BOZEMAN

Item 22648

Portable Sawmill

Owner's Manual

⚠ WARNING

READ AND UNDERSTAND THIS INSTRUCTION MANUAL PRIOR TO USING THIS PRODUCT. FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY OR DEATH.

Keep this instruction manual for future reference.

When properly installed, set-up, and operated, this Portable Sawmill is designed to quickly and accurately cut lumber from logs. The standard machine comes supplied with two sections of track and allows for a maximum 10 ft. cut length. An optional section of track is available for cutting longer logs, contact your distributor for information.

SPECIFICATIONS

Engine Specifications	
Engine type:	4-Stroke, Force Air Cooled, Single Cylinder (Model 190F/DH420)
Displacement:	420 cc
Start Type:	Pull-Start
Fuel Capacity:	1.72 Gallons
Oil Capacity:	1.1 Liters (1.15 Quarts)

Bandsaw Specifications	
Max Cutting Length:	10 ft. 4 in.(with two section track)
Max Cutting Width:	21 in.
Max Log Diameter:	26 in.
Drive Type:	1.72 Belt Driven
Blade:	144 in. x 1-1/4 in. x 0.035 in. 1.3 Hook Teeth per in. Carbon Tool Steel

The safety instructions provided in this manual are not intended to cover all possible conditions and practices that may occur when using, maintaining and cleaning the product.

Always use common sense and pay particular attention to all DANGER, WARNING, CAUTION, and NOTICE statements of this manual.

WARNING SYMBOLS AND DEFINITIONS

⚠	This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.
⚠ DANGER	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
⚠ WARNING	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
⚠ CAUTION	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
NOTICE CAUTION	Addresses practices not related to personal injury.

Symbol	Property or Statement
	Read and understand this instruction manual prior to using this product.
	Wear ANSI approved (or applicable national standard) goggles or properly fitted protective glasses with top and side protection.
	Use approved hearing protection such as ear plugs or ear mufflers.
	Wear foot protection.
	Use NIOSH approved dust mask or respirator.
	Wear anti-vibration safety gloves when operating.

Symbol	Property or Statement
	Keep all people out of the path of moving equipment and logs when operating or loading.
	Keep hands away from blade.
	Do not stand or step on this surface.
	MOVING PARTS CAN CRUSH AND CUT Keep all guards and doors in place during operation. Do not bypass door interlock safety switch.
	Keep clear of sawdust exhaust port.
	Burn hazard, avoid touching.

UNPACKING & INSPECTION

When unpacking, please inspect the product carefully to ensure the product is intact and undamaged. If any parts are missing or broken, please call 1-800-386-0191 or email us at info@bozeman-us.net as soon as possible.

⚠ **WARNING** **Do not operate this product if damaged during shipment, handling, or after misuse.**
Do not operate the product until the parts have been replaced or the fault rectified. Failure to do so may result in serious personal injury or property damage

⚠ WARNING **The Sawmill and its parts are heavy. It is recommended a minimum of two people are needed for unpacking, lifting, moving, and assembling.** If available, mechanical advantage lifting equipment (hoists, lifts, forklifts etc.) are also recommended.

Remove the parts and accessories from the packaging and inspect for damage. Make sure that all items in the contents are included.

Package contents:

- Sawmill Assembly
- Lube Tank and Bracket
- Push Beam Stand
- Six Accessory Boxes (See Assembly Section for Accessory Box contents)
- Long Stock Items

GENERAL SAFETY

⚠ WARNING **READ ALL SAFETY WARNINGS AND ALL INSTRUCTIONS.** Failure to follow the warnings and instructions may result in electric shock, serious injury and/or DEATH.

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE.

WORK AREA SAFETY

- **Operate in a safe work environment.** Keep your work area clean, well-lit and free of distractions. Place lights so you are not working in a shadow.
- **Keep anyone not wearing appropriate safety equipment away from the work area.**
- **Store properly and in a safe and dry location.** Keep out of reach of children.
- **Do not install or use in the presence of flammable gases, dust, or liquids.** Keep out of reach of children.
- **Do not install or use in the presence of flammable gases, dust, or liquids.**

PERSONAL SAFETY

- **Wear Personal Protective Equipment (PPE) approved by the American National Standards Institute (ANSI) or the Canadian Standards Association (CSA).**
- **Always wear impact safety goggles that provide front and side protection for the eyes.** Eye protection equipment should comply with ANSI Z87.1 or CSA Z94.3-07 standards based on the type of work performed.
- **Wear protective clothing designed for the work environment and equipment.**
- **Stay alert, watch what you are doing and use common sense when operating this product. Do not use this product while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating may result in serious personal injury.
- **Do not let familiarity gained from frequent use to allow you to become complacent and ignore safety principles.** A careless action can cause severe injury within a fraction of a second.
- **Do not overreach.** Always keep a proper footing and balance when operating.
- **Dress properly. Do not wear loose clothing 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 the correct equipment for the job.** This equipment was designed for a specific function. Do not disassemble, modify or alter this equipment or use it for an unintended purpose.
- **All users must understand the operation of all controls and learn how to stop the sawmill quickly in case of emergency.**

SPECIFIC SAFETY PRECAUTIONS

- **Always keep hands and limbs away from the blade, cables and other moving parts.**
- **Do not use the sawmill if parts are damaged, broken, or misplaced.** Have a qualified technician inspect, repair, or replace parts as needed.
- **Do not modify the sawmill in any way.** Modification may impair the safety, function, and affect the life of the equipment.
- **Do not wear gloves while operating the sawmill.** Gloves may give you a false sense of security and do little to protect your hands when operating. In fact, they may end up getting your fingers pulled into the blade if the material catches. Wear heavy-duty gloves only when the machine is stopped and while changing the blade.
- **Wear approved hearing protection when operating the equipment.**
- **Wear Approved safety goggles when working with the equipment or handling blades.**
- **Wear approved protective footwear with saw protection, steel toe-cap and non-slip sole when working with the equipment or handling blades.**
- **Wear full length protective pants and hi-vis gear when working with or operating the equipment or handling blades.**
- **Wear respiration protection when working with the equipment.**
- **Operate the equipment and handle blades in full daylight or under adequate site lighting.**
- **Keep the work area clean, free of clutter, pets, children, obstacles, hazards or distractions.**
- **Keep all children and animals at least 50 ft away from the equipment, blades and worksite.**
- **Keep clear of the sawdust chute and its path when in operation. A broken blade may be ejected from the sawdust chute at high velocity.**
- **Blade breakage occurs when it is not regularly adjusted, sharpened, and maintained, and/or when a blade is used past its service life.**
- **The operator must be on the opposite side of sawdust chute and behind the push beam.** Keep both hands on the push beam and never attempt to stand in front of the carriage or pull the carriage through a cut.
- **Never operate the gasoline powered engine in an enclosed area. Gasoline engines must be well ventilated and operated outside only.**
- **Engine exhaust gases may cause nausea, delirium, and potentially death without adequate ventilation.**
- **Never walk on the track or log supports, and never step across the tracks.**
- **Set up the equipment on obstacle-free level ground so that there is at least 3 ft of clear space around the tracks**

- **Do not stand between the equipment and logs that will be loaded onto the log supports.** Avoid standing where a rolling log can injure you.
- **Keep a fully charged dry-chemical fire extinguisher visible and easily accessible at the worksite.**
- **Keep a fully stocked first aid kit visible and easily accessible at the worksite.**
- **Never work alone.** Make sure that there are other adults within hearing distance should you need to call for help.
- **Adjustment of the Pulley Lifting Mechanism while the Cam Lock Handles are locked may cause the head to drop when the Cam Lock Handles are released.**
- **Never open Blade Wheel Doors or put your hands on the Blade, Blade Guard, or Blade Guide Blocks while the engine is running.** The clutch mechanism is designed to stop the blade when the engine is at idle speed. The clutch may engage without warning and cause the blade to move.
- **Always turn the engine off before attempting to open any doors or adjust any guards.**
- **Never bypass or disconnect the Wheel Door interlock switch.**
- **Carefully handle coiled blades which may unexpectedly spring apart in any direction.**
- **Do not operate this equipment in temperatures below -28°C (-18.5 °F)**
- **Do not add hardware or attachments of any kind other than those specifically designed and supplied by the distributor or offered by Bozeman.**
- **Maintain all Labels and Nameplates which have important information. Call 1-800-386-0191 or email info@bozeman-us.net for replacements.**
- **Prior to each operation, ensure:**
  1. The operator is using the proper personal protective equipment
  2. Maintenance has been properly performed.
  3. The blade is disengaged from the workpiece.
  4. The tracks are fully supported along their length.
  5. The carriage wheels and end-stops are installed and functioning properly.
  6. All components, fasteners, cables and other parts are properly installed and operational.
  7. The sawdust chute is free from obstruction.
  8. The blade, safety switches, doors and guards are properly installed and operating.
- **Prior to making each cut, ensure:**
  1. The work area is clear, and that all people and pets are at least 50 ft away.
  2. There are no trip hazards or other distractions.
  3. The blade will clear the log stops and clamps.
  4. The guards are still positioned correctly and have not moved.
  5. The tracks are free from debris or damage.
  6. The workpiece is firmly secured in place.
  7. The workpiece is free from inclusions such as rocks, nails, and other hard objects.
- **Always turn the engine off and engage the emergency stop button before leaving the operating position, even if for a moment, to load or reposition logs, or when removing lumber.**

ENGINE SAFETY

- **Refer to the engine manual for important safety information, operation, maintenance, and repair.**
- **THE ENGINE IS NOT SHIPPED WITH OIL.** Add oil and check the oil level prior to each use.
- **Gasoline, its vapors, and oil used in the engine are EXTREMELY FLAMMABLE and can be EXPLOSIVE under certain conditions, creating the potential for serious injury or death if improperly handled.**
- **Never operate an engine with a fuel or oil leak.**
- **Never refuel the engine when it is hot.** Turn off the engine and allow it to cool before attempting to add oil or gasoline.
- **Do not fill the tank in a closed area such as a garage, while smoking, or near any source of flame or sparks; this includes any appliance with a pilot light.**
- **Replace cap tightly to prevent spillage of fuel and potential fire hazard.**
- **Immediately clean any fuel or oil spills before starting the engine.**
- **Do not touch the engine.** The engine will become very hot during and after operation.
- **Use only regular unleaded gasoline with an octane rating of 90 or higher.** Using a lower rated fuel may result in poor performance and a shorter life span of the engine.
- **Fuel can damage paint and some types of plastic.** Be careful not to spill fuel when filling your fuel tank.
- **Never run the engine without the air filter in place.**
- **Operating the engine without the air filter in place will allow dust and debris to enter the engine resulting in severe engine damage.**
- **AVOID getting the air filter wet when in operation or while washing the vehicle.**
- **DO NOT use pressurized air to clean the air filter.**

CONSIDERATIONS BEFORE ASSEMBLY

⚠ CAUTION **Before assembling your sawmill, you must consider and make decisions regarding the safety, location, and workflow of the machine placement.**

Things to consider:

- The machine should be located and assembled outdoors for the best engine exhaust ventilation. Protection from the elements, such as a carport cover is ideal.
- Ensure there is adequate space around the machine to allow the operator to perform the work, and which will also provide adequate room for any bystanders.
- Pick a level spot. It may be necessary to level the ground prior to setting up the machine. Using sleepers under the tracks will help prevent the feet from settling into the ground and will also make future leveling adjustments easy.
- The machine will make very fast work of making lumber from logs, so be sure to consider how the logs will be loaded onto the machine, and where both the scrap and finished lumber will be stored.
- Use tools that will save you time and effort while easing the work of moving logs around. Some tools include cant hooks, log tongs, and log arches.

ASSEMBLY

WARNING **This is a complex and dangerous machine. The Sawmill is especially dangerous when assembled incorrectly. If you do not feel completely comfortable assembling it, then seek the services of a qualified technician to assemble it.**

The sawmill comes mostly pre-assembled, however the tracks, carriage, and lifting mechanism must be installed by the user or by a competent technician. Follow these steps to ensure proper assembly.

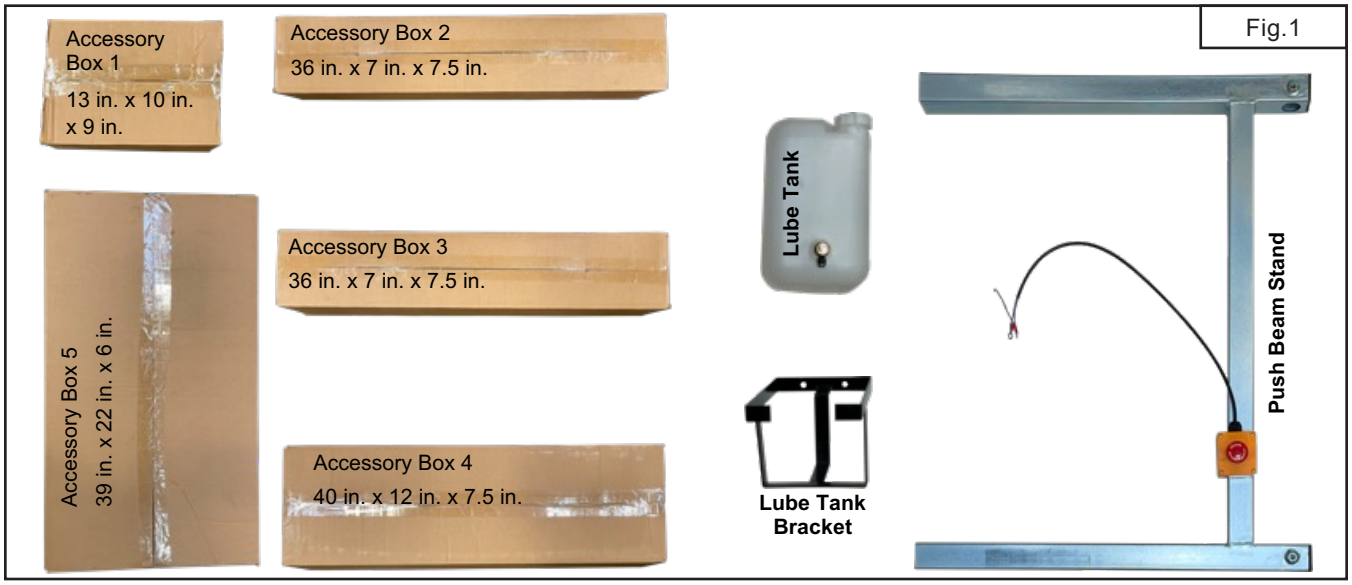
Tools needed for assembly:

- Screwdriver/Pry bar
- Philips #2 Screwdriver
- Rubber Mallet
- Metric Open-End Wrench Set
- Metric Hex Key (6mm)
- Metric Socket Set
- Framing Square

Step 1: Open the shipping Crate. Remove the straps on the shipping crate and use a screwdriver or pry bar to remove the top from the shipping crate.

