LX55 Sawmill
Safety, Operation,
& Maintenance Manual

LX55G14	**rev. A2.00**
LX55G9	**rev. A2.00**
LX55E7	**rev. A2.00**

Safety is our #1 concern!

September 2019

Form #2398

WARNING! Read and understand this manual before using this machine.

California

Proposition 65 Warning

WARNING: Breathing gas/diesel engine exhaust exposes you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

- Always start and operate the engine in a well-ventilated area.
- If in an enclosed area, vent the exhaust to the outside.
- Do not modify or tamper with the exhaust system.
- Do not idle the engine except as necessary.

For more information go to **www.P65warnings.ca.gov**.

WARNING: Drilling, sawing, sanding or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection.

For more information go to **www.P65Warnings.ca.gov/wood**.

Active Patents assigned to Wood-Mizer, LLC

Wood-Mizer, LLC has received patents that protect our inventions which are a result of a dedication to research, innovation, development, and design. Learn more at: *woodmizer.com/patents*

Wood-Mizer, LLC
8180 West 10th Street
Indianapolis, Indiana 46214

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ALIGNMENT

SAWMILL OPERATION

MAINTENANCE

SECTION 1 INTRODUCTION

1.1 About This Manual

This manual replaces any previous information received on your Wood-Mizer® equipment.

The information and instructions in this manual do not amend or extend the limited warranties for the equipment given at the time of purchase.

1.2 Getting Service

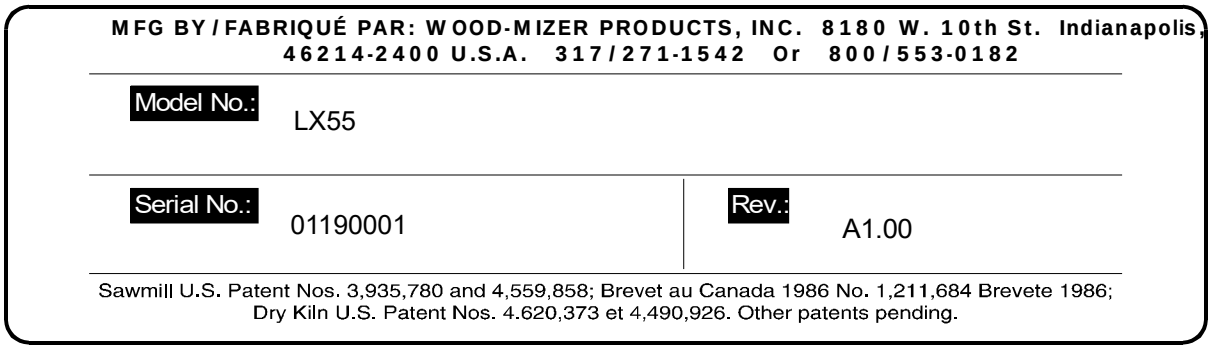
For contact information, sales, service, parts, and additional manuals, sign into your account on *https://woodmizer.com*, or call inside the USA: 1-800-553-0182 or from outside the USA: 317-271-1542

1.3 Specifications

Equipment specification are included in the Online Manuals, which are found at *https://apps.woodmizer.com/Manuals/Manuals.aspx?parent=0.*

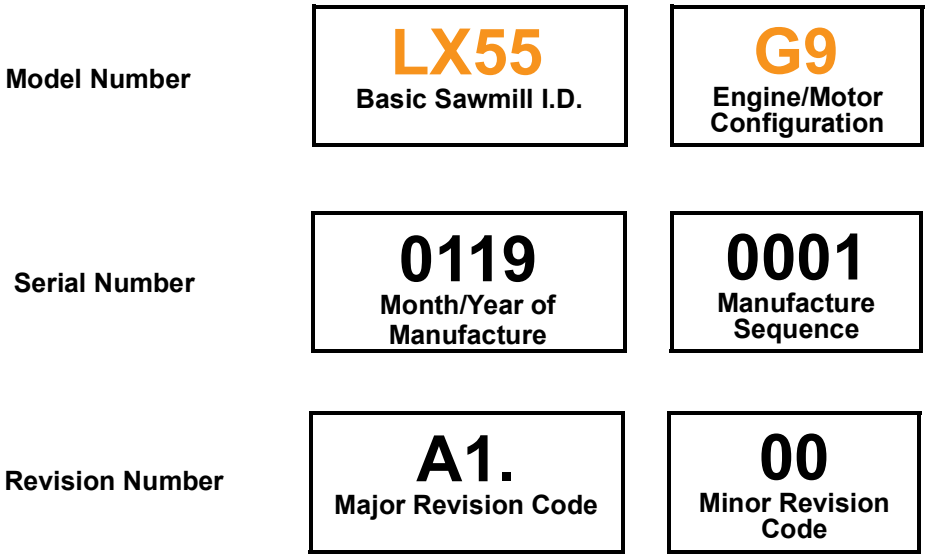
1.4 Customer and Sawmill Identification

Each Wood-Mizer sawmill is identified with a model number, revision, and serial number (see the figure below).



SERIAL NUMBER TAG.

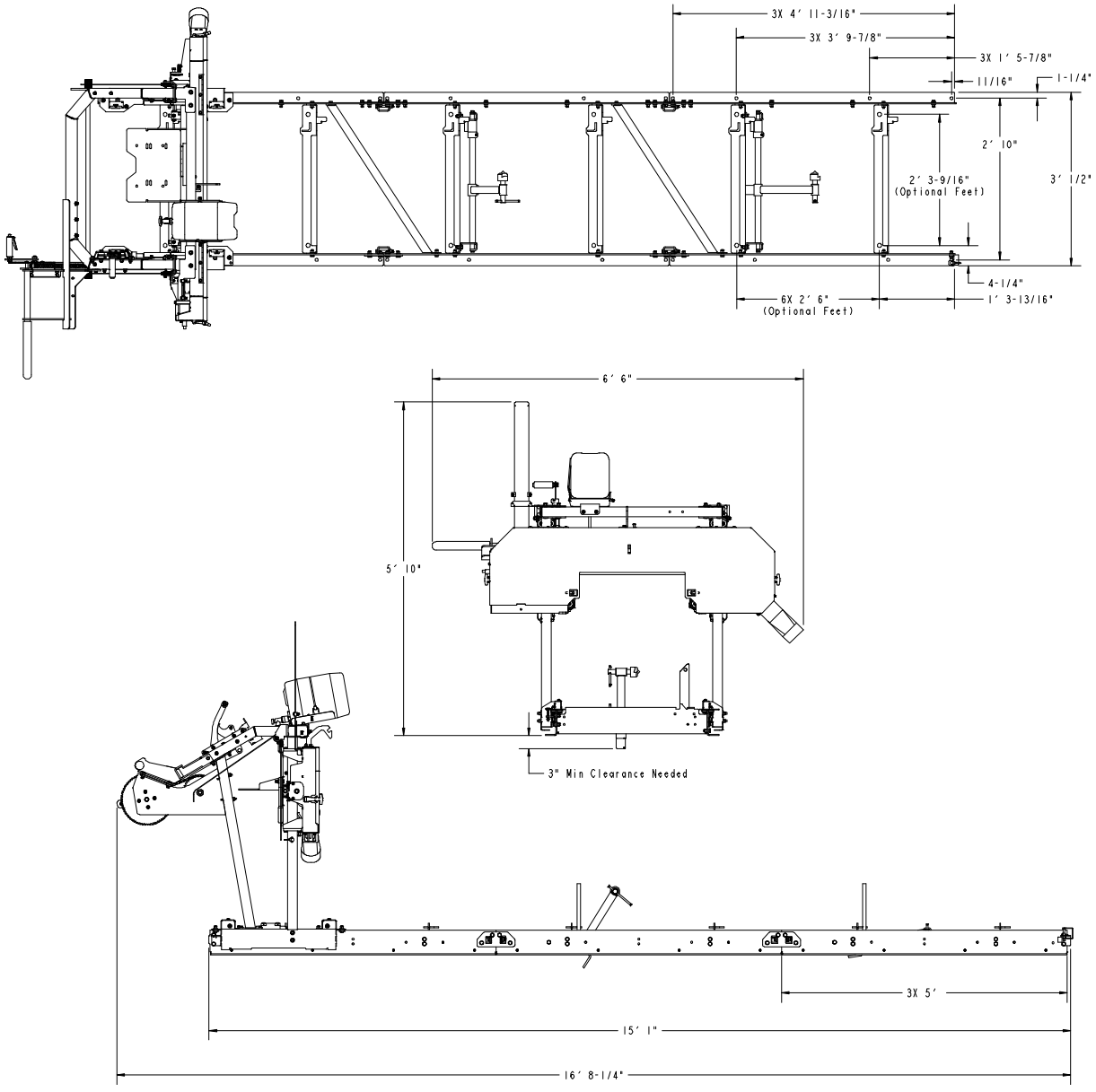
The model number includes the base model and the engine/motor configuration. The serial number contains the month and year of manufacture and a sequence number. The revision number helps identify the exact design of the equipment.



MODEL, SERIAL, AND REVISION NUMBER DESCRIPTION

1.5 LX55 Specifications

DIMENSIONS



SECTION 2 SAFETY

2.1 Safety Symbols

The following symbols and signal words call your attention to instructions concerning your personal safety. Be sure to observe and follow these instructions.

DANGER! indicates an imminently hazardous situation which, if not avoided, will result in serious injury or death.

WARNING! suggests a potentially hazardous situation which, if not avoided, could result in serious injury or death.

CAUTION! refers to potentially hazardous situations which, if not avoided, may result in minor or moderate injury or damage to equipment.

NOTICE indicates vital information pertaining to equipment.

NOTE: contains useful information.

2.2 Safety Instructions

OWNER/OPERATOR'S RESPONSIBILITY

The procedures listed in this manual may not include all ANSI, OSHA, or locally required safety procedures. **It is the owner/operator's responsibility and not Wood-Mizer LLC to ensure all operators are properly trained and informed of all safety protocols.** Owner/Operators are responsible for following all safety procedures when operating and performing maintenance to the equipment.

Observe ALL Safety Instructions

NOTICE Read the entire Operator's Manual before operating this equipment.

Note all safety warnings throughout this manual and those posted on the machine.

Be able to access this manual at all times while operating this equipment.

Read additional manufacturer's manuals and observe their applicable safety instructions.

Only persons who have read and understood the entire operator's manual should operate this equipment.

This equipment is not intended for use by or around children.

It is the owner/operator's responsibility to comply with all applicable federal, state, and local laws, rules, and regulations regarding the ownership, operation, and transporting your equipment.

Operators should become thoroughly familiar with and comply with these applicable laws for operating and transporting equipment.

WARNING!

Clean sawdust from all guards, vents, control boxes, or any area where sawdust may gather **after every shift**. Failure to do so may result in fire, causing death or serious injury.

Wear Safety Clothing (Personal Protection Equipment)

WARNING!

Always wear eye, ear, and foot protection when operating or servicing the sawmill.

Secure all loose clothing, hair, and jewelry before operating the sawmill.

Wear gloves and eye protection when handling bandsaw blades. Changing blades is safest when done by one person. Keep all other persons away from area when coiling, carrying, or changing a blade.

Some woods require respiration protection when operating the sawmill. **It is the sawyer's responsibility to know which woods require respiration protection.**

Keep Work Area Clean

WARNING!

Clean sawdust from all guards, vents, control boxes, or any area where sawdust may gather **after every shift**. Failure to do so may result in fire, causing death or serious injury

Maintain a clean and clear path for all necessary movement around the equipment and lumber stacks.

NOTICE Always properly dispose of all sawing by-products, including sawdust and wood debris, coolant, oil, fuel, oil filters, and fuel filters.

If replacing a component which has a safety decal affixed to it, make sure the new component also has the safety decal affixed.

Inspect all safety decals to ensure they are clean and readable. Replace all damaged safety decals to prevent personal injury or damage to the equipment. Con-

tact your local distributor, or call your Customer Service Representative to order more decals.

Fuel/Flammable Liquid Handling Safety

DANGER!

Do not smoke, weld, grind, or otherwise create sparks near your engine or storage tanks, especially during times of fueling.

Do not allow fuel/flammable liquid to spill on a heat source, such as a hot engine.

WARNING!

Store gasoline away from sawdust and other flammable materials.

Do not use flammable liquids (diesel fuel or kerosene) in the water lube accessories.

Clean fuel/flammable liquid spills immediately.

NOTICE Remove blades from equipment before cleaning them with fuel/flammable liquid.

Dispose of fuel/flammable liquids per local ordinances.

Battery Safety

WARNING!

Batteries expel explosive gases; keep sparks, flames, burning cigarettes, or other ignition sources away at all times.

Wear safety goggles and a face shield when working near batteries.

Wash hands after handling batteries to remove possible lead, acid, or other contaminants.

Charge the battery in a well ventilated area.

Do not attempt to charge a frozen battery.

NOTICE When working with batteries, do not spill or splash electrolyte (dilute sulfuric acid) as it is a strong corrosive.

Overcharging may reduce the overall service life of the battery.

Ensure the battery is fully charged before transporting the sawmill. If the battery is not fully charged, excessive vibration could reduce the overall service life of the battery.

EMERGENCY TREATMENT FOR CONTACT WITH BATTERY COMPONENTS (LEAD/SULFURIC ACID) *per SDS (Safety Data Sheet)*:

EYE CONTACT	**Sulfuric Acid and Lead: Flush eyes immediately with large amounts of water for at least 15 minutes while lifting lids. Seek immediate medical attention if eyes have been exposed directly to acid.**
SKIN CONTACT	**Sulfuric Acid: Flush affected area(s) with large amounts of water using deluge emergency shower, if available, shower for at least 15 minutes. Remove contaminated clothing, including shoes. If symptoms persist, seek medical attention. Wash contaminated clothing before reuse. Discard contaminated shoes. Lead: Wash immediately with soap and water.**
INGESTION	**Sulfuric Acid: Administer large amounts of water. Do NOT induce vomiting or aspiration into the lungs may occur and can cause permanent injury or death; consult physician.**
INHALATION	**Sulfuric Acid: Remove to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult,**

Sawmill Setup Safety

WARNING!

Do not set up the mill on ground with more than a 10 degree incline. Setting up the mill on an incline could cause it to tip over.

If setup on an incline is necessary, put blocks under one side of the mill or dig out areas for the legs to keep mill level.

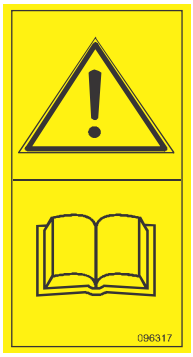
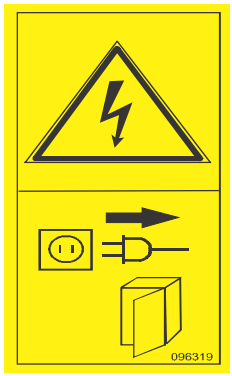
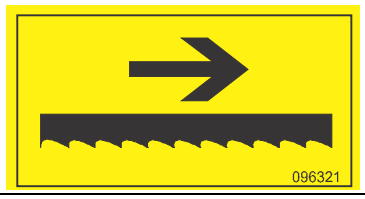
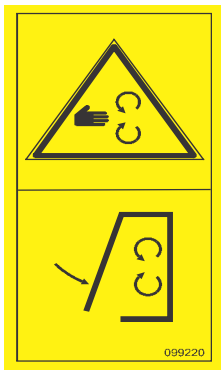
Use a lifting device (fork lift, crane, etc.) for parts over 100 lbs.

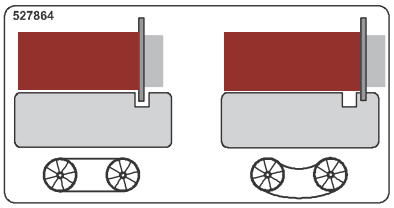
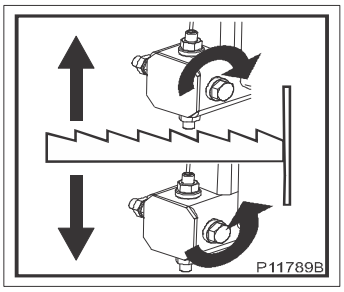
Use two persons for lifting parts over 50lbs.[1]

Keep all non-essential personnel out of the area while setting up the sawmill.

1.For more information on lifting safety see *NOISH Lifting Equation* at https://www.cdc.gov/niosh/docs/94-110/

2.3 Safety Decals

	096317	Read Operator's Manual CAUTION! Thoroughly read the manual before operating the machine. Observe all safety instructions and rules when operating the mill.
	096319	Disconnect Power Supply Before Opening (Electric version only)
	096321	Blade Movement Direction
	099220	Sawmill Covers Caution CAUTION! Close all guards and covers before starting the machine.
	099222	Warning Projectile Hazard Wear safety goggles.

	099221	Keep Away Danger CAUTION! Keep all persons a safe distance away from work area when operating the machine.
	527864	Blade Tension Align the disc in the notch for proper blade tension.
	P11789	Blade Alignment Turn counterclockwise to raise the blade. Turn clockwise to lower the blade.
	501465	Use Safety Boots Wear protective boots at all times when operating the mill!
	S12004g	Use Eye Protection Wear safety goggles at all times when operating the mill!

	S12005g	Use Ear Protection Wear ear protection at all times when operating the mill!

SECTION 3 ASSEMBLY

CAREFUL PLANNING IS ESSENTIAL TO A SMOOTH ASSEMBLY.

READ THIS SECTION THOROUGHLY TO PLAN THE ASSEMBLY.

3.1 Unpack the Mill

Parts are shipped according to size, not according to assembly.

NOTICE The sawhead is held upright by the bed cross rail bolted to the crate end. Be prepared to support the sawhead when the cross rail is unbolted.

1. Remove and unwrap all sawmill parts.
2. Set them where they are all visible.
3. Place the sawhead on a bench/flat surface at least 24” (0.6m) off the ground.
4. Open the small parts box -- not the blade box.

DANGER! COILED BLADES ARE UNDER SPRING TENSION. KNOW PROPER BLADE HANDLING BEFORE UNPACKING YOUR BLADE. FAILURE TO FOLLOW THIS WILL RESULT IN SERIOUS INJURY.

DO NOT UNPACK THE BLADE UNTIL READY FOR INSTALLATION.

3.2 Site Preparation

- Assemble the mill at its permanent site.
- Ensure ground is firm and level.
- Clear the area.
  - Inspect the site for debris or uneven surfaces that may become a trip hazard.
  - Clear out all non-essential personnel.
- Gas mills
  - Do not set up in enclose areas.
  - Position operator upwind, away from sawdust and exhaust.

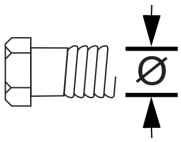
3.3 Torque Settings

Always tighten hardware to these values **unless otherwise noted**.

Fasteners must always be replaced with the same grade as specified in the Parts Manual.

Always use the proper tool for tightening hardware: SAE for SAE hardware and Metric for metric hardware.

Ensure fastener threads are clean and you start thread engagement properly.



