

## ITEM: HATCH COVER WHEELS on folding panels

**FINDING:** End wheels not turning freely when panels are closed



End wheels - flanged



End wheels - not flanged



End wheel stuck on  
wheeltrack



Intermediate wheel on  
hydraulic jack

### WHY IS THIS A PROBLEM?

#### TECHNICAL DATA : PANEL WHEELS

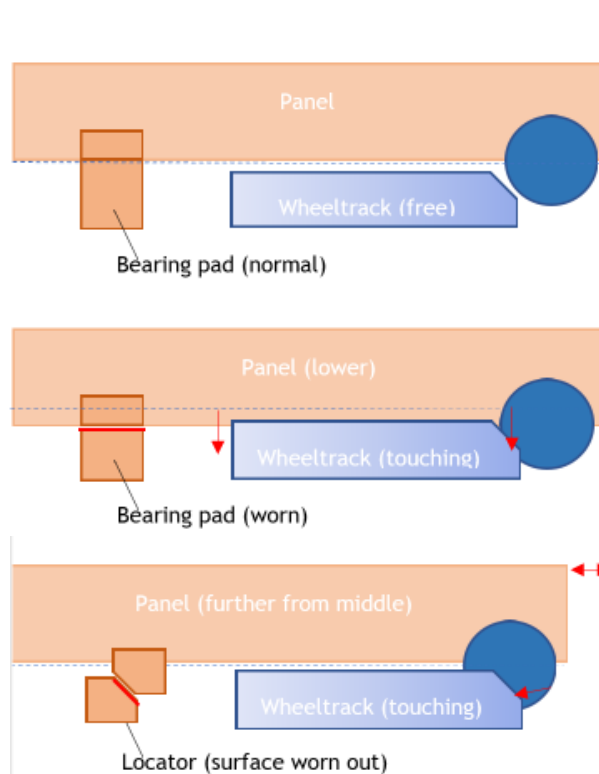
- Wheels are intended to move the panels to open and closed position.
- Wheels are not intended to carry the weight of the panels in sea-going position. In closed position the weight should be carried by the bearing pads.
- Therefore, the wheel track is cut out in dedicated positions, so that when the panel is closed the wheel is not touching the track.
- Wheels are flanged on one side of the panel and flat on the other to allow for restricted relative movement.

#### ISSUE WHEN END WHEELS ARE NOT TURNING

When the wheels are turning when panels are open, but not when the panels are closed, this is not a matter of greasing. In the first place, this is a symptom of an alignment issue.

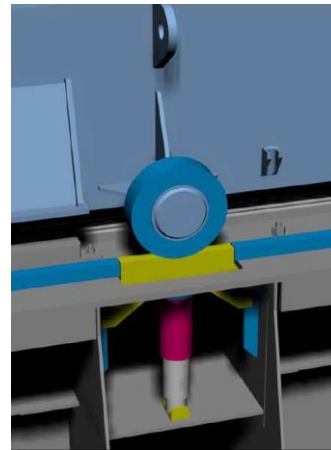
This may be a bearing pad wear-down near the meeting joint, causing the panels to sit lower and the wheels to touch the cut-out of the wheel track. In this case, the wheel will carry a large part of the panel weight, damaging the wheel and axis.

It may also be a longitudinal locator wear-down, causing the panels to not fully close near the meeting joint, and the wheel to be stuck on the wheel track. In this case, the panel will additionally not be able to properly settle down, causing leakages when left untended.



### DIFFERENCE WITH INTERMEDIATE WHEELS OR SIDE-ROLLING PANELS

The cylinders to jack up the wheels are single acting. This means they will only retract with weight on the cylinders. Therefore, after the sea voyage, one will see a gap between the wheel and the cylinder, but right after closing, the wheel will be touching. When these wheels are not turning freely, it is therefore not necessarily an issue.



### WHAT KIND OF FEEDBACK IS EXPECTED?

#### CORRECTIVE ACTIONS

- Identification of underlying cause
- Third party work reports on the line-out of your hatch covers
- If not available, your own measurements on how much steel was added on which locations
- Measurements after repairs
- Weathertightness test results after repairs

#### PREVENTIVE MEASURES

- Explanation of monitoring system implemented to avoid repairs outside of shipyard periods