Step 2: Unpack accessible items. With the top removed, carefully remove the five accessory boxes (the sixth accessory box will be removed later), lube tank and bracket, and push beam stand from the shipping crate (Fig.1).

Fig.1

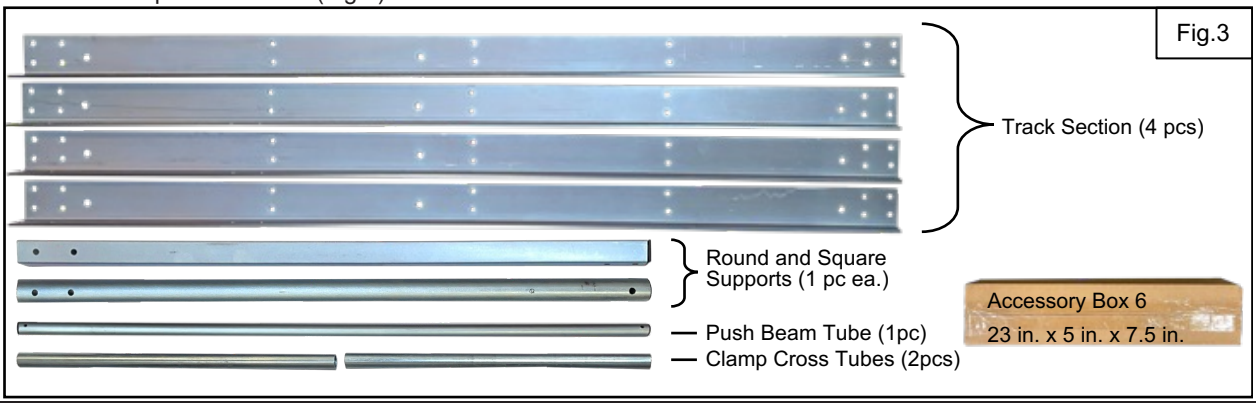


Step 3: Remove the side panels from the crate. Use a Philips Screwdriver to remove the thin metal corner reinforcement brackets on the four edges (Fig.1) of the crate then remove the four side panels (Fig.2).

Fig.2

Step 4: Unpack remaining accessible items. Remove the sixth accessory box and the long-stock items from the bottom of the crate. The long-stock items consist of four Track Sections, one each of the Round and Square Supports, one Push Beam Tube, and two Clamp Cross Tubes (Fig.3).

Fig.3



Step 5: Check the contents of the accessory boxes. Open each accessory box and check the contents match as follows (Figs. 4 through 9):

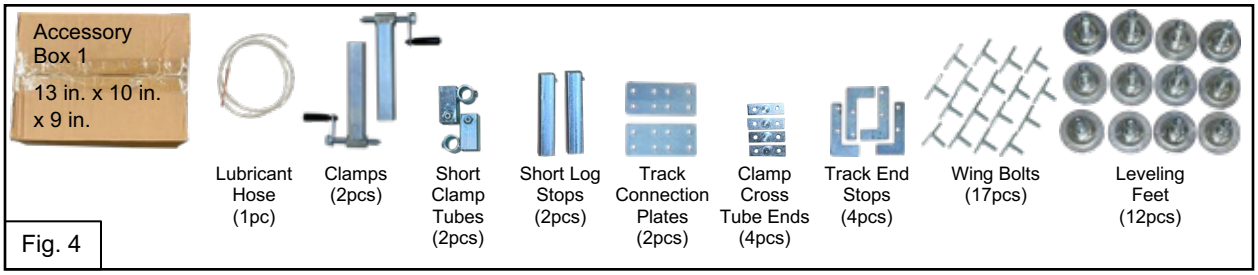


Fig. 4

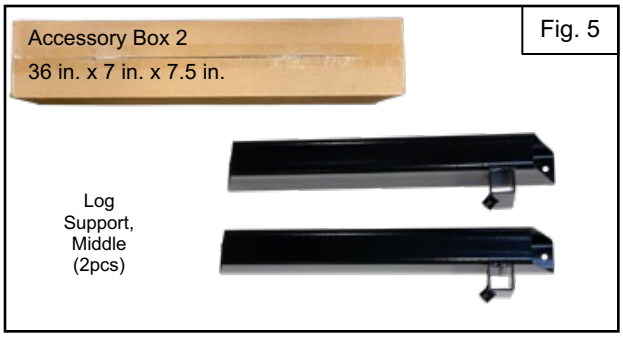


Fig. 5

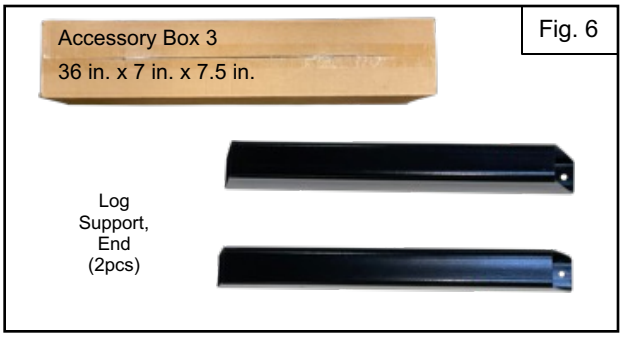


Fig. 6

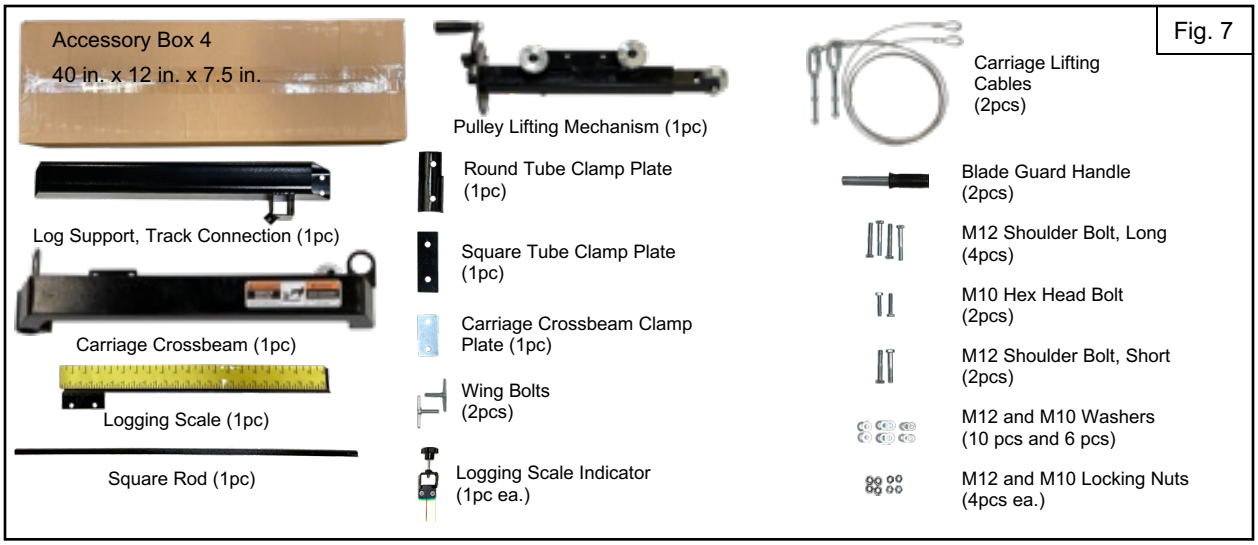


Fig. 7

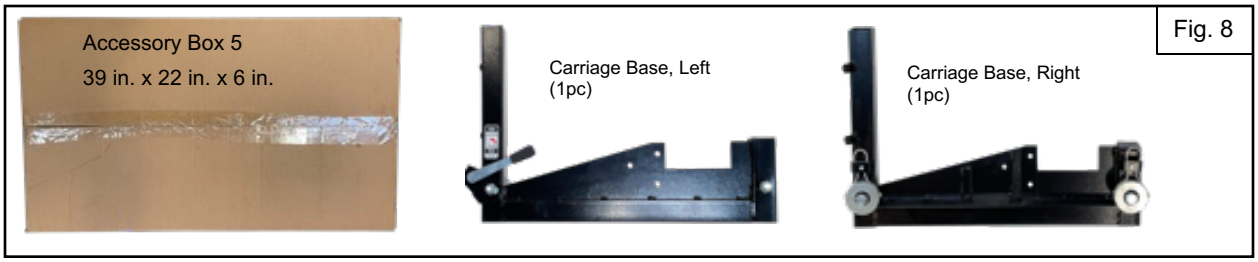


Fig. 8

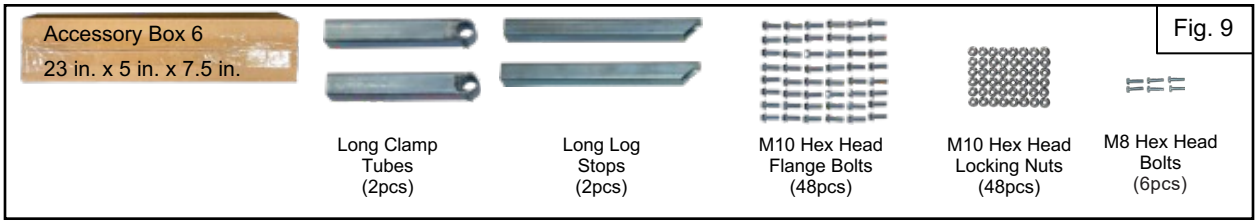


Fig. 9

Step 6: Layout the track, log supports, and leveling feet. Begin assembly by laying out the track, leveling feet, and log supports (Fig. 10) at the location where it will be set-up. Place the Middle and Track Connection Log Supports so that the log stop tubes are on the same side where the sawdust discharge area will be. This will ensure the cutting direction of the blade will always push the workpiece against the log stops while cutting.

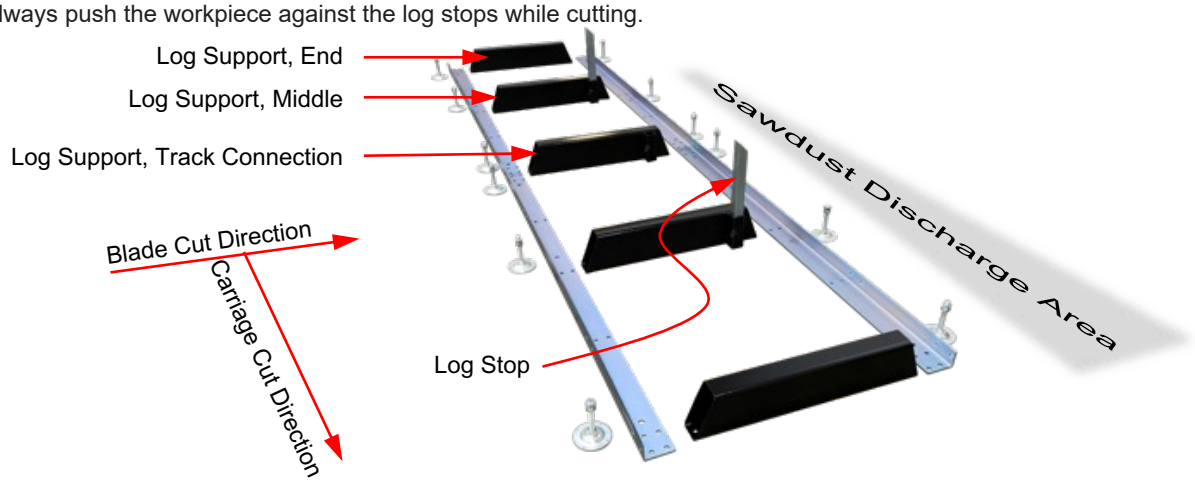


Fig. 10

Step 7: Place the feet on the sleepers (if used) and under the tracks. Remove one nut on each leveling foot and adjust the second nut so that it is about an inch below the end of the threaded rod. Place three feet under each section of track, then re-install the nut by hand and DO NOT TIGHTEN THE NUTS AT THIS TIME..

NOTE: Using sleepers under the tracks is highly recommended if the sawmill is not installed on a hard surface. Each sleeper should be at least 2 in. x 6 in. x 40 in. and installed under each pair feet (6 sleepers total), and parallel with the log supports.

Step 8: Install Middle and End Log Supports. Install both the Middle and End Log Supports using four M10 Hex Head Flange Bolts and M10 Hex Head Locking Nuts for each Log Support. The End Log Supports should be installed farthest out on the bolt holes. DO NOT TIGHTEN THE BOLTS AND NUTS AT THIS TIME.

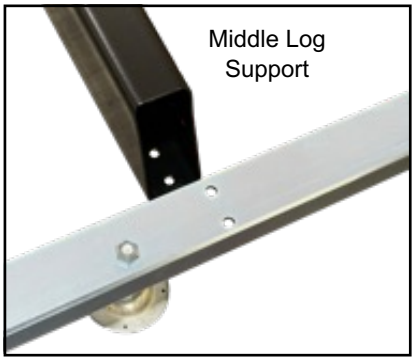


Fig. 11

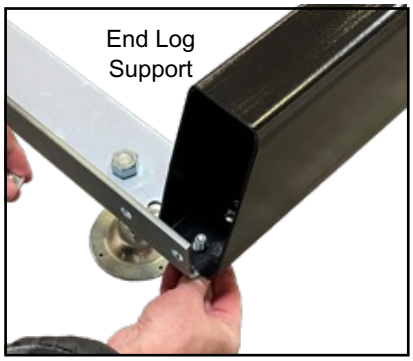


Fig. 12

Step 9: Install Track Connection Log Support and plate. Install Track Connection Log Support with the Track Connection Plate placed below the Tracks (Fig. 13). Use eight M10 Hex Head Flange Bolts and M10 Hex Head Locking Nuts for each side of the Track Connection Log Support. DO NOT TIGHTEN THE BOLTS AND NUTS AT THIS TIME.

