



How to Mount Axon Light Assembly Using Bolt on HPI

Service Bulletin

UM-XYXY, Rev. 1.0, 2025/08/27



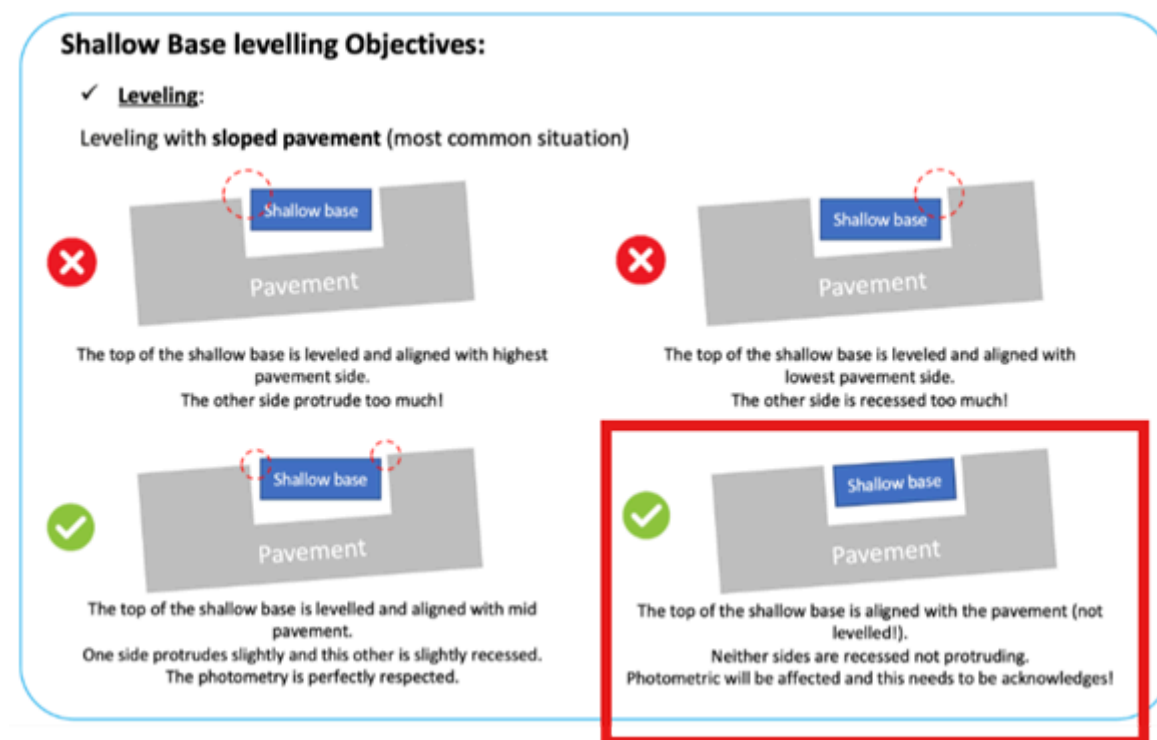
How to Mount Axon Light Assembly Using Bolt on HPI

Before You Start

Gather all necessary tools and equipment for installation, as detailed in the product manual.

Ensure the shallow base is installed in accordance with the manufacturer's recommendations.

Considering that the pavement **slopes are within the limits established by ICAO**, the preferred method to install the bases is the one seen in the picture below in the red square.



The impact on the photometry of this preferred method is nihil considering that:

