

**ecosense**  
TRAILER ASSIST

## Installation guide for Volvo

ETA-VO-S-1  
ETA-VO-M-1  
ETA-VO-M-3

## ECOSENSE TRAILER ASSIST

Ecosense Trailer Assist is the self-adjustable roof air deflector for your truck. It will automatically detect the height of the load carrier and adjust the deflector to the optimal position, ensuring minimal fuel consumption and CO<sub>2</sub> emissions. The system is fully automatic and requires no input from the driver. Ecosense Trailer Assist can help save up to 8 % in fuel costs by ensuring that even with frequent load carrier changes, the roof air deflector is always in an optimal configuration.

## INTRODUCTION AND SAFETY

This is an installation guide for Ecosense Trailer Assist for Volvo. The roof air deflector on the truck must be original Volvo equipment. See [support.ecosense.info](http://support.ecosense.info) for more information about compatible models.



**Warning:** This kit with its accompanying instructions is produced for authorized workshops that have personnel with qualified professional training. The installation instructions are produced for professional use and are not intended for use by non-professionals. Standard safety equipment for use in truck workshops must be worn when installing the Ecosense Trailer Assist system. If the installation instructions are not followed, or if the work is carried out by non-professionals, Rumblestrip will not assume any liability for damage incurred.

## COMPONENTS

### Included in the package

Check that nothing is damaged and that everything is included. Contact your distributor if anything is missing or is damaged.

- Two actuators
- Sensor (Class 1 laser)
- Electronics unit, with cables
- Two upper brackets and two cab brackets (each cab bracket is assembled from two parts)
- Cable ties and cable tie mounts
- 24 V power cord with connector
- Rubber sealing ring
- Screws, nuts and washers
- Warning stickers