Fig. 13

Step 10: Install the Long Log Stops and check layout. Place the two Long Log Stops into the receiving tubes on the Middle Log Supports (Fig. 14) and secure in place with a Wing Bolt (Fig. 15). Check that your tracks are situated correctly relative to the blade cutting direction, carriage cutting direction, and sawdust chute discharge area, as shown previously in Fig.10. Correct any discrepancies found.

Fig. 14

Fig. 15

Step 11: **Assemble the Clamp Assembly** (Fig. 16) on the track at the points on either side of the Track Connection Log Support.

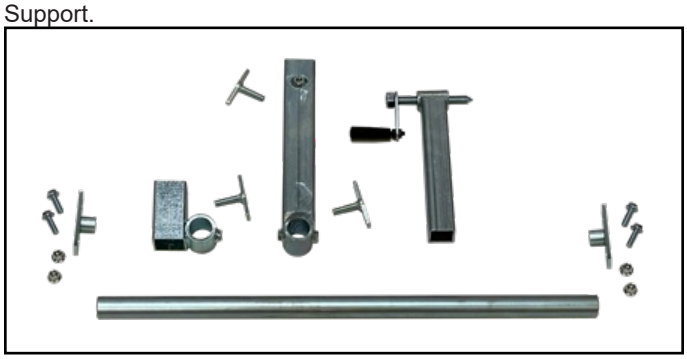


Fig. 16

Place a Clamp Cross Tube End onto a Clamp Cross Tube (Fig. 17) and set it on the track. Slide a Short Clamp Tube onto the Clamp Cross Tube (Fig. 18) and make sure the welded nut is on the side opposite of the Log Stops. Place a Long Clamp Tube onto the Clamp Cross Tube (Fig. 19) also with the welded nut on the side opposite the Log Stops. Place another Cross Tube End onto the Clamp Cross Tube and align both Cross Tube Ends with the holes in the track (Fig. 20).

Fig. 17

Fig. 18

Fig. 19

Fig. 20

Use four M10 Hex Head Flange Bolts and M10 Hex Head Locking Nuts to secure both ends of the Clamp Cross Tube onto the holes in the track (Fig. 21). Tighten the bolts on each Clamp Cross Tube End, then install a Wing Bolt into each welded nut on the bottom of both the Short and Long Clamp Tubes (Fig. 22). Place a Clamp into the Long Clamp Tube with the crank handle away from the Log Stop, then fit into place using a Wing Bolt (Fig. 23).

Fig. 21

Fig. 22

Fig. 23

Step 12: **Leveling the Track.** Lay a 1/2 in. thick x 3 in. wide x 30 in. long piece of wood on top of each of the two End Log Supports. Place a string-line (Fig. 24) on top of the wood and secure each end of the string-line to prevent it from moving. Use a ruler and check that each log support is 1/2 in. from the string. Use a spirit level to check the levelness, left to right, across each log support and adjust the leveling feet, as necessary while ensuring all feet are touching the ground. As a verification, check the level along each track, left and right. Repeat this process on both the left and right sides of the track until the track is level. Once the track is level, tighten the top nut on the leveling feet.

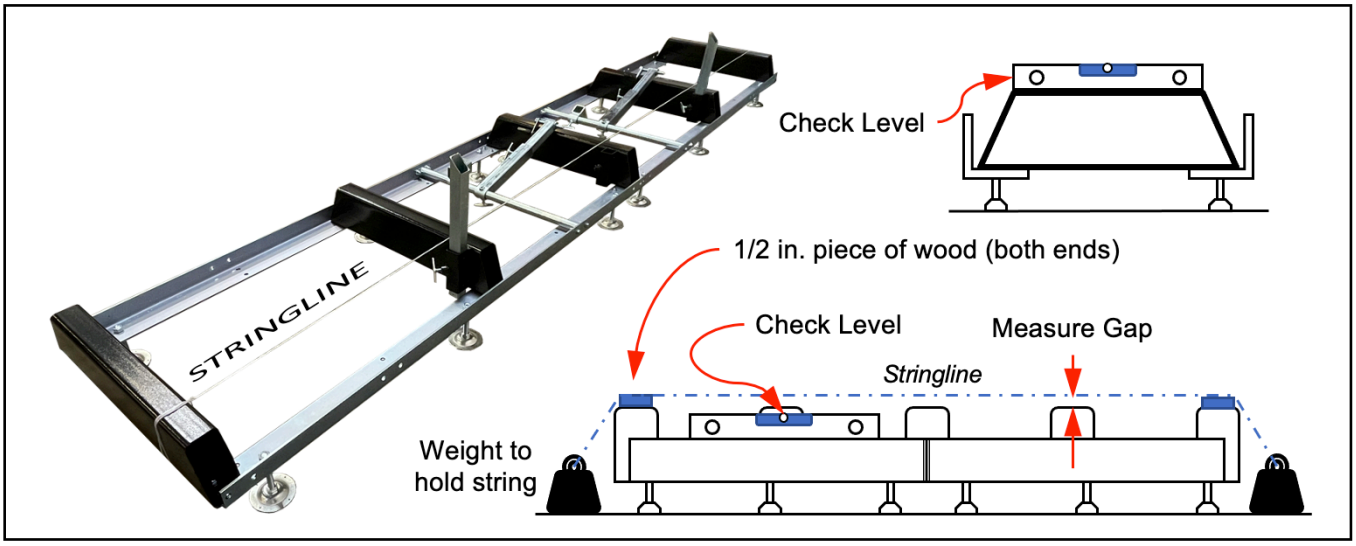


Fig. 24

Step 13: **Assemble the Carriage Base.** Lay out the Left and Right Carriage Base, as shown (Fig. 25), along with the Round and Square Support Tubes, Round and Square Tube Clamp Plates, four Long M12 Hex Head Shoulder Bolts M12 Locking Nuts, and eight M12 Washers. The Round Support Tube is assembled on the Left Carriage Base (the one with the Carriage Brake, and on the same side as the Carriage Wheels. Use two Long M12 Hex Head Shoulder Bolts with washers and nuts and mount the Round Support Tube with the Round Clamp Plate and nuts on the same side as the Carriage Wheels.

The Square Tube Support is assembled on the Right Carriage Base, also on the same side as the carriage wheels. Use two Long M12 Hex Head Shoulder Bolts with washers and nuts to mount the Square Support Tube with the Square Tube Clamp Plate and nuts on the same side as the Carriage Wheels.

Fig. 25

Step 14: **Remove the Crate Bottom.** Place a moving blanket in front of the Sawmill Head and crate bottom as shown (Fig. 26). Check that the Blade Wheel Door latches are latched, then place the Push Beam Tube into the Square Tube Support receptacle (Fig. 27). With two People, one using the Push Beam Tube as a lever, slowly place the Sawmill Head onto the blanket on the Blade Wheel Doors. (Fig. 27). The crate bottom may now be carefully removed.

NOTICE It is unnecessary to unbolt the shipping bracket (Fig. 28) because the Sawmill Head is only resting on top of the bracket.

Fig. 26

Fig. 27

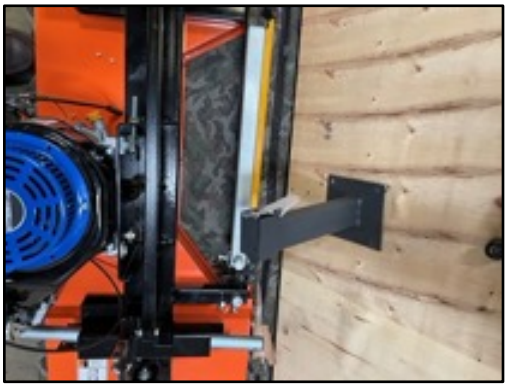


Fig. 28

Step 15: <u>Remove the Round Tube Support stop-screw.</u> Remove the stop-screw from the top of the Round Tube Support (Fig. 29).

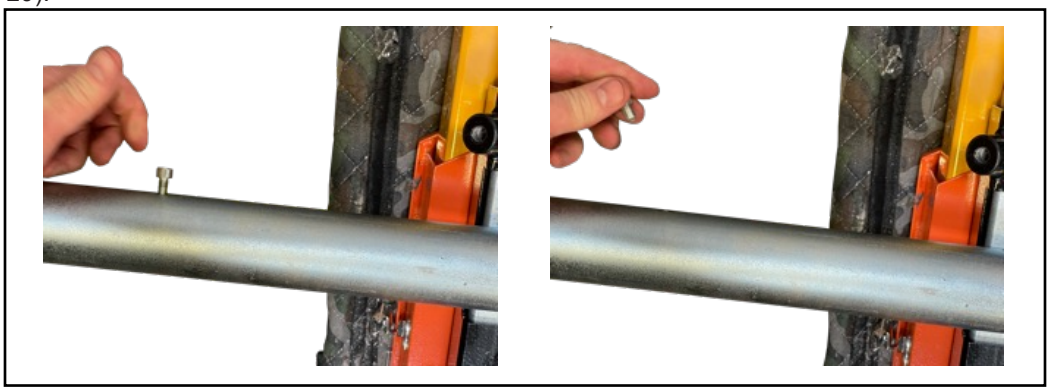
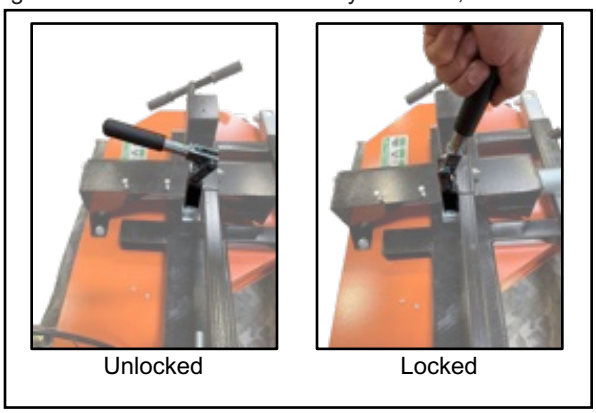


Fig. 29

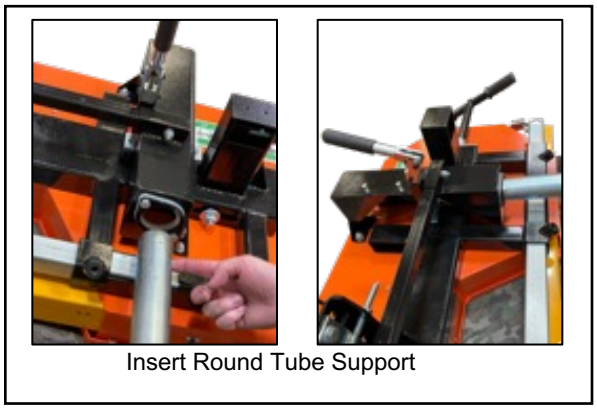
Step 16: <u>Assemble the Carriage Base to the Sawmill Head.</u> Check that the Cam Lock Handles are in the unlocked position (Fig. 30). Insert the Round Tube Support on the assembled Left Carriage Base into the Round Tube Support receptacle on the Sawmill Head (Fig. 31). Note that the Round Tube Support is on the right side since the Sawmill Head is lying on its face. Ensure the Carriage Wheels are facing towards the motor. It may be necessary to lift the Sawmill Head in order to insert the Carriage Base. To do so, insert the Push Beam Tube into the Square Tube Support receptacle (Fig. 32), and with two people, one using the Push Beam Tube as a lever, raise the Sawmill Head enough so the Left Carriage Base with Round Tube Support can be fully inserted into the Sawmill Head (Fig. 32). Once the Carriage base is fully inserted, move the Cam Lock Handle into the locked position (Fig. 30). Replace stop-screw from the top of the Round Tube Support (Fig. 33).

Check that the Cam Lock Handle on the Square Tube receptacle is in the unlocked position then Insert the assembled Right Carriage Base into the Square Tube Support receptacle on the Sawmill Head. The Carriage Wheels should be facing towards the motor. Once fully inserted, move the Cam Lock Handle into the locked position.



Unlocked Locked

Fig. 30



Insert Round Tube Support

Fig. 31

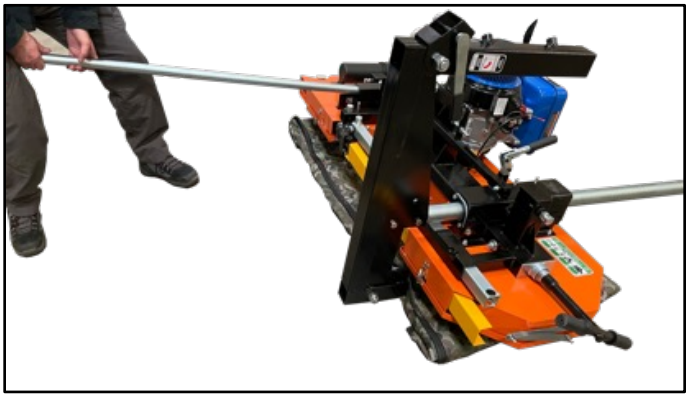


Fig. 32

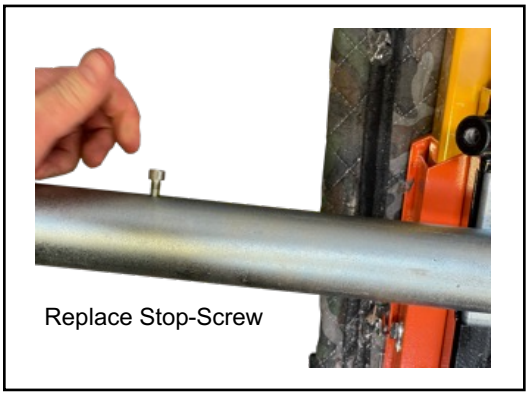


Fig. 33

Insert the Push Beam Stand (Fig. 34) into the square receptacles on the Carriage Base assemblies (Fig. 35). The emergency stop button should be facing away from the engine. It may be necessary to release one or both Cam Lock Handles. Be sure to lock the Cam Locks once the Push Beam Stand is installed. Secure in place using four Wing Bolts (Fig. 36).

