-C	Self-aligning roller bearing	2	
8	810730119	1JL226-1600-0000	Blade shaft	1	
9	710730023	1JL226-0000-0015	Spacer pad 1	1	
10	710730020	1JL226-0000-0014	Bearing seat 2	1	
11	710730158	1JL226-0000-0021	Bearing gland	1	
12	506030037	GB93-12	Spring washer	6	
13	501011126	GB5783-M12X30	Full thread bolt	6	
14	509010009	GB1152-M10X1	Oil cup	1	

**Forest machine (picture 11)**



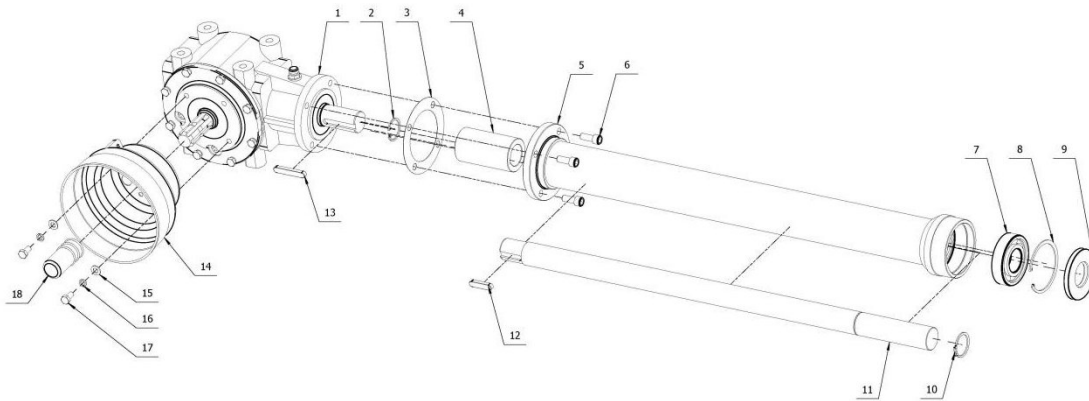
Forest machine (picture 11)					
Item	Article no.	Parts no.	Name	Qty	Remark
1	810730029	1JL226-0100-0000	Hood	1	
2	509010009	GB1152-M10X1	Oil cup	1	
3	810730139	1JL226-1800-0000	Butter way part	1	
4	706790181	EFAG140.014A-1	Suspension below pin	2	

