Simple Set

Safety, Operation, Maintenance
& Parts Manual

SSW, SSW-R, SSW-150   rev. A.00 - A.05

Safety is our #1 concern!

February 2010

Form #1611

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

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*

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SECTION 1   SETUP & OPERATION

1.1   Initial Setup

Simple Set will start up in manual mode when you turn the sawmill control key switch to the ON (#1) position. As the control powers up, the software revision is briefly displayed.

In manual mode, press the Up arrow to enter the setup menus.

MENUS

Set Speed: Available values are 1 - 5. The default value is 5. Lowering the Set Speed will assist in achieving the desired blade height setting in situations where the up/down chains or mast pads are too loose.

> **Up** and **Down** buttons: Scroll to the desired Set Speed setting.
> **Auto** button: Scrolls to the Units menu
> **Manual** button: Exits setup.

Units: Simple Set can display units in inches (default) or millimeters.

> **Up** and **Down** buttons: Scroll to the desired Units setting.
> **Auto** button: Scrolls to the Language menu
> **Manual** button: Exits setup.

Language: To date, the only available language is English.

> **Auto** button: Scrolls back to the Set Speed menu
> **Manual** button: Exits setup.

Display — Scroll Up — Manual

Manual

SIMPLESET
by Wood-Mizer

3H1041

Scroll Down — Auto — **FIG. 1-1**

1.2   Operation

Manual: With Simple Set in manual mode, operate the sawmill up/down system as normal with the sawmill control drum switch. The display will show a 'D' when the drum switch is pushed down and a 'U' when pushed up.

Auto: With Simple Set in auto mode, the saw head will move down the increment displayed when the sawmill control drum switch is activated in the down position. The saw head will move up as normal when the drum switch is activated in the up position. Two sets of values can be stored in the control.

Two sets of values can be stored in the control.

1.   Push the Auto button to toggle between Set1 and Set2.

2.   Use the Up and Down buttons to adjust the value in 1/16" (or 1mm) increments in Set1 or Set2.

3.   Bump the up/down switch down to move the blade to the next increment. Holding the switch up or down will bypass Simple Set and move the saw head until the up/down switch is released.

4.   If the saw head is raised before the next cut, bumping the up/down switch down will return the saw head to the original position plus the increment value.

5.   Push the Manual button to exit auto mode.

6.   Turn the sawmill control key switch to the OFF (#0) position to power off Simple Set.
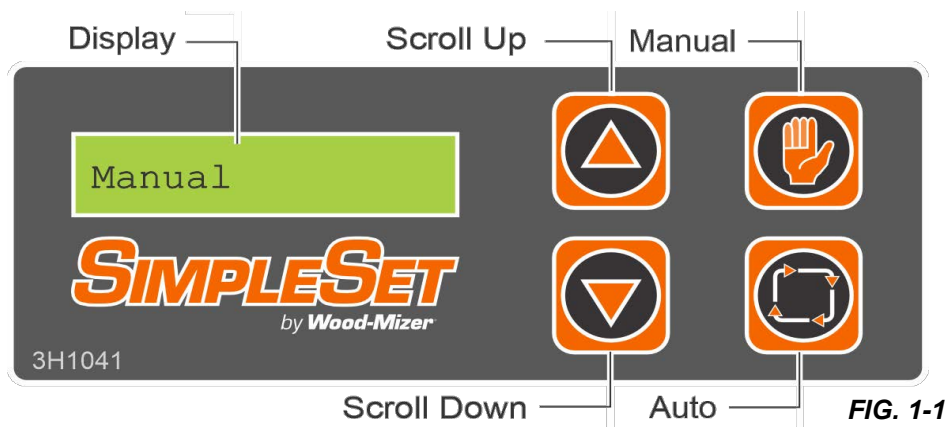
1.3   Troubleshooting

Error Messages

Simple Set error messages.

Error	Description
E02 Sensor	This message is displayed if Simple Set cannot detect the encoder sensor magnet when entering auto mode. Check that the gear box extension is aligned with the sensor. Push any button on the Simple Set control to exit to manual mode.
E03 Sensor	This message is displayed if Simple Set cannot detect a signal from the encoder sensor when entering auto mode. Check the encoder sensor cable connections. push any button on the Simple Set control to exit to manual mode.

Diagnostic Lights (After Mid-2016)

LED indicator lights are provided on the encoder sensor housing, the display circuit board, and H-bridge module inside the Simple Set control box. Observe the LED lights during operation to identify problems with the sensor, drum switches, or Simple Set control.
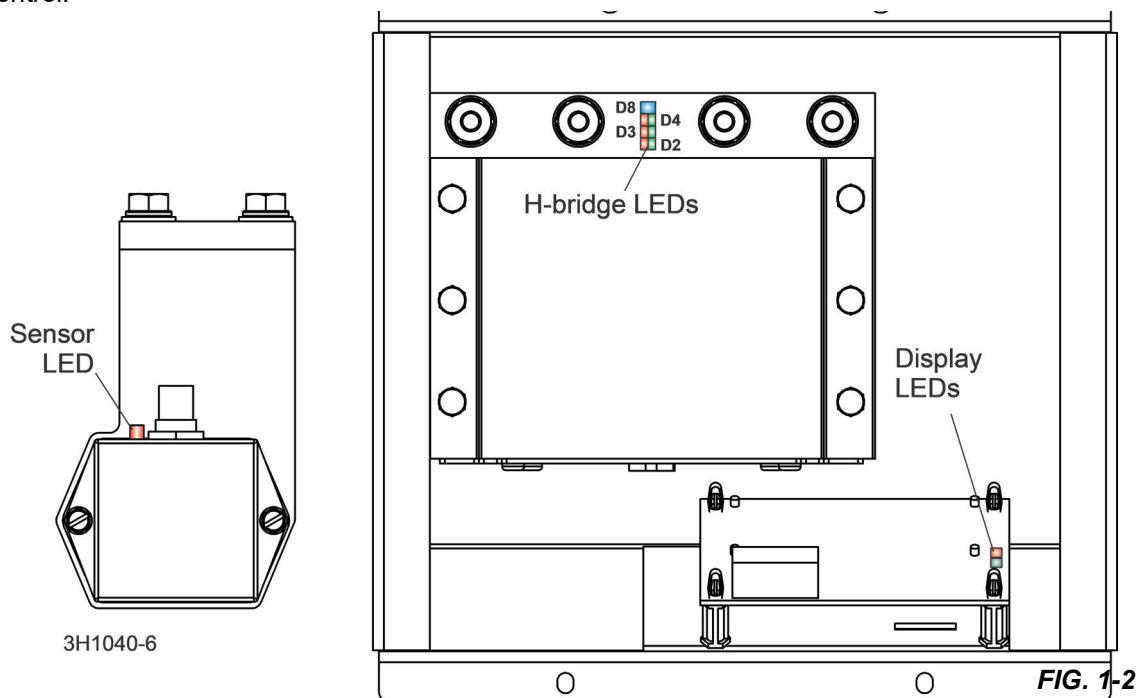
FIG. 1-2

NORMAL OPERATION:

- As the up/down gearbox shaft spins to move the saw head up or down, the sensor LED will illuminate and brighten.
  After each complete revolution of the shaft, the LED will turn off, then illuminate and brighten.

