



# Slope Sensor Kit

Groundsmaster® 3200 or 3300 Series Traction Unit

Model No. 31952

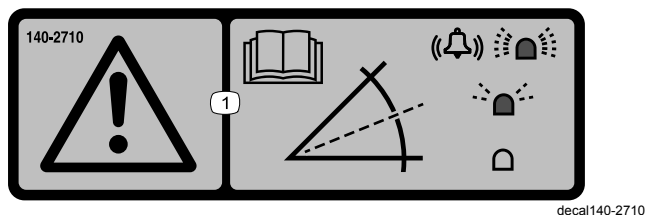
## Installation Instructions

# Safety

## Safety and Instructional Decals



Safety decals and instructions are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged or missing.



**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

## Loose Parts

Use the chart below to verify that all parts have been shipped.

Description	Qty.	Use
No parts required	–	Prepare the machine.
Sensor module	1	Install the kit.
Bolt	2	
Nut	2	
Mounting bracket	1	
Wire harness	1	
Alarm	1	
Plastic plug	4	
Cable tie	2	
Decal	1	Install the decal.
No parts required	–	Calibrate the sensor.

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

## Preparing the Machine

1. Park the machine on a level surface.
2. Disengage the power takeoff and lower the attachments.
3. Engage the parking brake.
4. Shut off the engine and remove the key.
5. Wait for all movement to stop.
6. Allow machine components to cool.

## Installing the Kit

### Installing the Sensor Module

1. Secure the sensor module to the mounting bracket using 2 bolts and nuts (Figure 1).

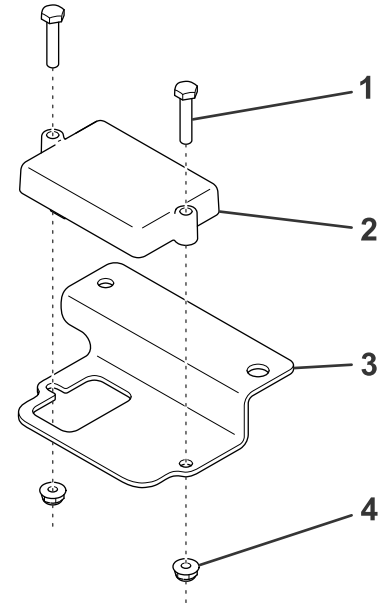


Figure 1

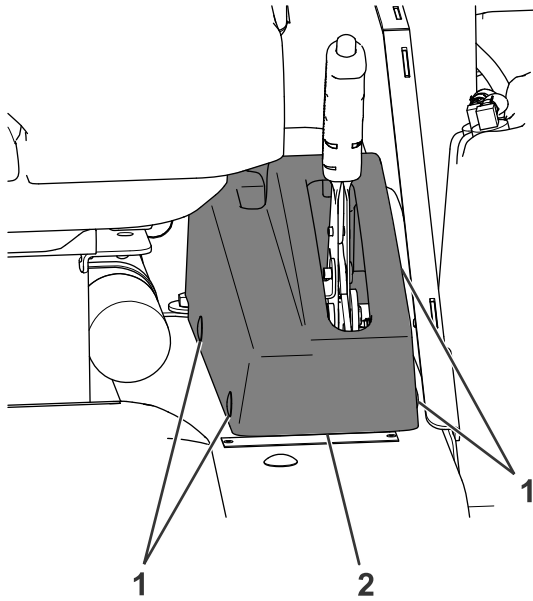
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1. Bolt
2. Sensor module
3. Mounting bracket
4. Nut

2. Torque the fasteners to 4.2 N·m (37 in-lb).

3. Remove and discard the plastic plugs securing the parking brake cover to the machine (Figure 2). Remove the parking brake cover.