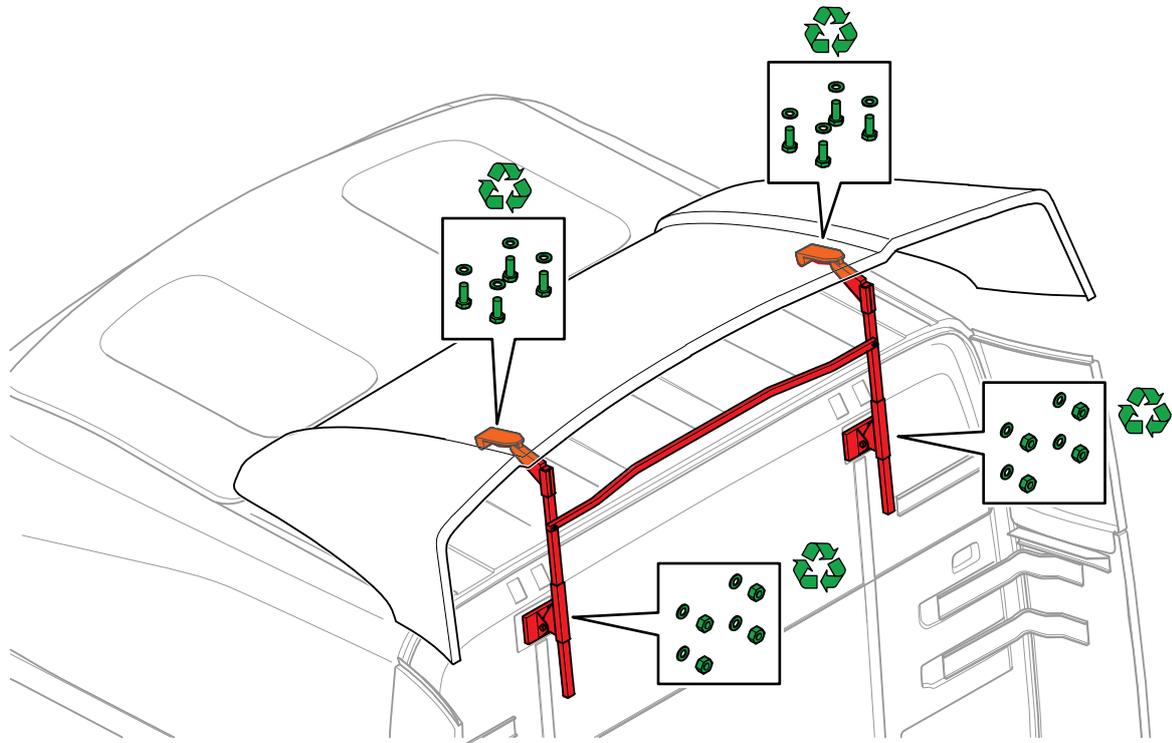
### Required, not included in package

- Screws and nuts, reuse from original Volvo roof air deflector

Make sure that all packaging material is handled according to local laws and regulations.

