

# EQSS Model6253 – OverWatch™ JLG RTxx69 Series



**\*\* Failure to follow this installation manual will void warranty \*\***



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## JLG RTxx69 Series Installation Manual

REV 1.3

30/11/2023

Model6253 OverWatch™ Installation Manual

Document # DO001359

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### DOCUMENT ABSTRACT:

This Installation Manual details the manufacturer's installation instructions for installing the Model6253 OverWatch™ on a JLG RTxx69 scissor lift.

### PRODUCT NAME:

Model6253 OverWatch Operator Detection System

### REFERENCE DOCUMENTS:

DO001195 Model6253 OverWatch User Manual

### CURRENT DOCUMENT REVISION:

1.2

### REVISION INFORMATION:

- 1.1 Initial Document Creation for installation on a JLG RTxx69 Series
- 1.2 Inclusion of harness schematics and new sensor mounting bracket
- 1.3 Update of model configuration instructions

## Important Information

Information contained in this publication regarding this device's applications and the like, is provided only for your convenience and may be superseded by updates. It is your responsibility to ensure that the application or our equipment meets with your specifications.

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N23041

This is a class A product certified to AS/NZS CISPR 22:2006. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.



## Table of Contents

Preparation .....	5
Required Tools .....	5
Installation Time .....	5
Operator Sensor .....	6
Control Module .....	9
Post Installation Configuration .....	15
Overview .....	15
Minimum system requirements .....	15
Wi-Fi Connection & Web Page Access .....	15
Machine Model Selection .....	16
Installation Test.....	17
Change Model Configuration .....	18
System Settings.....	19
Default Parameters .....	19
Polarity and Input Style.....	20
Harness Drawing AS002075 .....	21
Replacement Parts.....	22

## Preparation

### Required Tools

The OverWatch has been designed to be fitted using basic workshop tools. Shown below is a list of tools required to complete the installation

Item	Tool / Description
1	Electric Drill
2	Centre punch
3	Hammer
4	Side Cutters
5	Drill 3.2mm
6	Drill 5.0mm
7	Metric sockets or spanners
8	Needle nose pliers
9	Screw drivers

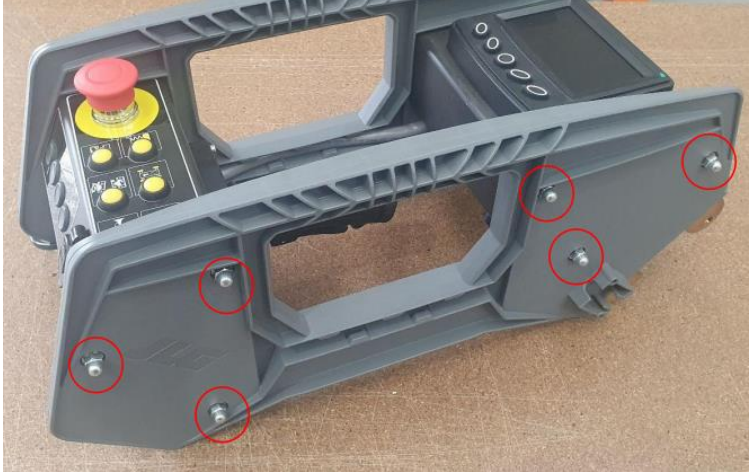
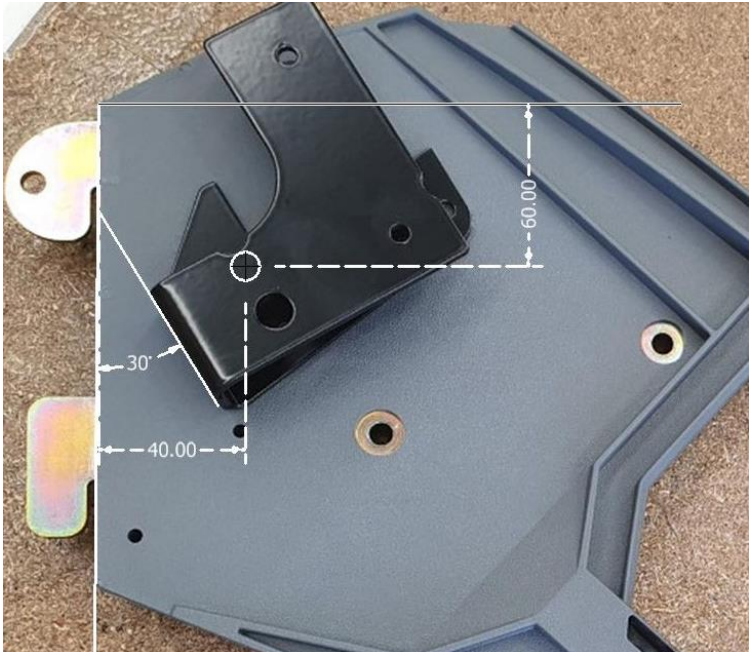
### Installation Time