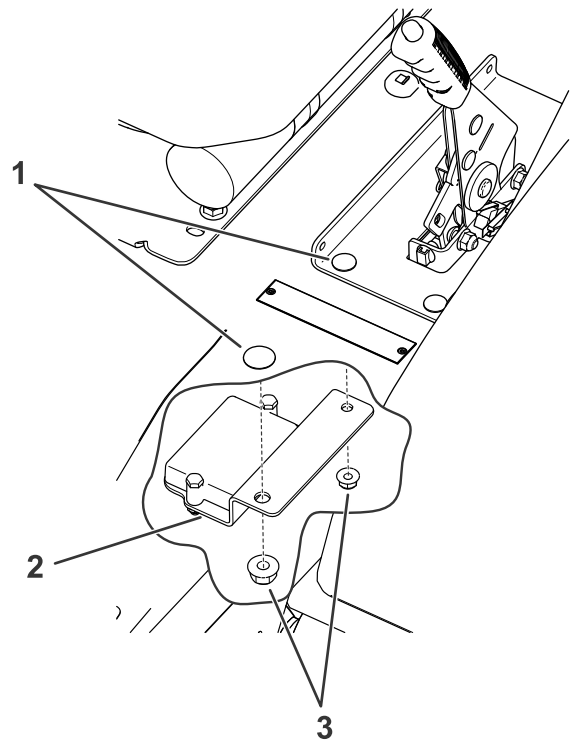
**Note:** Use a putty knife or a plastic-fastener removal tool when removing the plastic plugs.



**Figure 2**

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1. Plastic plug
2. Parking brake cover



**Figure 3**

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1. Bolts
2. Mounting bracket
3. Previously removed nuts

4. Raise the left side of the machine and remove the front left tire. Refer to Raising the Machine in the *Operator's Manual*.
5. Remove the nuts shown in Figure 3.

**Note:** Do not remove the bolts from the machine.

6. Secure the mounting bracket to the machine using the bolts and nuts (Figure 3).

## Installing the Alarm

1. Remove the knockout from the panel behind the parking brake (Figure 4).

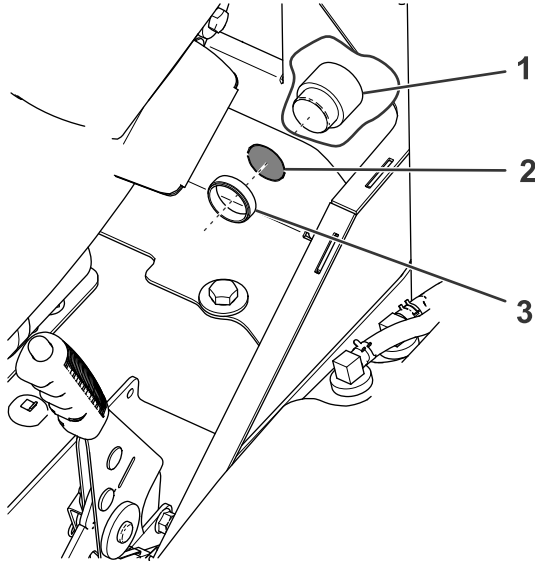


Figure 4

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1. Alarm
2. Knockout
3. Plastic nut

2. Remove the plastic nut from the alarm and use it to secure the alarm through the opening left by the knockout (Figure 4).
3. Install the previously removed parking brake cover using 4 new plastic plugs to secure it to the machine (Figure 2).

**Note:** You do not need to install the 2 outer plastic plugs on machines with cabs.

## Routing the Wire Harness

1. Plug the 90° connector into the bottom of the sensor module (Figure 5).

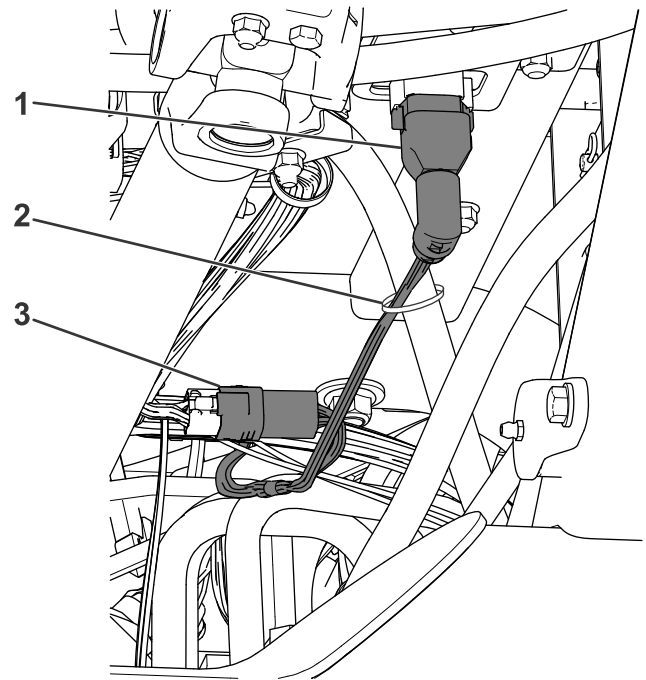


Figure 5

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1. 90° connector
2. Cable tie
3. Second connector

2. Route the wire harness back and plug the second connector into the machine wire harness (Figure 5).
3. Plug the very end of the wire harness into the previously installed alarm (Figure 6).

