



Saw Mill

OWNER'S MANUAL



WARNING:

Read carefully and understand all **ASSEMBLY AND OPERATION INSTRUCTIONS** before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

Thank you very much for choosing this product! For future reference, please complete the owner's record below:

Model: TMW-3228SMBS Purchase Date: _____

Save the receipt, warranty and these instructions. It is important that you read the entire manual to become familiar with this product before you begin using it.

This product is designed for certain applications only. The manufacturer cannot be responsible for issues arising from modification. We strongly recommend this product not be modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, DO NOT use the product until you have first contacted us to determine if it can or should be performed on the product.

For technical questions please call **1-218-943-6290**.

INTENDED USE

The Timber Tuff Saw Mill is portable and versatile which makes it a great tool for any lumber project. It has the capabilities of sawing logs up to 32" in diameter, 4-1/2" thick and a cutting length of 10'-5". It is equipped with a 420cc Briggs & Stratton Engine and Blades with a blade speed of 3279 fpm.

TECHNICAL SPECIFICATIONS

Item	Description
Capacity	32" diameter, 4-1/2" thick, 10'-5" in length
Engine	Briggs & Stratton 420cc
Blade	156" x 1-1/4" x .035 x 1.1tpi
Dimensions	161-2/5" x 77" x 92"

GENERAL SAFETY RULES



WARNING: Read and understand all instructions. Failure to follow all instructions listed below may result in serious injury.



CAUTION: Do not allow persons to operate or assemble this saw mill until they have read this manual and have developed a thorough understanding of how the saw mill works.



WARNING: The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions or situations that could occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

SAVE THESE INSTRUCTIONS

WORK AREA

- **Keep work area clean**, free of clutter and well lit. Cluttered and dark work areas can cause accidents.
- **Keep children and bystanders** away while operating the saw mill. Distractions can cause you to lose control, so visitors should remain at a safe distance from the work area.
- **Be alert of your surroundings.** Using a saw mill in confined work areas may put you dangerously close to cutting tools and rotating parts.

PERSONAL SAFETY

- **Stay alert**, watch what you are doing and use common sense when using a saw mill. Do not use a saw mill while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating a saw mill may result in serious personal injury.
- **Dress properly.** Do not wear loose clothing, dangling objects, or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
- **Use safety apparel and equipment.** Use safety goggles or safety glasses with side shields which comply with current national standards, or when needed, a face shield. Use a dust mask if working in dusty work conditions. This applies to all persons in the work area. Also use non-skid safety shoes, hardhat, heavy-duty work gloves, dust collection systems, and hearing protection when appropriate.

SAW MILL USE AND CARE

- **Do not modify the saw mill in any way.** Unauthorized modification may impair the function and/or safety and could affect the life of the equipment. There are specific applications for which the saw mill was designed.
- **Always check for damaged or worn out parts before using the saw mill.** Broken parts will affect the saw mill operation. Replace or repair damaged or worn parts immediately.
- **Do not exceed the saw mill load capacity.**
- **Distribute the load evenly.** Uneven loads may cause the saw mill to tip, resulting in personal injury to the operator or others. Log should be secured before sawing.
- **Use the saw mill on flat and level surfaces** capable of supporting the saw mill and its maximum load. Pulling or pushing a load on a slanted or uneven surface can result in loss of control. Saw mill needs to be on a flat and level surface before sawing.
- **Store idle saw mill.** When saw mill is not in use, store it in a secure place out of the reach of children. Inspect it for good working condition prior to storage and before re-use.

IMPORTANT SAFETY INFORMATION



WARNING! Read all instructions.

Failure to follow all instructions listed below may result in fire, serious injury and/or DEATH. The warnings and precautions discussed in this manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

SAVE THESE INSTRUCTIONS

Set Up Precautions

1. Gasoline fuel and fumes are flammable, and potentially explosive. Use proper fuel storage and handling procedures. Do not store fuel or other flammable materials near the machine.
2. Have fire extinguishers nearby.
3. Operation of this equipment may create sparks that can start fires around brush and dry vegetation. A spark arrestor may be required. The operator should contact local fire agencies for laws or regulations relating to fire prevention requirements.
4. Set up and use only on a flat and level surface. Area must be well ventilated.
5. Wear ANSI-approved safety goggles, heavy-duty work gloves, and dust mask/respirator during set up.
6. Use only lubricants and fuel recommended in the engine manual or in the Specifications chart of this manual.

Engine Precautions

Follow engine precautions and instructions in the included engine instruction manual.

Operating Precautions



CARBON MONOXIDE HAZARD

Using an engine indoors **CAN KILL YOU IN MINUTES.**

Engine exhaust contains carbon monoxide. This is a poison you cannot see or smell.



NEVER use indoors
EVEN IF doors and window are open.



Only use **OUTSIDE** and far away from windows, doors and vents.

1. Keep children and bystanders away from the equipment, especially during operation.
2. Do not leave the equipment unattended when it is running. Turn off the equipment (and remove safety keys, if available) before leaving the work area.
3. Wear ANSI-approved safety glasses, hearing protection, and NIOSH-approved dust mask/respirator under a full face shield during use. Wearing steel toe shoes is also recommended.

4. Wear heavy-duty work gloves when handling the blades.
5. People with pacemakers should consult their physician before use. Electromagnetic fields in close proximity to a heart pacemaker could cause pacemaker interference or pacemaker failure. Caution is necessary when near the engine's magneto or recoil starter.
6. Use only accessories that are recommended by Timber Tuff for your model. Accessories that may be suitable for one piece of equipment may become hazardous when used on another piece of equipment.
7. Do not operate in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Gasoline-powered engines may ignite the dust or fumes.
8. Stay alert, watch what you are doing and use common sense when operating this piece of equipment. Do not use this piece of equipment while tired or under the influence of drugs, alcohol or medication.
9. Do not overreach. Keep proper footing and balance at all times. This enables better control of the equipment in unexpected situations.
10. Dress properly. Do not wear loose clothing or jewelry. Keep hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
11. Parts, especially exhaust system components, get very hot during use. Stay clear of hot parts.
12. Do not cover the engine or equipment during operation.
13. Keep the equipment, engine, and work area clean at all times.
11. Use the equipment, accessories, etc., in accordance with these instructions and in the manner intended for the particular type of equipment, taking into account the working conditions and the work to be performed. Use of the equipment for operations different from those intended could result in a hazardous situation.
12. Do not operate the equipment with known leaks in the engine's fuel system.
13. WARNING: The brass components of this product contain lead, a chemical known to the State of California to cause birth defects (or other reproductive harm). (California Health & Safety code § 25249.5, *et seq.*)
14. WARNING: Some dust created by power sanding, sawing, grinding, drilling, and other construction activities, contains chemicals known [to the State of California] to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
 - Lead from lead-based paints
 - Crystalline silica from bricks and cement or other masonry products
 - Arsenic and chromium from chemically treated lumber

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles. (California Health & Safety Code § 25249.5, *et seq.*)
15. This product contains or, when used, produces a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. (California Health & Safety Code § 25249.5, *et seq.*)
16. When spills of fuel or oil occur, they must be cleaned up immediately. Dispose of fluids and cleaning materials as per any local, state or federal codes and regulations. Store oil rags in a bottom-ventilated, covered, metal container.
17. Keep hands and feet away from moving parts. Do not reach over or across equipment while operating.
18. Before use, check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the equipment's operation. If damaged, have the equipment serviced before using. Many accidents are caused by poorly maintained equipment.

19. Use the correct equipment for the application. Do not modify the equipment and do not use the equipment for a purpose for which it is not intended.
20. Keep hands and feet away from moving parts. Do not reach over or across equipment while operating.
21. Before use, check for misalignment or binding of any moving parts, breakage of parts, and any other condition that may affect the equipment's operation. If damaged, have the equipment serviced before using. Many accidents are caused by poorly managed equipment.
22. Use the correct equipment for the application. Do not modify the equipment and do not use the equipment for a purpose for which it is not intended.

Service Precautions

1. **Before service, maintenance or cleaning:**
 - a. Turn the engine switch to its "OFF" position.
 - b. Allow the engine to completely cool
 - c. Then remove the spark plug wire(s) from the spark plug(s).
2. Keep all safety guards in place and in proper working order. Safety guards include muffler, air cleaner, mechanical guards and heat shields, among other guards.
3. **Do not alter or adjust any part of the equipment or its engine that is sealed by the manufacturer or distributor. Only a qualified service technician may adjust parts that may increase or decrease governed engine speed.**
4. Wear ANSI-approved safety goggles, heavy-duty work gloves, and dust mask/respirator during service.
5. Maintain labels on the equipment. These carry important information. If unreadable or missing, contact Timber Tuff for a replacement.
6. Have the equipment serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the equipment is maintained. Do not attempt any service or maintenance procedures not explained in this manual or any procedures that you are uncertain about your ability to perform safely or correctly.
7. Store equipment out of the reach of children.
8. Follow scheduled engine and equipment maintenance.
9. Refueling:
 - a. Do not smoke, or allow sparks, flames, or other sources of ignition around the equipment, especially when refueling.
 - b. Do not refill the fuel tank while the engine is running or hot.
 - c. Do not fill fuel tank to the top. Leave a little room for the fuel to expand as needed.
 - d. Refuel in a well-ventilated area only.

