

Farm King

OPERATOR AND PARTS MANUAL

ELECTRIC HOPPER MOVER AND WINCH

Models 13" Backsaver Auger

Farm King



ASSEMBLY

ELECTRIC WINCH

NOTE: The following images may not show your winch exactly as it appears but the procedure is correct.

Remove the cable from the hand winch (if equipped).

Remove the hand winch from the input box (if equipped).

NOTE: 13114 Model: Skip Instructions related to Figure 5, and attach winch as detailed in Figure 6 on lowest mount welded to the tube.

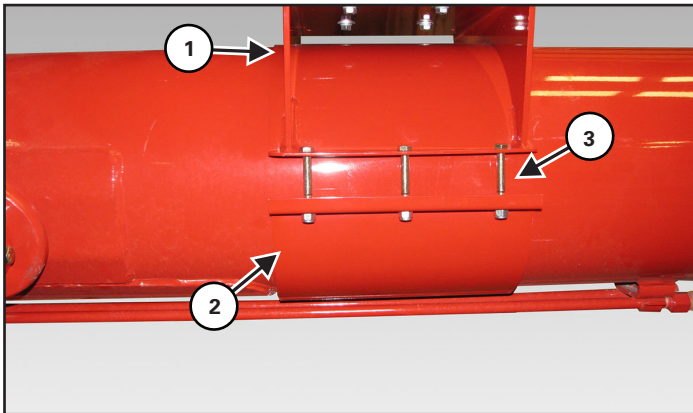


Figure 5

Position the upper winch mount (Item 1) on top of the bottom tube (approximately 32" from the lift arm boom) [Figure 5].

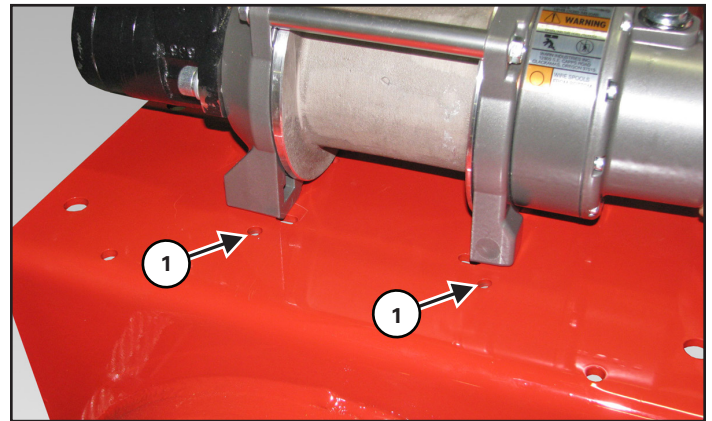
NOTE: Loosen the hydraulic tube clamps to allow the lower winch mount to be installed.

Position the lower winch mount (Item 2) with upper winch mount. Install three 3/8" x 2-3/4" bolts (Item 3) through the two mounts and install one 3/8" lock nut on each bolt (both sides) [Figure 5].

NOTE: Center and level the upper winch mount on the top of the bottom tube.

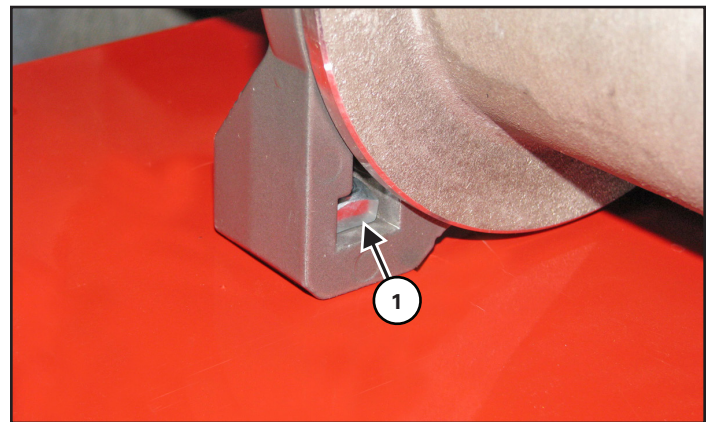
Tighten bolts and lock nuts until the two mounts are securely fastened around the bottom tube.

Figure 6

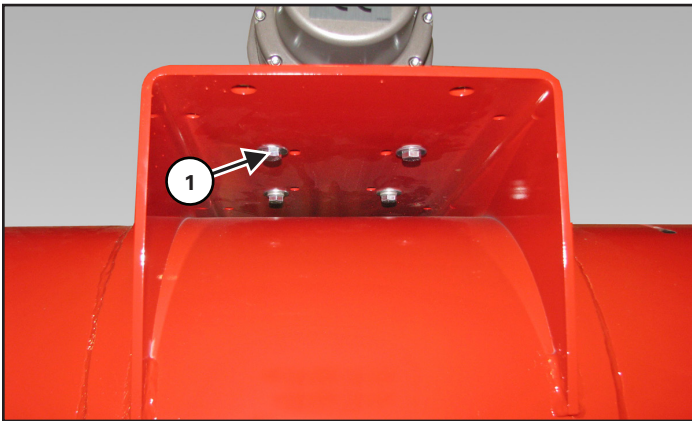


Align the winch with the four holes (Item 1) on the upper mount [Figure 6].

Figure 7



Install one 3/8" square head nut (Item 1) and 3/8" lock washer into each foot of the winch (hardware supplied with winch) [Figure 7].

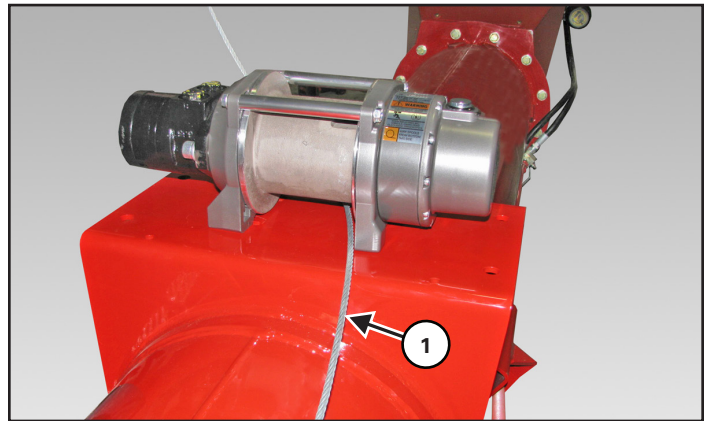
Figure 8

Install four 3/8" x 1-1/4" bolts (Item 1) and 3/8" flat washers up through the bottom the mount and to the square head nuts [Figure 8].

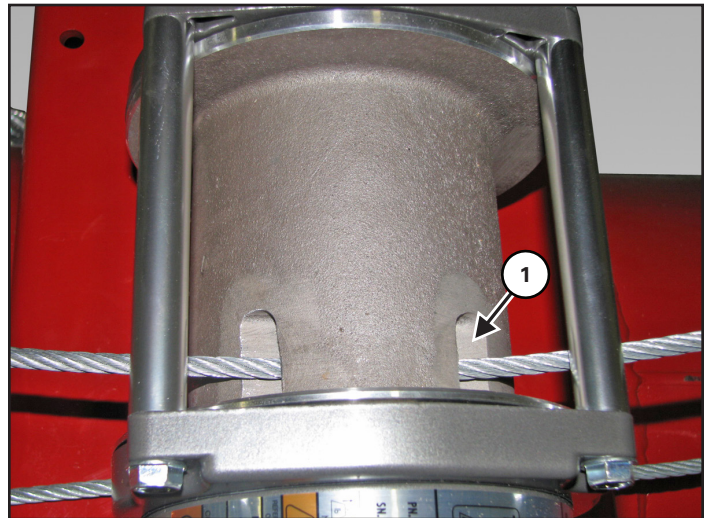
**CUT HAZARD**

To prevent injury to fingers and hands:

- Always wear heavy leather gloves when handling a wire rope.
- Never let wire rope slip through your hands.

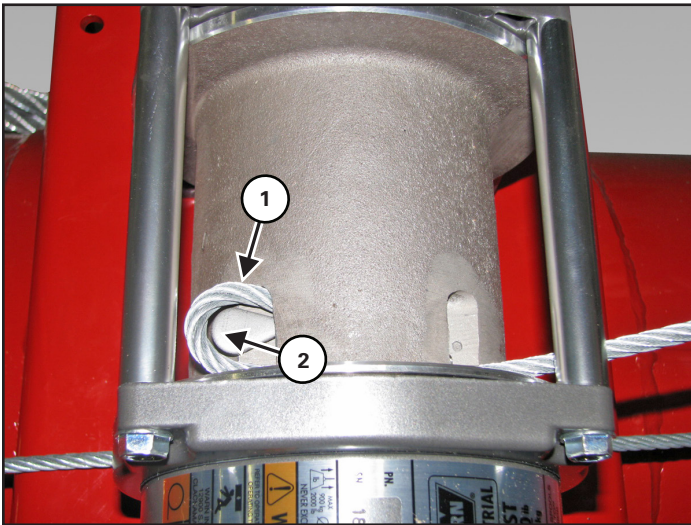
Figure 9

Route the winch cable (Item 1) through the end pulley of the lift boom, down through the bottom pulley of the lift boom, across the top of the bottom tube and underneath the winch [Figure 9].