The suggested time required to install the OverWatch is as detailed below

Task	Estimated Time (Minutes)
Open the operator control box	1
Drilling of all mounting holes for the various components	13
Mechanical assembly	10
Electrical assembly	10
Post installation system tests	10
Close the operator control box	1
<b>Total</b>	<b>45</b>

## Installation Instructions

### Operator Sensor

Step	Description	Diagram
1.	Remove all the bolts on the side of the control box to get access to the side plate and the bottom control box wiring.	
2.	<p>Mount the operator sensor bracket to the <b>LEFT</b> side of the control box as shown in the image.</p> <p>Use the sensor mounting bracket as a drilling template and drill the first hole at the location shown in the image.</p> <p>Position the sensor bracket so it is 30 degrees from the vertical line shown.</p> <p>Drill the remaining holes and mount the bracket.</p>	

3. **Sensor Mounting Guard V1 (ME001794)**

Mount the Operator sensor to the bracket, using M4 security screws and washers.

Use the following hardware from the kit.

1 x AS001910 Operator Sensor

1 x ME001794 Sensor Mounting Guard V1

2 x FA001417 M4 X 12mm Security Screw

2 x FA001235 Plain Washer

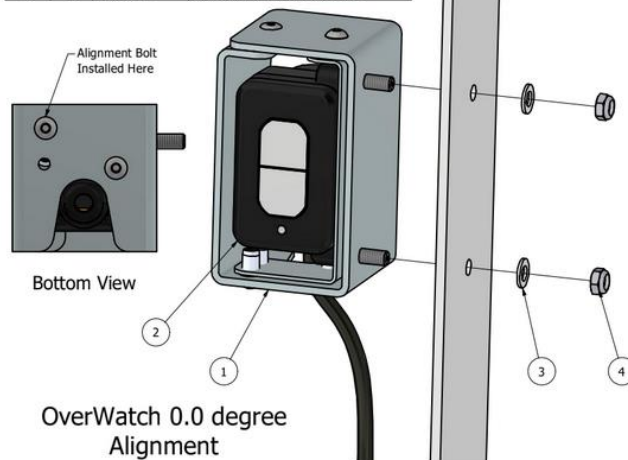


4. **Sensor Mounting Guard V2 (AS002326)**

This guard (AS002326) supersedes the original V1 design. Mount the operator sensor in on the mounting bracket using the supplied M5 washers and nuts. Make sure that the sensor is on the 0.0-degree angle, such that it is **not** twisted away from the joystick.

**The 0.0-degree angle is achieved by using the bolt hole as show in the image.**

PARTS LIST			
ITEM	QTY	STOCK NUMBER	DESCRIPTION
1	1	AS002326	Sensor Mounting Guard V2
2	1	AS001910	OverWatch Operator Sensor
3	2	FA001174	Washer, Plain, M5, 304 St. St.
4	2	FA001219	Nut, Hex, M5 x 0.8mm, Nylock