Metric Bolt Head Identification

Metric Grade 8.8

Metric Grade 10.9

COARSE THREAD					FINE THREAD					Wrench Size
Diameter & Thread Pitch	Metric 8.8		Metric 10.9		Diameter & Thread Pitch	Metric 8.8		Metric 10.9		
	N-m	lbs-ft	N-m	lbs-ft		N-m	lbs-ft	N-m	lbs-ft	
6 x 1.0	8	6	11	8						10 mm
8 x 1.25	20	15	27	20	8 x 1.0	21	16	29	22	13 mm
10 x 1.5	39	29	54	40	10 x 1.25	41	30	57	42	16 mm
12 x 1.75	68	50	94	70	12 x 1.25	75	55	103	76	18 mm
14 x 2.0	109	80	151	111	14 x 1.5	118	87	163	120	21 mm
16 x 2.0	169	125	234	173	16 x 1.5	181	133	250	184	24 mm
18 x 2.5	234	172	323	239	18 x 1.5	263	194	363	268	27 mm
20 x 2.5	330	244	457	337	20 x 1.5	367	270	507	374	30 mm
22 x 2.5	451	332	623	460	22 x 1.5	495	365	684	505	34 mm
24 x 3.0	571	421	790	583	24 x 2.0	623	459	861	635	36 mm
30 x 3.0	1175	867	1626	1199	30 x 2.0	1258	928	1740	1283	46 mm

3.4 Assemble the Log Bed

The bed should be assembled on its operation site.

> **NOTE:** Do not assembly the catch rail to the bed until after the carriage has been placed on it.

Assemble the bed sections

1. Attach the track rails to the cross rail by **loosely** securing the M10x30mm bolts. See Fig. 3-1.

NOTE: The head section cross rails are closer together then the other two sections.

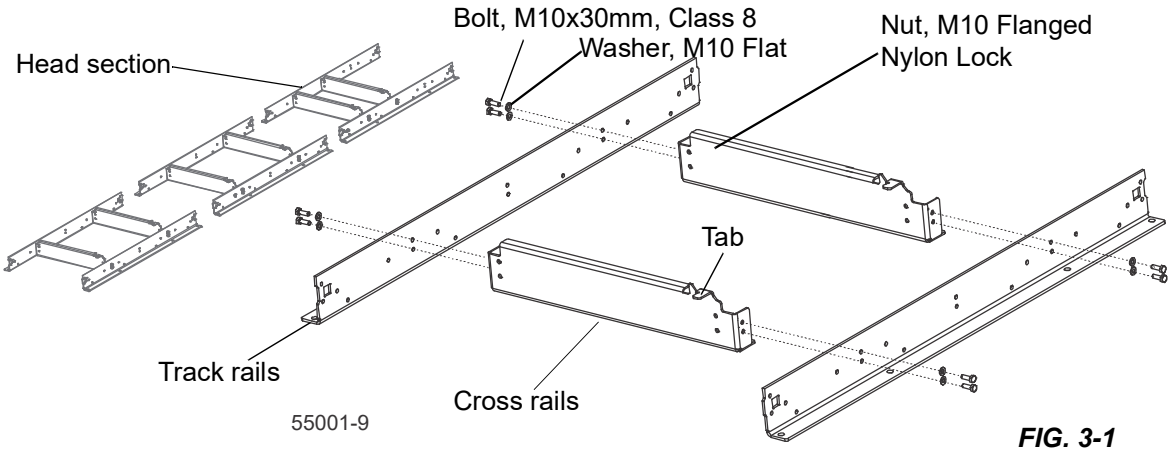


FIG. 3-1

2. Assemble all the track rails and cross rails ensuring all of the cross rails face the same direction.

3. Tighten all bolts on the tab side of the cross rails.

4. Adjust the track and cross rails (if needed) to square them.

5. Tighten all bolts.

OPTIONAL LEVELING FEET

If ordered, install the optional leveling feet as shown in Fig. 3-2.

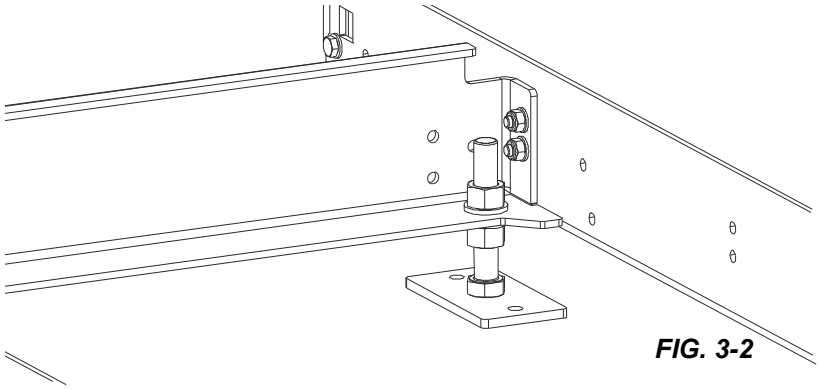


FIG. 3-2

Assemble the connector plates

1. Connect the bed sections using a connecting plate, a clamp, and M10x30mm bolts and hardware from the Bed Kit bag as shown in Fig. 3-3.

a. Bolt the connector plates in place, tightening the bolts in the rounded holes and loosely securing the bolts in the slotted holes.

b. Install the bolt and hardware on the clamp until the slack is taken up.

c. Set the clamp in place by inserting the larger notch j in first and tilting the clamp in then upward to catch the smaller notch k.

d. Draw the track rails together by tightening the clamp bolts.

e. Ensure that the top of the rail joints are smooth.

f. Tighten the bolts in the slotted holes.

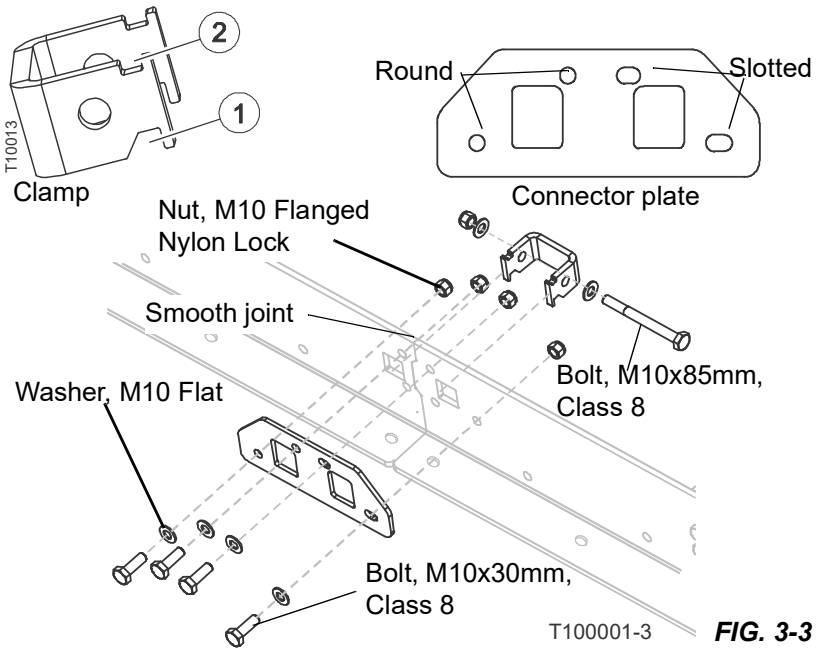


FIG. 3-3

2. Assemble the cross braces, tightening the M10x30mm bolts. See Fig. 3-4.

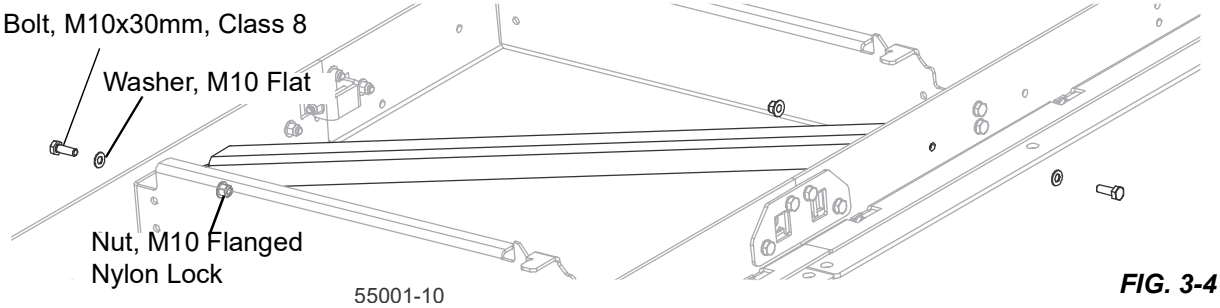


FIG. 3-4

NOTE: Optional bed extension sections may be added at this time, in the same manner as the standard bed sections.

NOTE: If using optional leveling feet or runners, attach them now before adding weight to the log bed.

Assemble the log clamps

1. Insert the log clamp arm and side support onto the rod.

Install the clamp screw and clamp point on the log clamp arm. See Fig. 3-5.

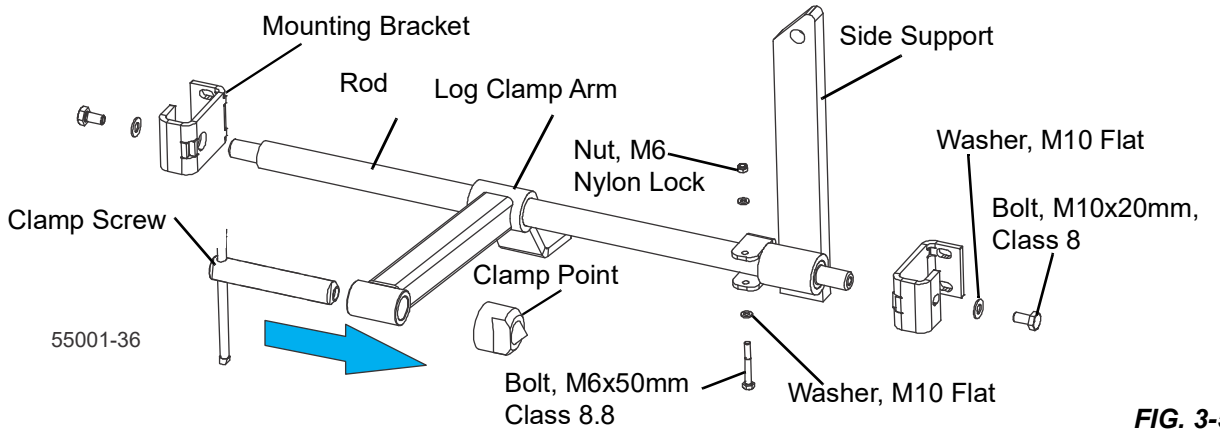


FIG. 3-5

2. Install the mounting brackets to the rod with M10x20mm bolts.

3. Insert the side support adjustment hardware.

Attach the complete log clamp in the middle of the bed using the M10x30mm bolts. See Fig. 3-6.

4. Assemble the second log clamp near the end of the log bed. See Fig. 3-6.

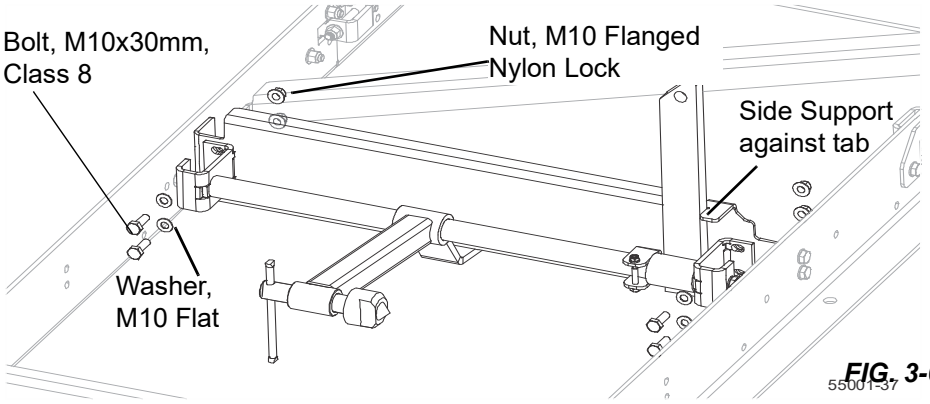


FIG. 3-6

Stop Blocks Installation

1. Install the stop blocks (ib Bed Kit bag) at **both ends** on the operator's side to prevent the sawhead from sliding off the bed. See Fig. 3-7.

2. Attach the stop blocks on the outside surfaces of the front and last bed sections using M10x30mm bolts.

NOTE: The stop blocks can also be used to prevent accidental sawhead movement as described in *Secure the Sawhead Carriage*.

WARNING! Failure to install stop blocks may result in serious personal injury and/or machine damage.

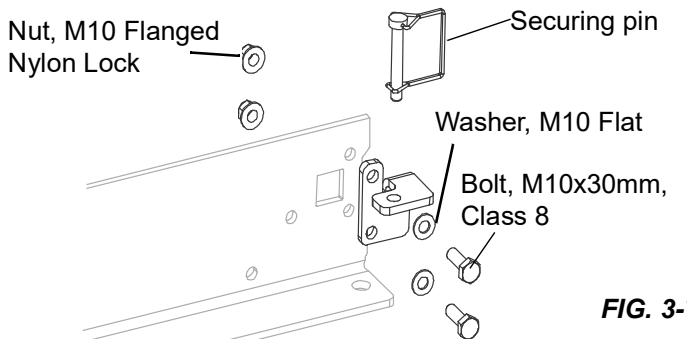


FIG. 3-7

Bed leveling

1. Use a 4-foot (120cm) level (or laser level) to level the bed in all directions. See Fig. 3-8.

NOTE: The bed must be level for the sawhead to travel smoothly over the rails.

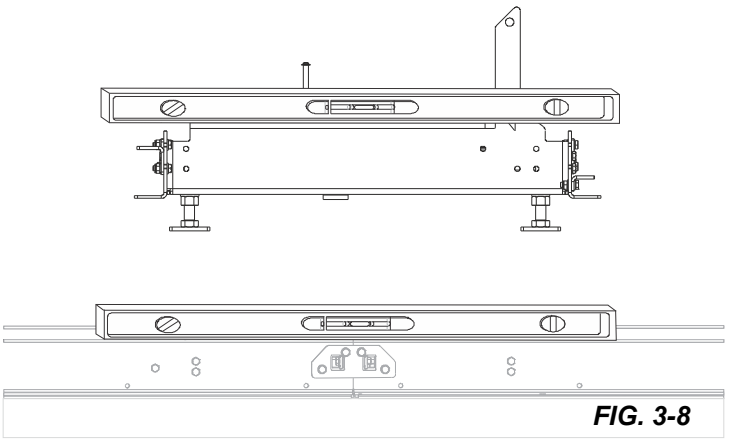


FIG. 3-8

3.5 Sawhead Installation

WARNING! Clear the area of non-essential personnel.

1. Insert the upper mast tube into the mast leg brackets. See Fig. 3-9.

2. Align the scale mount bracket (or infeed bracket for electric only) with the upper mast tube and the right mast leg.

3. Retrieve the hardware from the Mast Kit bag.

4. **Tighten** tube, legs, and bracket with the M10x 80mm carriage bolts.

5. Insert the fastened tubes into the mast guide brackets.

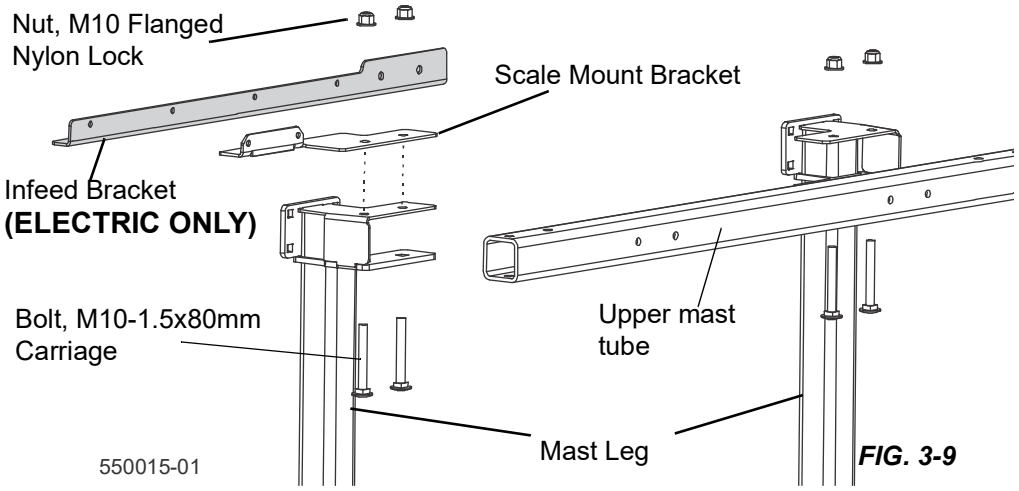
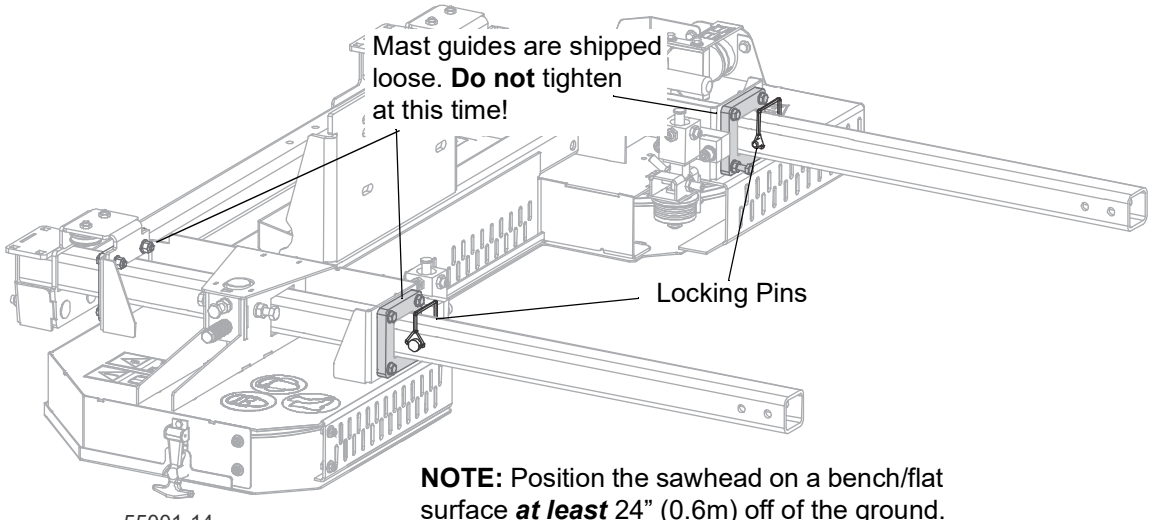


FIG. 3-9

6. Insert the head locking pins to prevent the head from sliding off the mast. See Fig. 3-10.



NOTE: Position the sawhead on a bench/flat surface ***at least*** 24” (0.6m) off of the ground.

FIG. 3-10

7. Slide the mast uprights into the mast carriage rollers and **loosely** secure with M10x80mm bolts as shown in Fig. 3-11.

WARNING!

Use assistance in lowering the sawhead. Avoid injury and equipment damage.

8. Set the sawhead in a **stable** vertical position.

NOTE: Do not assemble more on the carriage until later steps are completed.