MANUAL MODE

- In manual mode, the control board LED and the H-bridge D2, D3, D4 LEDs will illuminate (red) when the drum switch is activated in the down direction and (green) when the up/down drum switch is activated in the up direction.
  The LEDs will turn off when the drum switch is released.
  The H-bridge D8 LED will illuminate blue to indicate the 5 Volt DC output to the control board.

AUTO MODE

- In auto mode, the control box LED and the H-bridge D2, D3, D4 LEDs will illuminate (green) in the up direction as in manual mode.
  When the drum switch is bumped in the down direction, the control box LED and the H-bridge D2, D3, D4 LED's will illuminate (red) in the down direction but the control board LED will immediately turn off.
  When the blade reaches the increment value set by the Simple Set control, the D2, D3, D4 LEDs on the H-bridge will turn off.

If the drum switch is held down or the saw head coasts past the increment, the H-bridge D2, D3, D4 LEDs will illuminate (green) indicating the blade will move up to return to the increment value.
When the blade reaches the increment value, the H-bridge D2, D3, D4 LEDs will turn off.

Diagnostic Lights (Prior to Mid-2016)

LED indicator lights are provided on the encoder sensor housing, the display circuit board, and H-bridge module inside the Simple Set control box. Observing the LED lights during operation can help identify problems with the sensor, drum switches or Simple Set control.

Sensor LED

3H1040-3

H-bridge LEDs

Display LEDs

FIG. 1-3
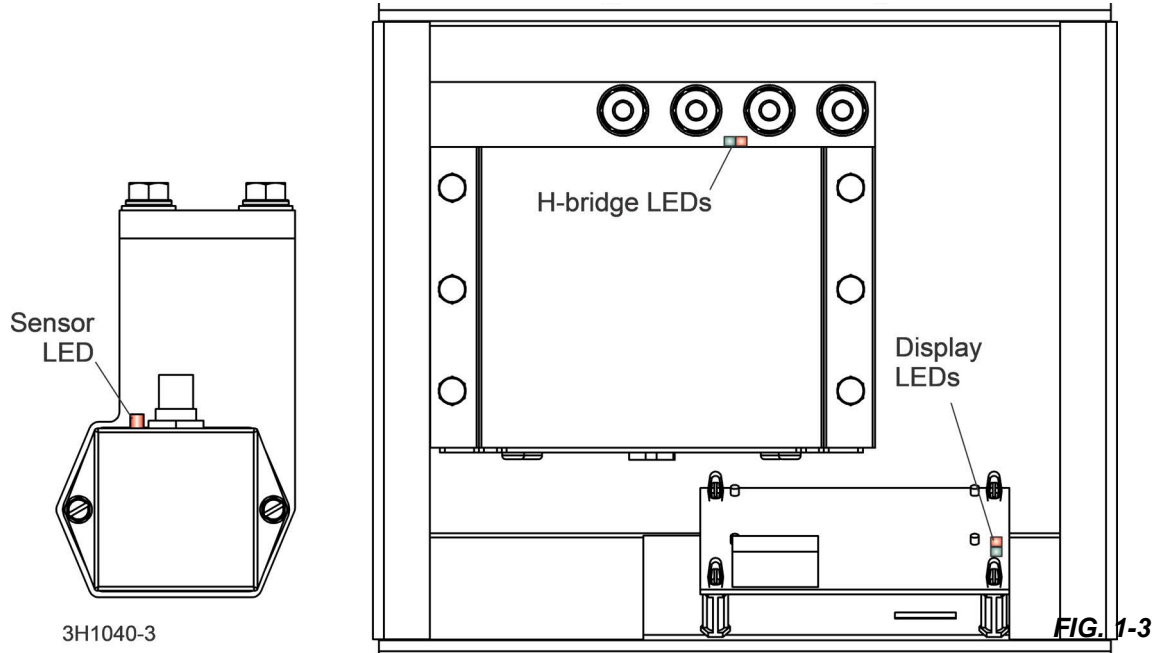
During normal operation:

- As the up/down gearbox shaft spins to move the saw head up or down, the sensor LED will illuminate and brighten. After each complete revolution of the shaft, the LED will turn off then illuminate and brighten.
- In manual mode, both control box LEDs will illuminate red when the drum switch is activated in the down direction and green when the up/down drum switch is activated in the up direction. Both LEDs will turn off when the drum switch is released.
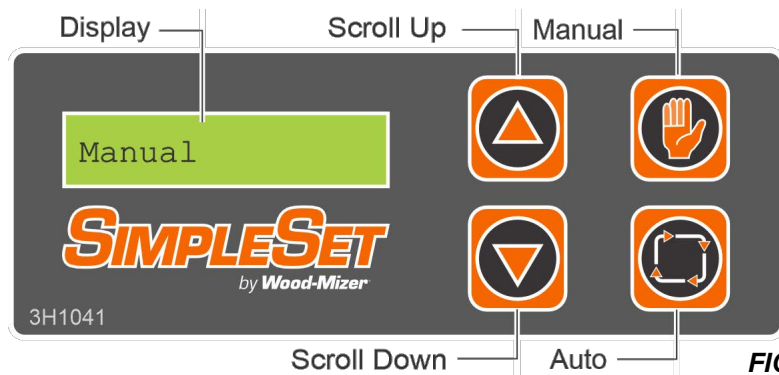- In auto mode, both control box LEDs operate the same (green) in the up direction as in manual mode. When the drum switch is bumped in the down direction, both LEDs will illuminate red and then the display LED will immediately turn off. When the blade reaches the increment value set by the Simple Set control, the LED on the H-bridge will turn off. If the drum switch is held down or the saw head coasts past the increment, the H-bridge LED will illuminate green indicating the blade will move up to return to the increment value. When the blade reaches the increment value, the H-bridge LED will turn off.

Simple Set Up/Down Gear Settings Adjustment

1. Make sure the power to the control box is on.

2. Press and hold the Manual button and then press and hold the UP button

3. Release the Manual button, then release the UP button

The Simple Set control panel will display the Speed setting.

4. Press the Auto button several times until "Gear: 0.xxxx" appears.

5. Use the Up/Down buttons to set the value of the Gear Setting as shown in the table below.

Display ── Scroll Up ── Manual

Manual

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3H1041

Scroll Down ── Auto

FIG. 1-4

Models	Revision	Gear Setting	InvGear Setting

LT40 (Default)	All	0.0938 (Default)	No (Default)
LT35/LT35HD	Any revision (upgraded with Up/Down Kit 074029)	0.1170	Yes
LT35/LT35HD	A1.00 - A1.02	0.2250	Yes
LT35/LT35HD	A2.00 - A2.01	0.3492	Yes
LT35/LT35HD	A3.00 - A4.01	0.1170	Yes
LT35/LT35HD	A5.00+ (or any revision upgraded with Up/Down Kit 074316)	0.1170	No
LX150/250	A1.00+	0.1350	Yes

6. Press the Auto button to display "InvGear: xx".

7. Use the Up/Down buttons to set the InvGear setting to the required value as shown in the table above.

8. Press the Manual button to return to the main menu.

Simple Set PID Settings

1. Make sure the power to the control box is on.

2. Press and hold the Manual button and then press and hold the UPbutton.

3. Release the Manual button, then release the UP button.

The Simple Set control panel will display the Speed setting.