Figure 10

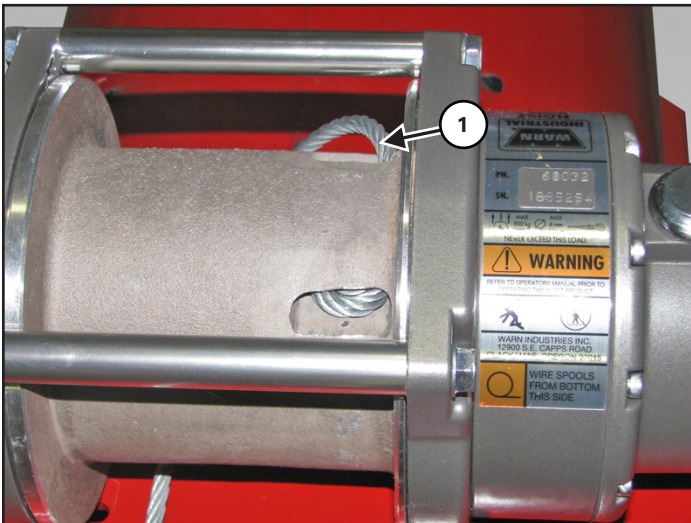
With the winch cable routed under the winch, feed the cable back through the two slots (Item 1) of the winch [Figure 10].

Figure 11



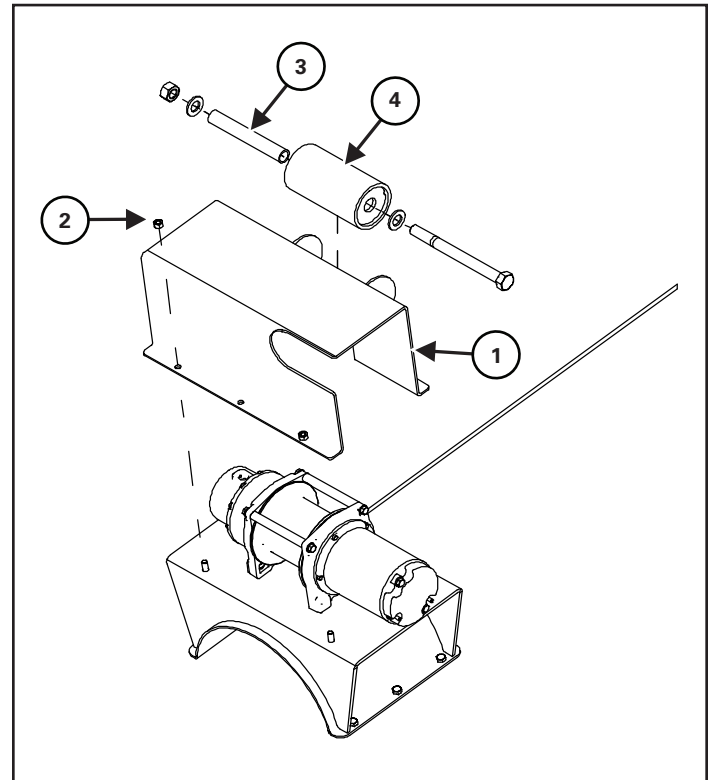
Loop the tail end (Item 1) of the cable and feed back into the slot, install the wedge (Item 2) inside the loop [Figure 11].

Figure 12



Pull back on the cable (Item 1) until the loop and wedge are inside the slot [Figure 12].

Figure 13

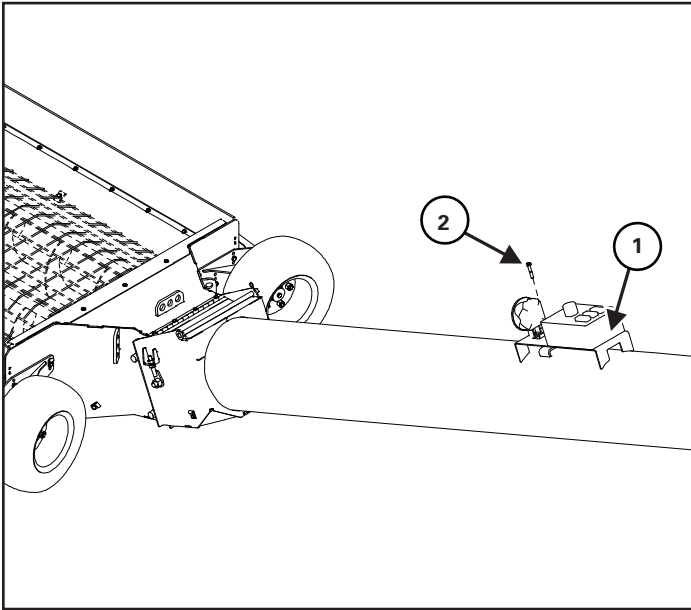


Install the winch shield (Item 1) onto the winch mounting plate using four 3/8" x 1" hex bolts (Item 2) and 3/8" lock nuts. Make sure the bracket on the shield faces the discharge [Figure 13].

Install the roller core (Item 3) inside the roller (Item 4). Attach the roller to the bracket on the shield using one 3/4" x 8-1/2" hex bolt, two 3/4" flat washers (on both sides of roller), and one 3/4" lock nut.

CONTROL BOX

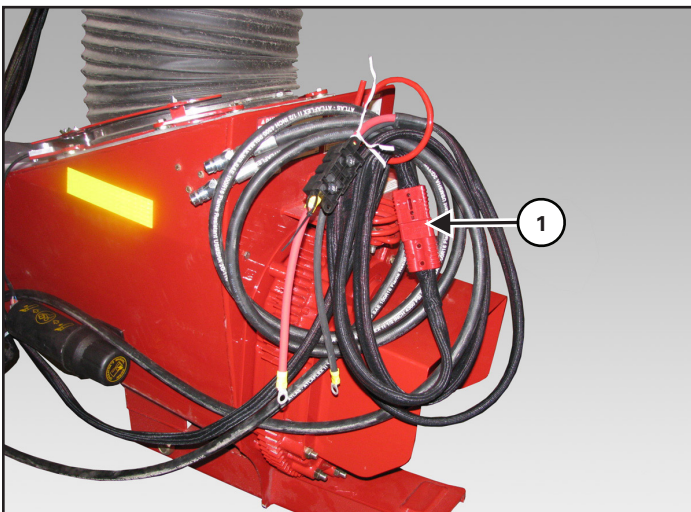
Figure 14



Position the control box and mount (Item 1) on the intake tube bracket. Attach the mount halves using one 5/16" x 2" hex bolt and 5/16" lock nut (Item 2) [Figure 14].

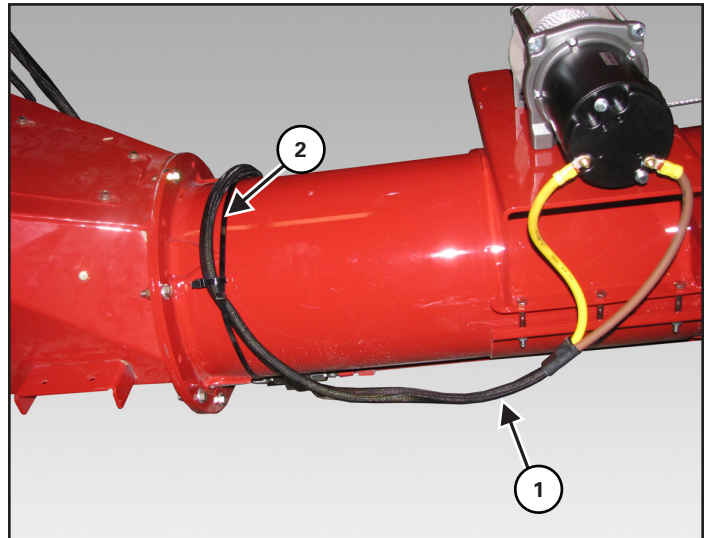
The control box and mount must be centered on the intake tube. Face the light towards the hopper.

Figure 15



Route the electrical harnesses (Item 1) from the control box along the input box and install into the storage bracket. Secure all harnesses [Figure 15].

Figure 16

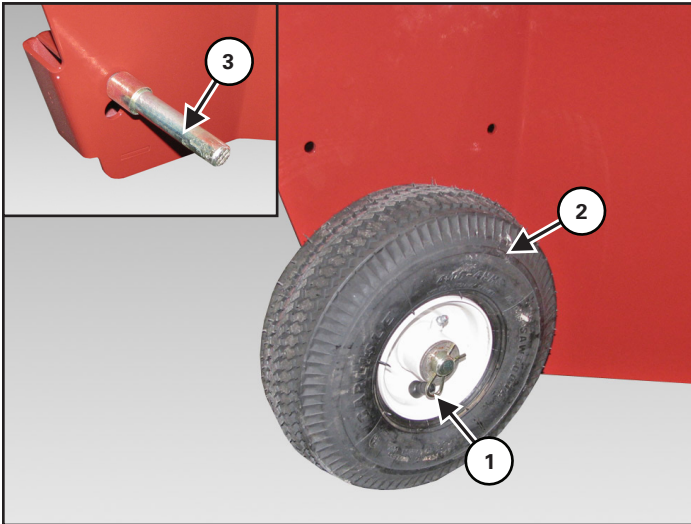


Route the harness (Item 1) from the control box and connect the wires to the winch motor [Figure 16].

Secure the harness to the auger tube using clamps (Item 2) [Figure 16].