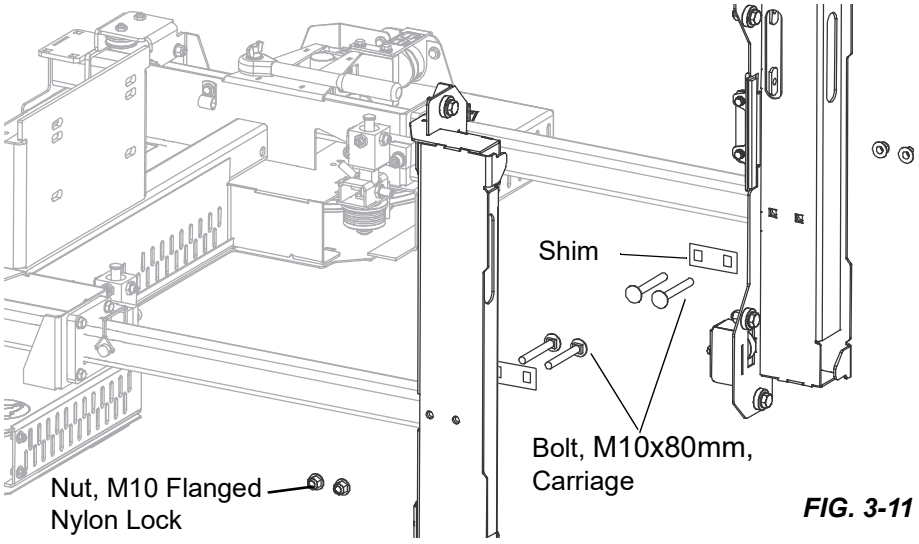


FIG. 3-11

3.6 Carriage Placement

WARNING!

Use 2 persons or lift equipment to move the carriage (sawhead and mast together) to the assembled bed rails.

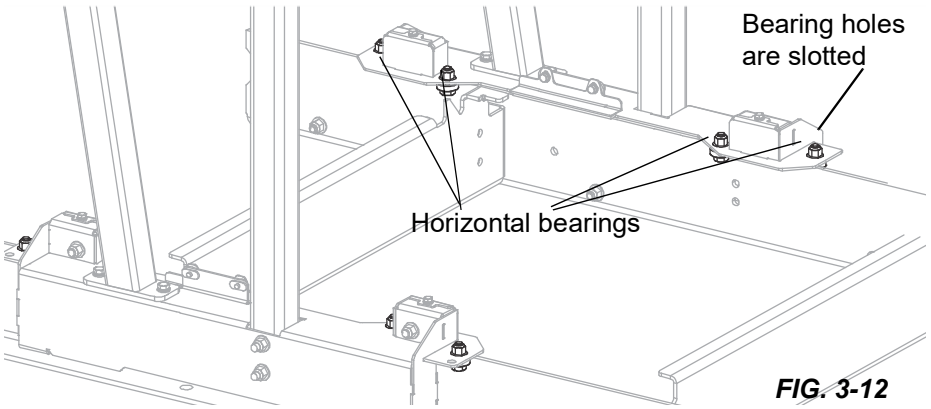


FIG. 3-12

1. Loosen the horizontal bearings on the roller assemblies.

NOTE: The sawdust chute goes on the same side as the log supports.

2. Place the carriage assembly on the sawmill bed.

3. Ensure that the vertical track roller bearings sit properly on the track rail.

NOTE: If the carriage does not ride smoothly, recheck how the bearings sit on the rail.

4. Align the horizontal bearings. See Fig. 3-12.

   a. Move the horizontal bearings against the track rail lightly touching the bearings and the vertical surface of the track rail while the sawhead is being moving.

   b. Tighten the nuts to lock the bearings in the adjusted position.

   NOTE: If the bearings press too firmly against the rail, it will impede movement on the rail resulting in premature bearing wear.

   c. Make this adjustment for all horizontal bearings (4 on each roller).

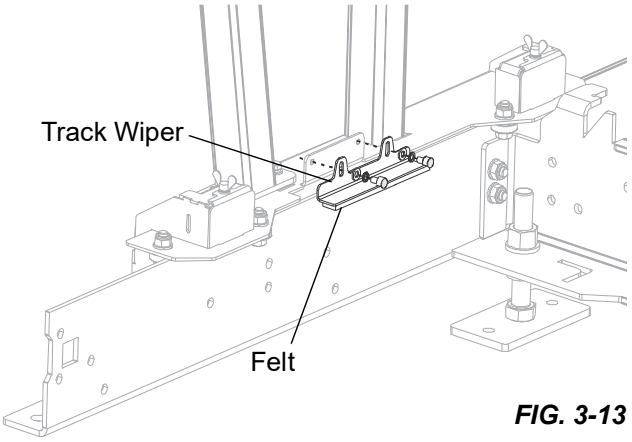


FIG. 3-13

5. Install the felt pad (from Bed Kit bag) on the track wiper bracket. See Fig. 3-13.

6. Adjust the track wiper so that the felt touches the track rail surface and the sawhead moves freely on the bed.See Fig. 3-13.

Assemble Catch Rail

The catch rail may be assembled on either side, but installing on the dust chute side makes loading logs easier. See Fig.3-14

WARNING! Do not omit catch rail.

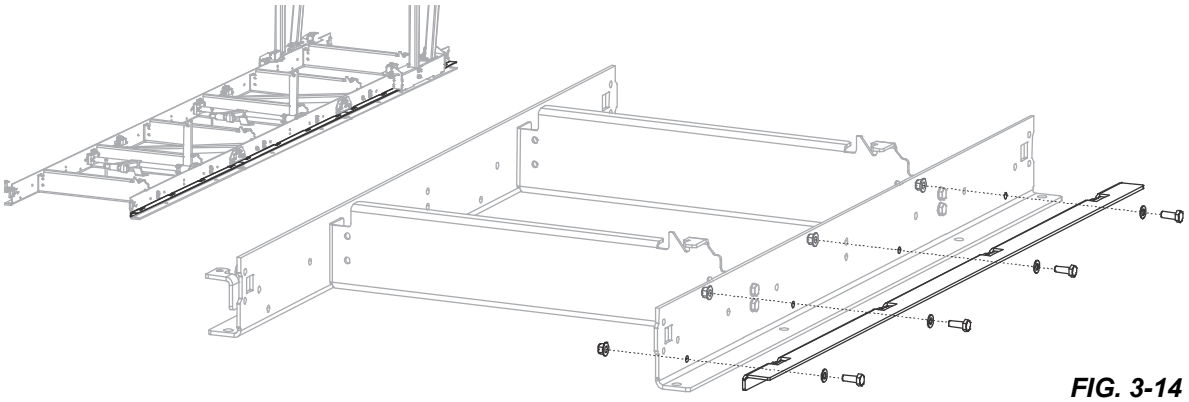
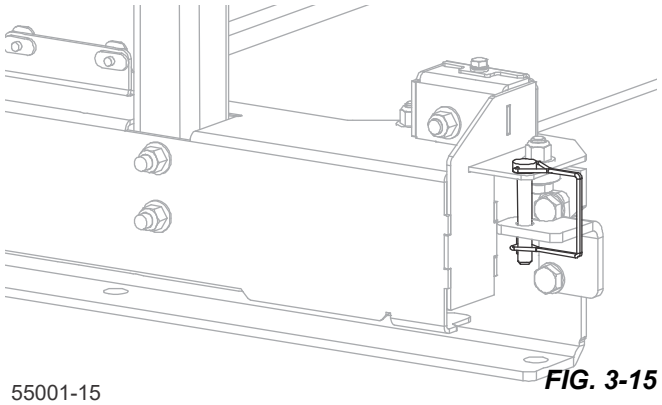


FIG. 3-14

Secure the Sawhead Carriage

At the head of the log bed secure the carriage with a locking pin to prevent accidental movement. See Fig. 3-15.



55001-15

FIG. 3-15

3.7 Install the Engine (Gas Versions Only)

1. Install the sawhead cover latch using two M8x25mm cap screws. See Fig. 3-16.

2. Unpack the engine and its parts.

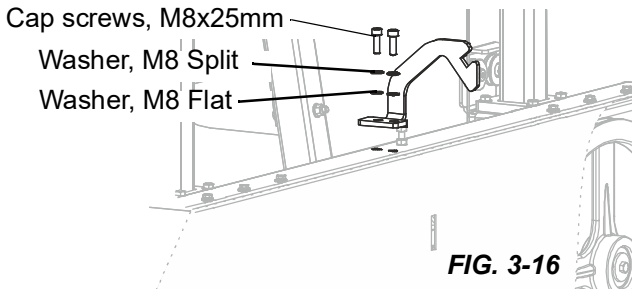


FIG. 3-16

3. Set the engine on the engine mounting platform and loosely secure with M10x50mm bolts. See Fig. 3-17.
4. Insert the shaft key and the large bushing over the engine shaft. See Fig. 3-18.

NOTE: If the shaft key is too tight, file to fit.

5. Ensure the bushing is flush to the end of the shaft. See Fig. 3-18.
6. Tighten the bushing set screw with a 3mm hex wrench. See Fig. 3-18.
7. Set the sheave over the bushing.
8. Secure the pulley with the bushing bolts. See Fig. 3-18.

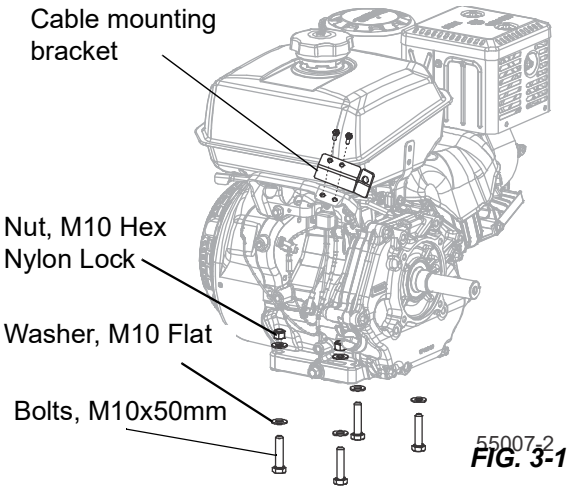
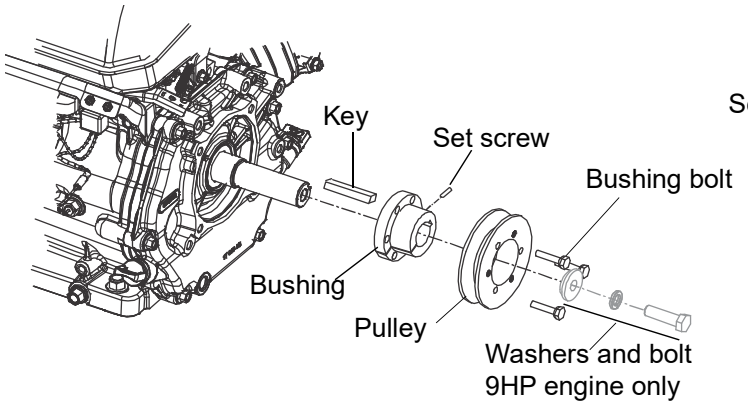


FIG. 3-17



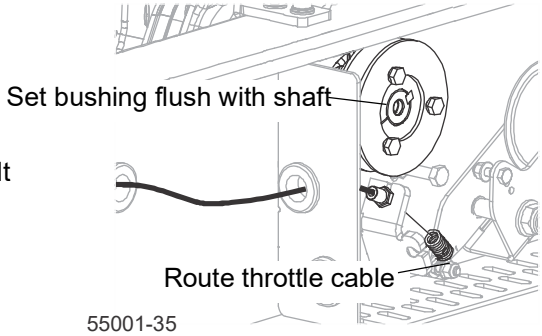


FIG. 3-18

9. Install the belt on bandwheel and pulley. See Fig. 3-19.
10. Replace the existing cable bracket on the engine with the supplied cable bracket. See Fig. 3-17.
11. Loosely attach the throttle cable to the cable bracket. See Fig. 3-20.

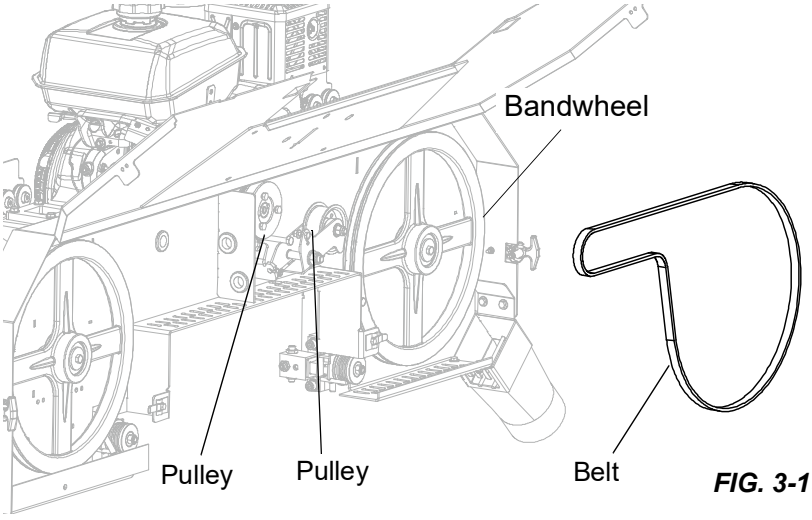


FIG. 3-19

12. Insert the throttle fitting in the throttle lever bracket. See Fig. 3-20.

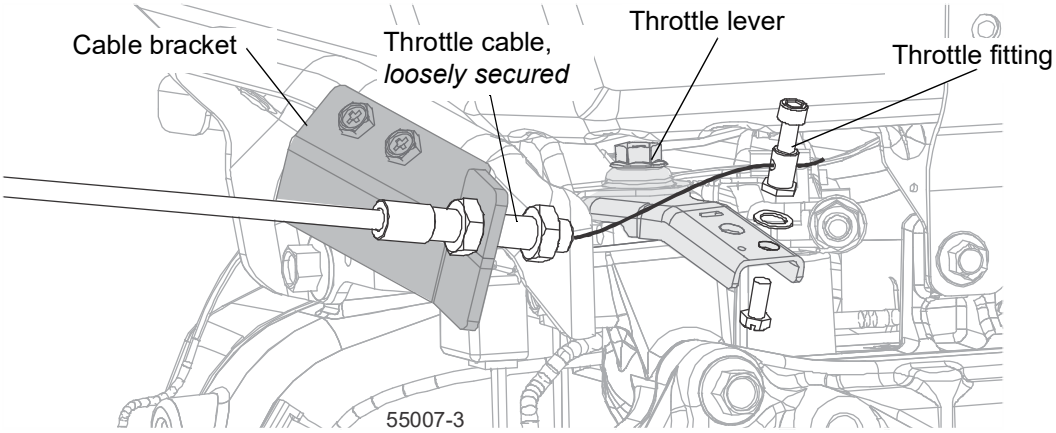


FIG. 3-20

13. 9HP ENGINE ONLY: Fasten step washer, lock washer, and bolt. See Fig. 3-18.

Attach the throttle cable to the clutch. See Fig. 3-21.

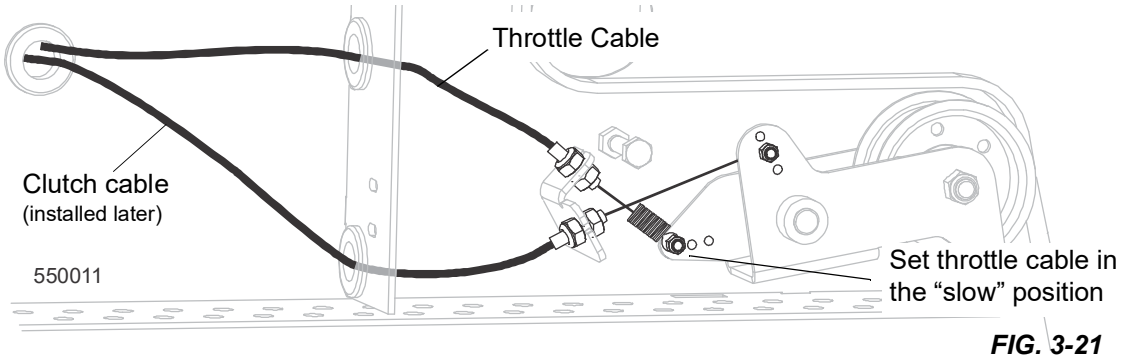


FIG. 3-21

14. Adjust and tighten the throttle cable at the throttle lever.

15. Place the drive belt around the drive pulley.

16. Tighten all mounting bolts.

NOTE: Some engines are shipped with the throttle lever tight. If necessary, loosen the throttle lever by loosening the nut at the top.

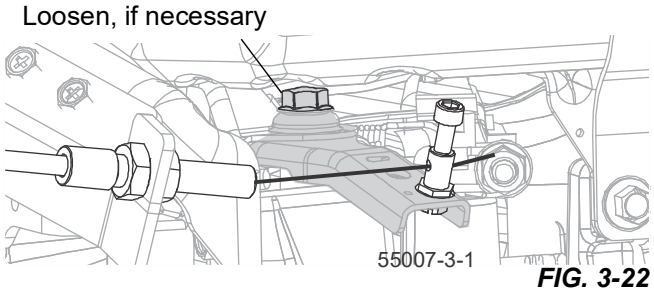


FIG. 3-22

17. Install the exhaust deflector. See Fig. 3-23

3.8 Install the Motor (Electric Version Only)

1. Unpack the motor and its parts.

2. Set the motor on the motor mounting platform and loosely secure with M10x50mm bolts.

3. Insert the shaft key and the large bushing over the engine shaft. See Fig. 3-24.

NOTE: If the shaft key is too tight, file to fit.

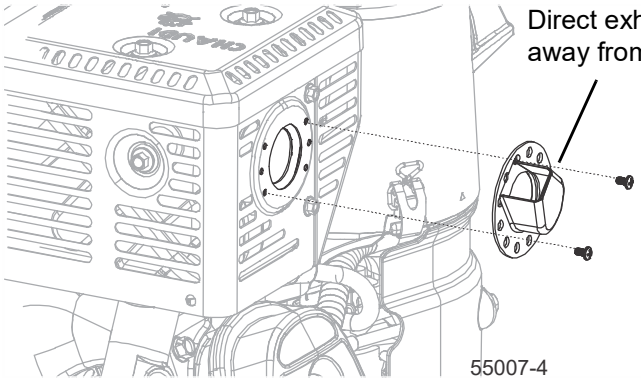


FIG. 3-23

4. Ensure the bushing is flush to the end of the shaft. See Fig. 3-24 .

5. Tighten the bushing set screw with a 3mm hex wrench. See Fig. 3-24.

6. Set the pulley over the bushing.

7. Secure the pulley with the bushing bolts. See Fig. 3-24

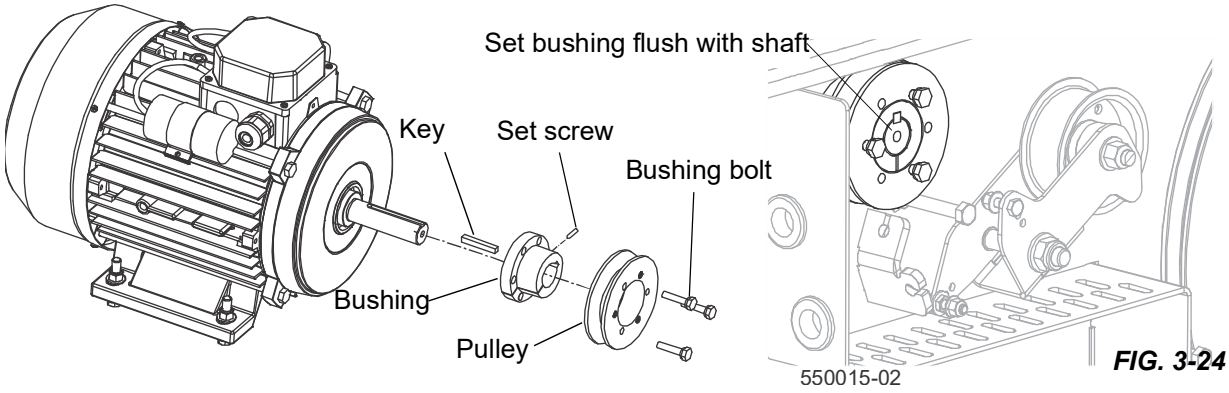


FIG. 3-24

8. Tighten motor mount bolts.

9. Place belt over pulley.

Insert the tension rod into the lower bracket as shown in Fig. 3-25.