4. Press the Auto button several times until PGain, DGain and IGain settings appear.

5. Use the Up/Down buttons to set the settings to the required values.

> *NOTICE* The PID settings are factory-set and they should not be changed. If necessary, set the PID settings to the following values: PGain 1.0, DGain 0.0 and IGain 0.0.
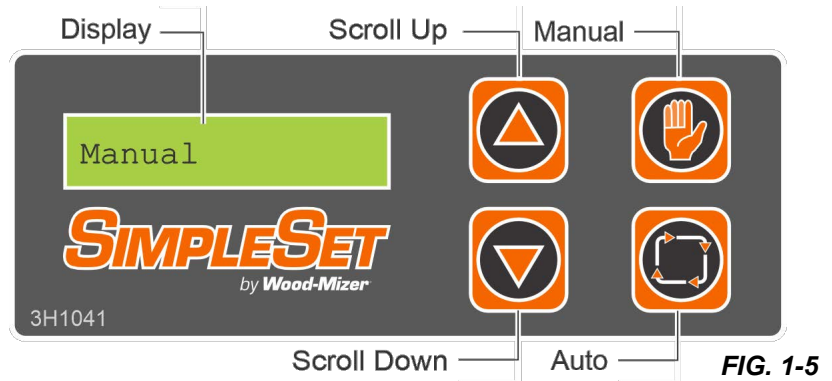
6. Press the Manual button to return to the main menu.

FIG. 1-5

SECTION 2   REPLACEMENT PARTS

2.1   Simple Set Kit, Complete (Standard)

3H1040D

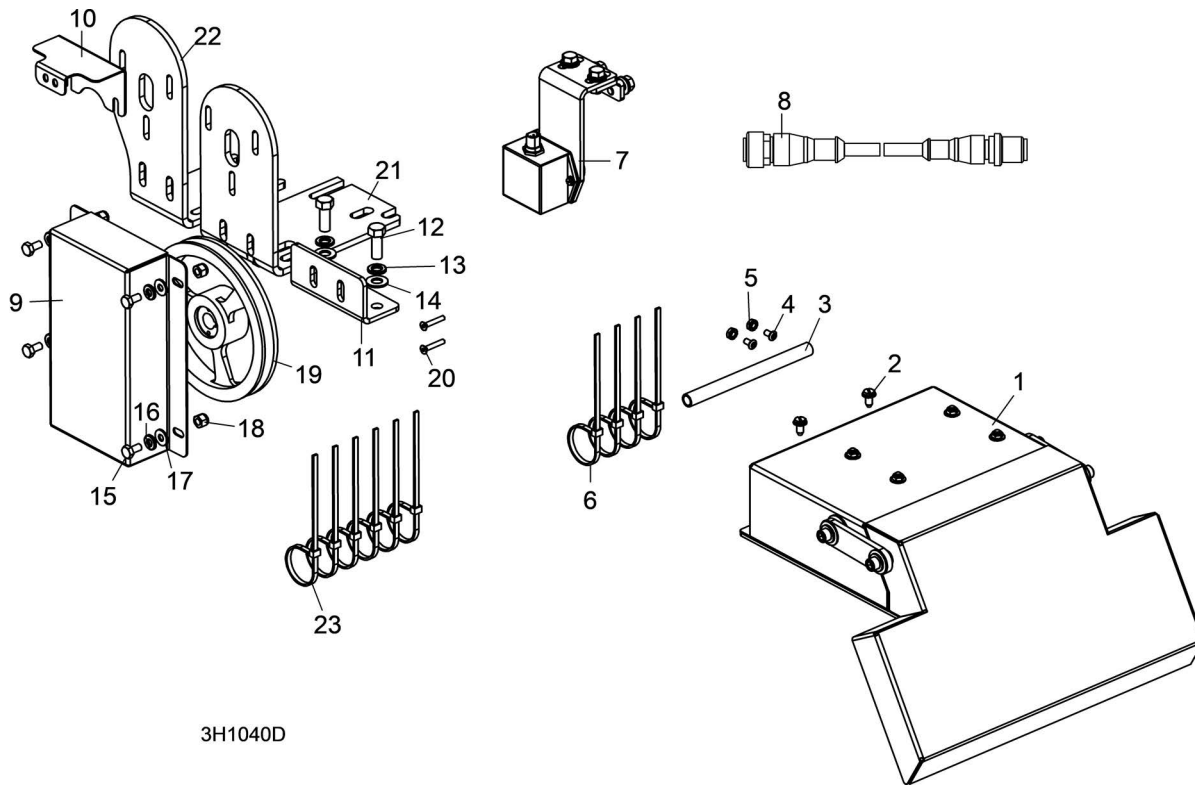| REF	PART #	DESCRIPTION	COMMENTS	QTY.
	SSW	**KIT, FACTORY-INSTALLED SIMPLE SET (STAN-DARD)**		1
	SSW-R	**KIT, FIELD-INSTALLED SIMPLE SET (STAN-DARD)**		1
1		Simple Set Control	*(See Section 2.5)*	
2	F05015-1	Screw, 1/4-20 x 1/2" Slotted Hex Head		2
3	R02348	Tubing, 1/2" Neoprene		.5 ft.
4	F05004-218	Screw, #10-24 x 3/8" Button Socket Head Stainless		2
5	F05010-14	Nut, #10-24 Self-Locking Hex		2
6	F05089-3	Tie Wrap, 3/16" x 6" UV Black		4
7		Sensor Assy, Magnetic Position	*(See Section 2.4)*	
8	053380	Cable, Simple Set Sensor		1
9	006862	Cover, Simple Set Enclosure		1
10	007067	Bracket, Sensor Cable	Added to secure sensor cable away from moving up/down pulley (Rev. A.01).**SSW Only**	1
11	007416	Bracket, Simple Set Mount	**SSW-S Only**	1
12	F05007-7	Bolt, 3/8-16 x 1" Hex Head		2
13	F05011-4	Washer, 3/8" Split Lock		2
14	F05011-3	Washer, 3/8" SAE Flat		2
		SSW-R Field Installed Kit Only (Includes parts above plus)**:**		

REF	PART #	DESCRIPTION	COMMENTS	QTY.
15	F05005-15	Bolt, 1/4-20 x 1/2" Hex Head		4
16	F05011-14	Washer, 1/4" Split Lock		4
17	F05011-11	Washer, 1/4" SAE Flat		4
18	F05010-69	Nut, 1/4-20 Hex Nylon Lock		4
19	006874	Sheave, Modified AK64 x 5/8"		1
20	F05004-252	Screw, #8-32 x 1" Flat Socket Head		2
21	014073	Bracket, Up/Down Motor Mount (Grove)		1
22	014529	Bracket, Up/Down Motor Mount (IPTS)		1
23	F05089-3	Tie Wrap, 3/16" x 6" UV Black		6
	SSW-1600	Instruction Sheet, Simple Set Retrofit		1
	M1610	Manual, Simple Set Option		1