Specifications

Fuel Type	87+ octane unleaded gasoline
Fuel Capacity	1.74 Gallon
Blade Speed	3,279 FPM
Log Diameter	32" Maximum
Board Width	26" Maximum
Cutting Thickness	4-1/2" Maximum
Cutting Length	10'-5" Maximum (125")

Note: Engine specifications are found in the engine manual supplied with this equipment.

TO PREVENT SERIOUS INJURY:

Operate only with proper spark arrestor installed. Operation of this equipment may create sparks that can start fires around dry vegetation and brush. A spark arrestor may be required. The operator should contact local fire agencies for laws or regulations relating to fire prevention requirements.

TO PREVENT SERIOUS INJURY: The Saw Mill is dangerous if assembled incorrectly.

If you do not feel completely comfortable assembling it, then have a qualified technician assemble it.

Assembly

Read all of the safety precautions and warnings in this manual before setting up or using this product.

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OPERATING INSTRUCTIONS



Read all of the safety precautions and warnings in this manual before setting up or using this product.

Engine Operation



Inspect engine and equipment looking for damaged, loose or missing parts before operating. If any problems are found, do not use equipment until fixed properly.

Start Procedure



Before starting the engine:

- a. **Follow the Set Up Instructions to prepare the equipment. Follow all instructions in The separate engine manual provided with the engine.**
 - b. **Inspect the equipment and engine.**
 - c. **Fill the engine with the proper amount and type of fuel and oil.**
 - d. **Read the Equipment Operation section that follows.**
1. Start and operate the engine according to the provided engine manual.
 2. Replacement engine operating instructions can be obtained from the engine manufacturer.

ASSEMBLY:

1. Open the package cover and take out the parts of the equipment for use.



The two long boxes at the bottom of the packing box are rail components. Take out the bolts and nuts inside to install the rails. Refer to exploded diagram 1

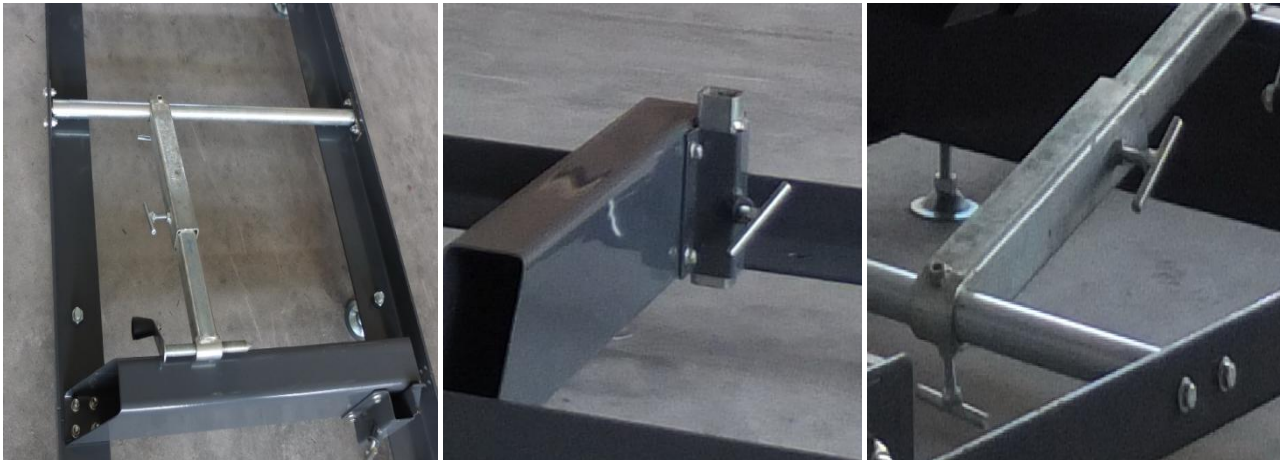
a: Place the track (7) as shown in the figure, and fix it with hex flange bolts (13) and hex flange nuts (15). The outer diameter of the guide rail is 1008.5mm. Use a meter ruler to measure the dimensions of each section of the guide rail. After adjusting the size, tighten the nut with a wrench.



b: Install 2 sets of end stop (3) on the front and rear ends of the guide rail, and tighten them with hex bolts (4) and nuts (2).



c: Fix the wood tightening device with hex flange bolts (13) and hex flange nuts (15), and install threaded plates (18) on the threads. There are 5 threaded plates in the small white box, of which the middle of center support (8) is a total of 2 One piece is used for the middle center support (12) of the guide rail, and two pieces are used for rocker tube sleeve (17).

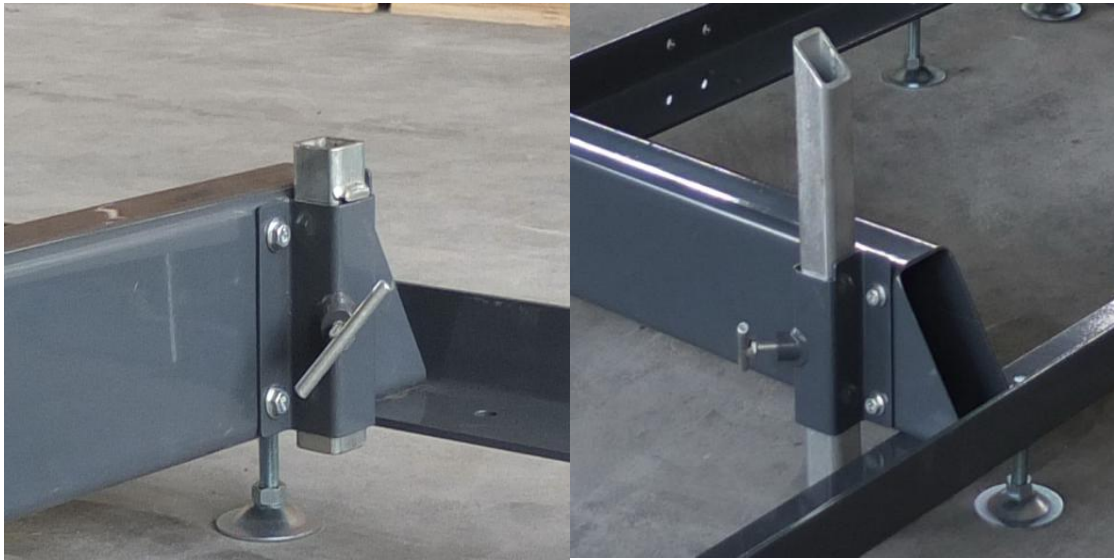


d: The bottom of the guide rail is equipped with 12 guide track adjustment frame (6), which can be selected according to the flatness of the ground.

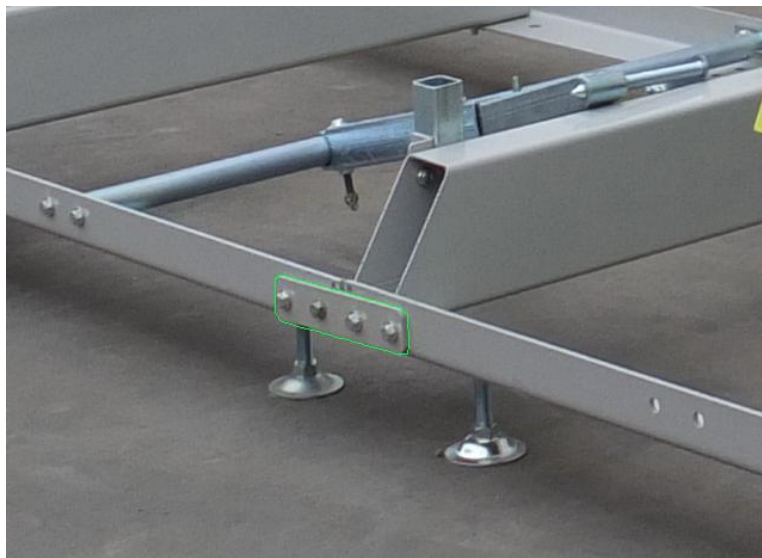


The equipment is equipped with two material blocking pipes each in length, and a suitable set of blocking pipes can be selected according to the

