

CCGS Edward Cornwallis Davit No J4373 Survey Report



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Executive Summary

This report outlines the issues that were found when carrying out an inspection and fault-finding test of the davit on the ship CCGS Edward Cornwallis. For each issue that was found during this inspection, a recommended course of action is provided. These recommended actions are split into those that are required before the davit is put into use again and those that stop the davit being used in the immediate future but should be carried out if the lifetime of the davit is to be extended.

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1. Introduction

1.1 Inspection Overview

1.2 Abbreviations & Definitions

Abbreviation	Definition
COS	Caley Ocean Systems
HPU	Hydraulic Power Unit

1.3 References

2. Purpose of Document

The purpose of this document is to detail the issues found when a visual inspection was carried out. It also documents the recommended course of action for each issue.

2.1 Distribution

Unless otherwise authorised by COS, the distribution of this document is confined to COS, nominated suppliers and approved Vendors only.

3. Visit to the ship Edward Cornwallis

- Conducted walk round and inspect Davit

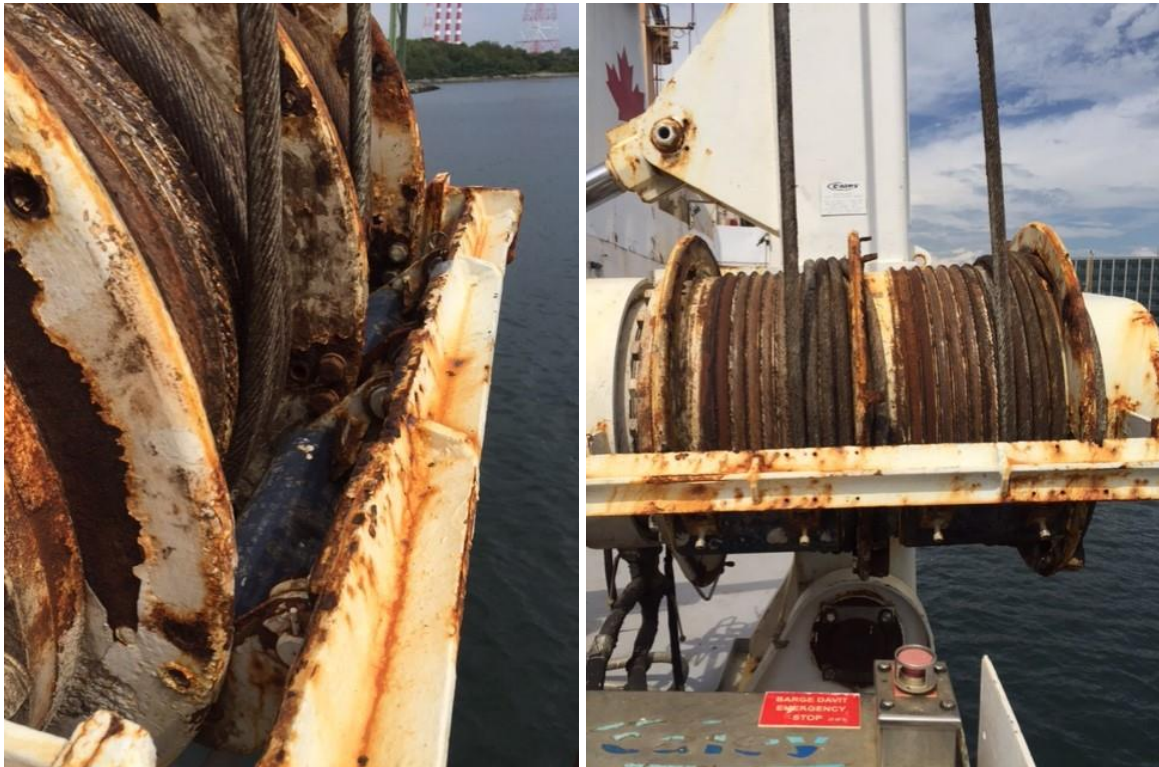
3.1 Davit General

- Initially the Davit appeared to be in a weathered condition, an carried-out operation function test was carried out with no weight / empty hook
- All Hydraulic hoses are over the 5-year life span. It is advised that these are changed out at the next maintenance period. At this point a hose register should be implemented, this will include hose ID with ID tags
- The Lever control valve is heavily corroded
- Lever control table also heavily corroded, there is an oil leak from lever control valve. The control valve will need to be stripped/replaced.
- The accumulator bottle is wrapped in denso tape, the gas was not checked as the isolation valve is seized and will not function.
- There was no certification for the accumulator or safety block, these will both need to be replaced.
- Hydraulic gauges, no visible test cert or inspection date, these should be replaced if they are being used for anything other than indication only. They have not to be used as test gauges without calibration.
- Valves at the bottom of Hydraulic tank handles are corroded, these should be replaced.
- Gasket around electrical motors are leaking due to age, the gaskets will need to be replaced gaskets, at this point the tank should be drained and inspected.
- Emergency system could not be tested as no hand pump was available and accumulator valve is seized.



