

Version 1.1

HO-MMHEL-RP-v1.1

Master Minimum Helideck Equipment List (MMHEL)

HeliOffshore Reference Document



HeliOffshore
Safety Through Collaboration

Safety Through Collaboration

Collaboration empowers safety and is at the very heart of HeliOffshore. This Master Minimum Helideck Equipment List (MMHEL) is a great example of how our industry – from designers and maintainers, to pilots and passengers – works together and learns from each other to ensure no lives are lost in offshore flight.

I would like to thank the HeliOffshore Helideck Working Group, industry stakeholders and every HeliOffshore member who came together to deliver this guidance. Thank you for your commitment and contribution. Together, we will implement and sustain ever-higher levels of performance so those we are responsible for travel home safely every day.

Tim Rolfe
CEO, HeliOffshore

Publishing Details

Version: 1.1

Publication date: May 2022

Authors:

Patrick Bosman (PHI)
John Parker (BP)
Lorraine Cameron (CHC)
Steve O'Collard (CHC)
Graham Wildgoose (OGUK)
Daniel Chicoyne (CNLOPB)
Colin Cheesewright (IOGP ASC Representative)
Giorgio Bindoni (AviaSafety Consulting Int.)
Jonathan Conrad (BP)
Mark Small (Chevron)
Simon Jones (Green Deck Operations)
Curtis Savidan (BSP)
Alex Knight (HCA)

Acknowledgments

HeliOffshore gratefully acknowledges the many members and industry stakeholders who contributed to the design, creation, delivery and feedback of this document, which will ultimately be one of a suite of documents capturing best practice in helideck management and operation.

Disclaimer

While every effort has been made to ensure the information contained in this recommended practice is accurate, HeliOffshore makes no warranty, express or implied, and takes no responsibility as to the accuracy, capability, efficiency, merchantability, or functioning of this information. The user of such information does so at their own risk and has reviewed and independently verified the information for their own purposes.

Extracts from this recommend practice may be published without specific permission from HeliOffshore, provided that HeliOffshore is duly acknowledged as the source and that the material is reproduced accurately, in context and solely for the purpose of safety.

The guidance given in this recommended practice document represents a collective position adopted by the Helideck Working Group. Participation in the group or being named as an author does not imply that an individual or their organization support any particular point.

This document is not intended to replace any contractual negotiations, agreements or requirements between helicopter operators and their customers nor supercedes any local regulatory requirements.

1 Description	4				
1.1 Background	5	1.6 From MMHEL to Minimum Helideck Equipment List (MHEL)	8		
1.2 Scope	5	1.7 Operational or maintenance procedures	8		
1.3 Aircraft Master Minimum Equipment List (MMEL)	5	1.8 Exceptions or variances	8		
1.4 Aircraft MMEL principle for Offshore Helidecks	5	1.9 Multiple unserviceabilities	8		
1.5 MMHEL Key Stakeholder Takeaways	6	1.10 Closing a Helideck	8		
1.5.1 Offshore Helideck Owner/Operator Organisations	6	1.11 Escalation/Communication	8		
1.5.2 Offshore Leadership	6	1.12 Feedback regarding the MMHEL	8		
1.5.3 Helideck Teams	6	1.13 Examples	8		
1.5.4 Aviation Advisors	6	1.14 MMHEL Guidance Template	9		
1.5.5 Helicopter Operator Organisation Leadership	7	2 Practical Examples for use of the MMHEL	10		
1.5.6 Helicopter Pilots and Dispatchers	7	4.1 Scenario 1	11		
1.5.7 Helicopter Operator Training Departments	7	4.2 Scenario 2	11		
1.5.8 National Aviation Authorities	7	4.3 Scenario 3	11		
1.5.9 International Maritime Organisation (IMO) Leadership	7	3 Repair Category	12		
1.5.10 Helideck Team Training Organisations	7	2.1 Definition	13		
		2.2 Categories	13		
		2.3 Single Extension	13		
		2.4 Exceptions	13		
		4 Master Minimum Helideck Equipment List (MMHEL)	14		
		01 Helideck lighting	15		
		02 Visual aids / markings	19		
		03 Communications equipment (applicability)	21		
		04 Helicopter payload management (applicability)	22		
		05 Miscellaneous safety critical equipment (applicability)	23		
		06 Weather reporting equipment	25		
		07 Fire fighting systems	27		
		08 Helideck monitoring system & reporting equipment (attended mobile facility only)	28		
		09 Helideck fixed equipment	30		

Section 1 Description



Section 1

Description

1.1 Background

This Master Minimum Helideck Equipment List (MMHEL) is a document that is based upon the methodology used to ensure airworthiness of an aircraft (see paragraphs 1.2 through 1.3 below). The MMHEL therefore provides a clear, understandable, and proven methodology to guide the pursuit of safe helideck operations based on the serviceability of helideck equipment.