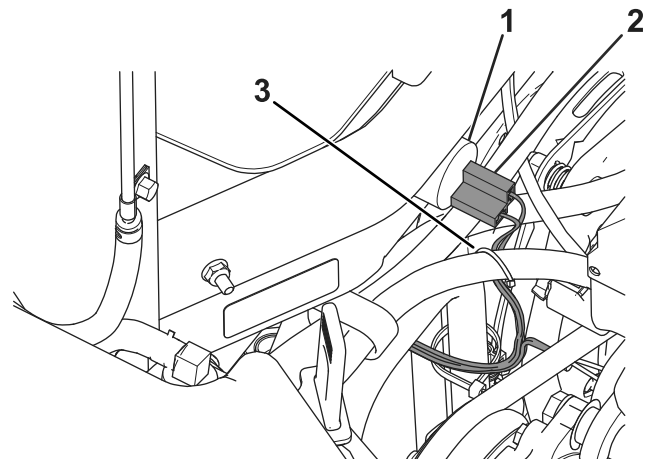


Figure 6

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1. Alarm
2. Last connector
3. Cable tie

4. Secure the harness to the hydraulic tube with a cable tie as shown in Figure 5.
5. Secure the harness away from A/C compressor belt on cab units as shown in Figure 6.

# Installing the Decal

1. Install the decal on the machine as shown in [Figure 7](#).

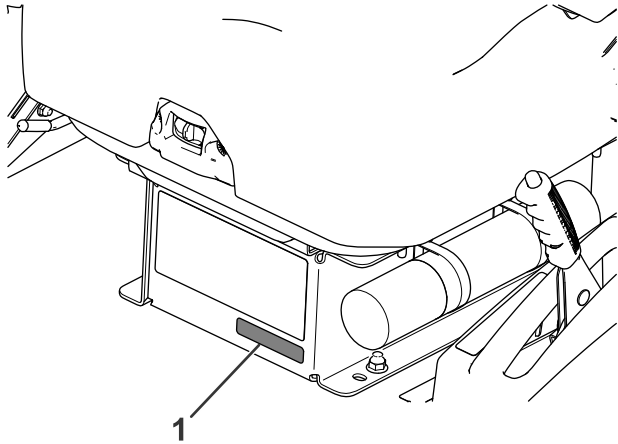


Figure 7

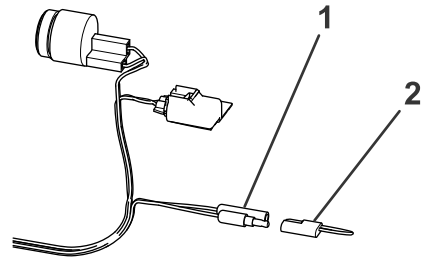
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1. Decal