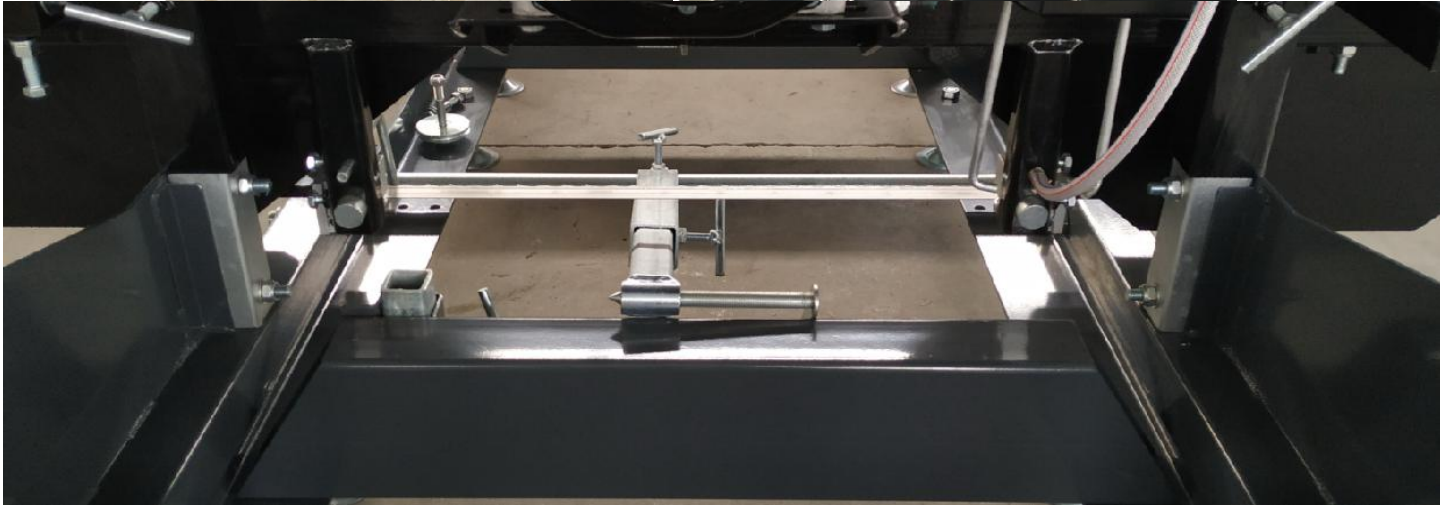
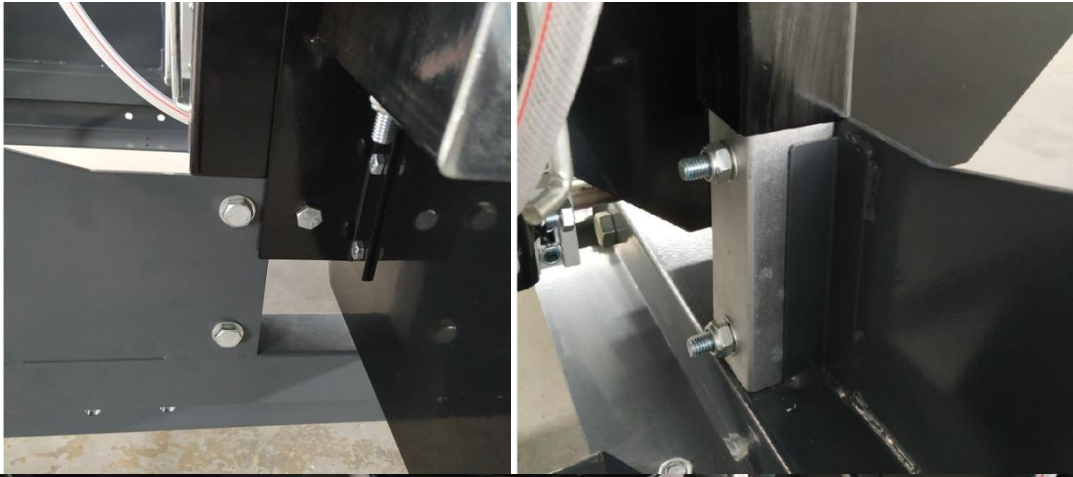
diameter of the wood when working. The drawing number of the short log support(9), and the drawing number of the long log support (10).



e: Install a guide rail connecting plate (25) on each side of the middle joint of the guide rail, and fix it with hex flange bolts (13) and hex flange nuts (15).



2. Take out the two sets of legs weldments (28) and the front square tube(26) and back square tube (45), lift the main body of the equipment on the two sets of legs, then insert the front square tube (26), and use the hex bolts (27) to flat washer (37) The hex nut (38) is fixed, and the rear tube (45) is fixed in the same way.

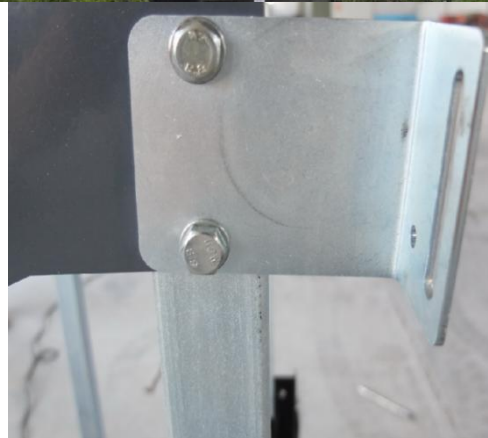


3. Install the pushing handle (46). As shown in the figure, it is fixed in the right back square tube (45). The height of the armrest can be adjusted to a suitable position according to the user's operating habits.

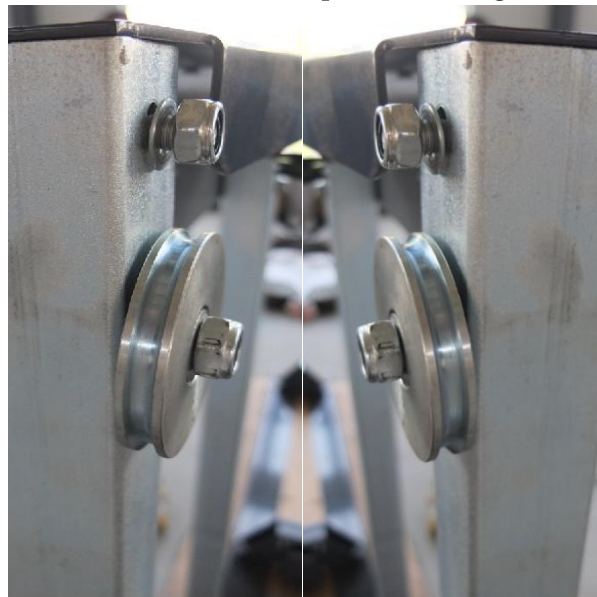


4. Install the upper assembly. Place the upper assembly on the top of the four square pipes as shown in the figure, then install the front frame (120) and scale support plate (134), align the bolt holes, and use the

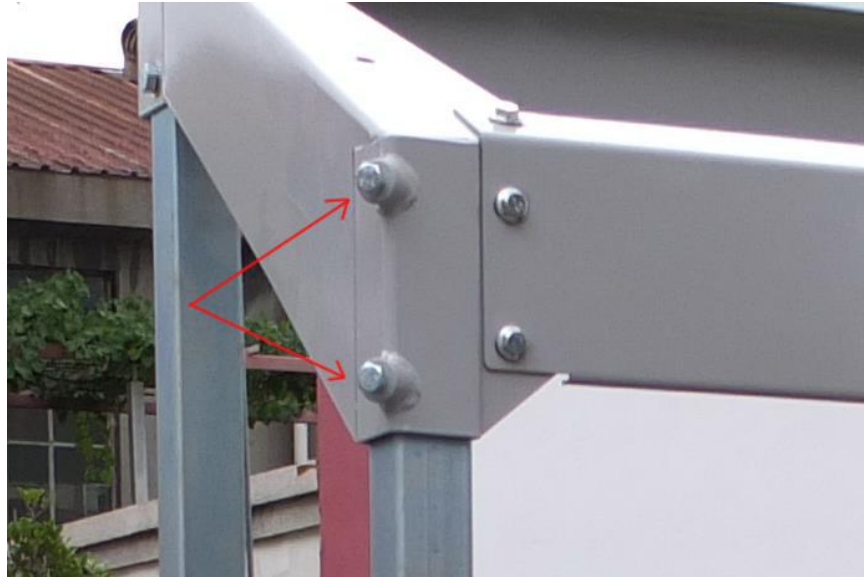
hex bolts (133) ,hex bolts (27), flat washers (37) and hex nuts (38)
Fixed.