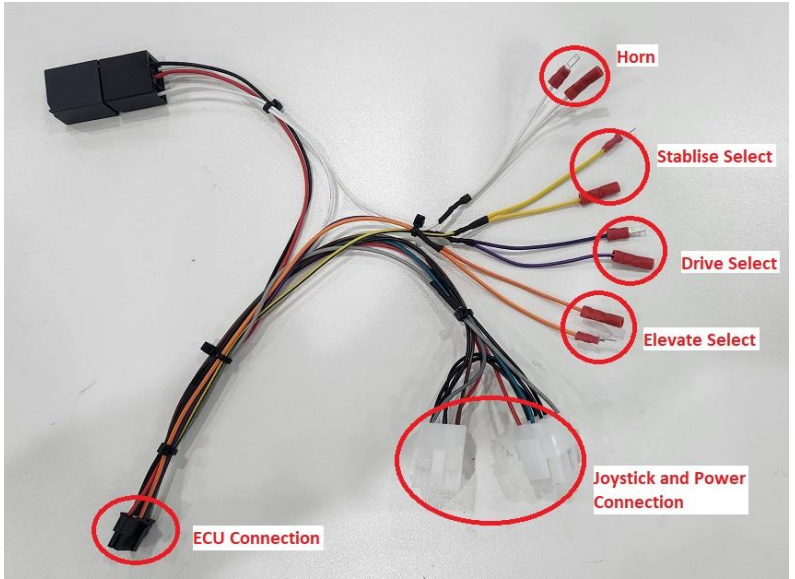
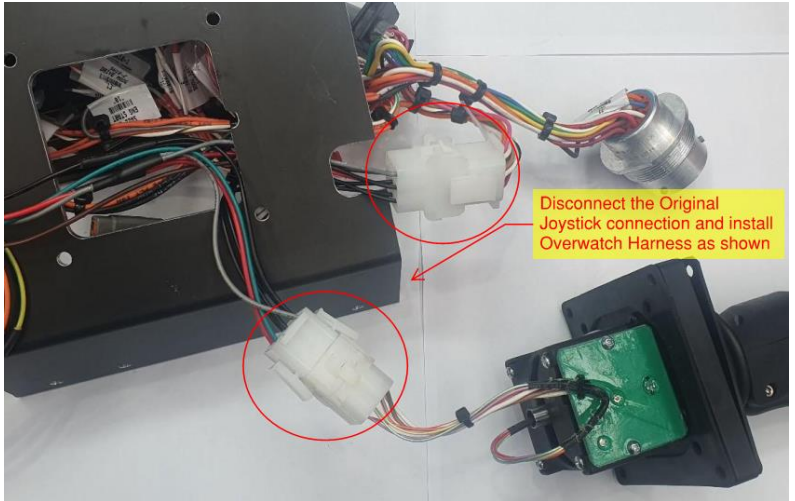


5. Drill one M20 hole and install the operator sensor cable gland.





## Control Module

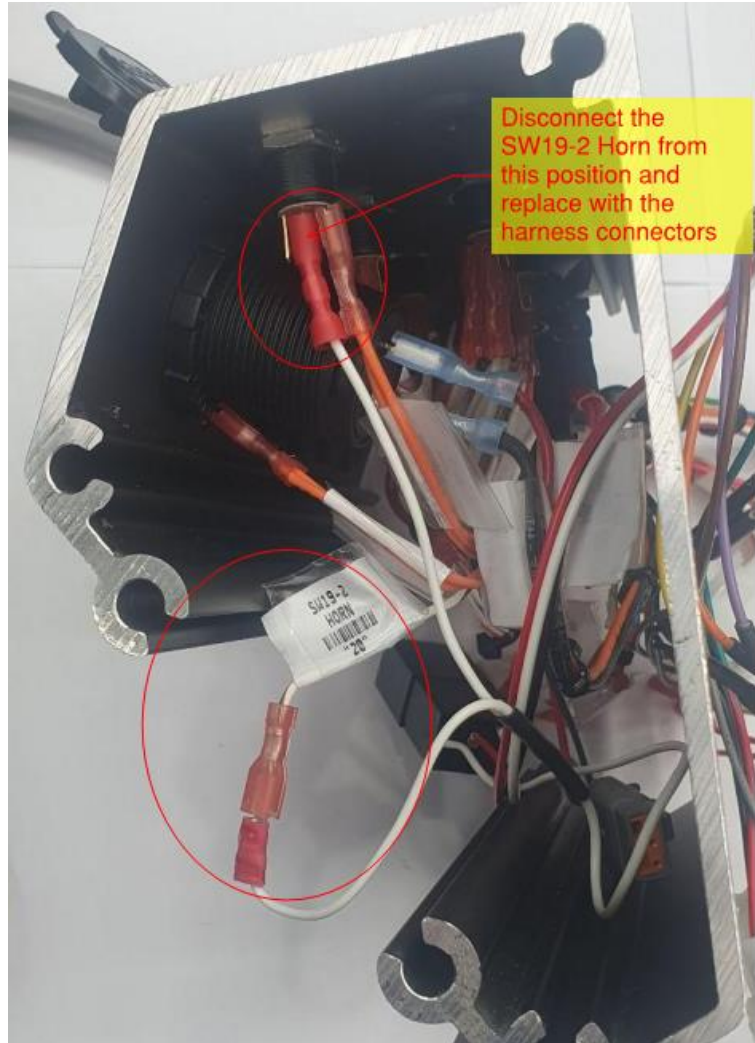
Step	Description	Diagram
1.	Wiring connections are made with the <b>AS002075</b> harness.	
2.	<p><b>Joystick and Power Connection:</b></p> <p>Disconnect the 9-pin connector from the joystick and install the OverWatch harness in series.</p> <p><b>Note: It is highly recommended to unscrew the Joystick during the installation process.</b></p>	

3.