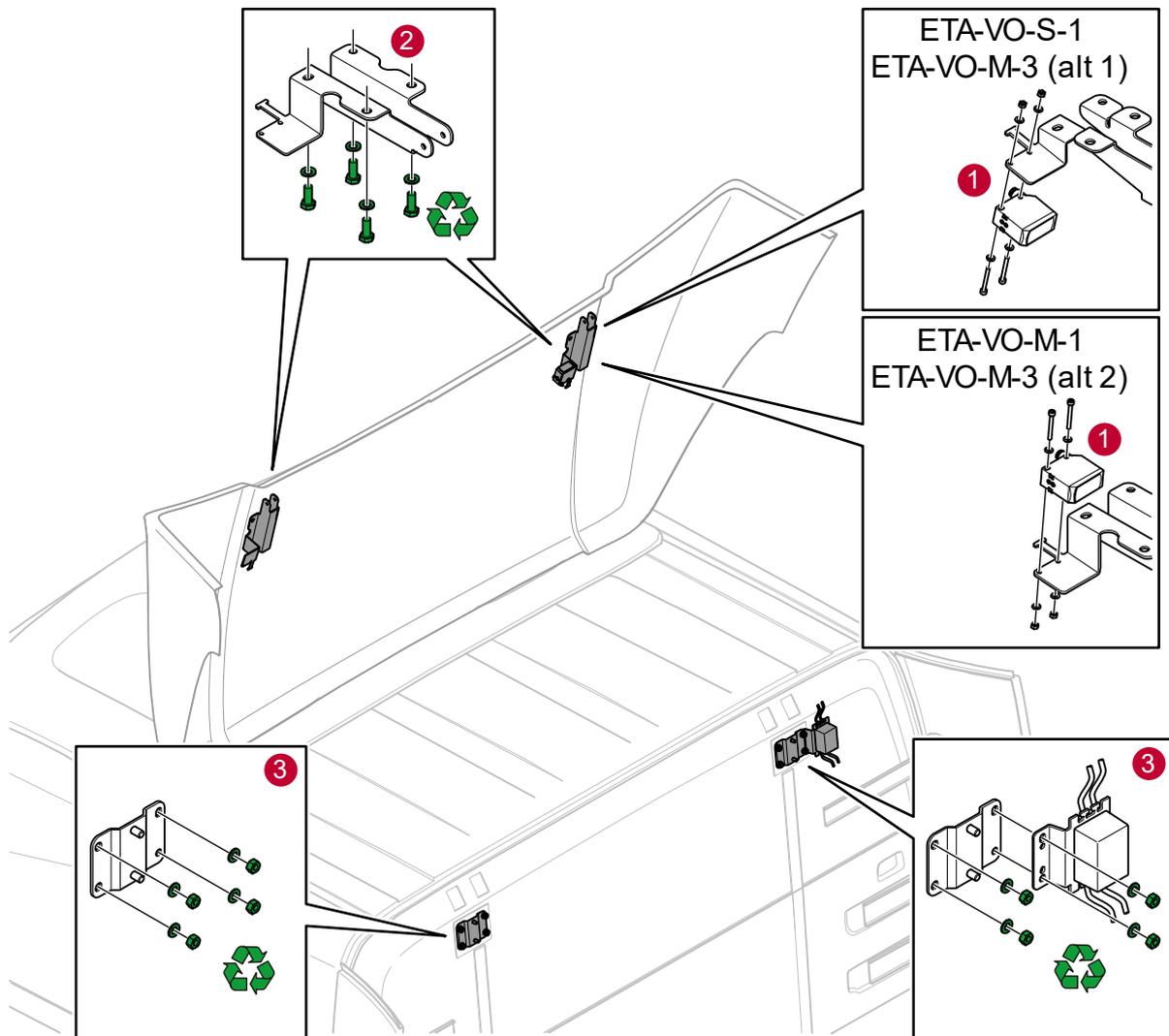
## INSTALLATION

### 1. Remove existing equipment



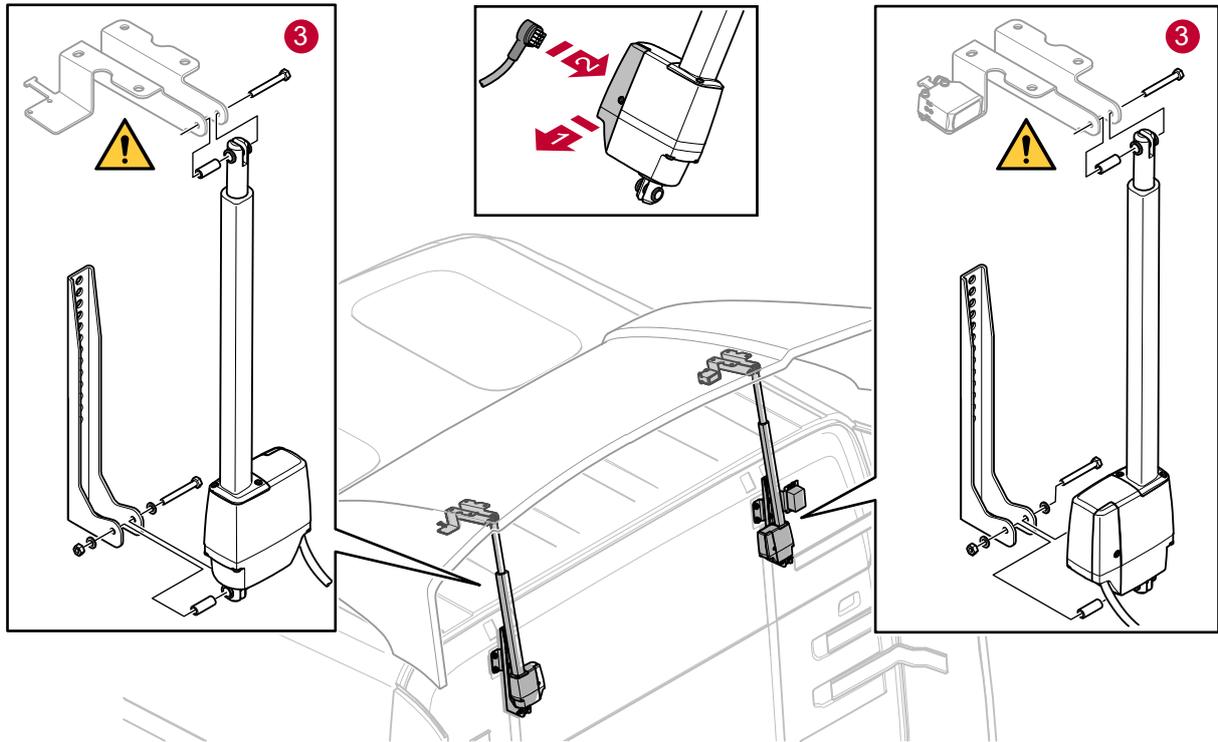
1. Remove the existing equipment. Note that the 8 nuts, 8 screws and washers will be reused, so keep them safe. Secure the roof air deflector in its up position while working.

