

TECHNICAL MEMORANDUM – METADATA SHEET			
Title C1511 TIGR Vibration Assessment		Report Number C1511	
Date 8 June 2021		Author(s) Ben Withy	
Distribution Unlimited		Security Classification UNCLASSIFIED	
Subject 1: Service NZ Army		Subject 2: Platform TIGR	
Subject 3: Keyword(s) – (enter one per cell below)			
TIGR	Vibration	IMU	
<p>Abstract</p> <p>Vibration levels on the TIGR platform were leading to failures. DTA assessed the vibrations and determined that on the old tracks the driving frequencies were in the range of 8 to 10Hz. A change to the track design was found to reduce the amplitude of the vibrations and spread the excitations over a broader range of frequencies. It was recommended that the OEM is asked to mitigate the amplification of vibrations into the manipulator arm and other attached accessories such as the observation head.</p>			

Investigator: B P Withy

Released: C J Barnes

TECHNICAL MEMORANDUM – METADATA SHEET			
Title: Cold chain validation test for Operation Pacific Vaccinate		Report Number C1516	
Date: 8 July 2021		Author(s) A D James	
Distribution Unlimited		Security Classification UNCLASSIFIED	
Subject 1: Service Other		Subject 2: Platform Offshore Patrol Vessel (OPV)	
Subject 3: Keyword(s) – (enter one per cell below)			
COVID-19	Vaccine	Cold chain transport	Aeon Softbox
Phase change material			
<p>Abstract</p> <p>DTA performed cold chain transport route performance validation for Operation Pacific Vaccinate duties to position COVID-19 vaccine into remote pacific islands on board HMNZS WELLINGTON.</p> <p>Testing proved that Aeon® Softbox reuseable shippers, using phase change material panels, were able to maintain internal temperatures at or below -15°C in excess of 70 hours when subject to 30°C ambient heat.</p>			

Investigator: A D James

Released: B P Withy

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TECHNICAL MEMORANDUM – METADATA SHEET			
Title Review of Cold Chain Temperature Data ex Operation Pacific Vaccinate I		Report Number C1516/2	
Date 27 October 2021		Author(s) A D James	
Distribution Unlimited		Security Classification UNCLASSIFIED	
Subject 1: Service Other		Subject 2: Platform Nil	
Subject 3: Keyword(s)			
COVID-19	Vaccine	Aeon Softbox	Cold chain transport
Phase change material			
<p>Abstract</p> <p>Cold chain temperature records from Operation Pacific Vaccinate (July 2021) were reviewed in order to assess the robustness of transport arrangements on board HMNZS WELLINGTON. Data indicate that the performance of the Aeon™ Softbox reuseable shipping cartons, within the ultralow temperature (ULT) container (set to a nominal -25°C), performed well. Whilst the daily defrost cycle of the ULT freezer unit did influence the Softbox internal temperature, the influence was not so great that the phase change material increased temperature to its melting point (nominally -21°C). It is considered that the addition of extra thermal mass in the ULT container is not required to protect the vaccine, provided measures are put in place to protect against power failure, refrigeration failure and unnecessary door opening.</p>			

Investigator: A D James

Released: C J Barnes

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TECHNICAL MEMORANDUM – METADATA SHEET			
Title Corrosion Assessment of SH-2G(I) Super Seasprite NZ3619 Wiring		Report Number C1518	
Date 17 August 2021		Author(s) A D James	
Distribution Unlimited		Security Classification UNCLASSIFIED	
Subject 1: Service RNZAF		Subject 2: Platform SH-2G(I)	
Subject 3: Keyword(s) – (enter one per cell below)			
Wiring	Electrical wiring	corrosion	
<p>Abstract</p> <p>Wiring samples from Seasprite NZ3619 were examined for corrosion following a severe wetting incident on board HMNZS OTAGO. Comparison was made with another active airframe (NZ3618) and a non-flying airframe (NZ3620). Those from NZ3619 were not significantly different from NZ3618, and overall, slightly worse than NZ3620.</p>			

TECHNICAL MEMORANDUM – METADATA SHEET			
Title SH-2G(I) Seasprite Main Landing Gear Liquid Spring Design Improvements		Report Number C1521	
Date 30 November 2021		Author(s) A D James                      G J Stephen	
Distribution Unlimited		Security Classification UNCLASSIFIED	
Subject 1: Service RNZAF		Subject 2: Platform SH-2G(I)	
Subject 3: Keyword(s) – (enter one per cell below)			
Seasprite	Helicopter	SH-2G(I)	Landing gear
Liquid spring	hydrogen		
<p>Abstract</p> <p>DTA has undertaken a review of Seasprite main landing gear liquid spring design improvements proposed by Kaman. The main element of the proposal is replacement of the existing aluminium thread plating with electroless nickel plating. Generally, the proposal looks to provide benefits for the RNZAF, but more detail is required to fully assess the cost effectiveness as the RNZAF fleet approaches end of life.</p>			

Investigators: A D James G J Stephen	Released: C J Barnes
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