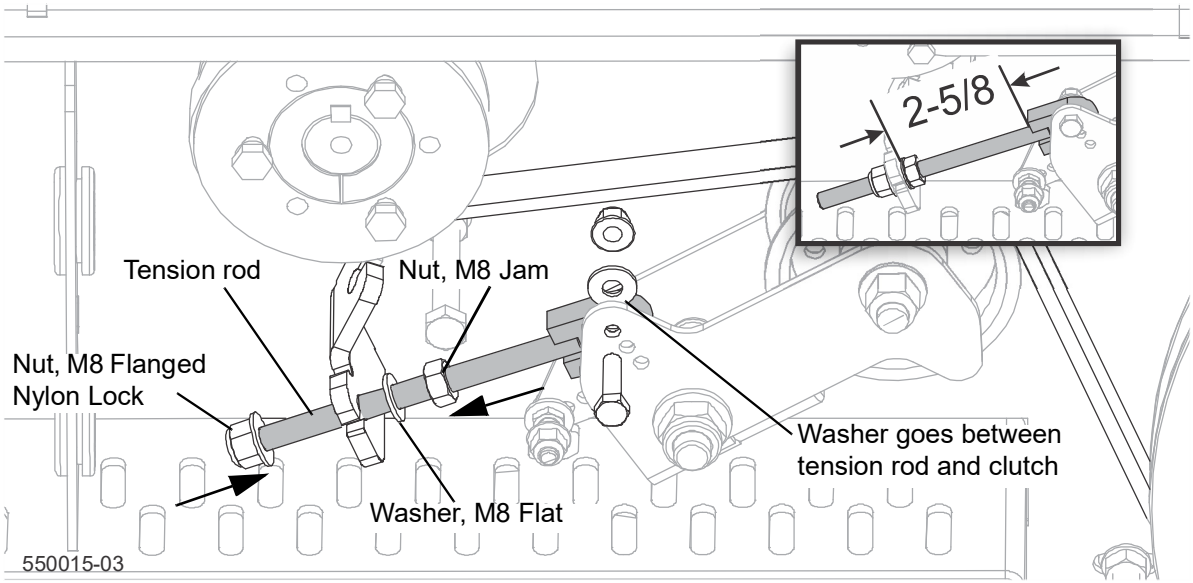


FIG. 3-25

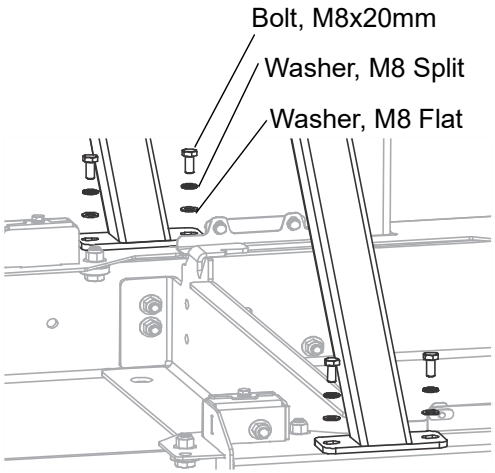
10. Adjust the tension rod nuts until the rod threads show about 2-5/8" (67mm) between the bottom of the rod head and the mounting bracket. See Fig. 3-25.

11. Tighten all nuts.

3.9 Finish Carriage Assembly

1. Loosely fasten the remaining mast elements as shown in Fig. 3-26.

NOTE: Fit may be very tight in places.



LOWER CARRIAGE VIEW

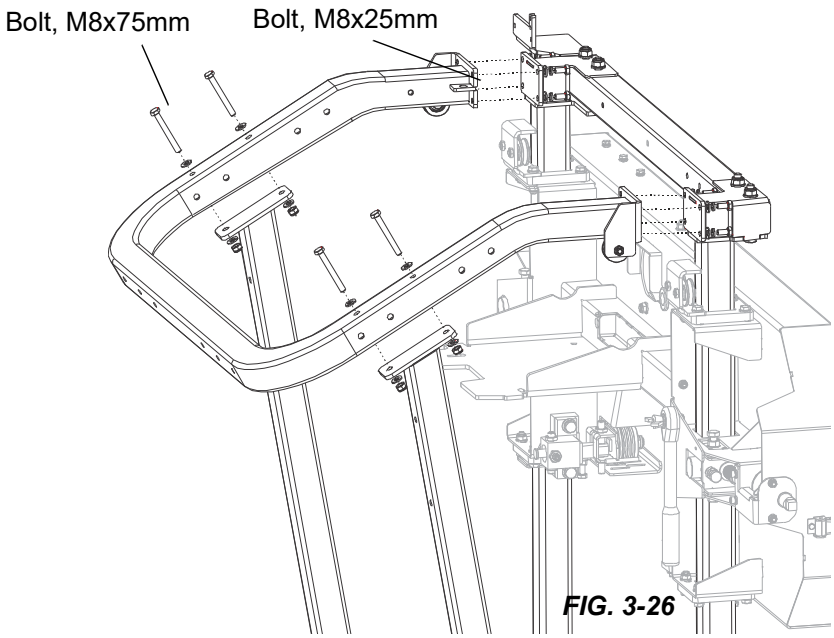


FIG. 3-26

2. Tighten all carriage fasteners, adjusting the fit as you tighten the bolts; include the bolts at the lower mast at the rollers.

3. Glide the carriage along the log bed to ensure that rollers move smoothly.

> **NOTE:** If the carriage does not ride smoothly, recheck the bed section joints or how the bearings sit on the rail.

Push Handle

1. Fasten the push handle to the frame with the M8x75mm bolts as shown in Fig. 3-27.

2. Slide the grip over the end of the push handle; use a lubricant, if necessary.

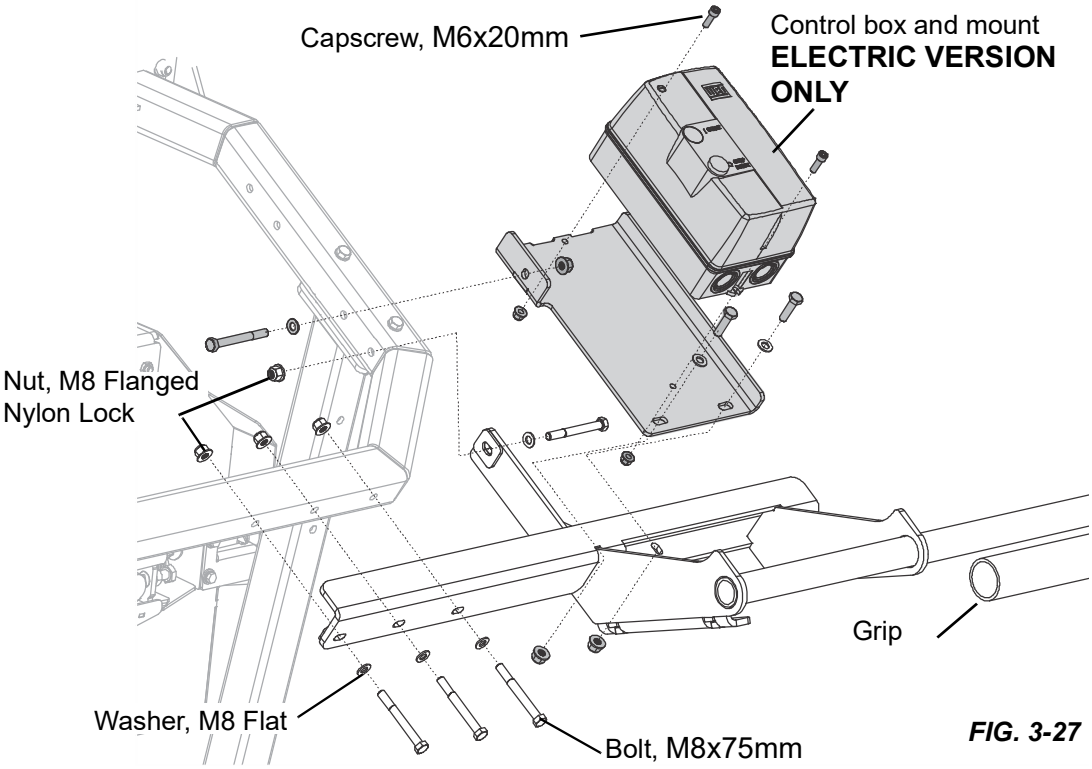


FIG. 3-27

Mount Lift System

INSTALL BRACKETS

1. Insert the bronze bushings into the holes located on up/down brackets. See Fig. 3-28.
2. Use M8x30mm and M8x75mm bolts to install the lift bracket near the control box.

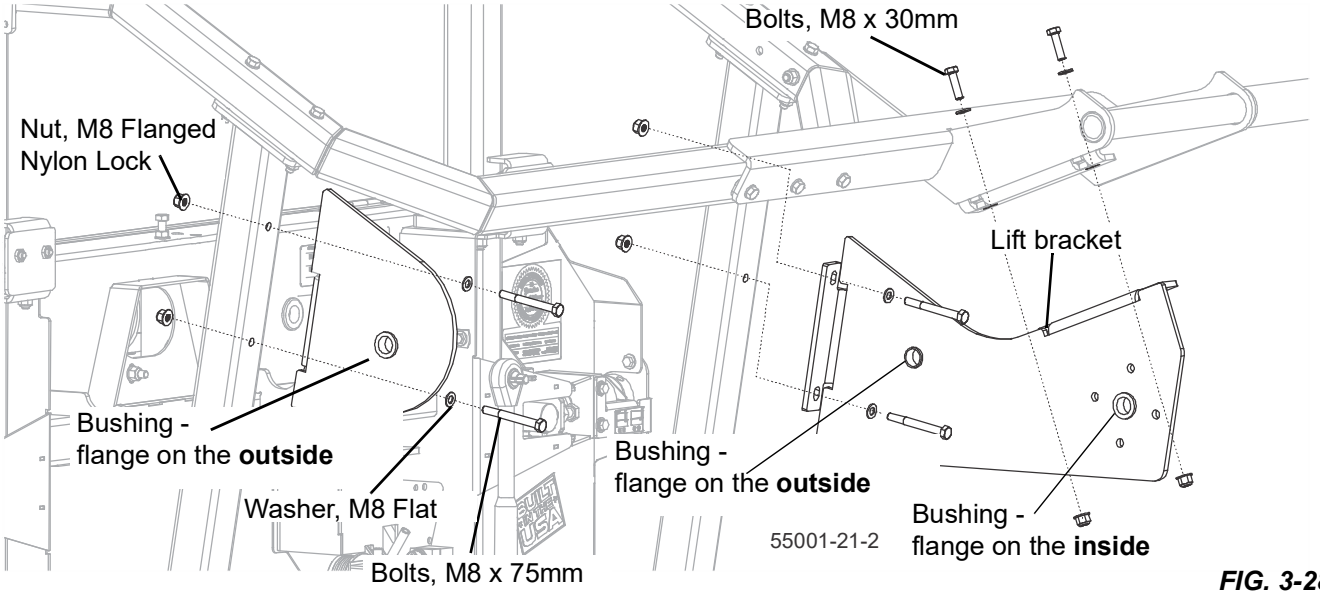


FIG. 3-28

3. Slide the large sprocket onto the shaft. See Fig. 3-29.
4. Slide shaft into the bushings on the brackets, **ensuring the key slot of the shaft is on the operator's side.**

ASSEMBLE SPROCKET ON SHAFT

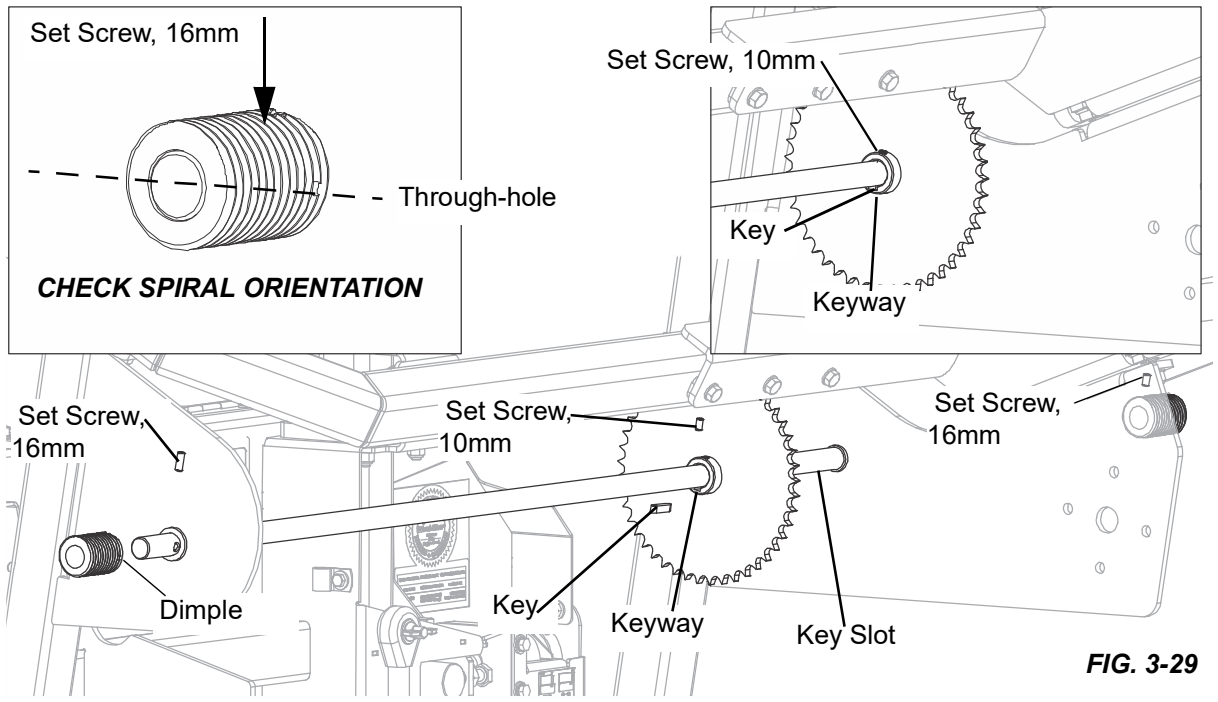


FIG. 3-29

1. Align the key in the slot in the shaft.See Fig. 3-29.
2. Align the sprocket keyway over the key.
3. Tighten the sprocket set screw. (See inset of Fig. 3-29.)
4. Attach the shaft ends.

NOTICE The helical shaft ends are left-right oriented according to the direction of the spiral. Ensure that the spiral directs the lift cable to the outside of the shaft. See Fig. 3-30.

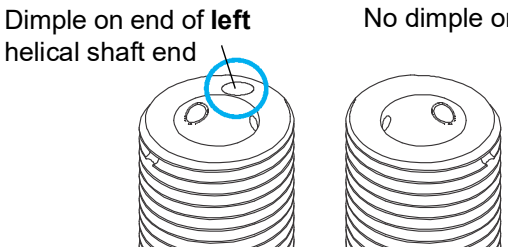


FIG. 3-30

5. Align the helical shaft ends over the through-holes and set screw holes in the shaft ends.
6. Slightly tighten the set screws to maintain that alignment. (Set screw will be fully tightened when the cable is inserted.)

ASSEMBLE THE ADJUSTMENT SYSTEM

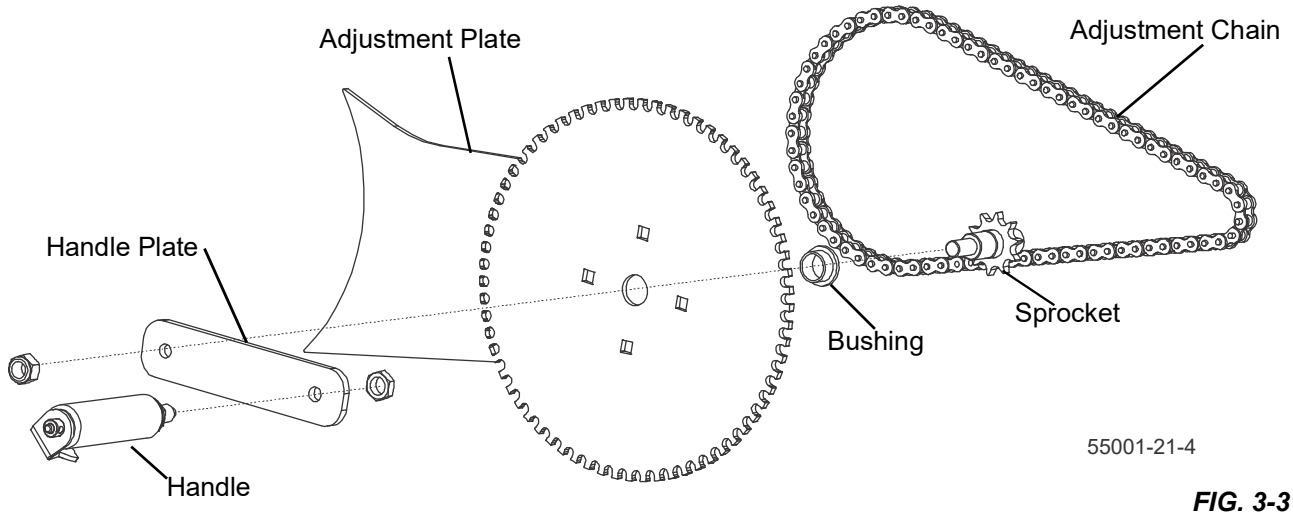
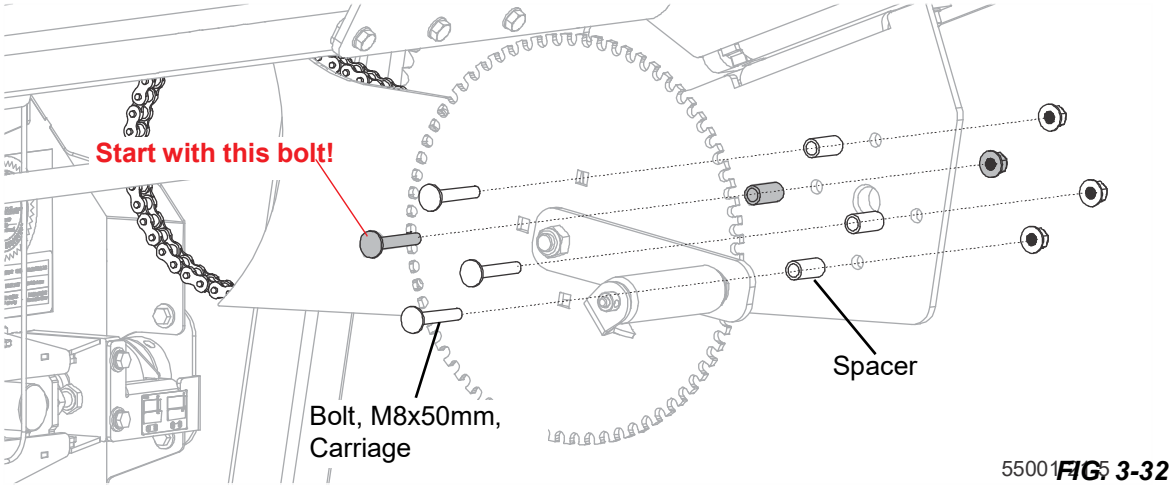


FIG. 3-31

1. Assemble handle to handle plate (if not already assembled). See Fig. 3-31.
2. Insert the bushing into the adjustment plate.
3. Insert the sprocket through the bushing and screw on the handle plate; fasten with the M12 nut.
4. Place the chain around the large sprocket on the shaft
5. Assemble the master link in the adjustment chain
6. Place the chain around the small sprocket.