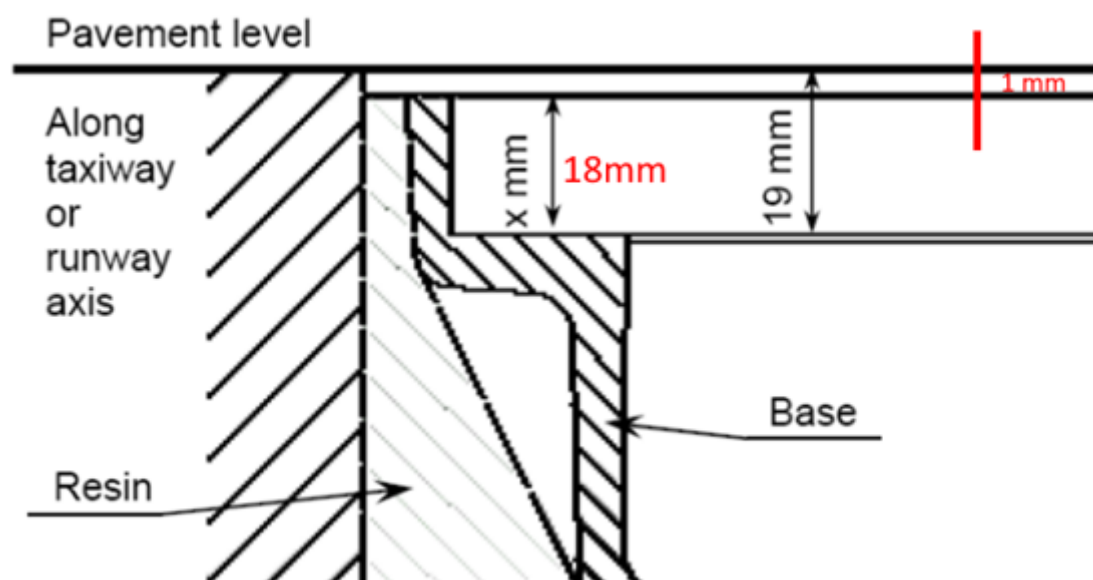
- The slope is according to the ICAO tolerances.
- The photometric measurement is done with a static sensor leveled with the car and the ground.
- The HPI base is installed 1mm below the ground surface as required by the manufacturer taking into account that the HPI base is 18mm high, and the light is 19mm high:

Follow the instruction included with the installation jig to properly position the shallow base in azimuth and in height.



CAUTION

The flange supporting the light in the shallow base should be 19mm (-0/+1.5mm) below the pavement surface, to ensure a correct light output and fixture projection above pavement level.



If the pavement is not plane, take the measurement where the pavement level is the highest, this is usually along the taxiway or runway axis.



Note

- $x = 18 \text{ mm}$ for 8" bases
- $x = 16 \text{ mm}$ for 12" bases

To allow the base to be installed 1mm below the asphalt surface, the jig to be used must be manually set:



Fixing Hardware



WARNING

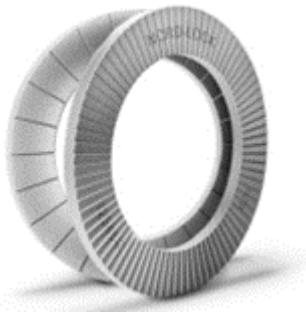
Only use fixing hardware from the same type as the one originally supplied with the base or adapter ring!

Since mid-2006, the shallow bases supplied by ADB Safegate include an indication of the type of thread on the bottom or flange of the base.



To determine the correct type of fixing hardware, note the following:

- M10 bolts require the use of a 17mm socket, supplied by ADB Safegate.
- During maintenance, if some lights need an important retorque, the NORDLOCK anti-vibrant washer can be a solution to mitigate the cause. Nordlock anti vibrant washers are composed of two washers facing each other. If they are separate, make sure to place them in the correct orientation.



