



Elevating and Amusement Devices Safety Program	Ref. No.: 303 / 23
ADVISORY	Date: April 30, 2023

Subject: Bearings on all 2 to 1 Roped Counterweights

Distribution: Posted on TSSA website

This advisory is intended to bring awareness to the possibility of a catastrophic failure when a BEARING on a 2 to 1 counterweight sheave arrangement fails.

Background:

A recent **BEARING** failure on a roped counterweight, resulted in counterweight sheave being forcefully separating from the counterweight frame. Reference Directors Order 302/23.

The bearing failure caused the counterweight sheave to seize. This ultimately led to the hoisting ropes coming off the sheave and separating the sheave from the counterweight frame. In turn this caused the counterweight to freefall and the car to overspeed downwards onto the car safeties.

Advisory:

Bearings on 2 to1 roped counterweights should be included in routine maintenance checks to ensure they are operating smoothly and not presenting signs of wear, noise, or other symptoms which could signal pending failure.

Bearings whether sealed or unsealed have a life expectancy rating.

Where the failure mode and effect analysis of a bearing arrangement has a high severity rating, such bearings should be included in routine maintenance checks and added to Maintenance control program documentation and the associated record of maintenance checks.

For Dover Turnbull installations see Directors Safety Order ED-302/23.

