

# Slope Sensor

Kit No. 142-3372

## Installation Instructions

### Safety Alert Symbol

This Safety Alert Symbol (Figure 1) is used both in this instruction sheet and on the machine to identify important safety messages which must be followed to avoid accidents

This symbol means: **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**



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**Figure 1**  
Safety Alert Symbol

The safety alert symbol appears above information which alerts you to unsafe actions or situations and will be followed by the word **DANGER**, **WARNING**, or **CAUTION**.

**DANGER:** Indicates an imminently hazardous situation which, if not avoided, **Will** result in death or serious injury.

**WARNING:** Indicates a potentially hazardous situation which, if not avoided, **Could** result in death or serious injury.

**CAUTION:** Indicates a potentially hazardous situation which, if not avoided, **May** result in minor or moderate injury.

This manual uses two other words to highlight information. **Important** calls attention to special mechanical information and **Note** emphasizes general information worthy of special attention.

### **⚠ WARNING**

**While maintenance or adjustments are being made, someone could start the engine. Accidental starting of the engine could seriously injure you or other bystanders.**

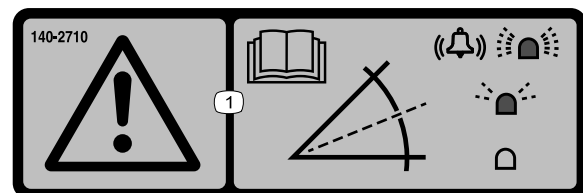
**Remove the key from the ignition switch and engage parking brake before you do any maintenance.**

**Note:** Determine the left and right sides of the machine from the normal operating position.

**Note:** Park the machine on a level surface. Make sure all moving parts have stopped, parking brake is engaged, and the key has been removed. Allow the machine to cool before starting these instructions.

### Safety and Instructional Decals

- Keep all safety signs legible. Remove all grease, dirt and debris from safety signs and instructional labels.
- Replace all worn, damaged, or missing safety signs.
- When replacement components are installed, be sure that current safety signs are affixed to the replaced components.
- If an attachment or accessory has been installed, make sure current safety signs are visible.
- New safety signs may be obtained from your authorized equipment dealer or distributor.
- Safety signs may be affixed by peeling off the backing to expose the adhesive surface. Apply only to a clean, dry surface. Smooth to remove any air bubbles.
- Familiarize yourself with the following safety signs and instruction labels. They are critical to the safe operation of your commercial mower.



140-2710

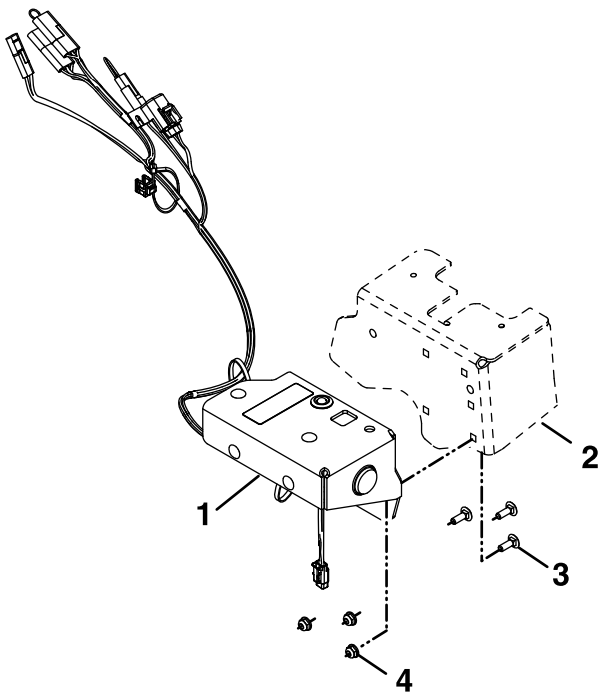
1. Warning—read the *Operator's Manual*; a fast flashing light and alarm sounding indicates a steep slope; a slow flashing light indicates a moderate slope; no light indicates normal operating conditions.



# Installation Instructions

**Note:** If a light kit is installed on the machine, remove existing right side light bracket. Once the slope sensor assembly has been installed on the machine, the light kit can be mounted to the new bracket.

1. Make sure all moving parts have stopped, parking brake is engaged, and the key has been removed.
2. Disconnect the negative battery cable from the battery.
3. For the 144 inch model, remove and retain the seat and the heat shield.
4. Install the slope sensor bracket assembly to the RH motion control bracket using three 1/4-20 x 3/4 inch screws and three 1/4 inch flanged nyloc nuts.

