

Collared eyebolts as lifting equipment

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NOPSEMA has published [Alert 64](#) relating to the failure of collared eyebolts when used for lifting.

What happened?

A piece of equipment was being lifted during maintenance and repair, when one of the two collared eyebolts used to lift it, sheared.

The piece of equipment, which weighed 21.7 tonnes, fell a distance of 1.2-1.8 m. There were no injuries.



What were the causes of the incident?

NOPSEMA reports that the primary, immediate causes of the incident were:

- The lifting equipment was configured such that the direction of pull was at an angle to the shaft of the eyebolt, so that a “fleet angle” from the vertical was created. Such an angular load reduced the Working Load Limit of the eyebolt to a significant degree.

IOGP Life Saving Rules:



Safe mechanical lifting

- The collar of the eyebolt was not fully flush with the body of the piece of equipment being lifted, causing a sheering force due to the fleet angle to be applied to the shaft of the eyebolt, instead of the load being spread across the eyebolt and the surface of the equipment being lifted (as per design).
- A **root cause** identified was **ineffective lift planning**.

The full Safety Alert can be found on NOPSEMA's [website](#).

Members may wish to refer to NOPSEMA's earlier [Safety Alert 59 Lifting and Rigging Plans](#).

Please also refer to [Guidelines for lifting operations](#).

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