WHEEL MOTOR

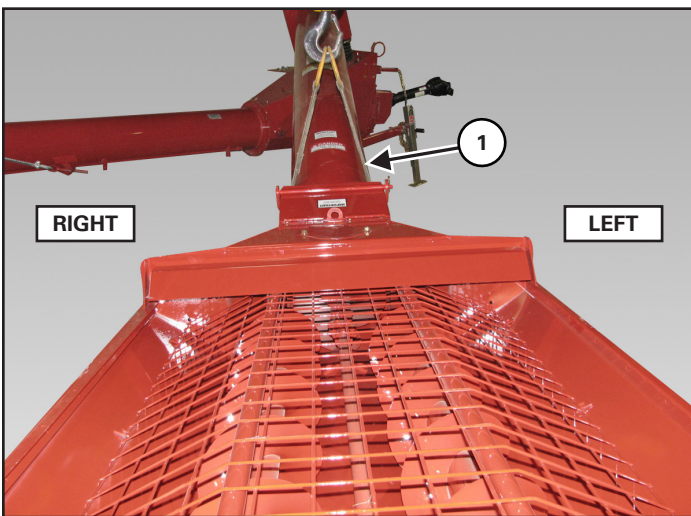
Figure 17



Remove the retaining clip (Item 1), washer, and tire (Item 2) from the hopper (the same side as intake auger). Remove the shaft (Item 3) [Figure 17].

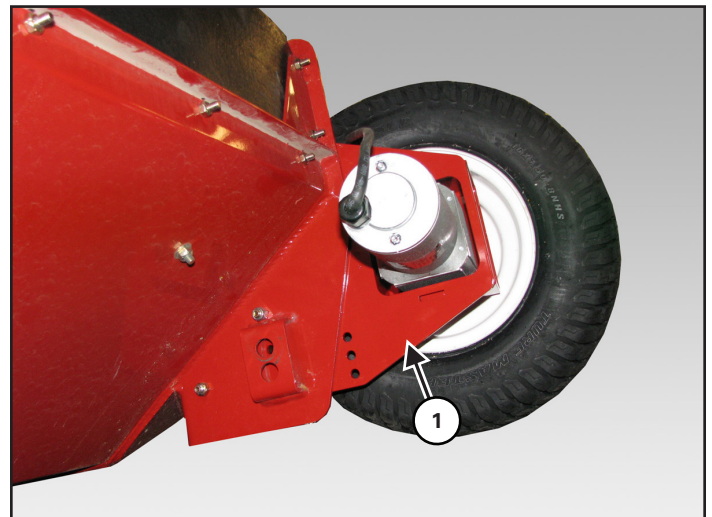
Repeat to remove opposite wheel and shaft.

Figure 18



Right hand (RH) and left hand (LH) sides of the hopper are as viewed from the end of the hopper, looking towards the intake auger (Item 1) [Figure 18].

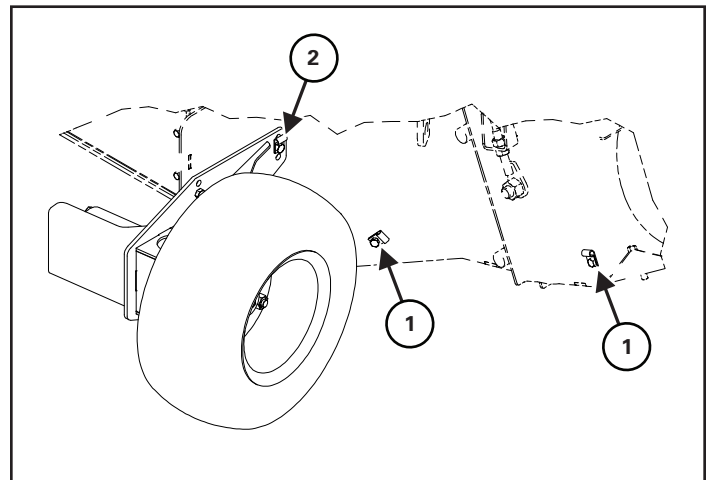
Figure 19



Install the left hand (L) electric motor / wheel assembly (Item 1) onto the hopper using three 3/8" x 1" bolts and 3/8" lock nuts. Tighten bolts and nuts [Figure 19].

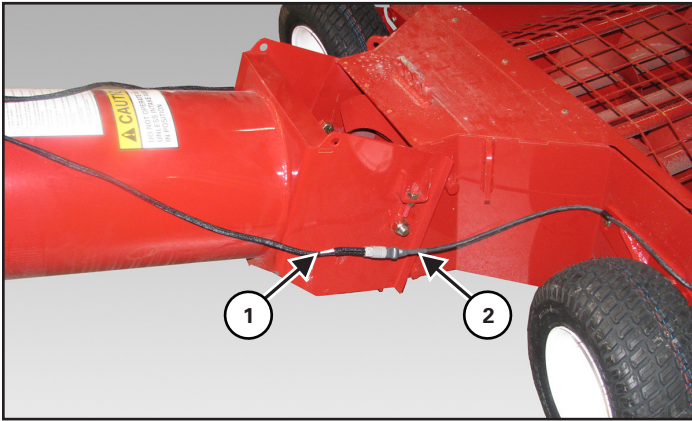
Repeat for installing the right hand (R) electric motor / wheel assembly.

Figure 20



Install three cable clamps (Item 1) and 5/16" x 5/8" hex bolts to the side the hopper. Repeat for the opposite side [Figure 20].

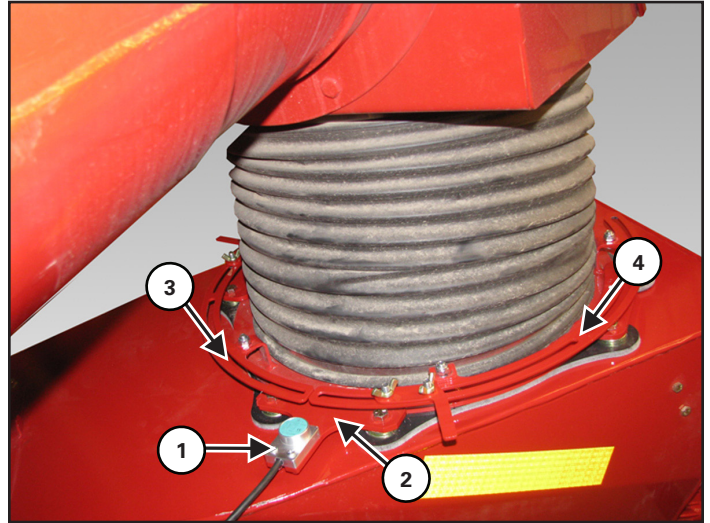
Install the cable clamp on the motor bracket using existing 3/8" x 1" bolt (Item 2) [Figure 20].

Figure 21

Install wiring harness connector (Item 1) to right hand (R) electric motor wheel harness connector (Item 2) as shown. Secure the cable using the cable clamps **[Figure 21]**.

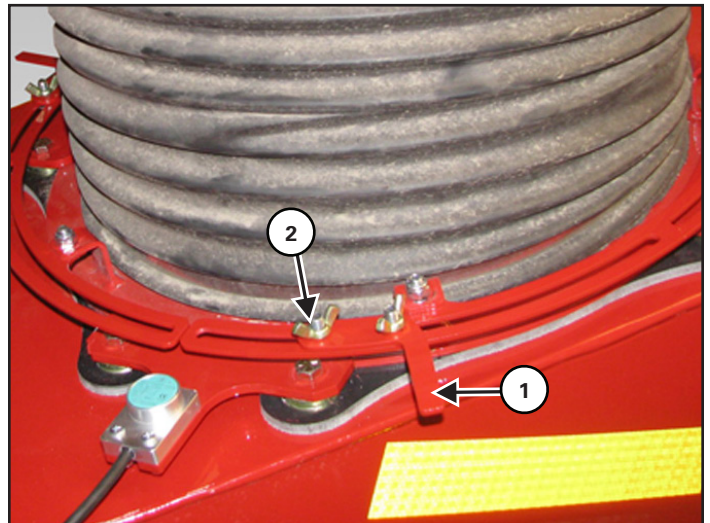
Repeat procedure for the left hand (L) electric motor.

PROXIMITY SENSOR

Figure 22

Install proximity sensor (Item 1) onto the ring clamp (Item 2) **[Figure 22]**.