ATTACH THE ADJUSTMENT SYSTEM



55001-25 ***FIG. 3-32***

1. Place the carriage bolts through the adjustment plate. See Fig. 3-32.
2. Slide the spacers on the carriage bolts.
3. Tighten the nuts on the carriage bolts.

INSTALL LIFT CABLES

1. Assemble the roller guides in the corners of the masts as shown in Fig. 3-33.

CAUTION! Ensure that the cable is routed smoothly on the helical end of the shaft. Cable damage can occur if cable does not wind smoothly.

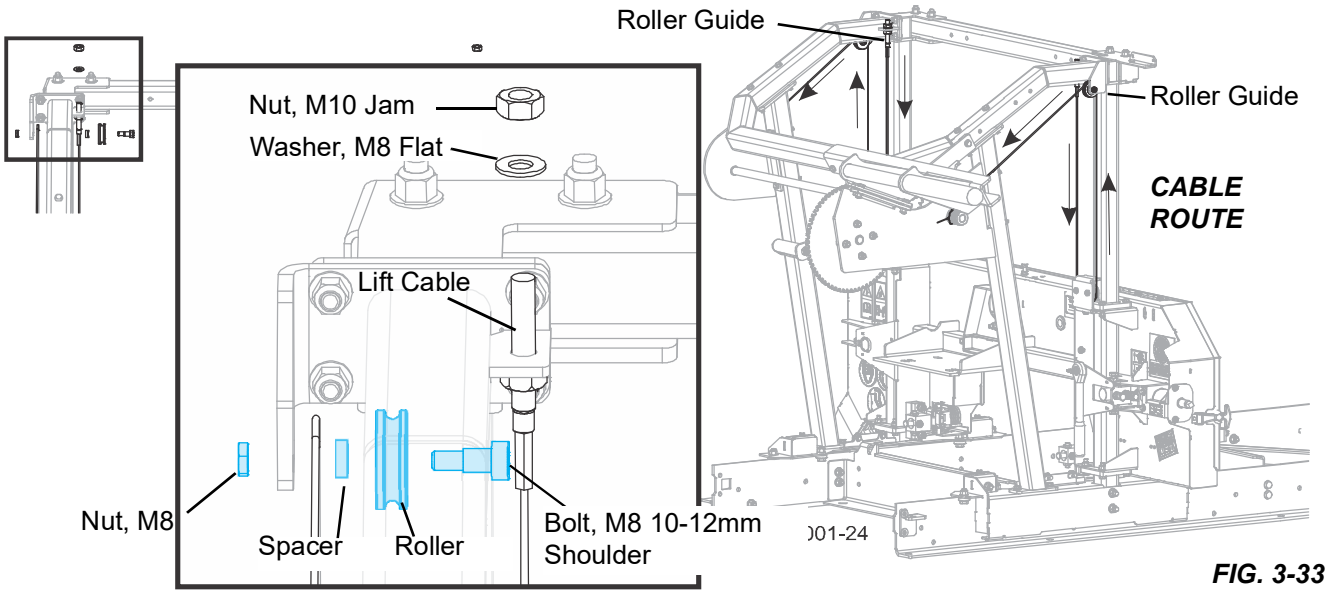


FIG. 3-33

WARNING! Use assistance in lowering the sawhead. Avoid injury and equipment damage.

2. Tighten the lower mast guides on both sides.

3. Adjust one saw head stop bolt to 1” (25mm) below the nylon mast guide. See Fig. 3-34
4. Remove the head locking pins to lower the head to the lowest position.
5. Level the sawhead.
   - **a.** Set a level across the top of the sawhead.
   - **b.** Adjust the second stop bolt until the head is leveled.
6. Attach the lift cable to the bracket as shown in Fig. 3-33.

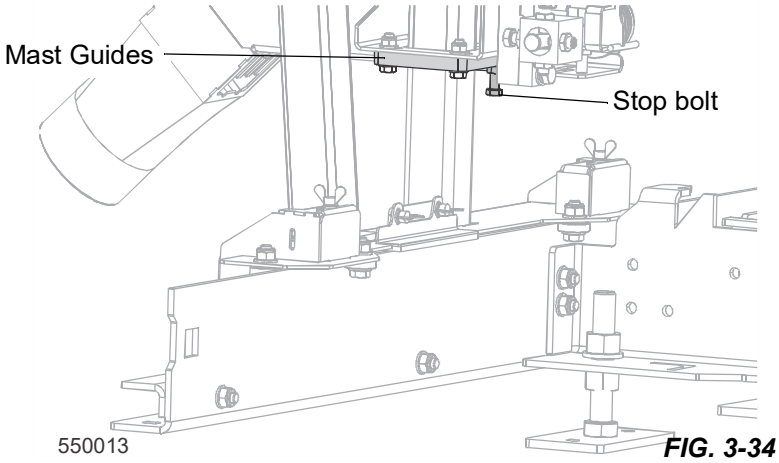


FIG. 3-34

NOTE: Set lower lift cable nut to 1/4 of the way up from the bottom of the threads to allow for adjustment.

7. Route the lift cable through the rollers as shown in Fig. 3-34.
8. Thread the lift cable through the hole in the lift shaft ends until all slack is taken up.
9. Tighten the set screw when the cable is tensioned.
10. Repeat on the other side of the sawhead.
11. Raise and lower the sawhead to check for additional adjustments.

3.10 Blade Height Scale Installation

1. Apply scale decal 3/4” down from the top of the height scale bracket (**if not pre-applied**).
2. Open the sawhead cover to install the blade height scale bracket.
3. Use M8x20mm carriage bolts to attach blade height scale to the sawhead cover. See Fig. 3-35.
4. Bolt the scale guide blocks on both edges of the scale using M6x30mm bolts.

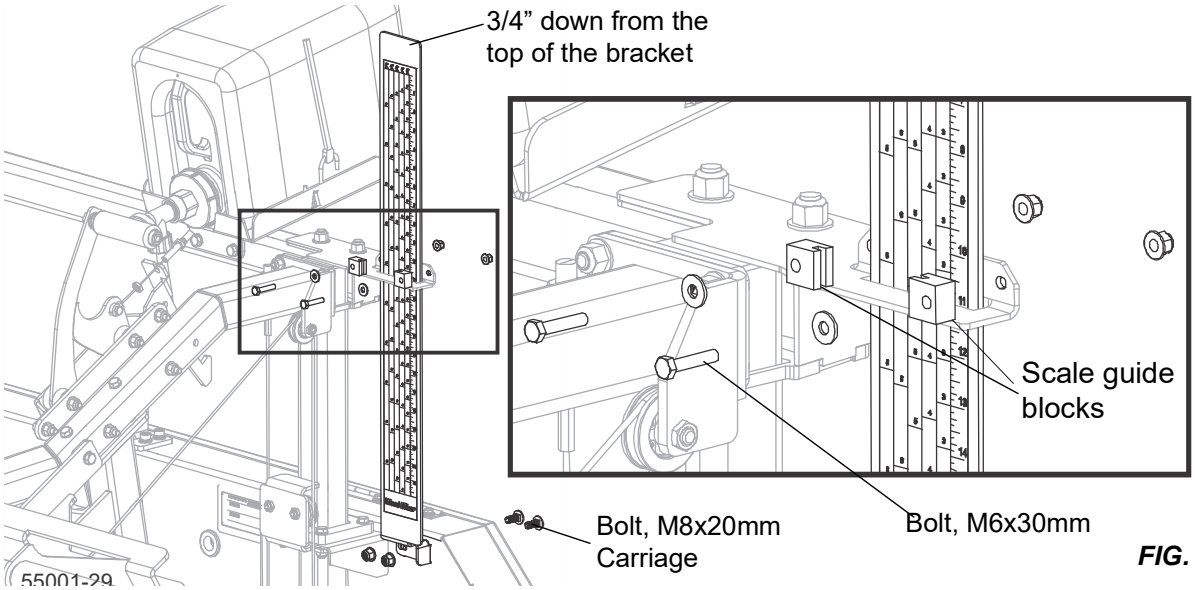


FIG. 3-35

5. Finger-tighten the nuts until final adjustment.
6. *See Section 4.7* for Blade Height Scale Adjustment.

3.11 Sawdust Chute Assembly Installation

Open the sawhead cover and fasten the sawdust chute using the M6x16mm bolts. See Fig. 3-36.

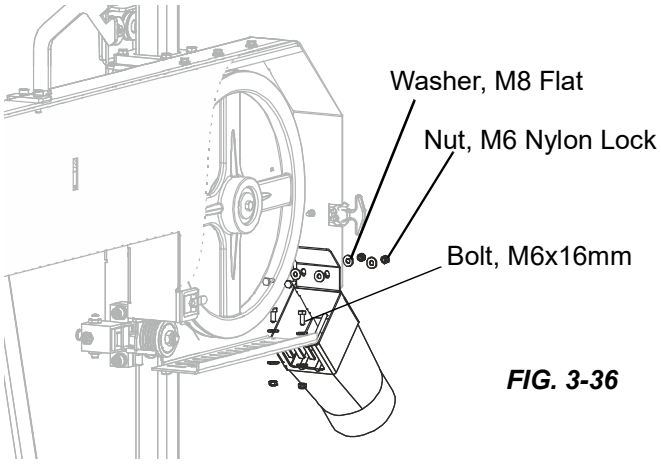


FIG. 3-36

3.12 Water Bottle Installation

1. Install the water bottle tray to the mast cross tube using the M8x75mm bolts. See Fig. 3-37.
2. Connect the hose between the water bottle and the idle side blade guide, using the hose clamp.

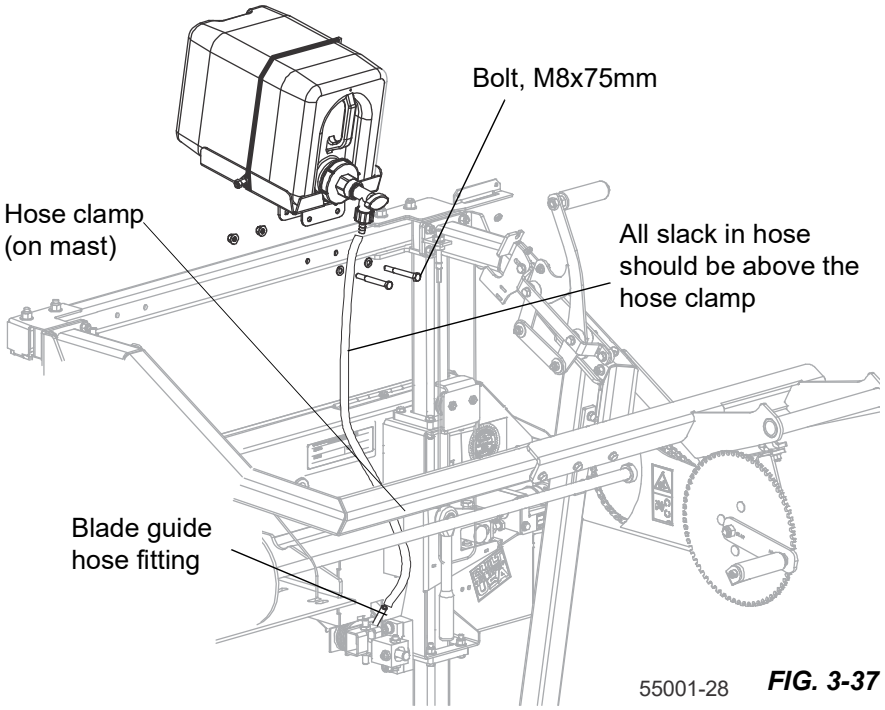


FIG. 3-37

3.13 Clutch Lever Installation (Gas versions only)

1. Attach the clutch lever assembly as shown in Fig. 3-38.
2. Attach the ring end of the clutch cable to the clutch lever.
3. Set the cable in the bracket; adjust as needed. See Fig. 3-39.

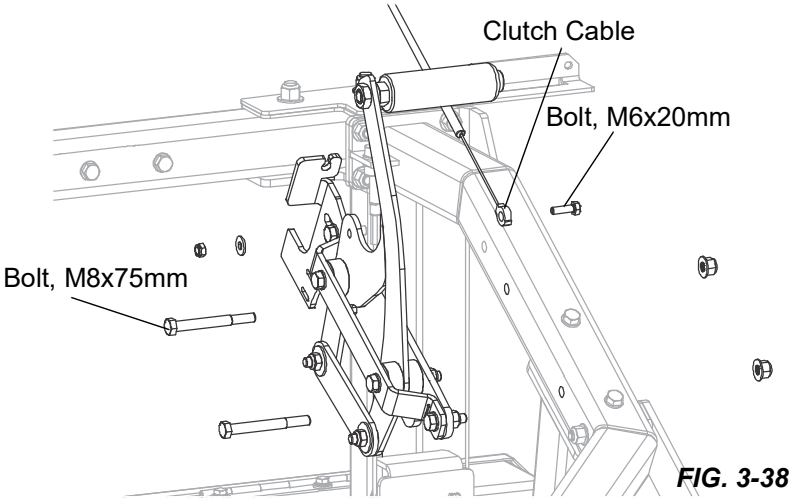


FIG. 3-38

4. Route the cable through the sawhead grommets and attach it to the clutch. See Fig. 3-39 and 3-40.

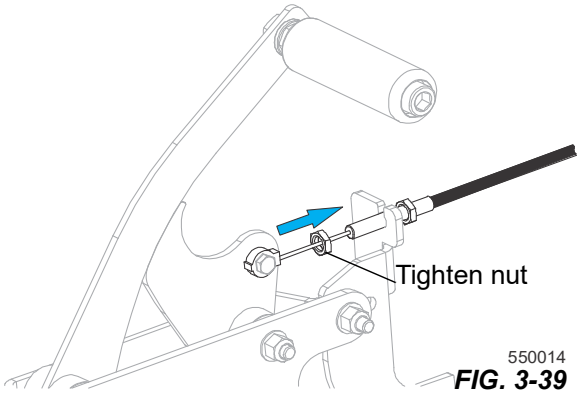


FIG. 3-39

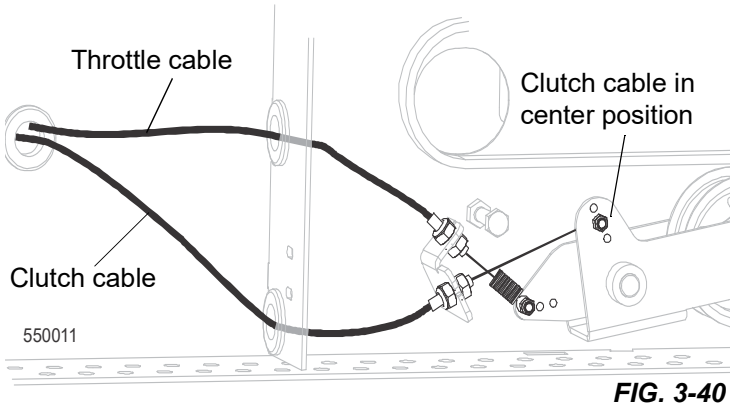


FIG. 3-40

5. *See Section 4.8* for information on cable adjustment.

3.14 Tension Tool Installation

Install the tension tool (ratchet) on the rear of the sawhead. See Fig. 3-41.

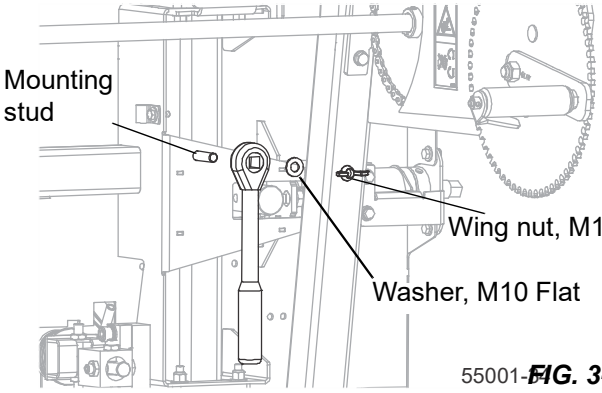


FIG. 3-41

3.15 Install the Blade

DANGER! COILED BLADES ARE UNDER SPRING TENSION. KNOW PROPER BLADE HANDLING BEFORE UNPACKING YOUR BLADE. FAILURE TO FOLLOW THIS WILL RESULT IN SERIOUS INJURY.

DO NOT UNPACK THE BLADE UNTIL READY FOR INSTALLATION.

WARNING! Wear gloves and eye protection when handling bandsaw blades. Failure to follow this may result in serious injury.

Keep all other persons away from area when coiling, carrying, or changing a blade. Changing blades is safest when done by one person. Failure to follow this may result in serious injury.

---

1. Read the pamphlet enclosed with the blade or watch the video on sawmill blades before removing the blade from the box.

NOTE: Do not remove the blade from the shipping box at this time.

2. Go to:

HOW TO COIL, UNCOIL, AND INVERT A BLADE

https://www.youtube.com/watch?v=43TWwSgSOaQ

Hold the three-loop coil in your right hand.

Find the loop that creates a figure eight, and pull down with your left hand.

The top two loops form a cross.

Grasp the top loop with your right hand. Grasp the other loop with your left.

Point the blade out and away from you. Slowly move your hands apart while rotating your forearms down and outward.

Your blade is successfully uncoiled.

3. Open the blade housing cover.

4. Turn the blade tension bar with the ratchet until the blade wheel is moved in. See Fig. 3-42

5. Carefully remove and uncoil the blade from the shipping box.

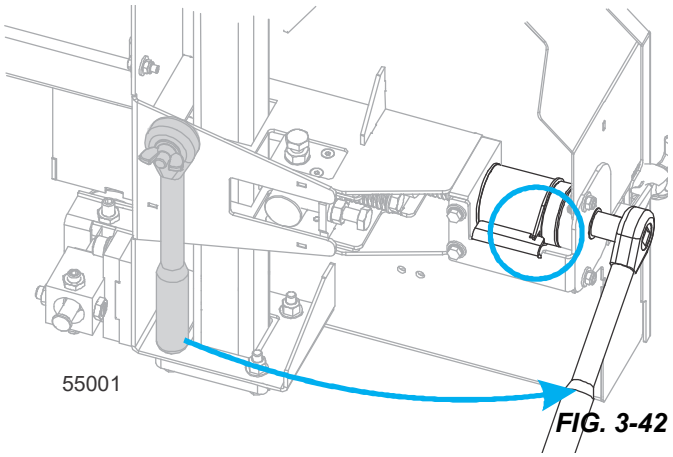


FIG. 3-42

6. Place the new blade around the blade wheels and under the blade guide rollers. See FIG.3-43.

NOTE: When installing a blade, make sure the teeth are pointing t toward the dust chute. If necessary, invert the blade as shown in Step 2.

