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## Normstahl LS60AM Swingdock Minidock User Manual



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The Normstahl brand has been a reliable partner and producer of premium entrance systems for the private and industrial sector since 1946. In collaboration with its network of distribution partners, Normstahl has become a leading provider of entrance solutions within Europe.

## **Introduction**

The English user manual is the original user manual, all other languages are direct translations of this document

## **General guidelines**

### **Correct operating instructions**

Before you continue reading, please ensure that you have the correct operating instructions. In case you use a Normstahl overhead sectional door at your loading bay refer to the separate user manual of your door as well.

## **Target group**

These operating instructions are intended for users of dock levelers and all persons involved in the installation, operation, preventive maintenance and repair of the dock leveler. Only authorized and fully trained persons who have been informed in detail about the possible risks are allowed to operate the dock leveler.

## **Purpose of these Operating Instructions**

- To enable users and engineers to operate and maintain the equipment.
- To minimise the risk to the life and health of the operator or of a third party.

## **Users responsibility**

### **The user of the dock leveler must ensure:**

- That all persons involved in the installation, maintenance or repair of the dock leveler have read and understood the entire scope of these operating instructions.
- That any person who is authorized to operate the dock leveler has been thoroughly trained and fully informed about possible risks.



### **Note!**

Always observe the Health and Safety Regulations which apply to your company. If you have any queries, please contact Normstahl.

## **Comments on the illustrations**

The pictures in these operating instructions, are drawn as an illustration. Some pictures are simplified for reasons of clarity. The actual specifications depend on the individual dock leveler supplied.

## **Safety**

### **General Safety Statement**

The dock leveler is designed to meet all safety requirements in the European Directives and the standards issued by the European Standardization Committee, CEN.

The dock leveler is designed and constructed to operate at maximum safety levels. However, the manufacturers cannot be held responsible for accidents or damage to the dock leveler if the following safety instructions are not observed.

- The dock leveler must only be operated by trained, authorised personnel.
- The dock leveler must be immobilised before installation, resetting, commissioning, maintenance and repair.
- Safety equipment must not be removed or to be set out of order.
- Avoid all actions that could adversely affect the operation of the dock leveler.
- No alterations may be made to the dock leveler without the prior consent of the manufacturer.
- Only operate the dock leveler if it is in perfect working order. Any faults must be reported to the person in charge immediately.
- All the regulations relating to dock levelers, even those not specially mentioned in this manual, must be adhered to. Always observe the accident prevention regulations laid down by the company.
- Ensure a firm footing when operating the dock leveler.
- While loading/unloading the lip has to lie firmly with a minimum of 100 mm and over its whole width on the vehicle bed.
- Traffic on the dock leveler must not weigh more than the load capacity of the dock leveler.
- The maximum speed of the forklift driving on the dock leveler platform is 7 km/h.
- In accordance with the EN 1398 standard, the dock leveler must not be used outside the permitted gradient of  $\pm 12,5\%$  (approx.  $\pm 7^\circ$ ) and the limitations of the docking vehicle in use. The limits may only be exceeded if the user ensures that the danger of slipping has been eliminated (e.g. dry and clean surfaces).
- Read and fully understand the safety instructions before you operate or do maintenance on the dock leveler.
- Always obey local health and safety regulations when you operate or do maintenance on the dock leveler.
- Make sure there are no persons or equipment in the working area of the dock leveler on top, below, in front and on both sides before you operate the dock leveler.
- Do not operate the dock leveler when there is a vehicle or other load on it.
- Do not drive a fork-lift truck or other vehicle on the dock leveler if the vehicle is wider

than the width of the dock leveler minus 70 cm.