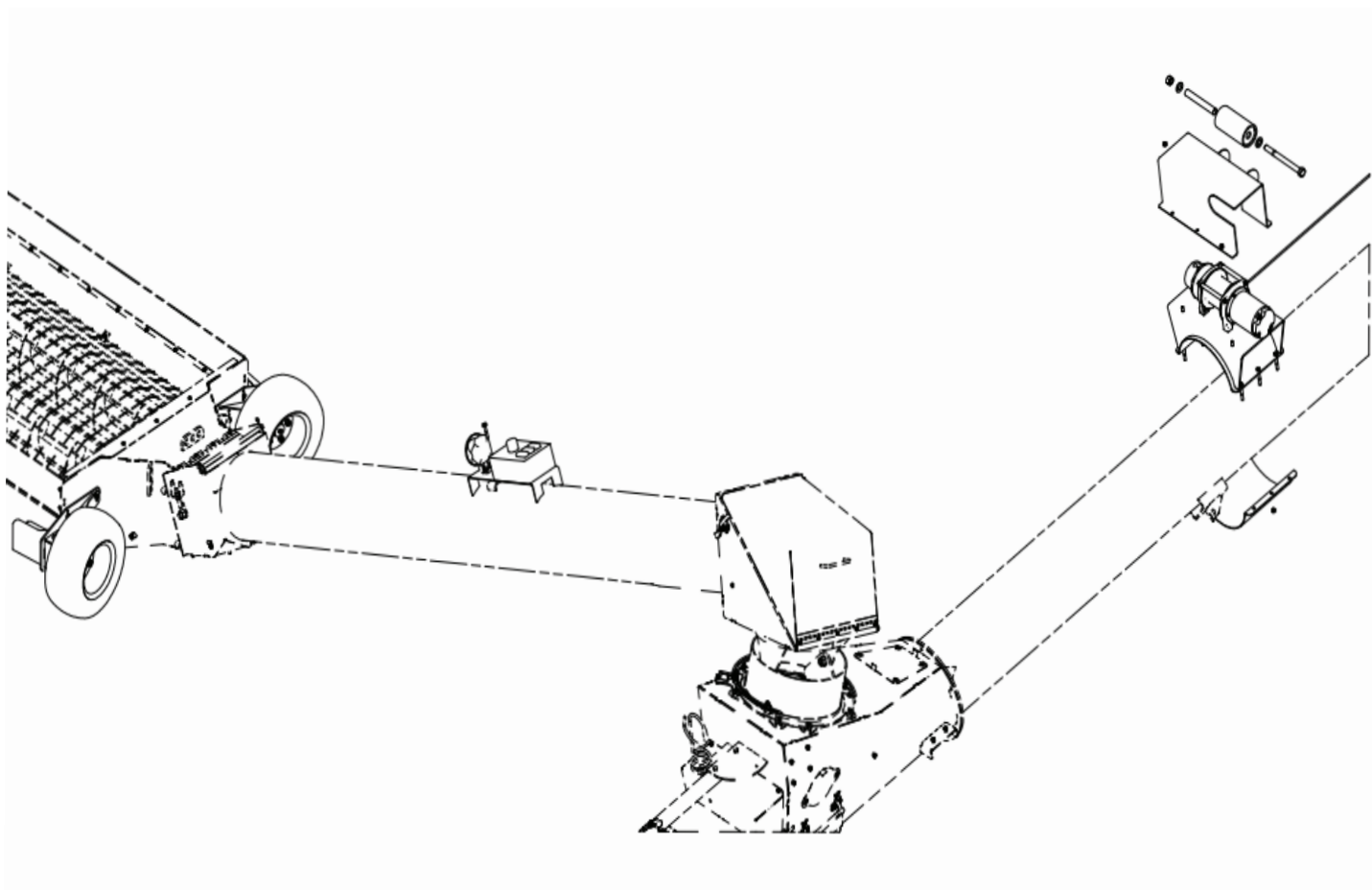
Align the proximity rails (Items 3 & 4) with the tabs and install four bolts and lock nuts **[Figure 22]**.

Figure 23

Install the two proximity indicators (Items 1) with the four bolts and wing nuts (Item 2) **[Figure 23]**.

Connect the wire harness to the proximity sensor.