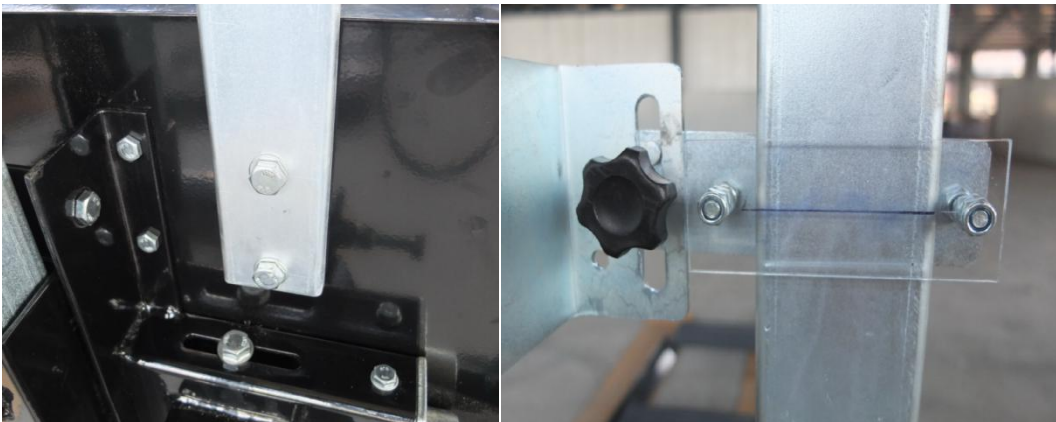
The pulley (161) is fixed on the long hex bolt (133) at the lower end of the front square tube (26) (refer to the exploded figure 5).



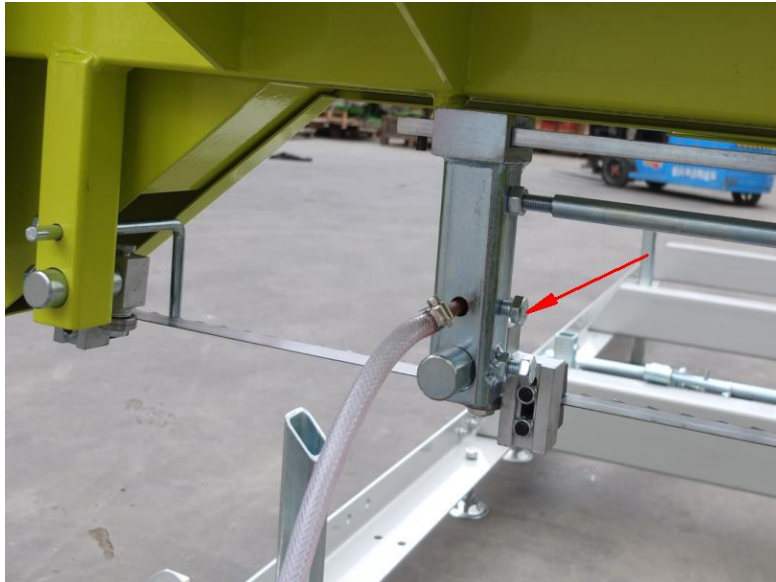
5. After fixing, use a wrench to tighten the bolt.
Then tighten the bolt pointed by the arrow.



6. Install the scale plate (119), scale plate (front) (132) and rivet (116) as shown in the figure. Refer to the picture for illustration.



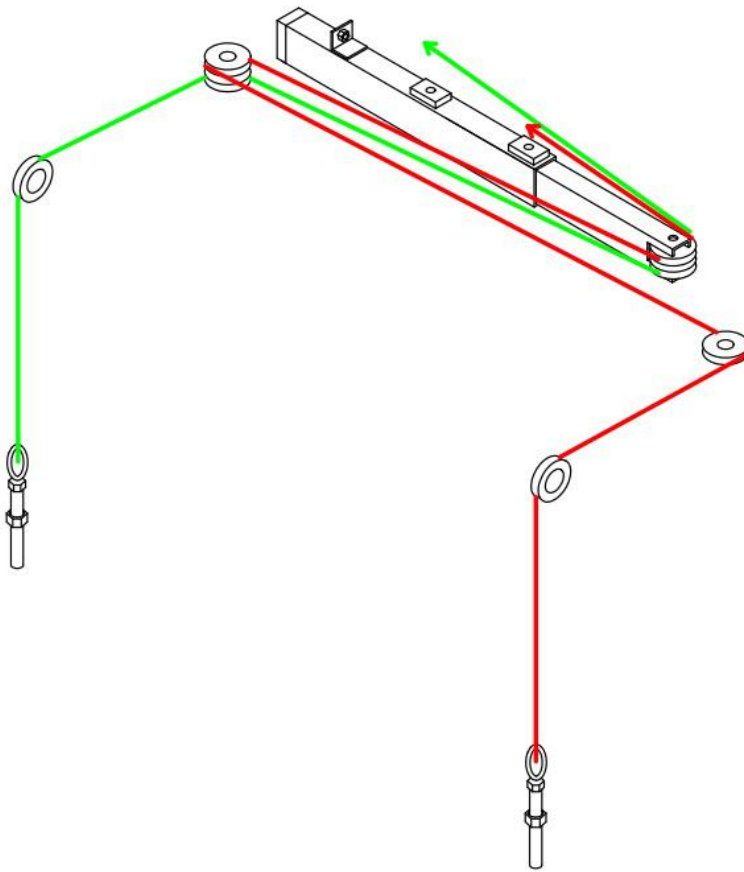
The water pipe at the lower end of the water tank is installed on the saw block pushing tube (54). Before installation, the bolt pointed to by the arrow in the figure must be loosened, and the water pipe will pass through before tightening.



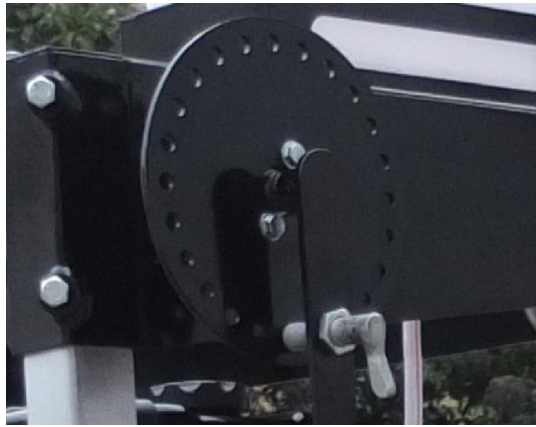
During work, adjust the size of the water valve (124) so that the water flow is sprayed on the saw blade (97) to cool the saw blade.



7. Install two wire ropes as shown in the figure. One end of the wire rope is hung on the lifting arm weldments (157), and the other end is hung on the steel wire rope screw(164) on the frame. Please refer to the picture and schematic diagram for installation of the wire rope.



After the wire rope is hung, the height adjustment arm (140) can be turned to raise the large pulley cover (machine body). Rotate the height adjustment arm (140) clockwise to raise the band saw, and turn counterclockwise to lower it.



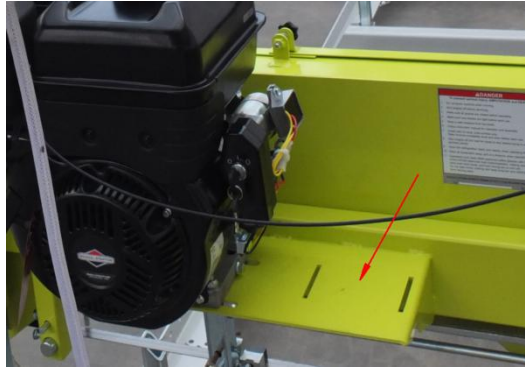
If the wheel cover is found to be uneven during the lifting process, first drop the large saw cover to the bottom, and adjust the up and down distance of the steel wire rope screw (164) at the left and right ends until the saw cover is level after being raised.



The height adjustment arm (140) has a locking function. When in use, you can turn the locking switch (142) to make the pin (146) fit into one of the holes of the rotary table (150) to lock the crank. Put the height adjustment arm (140).



The gasoline engine equipped with the saw is an electric starter, and customers can add a battery to start the gasoline engine. There is a place for installing the battery on the equipment, which is convenient for customers to install.



8. After the main body of the band saw machine is placed on the guide rail, take out the 4 guide guide brush (29) from the manual bag and install them in the brush groove of the leg weldments (28).
At this point, the big saw is installed.

Equipment Operation

1. Wear heavy-duty work gloves, ANSI-approved goggles behind a full face shield, steel-toed work boots, and a dust mask.
2. Operate only with the assistance of another qualified person.
3. Fill the Water Tank with clean water.
4. The maximum log diameter that can be cut is 32". The maximum board width that can be cut is 26". The log must be at least 3' 8" long and must rest on at least two Supports (8, 12) to prevent instability.
5. Cut branches off the log to be processed before sawing.
6. Do not cut logs containing foreign objects (nails, metal, etc.). This will cause Blade damage and could cause serious injury.
7. Choose the Short Log Supports (9) or the Long Log Supports (10) according to the log diameter.
8. Place the log to be cut on the Supports. See Figure T. Brace the log against the Log Supports (10 or 9) to prevent movement during sawing. The log should be positioned so that the force of cutting holds it against the supports. Log supports (9 or 10) need to be lower than the thickness of the board being cut to avoid blade damage.