**Horn Connection:**

At the back of the horn switch, disconnect the white wire on the **SW19-2** and install the OverWatch white wires with the spade and lug connectors.

**Note:** Check that the connectors are tight, use needle nose pliers to squeeze the connection if necessary

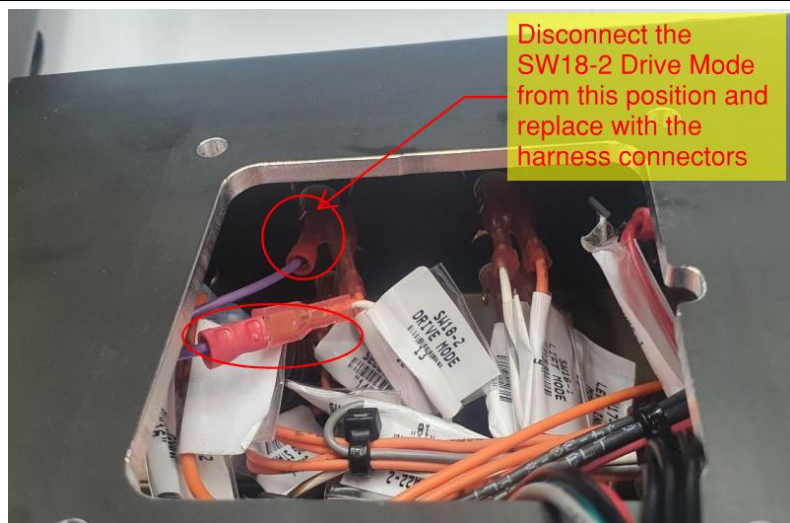



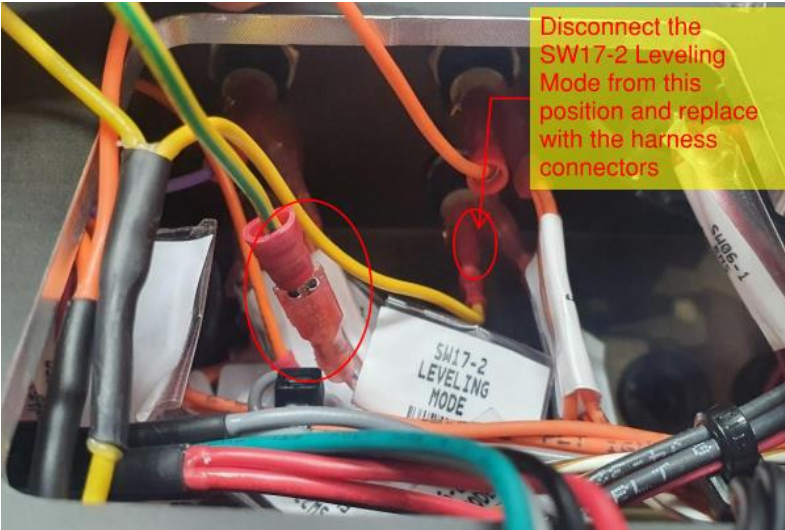
4.

**Drive Select:**

At the back of the drive switch, disconnect the white wire labelled as **SW18-2** and install the OverWatch purple wires with the spade and lug connectors.