FINAL ASSEMBLED LAYOUT

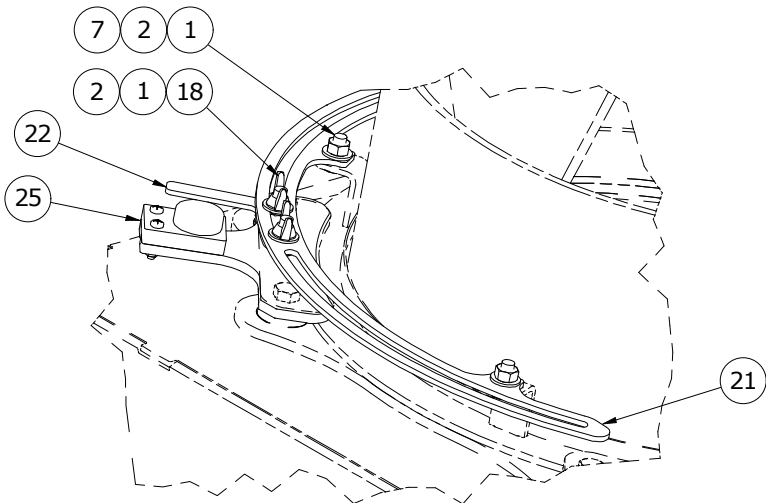


Farm King

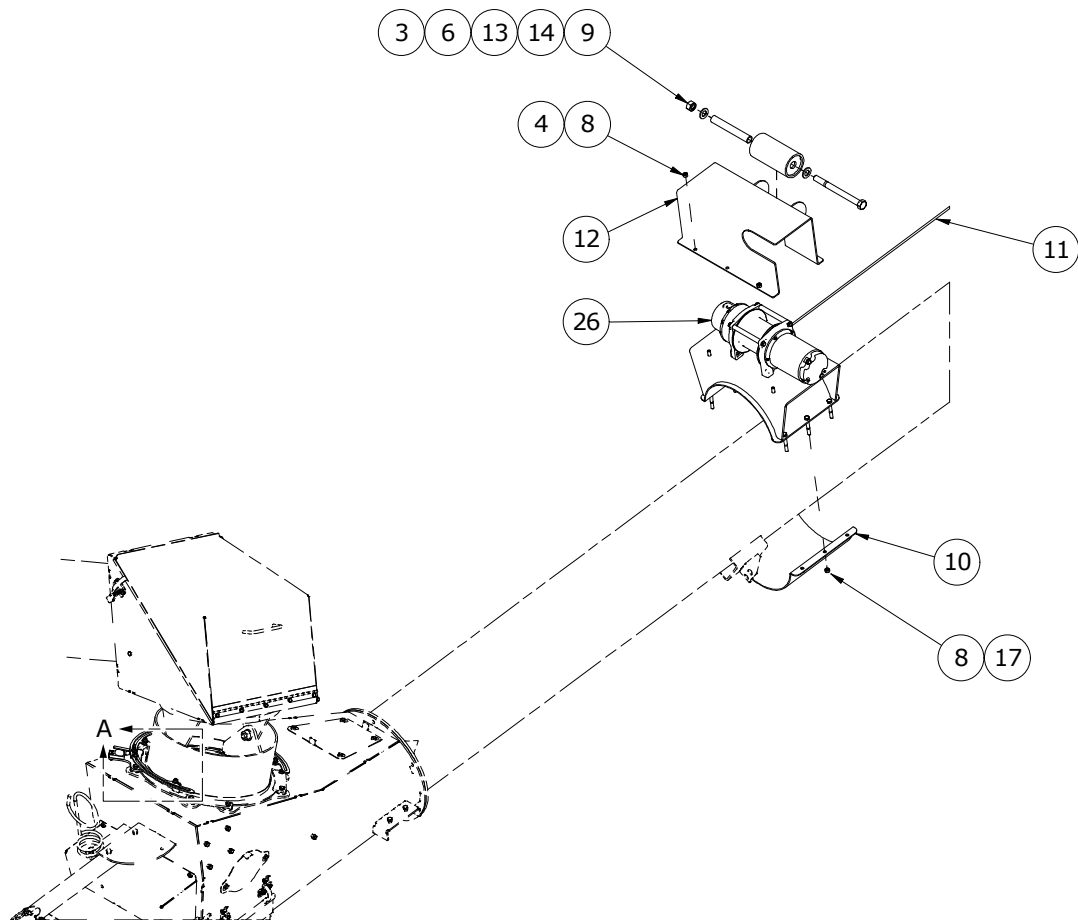


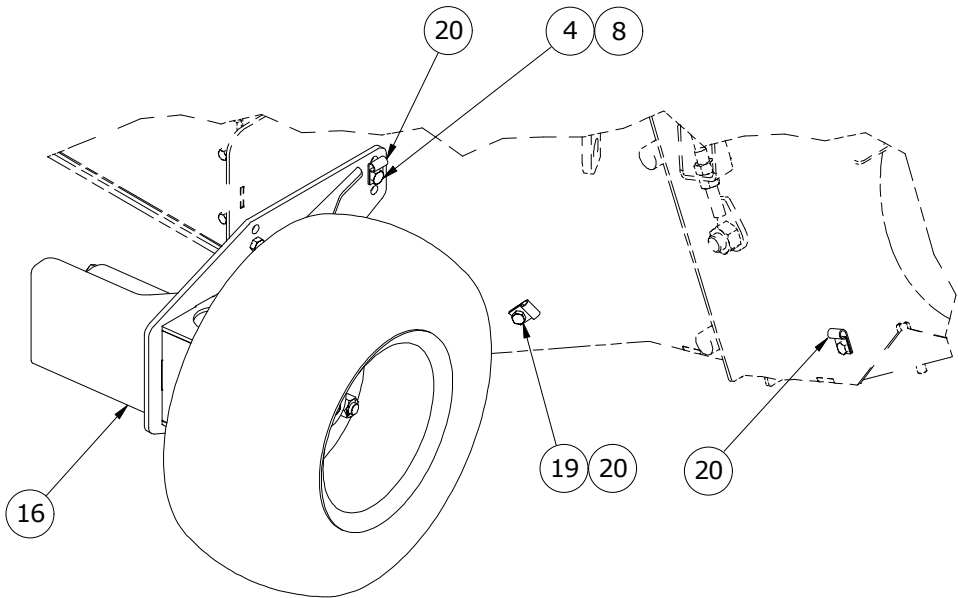
PART IDENTIFICATION

BS13 ELECTRIC MOVER AND WINCH

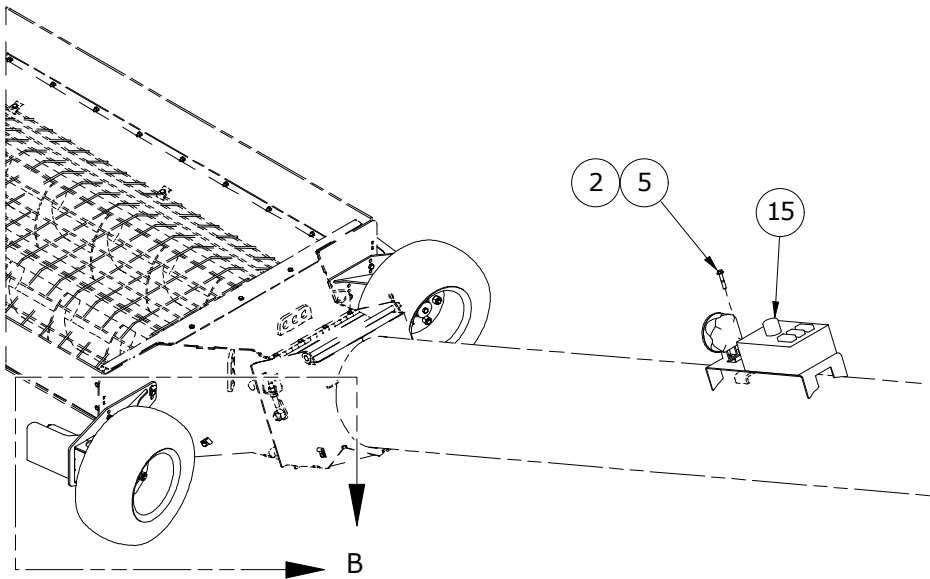


DETAIL A



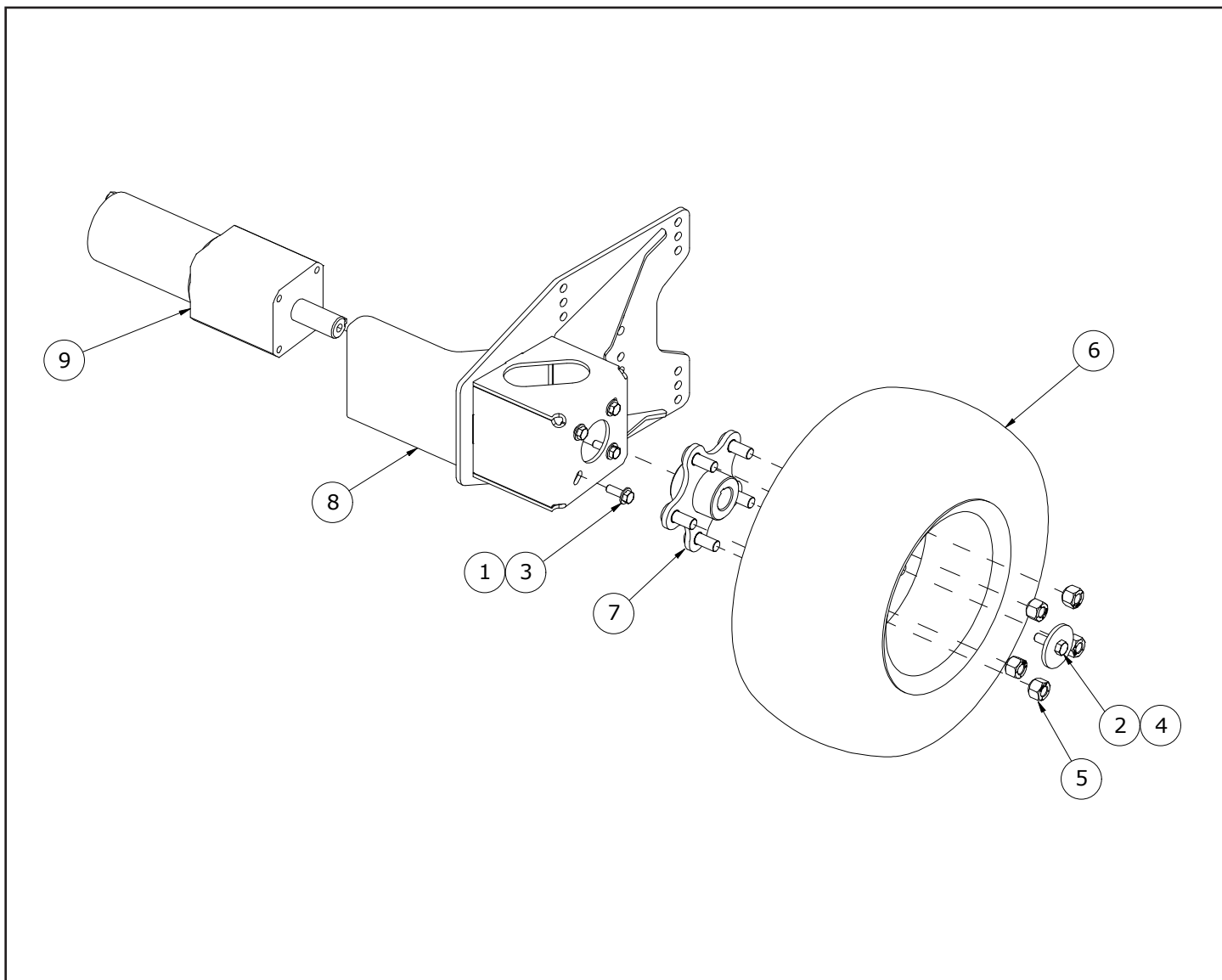


DETAIL B



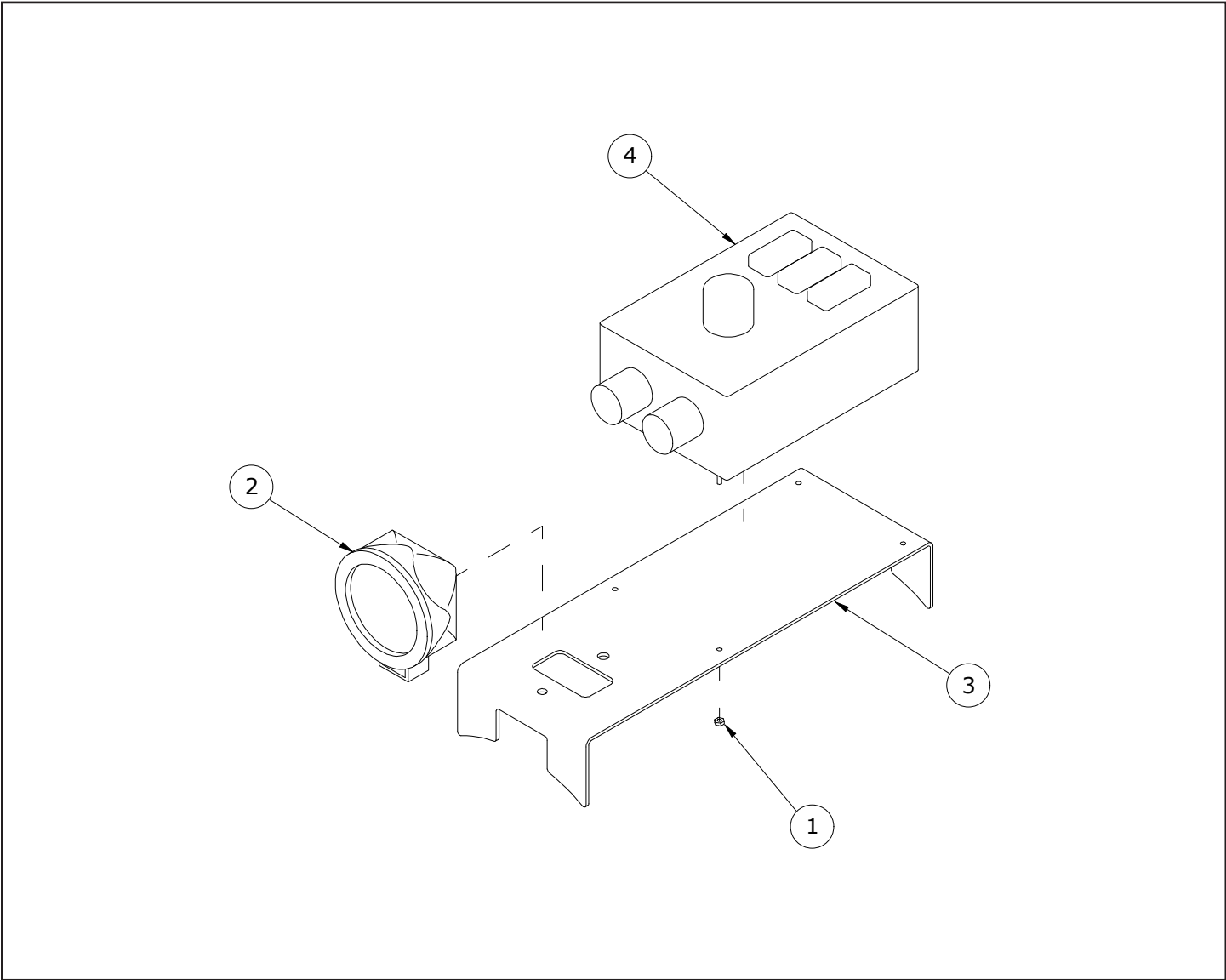
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	81185	5/16" X 3/4" CARRIAGE BOLT (PL)	8
2	81546	5/16" FLAT WASHER (PL)	9
3	84050	3/4" S.A.E. FLAT WASHER (PL)	2
4	86170	3/8" X 1" HEX BOLT GR.5 (PL)	16
5	810640	5/16" X 2" HEX BOLT (PL)	1
6	811908	BOLT HEX 0.750NC X 8.50 GR5PL	1
7	812362	5/16" LOCK NUT (PL)	4
8	812363	3/8" LOCK NUT (PL)	22
9	812365	3/4" LOCK NUT (PL)	1
10	910496	HYD. WINCH MOUNT 3-BOLT CLAMP	1
11	910508	WINCH CABLE ASSEMBLY (1/4")	1
12	932132	WELDT-WINCH GUARD	1
13	932146	WELDT-ROLLER	1
14	932408	TUBE-ROLLER CORE	1
15	935658	ASSY-13" CTRL BOX MOUNT	1
16	941039	ASSY - HOPPER MOVER	2
17	967488	3/8" X 2 3/4" HEX BOLT (PL)	6
18	968601	5/16" WING NUT	4
19	BU500397-6	HEX BOLT 5/16 X 5/8" (PL)	2
20	SZ000566	5/16X0.406 HOLE VINYL DIP CLAMP	6
21	SZ000956	13" MRD PROXIMITY RAIL	2
22	SZ000968	PROXIMITY INDICATOR	2
23*	SZ000998	HARNESS, ELEC MVR, WINCH	1
24*	SZ000999	WINCH HARNESS	1
25	SZ001020	10/13" PROX SENSOR MNT ASMBLY	1
26	SZ001053	13" ELEC WINCH MNT ASMBLY	1