2.2   Simple Set Kit, Complete (Standard Remote)

HD0236
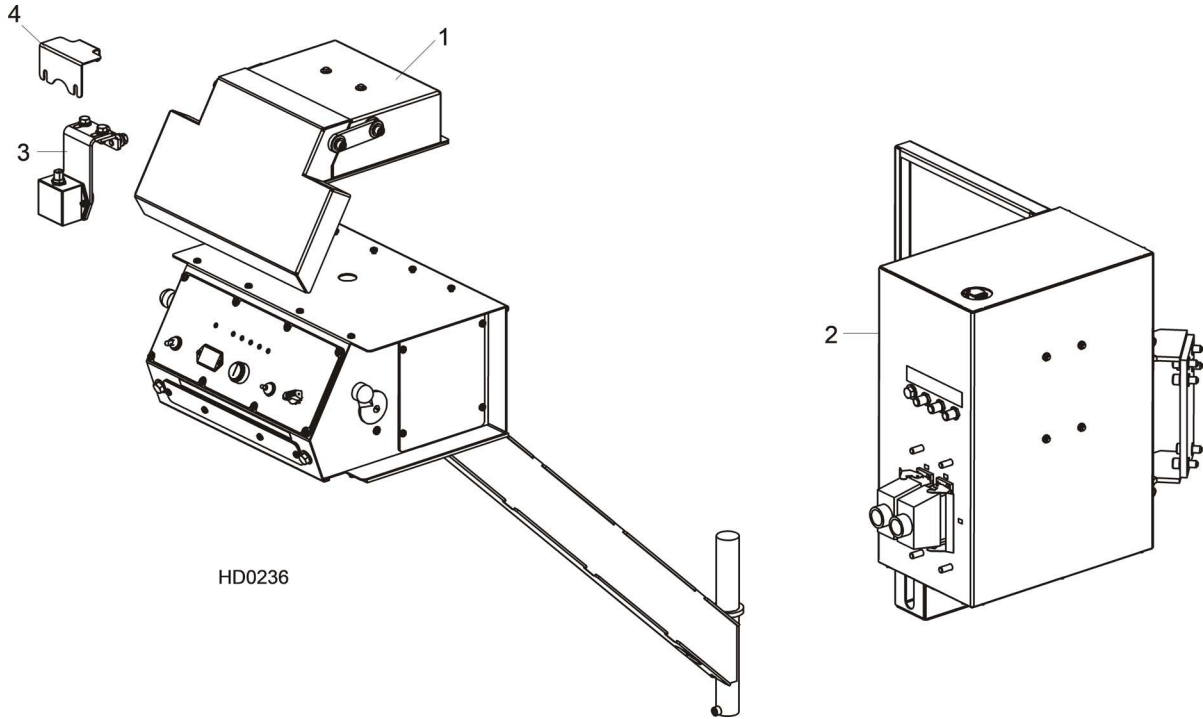
REF	PART #	DESCRIPTION	COMMENTS	QTY.
1		**SIMPLE SET OPERATOR CONTROL**	*(See Section 2.6)*	
2		**SIMPLE SET REMOTE POWER BOX**	*(See Section 2.7)*	
	SSW-R-1	**INSTALLATION KIT, REMOTE SIMPLE SET**		1
3		Sensor Assy, Magnetic Position	*(See Section 2.4)*	
4	007067	Plate, Simple Set Cable		1
	M1610	**MANUAL, SIMPLE SET OPTION**		1

2.3   Simple Set Kit Complete (LX150)

LX25025
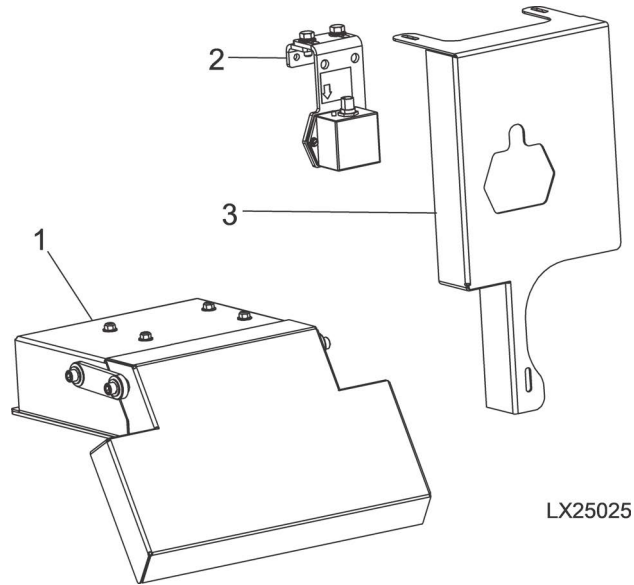
REF	PART #	DESCRIPTION	COMMENTS	QTY.
	SSW-LX150	**SIMPLESET, FACTORY INSTALLED LX150/250**		
1	073694	Control Assy, LX150 SimpleSet	Available in assemblies only.	1
2	053369	Sensor Assy, Magnetic Position	*(See Section 2.4)*	1
3	110701	Guard, LX150 Up/Dn, SSW		1

2.4   Sensor Assembly (all versions)
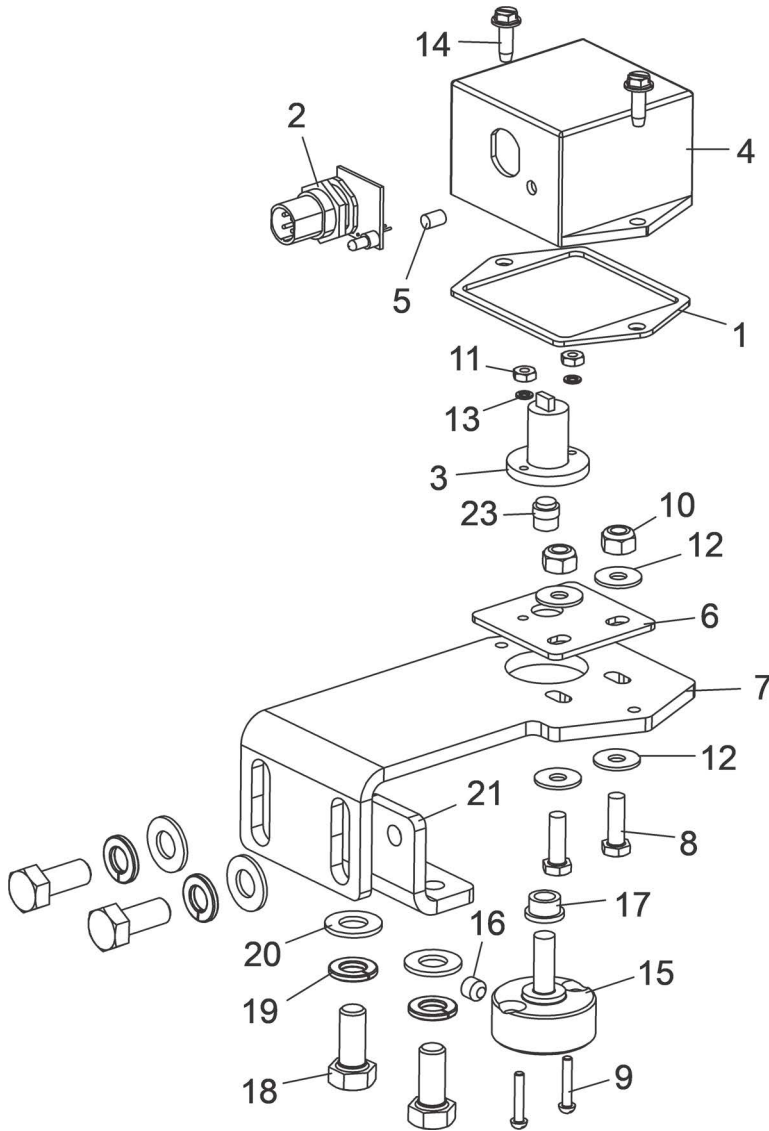
3H1142B

⚠CAUTION
Keep these bolts loose.
Tightening these bolts
can result in damage
to encoder parts.

