Continuing Airworthiness Notice – 25-005

Helicopter Winch Cable – Damaged during winching operation

9 June 2025

Issued by the Civil Aviation Authority of New Zealand (CAA) in the interests of aviation safety. A Continuing Airworthiness Notice (CAN) is intended to alert, educate, and make recommendations to the aviation community. A CAN contains information and guidance about an airworthiness concern that does not meet the criteria for an Airworthiness Directive (AD). The inspections and practices described in this CAN must still be carried out in accordance with the applicable NZCAR Parts 21, 43 and 91.

CAN numbering is by ATA Chapter followed by a sequential number for the next CAN in that ATA Chapter.

Applicability:

All helicopter operators carrying out winching operations and their maintenance providers.

Purpose:

The purpose of this CAN is to notify helicopter operators and maintenance providers of a recent occurrence reported to CAA of a winch cable which was damaged during a winching operation.

Background:

During a night winching training exercise, the crew experienced a significant winch cable swing event.

The crew were quickly able to arrest the cable oscillation but not before the cable contacted the helicopter skid causing damage (see figure 1 below).

Upon investigation it was determined that the cable had contacted the skid, the snowshoe and the ground handling lug protector. It appears that the cable became momentarily trapped between the skid and an exposed edge of the lug protector, causing broken wire strands in the cable (see figure 2 below).

The operator determined that due to a previous repair to the skid, the ground handling lug protector did not sit flush with the skid. This meant that the cable was able to become trapped in the resulting gap, causing damage to the cable.

It was also determined that a Teflon cable protector assembly installed by the operator was not long enough to protect the potential cable contact area, nor did it sit flush against the skid meaning that the cable could become trapped between the protector and the skid.

Based on the configuration of the aircraft and the protective devices installed on the skid, damage to the cable was inevitable under the circumstances.

The operator has now installed a ‘full length’ cable protector to the skid.

Recommendation:

CAA recommend that all operators who carry out winching operations introduce appropriate measures to ensure that cables are protected from potential damage from contact with aircraft structure. Where protective devices are installed, operators should ensure that these devices do not themselves create a risk of the winch cable becoming trapped and/or damaged.

CAA requests that operators and maintenance providers report any instances of winch cable damage via the occurrence reporting process: https://occurrencereporting.services.aviation.govt.nz

Any questions can be directed to: warren.hadfield@caa.govt.nz

Conclusion:

CAA will continue to monitor reports of winch cable damage and will update this CAN accordingly.

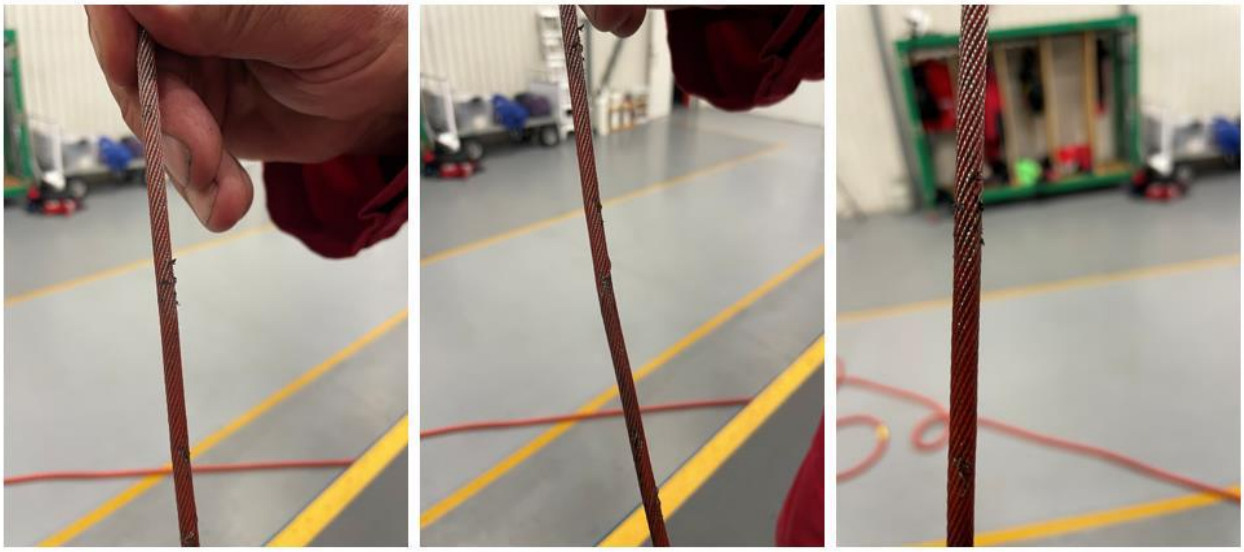

Figure 1 - Damaged cable.

