

# Wood-Mizer<sup>®</sup> Sawmill

## Remote Operation

LT70 AH Remote

rev. A2.02

## Operator's Manual



This manual is to replace the related appropriate information from the non-remote sawmill Operator's Manual

*Form #676*

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## **SECTION 1 REMOTE OPERATION**

The Remote Option provides remote operation for all sawmill functions from a single location at the front of the sawmill. The option includes all cables with traveling guide chain, a remote electrical power junction box, a front-mounted sawmill control box, and a remote clutch mechanism with switch to engage the blade from the remote location.


The Remote Option also includes Wood-Mizer's Simple Setworks system which allows automatic, incremental up/down movement of the cutting head.

# 1 Remote Operation

## Preparing for Remote Operation

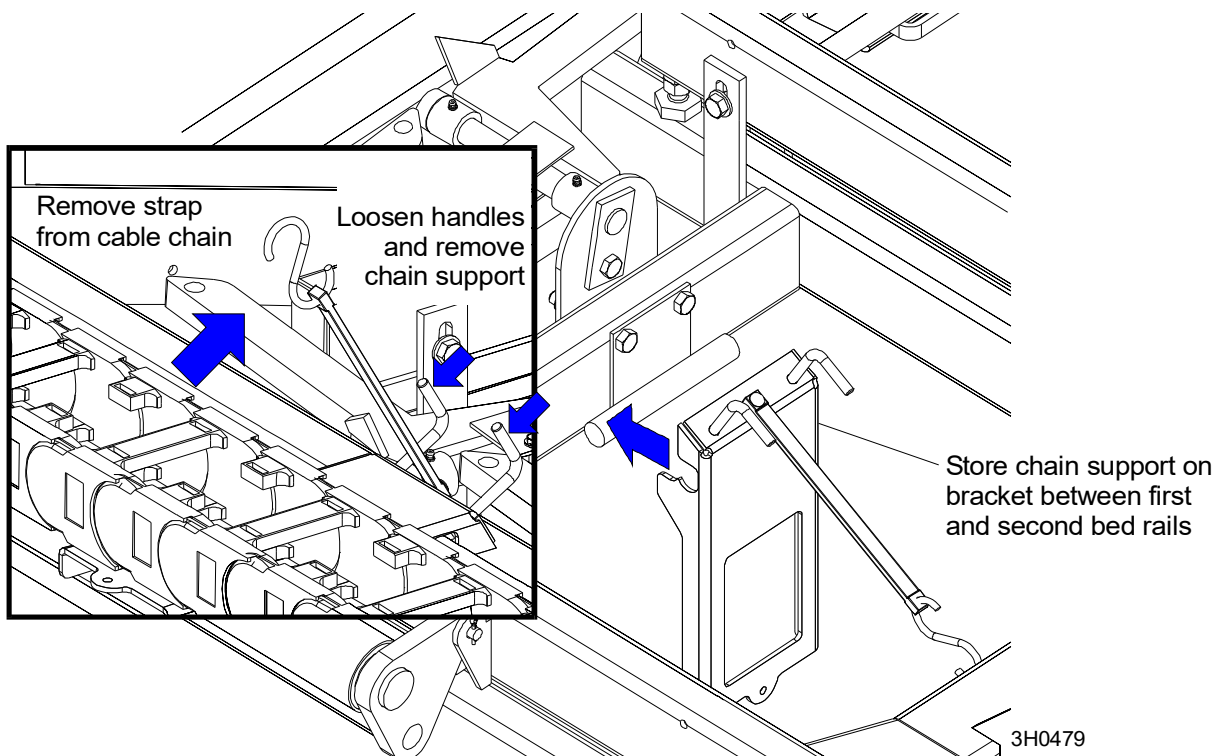
### 1.1 Preparing for Remote Operation

Set up the sawmill as instructed in your sawmill operator's manual.

 **CAUTION!** Moving the saw carriage before removing the cable chain support may cause damage to the chain. Also, moving the saw carriage when the chain is frozen can damage the chain. [See Section 1.4](#) for recommended chain deicing procedure.

**See Figure 1-1.** Before moving the saw carriage, remove the cable chain support bracket.

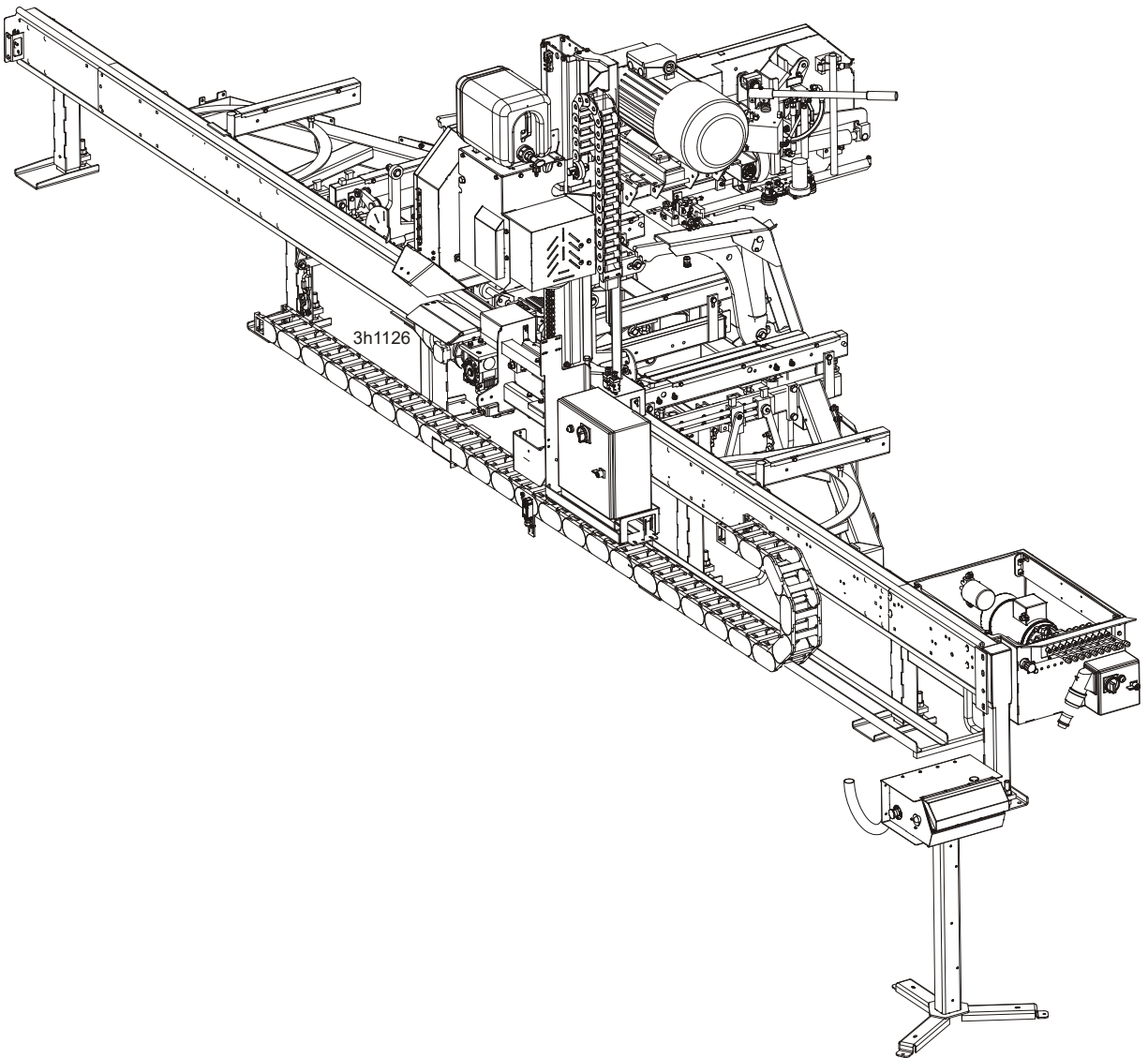
1. Disengage the rubber strap holding the cable chain to the support bracket.
2. Loosen the handles and remove the support bracket from the sawmill track rail.
3. Place the support bracket on the storage bracket located on the sawmill frame between the first and second bed rails. Tighten the handles to secure the support bracket to the storage bracket and secure the rubber strap in the bracket hole.