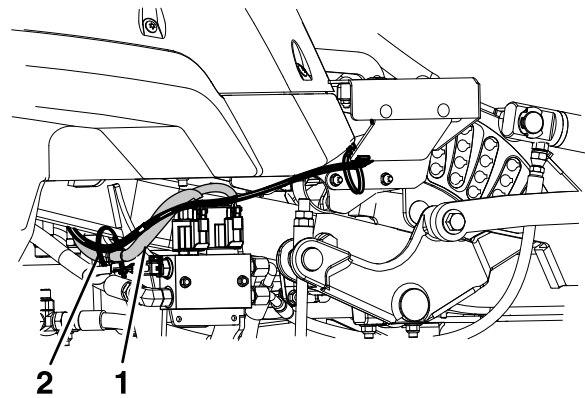


**Figure 2**

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- |                              |                               |
|------------------------------|-------------------------------|
| 1. Slope sensor              | 3. 1/4-20 x 3/4 inch screw    |
| 2. RH motion control bracket | 4. 1/4 inch flanged nyloc nut |

5. The harness routes along side the hydraulic valve harness. Remove the zip tie currently holding the hydraulic valve harness under the frame tube. Combine the valve harness with slope sensor harness with a new zip tie.



**Figure 3**

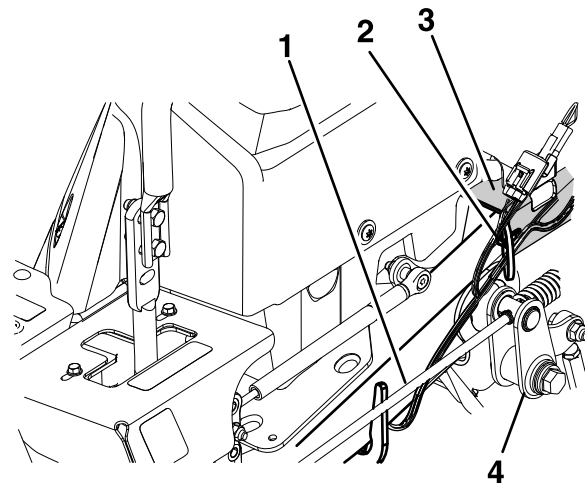
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1. Hydraulic valve harness
2. Zip tie

6. Route the harness.

- **For all Models Except 144 Inch:**

- A. The harness passes under the frame tube and routes upward between the upper brake link (see [Figure 4](#)).



**Figure 4**

Seat frame removed for clarity

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- |                     |              |
|---------------------|--------------|
| 1. Upper brake link | 3. Frame     |
| 2. Clip             | 4. Bellcrank |

- B. Clip the slope sensor harness on the frame above the bellcrank.

- **For 144 Inch Models:**
  - A. Route the harness along the frame tube towards the back of the frame.
  - B. Allow the harness to stay below the shield. Do Not clip to the frame.
  - C. Route the P1007 connector up between the frame tube/tank panel, heat shield, and seat mount and connect to the machine harness.

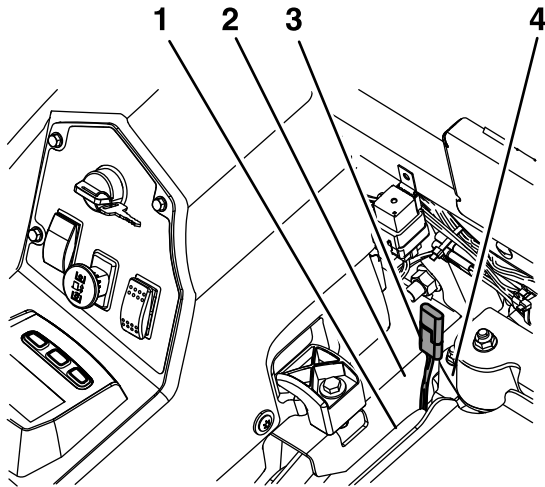


Figure 5

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- |                          |                    |
|--------------------------|--------------------|
| 1. Heat shield           | 3. P1007 connector |
| 2. Frame tube/tank panel | 4. Seat mount      |

**Note:** Before reinstalling the heat shield and seat, proceed to **Calibrating the Sensor** section.

7. Reconnect the negative battery cable.

## Calibrating the Sensor

1. With the machine parked on a flat surface remove the plug from calibration connector (P1004 and P1011).

**Note:** To access to the calibration connector:

- **For All Models Except 144 Inch:** raise the seat.
- **For 144 Inch Models:** remove and retain the heat shield and seat.

**Note:** The plug is located on same branch as fuse holder.

2. Plug the connectors together.
3. Turn the ignition key to the “ON” position, but Do Not start the engine.

**Note:** The LED light blinks as the sensor calibrates.

4. When the light no longer blinks, turn the ignition key to the “OFF” position.
5. Disconnect the calibration connectors and install the plug onto the connectors.
6. Lower the seat or reinstall the heat shield and seat.

## Using the Slope Sensor

When the machine is started, the LED light illuminates for five seconds and the audible alarm is activated to indicate that the sensor is functioning properly.

The light and alarm indicates the severity of the slope:

- No light—normal operating conditions
- Slow, flashing light—moderate slope
- Fast, flashing light and audible alarm—steep slope; proceed to a more shallow slope.

### **⚠ WARNING**

**Slopes are a major factor related to loss-of-control and tip-over accidents, which can result in severe injury or death.**

**Use extreme caution when operating the machine on a slope.**

**Important:** The operator is responsible for safe slope operation. Operating the machine on any slope requires extra caution. Refer to the Operator’s manual for more information on operating the machine on slopes.