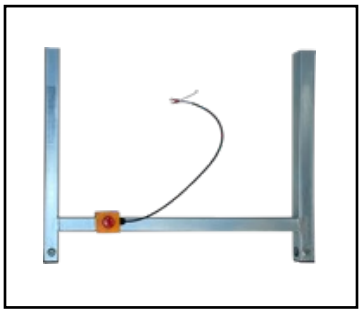


Fig. 34

Fig. 35

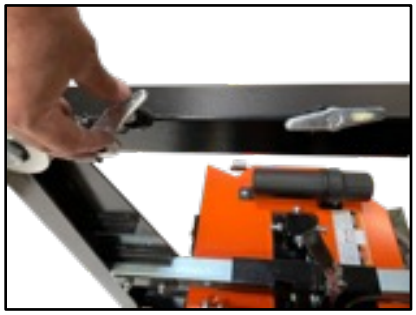


Fig. 36

Step 17: **Place the Carriage onto the track.** Move the Carriage with the Sawmill Head to the end of the track as shown (Fig. 37), with the Square Support Tube on the same side as the Long Log Stops. With two people using each Carriage Support Tube as a lever (Fig. 38), lift the Sawmill Head and gently set the Rear Carriage Wheels onto the Track (Fig. 39).

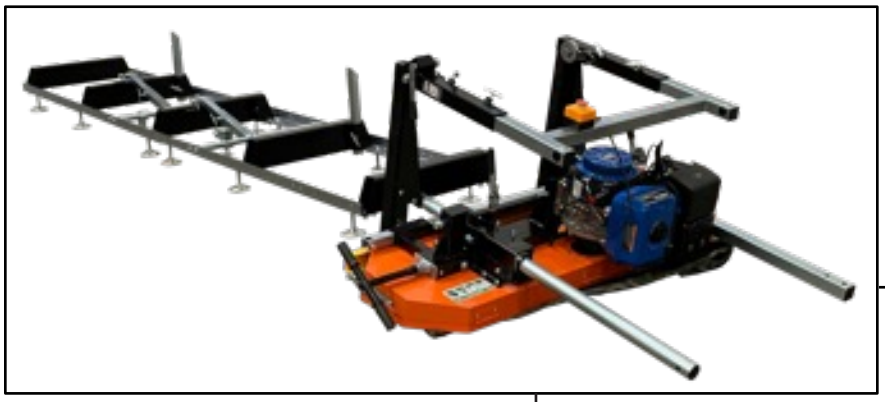


Fig. 37

Fig. 38

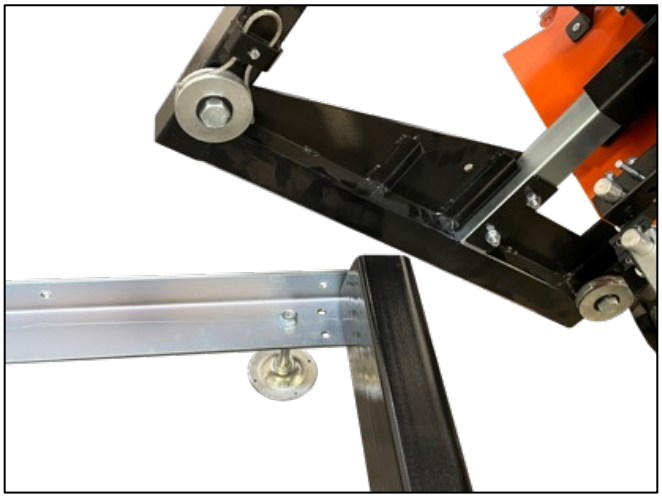


Fig. 39

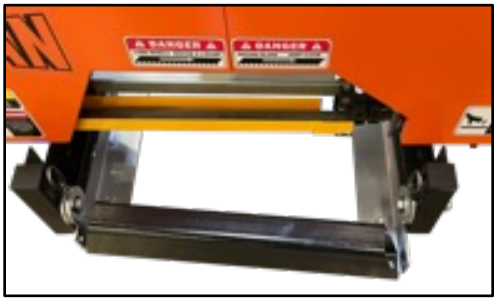


Fig. 40

With the Rear Carriage Wheels on the Tracks, use a pair of pry bars or other mechanical lifting method to place the front wheels on the track (Fig. 40). Note that the tracks in Fig.40 are skewed, and the log support is not perpendicular. This scenario will be addressed in Step 21, Adjusting the Track Alignment.

⚠ CAUTION **Refrain from moving the Carriage along the Tracks at this point.** Note that the Sawmill Head is at the lowest point, and that the Long Log Stops will interfere with the travel of the Carriage.

Step 18: Install the Track End Stops. On each end of the Tracks, install and tighten a Track End Stop using two M10 Hex Head Flange Bolts and Locking Nuts on the inside of the track as shown (Fig. 41) and with the nuts on the inside.

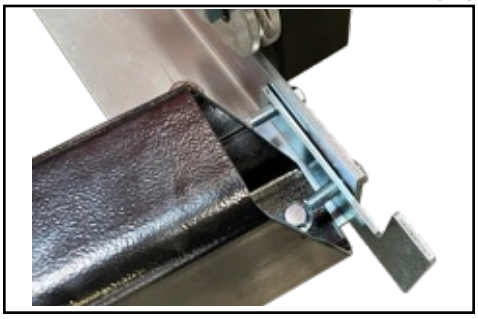


Fig. 41

Step 19: Install the Carriage Crossbeam and Logging Scale. Place the Carriage Crossbeam onto the Carriage Round Support and use the Carriage Crossbeam Clamp along with two Short M12 Shoulder Bolts and M12 Flat Washers to hold it in place (Fig.42). DO NOT TIGHTEN THE BOLTS. On the round tube end, use a pair of wrenches and remove the two bolts from the round clamp on the Carriage Crossbeam. Place the Logging Scale onto the outside of the round clamp of the Carriage Crossbeam and replace the two bolts (Fig. 43). While holding the scale parallel to the round tube, and the Carriage Crossbeam round clamp flush with the Round Tube end, tighten the bolts. Use the two bolts located just above the Cam Lock Handle to mount the Square Rod. Place the Scale Indicator onto the Square Rod and tighten the knob to hold it in place. It may be necessary to slightly bend the Square Rod and Logging Scale, so they are parallel. Tighten the bolts on the Square Tube Support clamp.

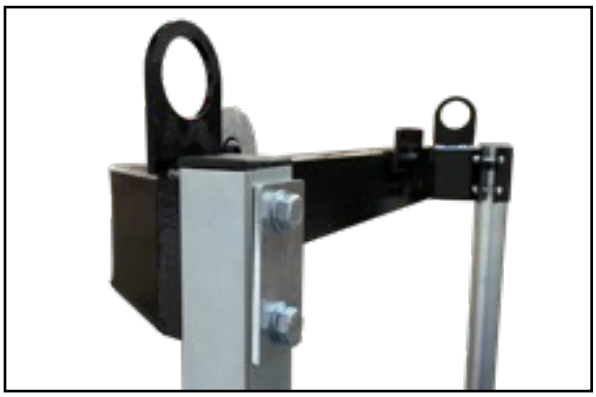


Fig. 42

Fig. 43

Step 20: Install the Pulley Lifting Mechanism and the Lube Tank Bracket. Place the Pulley Lifting Mechanism on top of the Carriage Crossbeam with the pulleys on the engine side and on the front side of the mounting bracket (Fig. 44). While holding the Pulley Lifting Mechanism in place, attach the Lube Tank Bracket as shown (Fig. 45). Use two M10 Hex Head Bolts and four M10 Flat Washers and tighten the bolts and nuts to secure the two pieces to the Carriage Crossbeam.

Fig. 44

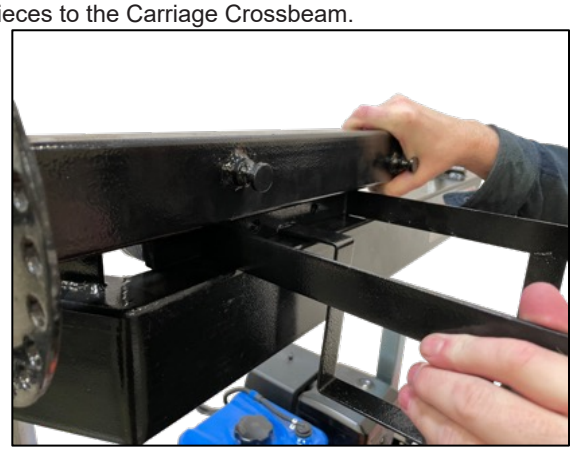


Fig. 45

Step 21: Install the Carriage Lifting Cables. Once the Pulley Lift Mechanism is tightened in place, release the Lock on the Index Plate and turn the Crank Handle so that the twin horizontal pulleys are fully retracted. Install a cable eye bolt into the bracket next to the Round Support Tube (Fig. 46), route the cable up and over the pulley directly above it (Fig. 47), then route the cable around the top horizontal pulley and hook it onto the upper pin (Fig. 48).

Fig. 46

Fig. 47

Fig. 48

Next, install the other cable eye bolt into the bracket near the engine muffler (Fig. 49), route the cable up and over the pulley directly above it, then under and around the pulley to the right (Fig. 50). Continue routing the cable around the bottom horizontal pulley and hook it onto the lower pin (Fig. 51).

Fig. 49

Fig. 50

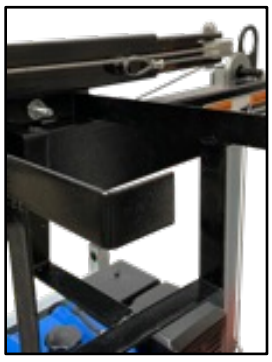
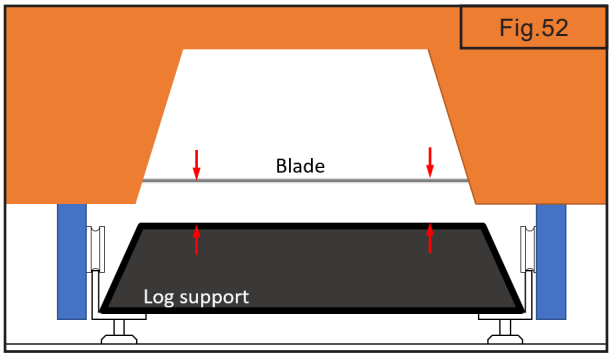


Fig. 51

Step 22: Adjust the Lifting Cables. Remove all Log Stops from their receptacles and place them aside. Lower all Clamps and rotate them until they are under the Log Supports.

With the Sawmill Head in its lowest position, release the lock on the Index Plate and turn the Crank Handle until there is slight tension on at least one, or both cables. Put both Cam Lock Handles into the unlocked position. Slowly move the Carriage until the blade is directly over one of the Log Supports. If necessary, move the sliding Blade Guard to its largest opening. Measure the distance between the blade and the log support on the left and right (Fig. 52). Raise or lower the carriage by adjusting the nuts on the cable eye bolts as necessary so that there is tension on both cables and the blade height is the same on both sides.



Step 23: Adjust the track alignment so the carriage travels freely, then tighten the bolts. The tracks may be skewed, and the Log Supports may not be perpendicular to the Tracks. Check that the Log Supports are perpendicular by using a framing square. Use a dead-blow hammer or rubber mallet to knock the end of the tracks so the log supports are square. Move the carriage slowly along the tracks and check for any binding. Check the level of the machine if necessary.

When everything measures correctly and the carriage moves freely, tighten the leveling nuts and all bolts and nuts between the log supports and the track.

Using screws to anchor the leveling feet to the floor or sleepers will help prevent the machine from moving and is highly recommended.


Fig. 53

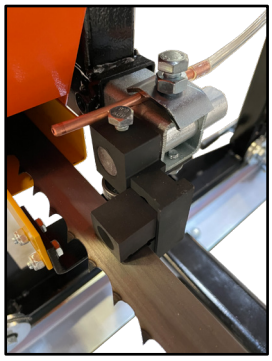


Fig. 54

Step 24: Install the Lube Tank. Place the Lube Tank into the Lube Tank Bracket. If the valve on the Lube Tank is on the side, install so that the valve is facing to the side of the machine, opposite the sawdust chute, to allow easy access for the operator. If the valve is on the bottom, install the lube tank for easy access. Push the end of the Lube Hose into the quick connector on the Lube Tank as far as it will go (Fig. 53). Route the tube to the blade Guide Block and secure it in place with the plate and nut that is installed on the bolt that holds the Guide Block (Fig. 54).

NOTICE

The Lube Tank should only be filled with water-based solutions. A typical solution includes about a cup of dish washing fluid per tank. In cold temperatures, and to prevent the fluid from freezing use low temperature windshield washing fluid. The flow of liquid should be adjusted to be slow, usually a steady drip of one drop per second or less. The fluid should drip onto the blade, just in front of the guide block.

Step 25: Install the Push Bar Tube. Slide the Push Bar Tube in from the side (Fig. 55), adjust it to your desired length, then use two Wing Bolts to secure it in place (Fig. 56).


Fig. 55


Fig. 56

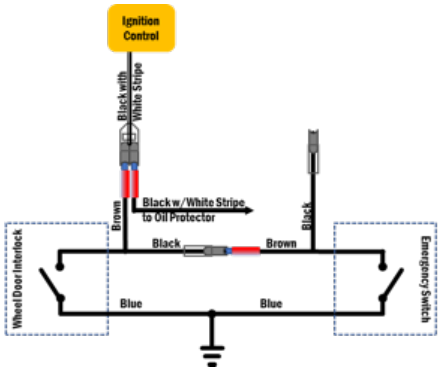

Fig. 57

Unwind the Accelerator Handle from the engine (Fig. 57) and install it on the operator side of the Push Bar Tube. The Accelerator Handle may be placed closer to the carriage or further away. Check that the cable will not bind on anything when the Sawmill Head is brought to its highest position or placed in its lowest position. Use an included cable-tie to secure the accelerator cable if desired. If the Accelerator Cable Tension needs to be adjusted, try adjusting it on the Accelerator Handle adjustment nut first. If there is not enough travel on this nut, back the nut off and adjust the cable tension at the carburetor on the engine.