## Forest machine (picture 12)



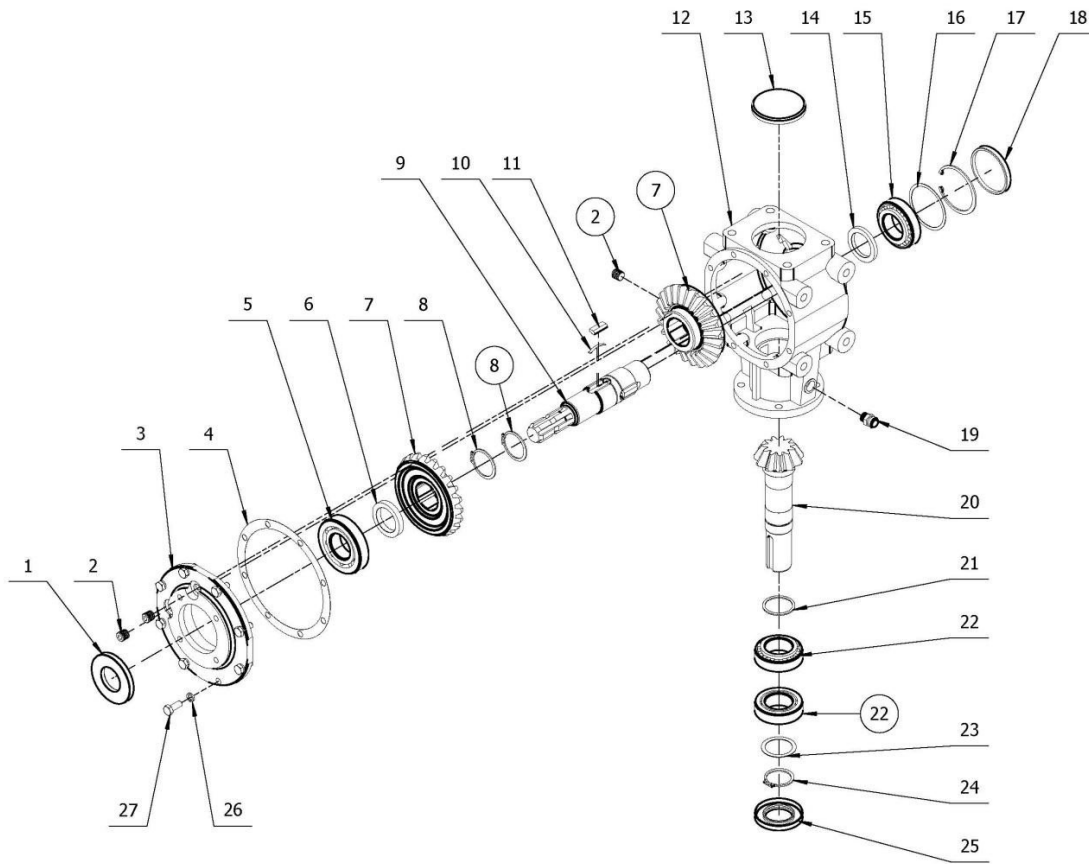
Forest machine (picture 12)					
Item	Article no.	Parts no.	Name	Qty	Remark
1	810730141	1JL226-1900-0000	Fence 1	1	
2	501010784	GB5782-M16X100	Half thread bolt	4	
3	503010765	DIN985-M16	Hexagon lock nut	8	
4	810730147	1JL226-2000-0000	Fence 2	2	
5	501010808	GB5782-M20X110	Half thread bolt	2	
6	804750219	1LTF-550-G11004	Lock pin assembly $\Phi 8$	3	
7	710730160	1JL226-0000-0022	Fixing pin 1	3	
8	501011160	GB5783-M16X50	Full thread bolt	4	
9	810730029	1JL226-0100-0000	Hood	1	
10	501010810	GB5782-M20X130	Half thread bolt	4	
11	503010767	DIN985-M20	Hexagon lock nut	6	
12	810730116	1JL226-1500-0000	Suspension pull rod	2	
13	810730066	1JL226-0300-0000	Suspension frame	1	

## Transmission assembly (picture 13)



Transmission assembly (picture 13)					
Item	Article no.	Parts no.	Name	Qty	Remark
1	810730076	1JL226-0401-0000	Gear box	1	
2	506060572	JB4341-42 (2mm)	Check ring	1	
3	702620017	AGM200.130	Paper washer	1	
4	710730164	1JL226-0400-0002	Adapter cover	1	
5	810730082	1JL226-0402-0000	Shaft tube	1	
6	505011444	GB70.1-M12X30	Screw	4	
7	511021553	GB276-6309-2RS	Deep groove ball bearing	1	
8	506060199	GB893.1-100	A check ring	1	
9	510020710	GB13871-FB-45X100X10	FB oil seal	1	
10	506060519	JB4342-45 (2.5mm)	Check ring	1	
11	710730075	1JL226-0400-0001	Shaft (5)	1	
12	507010101	GB1096-A-12X8X50	A flat key	1	
13	507010104	GB1096-A-12X8X70	A flat key	1	
14	703400202	FM120.00.199C	PTO COVER	1	
15	506010056	GB97.1-10	Plain washer	2	
16	506030036	GB93-10	Spring washer	2	
17	501011111	GB5783-M10X20	Full thread bolt	2	
18	702420030	EF100.00.177	Input shaft rust-proof cover	1	