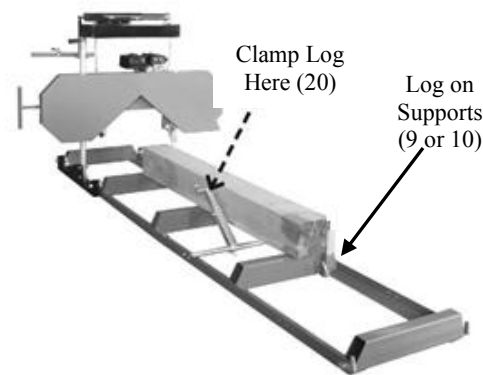


Figure T: Lumber Position

9. Clamp the log in place against the Log Supports (10 or 9) using the Log Clamp Assembly (20) in the location shown in Figure T.
10. Tighten all Bolts and T-Handles on the Log Clamp Assembly (20) and the Log Supports (10 or 9). Verify that they are securely in place before proceeding.

NOTE: Make sure the Log Clamp Assembly (20) does NOT interfere with the Saw Blade when sawing. The Log Clamp Assembly (20) should be lower than the Saw Blade at all times.

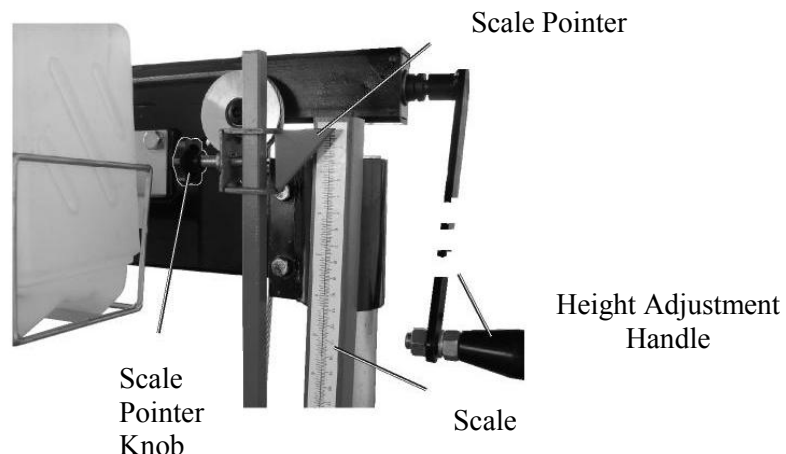


Figure U: Scale and Scale Pointer

11. Align the Blade with the top of the log, loosen the Scale Pointer Knob and adjust the Scale Pointer to point at 0" on the Scale. Tighten the Scale Pointer Knob.
12. Release both Thread Plate (18). Turn the Height Adjustment Handle (137) and adjust the cutting height until the Scale Pointer points to the desired thickness. Engage both Thread Plate (18).
13. The cut direction must be as shown below. If the log is cut from the other direction, the saw blade will push the log away from the supports and may cause the log to become unstable.

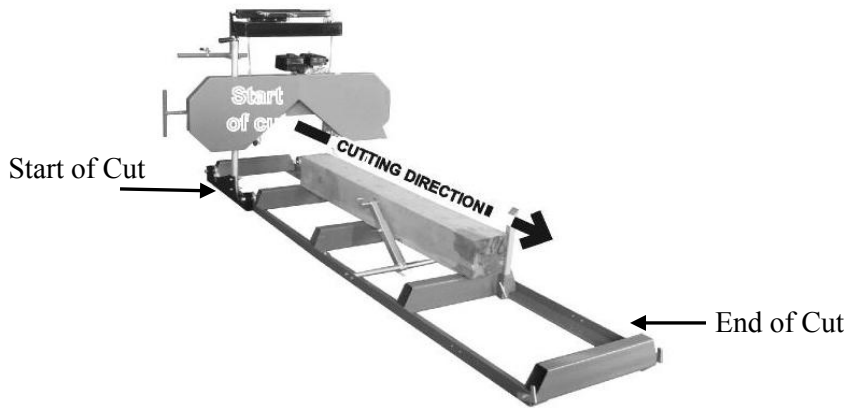


Figure V: Direction of Cut

14. **WARNING! All operators must stay clear of the front and back of the blade whenever the engine is running.**
15. Start and operate the engine according to the provided engine manual.
16. Adjust the Throttle to bring the Blade up to speed. The Locking Ring can be turned to lock the throttle in place.

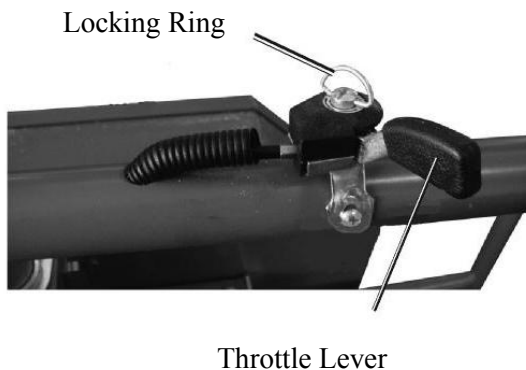


Figure W: Throttle Control

17. Throttle speed may need to be increased when the Saw is under load.
18. Move the Saw Head slowly along the track and against the log to make the cut.

NOTE: Repeated adjustments will need to be made during cutting.

19. **Shut off engine if blade binds, breaks, or another problem is suspected. Do not try to back the blade out of the log while engine is running.**
20. Trim off the rounded sides of the lumber
21. After the log is squared-off, boards or posts can be cut.

22. To prevent accidents, turn off the engine and disconnect its spark plug wire after use. Wait for the engine to cool, clean external parts with clean cloth, then store the equipment out of children's reach according to the Store instructions in this manual.

Servicing

⚠WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL STARTING:

Turn the power Switch of the equipment to its "OFF" position, wait for the engine to cool, and disconnect the spark plug wire(s) before performing any inspection, maintenance or cleaning procedures.

TO PREVENT SERIOUS INJURY FROM EQUIPMENT FAILURE:

Do not use damaged equipment. If abnormal noise, vibration or excess smoking occurs, have the problem corrected before further use.

Maintenance Procedures

Many maintenance procedures, including those not detailed in this manual, will need to be performed by a qualified technician for safety. If you have any doubts about your ability to safely service the equipment or engine, have a qualified technician service the equipment.

NOTE: These procedures are in addition to the regular checks and maintenance explained as part of the regular operation of the engine and equipment.

Engine Maintenance and Service

Follow the instruction found in the included engine manual.

Equipment Lubrication

1. Lubricate the Band Wheel Axles and Square and Round Posts with machine oil before each use.
2. Lubricate the Tension Handle with grease monthly or as needed.

Storage

1. Wait for engine to cool, then clean equipment with clean cloth.
2. Clean the engine and/or prepare it for storage according to engine manual instructions.
3. Apply a thin coat of rust preventive oil to all uncoated metal parts.
4. Cover and store in dry, well-ventilated area out of reach of children.
5. For cold weather operation, store the equipment in a cool dry area to prevent condensation and premature wear.

Equipment Troubleshooting

Problem	Possible Causes	Probable Solutions
Excessive blade breakage.	<ol style="list-style-type: none"> 1. Insufficient blade tension. 2. Incorrect speed or feed rate. 3. Log loose. 4. Blade rubs against wheel flange. 5. Blade teeth too coarse for log, or blade too thick. 6. Teeth contacting lumber before blade up to full speed. 7. Misaligned guides. 	<ol style="list-style-type: none"> 1. Increase blade tension. 2. Adjust speed or feed rate for the lumber being cut. 3. Make sure log is securely positioned against supports. Remove stray branches that prevent proper positioning. 4. Adjust blade tracking. 5. Use recommended blade only. 6. Allow blade to reach operating speed before cutting. 7. Align guides.
Premature blade dulling.	<ol style="list-style-type: none"> 1. Teeth too coarse. 2. Blade rotating too quickly. 3. Hard spots or scale in/on material. 4. Blade installed backwards. 5. Insufficient blade tension. 6. Metal or other objects in the logs. 	<ol style="list-style-type: none"> 1. Use recommended blade only. 2. Use lower speed. 3. Reduce speed, increase feed pressure. 4. Properly install blade. 5. Tension blade properly.
Blade cuts crooked.	<ol style="list-style-type: none"> 1. Log not square. 2. Feed pressure/rate too great. 3. Inadequate blade tension. 4. Dull blade. 5. Blade guide loose. 6. Insufficient blade tension. 	<ol style="list-style-type: none"> 1. Adjust log so that it is square with the blade. 2. Reduce feed rate. 3. Increase blade tension slightly. 4. Replace blade. 5. Adjust and secure blade guide.
Blade cuts rough.	<ol style="list-style-type: none"> 1. Too much blade speed and/ or rate of feed. 2. Blade is too coarse. 	<ol style="list-style-type: none"> 1. Reduce blade speed and feed rate. 2. Use recommended blade only.
Blade is twisting.	<ol style="list-style-type: none"> 1. Cut is binding blade. 2. Blade tension too high. 	<ol style="list-style-type: none"> 1. Decrease feed pressure. 2. Decrease blade tension.
Unusual wear on back or side of blade.	<ol style="list-style-type: none"> 1. Blade guides worn. 2. Blade guide bearing bracket is loose. 	<ol style="list-style-type: none"> 1. Replace blade guides. 2. Tighten blade guide bearing bracket.
Teeth ripping from blade.	<ol style="list-style-type: none"> 1. Teeth too coarse. 2. Feed rate incorrect. 3. Log loose. 4. Teeth filled with debris. 	<ol style="list-style-type: none"> 1. Use recommended blade only. 2. Adjust feed rate. 3. Make sure log is securely positioned against supports. Remove stray branches that prevent proper positioning. 4. Clean debris off blade.