Step 26: Install the Blade Guard Handle. Insert the Blade Guard Handle into the Blade Guard and secure it in place with the bolt on the Blade Guard (Fig. 58). Install the two Wing Bolts into the Blade Guard receptacle tube.


Fig. 58

Step 27: **Wire the Emergency Stop Button.** The Emergency Stop button is wired to the engine by connecting the blue wire to the grounding terminal (Fig. 59) and attaching the bullet connector on the brown wire to the black bullet terminal that is connected to the Wheel Door interlock switch (Fig. 60). The black wire bullet terminal is not connected to anything and is there to allow another switch to be added if necessary.



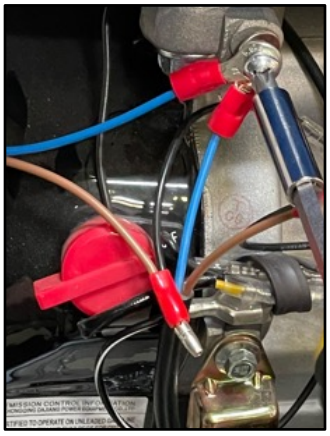


Fig. 59

Fig. 60

Once the wiring has been completed, use the flexible wire wrap to hold the wires together (Fig. 61). If necessary, use one of the provided wire-ties to prevent the Emergency Switch wire from hanging too low.

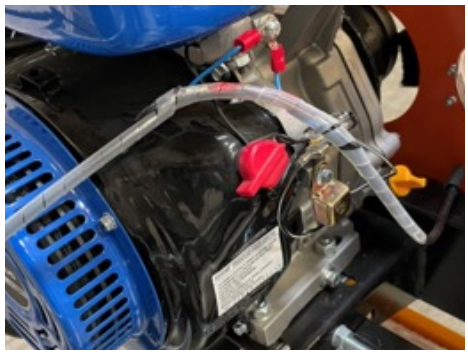


Fig. 61

SAWMILL ADJUSTMENTS

The ASSEMBLY INSTRUCTIONS address the following adjustments, refer to them as necessary:

- Track Leveling
- Track Alignment
- Lifting Cable Adjustment
- Accelerator Cable Tension Adjustment

This section will address adjustments that should be performed before first use and periodically as needed.

SAWMILL HEAD HEIGHT

The Sawmill Head height sets the depth of cut to control board thickness and is raised by unlocking both Cam Lock Handles (Fig. 62), unlocking the Index Plate Lock, and turning the Crank Handle clockwise in direction (Fig. 63).

Unlocked

Locked

Fig. 62

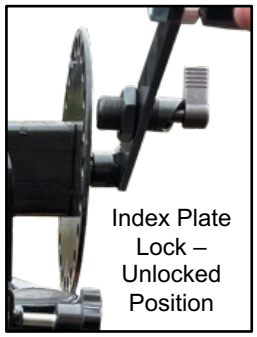


Fig. 63

WARNING **Do not operate the Crank Handle with the Cam Lock Handles in the locked position.**

The Cam Locks hold the Sawmill Head in position when cutting, and the Lifting Cables support the weight of moving the Sawmill Head up and down. If the Cam Locks are engaged while tension on the cables is released, the Sawmill Head will fall when the Cam Locks are released, resulting in damage or serious personal injury.

CAM LOCKS

The Cam Lock Handles are used to lock the Sawmill Head in position while cutting and after the Sawmill Head has been adjusted to the desired height. To increase the clamping force of the Cam Locks, simply tighten the bolt and nut located behind the clamp, opposite of the Cam Lock Handle (Fig. 64).

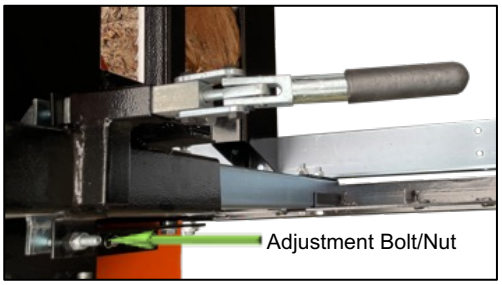


Fig. 64

TENSIONING THE BELTS

There are two belts on the Sawmill: the Driving Belt, which is connected between the motor and the Driving Blade Wheel located on the Sawdust Chute side, and the Driven Belt which is located on the Driven Blade Wheel located in front of the operator's position.

The Driven Belt is NOT tensioned and only rides in the Driven Blade Wheel to provide traction for the Blade. This belt can be pulled about one inch away from the wheel (Fig. 65).

To check Tension on the Driving Belt with the engine OFF use your finger and push downward firmly on the belt (Fig. 66). The belt should not deflect more than 1/4 in. up and down (1/2 in. total).

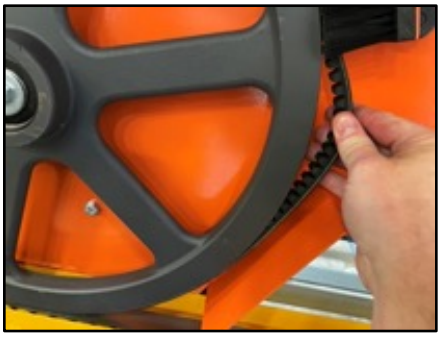


Fig. 65

Fig. 66

To increase tension on the Driving Belt, loosen the four nuts and bolts at the base of the engine (Figs. 67 and 68), then use a wrench to tighten the nut on the engine bracket below the engine (Fig. 69). Be sure to check the belt tension each turn while tightening to avoid over-tightening the belt, and check that the engine pulley and Driving Blade Wheel remain parallel to prevent excessive belt wear.

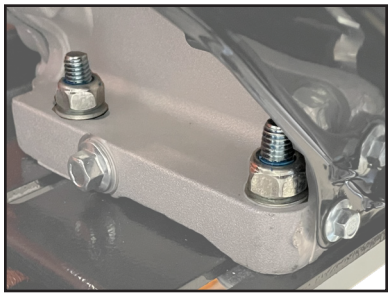


Fig.67

Fig.68

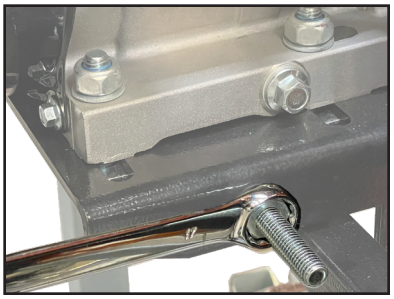


Fig.69

BLADE TRACKING

Blade tracking is important for the safety of the operator, smooth machine operation, and extended service life of the blade. Follow these steps to adjust the tracking on the blade if the blade slips off, a blade is replaced, and as part of a routine maintenance.

⚠ WARNING **Never attempt to adjust the blade tracking with the engine running.** Blade tracking adjustment must be performed only with the engine shut off. Engage the emergency stop button and unplug the spark plug wire to prevent accidental starting.

⚠ WARNING **Blades are very sharp and can cut even when not installed in the machine**, and coiled blades may uncoil unexpectedly. Always use Personal Protective Equipment such as heavy-duty cut-proof gloves, eye protection, and safety shoes when handling blades. Keep bystanders well away from any area where blades are being handled.

To check the tracking of the blade, shut off the engine, engage the emergency stop button, and unplug the spark plug wire. Open the Blade Wheel Doors and lock the hinges so the doors stay open. Turn the Tension Adjusting Tee Handle 1/2 to one full rotation counterclockwise to release blade tension.

With a steel rule, check that the distance from the face of each Blade Wheel to the tip of one tooth is 3/8 in. (Fig. 70 and 71). While wearing heavy-duty gloves, rotate the Driven Blade Wheel one or two turns then check the height again. The blade tracking should be consistent over several turns. If the blade moves, or if the distance is greater or less than 3/8 in., then the blade tracking should be adjusted.

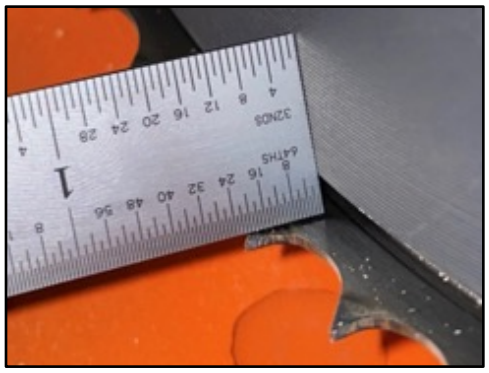


Fig. 70

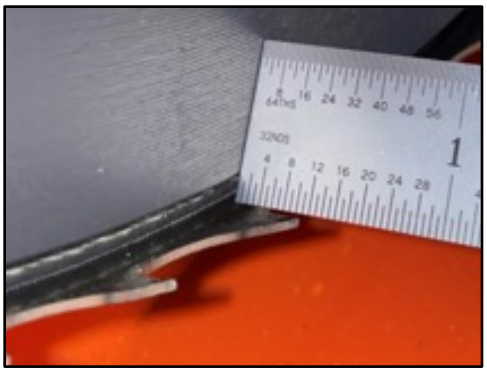


Fig. 71

Begin the Blade Tracking Adjustment by first loosening the bolts that hold the Blade Guide assemblies (circled) on both the fixed side (Fig. 72) and movable Blade Guard (Fig. 73). Be sure to re-adjust the Blade Guides after all tracking adjustments.

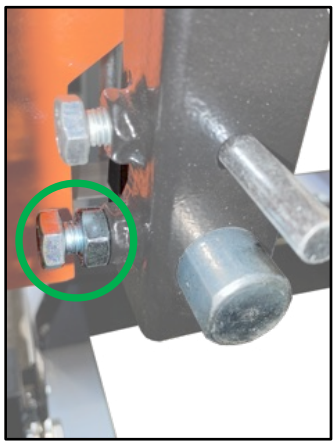


Fig. 72

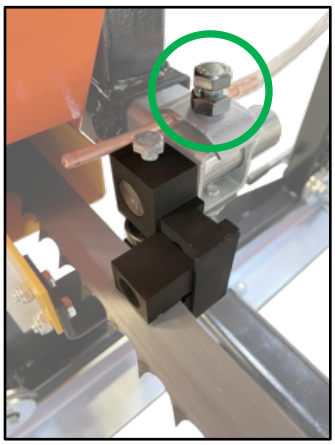


Fig. 73

Adjust the tracking on the Driven Blade Wheel (in front of the operator's position, opposite the sawdust chute). Release the blade tension, if it has not already been released, by turning the Tension Adjusting Tee Handle 1/2 to one full rotation counterclockwise (Fig. 74).

Loosen the locking nut on the Tracking Adjustment Bolt (Fig. 75). Using another wrench to turn the bolt (Fig. 76). Turning the bolt clockwise will cause the blade to track rearward into the blade cover. Adjusting it too far may cause it to scrape or bind on the cover. Turning the bolt counterclockwise will cause the blade to track forward and toward the Blade Wheel Door. Adjusting it too far may cause the blade to fall off. Turn the bolt in small increments (1/4 turn or 1/2 turn at a time), and after each increment, turn the Blade Wheel by hand. Continue this until the distance from the face of the Blade Wheel to the tip of the blade teeth is 3/8 in.

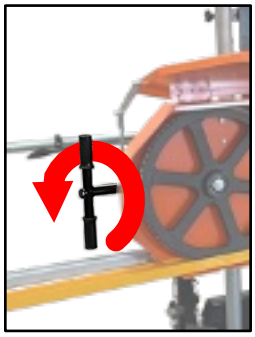


Fig. 74

Fig. 75

Fig. 76

After adjustment, look under the housing that the Tracking Adjustment Bolt is mounted and verify that the bolt is in the drilled recess (Fig. 77), then tighten the locking nut. If it is not in the recess, back the Tracking Adjustment Bolt out, re-seat it into the recess, and re-adjust the tracking.

Fig. 77

⚠ WARNING **Check that the Tracking Adjustment Bolt is seated in the drilled recess after adjustment and before operating the machine.** Damage to the machine or serious injury may result if the Tracking Adjustment Bolt is not in the drilled recess.

Adjust the tracking on the Driving Blade Wheel (opposite the operator's position, next to sawdust chute). Release the blade tension, if it has not already been released, by turning the Tension Adjusting Tee Handle 1/2 to one full rotation (Fig. 74).

The adjustment mechanism for the Driving Blade Wheel is different than the adjustment mechanism for the Driven Blade Wheel. There are two vertical bolts with locking nuts, one on the bottom, and one on the top (Fig. 78). Start by loosening each of the lock nuts on the vertical bolts by 1/2 turn, then loosen each bolt by 1/2 turn to unclamp the adjustment mechanism.

Fig. 78

To change the tracking so the blade moves forward on the Driving Blade Wheel: use a wrench to prevent the horizontal bolt turning and loosen (counterclockwise) the locking nut on the left side of the horizontal bolt by 1/2 turn (Fig.79), then while still preventing the horizontal bolt from turning, tighten (clockwise) the nut on the right side 1/2 turn. Tighten the upper and lower bolts equally then check the tracking of the blade.

To change the tracking so the blade moves rearward on the Driving Blade Wheel: use a wrench to prevent the horizontal bolt turning and loosen (counterclockwise) the nut on the right side of the horizontal bolt by 1/2 turn, then while still preventing the horizontal bolt from turning, tighten (clockwise) the locknut on the left side 1/2 turn (Fig. 79). Tighten the upper and lower bolts equally then check the tracking of the blade.

Continue adjusting until the distance from the face of the Blade Wheel to the tip of the blade teeth is 3/8 in. Once the blade is running true, check that the vertical bolts are equally tightened, and that the lock nuts are tightened to prevent the bolt from vibrating loose (Fig. 80). Check the Driving Belt Tension and adjust if necessary. Finally, set the Blade Tension.