Additionally, The MMHEL standardises communications and helideck operations so safety issues are easily identifiable and safety recommendations are readily accessible and applicable. Standardised safety determinations improve consistency between helicopter operators and helideck owners/operators.

The MMHEL belongs to the whole industry, but is published and maintained by HeliOffshore. Adoption of the MMHEL recommended practice guarantees that all parties involved in offshore helideck operations – from offshore installations to helicopter operators, and your own helideck team – are aligned. Additionally, by using the same document in the industry and within each company, each stakeholder is empowered to do their part in improving offshore helideck operations,

with aligned decision criteria, standardized communications and structured responsibilities.

1.2 Scope

The HeliOffshore MMHEL recommended practice is applicable to helidecks installed on offshore installations and vessels independent of the regulations or recommended practices used to design the helideck. It does not mandate or create new requirements for equipment that are not present as part of the installed helideck, nor does it support closing helidecks that do not meet the most current local helideck design requirements; it merely attempts to assure that where (safety) equipment and systems are installed, that the equipment and systems are either serviceable or repaired within a certain timeframe based on risk exposure, in order to provide the safety benefits that the equipment and systems were intended to deliver.

If a helideck owner adds new equipment to a legacy helideck, in order to align better with current applicable design requirements, its initial design is therefore upgraded and improved and the new line items associated with the upgrade in the MMHEL now become applicable as well.

1.3 Aircraft Master Minimum Equipment List (MMEL)

In aviation safety, a Master Minimum Equipment List (MMEL) is a categorized list of on-board systems, instruments and equipment that may be inoperative for flight in a specified aircraft model. Procedures or conditions may be associated with items on the list. Any airworthiness-related equipment or system not on the list must be functional for flight. Minimum equipment lists are issued to specific aircraft and specific operators. In order to use a minimum equipment list, that specific company must receive a letter of authorization from the national aviation authorities of the countries where the aircraft will operate.

1.4 Aircraft MMEL principle for Offshore Helidecks

Similar to the use of an MMEL for aircraft, a Master Minimum Helideck Equipment List (MMHEL) is a categorized list which provides equipment and systems that may be inoperative while maintaining the safe operation of a specific type of offshore helideck (Attended or Normally Unattended Installation (NUI) helideck). Additionally, the MMHEL also includes all equipment and systems that must be operational/serviceable for safe operation of an offshore helideck, which differs from

an aircraft MMEL, where it is implied that any equipment or system not mentioned in the MMEL shall be functional. Therefore the MMHEL provides two categories of equipment and systems for safe operation of Offshore Helidecks: Category A items that must always be serviceable/operational, and Categories B, C & D items that (conditionally) may be inoperative.

As a minimum, the MMHEL, as a document developed and managed by HeliOffshore and referred to by IOGP, is adopted by the Helideck Owner/Operator and, where applicable, may be mandated by the Helideck Owner's national aviation authority or agency delegated by the authority (for example: Helideck Certification Agency (HCA) on behalf of CAA UK, etc.).

The MMHEL is established by the HeliOffshore Helideck Workgroup (HOHWG) for both Attended Installation Helidecks and Normally Unattended Installation (NUI) Helidecks. The MMHEL identifies equipment items which individually may be unserviceable at the commencement of helideck operations (Categories B, C & D), in addition to Safety Critical Equipment that may not be unserviceable (Category A). An identified MMHEL line item may be associated with special operating conditions, limitations or procedures.

The underlying premise is that each offshore helideck, and its associated systems, were designed in compliance with locally mandated or recommended design requirements. The MMHEL is used to manage unserviceability and unavailability of helideck related systems or components within these locally mandated or recommended design requirements. The MMHEL is not intended to resolve (legacy) design compliance issues associated with a specific helideck. Its objective is to maximize the serviceability of installed safety equipment and systems.