## Gear box (picture 14)

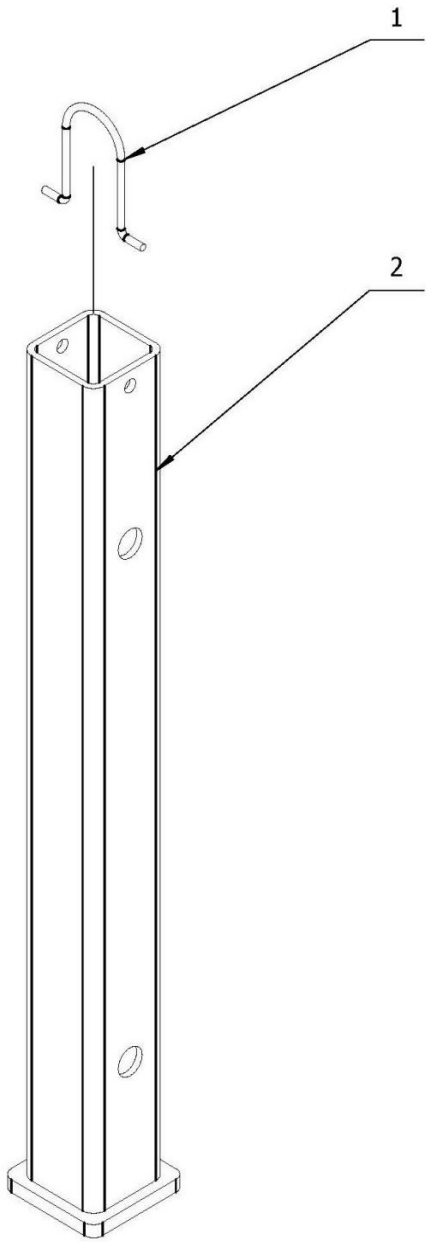


Gear box (picture 14)					
Item	Article no.	Parts no.	Name	Qty	Remark
1	510020708	CFW-45X90X10	FB oil seal	1	
2	516010003	ZBT32001.3-ZG3/8-19"	Tapered plug	3	
3	709100010	AG20.02.C03	311 shell cap	1	
4	710730078	1JL226-0401-0002	Sealing paper washer 1	1	
5	511016491	GB297-30309	Bearing	1	
6	710730080	1JL226-0401-0006	Check ring 2	1	
7	710730001	1JL226-0401-0004	Tapered gear 2	2	
8	506060325	GB894.1-50	A check ring	2	
9	710730079	1JL226-0401-0003	Input shaft	1	
10	702480007	AG14.01.C07	Spring leaf	4	
11	702480006	AG14.01.C06	Key	4	
12	710730165	1JL226-0401-0007	Gear box shell	1	
13	702650043	NFG-RCA-90X10	Block cap 90X10	1	
14	710730077	1JL226-0401-0001	Check ring 1	1	
15	511016442	GB297-32209	bearing	1	
16	710730166	TZDP-85-75-1	Adjusting pad3	1	
17	506060193	GB893.1-85	A check ring	1	
18	706000028	HM7FT.30.14	Cover $\Phi$ 85X10	1	
19	705290211	CBW-00-011B	ZG3/8 air plug	1	
20	710730002	1JL226-0401-0005	Bevel gear1	1	
21	710730167	TZDP-54-46-2	Adjusting pad 1	1	
22	511016391	GB297-33109	Bearing	2	
23	710730168	TZDP-58-45-1	Adjusting pad 2	1	

<b>Gear box (picture 14)</b>					
Item	Article no.	Parts no.	Name	Qty	Remark
24	506060519	JB4342-45(2.5mm)	Check ring	1	
25	510020673	CFW-45X80X10	FB oil seal	1	
26	506030036	GB93-10	Spring washer	8	
27	501011112	GB5783-M10X25	Full thread bolt	8	