Fig. 79

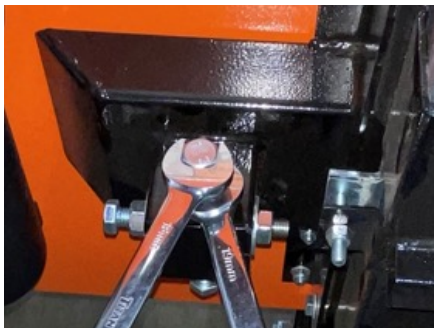
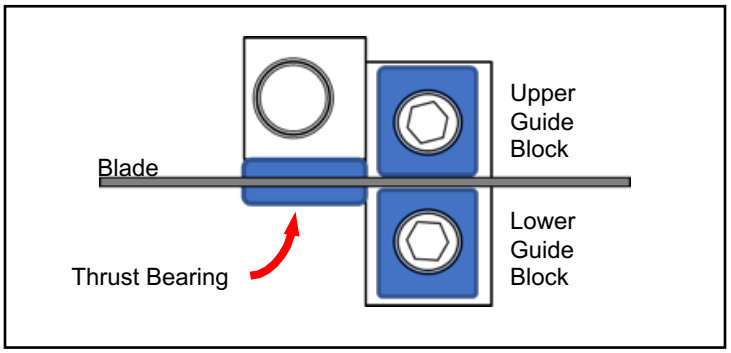


Fig. 80

BLADE GUIDE ADJUSTMENTS

The blade guides play an important part in accurate cutting and life of the blade. The guides should not be tight against the blade, and there should not be too much clearance that will allow the blade to move around while cutting. Follow these steps to properly set the Blade Guides:

Check the Blade Tracking and adjust if necessary. Check and set the Blade Tension.



Movable Blade Guide Diagram

Set the clearance between the Blade and the Thrust Bearings. This distance should be between 0.007 in. and 0.015 in. Use a feeler gauge or a piece of paper to set the gap. The thrust Guide Bearings should only turn when the machine is cutting; they should absorb the thrust of the blade while it is cutting.

On both the fixed side and movable (Fig.82) Blade Guide assemblies, use a hex key and loosen the screws that hold the LOWER guide blocks in place. Leaving the upper guide block tight will help to keep the assembly square with the blade.

Loosen the bolts that hold the Blade Guide Assemblies (circled, Fig. 81 and 82), and place the feeler gauge or paper between the back of the blade and the thrust guide bearing. While leaving the feeler gauge or paper in place, lightly push and hold the Blade Guide Assembly against the blade, then tighten the bolts (Fig. 83). Repeat these steps for the other Blade Guide Assembly.

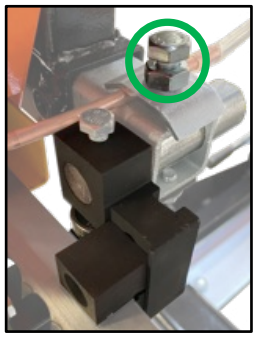


Fig. 81

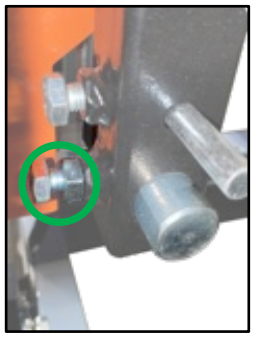


Fig. 82

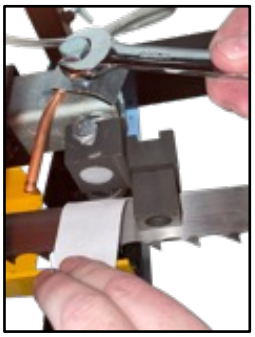


Fig. 83

Set the clearance between the Blade and the Upper and Lower Guide Blocks. This distance should be between 0.007 in. and 0.015 in. Use a feeler gauge or a piece of paper to set the gap. The gap allows free movement of the blade and supports the blade during cutting.

On both the fixed side and movable (Fig.82) Blade Guide assemblies, use a hex key and loosen the screws that hold both the Lower and Upper Guide Blocks in place.

Place the feeler gauge or paper between the blade and the Upper Guide Block. While leaving the feeler gauge or paper in place, lightly push and hold the Upper Guide Block against the blade, then tighten the hex screws (Fig. 84). Place the feeler gauge or paper between the blade and the Lower Guide Block (Fig. 85). While leaving the feeler gauge or paper in place, lightly push and hold the Lower Guide Block against the blade, then tighten the hex screws. Repeat these steps for the other Blade Guide Assembly.

Fig. 84

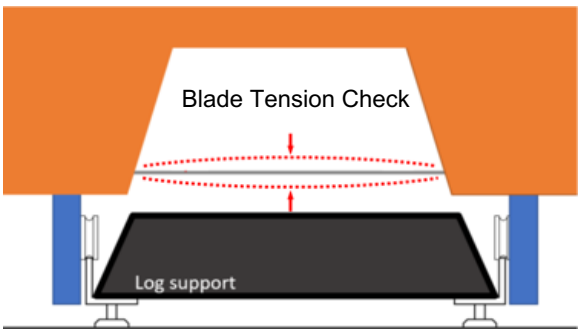
Fig. 85

BLADE TENSIONING

The blade tension is very important for proper cutting and helps to prevent the blade from moving. The correct tension on the blade provides for longer blade life along with safe and accurate cutting. Harder woods or faster feed rates will need higher tension. Over-tensioning the blade may cause the wheel bearings to fail.

Blade tension should only be checked adjusted with the engine off.

To check tension, move the Blade Guard to its widest opening and lock in place. Blade movement at the center of the blade when firmly pushed up and down, should be between 1/8 in and 1/4 in.



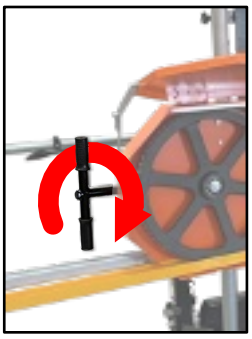


Fig. 86

To increase tension on the blade, turn the Tension Adjusting Tee Handle clockwise to one full rotation clockwise (Fig. 86) and check the tension again. Alternatively, it is possible to use a 24mm socket and torque wrench on the end of the handle to set the tension between 8 and 20 ft-lbs.

After setting the blade tension, move the Blade Guard to the smallest distance the cut will allow. This will ensure good blade support while cutting and result in the most accurate cut.

BLADE GUARD ADJUSTMENT

The Blade Guard serves two functions. First, it is there for safety to prevent the blade from being totally exposed, and second, it provides support to the blade during cutting, through the Blade Guide. It is important to adjust the Blade Guard so that the Blade Guide is as close to the workpiece as possible without interfering with the cut.

While cutting square lumber, setting the blade width is simple because the width of the workpiece is constant. When cutting untrimmed logs, the workpiece is usually tapered, and the Blade Guard will need to be adjusted to the largest width of the cut plus any necessary clearance needed (Fig. 87).

Adjust the Blade Guard by loosening the two Wing Bolts and moving the guard using the handle (Fig.88). Once the desired width is set, tighten the two Wing Bolts.

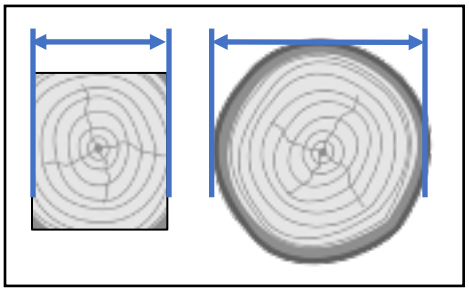


Fig. 87

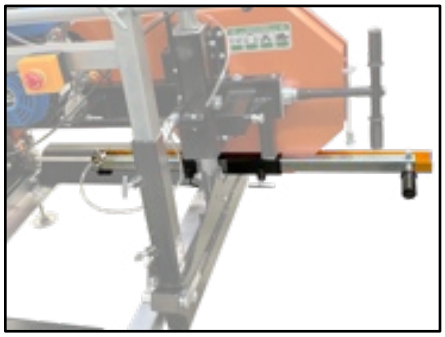


Fig. 88

SAWMILL MAINTENANCE

To keep your machine looking optimal and running smoothly for many years, proper periodic maintenance is recommended. Follow these guidelines to maintain your machine.

PROTECTION FROM THE ELEMENTS

Place your machine under a tin roof or carport roof to help keep the machine from getting wet. If a roof is not available, cover the machine well with one or more tarps to prevent rain or snow from getting directly onto the machine.

Apply car wax to painted surfaces at least once a year. Use a rust inhibiting paint in any areas where the color coating may have chipped or become deeply scratched.

Apply a coat of lithium grease on all exposed threads, such as on the wing bolts, adjustment bolts, and inside nuts or threaded holes that are not being used.

If desired, a small rubber gasket may be added around the edge of compartment that the Blade Wheel Doors contact will help prevent vibration and decrease the likelihood of water entering the compartment.

BEFORE EACH USE

⚠ WARNING **Gasoline is extremely FLAMMABLE and can be EXPLOSIVE under certain conditions, creating the potential for serious burns.** Always keep gasoline out of the reach of children.

- **Turn the ignition switch to "OFF".** The fuel tank should never be filled while the engine is running or while the engine is hot.
- **DO NOT FILL TANK IN A CLOSED AREA** such as a garage, while smoking, and away from any source of flame or sparks; this includes any appliance with a pilot light.

WARNING **DO NOT OVERFILL the gas tank.** If the tank is filled completely to the top, heat may cause the fuel to expand and overflow through the vents in the tank cap. There should not be any fuel in the filler neck.

- **Replace cap tightly to prevent spillage of fuel** and potential fire hazard.
- **After filling the tank, immediately wipe clean any spillage** and wait at least 10 minutes before starting.

Before each use:

- Follow the maintenance guidelines for the gasoline engine as described in the included engine manual.
- Make sure there is adequate lighting to perform work.
- **Check that there is oil and fuel in the engine.** Add or fill, as necessary.
- Ensure adequate ventilation for engine operation.
- Check the Belt Tension as described in the Adjustments-Tensioning the Belts section of this manual.
- Check and adjust the Blade Tension as described in the Adjustments-Blade Tensioning section of this manual.
- Check that there is nothing obstructing movement of the operator, the sawmill carriage, or sawdust chute exhaust that will hinder operation or cause a hazardous situation.
- Clear all bystanders and pets from the work area.
- Ensure operator is wearing the proper Personal Protective Equipment.

AFTER EACH USE

After each use:

- Turn the Engine control switch to the OFF position.
- Engage the Emergency Stop Button.
- Adjust the Blade Guard to its smallest opening.
- Release tension on the blade to prevent flats from forming on the belts. One counterclockwise turn of the Tension Adjusting Tee Handle should be sufficient for short-term stoppage. For long term (>30 days) stoppage, release all tension on the blade, or remove the blade.
- Clean the machine and around it. Use a horsehair bench brush to brush away sawdust and other debris off the machine. Open the Blade Wheel Doors and remove all accumulated sawdust. Move all large debris around the machine at least five feet from all sides. Thoroughly clear sawdust away from the sawdust discharge area.
- To prevent others from starting the machine, consider unplugging the spark plug.
- Cover the machine to protect it from the elements.

CHANGING THE BLADE

WARNING

Never attempt to change the blade when the engine is running. Engage the Emergency Stop button, then turn the engine control switch to the OFF position and unplug the spark plug before changing the blade.

Blades are very sharp and can cut even when not installed in the machine, and coiled blades may uncoil unexpectedly. Always use Personal Protective Equipment such as heavy-duty cut-proof gloves, eye protection, and safety shoes when handling blades. Keep bystanders well away from any area where blades are being handled.

- A blade will become dull after extended use and may need changing. Other times a blade may need to be changed is when a blade breaks.
- If your blade has broken, immediately engage the Emergency Stop button. Place the engine control switch into the OFF position.
- While wearing the appropriate Personal Protective Equipment, open the Blade Wheel Doors and carefully extract the broken blade.
- Troubleshoot and correct the cause of the breakage before attempting to use the machine again. Seek the assistance of a qualified technician if necessary.

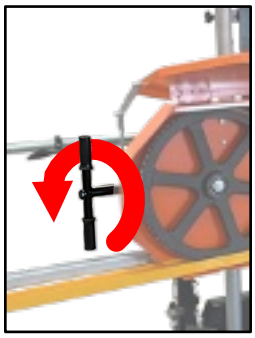


Fig. 89

- To install a new blade: with the engine OFF, turn the Tension Adjusting Tee Handle counterclockwise several turns (Fig. 89) to allow a new blade to be slipped on. Loosen the screws on both Bottom Guide Blocks with a hex key.
- Place a new blade onto the two Blade Wheels and through the guide blocks. Turn the Tension Adjusting Tee Handle clockwise and set the blade tension as described in the Adjustments-Blade Tensioning section of this manual.
- After setting the tension, check the blade tracking, and if necessary, adjust as described in the Adjustments-Blade Tracking section of this manual.
- Adjust the Blade Guides as described in the Adjustments-Blade Guides section of this manual.

CHANGING THE BELTS

WARNING **Never attempt to change the belts when the engine is running.** Engage the Emergency Stop button, then turn the engine control switch to the OFF position and unplug the spark plug before changing the belts.

It is recommended that both belts always be changed together.

Driven Belt type: BX58

Driving Belt type: BX77

To change the belts: remove the blade by turning the Tension Adjusting Tee Handle counterclockwise several turns to allow enough slack so the blade can be removed.

First remove the Driving Belt which is connected between the motor and the Driving Blade Wheel (Fig.90) by Following the procedure in the Adjustments-Tensioning the Belts however, instead of increasing the tension, decrease the tension by loosening the nut on the engine bracket below the engine (Fig. 69).

Next, remove the belt on the Driven Blade Wheel by placing a screwdriver under the belt and turning the blade wheel until the belt comes off.

Place new belts onto the wheels, then follow the procedure in the Adjustments-Tensioning the Belts section of this manual.

BELT BRUSHES

The belt brushes are used to keep sawdust from collecting on the belts. They should be set so that the bristles are just touching the belt.