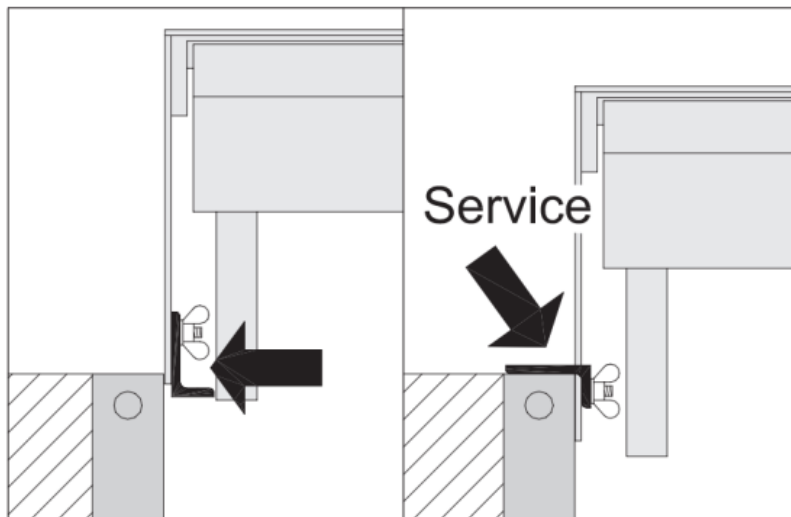
- Do not use the dock leveler to move persons.
- Do not operate the dock leveler after the date of the next scheduled maintenance. The date of the next scheduled maintenance is shown in the logbook.
- Always move the dock leveler to the fully up position and install the service support before you do maintenance on the dock leveler.
- Dock levelers shall not be operated in combination with vehicle tail lifts unless the tail lift is explicitly designed for that purpose.
- The vehicle shall be positioned not more than 200 mm from the loading dock if the nominal width of the dock leveler is less than 1250 mm.
- When not in use the dock leveler shall be returned to its stored position immediately.
- All necessary actions have to be taken to ensure that the vehicle does not depart before the dock leveler has returned to the resting position.

## Safety symbols and marks on the dock leveler

The following symbols are attached to the dock leveler at dangerous points:



Black and yellow warning stripes indicate a trip hazard.



A sticker on the inside of one of the side plates of the leveler shows how to install the safety prop

## Safety symbols used in this manual

**Note:** Additional tips and recommendations for the reader

**Caution:** A caution identifies a condition where equipment can be damaged.

**Danger:** Danger identifies a condition where special precautions must be used to prevent death.

**Indications and warnings within the text are illustrated by means of symbols. The symbols have the following meaning:**



**Caution:** Identifies a condition where equipment can be damaged.

**Danger:** Identifies a condition where special precautions must be used to prevent death.

**Warning:** Identifies a condition where an injury to a person can occur.



**Note!**

Supplemental information

## **Correct use**

The dock leveler's function is to fill in the gap (in height and distance) between the warehouse floor and the truck floor (trailer).



**Caution!**

Driving on the dock leveler is only allowed

- if the lip is securely resting on the vehicle bed or
- if the dock leveler is in its cross-traffic position

The load on the dock leveler must not exceed the load capacity quoted on the identification plate.

The maximum speed of the forklift driving on the dock leveler platform is 7 km/h.

The dock leveler must not be operated above or below the permitted maximum gradient  $\pm 12.5\%$  (approx.  $\pm 7^\circ$ ) or the limitations of the docking vehicle in use as stated in European safety standards.

## **Misuse**

**Any other use of the dock leveler other than described in paragraph "Correct use" is deemed to be misuse.**

## **Misuse refers in particular to:**

- Driving over the dock leveler carrying a load exceeding that stated on the specification plate,
- Driving over the dock leveler with lift trucks which are wider than the nominal width of the dock leveler minus 700 mm,
- Exceeding the maximum speed of 7 km/h of the forklift truck driving on the dock leveler platform,
- Operating the leveler whilst under load,
- Transporting persons.

## **Unsafe operating practices**

- Do not operate the dock leveler after expiry of the maintenance period. The next service date is marked in the log book .
- Do not operate the dock leveler if it is malfunctioning or damage has been detected.
- Do not operate the dock leveler if the lip is not resting firmly on the vehicle bed across its whole width with a minimum of 100mm.
- Do not operate the dock leveler if the vehicle to be loaded/unloaded is not securely parked.