* NOT SHOWN

MOVER MOTOR AND WHEEL

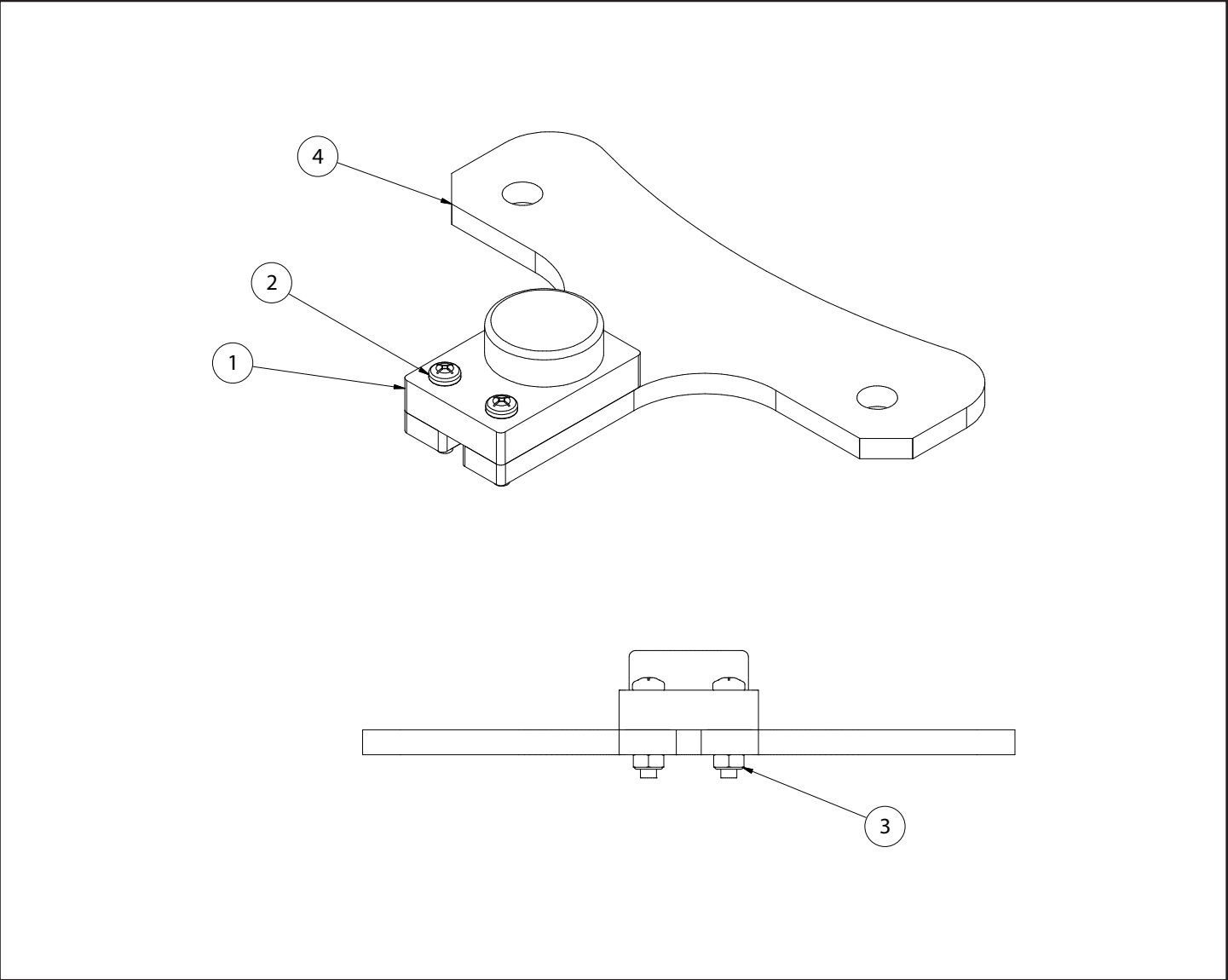
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	81546	5/16" FLAT WASHER (PL)	4
2	86171	3/8" X 1 1/4" HEX BOLT (PL)	1
3	812026	5/16" X 1" HEX BOLT (PL)	4
4	909180L	FLAT WASHER 7GA X 13/32"ID X 2"OD	1
5	915665	WHEEL STUD NUT-WB11	5
6	931708	16X6.50-8 SUPER LUG 5 BOLT	1
7	939763	WELDT - WHEEL DRIVE HUB	1
8	940049	WELDT - MOVER MOTOR MOUNT	1
9	SZ000892	MOTOR FOR ELEC HPPR MVR	1

CONTROL BOX



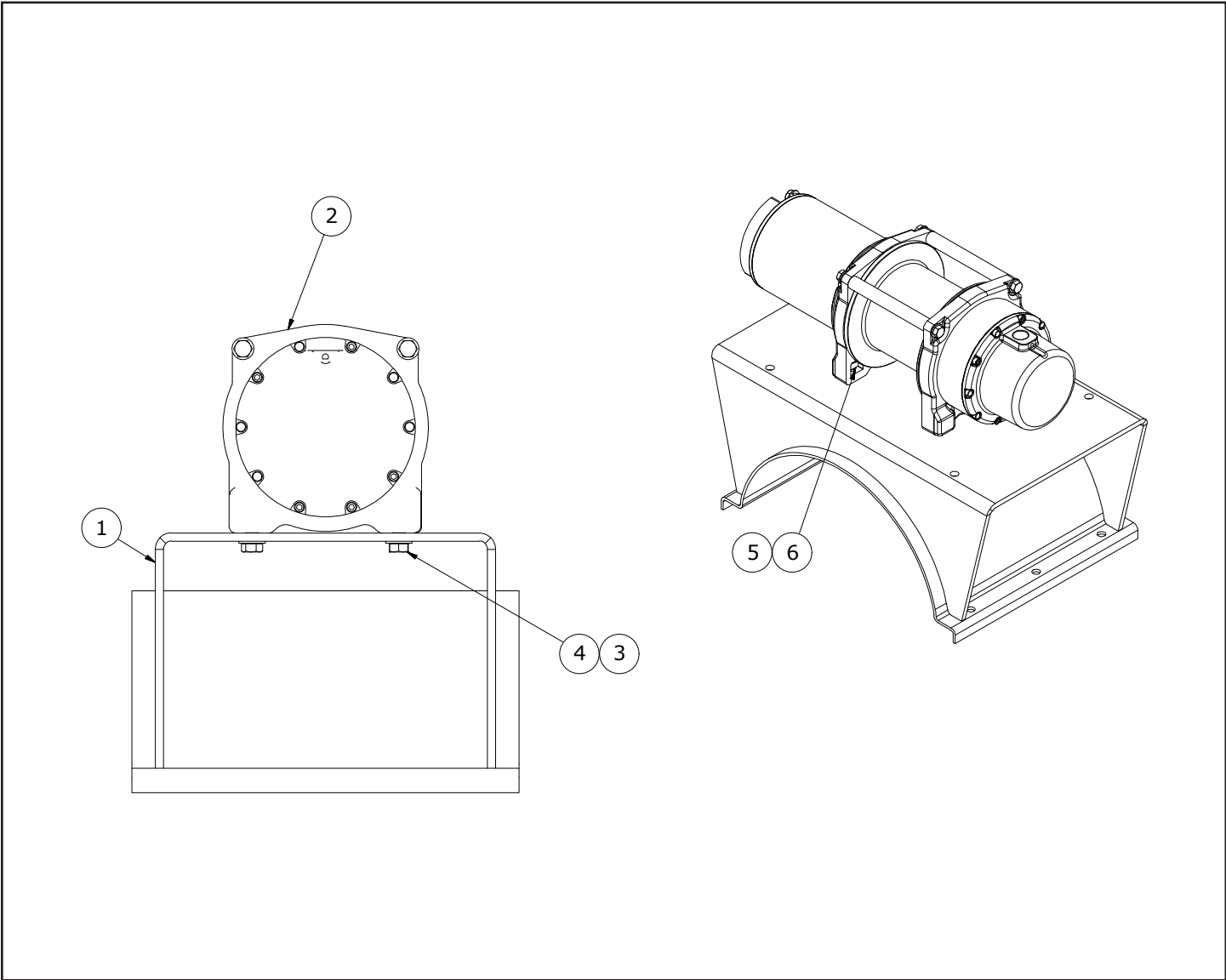
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	812537	NUT LOCK (NYLON) 0.136 NC GRB PL	4
2	933960	WORK LIGHT-LED W/ DEUTSCH CONNECTOR	1
3	935654	13" ELEC CTRL BOX MNT	1
4	SZ000997	ELECTRIC CTRL BOX, WINCH	1