**FIG. 1-1**

Before operating the controls on the control box, you will need to pivot the control from its travel position to the operating position.

See Figure 1-2.



**FIG. 1-2**

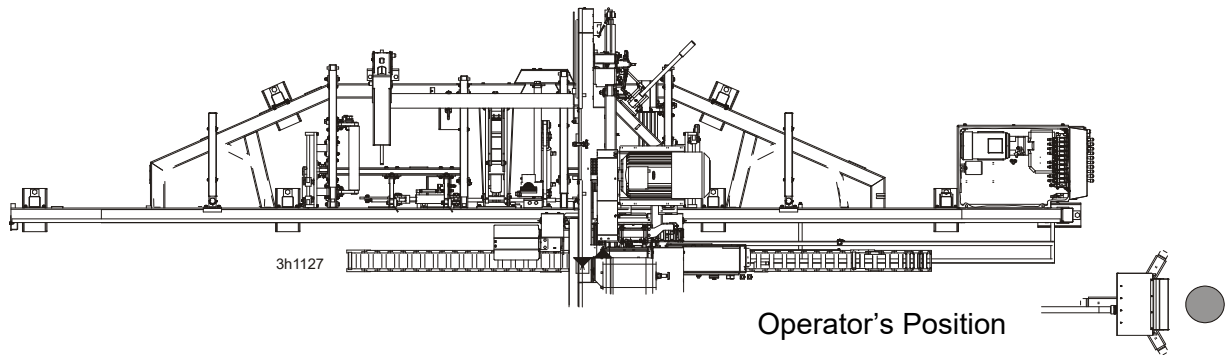
1. Turn the control pivot locking handle counterclockwise.
2. Pivot the control assembly 180 degrees so the controls face the front of the sawmill.
3. Turn the control pivot locking handle clockwise to lock the control in place. The lock is

# 1 Remote Operation

## *Preparing for Remote Operation*

designed to loosely hold the control in the operating position. The control can still be pivoted as needed during the sawing operation. The lock will hold the control firmly in the traveling position during towing.

See Figure 1-3.



**FIG. 1-3**

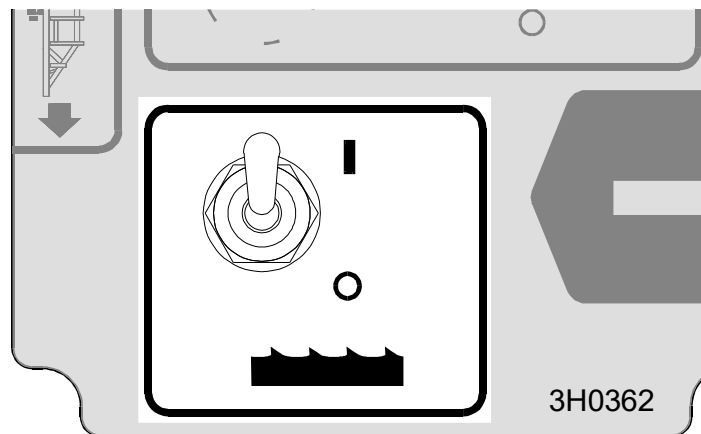
## 1.2 Remote Sawmill Operation



See **Figure 1-4**. All sawmill controls operate exactly as described in your sawmill operator's manual except the clutch/brake. Instead of pulling a handle to engage the blade, push the toggle switch on the control panel up. Hold the switch up until the clutch motor stops completely. The remote clutch mechanism will disengage the brake, rev the motor to full throttle, and start the blade spinning.



**DANGER!** Keep all persons out of the path of moving equipment and logs when operating sawmill or loading and turning logs. Failure to do so will result in serious injury.



**FIG. 1-4**

To stop the blade and engage the blade brake, push the toggle switch down. This will also return the engine to idle.

**NOTE:** Be sure the toggle switch stays in the up or down position. The boot on the switch may spring the switch back to neutral. You may need to hold the switch in position until the remote clutch motor completes its cycle.

# 1 Remote Operation

## *Preparing The Remote Option For Towing*

### 1.3 Preparing The Remote Option For Towing



1. After placing the saw head in its traveling position, engage the remote clutch switch to engage the drive belts. This will keep the engine from bouncing while towing the sawmill.
2. Turn the locking handle counterclockwise and pivot the control box to its traveling position. Turn the locking knob clockwise to secure the control box in position.
3. Place the chain support bracket under the cable chain, located between the first and second bed rails.

See Figure 1-5.

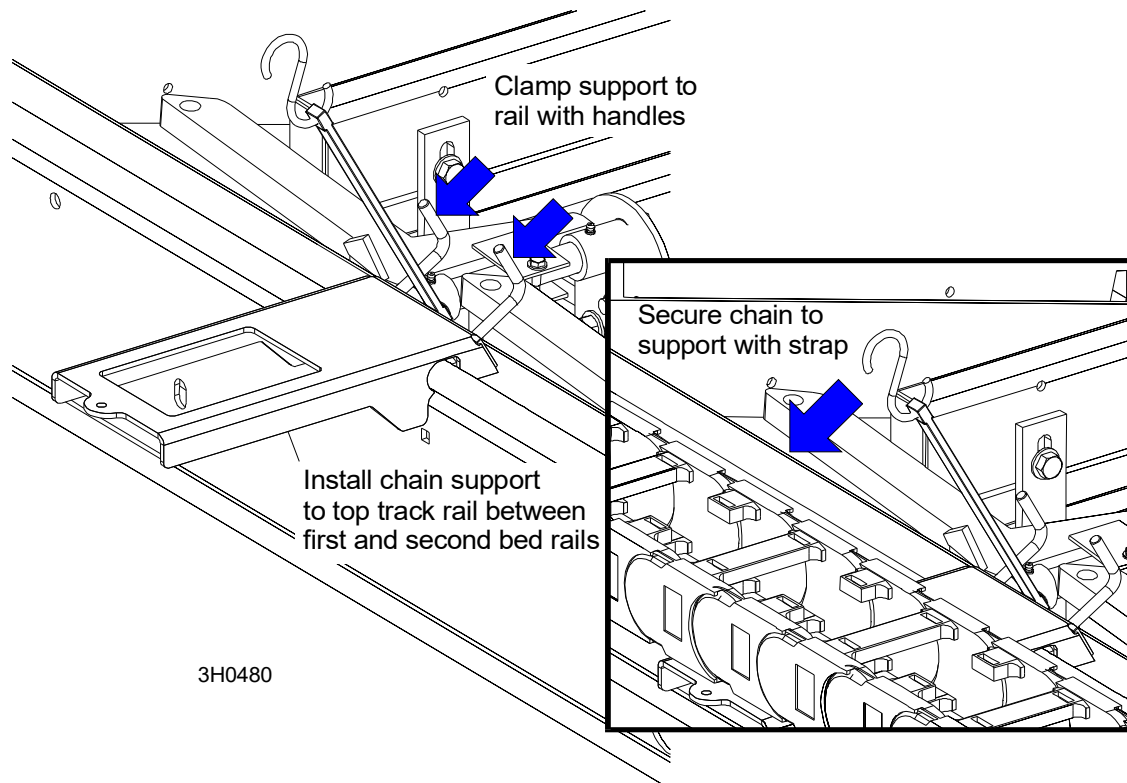


FIG. 1-5

4. Tighten the support handles and secure the chain to the support with the rubber strap.



## 1.4 Cold Weather Operation

If the sawmill is operated or stored in freezing conditions, the cable chain may freeze. Before moving the saw carriage, check to see if the chain is frozen:

1. Remove the chain support bracket ([See Section 1.1](#)).
2. Pull the chain up at a few locations to determine if it moves freely. If you detect the chain is frozen, proceed to the recommended deicing procedure below.
3. If the chain seems to move freely by hand, use the power feed to slowly move the saw carriage toward the rear of the mill. Since the saw carriage returns only at full speed, moving the saw carriage forward will allow you to slowly engage the cable chain to be sure it is not frozen. If you detect the chain is frozen, proceed to the recommended deicing procedure below.