Loosen the knob-screws and slide the brush into the desired position then re-tighten the knobs (Fig.91).

Fig. 91

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSES	SOLUTION
Wavy cuts	Blade wanders because it does not have enough tension.	Re-tension or increase the tension on the blade.
	Cutting speed is incorrect.	Change the engine speed by increasing/decreasing the amount of throttle and/or change the speed that the blade is fed into the workpiece.
	Blade guides are not set correctly.	Check that the guides have been set to the proper gap.
	Blade is dull.	Change the blade.
Blade has broken	Blade tension was set incorrectly.	Tension blade per Blade Tensioning Adjustment procedure.
	Blade guides are not set correctly.	Set the guides per the Blade Guides Adjustment procedure.
	Blade is not tracking correctly.	Adjust the blade tracking per the Blade Tracking Adjustment procedure.
	Excessive cutting force.	Feed the blade into the workpiece at a steady rate without forcing it.
	Inclusions in the workpiece.	Check to ensure there are no inclusions in the workpiece such as stones, nails, or other hard objects.
Blade slips or stops during cut	Inadequate Blade Tension.	Increase the tension on the blade per Blade Tensioning Adjustment procedure.
	Driving Wheel Belt is slipping.	Increase the Drive Wheel Belt per the Belt Tensioning procedure or change belts, if necessary.
	Excessive cutting force.	Feed the blade into the workpiece at a steady rate without forcing it. Follow the setup procedure for leveling the track, adjusting the lifting cables, and aligning the track.
Lumber is tapered	Tracks and log supports not level.	Follow the setup procedure for leveling the track, adjusting the lifting cables, and aligning the track.
Excessive Vibration when cutting	Clamps are not tightened.	Tighten the clamps.
	Workpiece moves when cutting.	Rotate the workpiece to find best cutting position.
	Belts have flats.	Caused by not releasing tension after use. Replace belts.
	Fasteners have become loose.	Follow the setup procedure for leveling the track, adjusting the lifting cables, and aligning the track, then tighten all loose fasteners.
Blade comes off wheels	Blade is not tracking correctly.	Adjust the blade tracking per the Blade Tracking Adjustment procedure.
	Blade tension was set incorrectly.	Tension blade per Blade Tensioning Adjustment procedure.
	Belts are worn.	Belts should ride a minimum of 1/32 in. above the outside diameter of the wheel. Check the driving belt tension or replace belts, if necessary.

PARTS LIST

Item	Description	Qty
1	Saw Main Beam	1
2	Bolt, Hex M8 x 20	11
3	Nut, Self-Locking M8	20
4	Bolt, Hex M10 x 25	5
5	Bolt, Hex M12 x 150	1
6	Washer, Large Flat 12	4
7	Nut, Self-Locking M12	6
8	Bolt, M12 x 45	2
9	Nut, Hex M12	6
10	Bolt, Hex M16 x 80	1
11	Nut, Hex M16	1
12	Pin, Round	2
13	Blade Guide Block Holder (Fixed)	1
14	Upper and Lower Guide Blocks	4
15	Hex Socket Head Cap Screws M8 x 40	4
16	Bearing, Ball 6200-RS	2
17	Washer, Flat 8	34
18	Square Support Tube Cam Receptacle	1
19	Square Support Tube Clamp Plate	1
20	Round Support Tube Cam Receptacle	1
21	Nut, Self Locking M10	11
22	Bolt, Hex M8 x 30	6
23	Bolt, Hex M8 x 45	2
24	Round Support Tube Clamp Plate	2
25	Bolt, Hex M6 x 25	2
26	Washer, lock 6	2
27	Round Support Tube Bushing	2
28	Round Support Tube Bushing Clamp Plate	2
29	Washer, Flat 10	35
30	Washer, Large Flat 10	5
31	Blade Wheel Compartment	1
32	Carriage Cross Beam	1
33	Track	4
34	End stop	4
35	Track connection plate	2
36	Pulley, Lifting Cable	5
37	Hex Socket Head Cap Screw M12 x 20	1
37A	Hex Socket Head Cap Screw M12 x 25	2
38	Bearing, Ball 6001RS	5
39	Circlip, Internal 28	5

PARTS LIST

Item	Description	Qty
40	Bolt, Hex M12X70	2
41	Bolt, Hex M10X50	6
42	Nut, Hex M10	21
43	Washer, Lock 10	4
44	Carriage Crossbeam Clamp	1
45	Round Support Tube	1
46	Blade Guard Support Tube	1
47	Blade Guard Handle Tube	1
48	Blade Guide Block Holder (Movable)	1
49	Blade Guard Plastic Handle	3
50	Bolt, Hex M10 x 30	10
51	Lube Hose Clamp	1
52	Blade Guard	1
53	Blade Guard Attachment	1
54	Bolt, Hex M8 x 10	2
55	Bolt, Hex M6 x 16	8
56	Nut, Lock M6	9
57	Square Support Tube	1
58	Lift Mech Telescoping Tube	1
59	Lift Mech Fixed Tube	1
60	Acme Screw	1
61	Bearing, Ball 51102	2
62	Index plate	1
63	Nut, Small Round M14 x 1.5	2
64	Spacer, Bearing	3
65	Spacer, Bearing	2
66	Bolt, Hex M12 x 65	1
67	Crank Pivot Tube	1
68	Cotter Pin 5 x 24	2
69	Tensioner Threaded Rod	1
70	Blade Tensioner Tee Handle	1
71	Tensioner Rod Housing	1
72	Tensioner Flat Washer	2
73	Tensioner Coupler	1
74	Bearing, Thrust Ball 51204	1
75	Driven Wheel Shaft	1
76	Driving Wheel Shaft	1
77	Bearing, Ball 6305	4
78	Circlip, Internal 62	2
79	Lube Tank Bracket	1

PARTS LIST

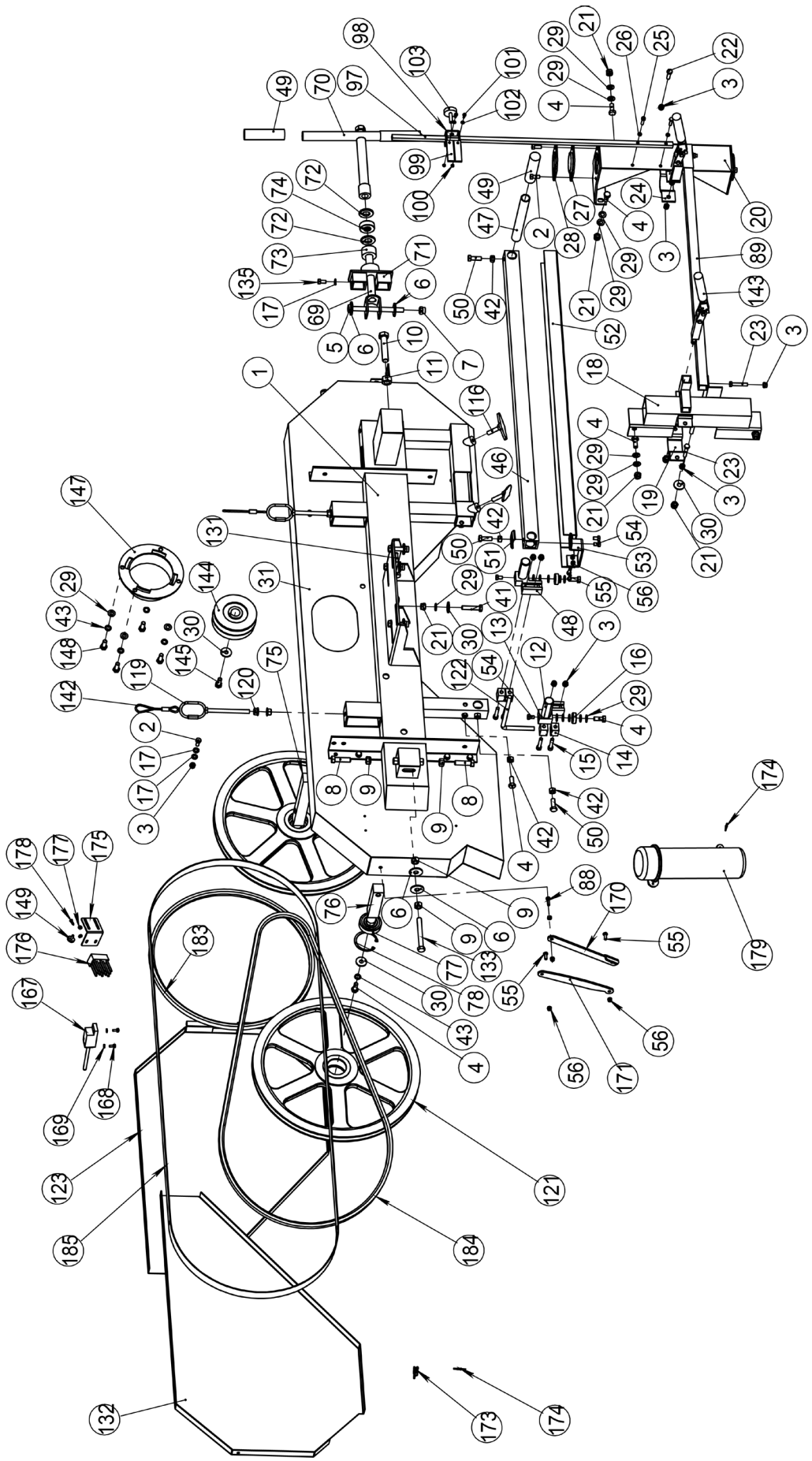
Item	Description	Qty
80	Wheel, Carriage	4
81	Circlip, Internal 42	4
82	Bearing, Ball 6004	4
83	Carriage Bed, Right	1
84	Carriage Bed, Left	1
85	Bolt, Hex M20 x 110	4
86	Nut, Lock M20	4
87	Wheel Brush Clamp	4
88	Bolt, Hex M6 x 20	9
89	Cam Lock Crossbeam	1
90	Push Beam Stand	1
91	Push Beam Tube	1
92	Round Tube Clamp Plate	1
93	Hex bolt M12 x 80	4
94	Square Tube Clamp Plate	1
95	Wheel Brush	4
96	Scale Bracket	1
97	Square Rod	1
98	Scale Indicator Bracket	1
99	Scale Indicator Glass	1
100	Nut, Hex M4	2
101	Screw, Philips Pan Head M4X12	2
102	Washer, Flat 4	2
103	Thumb Screw, Plastic Head M8 x 30	1
104	Log Support, Track Connection	1
105	Wheel Spacer, Inner	4
106	Wheel Spacer, Outer	3
107	Log Support, Mid	2
108	Log Support, End	2
109	Clamp Cross Tube End	4
110	Clamp Cross Tube	2
111	Long Clamp Tube	2
112	Clamp	2
113	Clamp Handle	2
114	Long Log Stop	2
115	Short Clamp Tube	2
116	Wing Bolt, M10 x 40	19
117	Short Log Stop	2
118	Lock nut M10	48
119	Lifting rings	2

