

ALERT

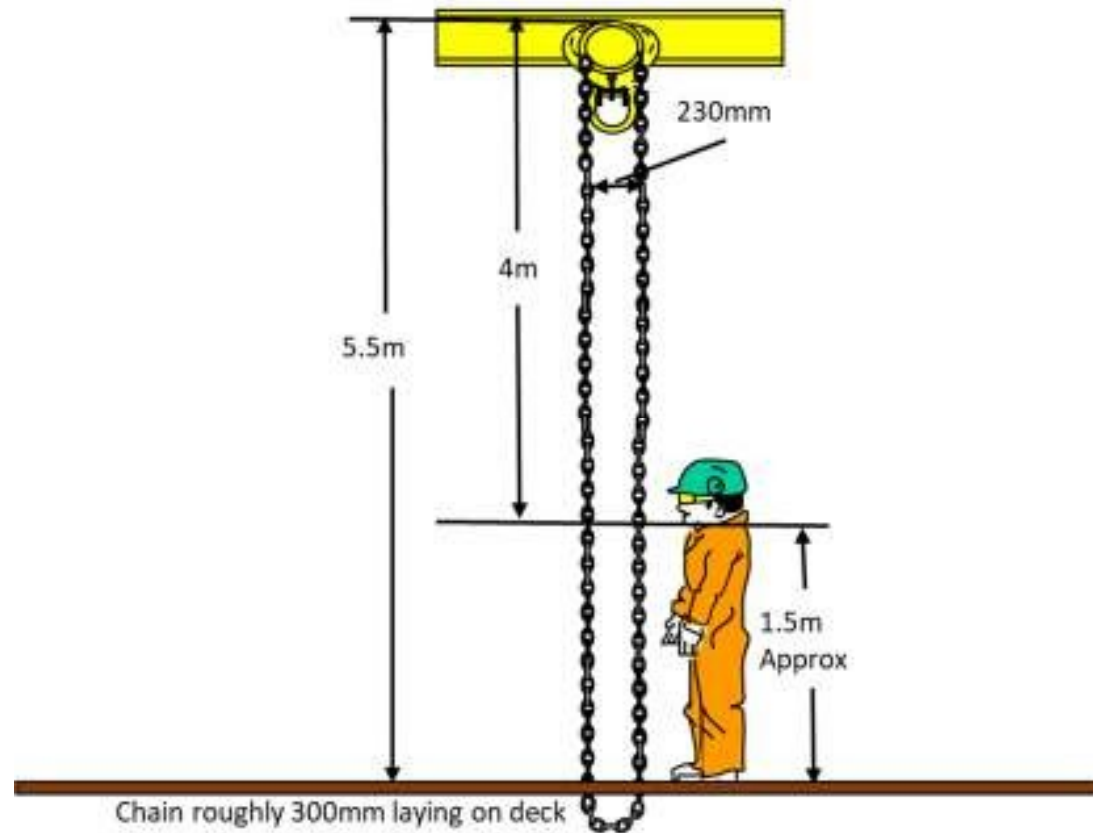
Dropped Object

Geared Beam Trolley Movement Chain

Alert Information

- This incident actually happened
- The 15te SWL geared beam trolley had been installed on the runway beam the previous night
- The trolley was not under load at the time
- Pre use checks were being carried out by a competent person
- The injured party luckily only suffered slight discomfort
- Investigation found the trolley was correctly certified
- Investigation found the trolley had been installed correctly
- It was not possible to access the trolley at height for a close visual inspection