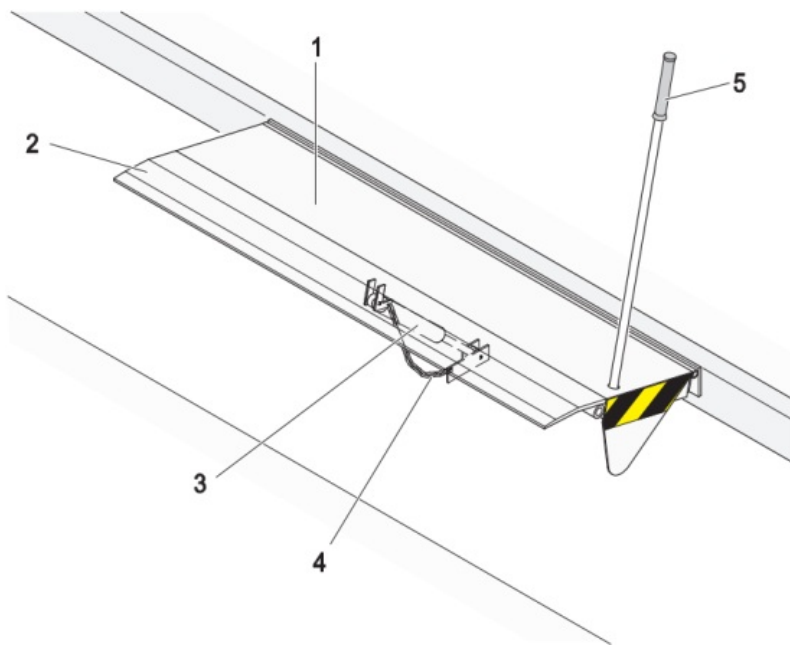
## **Description**

### **General**

The Normstahl mini dock leveler meets the standard demands of most loading operations and fully complies with rules and regulations of the European Standard EN 1398.

### **Safety relevant spare parts**





1. Platform
2. Lip
3. Gas spring
4. Chain
5. Operating handle

## Mode of use

The dock levelers bridges the gap (height and distance) between the warehouse floor and the truck floor (trailer). It also adjusts to the variations in height of the vehicle bed during loading and unloading.

The dock leveler essentially consists of a platform of which the rear end is supported by a hinge at dock height and of which the front end is provided with a swing lip. During the loading operation the lip swings out to extend the dock leveler and then lowers onto the vehicle bed.

In this free floating position the dock leveler forms a gradient that automatically adjusts to the height fluctuation of the vehicle and allows mechanical handling equipment to pass from the warehouse floor level onto the vehicle bed.

The leveler platform adjusts to sloping lorry beds by distorting laterally while the lip has to lie firmly with a minimum of 100mm wide and over its entire width on the lorry bed. In

the cross-traffic (parked) position the dock leveler is fully supported.

The dock leveler must not be used above or below dock level within the permitted gradient of  $\pm 12.5\%$ .

The dock leveler is operated mechanically. The platform is lifted, the lip is swung out and lowered onto the vehicle bed in one movement by a single person.

## Operating functions



### Caution!

Always follow the steps shown on the operating instruction plate installed next to the door opening.

## Operation

This section describes the complete operation of the dock leveler. In order to ensure safe operation of this equipment the following safety instructions must be observed.



### Caution!

Make sure that the installation has been carried out by engineers from Normstahl or authorised and specially trained persons according to the separately delivered installation manual!



### Caution!

Make sure there are no persons or equipment in the working area of the dock leveler on top, below, in front and on both sides before you operate the dock leveler.



### Caution!

The dock leveler may be operated by trained persons (minimum age 18 years) only. The user has to ensure that all persons concerned have understood the instructions. During operation, the movement of the dock leveler must be closely watched.

## Daily start up procedure

Before operating the dock leveler, visually inspect the dock leveler for safety reasons.

If no faults are found, the dock leveler can be put into operation.

## Test run

In order to ensure safe operation of the dock leveler, commissioning is to be carried out only by qualified and trained specialists. A test run is required to make sure that all operating functions of the dock leveler are working. If all operating functions work correctly, the dock leveler is ready for use.

## Operation of the dock leveler

### Docking the vehicle

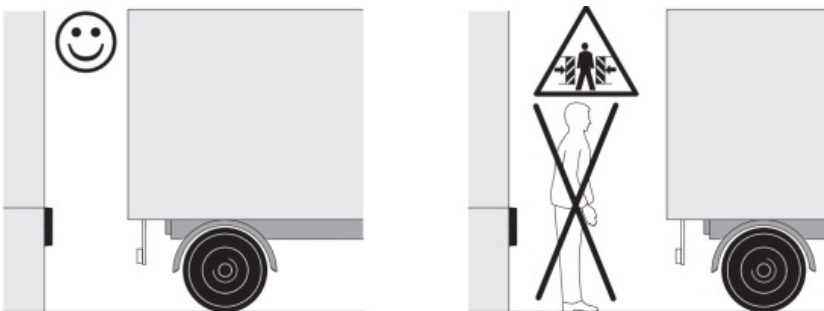


### Attention!

Do not operate the leveler in combination with vehicle tail lifts unless the tail lift is explicitly designed for that purpose.