### ***Recommended Cable Chain deicing Procedure***

To de-ice the chain, apply a salt solution (preferably calcium chloride and water) to the entire length of the chain. Allow the solution to sit until the chain can move freely. The strength of the solution and time required to free the chain will depend on how cold the weather is and how much ice has accumulated in the chain.

Before storing the sawmill after using the salt solution, be sure to rinse the salt from any metal portions of the sawmill frame to prevent corrosion. Refer to the recommended cold-weather storage procedure below to prevent the chain from freezing.

### ***Recommended Cable Chain Ice Prevention Procedure***

Before storing the sawmill in freezing temperatures, apply a 50/50 solution of environmentally safe antifreeze (Sierra) and water to the cable chain. A garden sprayer can be used to apply the solution.

# 1 Remote Operation

## Hydraulic Control Operation

### 1.5 Hydraulic Control Operation

The hydraulic control levers become operational when the contacts at the bottom of the carriage touch the power strip on the frame tube. The hydraulic control levers will only work when the cutting head is close enough to the front end of the mill to touch the power strip.

**See Figure 1-6.** Hydraulic units have eleven control levers to load, clamp, turn and level logs.

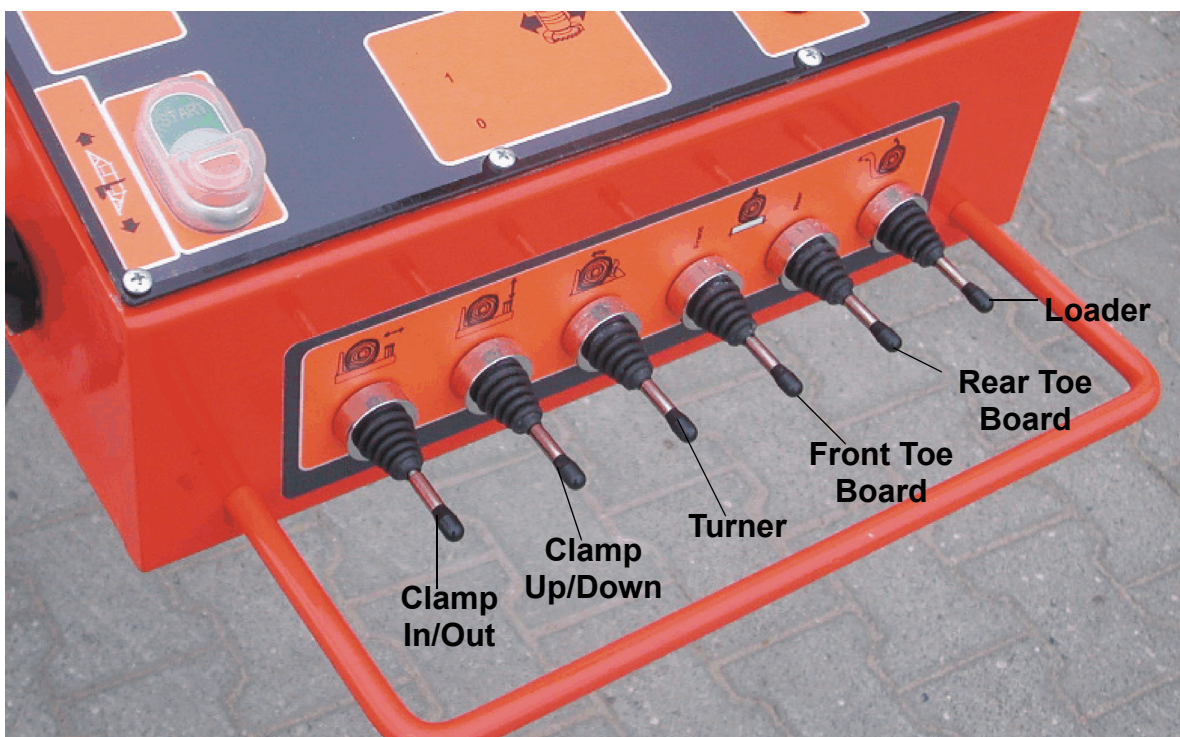


FIG. 1-6

Use the hydraulic control levers to get the mill ready to load a log.

**DANGER!** Keep all persons out of the path of moving equipment and logs when operating sawmill or loading and turning logs. Failure to do so will result in serious injury.

**CAUTION!** Always make sure the engine is running before operating the hydraulic controls. Operating the controls without the engine running will result in power drainage from the battery.

1. Move the clamp out and down so it will not get in the way of logs being loaded onto the bed.



Lower the clamp in/out lever to move the clamp out toward the loading side of the sawmill.



Lower the clamp up/down lever to lower the clamp below bed level.

2. Raise the log loader lever to extend the legs of the log loader out as far as they will go.



3. The chain securing the log loading arm to the bed frame will be tight. Manually push the log loader arm until there is slack in the chain.

4. Unchain the loading arm from the bed frame.

5. Lower the turner lever to completely lower the turner arm. Notice that after the turner arm is all the way down, the side support braces will begin to lower. Release the turner lever after the turner arm is lowered, but before the side supports begin to lower. This stops the log being loaded from damaging the turner and/or falling off the side of the sawmill.



6. When raising the turner lever, the side supports rise first. After reaching a fully vertical position, the turner arm will engage and start to rise.

7. Manually lower the log loader so it rests on the ground.



**CAUTION!** Be careful when manually lowering the log loader. Do not drop the loader onto the ground or perform any action which might break the velocity fuse valves on the loader cylinders. These valves control hydraulic flow and are necessary to prevent the loading arm from collapsing during use.

8. Lower the loader lever to lower the loading arm as far as it will go. Logs must be rolled onto the loading arms one at a time.



9. The front, middle and rear toe boards should be below bed level. Once a tapered log has been loaded, the front or rear end of the log may be lifted to parallel the heart of the log to the path of the blade.



The front toe board is raised by lifting the front toe board lever up. The middle toe board is raised by lifting the middle toe board lever up. The rear toe board is raised by lifting the rear toe board lever up. Once a flat has been made and the log is ready to be turned, push the appropriate toe board lever down to lower either toe board until it falls below the level of the bed.

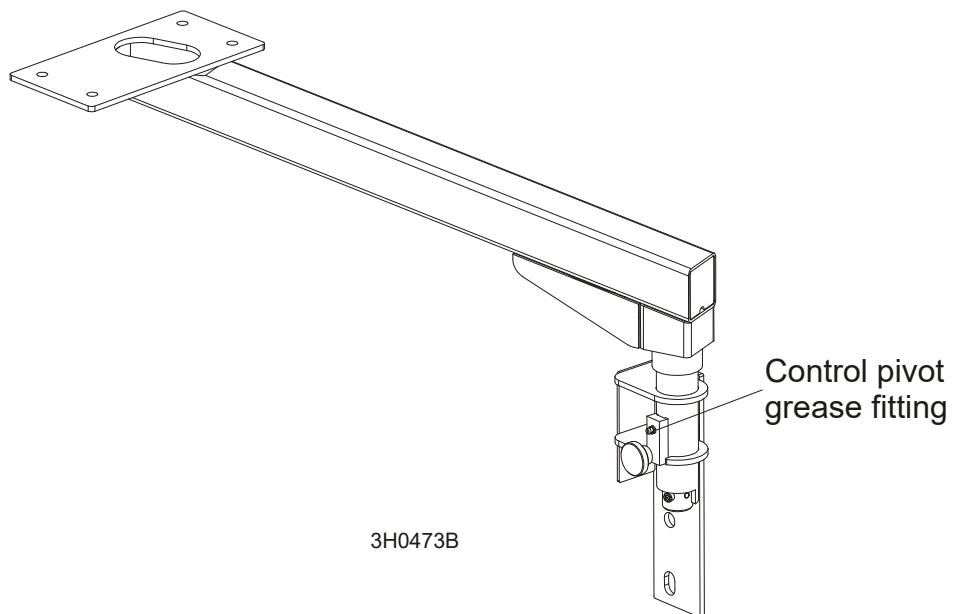
## SECTION 2 MAINTENANCE & TROUBLESHOOTING

### 2.1 Control Pivot Lubrication



Lubricate the control pivot as necessary to allow the control box to pivot freely. Apply a NLGI No. 2 grade lithium grease to the grease fitting supplied above the pivot locking handle.