Wood-Mizer Products, Inc.
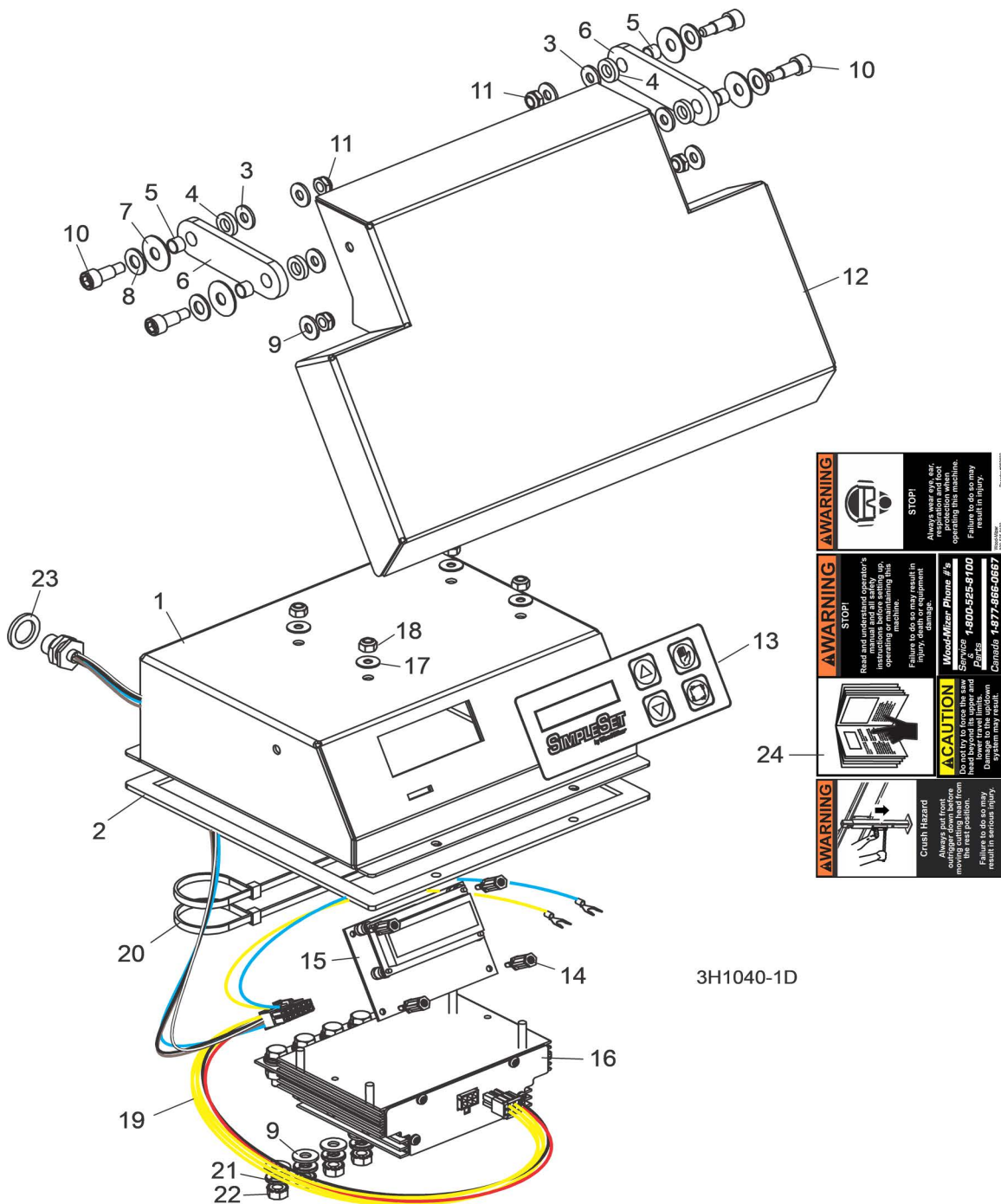800-525-8100   Reorder #074269

REF	PART #	DESCRIPTION	COMMENTS	QTY.
	053369	**SENSOR ASSEMBLY, MAGNETIC POSITION**		1
1	006864	Gasket, Encoder		1
2	053376	PCB Assembly, Encoder Sensor	Available in assemblies only.	1
3	053387	Sensor Kit, Magnetic Encoder		1
4	053399	Enclosure, Position Sensor		1
5	053400	Lens, LED T1 Clear		1
6	057853	Plate, SimpleSet Encoder Slide		1
7	061518	Plate, SimpleSet Encoder Mount		1
8	F05004-18	Screw, 10-24 x 5/8" Unsl Indent Hex Head Machine		2
9	F05004-49	Screw, #4-40 x 5/8" Sl Rnd Head Machine		2
10	F05010-160	Nut, 10-24 Hex Nylock		2
11	F05010-43	Nut, #4-40 Hex		2
12	F05011-18	Washer, #10 SAE Flat		4
13	F05011-21	Washer, #4 Split Lock		2
14	F05015-18	Bolt, #8-32 x 1/2" Sl Hex Head S		2

REF	PART #	DESCRIPTION	COMMENTS	QTY.
15	057852	Extension, SimpleSet Gearbox Shaft		1
16	F05005-131	Screw, 1/4-20 x 1/4" SH Cup Pt Set		1
17	049018	Bushing, Flange 1/4" ID x 1/4" Lg		1
18	F05006-5	Bolt, 5/16-18 x 3/4" Hex Head Cap		4
19	F05011-13	Washer, 5/16" Split Lock		4
20	F05011-17	Washer, 5/16" SAE Flat		4
21	057872	Plate, SimpleSet Mount		1
22	074269	Decal, Encoder Bolt Warning		1
23	065890	Magnet Assembly, Simple Set Encoder w/Hub		1

2.5   Simple Set Control (Standard, SSW)

3H1040-1D

REF	PART #	DESCRIPTION	COMMENTS	QTY.
	006847	**CONTROL ASSEMBLY, SIMPLE SET**		1
1	006845	Box Weldment, Simple Set Control		1
2	006863	Gasket, Simple Set Control Box		1
3	F05011-11	Washer, 1/4" SAE Flat		4
4	F05011-92	Washer, 5/16" Nylon Flat		4