### Attention!

Make sure that no one is between vehicle and loading dock when the truck is moving towards the leveler!



1. Back up the vehicle with open tail-gate or lowered tail-lift.
2. Make sure the vehicle is secure and cannot roll or drive away.
3. Under no circumstances open the loading bay door before the vehicle is securely parked.

## Positioning the lip on the vehicle bed

### **Caution!**

Do not allow anyone to be in the vicinity of the dock leveler while it is being raised or lowered. If there is a fault, switch the main switch to “O-OFF” or press the emergency stop button to interrupt any movement of the dock leveler.

### **Caution!**

During loading/unloading, the dock leveler must rest with a minimum of 100 mm securely over its whole width on the vehicle.

- Make sure the Daily start procedure has been done.
- Make sure the tail-gate or tail-lift of the vehicle is in the open position.
- Make sure the vehicle is properly positioned.
- Make sure the vehicle parking brake is on, and if necessary, install chocks to prevent movement of the vehicle.

### **Attention!**

Make sure that the lip is not resting on the tail lift!

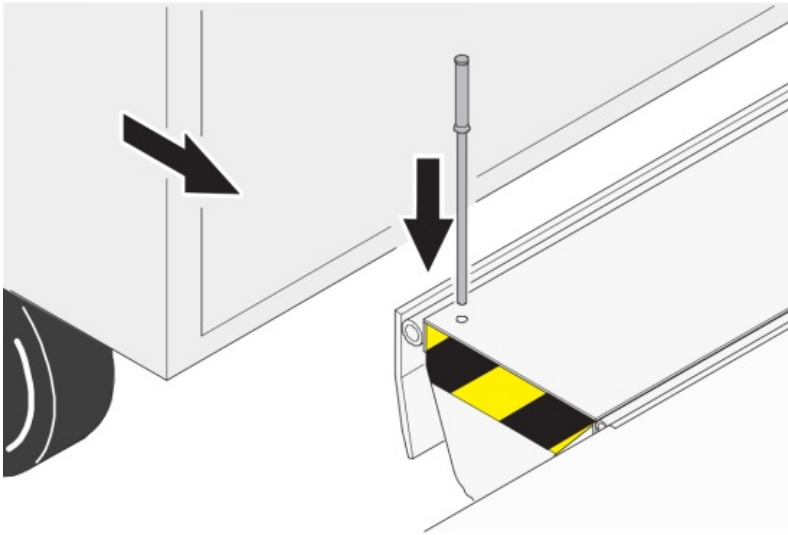


## **Docking procedure**

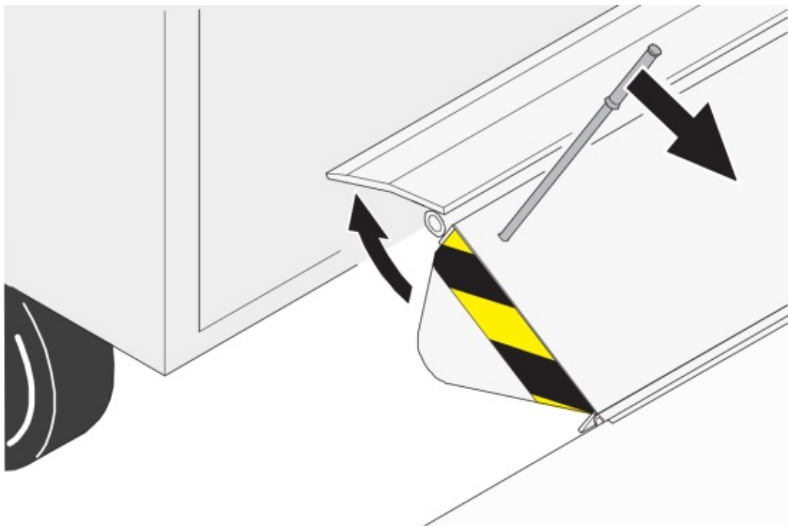
### **Caution!**

The operator must be standing in a safe and secured position while operating.