PROXIMITY SENSOR



ITEM	PART NUMBER	DESCRIPTION	QTY.
1	SZ001000	PROX SWITCH W/ CONNECTOR	1
2	SZ001021	SCREW MACH #8-32 X 0.875 PANHD	2
3	812537	NUT LOCK (NYLON) 0.136 NC GRB PL	2
4	SZ001238	13" & 16" PROXIMITY MOUNT, 2016	1

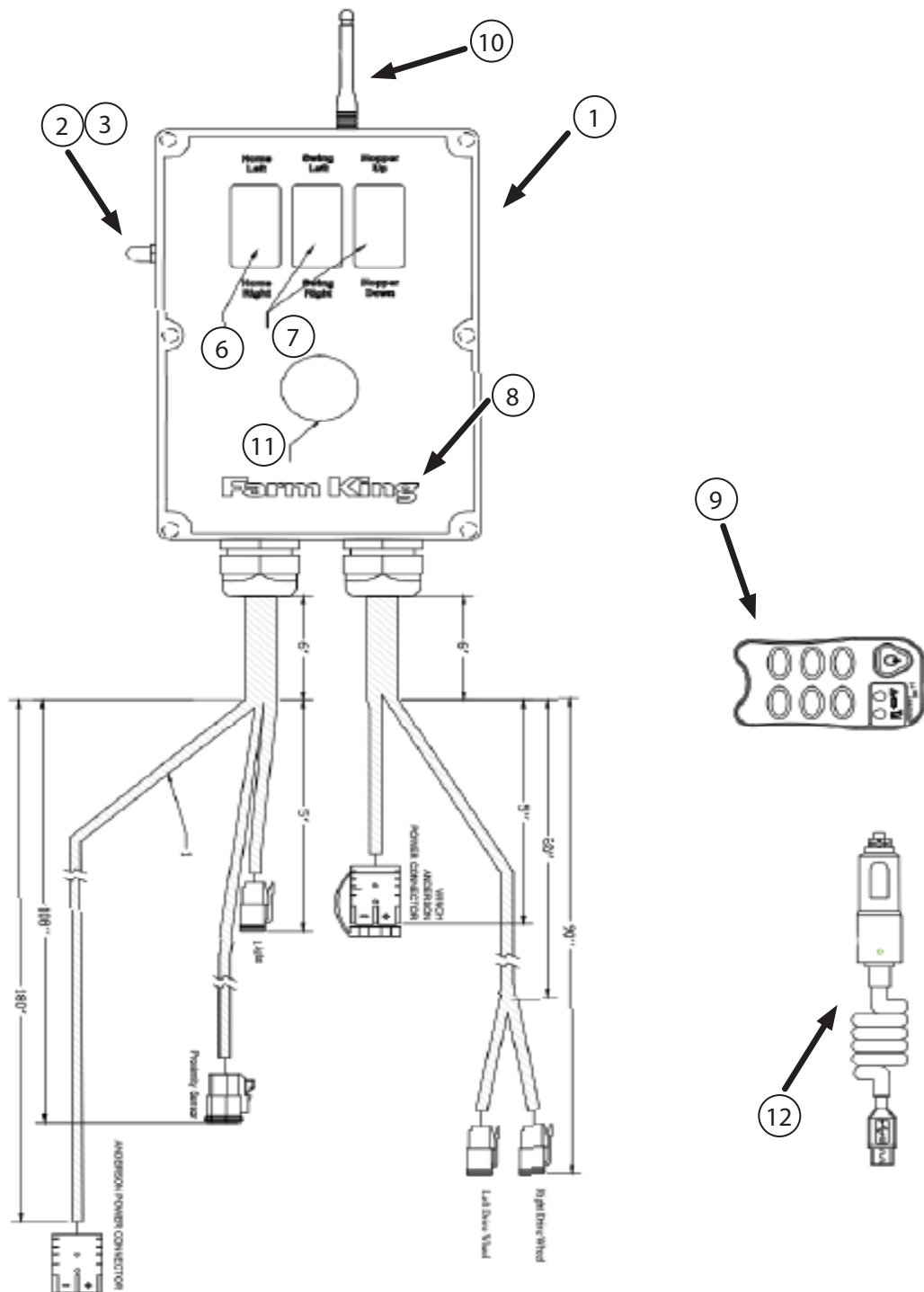
WINCH

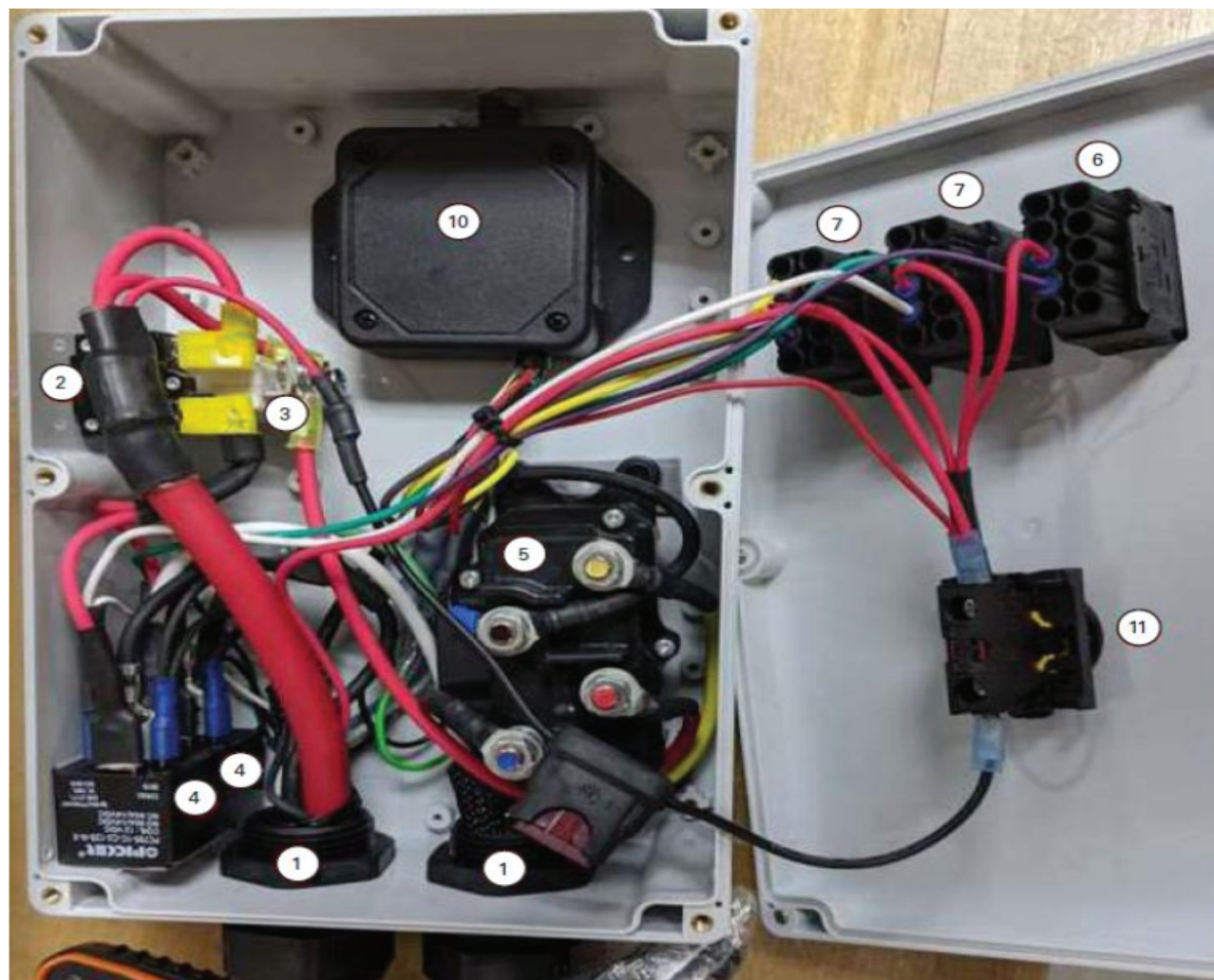


ITEM	PART NUMBER	DESCRIPTION	QTY.
1	910492	WELDT - HYD. WINCH MOUNT (NOT USED ON 13114 MODELS)	1
2	SZ001195	WARN DC2000MF ELEC HOIST	1
3	-	WASHER FLAT 3/8	4
4	-	BLT HHCS 3/8-16UNC 1-1/4" G5	4
5	-	3/8 SQUARE NUT	4
6	-	3/8" LOCK WASHER (PL)	4