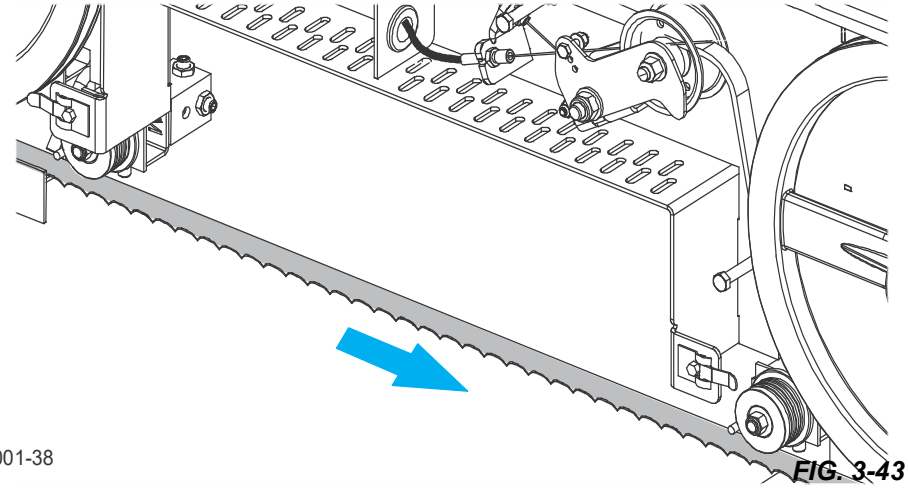


FIG. 3-43

7. Position 1 1/4” wide blades (standard) on the wheels so the gullet is 1/8" (3.0 mm) out from the edge of the wheel. See Fig. 3-44.

Go directly to the Section 4, *Alignment* to align it before use.

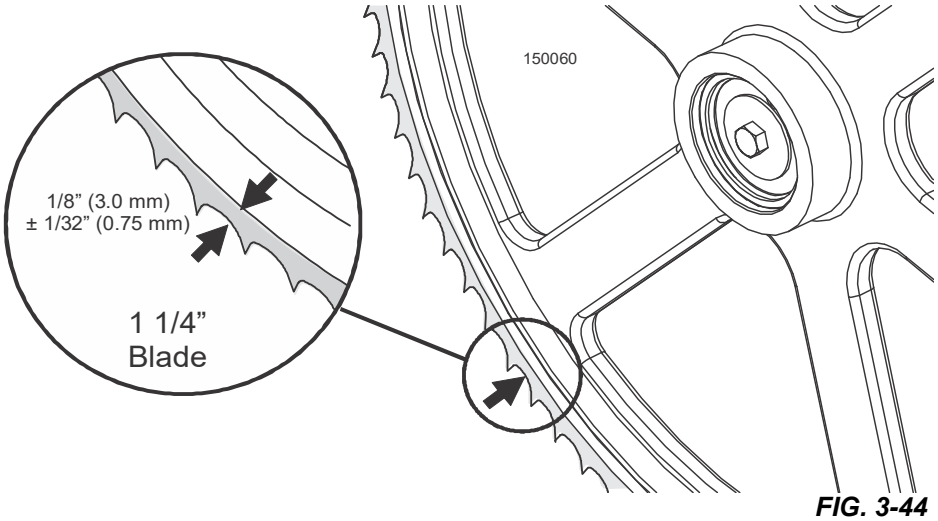


FIG. 3-44

SECTION 4 ALIGNMENT

4.1 Tension the Blade

Use the tension ratchet tool to center the indicator in the notch. See inset of Fig. 4-1.

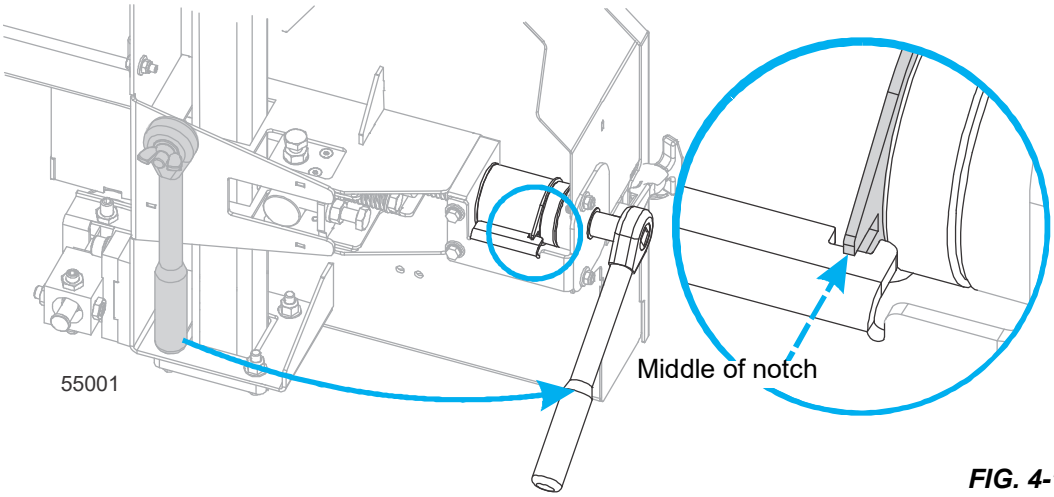


FIG. 4-1

NOTICE Loosen the blade tension after every use to increase blade, wheel, and tensioner life.

4.2 Tracking the Blade

WARNING! Do not spin the blade wheels by hand or spin with the blade covers open. Until the blade is properly tracking, the blade may come off of the wheels.

Ensure the blade is disengaged and all persons are out of the path of the blade before starting the engine or motor.

1. Clear the area.
2. Start the engine/motor.

NOTICE See the appropriate manual supplied with your specific engine/motor configuration for starting and operating instructions.

3. Engage the blade ***momentarily***, rotating the blade until the blade positions itself on the wheels.
4. Disengage the blade.
5. Turn off the engine/motor and check the position of the blade on the blade wheels. See Fig. 4-2

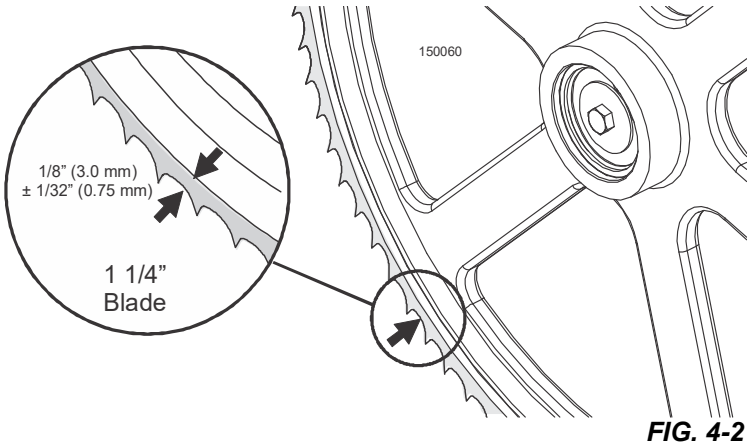


FIG. 4-2

6. Use the cant controls to adjust where the blade travels on the blade wheels.

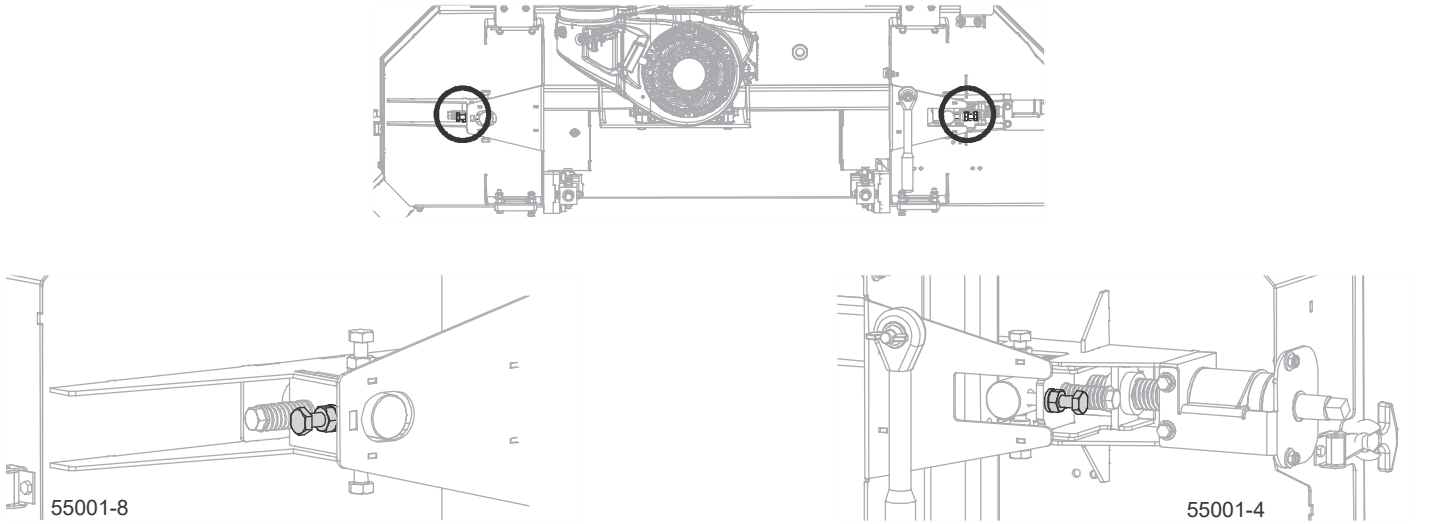


FIG. 4-3

NOTE: If the blade is too far out, back the blade onto the wheel by turning the cant control clockwise. If the blade is too far in, turn the cant control counterclockwise until the gullet of the blade is the correct distance from the front edge of the wheel. See Fig. 4-2 and 4-3.

7. Repeat these steps until the blade tracks properly on the blade wheels.

4.3 Squaring the Sawblade

Both blade wheels must be square to the sawmill bed and parallel to each other in the vertical plane. If the blade wheels are tilted up or down, the blade will not be properly adjusted in relation to the sawmill bed.

1. Attach the alignment tool to the blade near the drive-side blade guide. See Fig. 4-4.

NOTE: Ensure the tool does not rest on a tooth or burr, and is lying flat against the blade.

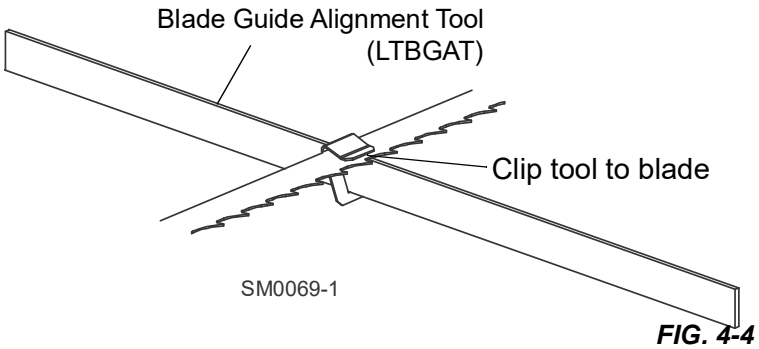


FIG. 4-4

2. Move the carriage so the **front** end of the tool is positioned over the first bed rail.

3. Measure the distance from the bed rail to the bottom edge of the tool.

4. Move the carriage so the **back** end of the tool is positioned over the bed rail.

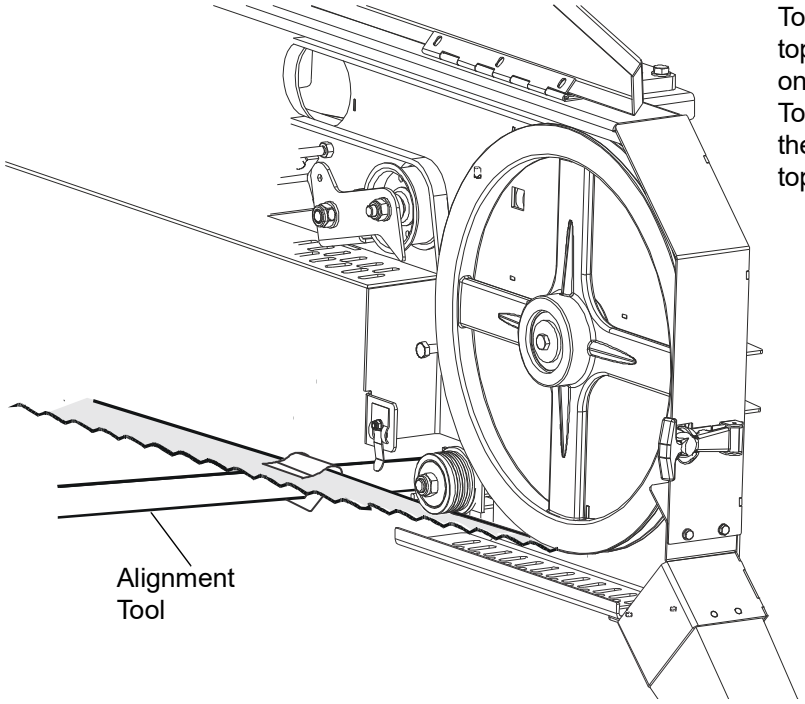
5. Measure the distance from the bed rail to the bottom edge of the tool.

6. If the two measurements differ by more than 1/16" (1.5 mm), adjust the vertical tilt of the drive-side blade wheel.

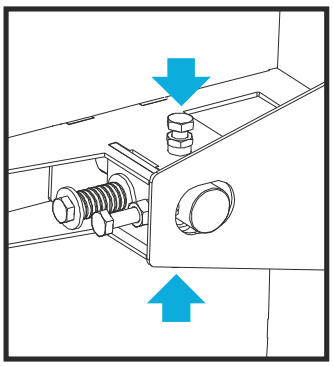
7. Use the screws shown in Fig. 4-5 to adjust the drive blade wheel vertically.

a. Loosen the jam nut on the bottom adjustment screw and tighten the screw.

b. Tighten the top and bottom jam nuts.



To tilt the wheel up, tighten the top screw (loosening the bottom one).
To tilt the wheel down, tighten the bottom screw (loosening the top one).



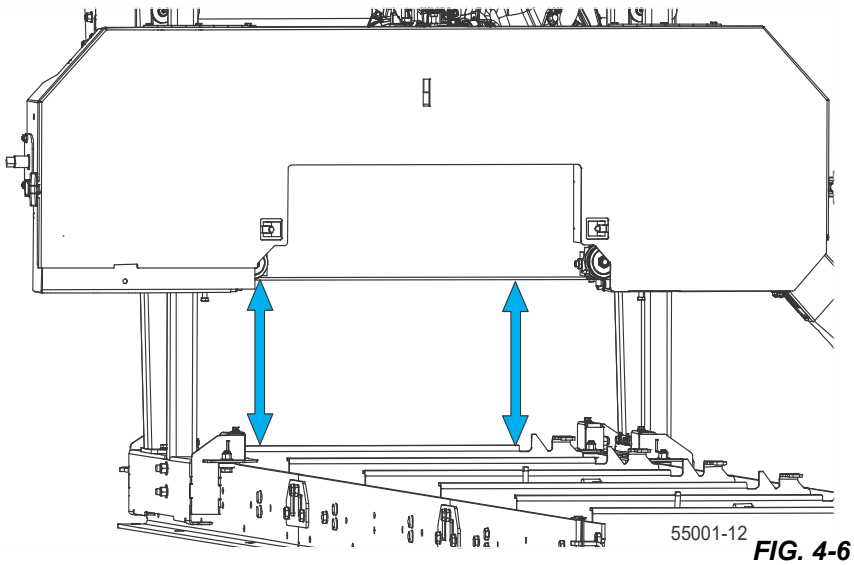
55009P-1

FIG. 4-5

4.4 Saw Head Adjustment

1. Check that the tensioned blade is parallel to a bed rail. See Section 4.3.
2. Raise the sawhead approximately half way.
3. Measure the distance between the blade and the bed rail on both sides of the saw head.
4. Loosen the nylon mast guide.

NOTE: These were shipped loose.



55001-12

FIG. 4-6

5. Move the threaded rod up or down by loosening the lower jam nut and tightening the upper nut **until both measurements are the same**. See Fig. 4-7.

CAUTION! Do not to loosen the upper nut completely as it can cause the saw head to fall.

6. Tighten the mast guides.

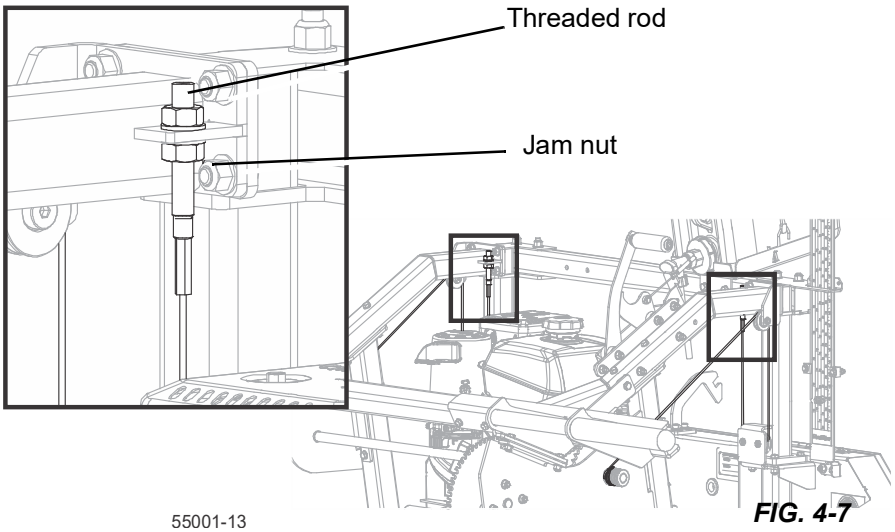


FIG. 4-7

4.5 Blade Deflection

1. Position the saw head so that the blade is above a bed rail.
2. Measure the actual distance with a tape from the top of the rail to the bottom of the blade.
3. Loosen the bottom jam nut and tighten the top jam nut until the blade guide deflects the blade down 1/4” (8mm). See Fig. 4-8.
4. Repeat for the other blade guide.

NOTE: Be sure the blade guard clears the blade. It should be checked with the blade guard all the way in and all the way out.

Use the jam nuts to adjust the roller

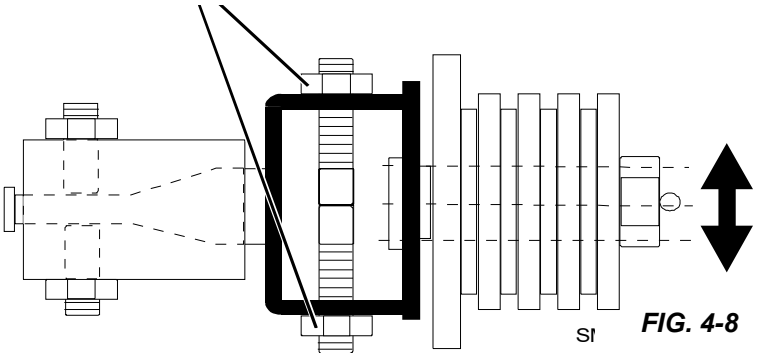


FIG. 4-8

4.6 Sawblade Vertical and Horizontal Alignment

Blade Guide Vertical Tilt Alignment

The blade guides should be adjusted properly in the vertical plane. If the blade guides are tilted vertically, the blade will try to travel in the tilted direction.

