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# EQSS Model6253

# OverWatch

## OPERATION MANUAL

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# OverWatch
# User Manual

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## Principle of Operation:

The OverWatch is an aid to the operator and this system does not replace operator training or safe operating practices.

The system detects the operator's position and movements, with respect to the scissor lift's direction of movement.

This information is used to determine if a potential crushing event is about to occur.

The system constantly measures the operator's position, acceleration and velocity.

The system will trigger and cut the machine operation if the system detects movements above the pre-set limits.

## For Best Operation:

- Stand in front of the controls to start the machine movement
- Hold onto the guardrail
- Remain in front of the sensor when elevating and driving
- Move smoothly when looking around the machine and when looking for obstacles and hazards
- Do not move abruptly towards the controls

## Disclaimer:

The OverWatch is an aid to the operator and this system should not in any way replace operator training. The system relies on optical detection principles and may not work in all situations and environments. The system must be properly maintained, and pre-operational checks must be completed.

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## Pre-Operational Checks:

It is recommended to complete an inspection of the OverWatch system as part of the MEWP pre-operational inspection and the periodic inspection. Each inspection should confirm the OverWatch is functioning correctly.

This inspection must be conducted by a person with the expertise to safely operate the MEWP and evaluate the operation and condition of the OverWatch.

## Visual Inspection:

| Item | Action Notes | Pass/Fail |
|------|-------------|-----------|
| 1 | **Sensor Condition:** Inspect the sensor for any cracks or damage. Make sure the sensor face is clean. Replace the screen protector if necessary. | |
| 2 | **Sensor Installation:** Check the operator sensor is attached and not loose. Check the wedge and brackets are in the correct position. The mounting position and the use of angled wedges are different for each model, check the installation manual before proceeding. | |
| 3 | **Sensor Wiring:** Check wiring is secure and undamaged. Check the wire running from the control box to the operator sensor is secure. | |

## Functional Inspection:

| Item | Action Notes | Pass/Fail |
|------|-------------|-----------|
| 4 | **Indicator Lights:** Confirm the sensor light is visible when the OverWatch is active. The light settings are explained later in this manual. | |
| 5 | **Audio:** Stand in position, select the mode and press the trigger. Confirm the audio is "Elevate" and "Drive". | |
| 6 | **Operator Zone:** Stand outside of the sensor zone. Press the joystick trigger. Confirm the audio is "Operator zone" or "Sensor obstruction". The OverWatch should not allow machine movement. | |
| 7 | **Sensor Obstruction:** Hold your hand over the face of the sensor and press the joystick trigger. Confirm the audio is "Sensor obstruction". | |
| 8 | **Cutout:** Stand in front of the control box, start to elevate and lean over the sensor. Confirm the machine cuts movement. | |

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## Operational Instructions:

**WARNING:** Risk of Severe Injury or Death

The OverWatch is an aid to the operator and this system does not replace operator training or safe operating practices. The system relies on optical detection principals and may not work in all situations and environments.

The operator must use the machine while standing in front of the control box at all times.

## Starting Position:

The OverWatch Sensor is mounted on the platform control box. This sensor has an infrared beam (LIDAR), which is used to measure the operator's position, acceleration and velocity. The sensor must always maintain a visible line of sight to the operator. The operator must always remain in position and maintain normal movements in order to control the machine functions. The system automatically adjusts each time the operator presses the joystick trigger switch.

### ✓ Stand in front of the controls
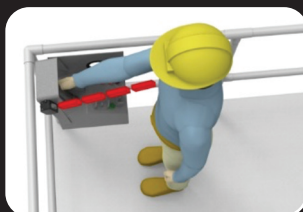


### ✗ Movement does not start if the operator is not in position

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## Cutout:

The OverWatch will cutout and stop the machine movement when
- The operator is too close to the sensor
- The operator moves rapidly toward the sensor when the machine is in reverse or elevating upwards
- The operator moves out of the sensor beam when elevating upwards



**A cutout will occur** when the operator moves **towards the sensor** when **elevating upwards** or driving in **reverse**

## Out of Beam Audio Alert:

When driving forward, if the operator moves out of the sensor beam then it sounds an audible alert of three short beeps. This notifies the operator and any occupants of the operator's changed position. This is applicable for slab scissors and mast, there is no alert for RT scissors.