See Figure 2-1.



**FIG. 2-1**

## 2.2 Clean The Cable Chain & Support Tray

As you operate the sawmill, be aware of any pieces of debris that may fall on the cable chain and/or support tray. Stop the sawmill and immediately remove any pieces of wood, bark or anything else that may divert the path of the chain or cause it to jam.

Clean the cable chain and support track of sawdust buildup every eight hours of operation. Blow or brush the sawdust from the track and tray and remove any accumulated sawdust that is high enough to contact the chain/tray.

## 2.3 Cable Chain Repair

If a component of the cable chain breaks or is missing, replace the component.



**CAUTION!** Do not operate the remote sawmill if the cable chain is damaged or components of the chain are missing. The chain components are interlocking and continued operation will cause more damage to the chain.

**See Figure 2-2.** To disassemble the chain use a screwdriver to pry the connecting links apart. After removing the connecting links, the side plates can be disassembled by pulling them apart at an angle.

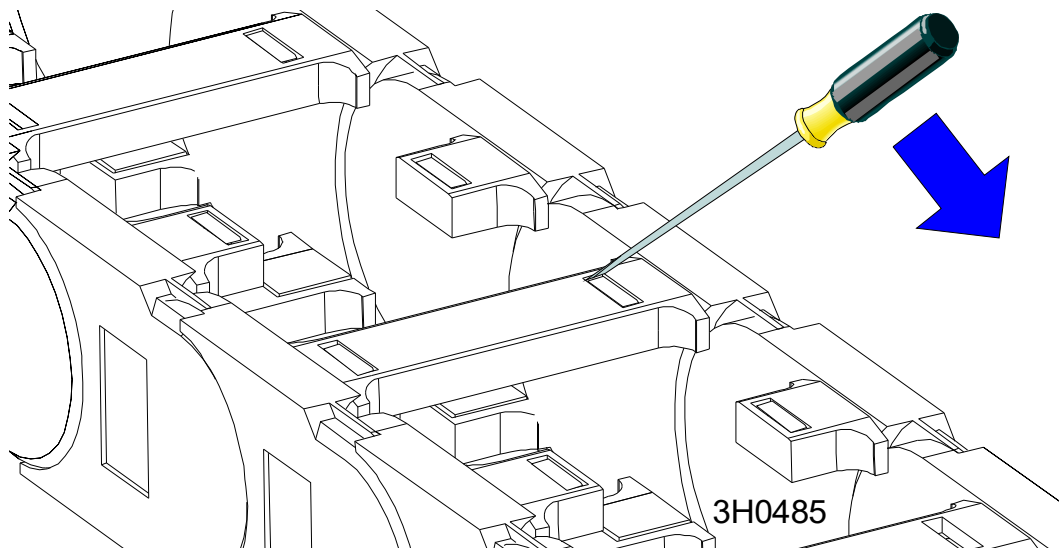


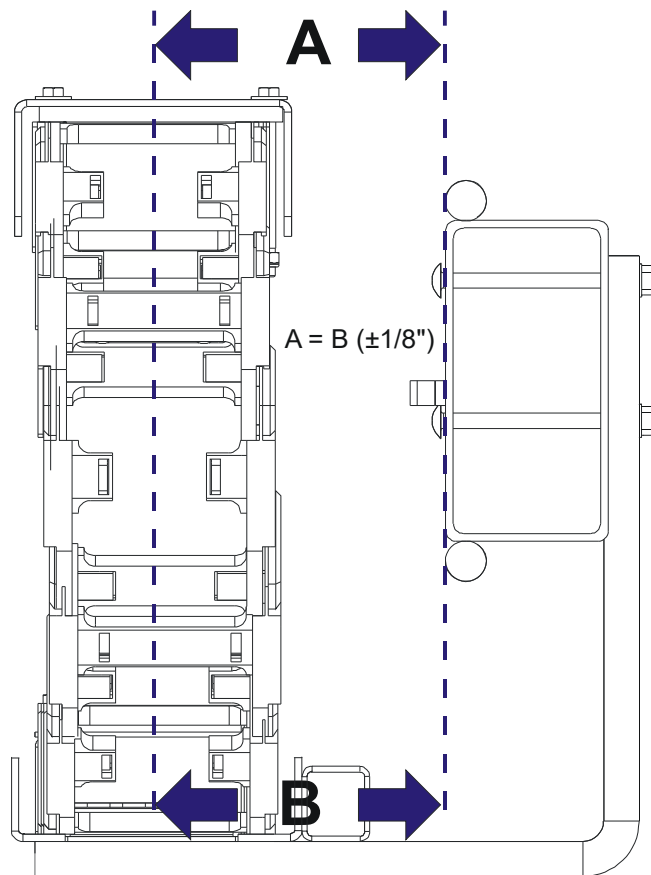
FIG. 2-2

## 2.4 Cable Chain And Support Tray Alignment

During each sawmill setup, check the alignment of the cable chain and the support tray:

1. The chain should travel in a straight line. Traveling at an angle will cause the chain to prematurely wear and break. Check the alignment of the chain by measuring from the sawmill frame tube to the center of the chain at the top and bottom. The measurements should be the same ( $\pm 1/8"$ ).

See Figure 2-3.



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Front End View of  
Remote Chain

**FIG. 2-3**

Loosen the mounting bolts at the top or bottom of the chain to adjust the distance from the sawmill frame tube.

2. The chain support tray must be level to prevent premature wear of the chain. Use a square to check the angle of the tray to the sawmill frame. Check at several locations along the length of the tray.

See Figure 2-4.

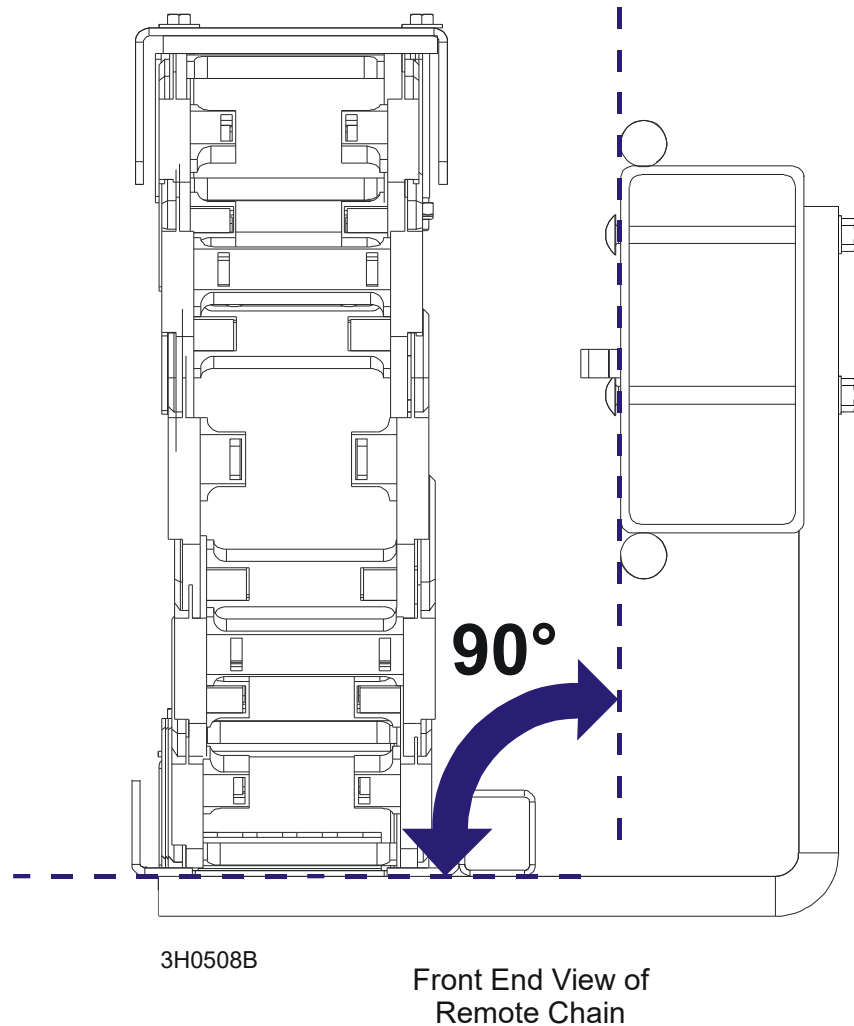


FIG. 2-4

Bend the tray up or down as necessary to square it to the sawmill frame.