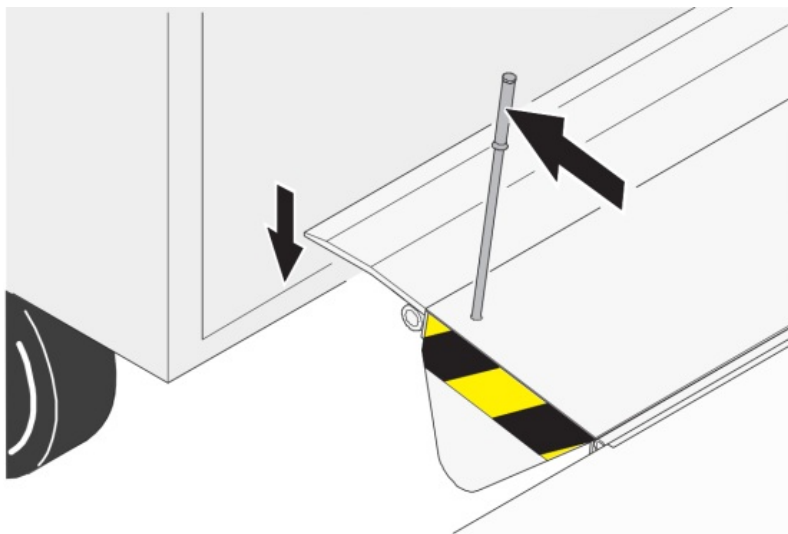
1. Remove the handle from its holder and plug it in the adaption hole in the platform.



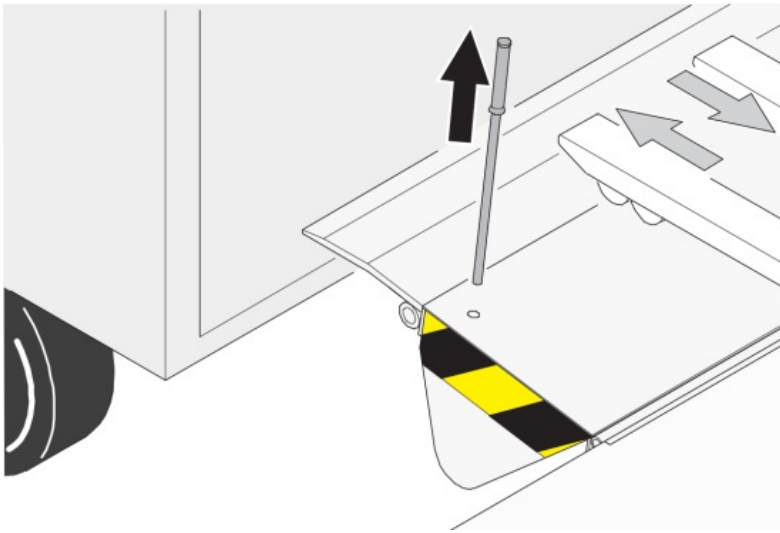
2. Pull the handle backwards to the upmost position to raise the platform and swing out the lip



3. Lower the lip onto the vehicle bed.



4. Make sure the tail-gate or tail-lift of the vehicle is in the open position.
5. Remove the handle from the operating position and put it in the holder.



6. Loading/unloading can now take place.

## Releasing the vehicle

### **Caution!**

After the loading operation, the dock leveler has to be returned to crosstraffic position immediately



### **Attention!**

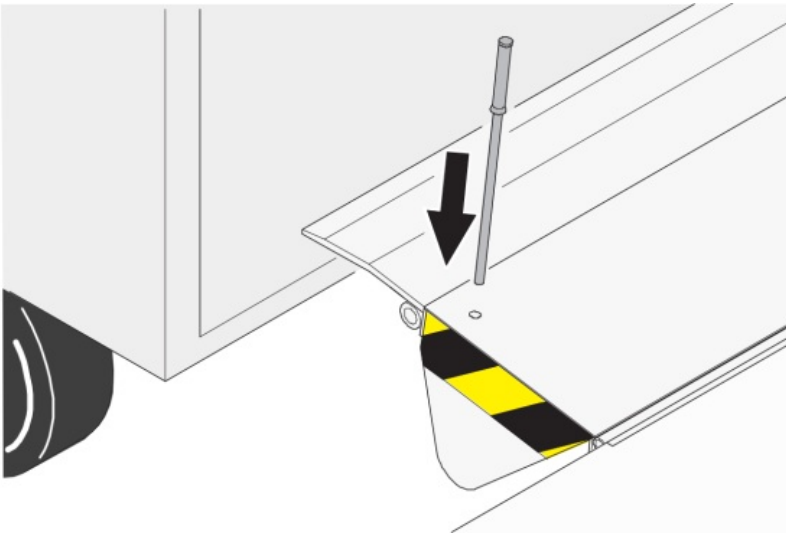
Do not leave the loading bay before the leveler has returned to crosstraffic position.