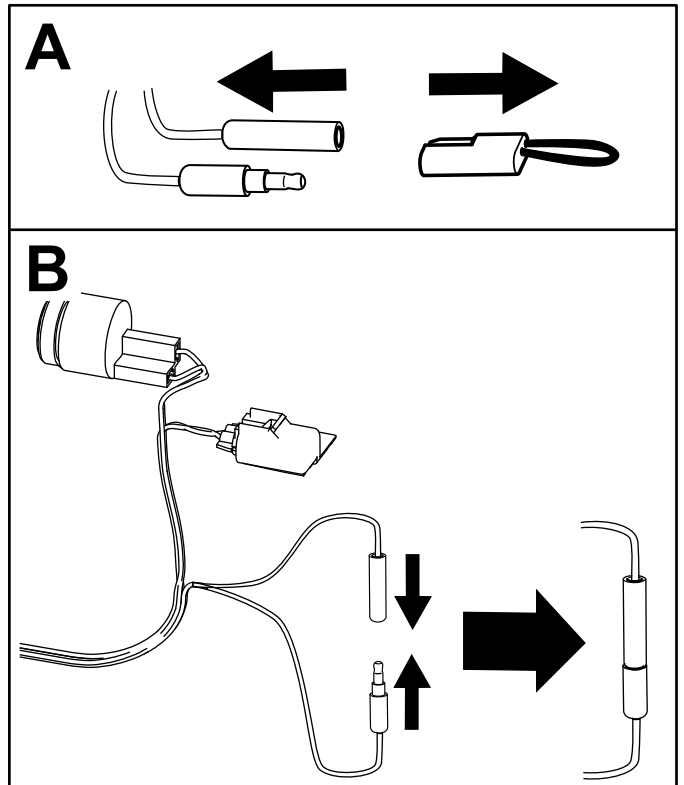
2. Install the front left tire, torque the lug nuts, and lower the machine. Refer to *Installing the Front Tires* in the *Operator's Manual*.

# Calibrating the Sensor

1. While on a flat surface, remove the plug from the calibration connectors ([Figure 8](#)).



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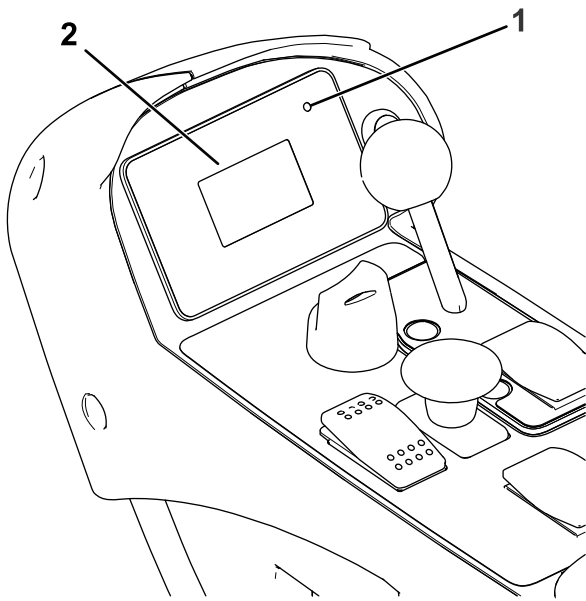
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Figure 8

1. Calibration connectors
2. Plug

2. Plug the calibration connectors together as shown in [Figure 8](#).
3. Turn the ignition key to the ON position, but do not start the engine.
4. The displays shows Slope Sensor Calibrating.

**Note:** The LED light next to the display screen ([Figure 9](#)) is solid green as the sensor calibrates.



**Figure 9**

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1. LED light                      2. Display

# Operation

## Using the Slope Sensor

The light and alarm indicates the severity of the slope:

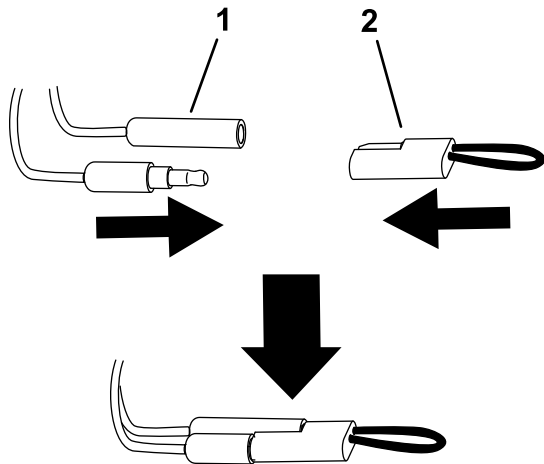
- Green light—normal operating conditions
- Slow, flashing red light and B2713 displaying on the screen—moderate slope
- Fast, flashing red light, audible alarm, and B2714 displaying on the screen—steep slope; proceed to a more shallow slope.

### **⚠ 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.**

5. When the display shows Slope Sensor Calibrated, turn the ignition key to the OFF position.
6. Disconnect the calibration connectors and install the plug onto the connectors (Figure 10).



**Figure 10**

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1. Calibration connectors      2. Plug

**Notes:**



**Count on it.**