Use the Blade Guide Alignment Tool (LTBGAT) to measure the vertical tilt of the blade. See Fig. 4-9.

OUTER BLADE GUIDE

1. **If using optional adjustable blade guide arm**, open the blade guide arm 1/2" (13 mm) from fully open.
2. Clip the alignment tool on the blade.
3. Position the tool close to the outer blade guide assembly.

NOTE: Ensure the tool does not rest on a tooth or burr, and is lying flat against the bottom of the blade.

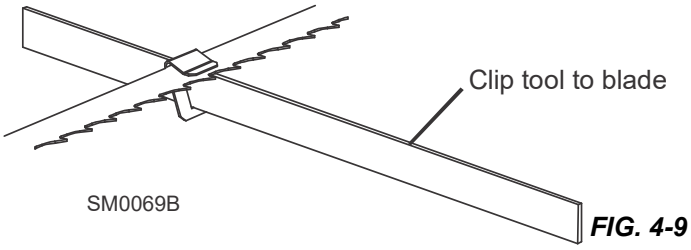


FIG. 4-9

4. Move the carriage so that the **front** end of the tool is positioned above the bed rail.
5. Measure the distance from the bed rail to the bottom edge of the tool.
6. Move the carriage so that the **back** end of the tool is positioned above the bed rail.

7. Measure the distance from the bed rail to the bottom edge of the tool.

If the measurement from the tool to the bed rail is not equal within 1/32" (.75 mm), adjust the vertical tilt of the outer blade guide roller. See Fig. 4-10.

8. Loosen one set screw at the side of the blade guide assembly.

9. Loosen the jam nuts on the top and bottom vertical tilt adjustment screws.

a. To tilt the roller up, loosen the bottom screw and tighten top screw.

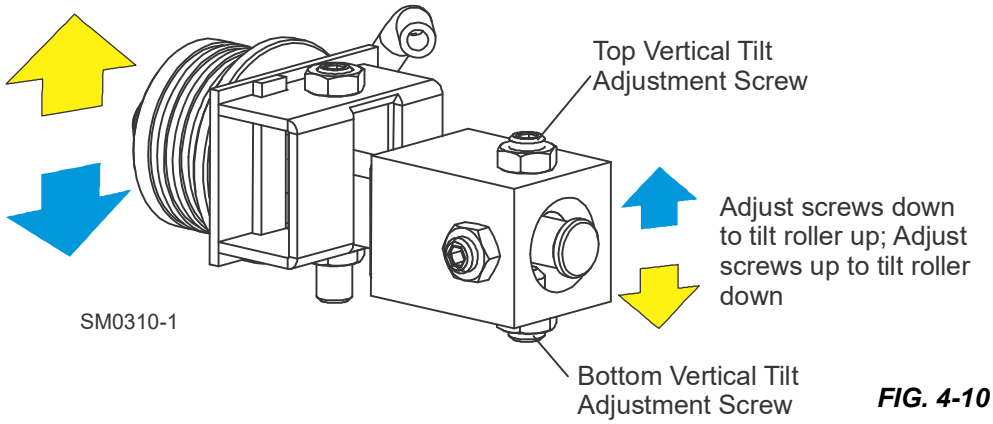


FIG. 4-10

b. To tilt the roller down, loosen the top screw and tighten the bottom screw.

10. Tighten the jam nuts and recheck the tilt of the blade.

INNER BLADE GUIDE

11. Move the blade guide alignment tool close to the inner blade guide roller assembly and repeat the above steps.

12. Adjust the vertical tilt of the inner blade guide, if necessary.

Blade Guide Flange Spacing

Each blade guide must be adjusted so the roller flange is the correct distance from the back edge of the blade. If the flange is too close to or too far from the blade, the sawmill will not cut accurately.

The blade guide rollers should also be slightly cocked. If the moving blade makes contact with the leading flange edge of the roller, momentum may cause the blade to slip over the flange. Contact with the trailing edge would force the blade upward onto the roller.

NOTICE When adjusting blade guide spacing, **loosen the top set screw and one side set screw only.** This will ensure horizontal and vertical tilt adjustments are maintained when the adjustment screws are retightened.

OUTER BLADE GUIDE

1. Ensure that the distance between the flange on the **outer blade guide roller** to the back edge of the blade measures to 1/8” (3.0 mm). See Fig. 4-11.

Adjust the roller back or forward if necessary.

2. Loosen the top screw and one side screw.

3. Gently tap the blade guide forward or backward until properly positioned.

4. Retighten the screws and jam nuts.

INNER BLADE GUIDE

5. Ensure that the distance between the

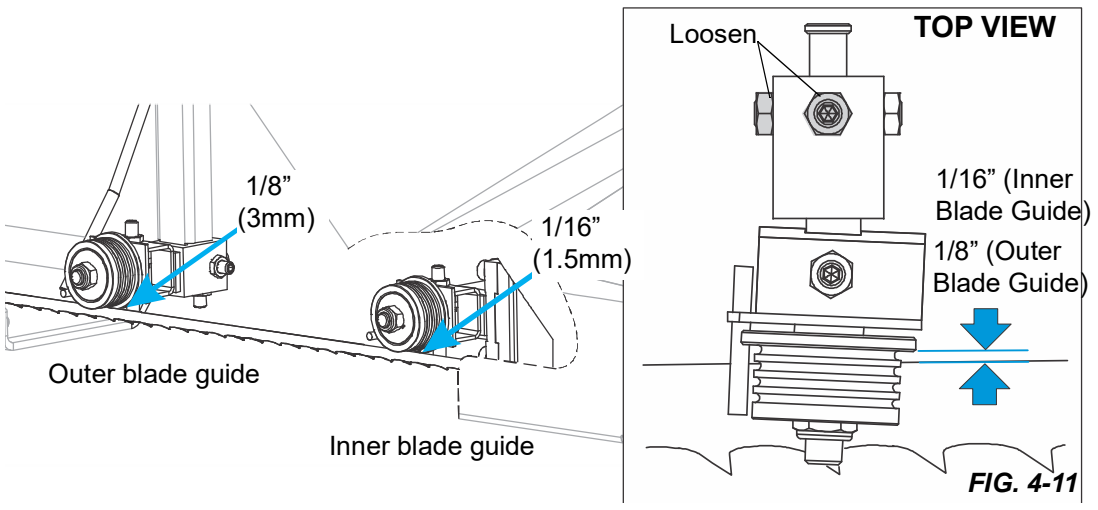


FIG. 4-11

flange on the **inner blade guide roller** to the back edge of the blade measures to 1/16" (1.5 mm). See Figure 4-11.

6. Adjust the roller back or forward, as described above.

7. Check previous alignments and adjust as necessary.

4.7 Blade Height Scale Adjustment

After the entire sawmill has been aligned and all adjustments made, check that the blade height scale indicates the true distance from the blade to the bed rails.

1. Move the saw head so the blade is positioned directly above one of the bed rails.

2. Measure from the bottom edge on a **down-set tooth** of the blade to the top of the bed rail.

3. Loosen the scale bracket mounting bolts and nuts, adjust the scale position until the scale indicator reads the distance measured in the previous step. See Fig. 4-12.

4. Retighten the bracket mounting bolts and nuts.

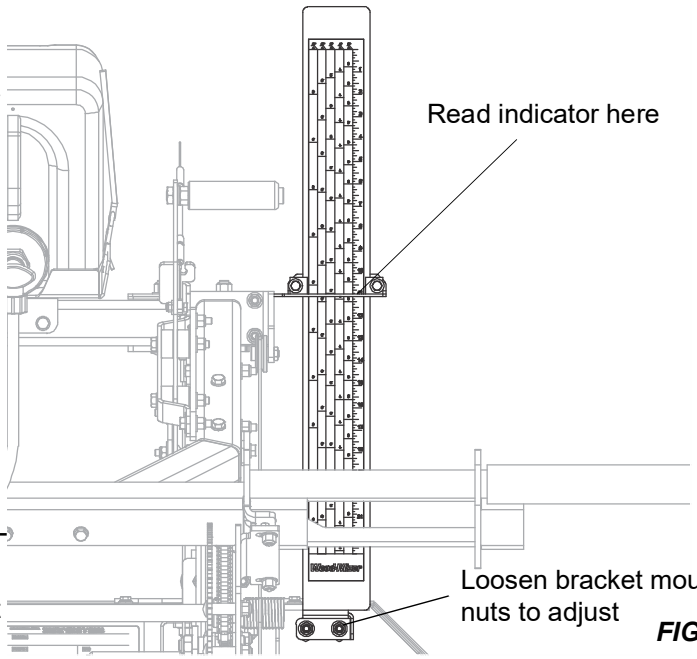


FIG. 4-12

4.8 Engine Drive Belt Adjustment

The drive belt is tensioned properly if the drive pulley is fully engaged when the clutch handle is in the **down** position.

The throttle cable is adjusted properly if the engine runs at full rotational speed (3600 r.p.m.) when the clutch handle is pushed down.

When the clutch handle is released, the engine should return to idle and the drive pulley should stop spinning

1. Adjust the drive belt by increasing or reducing the clutch cable. See Fig. 4-13.

If necessary, adjust the throttle cable connecting the clutch with the engine throttle. .

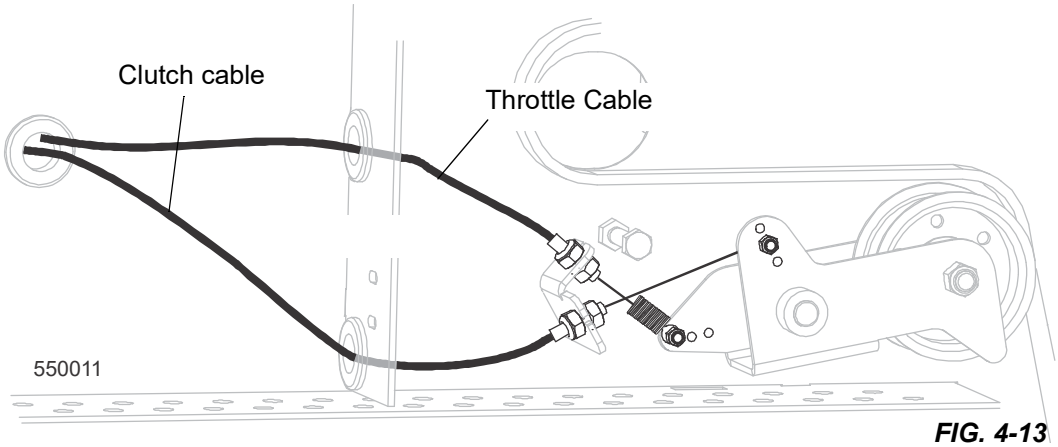


FIG. 4-13

SECTION 5 SAWMILL OPERATION

WARNING! If a blade or drive belt breaks during operation, wait until all moving parts stop completely.

- Ensure ground is firm and level.
- Clear the area.
  - Inspect the site for debris or uneven surfaces that may become a trip hazard.
  - Clear out all non-essential personnel before starting.
  - Ensure that the operator is wearing personal protection equipment and proper work clothing.
- Check the engine oil level. (See the Engine Manual.)
- Optimal operating temperature range is 5°F (-15°C) to 105°F (40°C).
- Ensure all guards and covers are in place and secured/closed.
- Ensure all personal protection equipment is used.
- Gas mills
  - Do not operate in enclose areas.
  - Position operator upwind, away from sawdust and exhaust.

5.1 Starting the Engine/Motor

See the engine/motor manual supplied with your machine for starting and operating instructions.

5.2 Loading, Turning, and Clamping Logs

LOADING A LOG

1. Move the sawhead to the front end of the frame.

   NOTICE Ensure the sawhead is far enough forward on the bed so the log does not hit it, resulting in machine damage.

2. Lower the log clamp completely and move it toward the loading side of the sawmill frame.

   NOTICE Ensure the clamp is far enough down so the log does not hit it, resulting in machine damage.

3. Raise the side supports on the sawmill bed to prevent the log from falling off the side of the bed.
4. Position the log parallel to the sawmill bed.
5. Roll the log onto the sawmill bed.

   NOTE: Use log loading equipment or a ramp to load the log onto the sawmill bed.

6. Position the log against the side supports.

TURNING A LOG

1. Use a cant hook to spin the log against the side supports until it is turned the way you want it for the first cut.

CLAMPING A LOG

1. Position the log clamps against the log, far enough **below your cuts**.
2. Use the clamp handle to secure the log firmly against the side supports.

Make sure the side supports are positioned low enough for the blade to pass over them. If they are not, back the clamp off slightly and push the side supports down until they are positioned below the height of your last cut on a given side of the log.

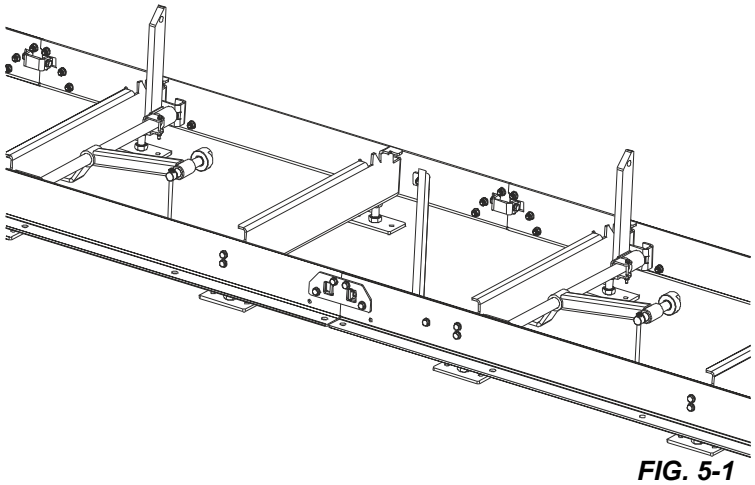


FIG. 5-1

5.3 Level a Log

Shim one end of the log (e.g. using an optional leveling wedge 130005) until the heart of the log measures the same distance from the bed rails at each end of the log.

5.4 Lift Operation

1. Install a blade, if needed, and check for correct blade tension.
2. Use the crank handle to raise or lower the sawhead.

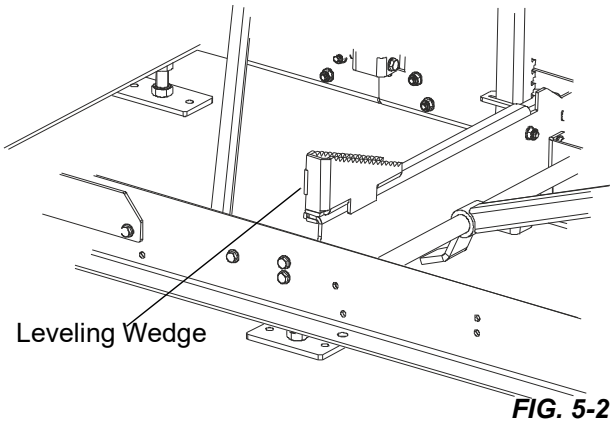


FIG. 5-2

One full turn of the crank handle moves the sawhead 1/2" (12.21 mm). If you rotate the crank handle by one tooth on the disc, the sawhead will be raised/lowered 1/32" (0.18 mm).

CAUTION! Do not force the sawhead above the 20" (50cm) mark or below the 1" (25.4mm) mark. Damage to the lift system may result.

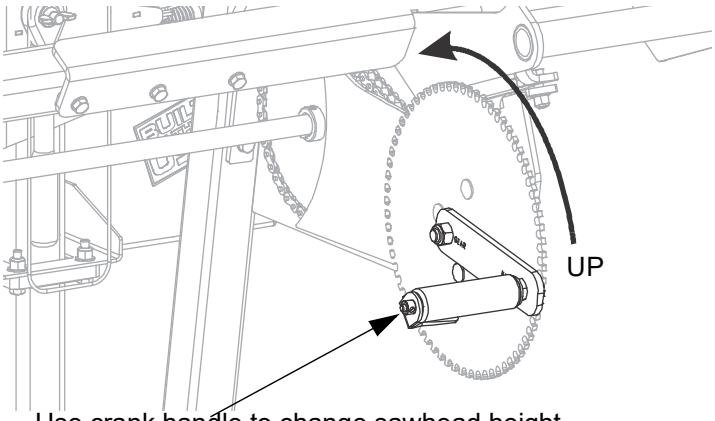


FIG. 5-3

5.5 Gas Engine Operation

1. Clear any loose objects from the area of the blade, engine, and drive belt.
2. Ensure the clamps and side supports are positioned low enough for the blade to pass over them.
3. Ensure the log is clamped securely.
4. Open the fuel supply valve and turn on the ignition by moving the ignition/fuel lever to the "ON" position.
   - **Cold engine:** Close the engine choke by moving the choke lever to the "ON" position. Disengage the tensioner handle (by moving it away from you).
   - **Warm engine:** Disengage the tensioner handle (by moving it away from you). A warm engine usually does not require choke on.
5. Pull the engine starter cord slowly until you feel resistance, then pull the cord quickly to start the engine.
   - **Cold engine:** When the engine starts, slowly open the choke all the way by moving the choke lever to the "OFF" position.

6. Engage the clutch handle by pulling it toward you as shown in Fig.6-4 .

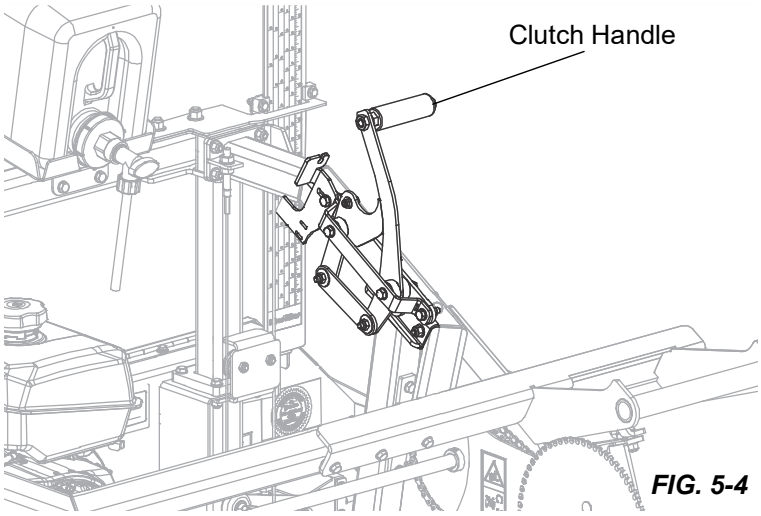


FIG. 5-4

NOTE: Let the engine idle for about 1-3 minutes (depending on ambient temperature) to warm up before starting the sawing operation.

ENGINE SHUTOFF

1. Disengage the tensioner handle (by moving it away from you) to stop the blade.
2. The engine should run with no load for 15 seconds. Stop the engine by moving the ignition/fuel lever to the ”OFF” position.

CAUTION! When stopping the engine, reduce the load slowly. Do not stop the engine suddenly as it may cause the temperature to raise abnormally.

5.6 Feed Operation

The feed operation is performed by pushing the sawhead manually at as steady a speed as manageable. Ensure the sawhead will not hit any bed components while in motion.