### **Caution!**

Make sure there are no persons or equipment on or under the platform.

## Releasing procedure

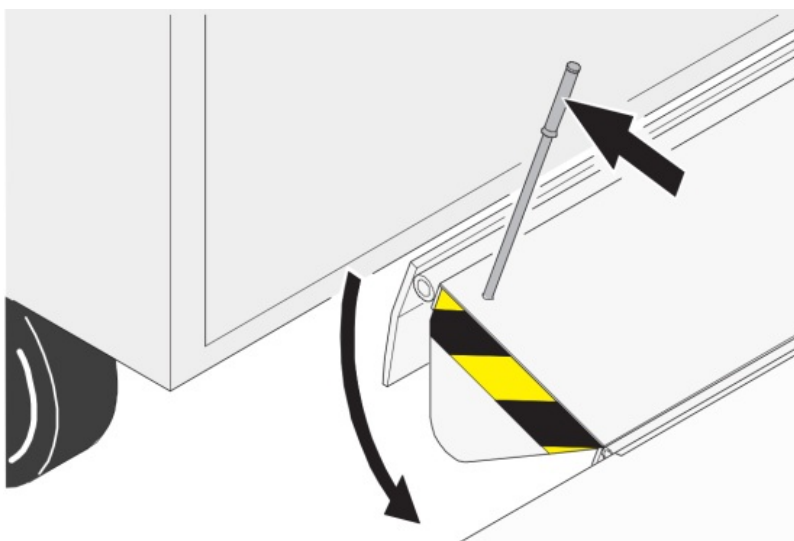
1. Remove the handle from its holder and plug it in the adaption hole in the platform.



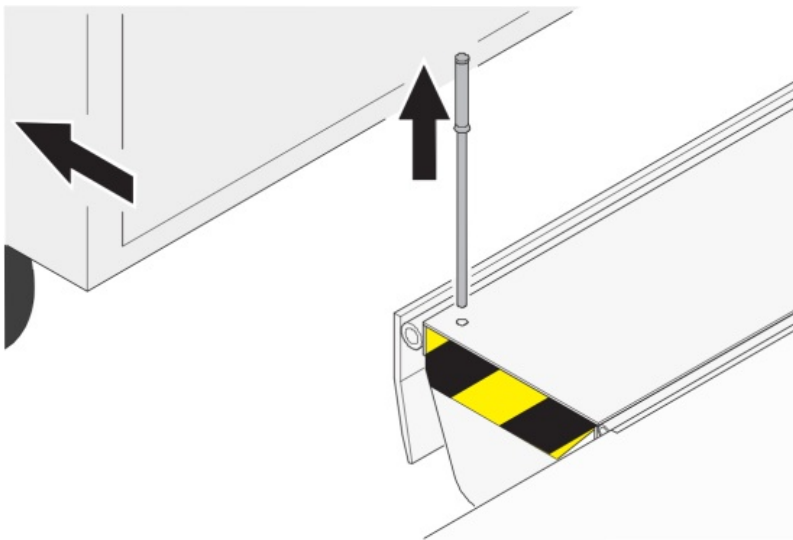
2. Raise the platform rapidly from the vehicle bed. The lip will swing in.



3. Lower the leveler before it reaches the upmost position to bring it in the cross traffic position.



4. Make sure the lip is resting correctly in the support profile.
5. Remove the handle from the operating position and put it in the holder.



6. The vehicle can leave the loading dock.

## Daily shut down procedure

1. Move the dock leveler to the cross-traffic position.
2. The dock leveler has now been taken out of commission

## Maintenance

### General remarks on maintenance work

The dock leveler is designed to keep maintenance to a minimum. Safe operation is only ensured if maintenance work is carried out at regular intervals.



Carry out a visual inspection every day.