When driving in reverse the operator may need to move out of the sensor beam during movement to watch the machine travel, so no alert will sound.

When elevating if the operator moves out of the sensor beam then a cutout will be applied.



Out of beam **audio alert** will sound only when **driving forward**

## System Override:

The OverWatch has an override function. This function will allow free control of the machine for 30 seconds without any cutout. This function is then not available for the next 30 seconds.



**To Override:**
**3 quick presses** of the **joystick trigger**

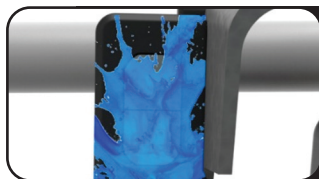# OverWatch
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## Obstructed Sensor:

The OverWatch can detect if the operator sensor is obstructed.

An obstruction may occur if the sensor is physically covered with an object or a material such as paint or concreate.

The OverWatch will announce "Sensor Obstruction".

The operator must then clean the sensor in order to operate the machine.



The **system detects** if the **operator sensor** is **obstructed,** clean the **sensor** to continue **normal operation**

## Prone Operator Alarm:

The alarm will sound after a cutout to alert the worksite that the operator may be trapped. The alarm will repeat at short intervals until the operator moves away from the sensor and the controls are returned to neutral position.



Prone alarm **will sound** after **a cutout** if
- Operator remains motionless
- Joystick is not returned to idle
  - Trigger remains active

## To Connect to WiFi:

- Power on the MEWP
- Swipe your thumb across the sensor 3 times
- The LED will blink each time
- The audio will announce "WiFi on".
- The user can then connect to the OverWatch SSID using password **12345678** and then access the web page **192.168.4.1**

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**Cutout Behaviour:**

The OverWatch detects the operator's position and movements, with respect to the scissor lift's direction of movement. It will then apply a cutout to stop the machine to reduce the risk of harm to the operator.

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**Elevate Mode:** A cutout will occur in elevate according to the following table:

| Operator Action | Elevate | Lowering |
|---|---|---|
| Operator stands in front of the sensor to start the machine movement | No Cutout | No Cutout |
| Operator is not in front of the sensor at the start of the machine movement | Cutout | No Cutout |
| Operator moves out of the sensor beam or ducks down | Cutout | No Cutout |
| Operator moves rapidly toward the sensor | Cutout | No Cutout |
| Operator moves rapidly away from the sensor | Cutout | No Cutout |

**Drive Mode:** A cutout will occur in elevate according to the following table:

| Operator Action | Drive Forward | Drive Backward |
|---|---|---|
| Operator stands in front of the sensor to start the machine movement | No Cutout | No Cutout |
| Operator is not in front of the sensor at the start of the machine movement | Cutout | Cutout |
| Operator moves out of the sensor beam or ducks down | Alert Sound* | No Cutout |
| Operator moves rapidly toward the sensor | No Cutout | Cutout |
| Operator moves rapidly away from the sensor | No Cutout | No Cutout |
| Operator moves over the sensor | No Cutout | Cutout |

*There is no alert for RT scissors.

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## Visual & Audio Notifications:

| Light - Colour | Audio Announcement | Description |
|---|---|---|
| | OverWatch, Version 9 | System is powered and running. |
| | Drive / Elevate | Trigger pressed, movement selection determined. |
| | Sensor Obstruction | There is an object covering the sensor, the sensor has no valid reading or the operator is too close to the sensor. |
| | Operator Zone | The operator is not in the defined range. |
| | None | Flashing blue light. The sensor is pointing to a reflective surface. |
| | Cutout | The EWP movements have been cutout to prevent injury to the operator. |
| | Override | The OverWatch is in override mode. There are no cutouts in this mode. |
| | Expired | The override mode has timed out and the OverWatch has returned to normal operation. |

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**EQUIPMENT SAFETY SYSTEMS**

75 Naxos Way, Keysborough
3173 Victoria Australia
+61 3 8770 6555

110 Butterfield,
Great Marlings, Luton.
LU2 8DL
United Kingdom
+447436477557

**sales@eqss.com.au**
**support@eqss.com.au**

**eqss.com.au**