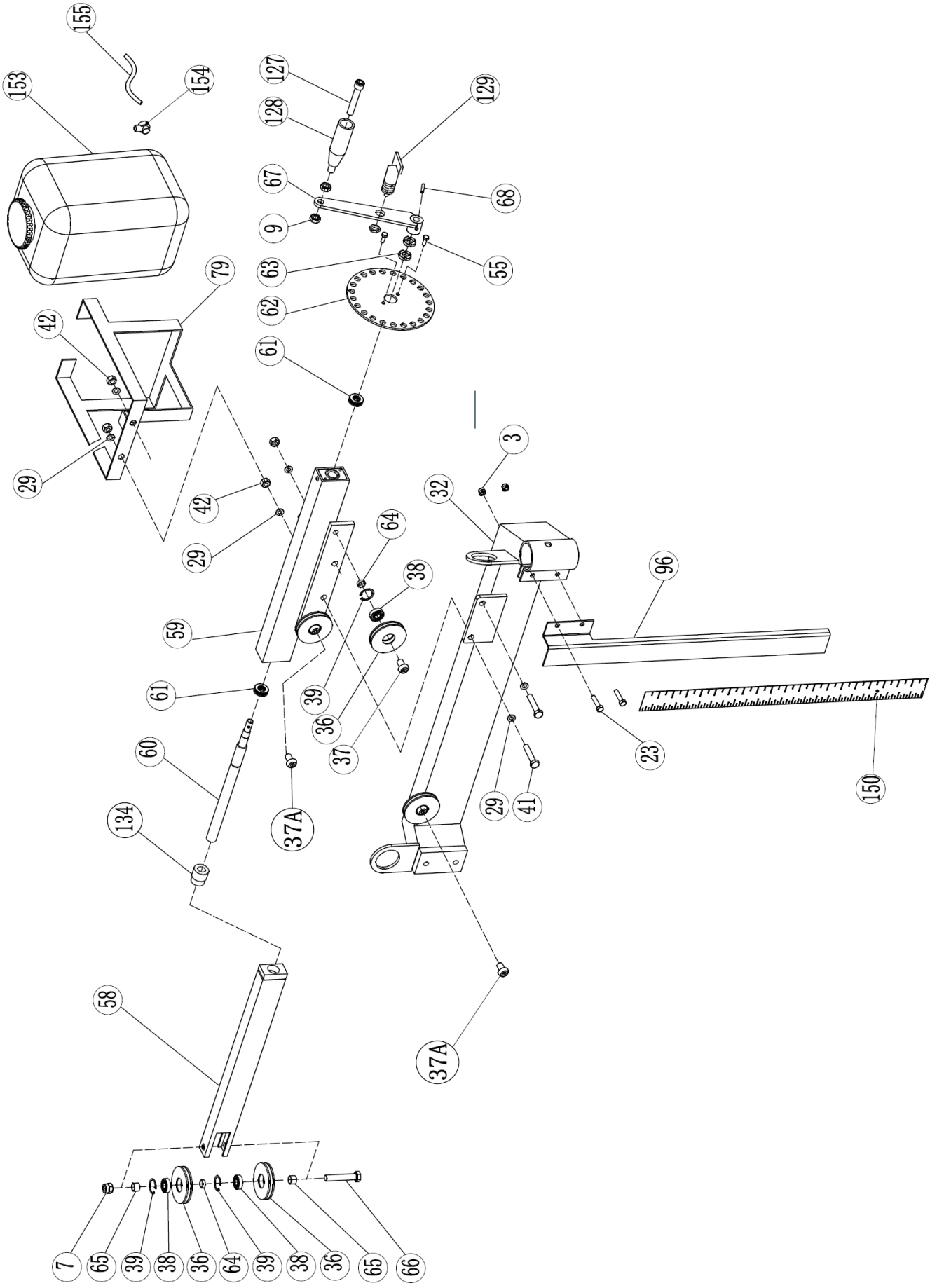
PARTS LIST

Item	Description	Qty
120	Hex Flange Nut, M10	4
121	Blade Wheel	2
122	Hook	1
123	Blade Wheel Door, Left	1
124	Crank plastic handle(φ10 hole)	2
125	Hex socket head cap screw M8 x 80	2
127	Hex socket head cap screw M8 x 80	1
128	Crank plastic handle(φ13 hole)	1
129	Index plate lock	1
130	Leveling Foot, M16	12
131	Engine Tensioning Plate	1
132	Blade Wheel Door, Right	1
133	Bolt, Hex Head Full Thread M12 x 100	1
134	Brass Acme Nut	1
135	Bolt, Hex Head M8 x 16	1
136	Bolt, Hex Flange M10 x 30	48
137	Washer, Flat 12	12
142	Carriage Lifting Cable	2
143	Cam Lock	2
144	Clutch	1
145	Screw 318 x 24 x 25	1
146	Engine	1
147	Clutch Guard	1
148	Screw 318 x 16 x 25	4
149	Plastic Head Thumb Screw, M5	4
150	Magnetic Loggers Scale	1
151	Throttle Cable	1
152	Emergency Stop Switch box	1
153	10 Liter Lube Tank	1
154	PTC Quick Connect	1
155	Lubricant Hose w/ copper spout	1
156	Throttle Handle	1
157	Hex Socket Head Screw M6 x 40	2
158	Hex Nut M6	2
159	Carriage Brake Seat	1
160	Carriage Brake Handle	1
161	Carriage Brake Sleeve	1
162	Plastic Handle	1
163	Brake Pad	1
164	Lower Wheel Spacer 3	1

PARTS LIST

Item	Description	Qty
165	Hex Socket Head Set Screw M6 x 8	1
161	Lower Wheel Spacer 3	1
162	Hex Socket Head Set Screw M6 x 8	1
163	Brake Tension Spring	1
164	Door Interlock Switch YBLX	1
165	Screw, Philips Pan Head M5 x 12	2
166	Brake Tension Spring	1
167	Door Interlock Switch YBLX	1
168	Screw, Philips Pan Head M5 x 12	2
169	Lock washer 5	2
170	Side Pull Plate 2	2
171	Side Pull Plate 1	2
173	Door Buckle	2
174	Blind Rivets	11
175	Brush Support Plate	2
176	Brush	2
177	Flat Washer 5	4
178	Screw, Self-Tapping Philips Pan Head ST4.2 x13	4
179	Document Tube	1
180	Emergency Stop Switch	1
181	Emergency Stop Label	1
182	Screw, Philips Pan Head M5 x 10	2
183	BX58 1473 V-Belt	1
184	BX77 1956 V-Belt	1
185	Saw Blade, 34 x 1 x 3650	1
186	Pipe Plug, Round 50	1
187	Pipe Plug, Round 33	2
188	Pipe Plug, Square 60	2
189	Pipe Plug, Square 50	3
190	Hex Nut, M8 (Black)	4

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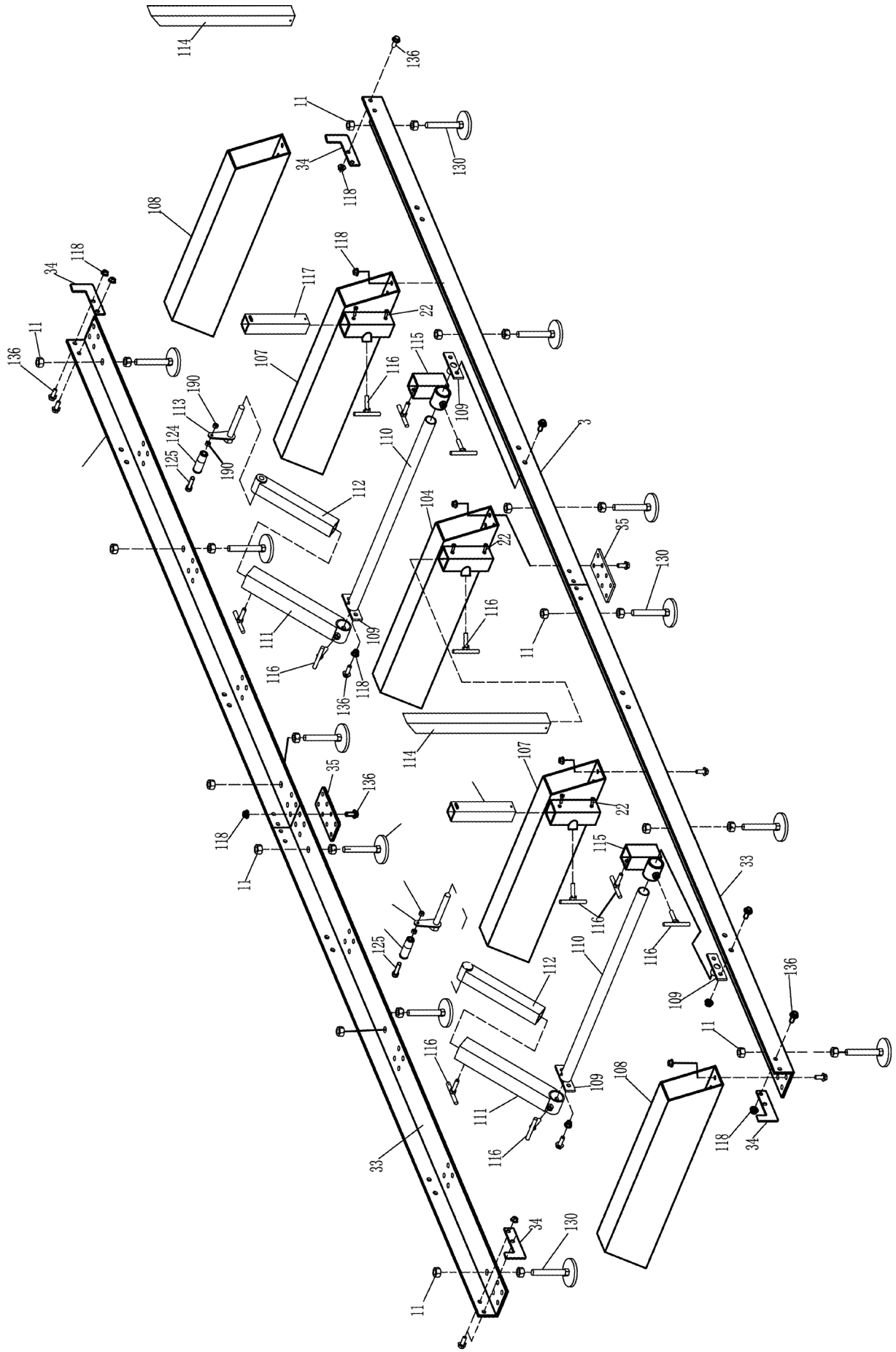
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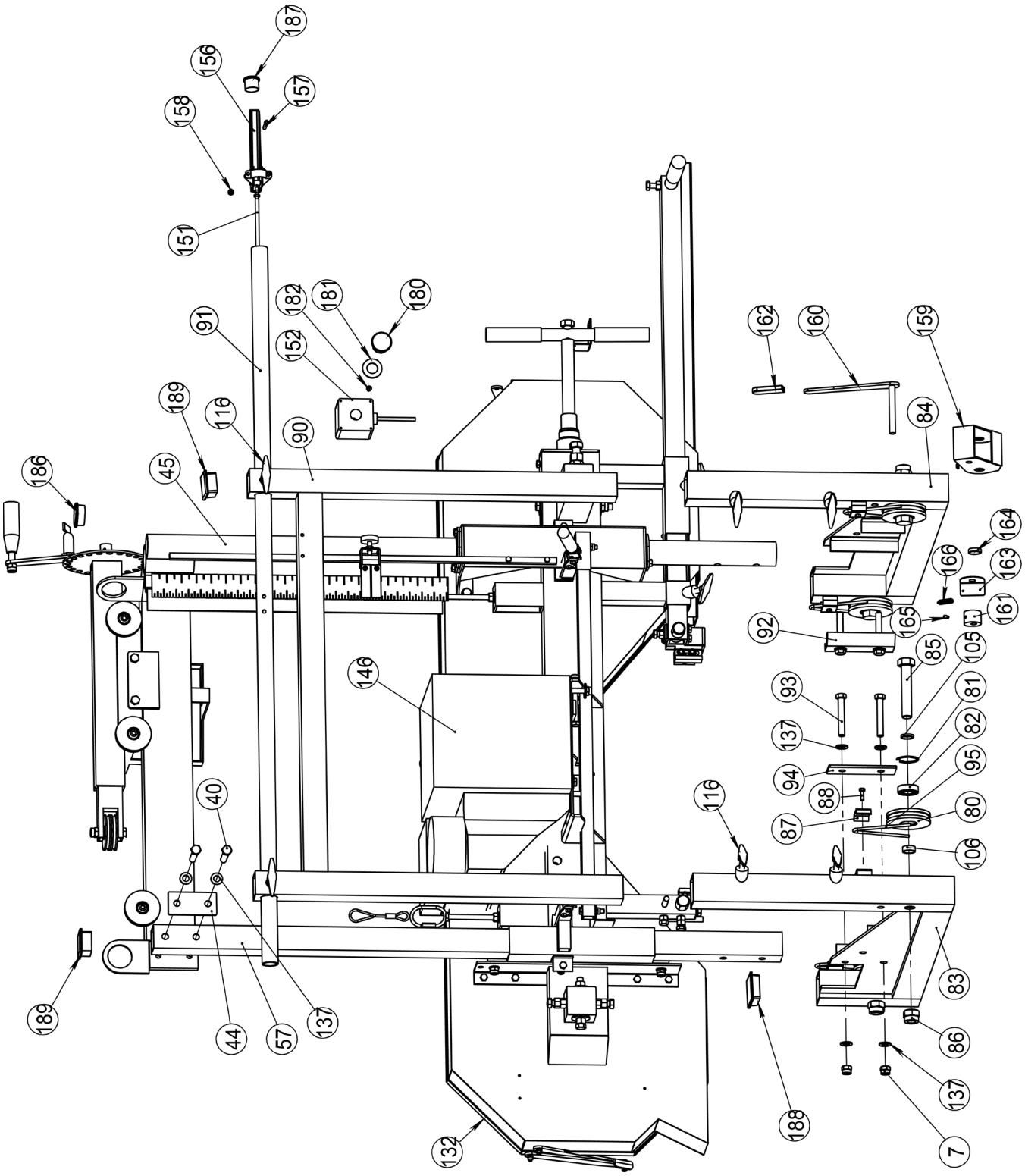
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NOTES

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NOTES

90 DAY LIMITED WARRANTY

Star Asia-USA, LLC (hereinafter “seller”) warrants to the original purchaser only, that this product will be free from defects in material or workmanship for a period of 90 days from date of purchase for home domestic use.

Warranty Performance

Warranty coverage is conditioned upon purchaser furnishing seller or its authorized service center with adequate written proof of the original purchase date. Products returned, freight prepaid and insured, to our factory or to an Authorized Service Center will be inspected and repaired or replaced, at seller’s option, free of charge if found to be defective and subject to warranty. Defective parts not subject to normal wear and tear will be repaired or replaced, at our option during the above stated warranty periods. In any event, reimbursement is limited to the purchase price paid. Other than the postage and insurance requirement, no charge will be made for repairs or replacements covered by this warranty. Under no circumstances shall the manufacturer bear any responsibility for loss of the unit, loss of time or rental, inconvenience, commercial loss or consequential damages, There are no warranties which extend beyond the description of the face hereof.

Exclusions

This warranty does not cover parts damaged due to normal wear, abnormal conditions, misapplication, misuse, abuse, accidents, operation at other than recommended pressures or temperatures, improper storage of freight damage. Parts damaged or worn by operation in dusty environments are not warranted. Failure to follow recommended operating and maintenance procedures also voids warranty. Additional items not covered under warranty: product failure caused by rain, excessive humidity, corrosive environments or other contaminants; cosmetic defects that do not interfere with product’s functionality. This warranty shall not apply when: the product has been used for commercial or rental purposes; defects in materials or workmanship or damages result from repairs or alterations which have been made or attempted by others or the unauthorized use of nonconforming parts; this damage is due to abuse, improper maintenance, neglect or accident; or the damage is due to use of the product after partial failure or use with improper accessories. Warranty does not apply to accessory items. Seller will not be liable for: labor charges, loss or damage resulting from improper operation, maintenance or repairs made by persons other than a Star Asia-USA, LLC Authorized Service Center. The use of other than genuine Star Asia-USA, LLC repair parts will void warranty.

Warranty Disclaimers

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Limitations on Warranty Disclaimers

Any implied warranties shall be limited in duration to 90 days from the date of purchase. In some states of the U.S.A. and in some provinces of Canada there is no limitation for how long an implied warranty is valid, so the aforementioned limitation may not apply to you. In no event shall a seller be liable for any incidental or consequential damages (including but not limited to liability for loss of profits) arising from the sale or use of this product. In some states of the U.S.A. and in some provinces of Canada the exclusion or limitation of incidental or consequential damages is not allowed, so that aforementioned limitation or exclusion may not apply to you.

This Limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state in the U.S.A., Canada and the Commonwealth of Puerto Rico. For warranty coverage within other countries, contact your local star Asia-USA, LLC dealer or importer.

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P.O. Box 58399, Renton, WA 98058
Consumer Service: 800-386-0191
e-mail: info@titan-us.com