**SECTION 3 REPLACEMENT PARTS**



### 3.1 How To Use The Parts List

- Use the table of contents or index to locate the assembly that contains the part you need.
- Go to the appropriate section and locate the part in the illustration.
- Use the number pointing to the part to locate the correct part number and description in the table.
- Parts shown indented under another part are included with that part.
- Parts marked with a diamond (◆) are only available in the assembly listed above the part.

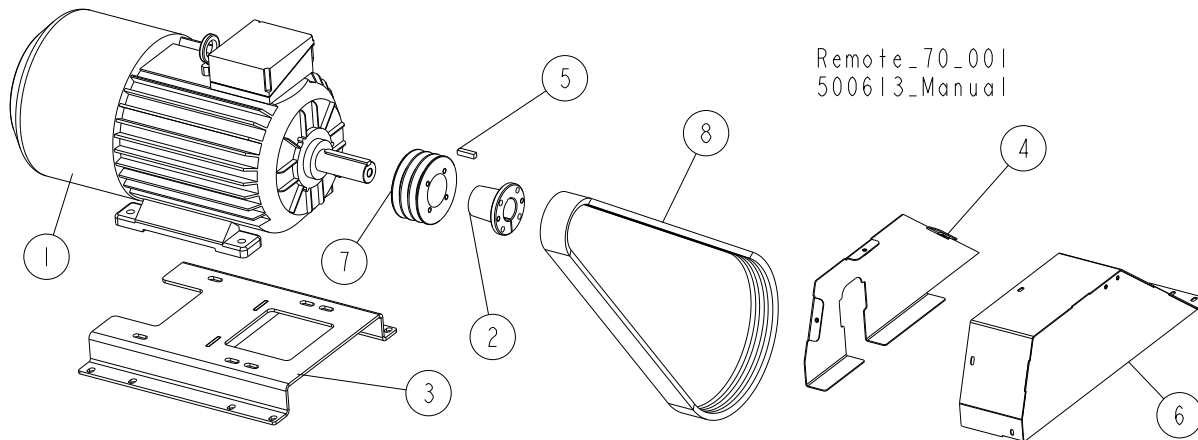
See the sample table below. Sample Part #A01111 includes part F02222-2 and subassembly A03333. Subassembly A03333 includes part S04444-4 and subassembly K05555. The diamond (◆) indicates that S04444-4 is not available except in subassembly A03333. Subassembly K05555 includes parts M06666 and F07777-77. The diamond (◆) indicates M06666 is not available except in subassembly K05555.

| <b>3.2 Sample Assembly</b> |   |           |      |   |
|----------------------------|---|-----------|------|---|
| REF                        | DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)  | PART #    | QTY. |   |
|                            | SAMPLE ASSEMBLY, COMPLETE (INCLUDES ALL INDENTED PARTS BELOW) | A01111    | 1    |   |
| 1                          | Sample Part   | F02222-22 | 1    |   |
|                            | Sample Subassembly (Includes All Indented Parts Below)        | A03333    | 1    |   |
| 2                          | Sample Part (◆ Indicates Part Is Only Available With A03333)  | S04444-4  | 1    | ◆ |
|                            | Sample Subassembly (Includes All Indented Parts Below)        | K05555    | 1    |   |
| 3                          | Sample Part (◆ Indicates Part Is Only Available With K05555)  | M06666    | 2    | ◆ |
| 4                          | Sample Part   | F07777-77 | 1    |   |

#### To Order Parts:

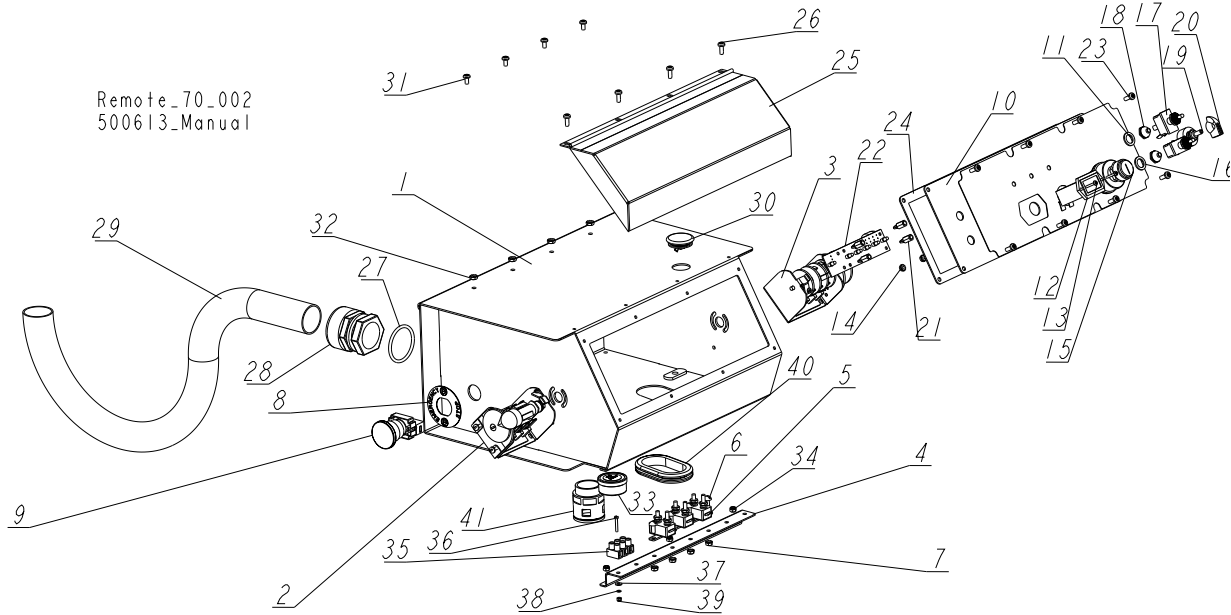
- From Europe call our European Headquarters and Manufacturing Facility in Kolo, Poland at **+48-63-2626000** or **+48-3912-1319**. From the continental U.S., call **1-800-448-7881** to order parts. Have your customer number, vehicle identification number, and part numbers ready when you call.
- From other international locations, contact the Wood-Mizer distributor in your area for parts.

### 3.3 Motor Assembly



| REF. | DESCRIPTION (◆ Indicates Parts Available In Assemblies Only) | PART #   | QTY |
|------|--|----------|-----|
| 1    | MOTOR, 18.5 kW/380V 1LA7166-2AA60-Z ELECTRIC                 | 087397   | 1   |
| 2    | BUSHING, SPLIT TAPER (E25 MOTOR KIT)                         | 085714   | 1   |
| 3    | PLATE, E25LT80 MOTOR MOUNTING                                | 090089-1 | 1   |
| 4    | COVER WELDMENT, E25LT80 BELT - REAR                          | 090050-1 | 1   |
| 5    | KEY, 9.5h7x9.5x3.8   | 087384   | 1   |
| 6    | PULLEY, 15/18.5kW ELECTRIC MOTOR                             | 085671   | 1   |
| 7    | GUARD WELDMENT, E25LT80 MOTOR BELT                           | 090046-1 | 1   |
| 8    | BELT, 3BX74 DRIVE  | 014249   | 1   |