**Note:** Check that the connectors are tight, use needle nose pliers to squeeze the connection if necessary



<p>5.</p>	<p><b>Elevate Select:</b></p> <p>At the back of the elevate switch, disconnect the white wire labelled as <b>SW16-2</b> and install the OverWatch orange wires with the spade and lug connectors.</p> <p><b>Note:</b> Check that the connectors are tight, use needle nose pliers to squeeze the connection if necessary</p>	
<p>6.</p>	<p><b>Stabiliser Select:</b></p> <p>At the back of the stabiliser switch, disconnect the white wire labelled as <b>SW17-2</b> and install the OverWatch yellow/green wires with the spade and lug connectors.</p> <p><b>Note:</b> Check that the connectors are tight, use needle nose pliers to squeeze the connection if necessary</p>	

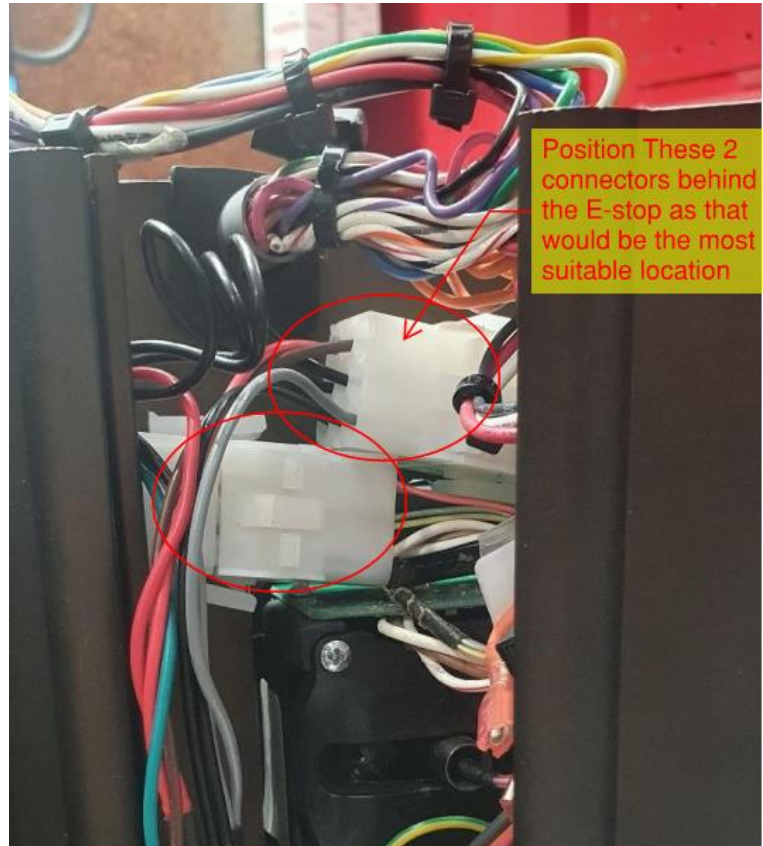


7.

**Placing the Joystick back:**

Position the joystick harness connectors at the back of the E-stop while placing the joystick back in.

**Note:** Make sure the cables are secure and in position as not to be pinched or damaged during the closure.

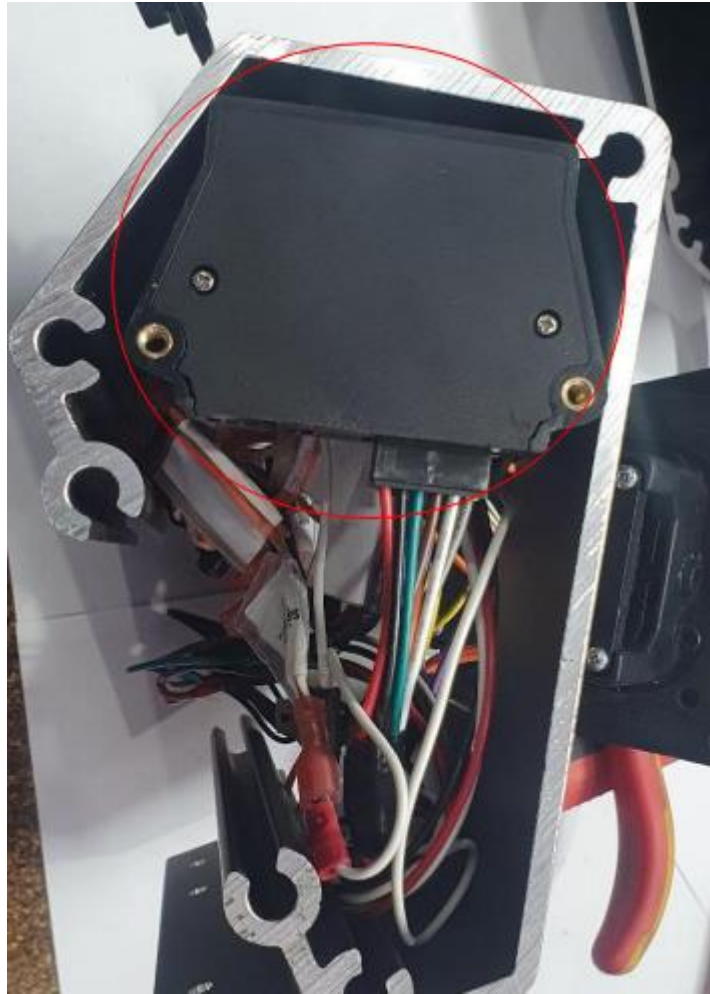


8.