## 2. Attach components to the cab



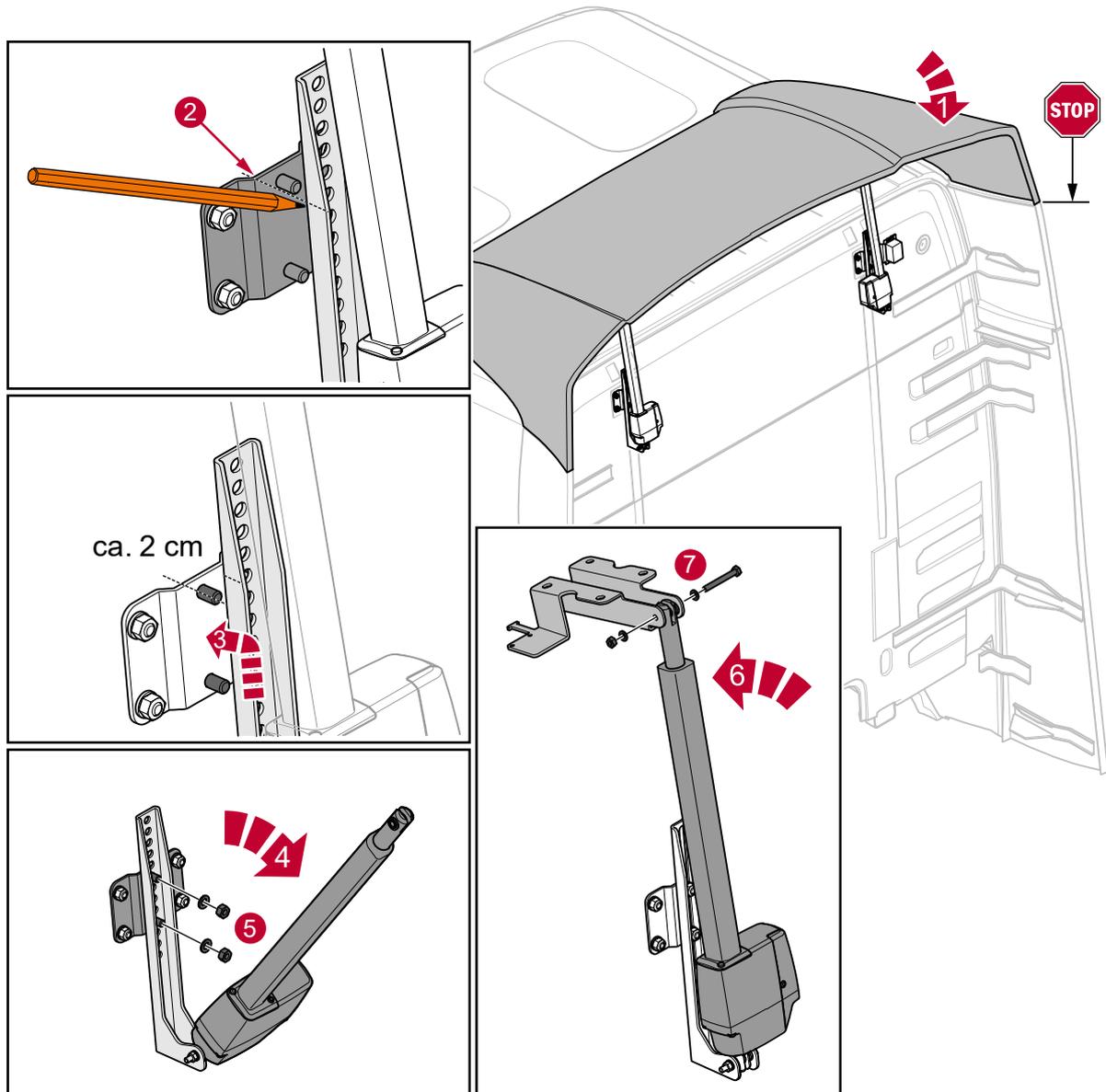
1. Attach the sensor on upper bracket. Note that the sensor is placed differently depending on model, see illustrations. Make sure that the sensor is aligned with the attachment.
  - For ETA-VO-M-3, use **alt 1** if the system is mounted on a **Globetrotter XL** cab.
  - For ETA-VO-M-3, use **alt 2** if the system is mounted on a **Globetrotter** cab.
2. Attach the upper brackets on roof air deflector. The bracket with the sensor is placed on the right side.
3. Attach the electronics unit on one of the bracket plates, and mount both bracket plates on the cab wall. The bracket plate with the electronics unit is placed on the right side.