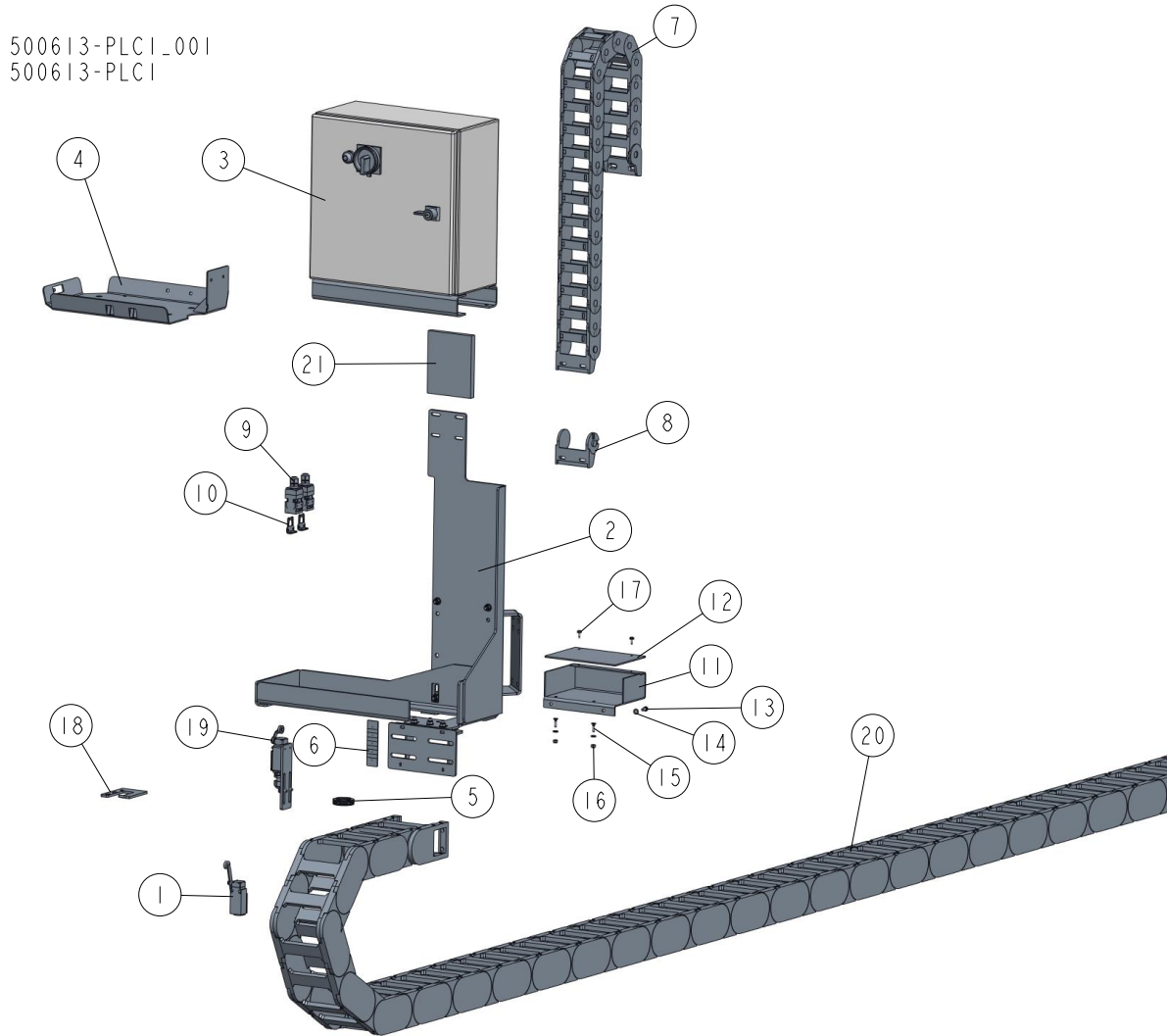
3.4 Control Box



| REF. | DESCRIPTION (◆ Indicates Parts Available in Assemblies Only) | PART #        | QTY      |
|------|--|---------------|----------|
|      | <b>PULPIT OPERATORA MASZYNY BOX, LT40/70 AC CONTROL</b>      | <b>500630</b> | <b>1</b> |
| 1    | BOX WELDMENT, AC CONTROL                                     | 086546-1      | 1        |
| 2    | SWITCH, 1992GS PWR/FEE (SERVICE PACKAGE)                     | E20438        | 1        |
| 3    | SWITCH, 1992 UP/DOWN (SERVICE PACKAGE)                       | E20440        | 1        |
| 4    | RAIL, CIRCUIT BREAKER  | 015310        | 1        |
| 5    | BREAKER, 15A MANUAL RESET                                    | E20430        | 3        |
| 6    | BOLT, 8-32X1/2 SL RND HEAD MACHINE                           | F05004-12     | 4        |
| 7    | NUT, #8-32 KEPS  | F05010-41     | 4        |
| 8    | WASHER, EMERGENCY STOP SWITCH                                | 086561        | 1        |
| 9    | SWITCH, XB4 BS542 EMERGENCY STOP                             | 086556        | 1        |
|      | <b>PLATE, COMPLETE FRONT CONTROL BOX</b>                     | <b>086562</b> | <b>1</b> |
| 10   | PANEL WLDMT, FACE  | 015302        | 1        |
| 11   | DECAL, GAS FACE PANEL  | 015271        | 1        |
| 12   | METER, HOUR RECTANGLE MOUNT                                  | 015401        | 1        |
| 13   | SCREW, 6-32X3/4 SBHC SS                                      | F05004-93     | 2        |
| 14   | NUT, #6-32 KEPS  | F05010-59     | 2        |
| 15   | SWITCH, KEY  | P04350        | 1        |
| 16   | WASHER, 1/2X3/4X1/16 NYLON                                   | P05251-1      | 2        |
| 17   | SWITCH, DPDT TOGGLE 21A REV MOM SPADE                        | 024200        | 2        |
| 18   | BOOT, TOGGLE SWITCH  | P02575        | 2        |
| 19   | POTENTIOMETER ASSY, FEED RATE CONTROL                        | 024450        | 1        |
| 20   | KNOB, SPEED CONTROL  | P06257        | 1        |
| 21   | STANDOFF, PCB 1/2 #6 FEMALE THREADING                        | 023147        | 4        |
| 22   | PCB ASSY, LED GAS/ELECTRIC SAWMILL 1997                      | 015416        | 1        |
| 23   | BOLT, #10-24 X 1/2 PHILLIPS PAN HEAD, TYPE 23                | F05015-17     | 8        |
| 24   | GASKET, FRONT PANEL  | 015270        | 1        |
| 25   | COVER WELDMENT   | 015304        | 1        |
| 26   | BOLT, #10-24 X 1/2 PHILLIPS PAN HEAD, TYPE 23                | F05015-17     | 4        |
| 27   | SEAL, 1 1/4 RING LQTI W/RETAINER                             | 015430        | 1        |

| REF. | DESCRIPTION (◆ Indicates Parts Available In Assemblies Only) | PART #     | QTY |  |
|------|--|------------|-----|--|
| 28   | CONNECTOR, 1 1/4 STRAIGHT METAL CONDUIT                      | 024402     | 1   |  |
| 29   | CONDUIT, 1-1/4IN FLEX  | 024401     | 1   |  |
| 30   | PLUG, ASO75 OILTITE  | E20570     | 1   |  |
| 31   | SCREW, 10-24X3/8 PH PHIL MS W/NEO WASHER                     | F05004-148 | 4   |  |
| 32   | NUT, #10-24 KEPS   | F05010-14  | 4   |  |
| 33   | GREASE, DRUM SWITCH  | A20463     | 1   |  |
| 34   | NUT, M5-8-FE/ZN5 DIN985                                      | F81030-2   | 3   |  |
| 35   | FITTING, ELZ-4   | F81086-1   | 1   |  |
| 36   | SCREW, M3 X 20-5.8-A SLOTTED CHEESE HEAD ZINC                | F81000-8   | 1   |  |
| 37   | WASHER, 4.3 FLAT ZINC  | F81051-2   | 1   |  |
| 38   | WASHER, 3.2 A MS FLAT SPECIAL                                | F81050-1   | 1   |  |
| 39   | NUT, M3-6-HEX NYLON ZINC LOCK                                | F81028-2   | 1   |  |
| 40   | GROMMET, RUBBER  | 087065     | 1   |  |
| 41   | CONNECTOR, MAXI-FLEX GP29                                    | 086576     | 1   |  |