**Position the Overwatch ECU and Horn relay:**

Position the Overwatch ECU and horn relay at the back of the horn push button as shown in the image.

Connect the 12-pin connector from the Overwatch harness to the Overwatch ECU.



9.

Connect the 8-pin connector from the sensor to the ECU and place back the bottom plate of the control box to its original position.



10. Reattach the two plates of the control box.

Make sure the operator sensor cable runs clear to the joystick enclosure and tighten the M20 gland to seal the cable entry point.

Use cable ties to secure the operator sensor cable as shown in the image.



# Post Installation Configuration

## Overview

After the system has been installed it must be configured with the parameters to suit the machine. Follow the instructions below to configure the OverWatch.

## Minimum system requirements

Any smart phone, tablet or laptop that meets the following requirements:

- The device can connect to a Wi-Fi access point
- The device has an up to date web browser installed. Firefox, Chrome or Safari are recommended.

## Wi-Fi Connection & Web Page Access

To enable the Wi-Fi connection on the OverWatch to complete the configuration follow the steps below.

1. Power down the platform control box with the ESTOP
2. Wait 5 seconds
3. Power up the platform control box with the ESTOP
4. While standing **in front of the operator sensor**, switch on the OverWatch
5. As the welcome chime starts to play, cover the sensor. The LED will flash white then black to acknowledge.
6. Remove your hand from the sensor. The LED will flash white then black to acknowledge.
7. After covering then uncovering the sensor this way 2 more times, "Wi-Fi On" will be announced
8. On your Wi-Fi enabled device (laptop, tablet, smartphone, etc), show the available wireless networks
9. Select the wireless network (starts with "overwatch") to connect to the OverWatch
10. When prompted, enter the **password 12345678**
11. Open your preferred web browser (Chrome, Firefox, Safari)
12. Enter the following into the address bar <http://192.168.4.1> to open the OverWatch main page

## Machine Model Selection

Follow the instructions below to configure the OverWatch.

1. Select the Setup option
2. If there is a password field at the bottom of the page, follow the instructions in Change Model Configuration to obtain the password and enter the password field
3. Select the EWP Model from the drop-down list and click Set
4. Click on Proceed to test to begin the installation test



OverWatch Setup

JLG RT xx69 Series ▼

Set

Serial number: 6253E-2001-9999

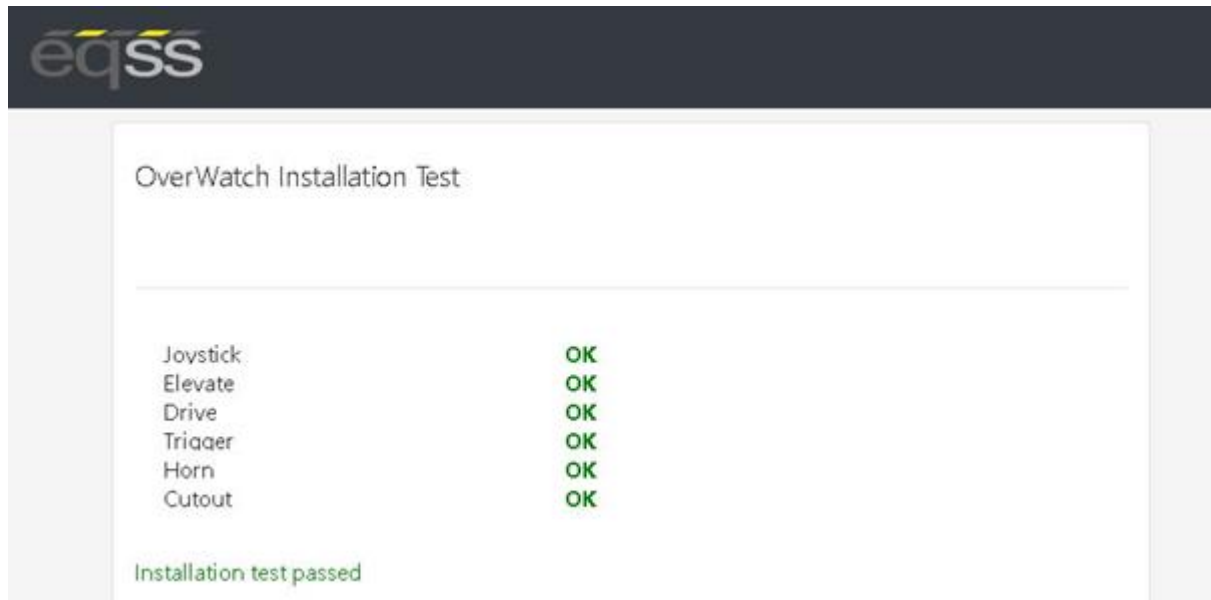
No control box set.