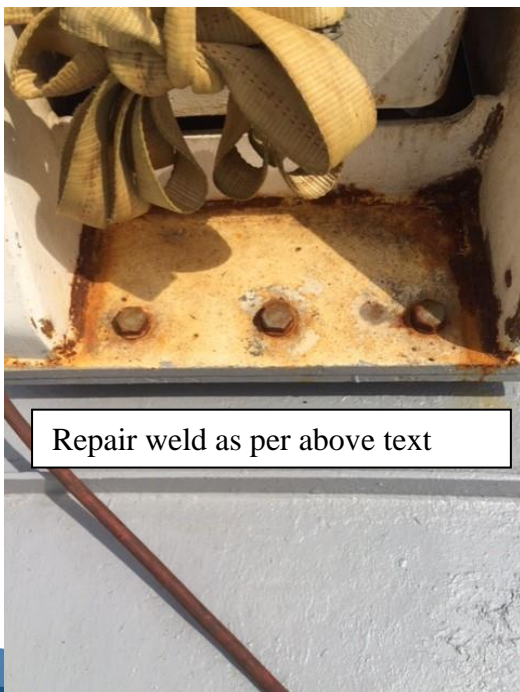
3.2 Davit Winch

- The Winch drum is in a poor condition with corrosion on all hardware, all fasteners should be replaced on next overhaul.
- At the next overhaul it is recommended that the following is done at a minimum.
- Completely dismantle winch, NDT all fabrications including drum and pedestals. Complete re-coating of the winch following NDT (any repair work should be carried out following NDT then re-tested after repair)
- Strip and inspect the brake pack replace parts as necessary
- Strip and inspect the motor, replace parts as necessary and bench test on completion
- Strip and inspect the gearbox and replace parts as necessary
- All parts should receive a full paint spec on completion.
- Side web on the winch pedestal to be repaired prior to re-coating
- Roller on the drum is heavily corroded and will not function
- Wire rope requires lubrication, the rope should be changed at the overhaul as it has a year left of certification.



3.3 Davit strongback

- All hardware on strongback's is heavily corroded and should be replaced
- At some point forward strongback has been welded / repaired possibly had crack issue, this will have to be stripped back and have NDT carried out.
- Strongback base pins have at some point had nuts welded on to the pins to try and remove the pins. pins are corroded and should be replaced with 17/4ph pins at next overhaul.
- Please be aware that due to current condition of the pin it may need to be thermal lanced to remove.



Repair weld as per above text

3.4 Davit crossbeam and associated equipment

- All hardware/bolts corroded, replace at next overhaul
- Sheave dolly bolts also corroded, replace at next overhaul
- Aft sheave dolly does not swing freely, strip and inspect at next overhaul and replace parts as necessary.
- For greasing sheaves, it is recommended that a central/automatic greasing system is utilised. This would negate the need to work at height for greasing routines at sea.



3.5 Davit Cylinders

- It appears to have nuts welded to the pin to draw pins out, pins are corroded and made of mild steel. All pins should be replaced for 17/4ph
- Please be aware that pins made need to be lanced like the strongback pins
- Cylinders to be stripped, inspected and re-sealed as part of next overhaul



4. Summary

From the current condition of the davit it is recommended that it goes through a full overhaul cycle. In addition to all items noted above, the following should be included.

- Strip to component parts, parts should be replaced when out with OEM spec
- All structures blasted to SAE2 and NDT carried out on all load path primary welds
- Fully coat the davit structures to OEM paint scheme
- Strip and inspect the brake pack replace parts a necessary
- Strip and inspect the motor, replace parts as necessary and bench test on completion
- Strip and inspect the gearbox and replace party as necessary
- All parts should receive a full paint spec on completion.
- Replace all hoses and implement new hose register
- Replace existing accumulators and safety blocks
- Replace hand control valve
- Xylan coat manifold blocks and replace corroded cartridges (xylan coating removes the need for covering blocks in denzo)