Follow all safety precautions whenever diagnosing or servicing the equipment or engine

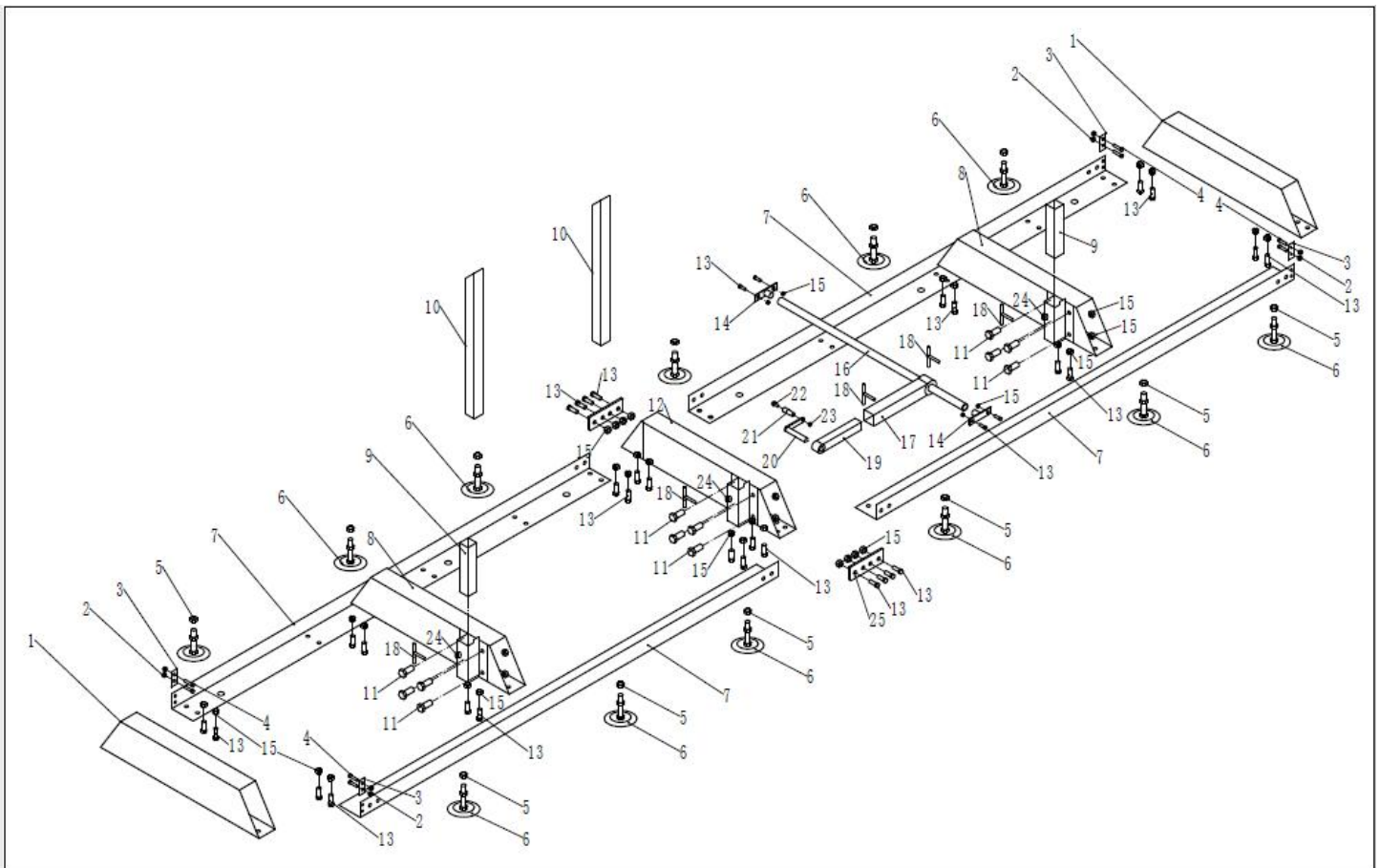
Parts List

Parts List For TMW-3228SMBS					
Part	Description	Qty	Part	Description	Qty
1	End Support	2	87	V-Belt B-1422	1
2	Nut M8	19	88	V-Belt B-1981	1
3	End Stop	4	89	Spring ϕ 10	3
4	Hex Bolt M8 \times 20	10	90	Flat Washer ϕ 10 t4	2
5	Nut M16	25	91	Snap Ring ϕ 62	2
6	Track Adjustment Frame	12	92	Ball Bearing 6305	4
7	Track	4	93	Bandwheel	2
8	Center Support	2	94	Long Bandwheel Axle	1
9	Short Log Support	2	95	Short Bandwheel Axle	1
10	Long Log Support	2	96	Hex Bolt M16 \times 110	1
11	Hex Flange Bolt M10 \times 15	12	97	Blade	1
12	Center Support	1	98	Spring ϕ 16	1
13	Hex Flange Bolt M10 \times 25	36	99	Hex Bolt M12 \times 150	1
14	Rotate Base	2	100	Spring ϕ 12	6
15	Hex Flange Nut M10	56	101	Hex Bolt M12 \times 65	2
16	Turn Tube	1	102	Flat Washer 12 t3	2
17	Rocker Tube Sleeve	1	103	Nut M12	5
18	Thread Plate	8	104	Hex Bolt M12 \times 100	1
19	Rocker Tube	1	105	Blade Guard	1
20	Log Clamp	1	106	3/8-24 Bolt	1
21	Handle Cover	1	107	Flat Washer 10 t4	1
22	Inner Hex Bolt M10 \times 30	1	108	Clutch	1
23	Hex Nut M10	11	109	Snap Ring 52	1
24	Press Plate	3	110	Bearing 1641 RLD	1
25	Connection Plate	2	111	Flat Key	1
26	Front Square Tube	2	112	Clutch Shield	2
27	Hex Bolt M12 \times 80	10	113	Tension Spring	3
28	Leg Weldments	2	114	Clutch Shaft	1
29	Guide Brush	4	115	Clutch Control Block	3
30	Hex Nut M20	4	116	Rivet 5 \times 25	3
31	Flat Washer ϕ 20	4	117	Engine Spacer	1
32	Sliding Wheel Cushion	8	118	Scale Plate	1
33	Leg Sliding Wheel	4	119	Scale	1
34	Ball Bearing 61904	8	120	Frame (Front)	1