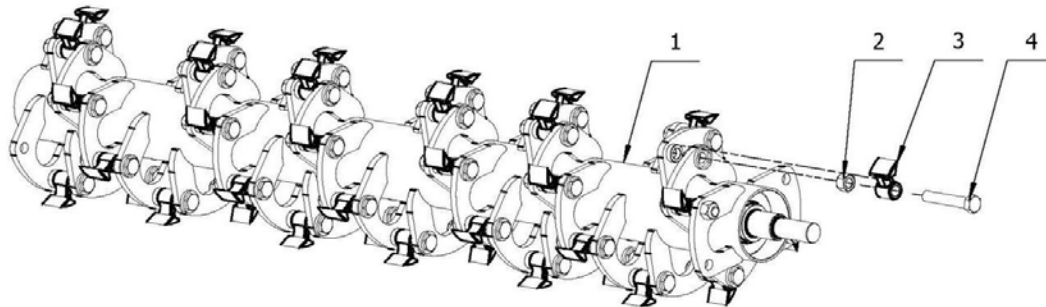


**Brace part (picture 15)**



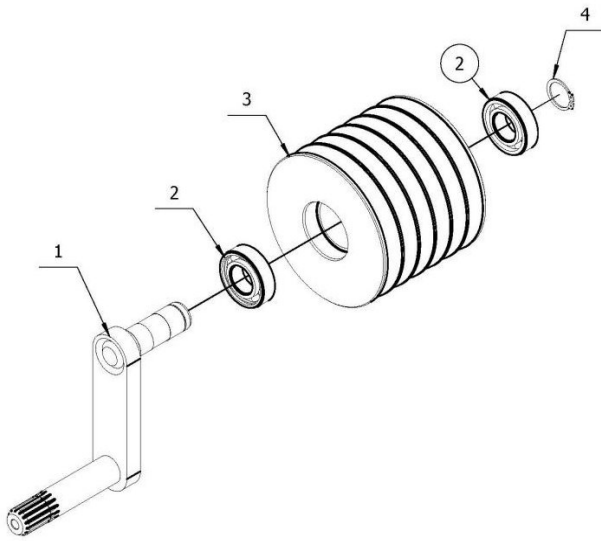
<b>Brace part (picture 15)</b>					
Item	Article no.	Parts no.	Name	Qty	Remark
1	710730092	1JL226-0700-0001	Brace ring 1	1	
2	810730093	1JL226-0701-0000	Brace	1	

## Blade shaft (picture 16)



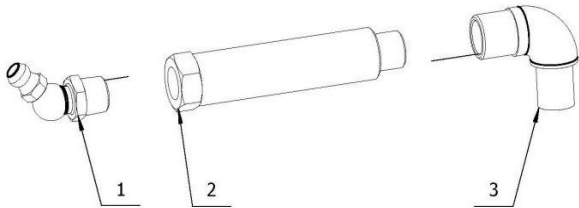
Blade shaft (picture 16)					
Item	Article no.	Parts no.	Name	Qty	Remark
1	810730121	1JL226-1601-0000	Blade shaft	1	
2	503010317	GB6184-M24	Lock nut	46	
3	710730120	1JL226-1600-0001	Blade	46	
4	501010834	GB5782-M24X130	Half thread bolt	46	

## Tensioning wheel assembly (picture 17)



Tensioning wheel assembly (picture 17)					
Item	Article no.	Parts no.	Name	Qty	Remark
1	810730135	1JL226-1701-0000	Assemble frame 1	1	
2	511021988	GB276-6205-RS	Deep groove ball bearing	2	
3	710730132	1JL226-1700-0001	Tensioning belt pulley	1	
4	506060310	GB894.1-25	Check ring	1	

**Butter way parts (picture 18)**



Butter way parts (picture 18)					
Item	Article no.	Parts no.	Name	Qty	Remark
1	509010020	GB1153-M10X1X45°	Oil cup	1	
2	710730140	1JL226-1800-0001	Adapter 1	1	
3	705091582	4TJ141-4400-03	Adapter	1	