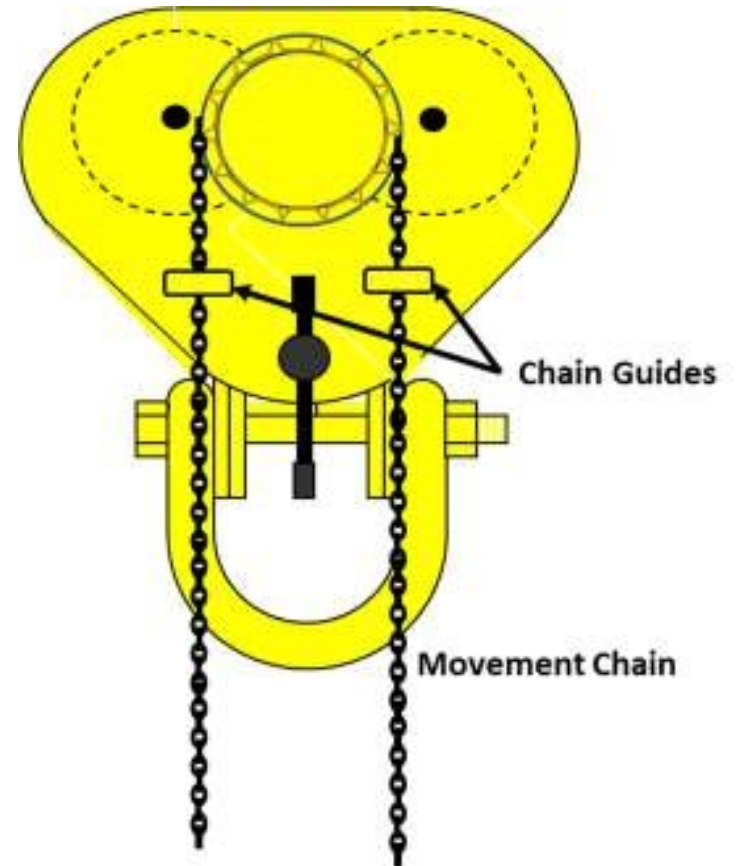
What Happened



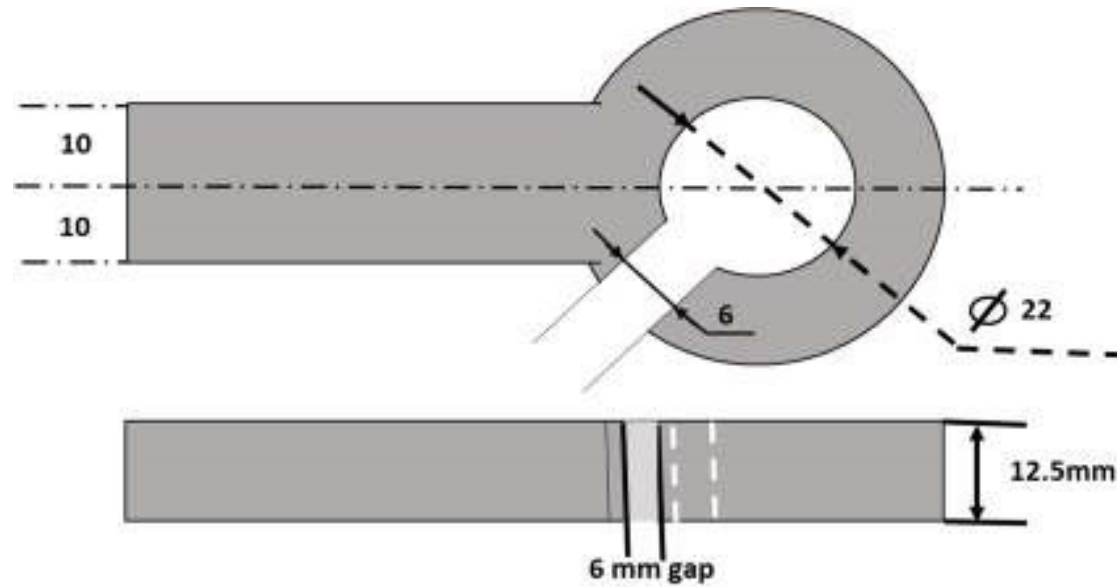
During the pre-use checks of a geared beam trolley the movement chain disengaged from the trolley guide wheel and fell 5.5 meters to the deck. The dropped chain contacted an individual by a glancing blow to the shoulder.

Geared Beam Trolley

This only applies to geared beam trolleys with the chain guides as detailed in the following slides

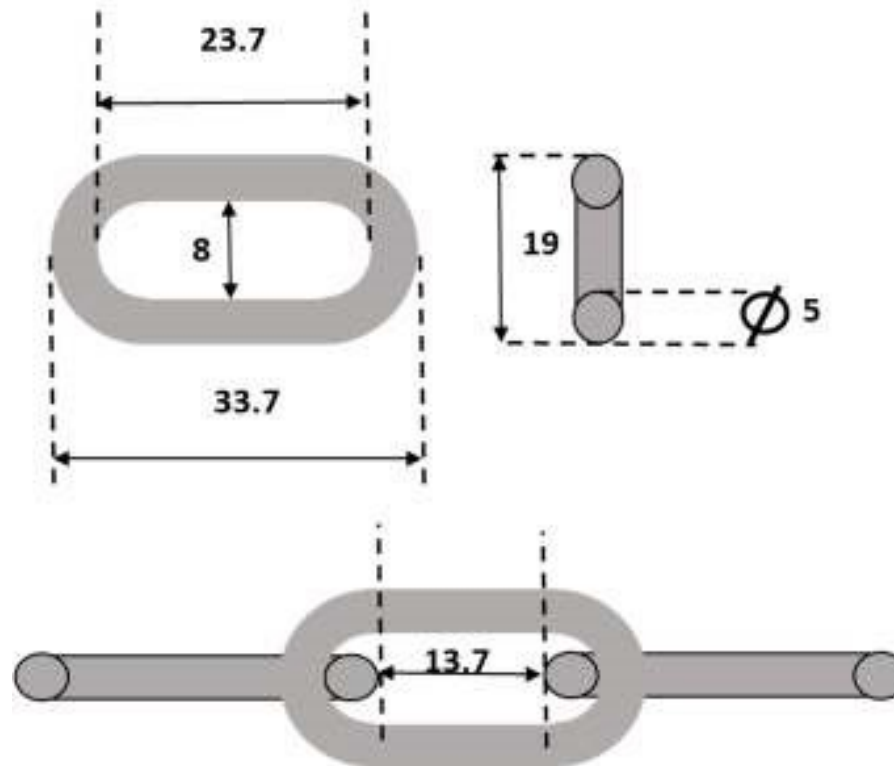


Chain Guide Specification



- Note the gap is detailed as being 6mm
- The depth of the guide is detailed as being 12.5mm
- The available distance between links is 13.7mm which again allows the link to freely come out of the gap

Chain Link Specification



- Zinc Plated Electrically tested
- Welded long link
- (Other chains may fit but ride over pockets)

The Problem

- As can be seen in the previous slides the chain guide specification is for a 6mm gap in the chain guide and the chain diameter is 5mm
- The gap in the chain guide is vertical
- The depth of the guide is 12.5mm the available distance between links is 13.7mm
- This means the chain can easily come out of the guide
- Once out of the guide the chain can then easily come off the chain gear wheel and become a dropped object
- Not all makes / models of geared beam trolley have this combination of chain guide and chain

The Solution

- Checks should be carried out to ensure the chain cannot unintentionally disengage from the chain guides
- If it is possible the chain can freely exit the chain guide the manufacturer should be consulted to agree a workable safe solution