1. Feed the blade into the log at a slow speed to decrease the blade from flexing and dipping up or down.
2. Use a slow speed until the whole width of the blade has entered the cut.
3. Increase the feed rate: feed rates vary with width and hardness of the wood.

NOTE: Over-feeding results in blade and drive belt wear, and also produces a wavy cut.

CAUTION! Stop the blade when returning the sawhead to prevent the blade from being pulled off and to increase the life of the blade.

5.7 Cutting The Log

1. Position the log and clamp firmly.
2. Move the sawhead to position the blade close to the end of the log.
3. Use the blade height scale to determine where to make your first cut.
   - **a.** Set the blade to the desired height with the lift crank.
   - **b.** Ensure that the blade will clear all side supports and the clamps.
   - **c.** Adjust the outer blade guide to clear the widest section of the log by moving the blade guide arm knob.
4. Engage the clutch to start the blade spinning.
5. Start the water lube if necessary to prevent sap buildup on the blade.
6. Feed the blade into the log slowly.
7. When the teeth exit the end of the log, disengage the clutch and remove the cut slab.
8. Return the mast to the front of the mill.
9. Repeat until the first side of the log is cut as desired.

10. Set aside the usable flitches (boards with bark on one or both sides) to edge them later.

11. Remove the wedge if it was used.

12. Remove the clamps and turn the log 90 or 180 degrees.

13. Ensure the flat on the log is placed flat against side supports (if turned 90 degrees) or it is flat on bed rails.

> **NOTE:** If the log was turned 90 degrees and you are using the wedge to compensate for taper in the log, use the wedge again on the second side of the log until the heart is parallel with the bed.

14. Repeat the steps used to cut the first side of the log until the log is square. Cut boards from the remaining cant by adjusting the blade height for the thickness of boards that you want.

> **NOTE:** The blade cuts a 1/16 - 1/8" (1.6-3.2 mm) wide kerf. If you want 1" (25.4 mm) thick boards, lower the mast 1 1/16 - 1 1/8" (27-28.6 mm) for each board.

5.8 Edging

1. Raise the side supports to 1/2 the height of the flitches, or the boards that need to be edged.

2. Stack the flitches on edge against the side supports.

3. Clamp the flitches against the side supports halfway up the flitch height.

Wider flitches should be placed to the clamp side. When they are edged, flip them over to edge the second side without disturbing the other flitches or without having to pull them from the middle of the stack.

4. Adjust the blade height to edge a few of the widest boards.

5. Loosen the clamps and turn the edged boards over to edge the other side.

6. Repeat steps 2-4.

7. Loosen the clamps and remove the boards that have good clean edges on both sides. Clamp the remaining flitches and repeat steps 2-5.

5.9 Blade Height Scale

THE INCH SCALE

The horizontal line on the blade height indicator shows how many inches the bottom of the blade is above the bed of the mill. If you know the height of your blade at each cut, you can determine the thickness of lumber you are sawing.

Example: You want to cut 1" (25 mm) random width boards from a log.

a. Position the blade for the first cut.

b. Move the mast to an even measurement on the inch scale.

c. Make a trim cut. Return the mast for the second cut and lower it 1 1/8" (29 mm) below the original measurement. (The extra 1/8" (3 mm) allows for saw kerf and shrinkage of the lumber.)

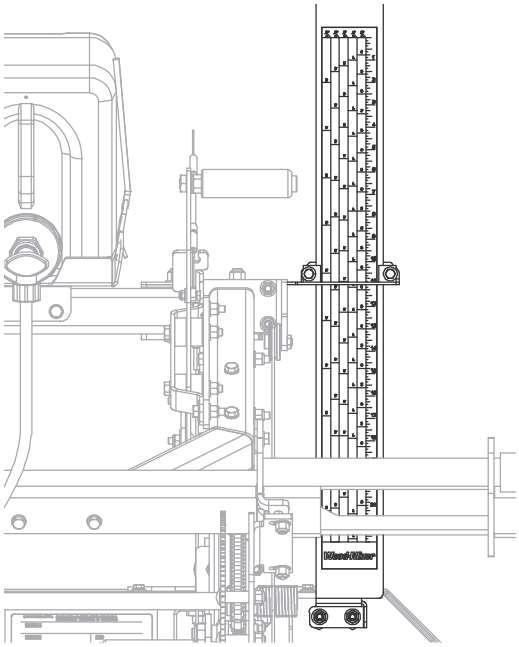


FIG. 5-5

THE QUARTER SCALE

The quarter scale has four sets of marks. Each set represents a specific lumber thickness. Saw kerf and shrinkage allowance are included, but actual board thickness will vary slightly depending on blade thickness and tooth set

To use the quarter scale, look at the blade height indicator.

Position the quarter scale over the inch scale. Align one of the quarter scale marks with the horizontal line on the indicator.

Make a trim cut. When you return the mast for a second cut, lower the mast to the next mark on the scale. This mark shows where the blade should be positioned to cut a certain thickness of lumber, without having to measure on the inch scale.

Standard Quarter Scale	
Scale	**Actual Board Thickness**
3/4	3/4” (19 mm)
4/4	1" (25 mm)
5/4	1 1/4" (32 mm)
6/4	1 1/2" (38 mm)
8/4	2" (51 mm)

TABLE 5-1

Example: You want to cut 1" (25 mm) (4/4) random width boards from a log.

a. Position the blade for the first cut.

b. Position the magnetic quarter scale so a 4/4 mark is aligned with the line on the indicator.

c. Make a trim cut.

d. Return the mast for the second cut.

e. Lower the blade so the indicator is aligned with the next 4/4 mark on the quarter scale.

f. Turn the log 90 degrees and repeat.

5.10 Water Lube Operation

The Water Lube System keeps the blade clean. Water flows from a 5-gallon (18.9 liter) bottle through a hose to the blade guide where the blade enters the log. A valve in the bottle cap controls the amount of water flow. Normal flow is 1-2 gallons (3.8-7.6 liters) per hour.

Not all types of wood require the use of the Water Lube System. When it is needed, use just enough water to keep the blade clean. This saves water, and lowers the risk of staining the boards with water.

When changing blades, let the blade spin with water running on it for about 15 seconds before removing it. This will clean the blade of sap buildup. Dry blade with a rag before storing or sharpening.

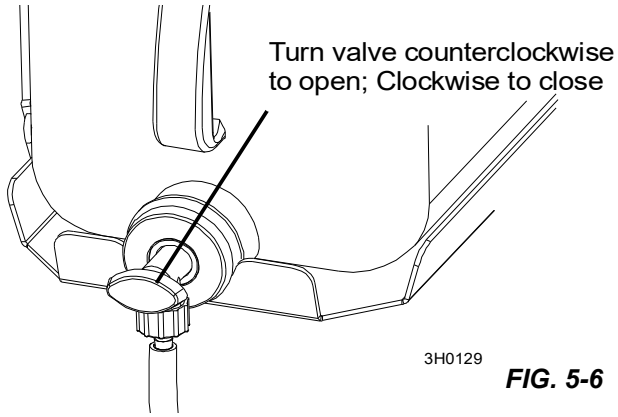


FIG. 5-6

For lubrication benefits, add 12oz. (0.35L) of Lube Additive (part number **ADD-1**) to 5 gallons (18.9 liters) of water. Lube Additive enables some previously impossible timbers to be cut by significantly reducing resin buildup on the blade. It helps to reduce heat buildup, wavy cuts, and blade noise. This biodegradable and environmentally friendly pre-mix includes a water softener additive, so it works with hard water.

WARNING! Do not use flammable fuels or liquids such as diesel fuel. Failure to follow this can damage the equipment and may result in serious injury or death.

Use ONLY water and Lube Additive with the water lube accessory. If these types of liquids are necessary to clean the blade, remove it and clean with a rag.

If you are sawing in freezing temperatures, remove the water lube bottle from the sawmill when done sawing and store it in a warm place. Blow any remaining water from the water lube hose.

5.11 Transporting the Sawmill

WARNING! Keep all persons out of the path of the sawhead while loading and unloading the sawmill. Failure to do so may result in serious injury or death.

The assembled sawmill can be transported in an appropriately equipped pickup truck.

1. Move the sawhead to one of the segments equipped with the stop block and secure it in place with the locking pin.
2. Divide the bed frame into the segments.
3. Slide the bed frame segments into the truck.
4. Use a forklift to load the sawhead with the mast and bed segment into the truck and secure it with transport straps.

SECTION 6 MAINTENANCE

WARNING! Turn off the motor/engine and wait until all parts have stopped moving before removing any cover or guard. Failure to do so may result in serious injury or death.

6.1 Wear Life

This chart lists estimated life expectancy of common replacement parts if proper maintenance and operation procedures are followed. Actual part life may vary significantly.

Part Description	Estimated Life
Blade Wheel Belts	400 hours
Blade Guide Rollers	1000 hours
Drive Belt	400 hours

6.2 Blade Guides

1. Check the rollers for performance and wear **every blade change**.
2. Replace any rollers which are not clean, not spinning freely, or have worn smooth or misshaped.

6.3 Sawdust removal

WARNING! Clean sawdust **after every shift** from all guards, vents, housings, or any area where sawdust may gather. Failure to do so may result in fire, causing death or serious injury.

1. Inspect the sawdust chute for damage.

NOTICE The steel fingers prevent objects from becoming a projectile and exiting the sawdust chute. Ensure that they can serve their purpose.

2. Remove sawdust buildup from lift pulleys as necessary.

6.4 General Maintenance

Every 8 Hours of Sawmill Operation (Daily)

- Check the engine oil level. (See the Engine Manual.)
- Clean the track rollers, mast carriages and track wipers.
- After you have finished using the sawmill, lower the sawhead all the way down so that the sawhead rests on the stop bolts and the lift cables remain tensioned.
- Inspect the sawmill parts for damage.
- Open the blade housing cover and brush any sawdust buildup from the housing, cover, and V-belts.

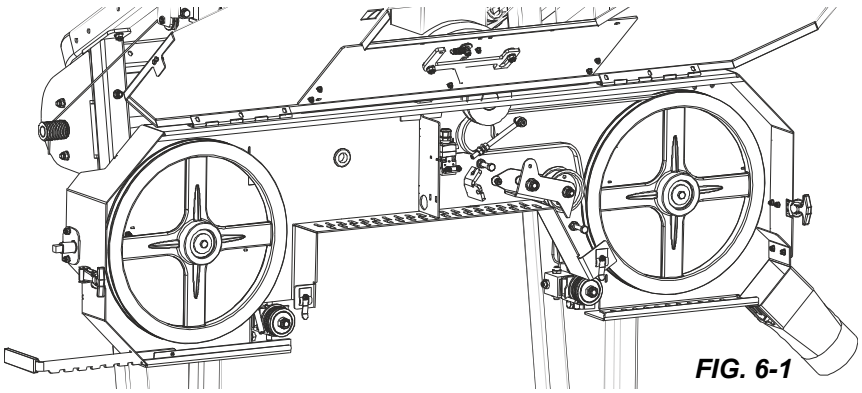


FIG. 6-1

Every 160 Hours of Sawmill Operation (Monthly)

CAUTION!

Apply white lithium grease to the lift cables on both sides of the sawhead.

Check if the lift cables are in good condition. If either lift cable is damaged, immediately replace it with a new one.

- Be sure the lift crank handle is lubricated. When applying the grease or oil, be careful not to spray it onto the friction pad.

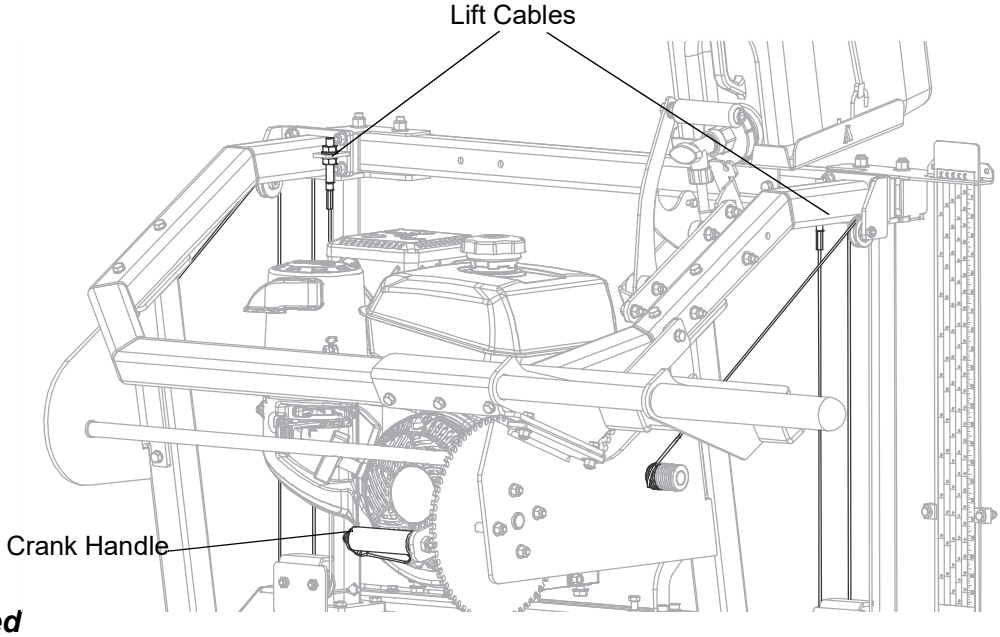


FIG. 6-2

As Needed

Properly maintaining the mast track surfaces and the track rollers is critical in preventing corrosion that can cause pitting and scaling on the rail surfaces. Pitted and scaled surfaces can, in turn, cause rough cuts or jerky forward/backward movement of the sawhead.

CAUTION!

Keep mast track surfaces free of rust. Formation of rust on the mast track surfaces can cause rapid deterioration of these surfaces.

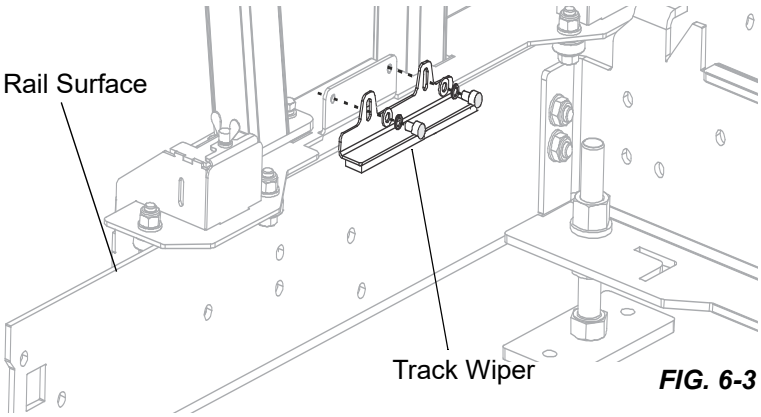


FIG. 6-3

1. Clean track rails to remove any sawdust and sap buildup every eight hours of operation.

Use a light-grade sandpaper or emery cloth to sand off any rust or other adhering particles from the rails

2. Lubricate the rails by wiping them with Dexron III ATF transmission fluid.
3. Remove sawdust from the track roller housings and brush any sawdust buildup from the housings every twenty-five hours of operation.
4. Make sure the track wipers touch the track surfaces and are free of sawdust buildup.

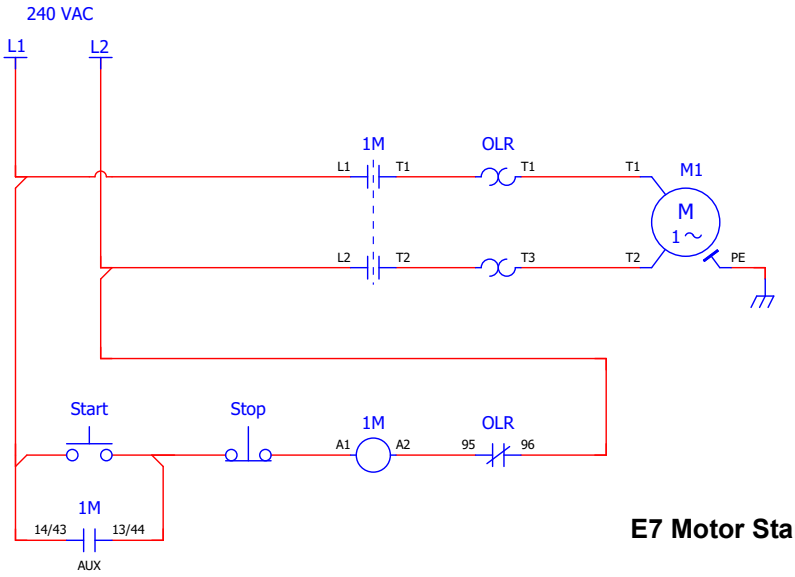
6.5 Motor/Engine Maintenance

Refer to the motor/engine manufacturer's manual for maintenance intervals and procedures regarding the motor/engine.

6.6 Troubleshooting

WARNING! Before performing any service to this machine, turn off the engine. Moving sawmill parts can cause serious injury or death.

Electrical Wiring Diagram



E7 Motor Starter

Mechanical issues

PROBLEM	CAUSE	SOLUTION
Blades dull quickly	Dirty logs	Clean or debark logs, especially on entry side of the cut.
	When grinding teeth, heating too much and causing teeth to soften	Grind just enough metal to restore sharpness to the teeth. Use water/coolant while sharpening the blade.
	Poor sharpening techniques	Make sure the tips of teeth are sharpened properly.
Blades break prematurely	Rubber belts on blade wheels worn to a point that blade contacts metal pulley - look for shiny spots on edges of wheels.	Replace the blade wheel belts.
	Blade tension too tight	Tension blade to recommended specifications(*See "Tension the Blade."*).
Blade does not track right on wheels	Blade wheel improperly adjusted	Readjust. (*See "Tracking the Blade."*)
	Flat/worn blade wheel belts	Replace the belts.
Drive Belts Wear Prematurely or Jump	Engine/motor and drive pulleys out of alignment	Align the pulleys.

PROBLEM	CAUSE	SOLUTION
Boards thick or thin on ends or in the middle of board	Stress in log which causes log to not lay flat on bed.	After log has been squared, take equal cuts off opposing sides. Take a board off the top. Turn the log 180 degrees. Take a board off. Repeat, keeping the heart in the middle of the cant, and making it your last cut.
	Engine not reaching full throttle	Adjust throttle cable.
	Not enough blade tension	Adjust clutch cable for more tension.
	Incorrect tooth set	Resharpen and reset blade.
	Bed rails misaligned	Realign the bed.
Height adjustment jumps or stutters when moving up or down	Lift cable improperly adjusted	Adjust the lift cable.
	Vertical wear pads are too tight.	Adjust pads.
	Lift cable too loose	Replace/adjust lift cable.
Lumber is not square	Blade not parallel to bed rails	Adjust bed rails.
	Sawdust or bark between log/cant and bed	Remove particles.
	Tooth set problem	Resharpen and reset blade.
Sawdust builds up on track	Track is sticky	Clean track and apply silicone spray.
	Worn wipers	Adjust wipers to firmer contact track or replace them.
Wavy cuts	Excessive feed	Reduce feed speed.
	Improperly sharpened blade (This will be the problem 99% of the time!)	Resharpen blade.
	Blade guides improperly adjusted	Adjust blade guides.
	Sap buildup on blade, belts or blade wheels	Use Water Lube.
	Dull blade	Sharpen or replace.
	Not enough blade tension	Adjust clutch cable for more tension.
	Tooth set problem	Resharpen and reset blade.

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