### 3.5 Mounting Kit 500613-PLC1

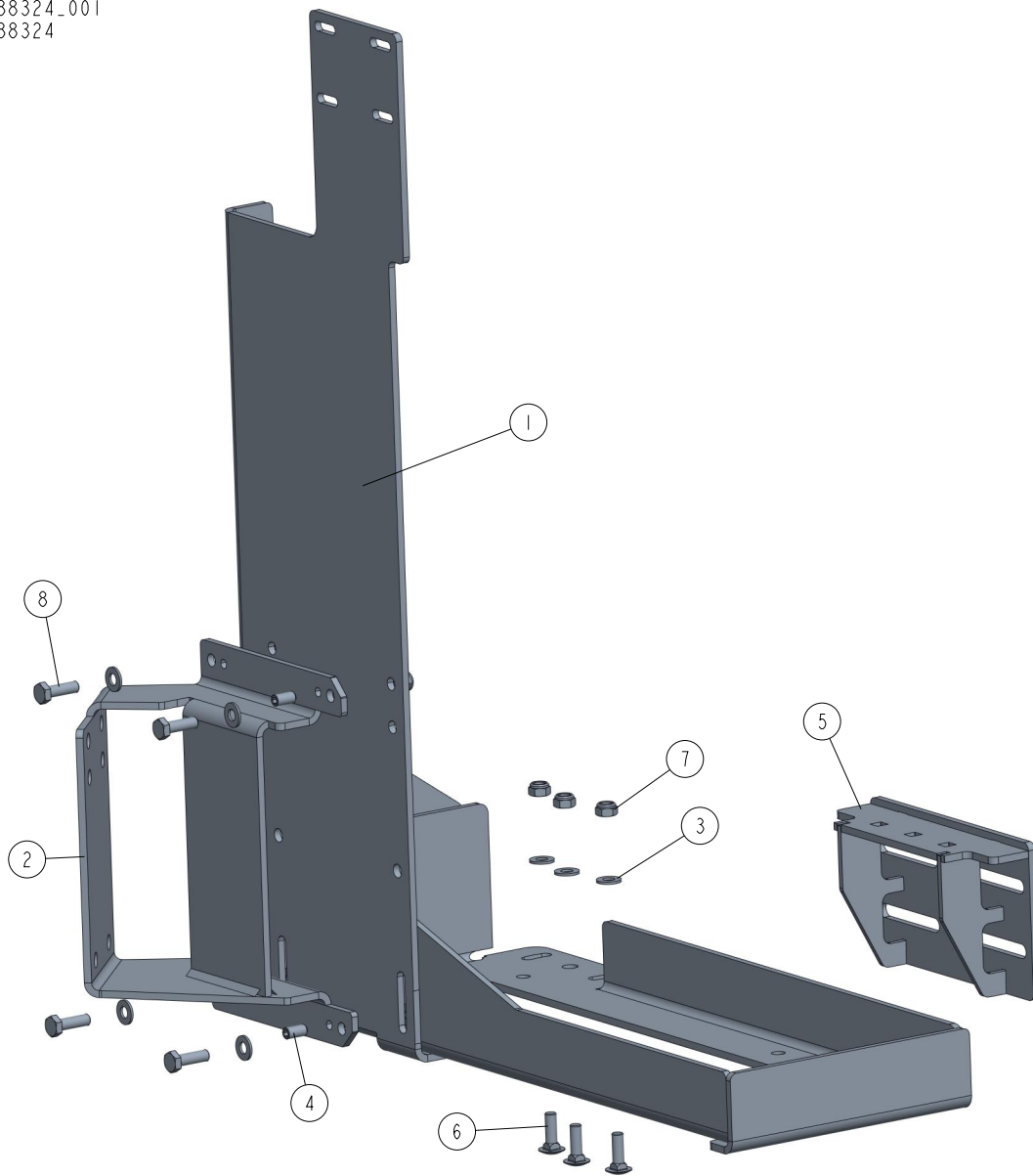


| REF | DESCRIPTION (◆ indicates parts available in assemblies only)            | PART #          | QTY |
|-----|---|-----------------|-----|
| -   | <b>MOUNTING KIT E25 LT70.</b>   | 500613-PLC<br>1 | 1   |
| 1   | SWITCH, GLCB01A2B ( HONEYWELL) LIMIT                                    | 086469          | 1   |
| 2   | BASE, AC REMOTE ELECTRIC BOX - COMPLETE <a href="#">See Section 3.6</a> | 088324          | 1   |
| 3   | BOX, ELECTRIC LT70 REMOTE PLC1  | 087808-PLC<br>1 | 1   |
| 4   | TRAY, WATER LUBE BOTTLE/FUEL TANK                                       | 088307-1        | 1   |
| 5   | NUT, 53019060 GMP-GL 29   | 086560          | 3   |
| 6   | ELEMENT, E9S SELF-ADHESIVE MOUNT  | 087695          | 5   |
| 7   | CARRIER, INGUS 27.07.063 CABLE  | 088048          | 1   |
| 8   | BRACKET SET, 2607.12PZ CABLE CARRIER                                    | 087773          | 1   |
| 9   | SWITCH, AZ17-11ZRK SAFETY   | 094232          | 2   |
| 10  | KEY, AZ17/170-B5  | 094422          | 2   |
| -   | WIRES GUARD, COMPLETE   | 089310          | 1   |
| 11  | GUARD, WIRES  | 089306-1        | 1   |
| 12  | PLATE, GUARD TOP  | 089308-1        | 1   |

| REF | DESCRIPTION (◆ indicates parts available in assemblies only)       | PART #    | QTY |  |
|-----|--|-----------|-----|--|
| 13  | BOLT, M6X12 8.8 HEX HEAD FULL THREAD ZIN                           | F81001-7  | 2   |  |
| 14  | WASHER, 6.4 FLAT ZINC  | F81053-1  | 4   |  |
| 15  | SCREW, M6X20-5.8-B SLOTTED COUNTERSUNK H                           | F81001-31 | 2   |  |
| 16  | NUT, M6-8-B HEX NYLON ZINC LOCK                                    | F81031-2  | 2   |  |
| 17  | BOLT, #10-24X1/2 SELF TAPPING                                      | F05015-7  | 2   |  |
| 18  | BRACKET, LIMIT SWITCH  | 091852-1  | 1   |  |
| 19  | SWITCH ASSEMBLY, LT70 SAFETY LOWER <a href="#">See Section 3.7</a> | 505711    | 1   |  |
| 20  | CARRIER, 400.100.200.0 IGUS CABLE                                  | 092367    | 1   |  |
| 21  | CONTROLLER, ALTIVAR ATV312HU11N4 SPEED                             | 093488    | 1   |  |

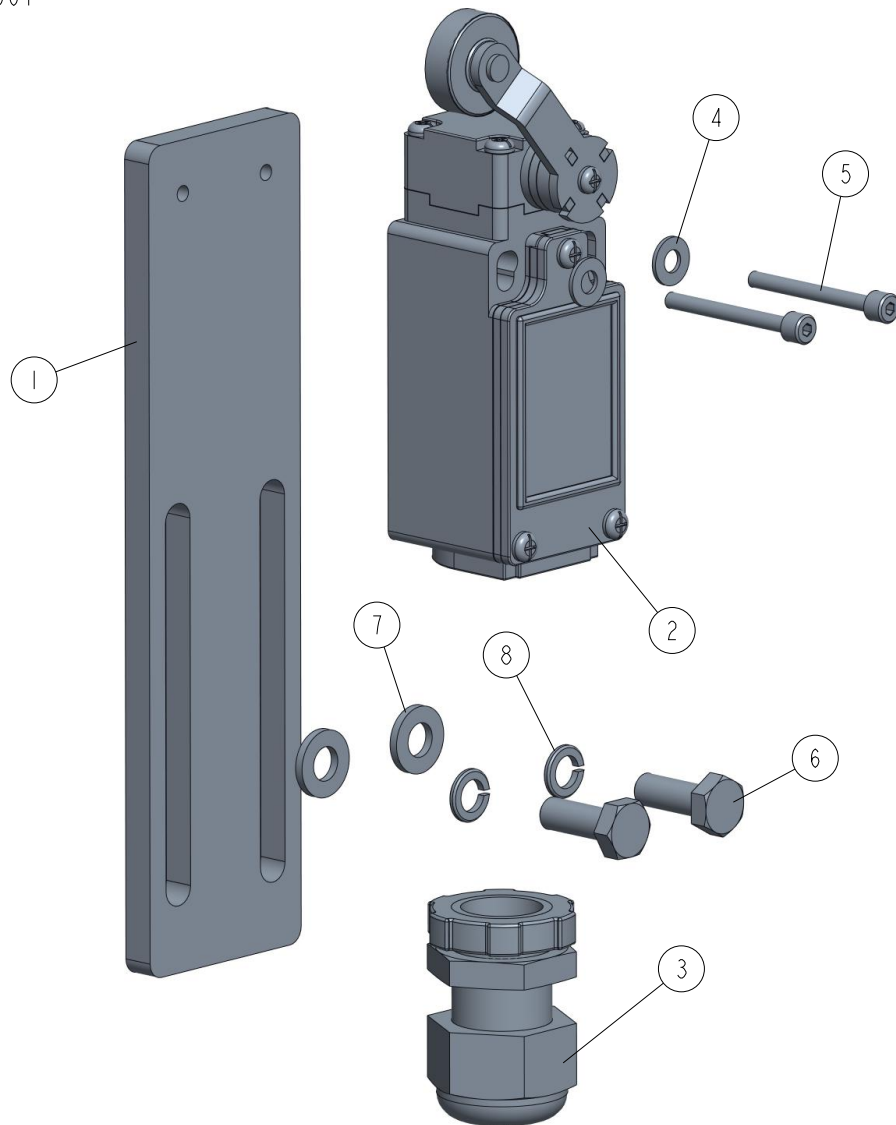
### 3.6 Base, AC Remote Electric Box 088324