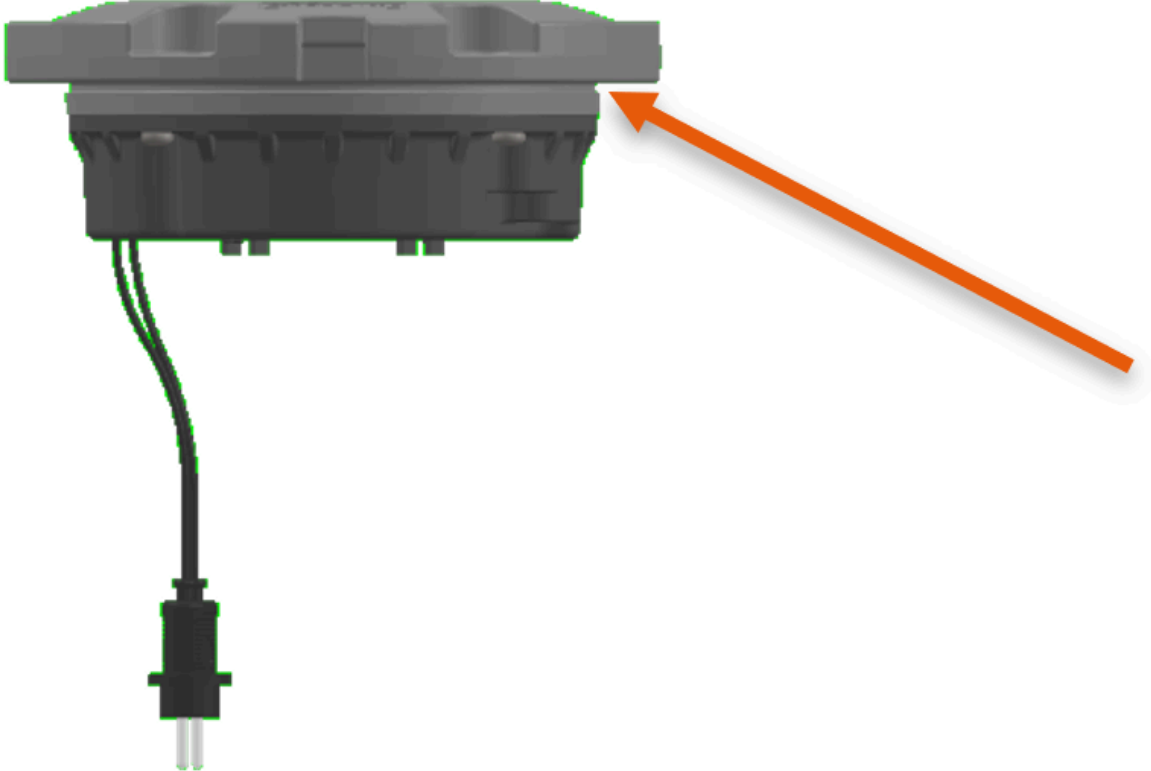
Mount and Connect the Light Assembly

Step	Action
1	Carefully clean and de-grease the contact surfaces of the light fixture and base or adapter ring, ensuring surfaces are clean and smooth.
2	In case a light has already been mounted on the base previously, ensure that the thread is clear from any debris. Remove old Loctite residues using a manual thread-cleaning device, size M10. Clean (for example with pressurized air) to make sure the threaded hole is dry and free of dirt. Ensure that the thread-cleaning device is correctly aligned with the thread hole. Clean the thread-cleaning device after use. Check the thread inside the threaded hole for damage, by using a go/no-go M10 thread gauge.   GO NO GO
	CAUTION If a solvent or oil based product has been used to clean the thread, make sure the product has been completely cleaned out. Those products could damage the o-ring.

Step Action

3

If the O-ring is not installed, use a new, clean one, positioned in the dedicated groove of the light fixture.



The diagram shows a black, rectangular light fixture with a cable extending from the bottom. An orange arrow points to a groove on the side of the fixture, indicating where an O-ring should be installed.

- For AXON light with HPI base use the grey O-ring provided by ADB Safegate

Never re-use an O-ring.

4

Do not lubricate the O-ring.



CAUTION

"Never lubricate the gasket with silicone or any other kind of grease. Avoid the use of soap containing silicone or glycerine. "

Make sure the surface that will be in contact with the O-ring is free of any solvent or oil.

5

Connect the light by inserting its plug into the receptacle of either the shallow base or the secondary cable of the transformer.
Connect the earth bonding to the light fixture grounding screw or lug, and torque to 2.5 Nm.

Step Action

- 6 Gently install the light fixture; press it firmly into the adapter ring or base and ensure it is correctly seated.
Make sure not to drop the light fixture or to pinch the secondary or ground wires between the base and light fixture.