Dock levelers must be given a safety inspection by a trained service engineer before first commissioning and thereafter at least once a year. Dock levelers must also be inspected after important repair work, e.g. welding of load bearing components. The extent of the inspection to be carried out depends on the scope of the repair work. The user must keep a written report containing the results of the inspection, including the date, name, address and signature of the person who has carried out the inspection.



### Caution!

Before undertaking any maintenance work make sure that the work place is sufficiently illuminated.



## **Caution!**


Before undertaking any maintenance work make sure to wear a helmet!

### **Preventive maintenance schedule**

Frequency	Part	Tasks
Daily	Platform and swing lip	Clean the platform and the swing lip.
		Do the Daily start up procedure.
		Do the Daily shut down procedure
Monthly	Platform and swing lip	Inspect the platform, swing lip and frame for any damage.
	Dock leveler	Lubricate the dock leveler.
		Do the functional test of the dock leveler.
	Pneumatic system	Inspect the gas spring and chain for any damage.

### **Maintenance by service engineer**

Frequency	Part	Tasks
Every year	Safety	Inspect for wear and tear Inspect the functionality Inspect the functioning of safety device
Every 6 years	Pneumatic system	Replace the gas spring

 Depending on the cycles per day shorter frequencies may be applicable!

### **Preventive maintenance procedures**

## Clean the Platform and the swing lip

1. Make sure the dock leveler is in the cross-traffic position.
2. Use suitable cleaning materials to clean the platform and the lip.

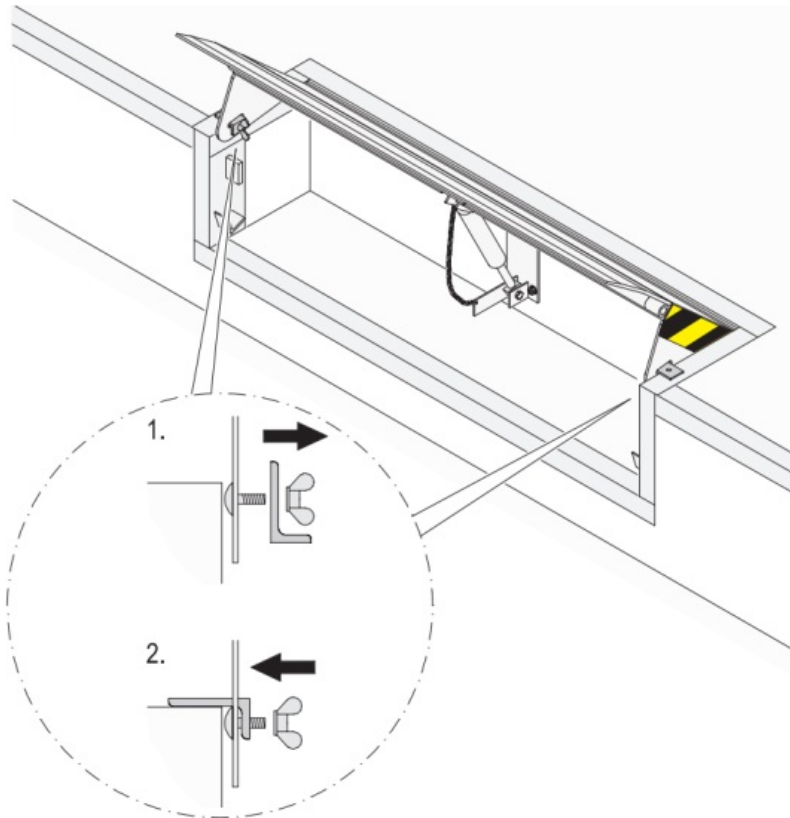
## Install the safety prop

### **Caution!**

Make sure there are no persons or equipment in the working area of the dock leveler on top, below, in front and on both sides before you operate the dock leveler.

### **Caution!**

Make sure that the lip is free to rotate!



1. Remove the handle from its holder and plug it in the adaptation hole in the platform
2. Pull the handle backwards to the upmost position to raise the platform and swing out the lip.
3. Unscrew the wing nuts and remove the two safety props. Put the safety props onto the bolts so that the short sides are laying against the platform sides and the long sides are facing the outside of the dock leveler. Secure the safety props with the wing nuts

4. Lower the leveler until it rests firmly on the safety prop.

### **Inspect the platform, lip and support frame for damage**



#### **Danger!**

Install the safety prop before you do maintenance on the dock leveler.