088324\_001  
088324



| REF | DESCRIPTION (u indicates parts available in assemblies only) | PART #    | QTY |
|-----|--|-----------|-----|
| -   | <b>BASE, AC REMOTE ELECTRIC BOX - COMPLETE</b>               | 088324    | 1   |
| 1   | MOUNT WELDMENT, AC REMOTE ELECTRIC BOX                       | 550045-1  | 1   |
| 2   | BRACKET, AC REMOTE ELECTRIC BOX BASE                         | 530171-1  | 1   |
| 3   | WASHER, 8.4 FLAT ZINC  | F81054-1  | 11  |
| 4   | SCREW, M8X16 45H GEOMET SET                                  | F81014-2  | 2   |
| 5   | BRACKET, CABLE CARRIER                                       | 516829-1  | 1   |
| 6   | BOLT, M8X25 8.8 CARRIAGE ZINC                                | F81002-59 | 3   |
| 7   | NUT, M8 8 HEX NYLON ZINC LOCK                                | F81032-2  | 7   |
| 8   | BOLT, M8X25-8.8-B HEX HEAD FULL THREAD Z                     | F81002-5  | 4   |

## 3.7 Switch Assembly 505711

505711\_001  
505711

| REF. | DESCRIPTION (◆ Indicates Parts Available In Assemblies Only) | PART #        | QTY      |
|------|--|---------------|----------|
|      | <b>SWITCH ASSEMBLY, LT70 LOWER LIMIT</b>                     | <b>505711</b> | <b>1</b> |
| 1    | BAR, LIMIT SWITCH MOUNTING                                   | 505125-1      | 1        |
| 2    | LIMIT SWITCH, FA138 Z11                                      | 100931        | 1        |
| 3    | STUFFING-BOX, SKINTOP PG 13.5                                | 086524        | 1        |
| 4    | WASHER, 4.3 FLAT ZINC  | F81051-2      | 2        |
| 5    | SCREW, M3X30 8.8 HEX SOCKET HEAD CAP ZINC                    | F81011-38     | 2        |
| 6    | BOLT, M6 X 16 8.8 HEX HEAD FULL THREAD ZINC                  | F81001-15     | 2        |
| 7    | WASHER, 6.4 FLAT ZINC  | F81053-1      | 2        |
| 8    | WASHER, Z 6.1 SPLIT LOCK ZINC                                | F81053-3      | 2        |



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## SECTION 4 ELECTRICAL WIRING DIAGRAMS, LT40ME20SRAH4-ST



**IMPORTANT!** When using a sawmill with the rewired control panel it is very important not to switch between saw head forward/backward movement until the saw head stops. Failure to do so may result in serious sawmill damage.



**WARNING!** When using the variable reverse speed wiring it is recommended that the operator should stop the head, turn the potentiometer to zero, engage reverse and then increase speed. Failure to do this may result in damage to the circuit. There is a protection in the circuit and if this is activated it will not allow the head to start the return movement until the potentiometer is set to zero.

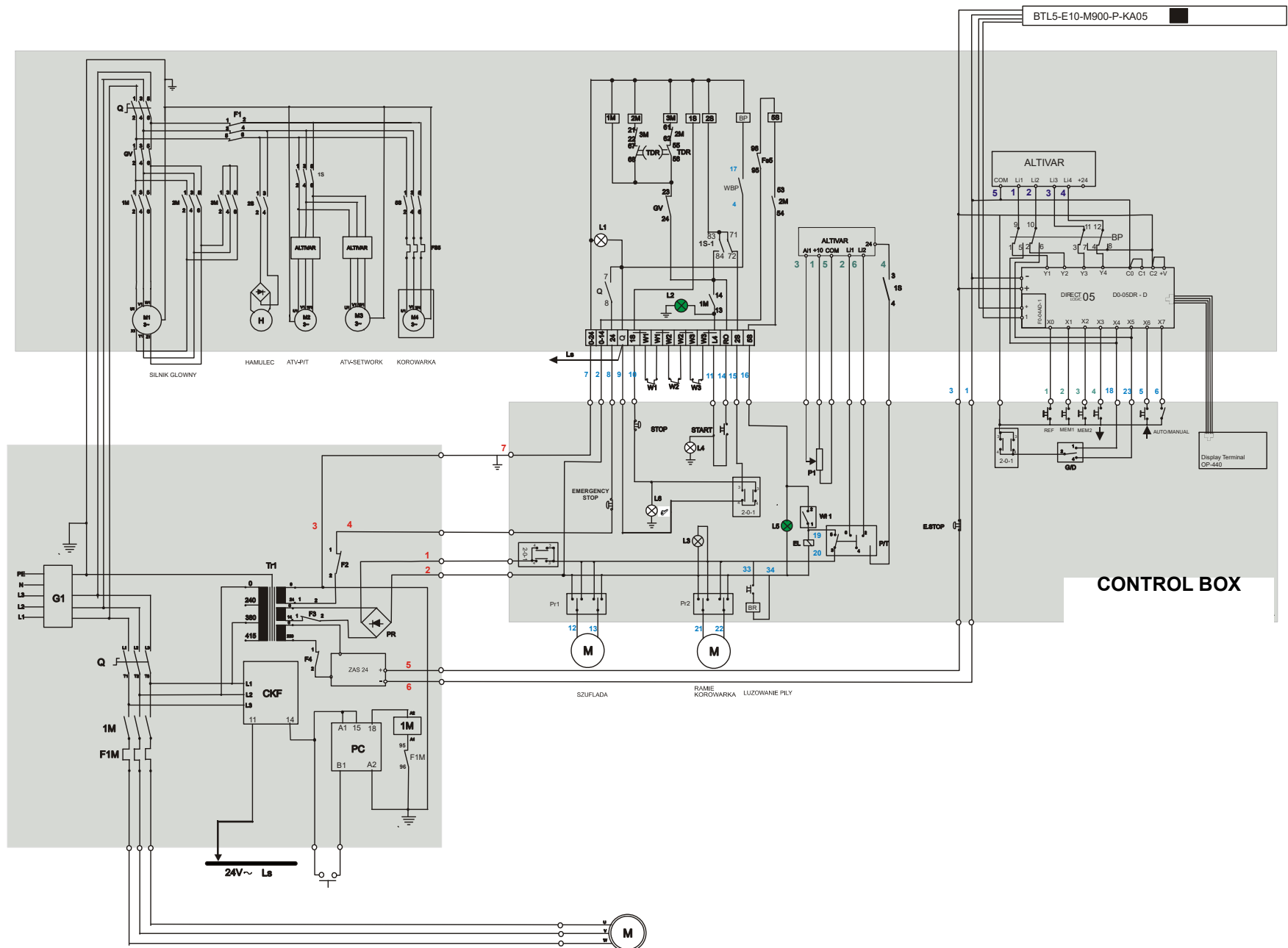


FIG. 4-1 . LT40ME20SRAH4-ST

**FIG. 4-2**