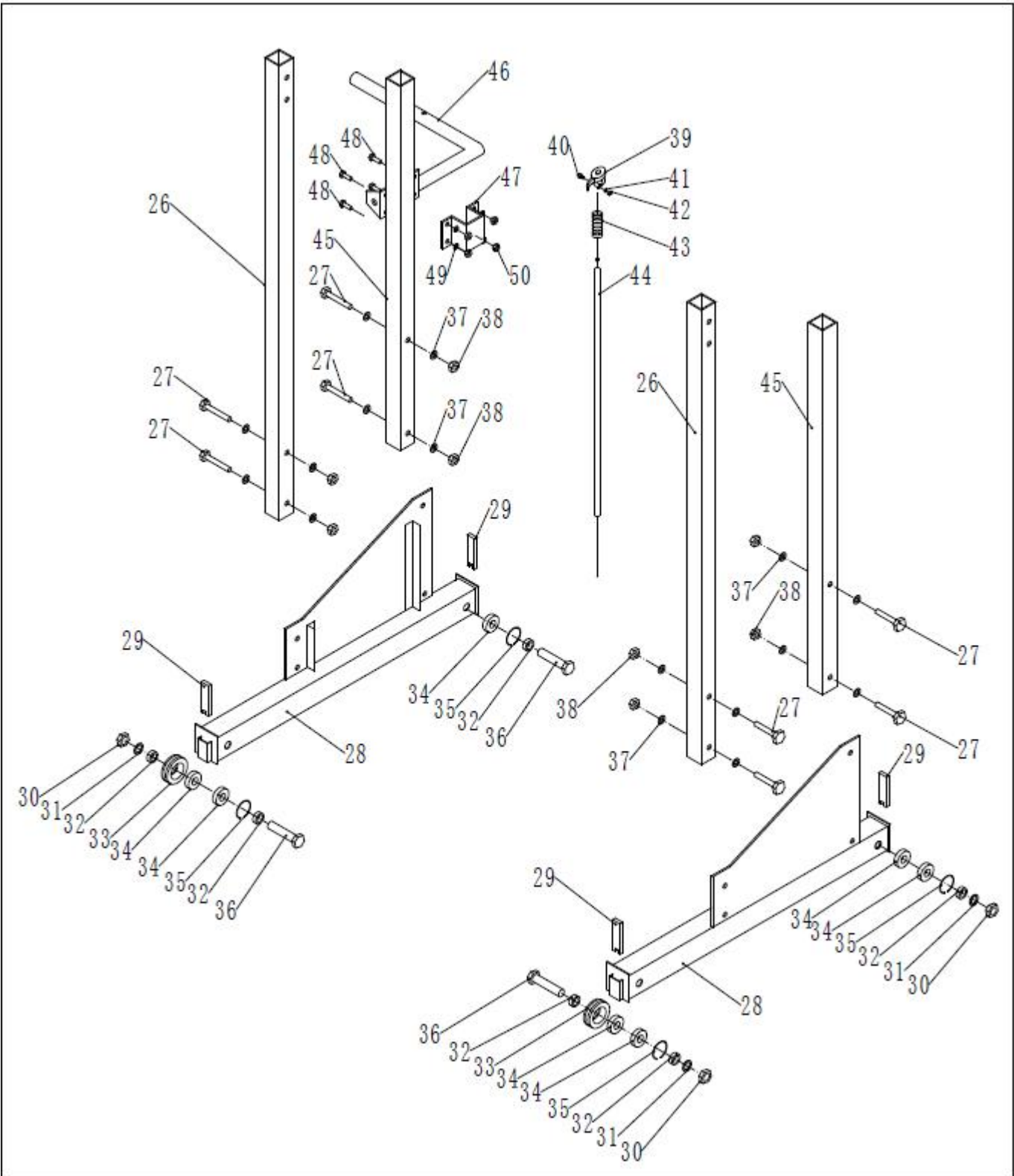
35	Snap Ring $\phi 37$	4	121	Water Tank	1
36	Hex Bolt M20 \times 90	4	122	Water Pipe 1	1
37	Flat Washer $\phi 12$	30	123	Water Pipe Connection	2
38	Hex Nut M12	15	124	Water Valve	1
39	Throttle Control	1	125	Water Pipe 2	1
40	Bolt M4 \times 40	1	126	Water Pipe Clamp	4
41	Flat Washer $\phi 4$	1	127	Copper Tube	1
42	Hex Nut M4	1	128	Hex Bolt M6 \times 30	2
43	Throttle Line Cover	1	129	Scale Plate (Back)	1
44	Throttle Line	1	130	Cylindrical Pin 8 \times 8	1
45	Back Square Tube	2	131	Hex Nut M6	6
46	Pushing Handle	1	132	Scale Plate (Front)	1
47	Handle	1	133	Hex Bolt M12 \times 90	2
48	Hex Bolt M10 \times 30	4	134	Scale Support Plate	1
49	Flat Washer $\phi 10$	25	135	Bolt (Short)	1
50	Hex Nut M10	11	136	Hex Bolt M12 \times 55	2
51	Pushing Rod	1	137	Height Adjustment Handle	1
52	Support Frame	1	138	Nut M12	1
53	Nut M10	3	139	Spring Cylindrical Pin 5 \times 20	1
54	Pushing Tube	1	140	Height Adjustment Arm	1
55	Spring Cotter Pin 6 \times 20	3	141	Spring Cylindrical Pin 3 \times 16	1
56	Inner Hex Serew M10 \times 20	3	142	Locking Switch	1
57	Clamp Saw Guide	1	143	Nut M16 \times 1.5	2
58	Tension Handle	1	144	Locking Pin Sets	1
59	Flat Washer $\phi 20$ t4	1	145	Locating Spring	1
60	Polyurethane Block	1	146	Pin	1
61	Long Shaft Screw	1	147	Water Tank Frame	1
62	Screw Base	1	148	Hex Flange Bolt M10 \times 20	6
63	Frame Weldments	1	149	Hex Flange Bolt M8 \times 20	3
64	Hex Bolt M8 \times 16	9	150	Rotary Table	1
65	Flat Washer $\phi 8$	1	151	Round Nut M14 \times 1.5	2
66	Inner Hex Bolt M8 \times 40	4	152	Frame (Left)	1
67	Clamp	8	153	Pushing Bearing 51102	2
68	Left Fixed Block	1	154	Screw	1
69	Right Fixed Block	1	155	Copper Nut	1
70	Hex Bolt M8 \times 12	2	156	Pushing Rod Weldments	1
71	Clamp Saw Shaft	2	157	Lifting Arm Weldments	1
72	Locating Rod	1	158	Pulley Flat Washer	8
73	Hex Bolt M10 \times 25	11	159	Snap Ring $\phi 28$	7
74	Big Flat Washer $\phi 10$ t2	2	160	Ball Bearing 6001	7
75	Big Flat Washer $\phi 10$	8	161	Pulley	7
76	Hex Bolt M10 \times 50	6	162	Steel Wirerope 1	1
77	Left Square Tube	1	163	Steel Wirerope 2	1

78	Right Square Tube	1	164	Steel Wire Rope Screw	2
79	Engine	1	165	Hex Bolt M12×65	3
80	Hinge Pin	4	166	Shaft Wheel Support Tube	2
81	Cotter Pin 2.5×16	4	167	Frame (Back)	1
82	Left Door	1	168	Pulley Spacer	2
83	Right Door	1	169	Hex Bolt M12×40	1
84	Bolt	1	170	Frame (Right)	1
85	Nut M8	1	171	Hex Flange Bolt M10*30	2
86	Nut M8	1			