# Parts List

Item	Part No.	Description	Qty
1	142-9985	Asm-Bracket W/Decal	1
1:1	140-2710	Decal-Slope Sensor	1
2	122-1266	Sensor-Slope	1
3	122-0630	Asm-Indicator-LED, Red	1
3:1	122-0634	Gasket-LED	1
3:2	122-0633	Washer-Locking	1
3:3	122-0632	Nut-Fixing	1
4	80-9330	Asm-Audio Alarm	1

Item	Part No.	Description	Qty
4:1	104-5107	Nut-Plastic	1
5	142-8693-01	Plate-Cover	1
6	142-2680	Harness-Slope Sensor	1
7	3229-3	Bolt-Carriage 1/4-20 x 1 1/4	2
8	104-7201	Nut-Nyloc 1/4-20 Flg	7
9	3229-1	Bolt-Carriage 1/4-20 x 3/4	5
10	3290-378	Tie-Cable	3
12	32180-078	Clip-Edge	1

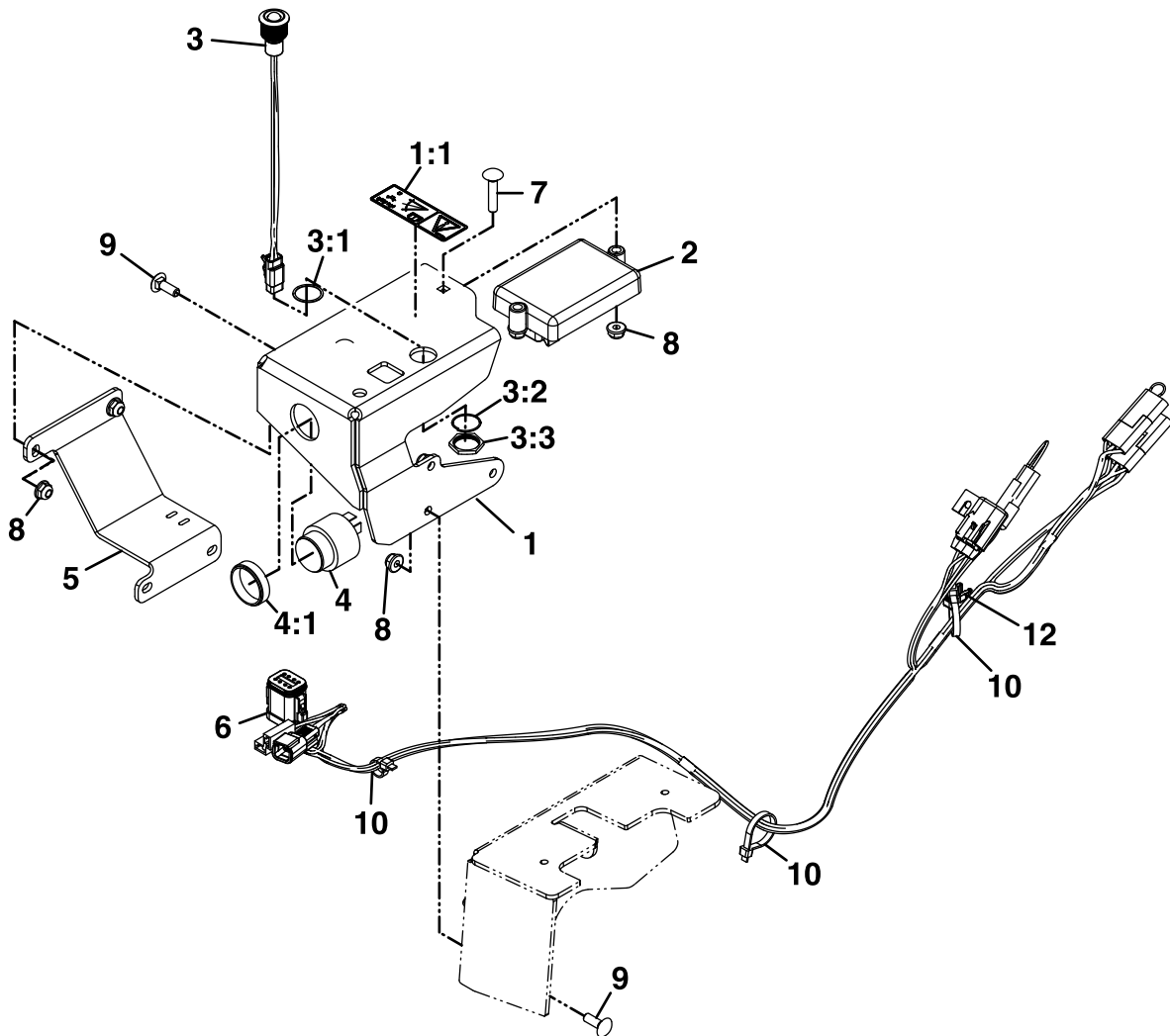


Figure 6

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