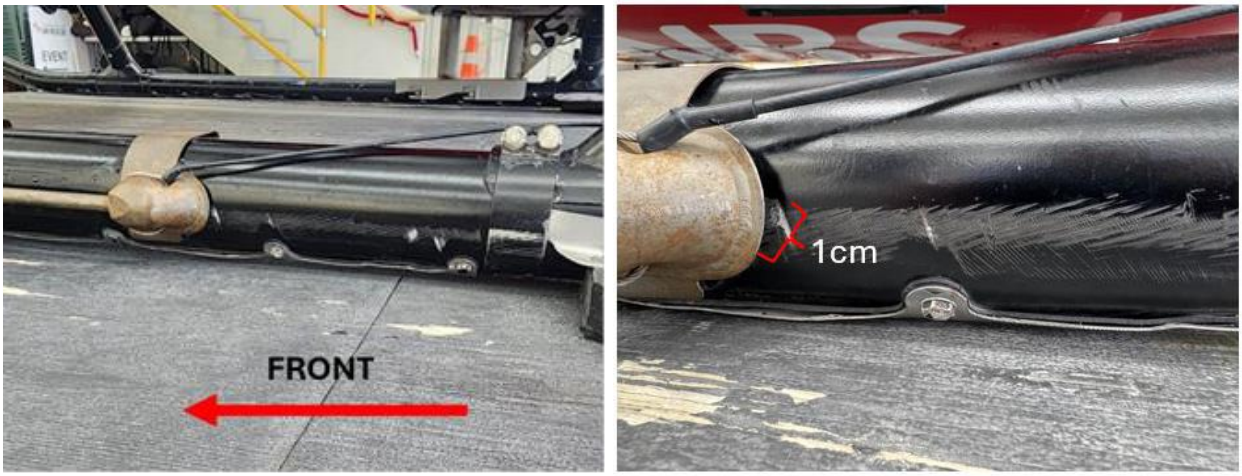

Figure 2 - Damaged skid.

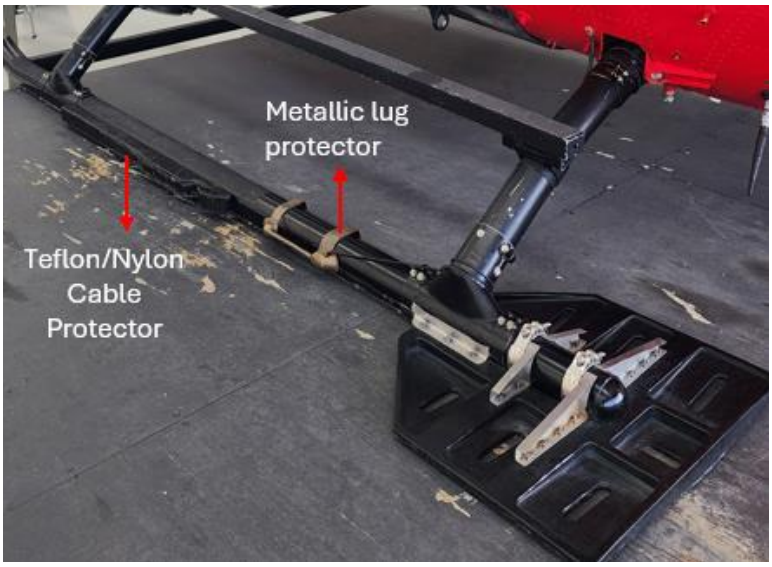

Figure 3 - Protectors installed at time of incident.

Figure 4 - Full length cable protector installed on skid.