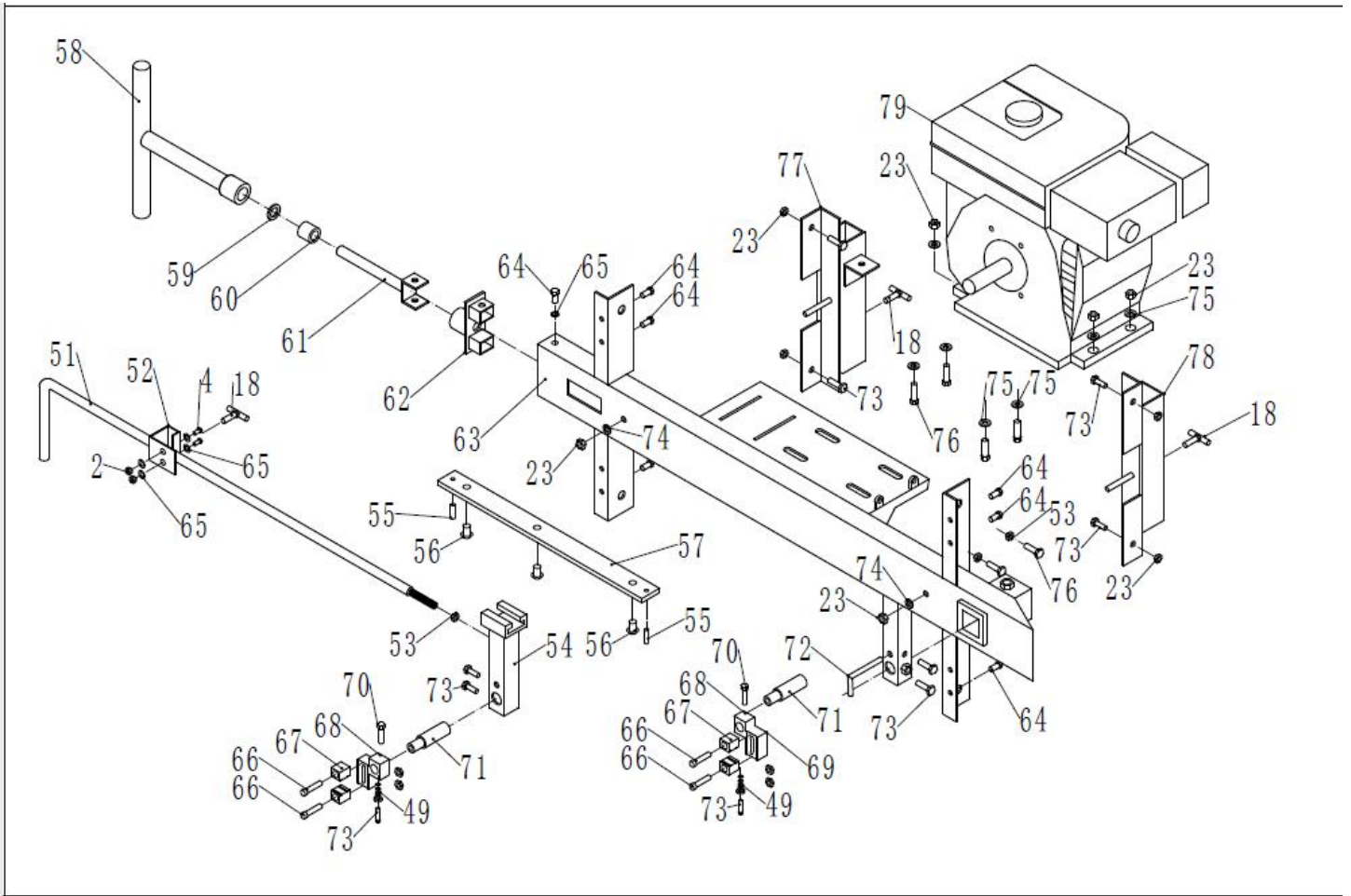
Assembly Diagram 1



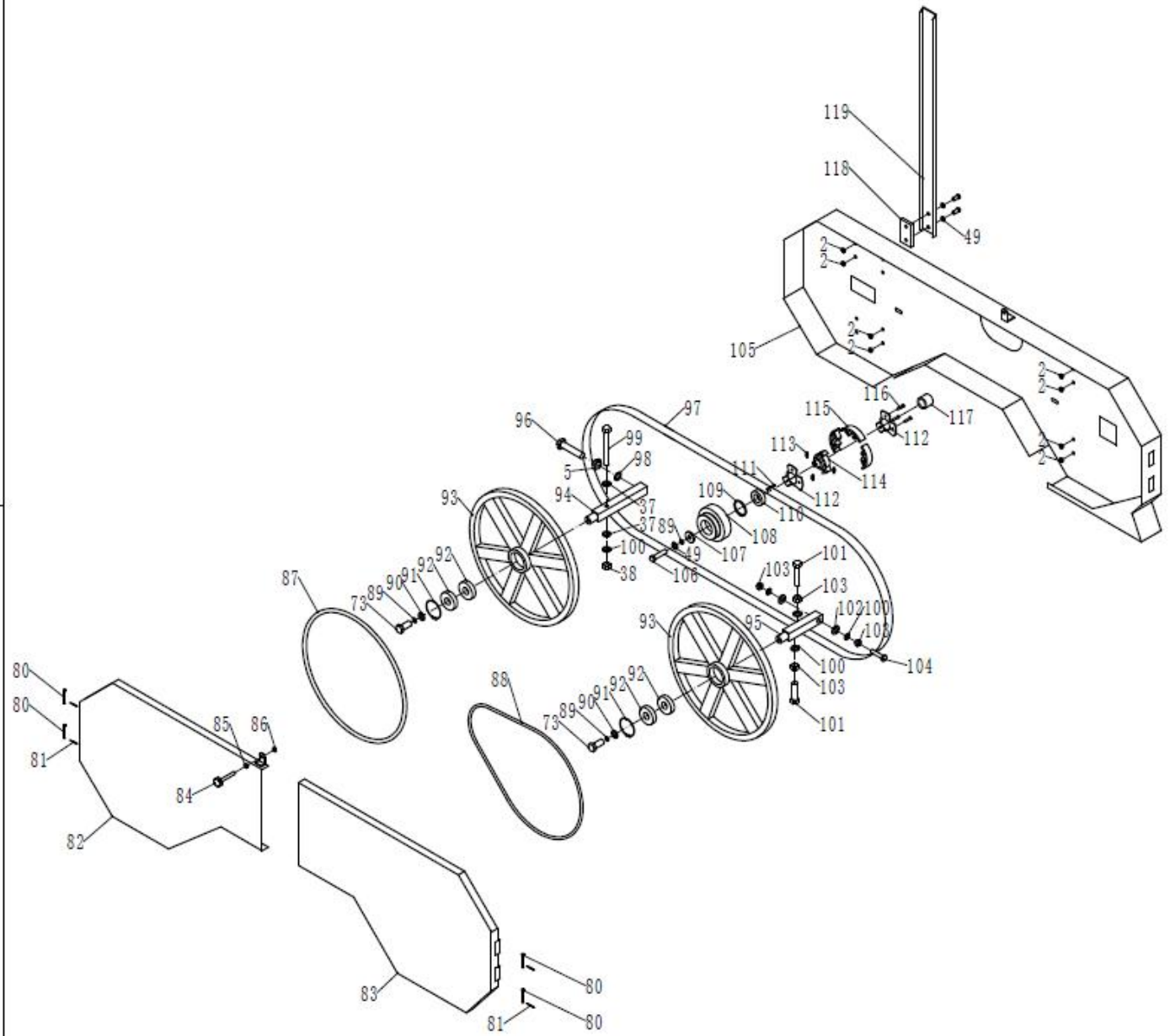
Assembly Diagram 2



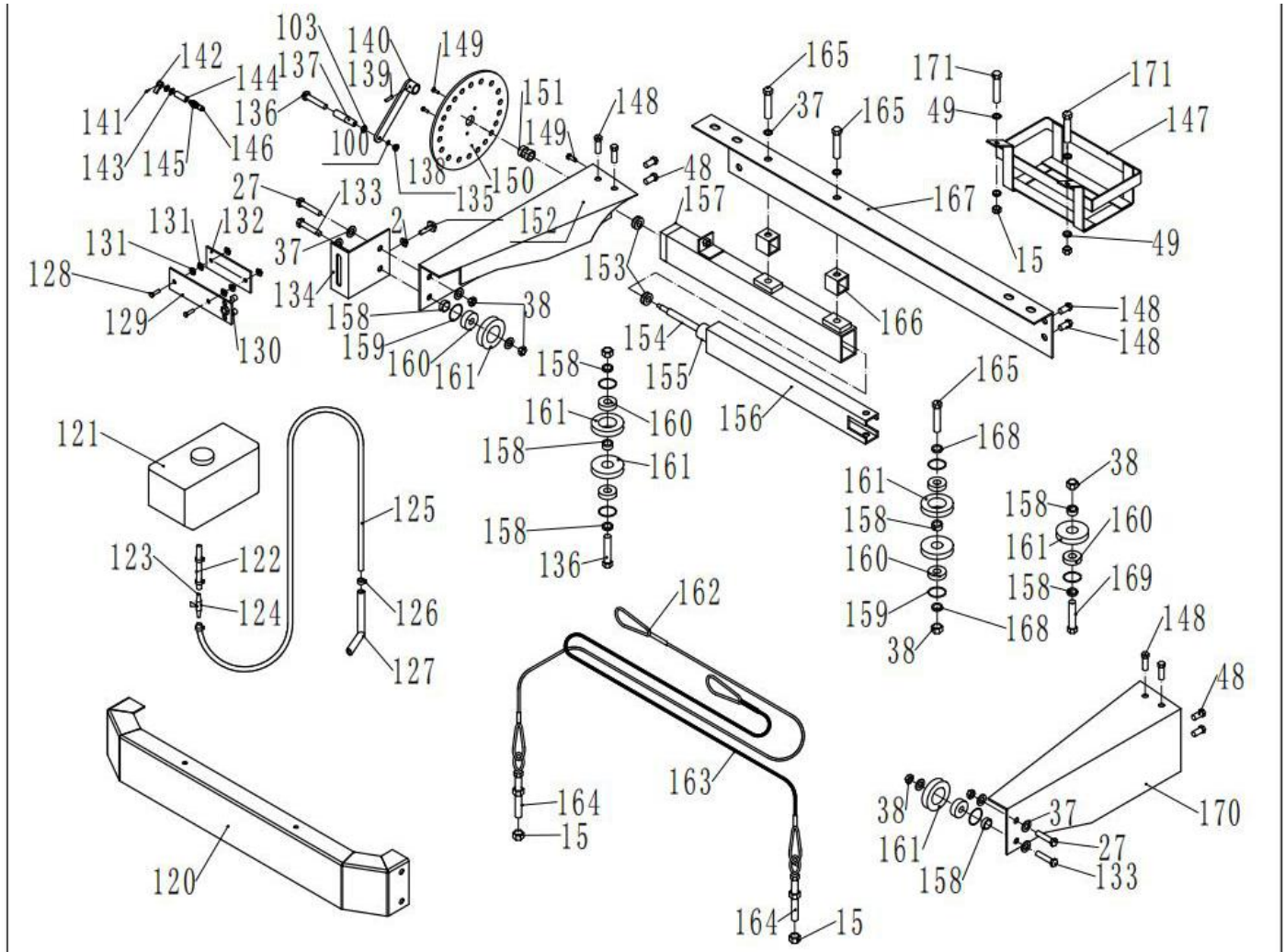
Assembly Diagram 3



Assembly Diagram 4



Assembly Diagram 5



PLEASE READ THE FOLLOWING CAREFULLY

The Manufacturer and/or Distributor has provided the parts list and assembly diagram in this manual as a reference tool only. Neither the Manufacturer or Distributor makes any representation or warranty of any kind to the buyer that he or she is qualified to make any repairs to the product, or that he or she is qualified to replace any parts of the product. In fact, the Manufacturer and/or Distributor expressly states that all repairs and parts replacements should be undertaken by certified and licensed technicians, and not by the buyer. The buyer assumes all risk and liability arising out of his or her repairs to the original product or replacement parts thereto, or arising out of his or her installation of replacement parts thereto.

Note: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

WARRANTY

One-year limited parts warranty

For technical questions, please call 218-943-6290.



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