### 3. Mount the actuators



1. Remove the screw and open the cover on each actuator.
2. Connect the cables from the electronics unit and close the covers.
3. Attach the actuators to the cab and upper brackets. Note that the right and left actuators are placed in opposite directions, see illustration. Insert the screw to the upper bracket without tightening it with the nut.

#### 4. Set the actuator height



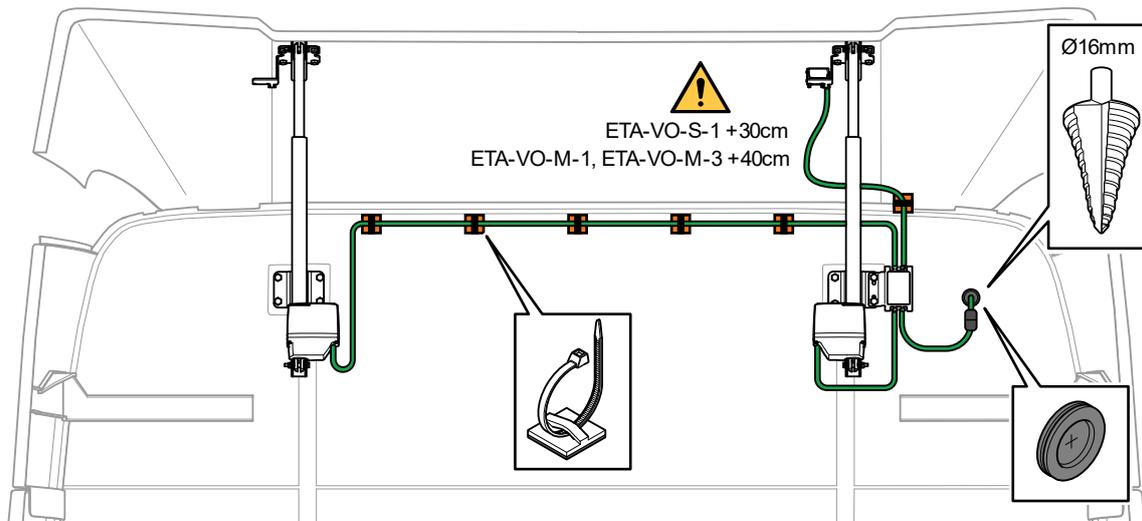
1. Lower the roof air deflector to its bottom position, so that it rests on the roof or the side air deflectors.
2. Mark the current position of both cab brackets when held against the plate.
3. Raise the cab brackets (with attached actuators) **ca 2 cm** and slide them onto the bracket plates using a pair of suitable holes (make sure to use the same holes on both sides).
4. Fold down the actuators from the upper bracket.
5. Fasten the cab brackets using the nuts. Use a tightening torque of **20 Nm**.



**Warning:** Failure to use the prescribed tightening torque can lead to damage to the system components, or to unwanted movement of the brackets.

6. Fold the actuator back up and raise the roof air deflector so that the actuator fits into the upper bracket.
7. Fasten the actuator to the upper bracket with the screw and nut.

## 5. Attach the cables



1. Connect the cable from the electronics unit to the sensor. Ensure that it is long enough to reach when the roof air deflector is in the highest position.
  - For ETA-VO-S-1, 30 cm extra cable is required.
  - For ETA-VO-M-1 and ETA-VO-M-3, 40 cm extra cable is required.
2. Drill a 16 mm hole in the cab wall for the power cable and insert the rubber ring (or use an existing hole).
3. Insert the long power cable into the cab wall hole and fasten it inside the cab where appropriate.
4. Fasten the cables with cable ties and cable tie mounts. It is recommended that the sensor cable is fastened on the roof as well as around the sensor cable connector. Note that the extra length of the sensor cable must be between the roof and connector cable ties.