NOTE: ITEMS 3-6 ARE SUPPLIED WITH SZ001195

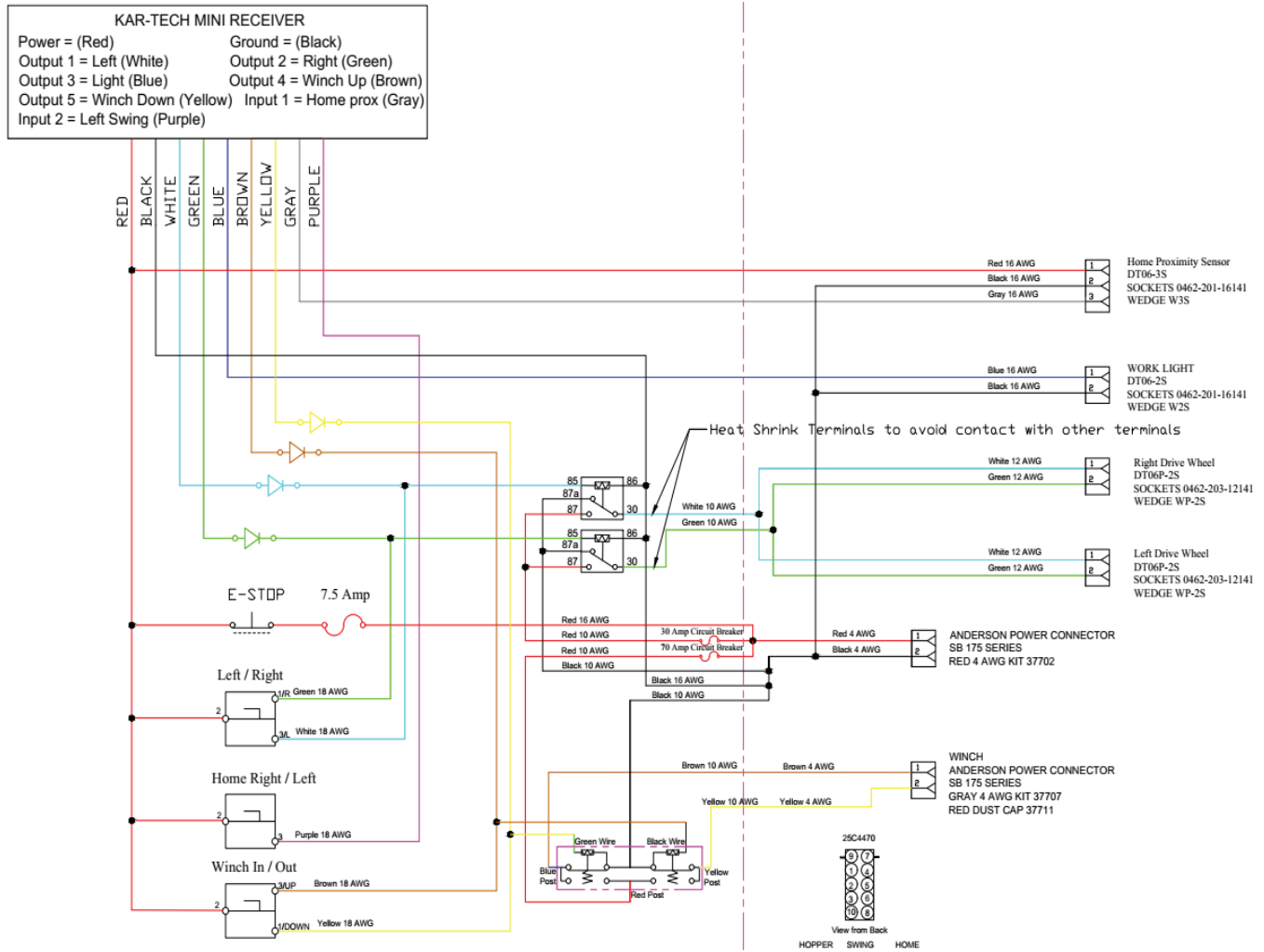
SZ000997 CONTROL BOX



SZ000997 CONTROL BOX


ITEM	PART NUMBER	DESCRIPTION	QTY.
1	931903	WIRE HARNESS	1
2	931904	30 AMP BREAKER	1
3	931905	70 AMP BREAKER	1
4	931906	60 AMP RELAY	2
5	931907	12V 160 AMP CONTACTOR	1
6	931908	2 POSITION SWITCH (SWING HOME CONTROL)	1
7	931909	3 POSITION SWITCH (WINCH AND SWING CONTROL)	2
8	931910	FACE PLATE LABEL	1
9	SZ001002	7 BUTTON REMOTE (TRANSMITTER)	1
10	931911	RECIEVER	1
11	931912	E-STOP BUTTON	1
12	SZ000921	REMOTE CONTROL CHARGER	1
13	SZ000997	CONTROL BOX (CONTAINS ITEMS 1-12)	1

SZ000997 CONTROL BOX WIRING SCHEMATIC



CONTROL SYSTEM OPERATIONAL NOTES

Home / Operation

- If the Home Button is pressed and the Home Left Swing input is activated, the auger will swing right for 2 seconds while ignoring input from the Home / Operation Prox input, and then keep swinging until the Home / Operation Prox input is deactivated. If the Home / Operation Prox is not deactivated within 20 seconds the Right Auger Swing output will be turned off. **Once the home button is pressed the swing Left or the Operation button needs to be pressed before the home function will work again.**
- If the Home Button is pressed and the Home Left Swing input is deactivated the auger will swing left for 2 seconds while ignoring input from the Home / Operation Prox input, and then keep swinging until the Home / Operation Prox input is deactivated. If the Home / Operation Prox is not deactivated within 20 seconds the Left Auger Swing output will be turned off. **Once the home button is pressed the swing Right or the Operation button needs to be pressed before the home function will work again.**
- If the Operation Button is pressed and the Home Left Swing input is activated, the auger will swing left for 2 seconds while ignoring input from the Home / Operation Prox input, and then keep swinging until the Home / Operation Prox input is deactivated. If the Home / Operation Prox is not deactivated within 20 seconds the Left Auger Swing output will be turned off. **Once the Operation button is pressed the swing Right or the Home button needs to be pressed before the home function will work again.**
- If the Operation Button is pressed and the Home Left Swing input is deactivated, the auger will swing right for 2 seconds while ignoring input from the Home / Operation Prox input, and then keep swinging until the Home / Operation Prox input is deactivated. If the Home / Operation Prox is not deactivated within 20 seconds the Right Auger Swing output will be turned off. **Once the Operation button is pressed the swing Left or the Home button needs to be pressed before the home function will work again.**

Light

- The light output will turn on when the transmitter is activated and will stay on for 10 minutes.
- If the auger is moved off the Home Prox the timer will restart the 10 minute timer.

REMOTE CONTROL PROGRAMMING

OPERATION:

Press and hold the power button on the transmitter until both LEDs turn on, then release. The green LED will flash rapidly when communication has been established with the receiver. The green LED flashes slowly if the receiver is off or there is no communication between the transmitter and receiver. Turn the receiver on and press the corresponding buttons on the transmitter keypad to turn ON and off the LEFT, RIGHT, WINCH UP, and WINCH DOWN outputs. The only way to turn off the LIGHT output early is to recycle power to the receiver with the transmitter off.

RECHARGING:

The red BATTERY LED on the transmitter will blink once every second when the battery is low and requires charging. Plug the charging connector into the port at the top of the transmitter. Observe orientation and do not use force. A solid red LED indicates battery is charging. Once the internal battery is fully charged, the red LED will turn off and the green LED will turn on. A fully discharged unit will take up to 3 hours to recharge. Use only approved chargers.

INDICATOR LIGHTS:

The receiver has two LED indicators, the red ERROR CODE indicator and the green SIGNAL indicator.

The green SIGNAL indicator flashes rapidly whenever there is communication between the transmitter and the receiver.

The red ERROR CODE indicator starts blinking once every second when there is no RF communication between the receiver and transmitter. It also blinks when there is a problem with the system in the form of an error code. Refer to the ERROR CODE CHART table for more information.

TEACH ID CODE:

To synchronize a new transmitter and receiver together use the following procedure:

1. Make sure both transmitter and receiver are off.
2. To get the transmitter into TEACH ID mode, press and hold the POWER button until both lights start to blink. Release the POWER button.
3. Apply power to receiver
4. Wait for 1 second or until the green and red LEDs on the transmitter stop blinking and green LED starts blinking rapidly.

CLONING TRANSMITTERS

WARNING! - ONLY ONE TRANSMITTER CAN BE ON AT A TIME, THEY CANNOT BE USED SIMULTANEOUSLY - use with CAUTION!

Occasionally, it is desirable to have more than one transmitter work with a single receiver. This is accomplished by a process called cloning. Cloning allows an additional transmitter (B) to have the same ID code as the original transmitter (A). If this feature is desired, use the following procedure:

1. Make sure both transmitters and the receiver are off
2. On Transmitter A, press and hold the POWER button for greater than 10 seconds. The LEDs will start to blink then release the power button.
3. On Transmitter B, press and hold LEFT, RIGHT, and the POWER button for a few seconds. The LEDs will start to blink then release the buttons.
4. Wait for ~1 second until both LEDs stop blinking on both units.
5. Cloning complete

If the cloning feature has been invoked and is no longer desired, the ID code of one of the transmitters needs to be changed. This will undo the transmitters. If this is desired, use the following procedure:

1. Make sure the receiver and transmitter are OFF
2. Press and hold buttons LEFT, OP, 8, and POWER simultaneously until both LEDs start toggling then release buttons
3. Press any button again to select a new ID
4. uncloning complete
5. Follow the SYNCHRONIZING TRANSMITTER AND RECEIVER procedure above to link the uncloned transmitter to a new receiver

TRANSMITTER SLEEP TIME PROGRAMING

The transmitter is factory set to turn off (sleep) after 15 minutes. To change the time the transmitter waits before going to sleep, use the following procedure:

1. Press and hold buttons HOME, OP, 8 and POWER simultaneously.
2. Release the buttons. At this point, both lights will blink once per second
3. Next, press one of the following buttons to adjust the sleep time:
 - RIGHT = 15 min
 - LEFT = 30 min
 - OP = 1 hr
 - HOME = 2 hr
 - Button 8 = sleep disabled (continuous on, use power switch to turn off)
4. Sleep time programming complete

www.farm-king.com

Farm King

301 Mountain Street South
Morden, MB R6M 1X7
E-mail: info@buhler.com
www.farm-king.com

Equipment shown is subject to change without notice.
©2025 BuhlerTrading Inc. Printed in Canada ADTSX:BUI