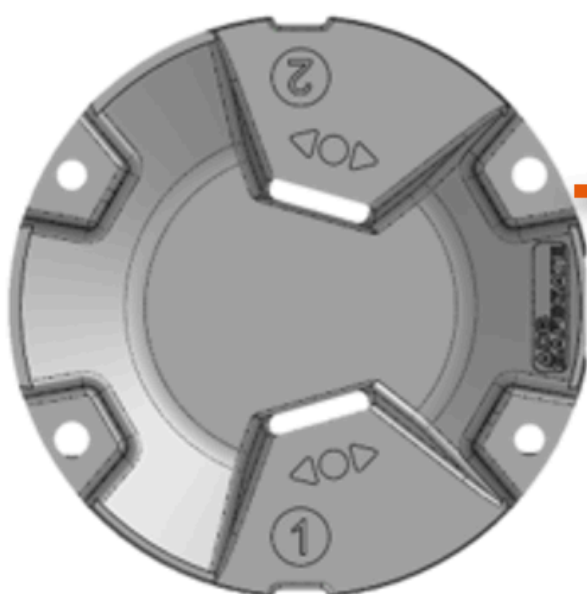
CAUTION

Verify the contact surfaces are clean and free from debris and the light fixture is seated correctly onto the base or adapter ring.



CAUTION

For curved lights, make sure that the logo on the top of the light is pointed towards the centre of curvature of the taxiway.



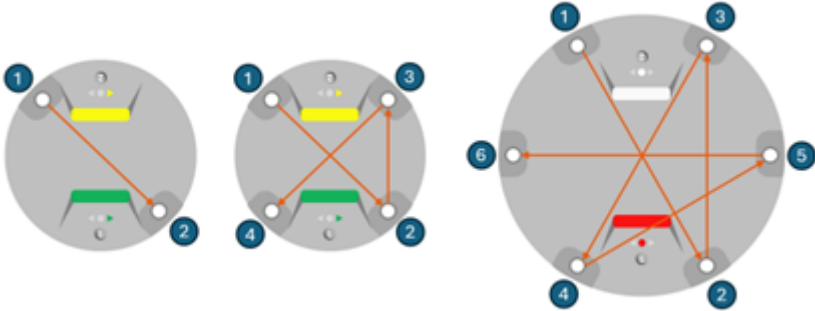
Center of
curvature

- 7 Align the correct ADB Safegate approved bolt with the anti-vibrant washer by hand.



CAUTION

Never use a high speed tool or shock wrench for tightening or untightening.

Step Action	
8	Torque down the bolt using a calibrated torque wrench. When reaching 5 Nm switch to the next bolt following a star sequence as shown below. When all bolts are torqued to 5 Nm continue the star sequence adding 60° of turn to each bolt until you reach the final torque of 21 Nm. Take additional care not to exceed 35rpm when tightening the bolt to avoid galling between the bolt and the thread. 
CAUTION Do not use high speed or impact tools for tightening and untightening.	
9	Perform an additional torque check on each bolt to ensure the required torque is achieved. This also helps to seat the fitting within the base.
10	Ensure that the bolt and washer are flush to the light once the required torque has been achieved.

Step	Action
11	Visually inspect the installation to ensure the fixture is evenly seated in the base. Ensure all items including tools are accounted for.
12	Refer to the light fixture recommended maintenance program for optimal service life. The recommendation is based on movement area categorization and annual air traffic movements. We further recommend a re-torque* of lights & visual inspection 1 week after installation to check for any installation anomalies and bedding in. If inspection is successful, we recommend moving to the instruction manual recommendation. If anomalies are noted, continue with a 1 week inspection regime and investigate potential cause. This is a recommendation only and should be risk assessed locally and adapted according to local data driven analysis. We further recommend the use of a CMMS, such as ADB Safegate CORTEX Service, to electronically schedule and track maintenance and provide audit traceability and data analysis of maintenance & inspection tasks in accordance with ICAO and FAA standards.
 Note Break loose torque may drop below the recommended torque within the 1 week. This is typically due to slight settlement following installation.	
	

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