## 6. Electric installation



**Warning:** Before starting the electrical installation, read the manuals for the truck to find vehicle-specific information and safety instructions!

1. Switch off the main current before starting work on the electrical system.
2. Connect the power cable to the body builder electrical centre in the vehicle. Use body builder fuse holder 10A. The power cable consists of two wires: white (GROUND) and brown (+24 VDC, 10A Ignition +15).

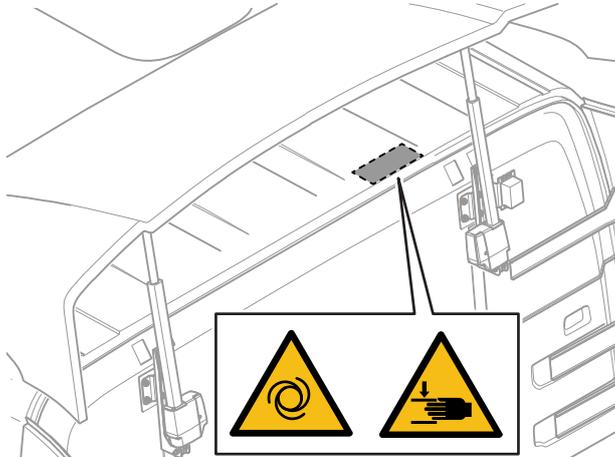


**Warning:** The connection must be made to Ignition +15, **not** to Battery +30.

3. Connect the long power cable to the short power cable from the electronics unit.

## 7. Attach warning stickers

Two warning stickers are included, to warn for pinch point and automatic machinery that may start without warning.



1. Attach the warning stickers so that they are clearly visible on the roof of the truck cab.

## 8. Test the system

1. Make sure that the entire area around the roof air deflector is clear from people and objects.
2. Turn on the truck's ignition.
3. Wait 3 minutes while the system configures itself before first use.
4. Hold up a flat piece of cardboard, or similar, in front of the laser, at a distance of 50-100 cm from the sensor.
5. Within two minutes, the actuators should start extending, thereby raising the roof air deflector. Double-check that the attached sensor cable does not get stuck anywhere while the deflector is extending.
6. Make sure that the piece of cardboard is tall enough to enable the roof air deflector to extend all the way to its highest position. Alternatively, follow the laser dot with the cardboard upwards.
7. At the highest position, double-check that there is enough slack in the sensor cable attachment to avoid it being damaged or dislodged.
8. After the roof air deflector has reached its highest position, it may retract a few centimetres. It will then stay there until the piece of cardboard is removed, after which it should retract again to its lowest position (unless the laser dot hits something else just behind the cardboard piece).
9. Test complete! Remove the cardboard and the roof air deflector should retract to its lowest position after a short period of time.

## Good to know

The equipment is powered when the truck's ignition is turned on. The buttons on the sensor are not in use.

To dismantle the Ecosense Trailer Assist equipment, start by making sure the truck's main current is off. Then follow all the installation steps in reverse. If the equipment is to be discarded, make sure to recycle the components according to local laws and regulations.

## TROUBLESHOOTING



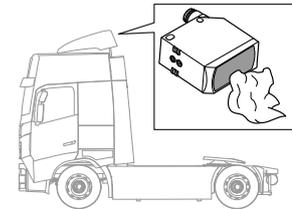
**Warning:** Do not approach the sensor when the equipment is on!

Note that it may take up to two minutes for the deflector to adjust after it has detected a load carrier.

If the air deflector does not adjust to the load carrier height, the following are the most probable potential causes:

### There is dirt on the sensor

1. Turn off the truck's ignition.
2. Clean the sensor with a cloth and mild detergent.



### The overload protection has been activated

1. Turn off the truck's ignition.
2. Check that the roof air deflector or its mechanics are not jammed.

### If this does not help

- Check that all cables are connected and not damaged.
- Check the fuses.

## READ MORE

This manual and more information can be found online: [support.ecosense.info](http://support.ecosense.info)

The printed manual is to remain with the truck, even in the event of new ownership.