REF	PART #	DESCRIPTION	COMMENTS	QTY.
5	016655	Bushing, 5/16" ID x 3/8" OD x 1/4" Bronze		4
6	006872	Plate, Simple Set Control Cover Link		2
7	F05011-93	Washer, 5/16" Belleville		4
8	F05011-17	Washer, 5/16" SAE Flat		4
9	F05011-11	Washer, 1/4" SAE Flat		8
10	F05006-69	Bolt, 5/16" x 1/2" Shoulder 1/4-20 Thread Stainless		4
11	F05010-156	Nut, 1/4-20 Hex Half Nylon Lock		4
12	006846	Cover, Simple Set Control		1
13	053347	Membrane, Simple Set Control Switch		1
14	053385	Standoff, 5/8" Threaded PCB		4
15	053377	PCB Assembly, Simple Set Control		1
	073695	PCB Assy, **LX150/250** SimpleSet Control		
16	053373	H-Bridge Assembly, Simple Set		1
17	F05011-18	Washer, #10 SAE Flat		4
18	F05010-160	Nut, #10-24 Hex Nylon Lock		4
19	053379	Harness Assembly, Simple Set Control		1
20	F05089-3	Tie Wrap, 3/16" x 6" UV Black		2
21	F05011-14	Washer, 1/4" Split Lock		4
22	F05010-9	Nut, 1/4-20 Self-Locking Hex		4
23	F05011-19	Washer, 5/8" x 15/16" x .094 Nylon	Added to better secure harness plug (Rev. A.03).	1
24	069632	Decal, Control Box 4 x Warning		1

2.6   Simple Set Control (Standard Remote Operator, SSW-R)

HD0236-1B
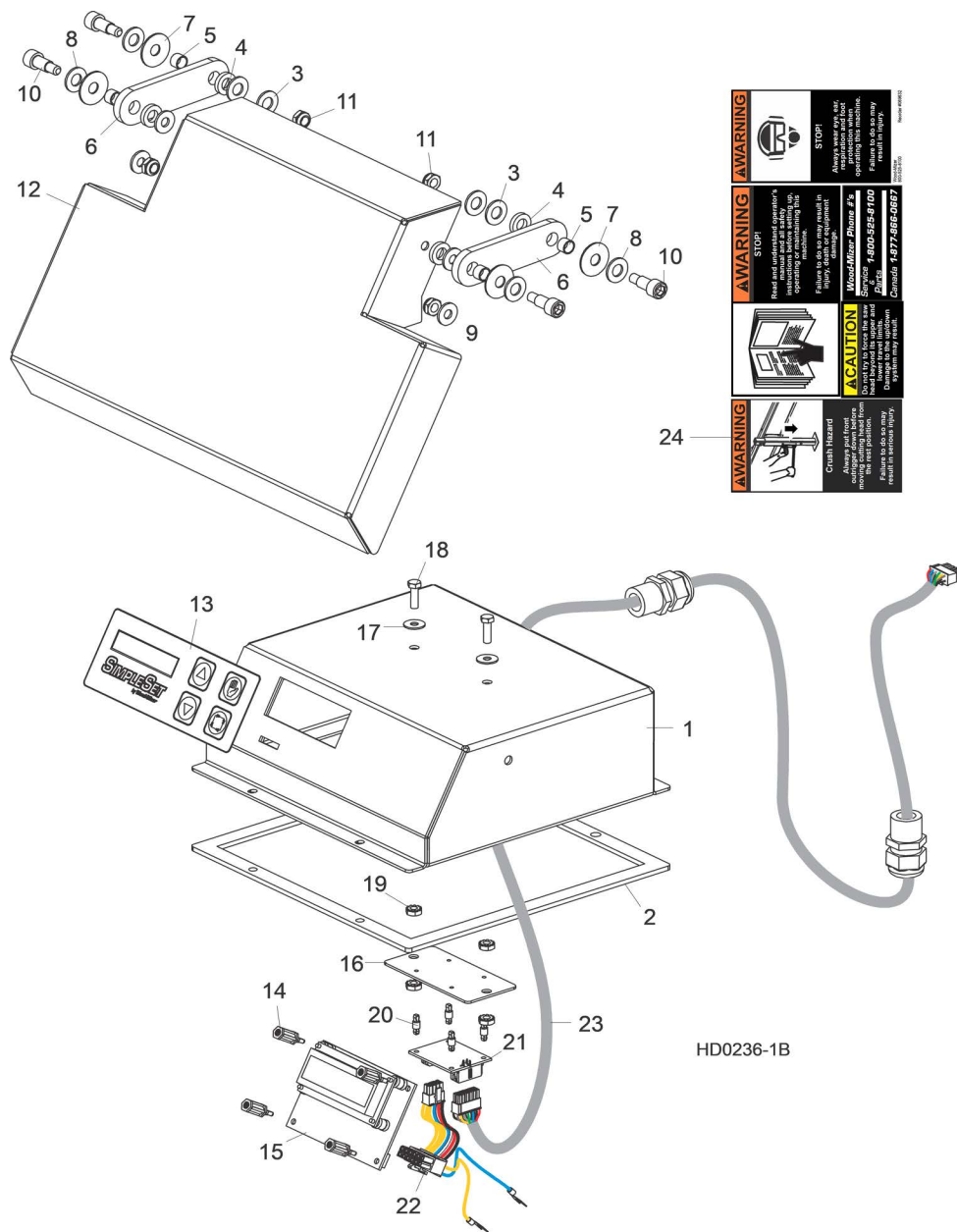
REF	PART #	DESCRIPTION	COMMENTS	QTY.
	053680	**CONTROL ASSEMBLY, SIMPLE SET (REMOTE)**		1
1	007812	Box Weldment, Simple Set Control (Remote)		1
2	006863	Gasket, Simple Set Control Box		1
3	F05011-11	Washer, 1/4" SAE Flat		4
4	F05011-92	Washer, 5/16" Nylon Flat		4
5	016655	Bushing, 5/16" ID x 3/8" OD x 1/4" Bronze		4
6	006872	Plate, Simple Set Control Cover Link		2
7	F05011-93	Washer, 5/16" Belleville		4
8	F05011-17	Washer, 5/16" SAE Flat		4
9	F05011-11	Washer, 1/4" SAE Flat		20

REF	PART #	DESCRIPTION	COMMENTS	QTY.
10	F05006-69	Bolt, 5/16" x 1/2" Shoulder 1/4-20 Thread Stainless		4
11	F05010-156	Nut, 1/4-20 Hex Half Nylon Lock		8
12	006846	Cover, Simple Set Control		1
13	053347	Membrane, Simple Set Control Switch		1
14	053385	Standoff, 5/8" Threaded PCB		4
15	053377	PCB Assembly, Simple Set Control		1
16	007814	Plate, Remote SimpleSet PCB Mount		1
17	F05011-18	Washer, #10 SAE Flat		2
18	F05004-18	Screw, #10-24 x 5/8" Unslotted Indent Hex Head Machine		2
19	F05010-14	Nut, #10-24 Self-Locking Hex		4
20	053654	Standoff, .100" Male-Male Quick-Fit		4
21	053631	PCB Assembly, Remote SimpleSet Driver		1
22	053634	Harness Assembly, Remote SimpleSet Control		1
23	053629	Cable Assembly, Remote SimpleSet Interface		1
24	069632	Decal, Control Box 4 x Warning		1