Proceed to test



## Installation Test

After the model configuration has been set or updated an Installation Test must be performed. This will ensure the installation has been correctly performed and the OverWatch is functioning correctly. Follow the instructions on the web page to complete the Installation Test.



## Change Model Configuration

To reconfigure the OverWatch for a different model requires an authorisation password. The authorisation password is generated from the EQSS website. The EQSS website requires a login username and password, contact EQSS for these details.

Follow the instructions below to obtain an authorisation password. It is important to note that each ECU has a unique serial number and a unique password.

1. Open your web browser and enter the following into the address bar <http://www.eqss.com.au/overwatch> to open the Login page
2. Enter your username and password
3. Enter the EUC serial number which is shown on the setup page or on the ECU serial number sticker, also enter the owner and model details of the EWP and then click Generate Hash
4. The generated Hash code or password can be used to change the model configuration.



### Details

Name	John Smith
Email	john.smith@company.com
Phone	+61 9 9999 9999
EQSS Overwatch Serial Number	6253E-2004-0000
Scissor Lift Model	JLG RT xx69 Series
Hash	50244

## System Settings

### Default Parameters

The OverWatch is configured with the following default parameters.

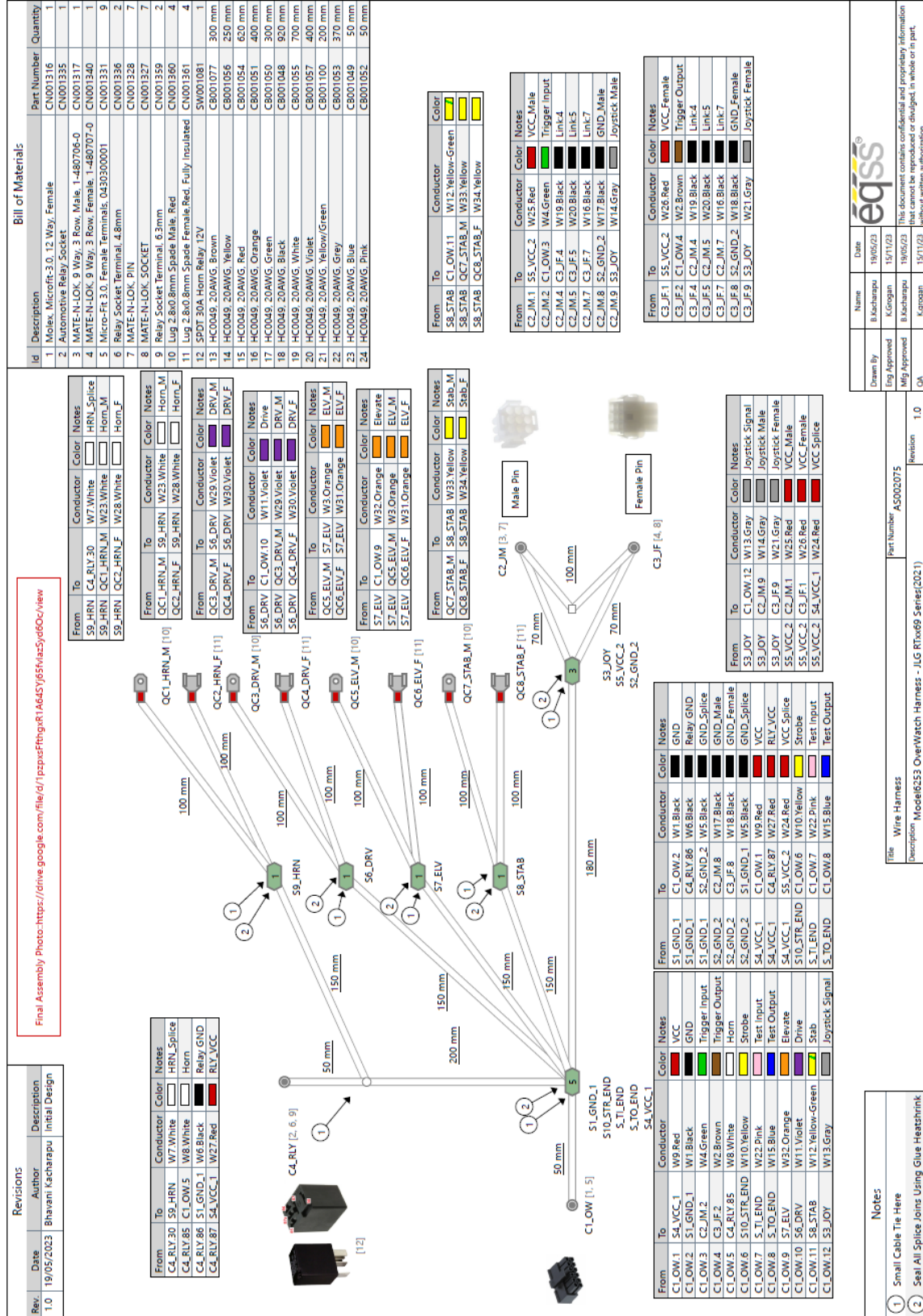
Setting Name	Description	Default
max_safe_velocity	This is the velocity threshold for the cutout in cm/s for drive mode.	95
max_safe_displacement	This is the maximum permitted distance in cm the operator may be away from the calibration position in drive mode.	50
max_safe_velocity_elevate	This is the velocity threshold for the cutout in cm/s for elevate mode.	75
max_safe_displacement_elevate	This is the maximum permitted distance in cm the operator may be away from the calibration position in elevate mode.	50
fwddispadj	The proportion of the calibration distance toward the sensor permitted to the operator.	0.7