#### **1. Inspect the platform, swing lip and frame/dock edge for the following defects:**

- Damage to the protective coatings
- Corrosion
- Cracks
- Crumbling concrete in the area around the frame/cast-in channel
- Movement of the ramp edge under load

#### **2. Make sure:**

- The safety symbol is visible
- The chain is not broken
- There is sufficient grease on the hinges
- Dock edge is properly fixed to the concrete body.

3. If defects are found, contact the local service centre.

4. Remove all tools and equipment from the area.

### **Inspect the Electrical System**



#### **Danger!**

Install the safety prop before you do maintenance on the dock leveler.

#### **1. Inspect the gas spring and chain for the following:**

- Deformation of the gas spring
- Damage to the chain
- Chain activating before the gas spring is fully extended
- Operating force is  $\leq 300\text{N}$
- Corrosion
- Cracks

2. If defects or malfunctions are found, contact the local service centre.

3. Remove all tools and equipment from the area.

### **Lubricate the dock leveler**



#### **Danger!**

Install the safety prop before you do maintenance on the dock leveler.

1. **Use a suitable grease gun and a clean cloth to apply grease to:**
  - The hinges at the rear end of the platform. Use the lubrication holes in the bearings of the plateau hinges.
  - The hinge joints on the lip
2. Use suitable cleaning materials to remove all excess grease.
3. Remove all tools and equipment from the area.

### **Remove the safety prop**



#### **Caution!**

Make sure there are no persons or equipment in the working area of the dock leveler (on top, below, in front and on both sides) before you operate the dock leveler.

1. Unscrew the wing nuts and remove the two safety props.
2. Put the safety props onto the bolts so that the long sides are laying against the platform sides and the short sides are facing the ground floor.
3. Secure the safety props with the wing nuts.
4. Remove the handle from its holder and plug it in the adaptation hole in the platform.
5. Raise the platform rapidly. The lip will swing in.
6. Lower the leveler before it reaches the upmost position to bring it in the cross traffic position.
7. Remove the handle from the operating position and put it in the holder.

### **Test and Adjustments**



#### **Caution!**

Make sure there are no persons or equipment in the working area of the dock leveler before you operate the dock leveler.



## **Danger!**

Install the safety prop before you do maintenance on the dock leveler.

### **Functional test**

1. Remove the handle from its holder and plug it in the adaptation hole in the platform
2. Pull the handle backwards to the upmost position to raise the platform and swing out the lip.
3. **Make sure:**
  - The platform moves smoothly to the fully up position
  - Chain is activating before the gas spring is fully extended
  - Operating force is  $\leq 300\text{N}$
4. Lower the lip.
5. Raise the platform rapidly from the vehicle bed.
6. Make sure the lip swings in.
7. Lower the leveler before it reaches the upmost position to bring it in the cross traffic position.
8. Remove the handle from the operating position and put it in the holder.

### **Troubleshooting**

This chapter contains troubleshooting information for users of this door. If a fault is not described in this chapter contact the local service centre for assistance.

### **Introduction**

This chapter contains troubleshooting information for users of the Normstahl mini dock leveler. If a fault is not described in this chapter contact the local service centre for assistance.

#### **Platform does not move**

Possible Cause	Solution
Load on the dock leveler	Remove the load

Mechanical obstruction	Remove the obstruction
Dock leveler damaged	Contact the local service centre
Platform hinge jammed	Clean and lubricate the hinge (see “Lubricate the dock leveler”)

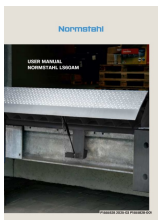
### Swing lip does not swing

Possible Cause	Solution
Mechanical blockage	Remove the blockage
Pneumatic unit damaged	Contact the local service centre
Chain is broken	Contact the local service centre

[www.normstahl.com](http://www.normstahl.com)

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## Documents / Resources

	<p><a href="#">Normstahl LS60AM Swingdock Minidock [pdf]</a> User Manual</p> <p>P1555828, 2025-03, P1555828-001, LS60AM Swing Dock Mini Dock, LS 60AM, Swing Dock Mini Dock, Dock Mini Dock, Mini Dock</p>
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### References

- [User Manual](#)

Normstahl

2025-03, Dock Mini Dock, LS60AM, LS60AM Swing Dock Mini Dock, Mini Dock, Normstahl, P1555828, P1555828-001, Swing Dock Mini Dock

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