2.7 Simple Set Control (Standard Remote Power Box)

HD0236-2
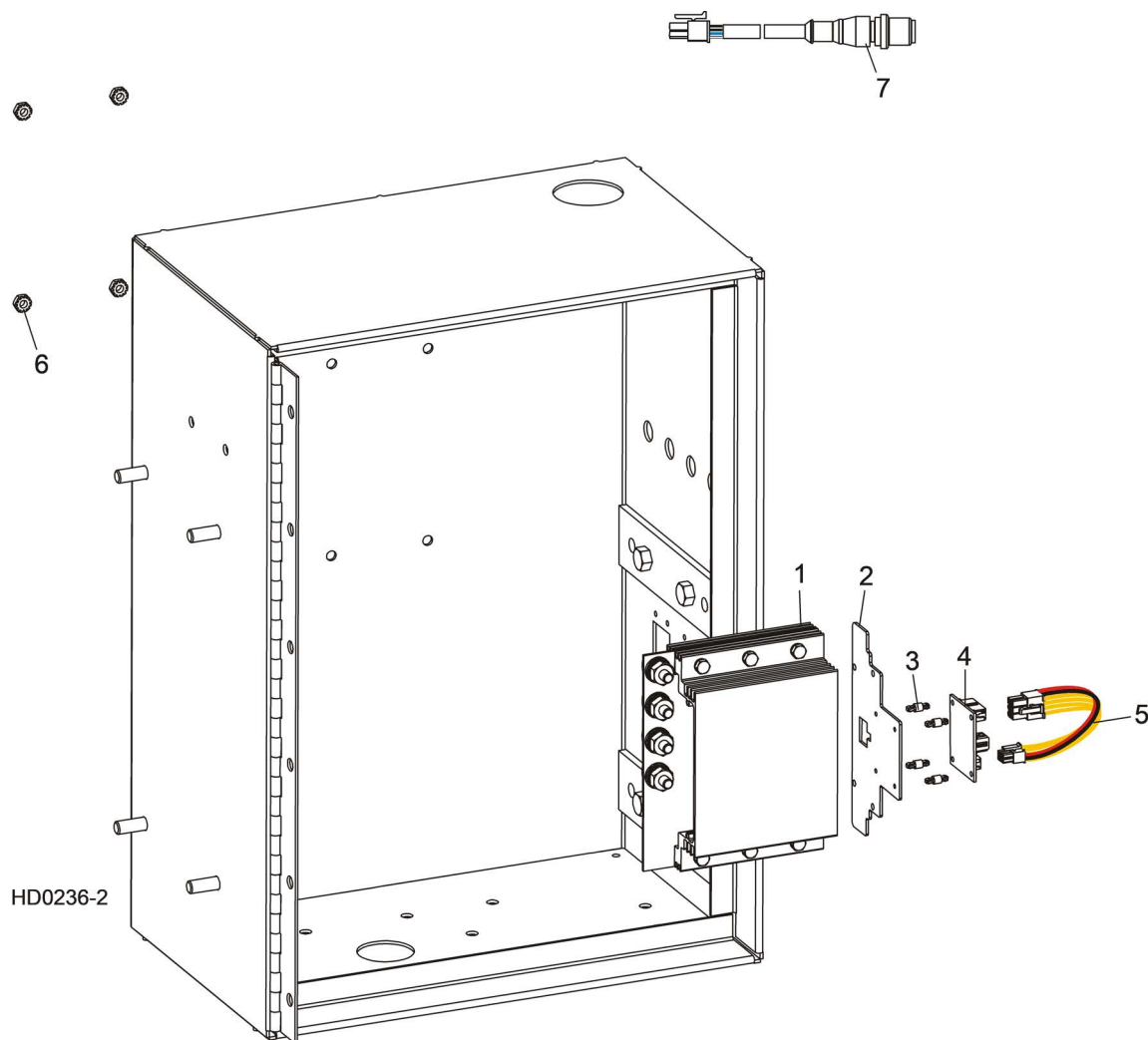
REF	PART #	DESCRIPTION	COMMENTS	QTY.
	053681	**H-BRIDGE ASSEMBLY, REMOTE SIMPLESET**		1
1	053373	H-Bridge Assembly, SimpleSet		1
2	053633	Plate, Remote SimpleSet Front		1
3	053654	Standoff, .100" Male-Male Quick-Fit		4
4	053630	PCB Assembly, Remote SimpleSet Receiver		1
5	053633	Harness Assembly, Remote SimpleSet Bridge		1
6	F05010-14	**NUT, #10-24 SELF-LOCKING HEX**		4
7	053632	**CABLE ASSEMBLY, REMOTE SIMPLESET SENSOR**		1