fwdveloadj	The coefficient to apply to the maximum allowable velocity when the movement of the operator is toward the sensor.	1.0
zone_obstruction	If the lidar sensor reading is below this, the lidar is considered to be obstructed (with paint or thick coat of dust) and the system is cutout until the obstruction is cleared.	5
zone_minimum	The minimum calibration distance. If the operator is closer to the sensor than this "operator zone" will be announced.	17
zone_maximum	The maximum calibration distance. If the operator is further from the sensor than this "operator zone" will be announced.	120
adc_elevate_threshold	Threshold value for the elevate ADC input.	1000
adc_drive_threshold	Threshold value for the drive ADC input.	1000
adc_trigger_threshold	Threshold value for the trigger ADC input.	1000
adc_joyystick_fwd_threshold	Forward threshold value for the joystick ADC input.	1300
adc_joyystick_bwd_threshold	Backward threshold value for the joystick ADC input.	1400
throttle_time	Period after the trigger is pressed (ms) during which initial velocity reading is computed.	500
driving_state_timeout	Mode selection switch timeout (ms)	7000

## Polarity and Input Style

The table below describes each setting

Setting Name	Description	Default
joystick_drive_forward	Direction of joystick to move machine forward	forward
joystick_elevate_upward	Direction of joystick to move machine upwards	backward
elevate_polarity	Direction of signal logic	high
drive_polarity	Direction of signal logic	high
trigger_polarity	Direction of signal logic	high
joystick_polarity	Direction of signal logic	Low
driving_state_input	Direct or timer based	direct

# Harness Drawing AS002075



## Replacement Parts

Replacement parts for this OverWatch kit are available from EQSS, please email [sales@eqss.com.au](mailto:sales@eqss.com.au)

Shown below are the part numbers for the major components included in this model specific kit.

Part Number	Description
AS002040	OverWatch - Complete kit JLG RTxx69 Series
AS001910	OverWatch - Operator Sensor with M20 gland
AS001916	OverWatch - Electronic Control Unit (ECU)
AS002075	OverWatch – JLG RTxx69 Harness
AS002326	OverWatch - Sensor Guard V2
ME001819	OverWatch – JLG Sensor Mounting Bracket - A