2.8 Simple Set Control (LX150/250, SSW-150-A)
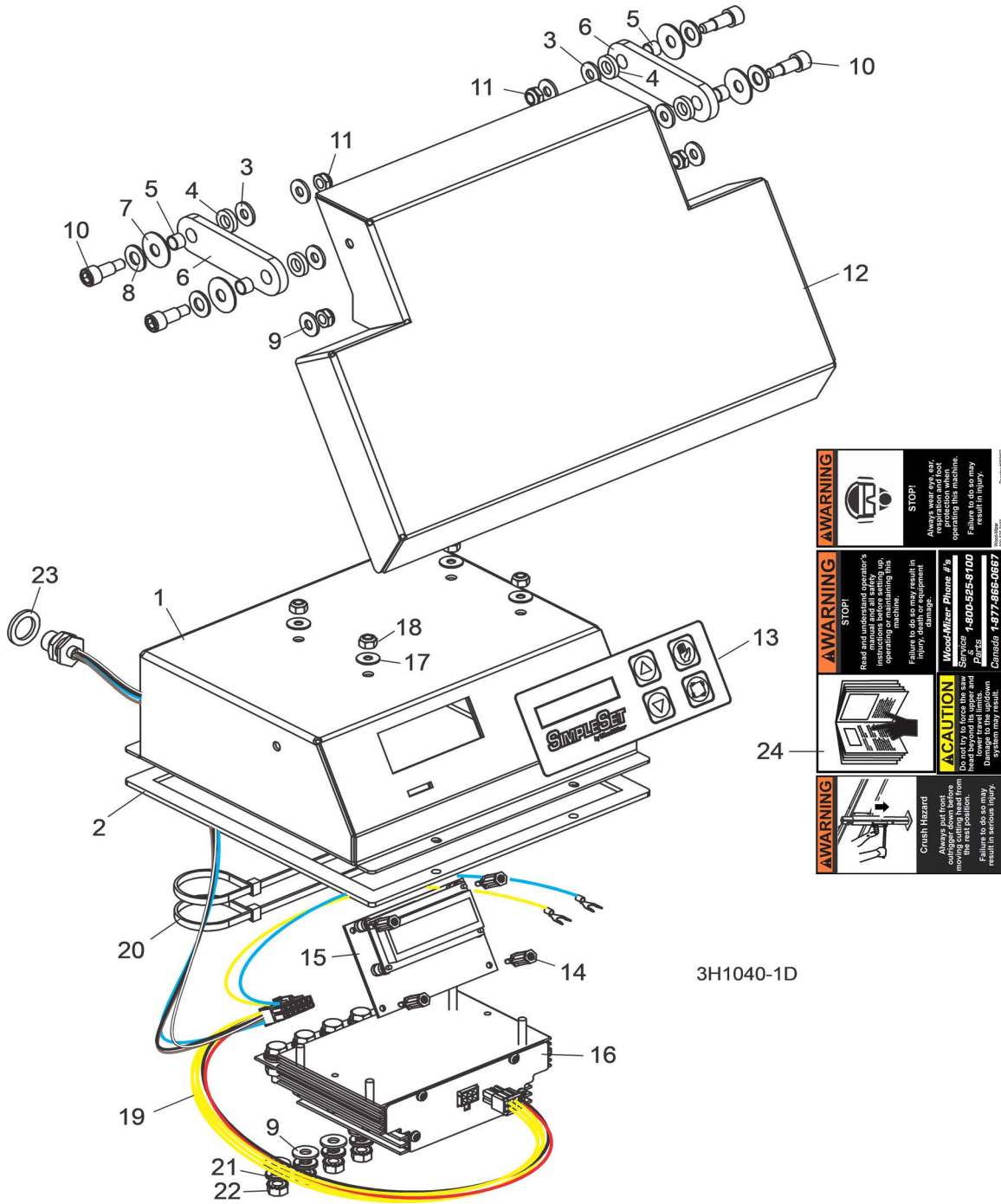
3H1040-1D

REF	PART #	DESCRIPTION	COMMENTS	QTY.
	073694	**CONTROL ASSEMBLY, SIMPLE SET**		1
1	006845	Box Weldment, Simple Set Control		1
2	006863	Gasket, Simple Set Control Box		1
3	F05011-11	Washer, 1/4" SAE Flat		4
4	F05011-92	Washer, 5/16" Nylon Flat		4
5	016655	Bushing, 5/16" ID x 3/8" OD x 1/4" Bronze		4

REF	PART #	DESCRIPTION	COMMENTS	QTY.
6	006872	Plate, Simple Set Control Cover Link		2
7	F05011-93	Washer, 5/16" Belleville		4
8	F05011-17	Washer, 5/16" SAE Flat		4
9	F05011-11	Washer, 1/4" SAE Flat		8
10	F05006-69	Bolt, 5/16" x 1/2" Shoulder 1/4-20 Thread Stainless		4
11	F05010-156	Nut, 1/4-20 Hex Half Nylon Lock		4
12	006846	Cover, Simple Set Control		1
13	053347	Membrane, Simple Set Control Switch		1
14	053385	Standoff, 5/8" Threaded PCB		4
15	073695	PCB Assembly, Simple Set Control		1
16	053373	H-Bridge Assembly, Simple Set		1
17	F05011-18	Washer, #10 SAE Flat		4
18	F05010-160	Nut, #10-24 Hex Nylon Lock		4
19	053379	Harness Assembly, Simple Set Control		1
20	F05089-3	Tie Wrap, 3/16" x 6" UV Black		2
21	F05011-14	Washer, 1/4" Split Lock		4
22	F05010-9	Nut, 1/4-20 Self-Locking Hex		4
23	F05011-19	Washer, 5/8" x 15/16" x .094 Nylon	Added to better secure harness plug (Rev. A.03).	1
24	069632	Decal, Control Box 4 x Warning		1

SECTION 3   ELECTRICAL INFORMATION

NOTE: SimpleSet wiring for **remote sawmills** is provided in the sawmill wiring diagrams.

3.1   Wiring Diagram (Standard)
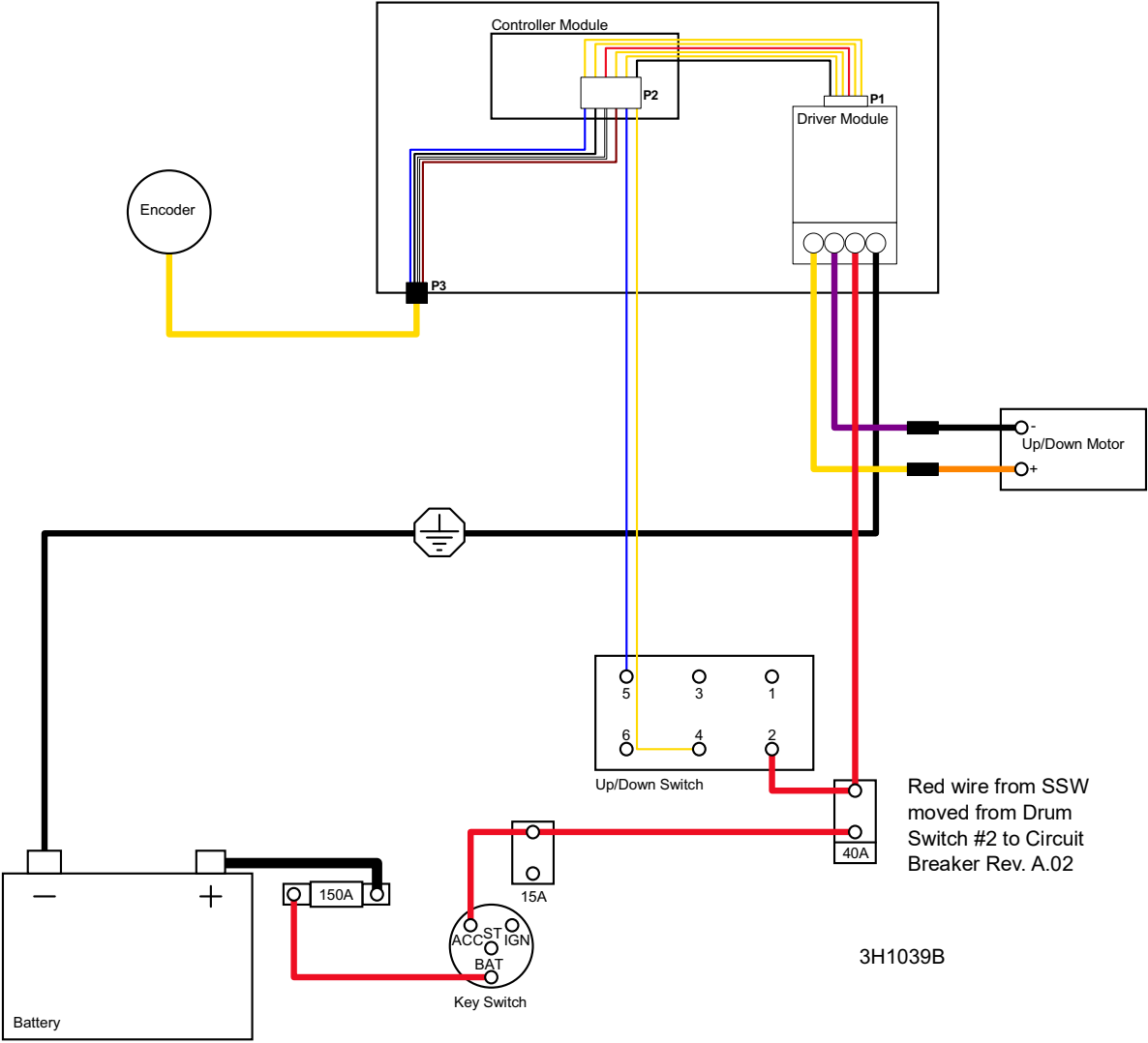
NOTE: SimpleSet wiring for **remote sawmills** is provided in the sawmill wiring diagrams.

3.2 Wiring Diagram (LX150/LX250 installed)

Equipped with SimpleSet

SOL4/SOL5 Legend