The purpose of the MMHEL is to offer a decision aide to the Helideck team; provide standardisation to the helicopter operators; improve communication between the helicopter operator and the Helideck operator; and determine the level of risk and ability to continue safe operations.

Any serviceability shall be discussed between the helicopter operator and the helideck operator.

Ultimately, it is up to the helicopter operator to determine if they can continue operations to a helideck with out of service items.

Any maintenance defect shall be recorded and tracked in the normal way the helideck operator reports maintenance issues.

Example/Analogy

A 1965 Ford Mustang does not have anti-lock braking, airbags, or maybe not even seatbelts; therefore a line item in an 'automobile' MMEL regarding required seatbelts would not be applicable. For a 2020 Ford Mustang where these systems, including seatbelts, are installed and are part of the design requirements, the line item regarding seatbelts would be applicable. The MMEL in this example does not mandate or create a new requirement for seatbelts in the 1965 model, nor does it support not driving the car anymore; it merely attempts to assure that where (safety) equipment and systems are required and installed, that the equipment and systems should be serviceable or repaired in order to provide the safety benefits that they were intended to deliver. If the owner decides to add seatbelts to the old Mustang, its design is improved and the applicable lines in the MMEL now become applicable as well.

1.5 MMHEL Key Stakeholder Takeaways

1.5.1 Offshore Helideck Owner/Operator Organisations

The MMHEL supports Offshore Helideck Owner/Operator Organisations to align the management, structure the maintenance and serviceability of helideck equipment, and provide helideck safety assurance. This robust recommended practice has been developed and agreed by aviation experts in the HeliOffshore Helideck Workgroup, with participation from helicopter operators,

helideck owner/operator organisations, helideck inspectors, and other regulatory and industry bodies. Industry organisations (like IOGP, HSAC, etc.) are encouraged to request their members to adopt the MMHEL in their respective member organisations, as there is no significant cost associated with the introduction and continued use of the MMHEL.

1.5.2 Offshore Leadership

The MMHEL supports Offshore Leadership and their teams by structuring the management of unserviceable helideck equipment and associated opening of the helideck for safe helicopter operations. As this initiative is developed and supported by aviation experts, all parties – from offshore installations, helicopter operators, to your own helideck team – are aligned. Offshore Leadership should consider referencing the MMHEL recommended practice as an internal standard in their helideck operations manual (HOM) or equivalent document depicting processes and procedures used for safe helideck operations, subsequently it can be used as a planning and management tool. As mentioned before, there is no significant cost associated with the introduction and continued use of the MMHEL; however it will have significant safety benefits. Additionally, feedback from MMHEL users will assist in keeping the document current and assure continuous improvement. Contact the HeliOffshore Helideck Workgroup to provide your feedback (see paragraph 1.12).

1.5.3 Helideck Teams

The MMHEL is a helideck team's tool for daily use. The MMHEL methodology and tool introduces a practical approach to helideck readiness. Make it part of your new, daily routine and use it to advocate for and communicate recommended industry aligned safety practices with your Offshore Leadership. The MMHEL is a standardized decision tool to determine if a helideck can be opened for operations, that defines repair times for helideck related equipment and systems, provides communication guidance for the helideck team members to inform their offshore leadership and helicopter operators, and improves the daily activities and associated communications with their leadership of helideck team members.

1.5.4 Aviation Advisors

The MMHEL supports helideck safety assurance, risk assessment and decision-making. The company's internal feedback regarding MMHEL related communications provides the data that Aviation Advisors need to improve their company's internal practices and procedures, and provides assurance feedback regarding helideck readiness. Implementation and use of the MMHEL will therefore provide significant benefits to the Aviation Advisors' role and responsibilities. Additionally, feedback from MMHEL users will assist in keeping the document current and assure continuous improvement. Aviation Advisors are in an excellent position to provide that feedback. Contact the HeliOffshore Helideck Workgroup to provide your feedback (see paragraph 1.12).

1.5.5 Helicopter Operator Organisation Leadership

The MMHEL supports helicopter operator employees to assure alignment of the management, maintenance and serviceability of helideck equipment, and provide helideck safety assurance. Historical attempts to improve helideck equipment's maintenance status and serviceability depended on the willingness of the helideck owner/operator to make improvements based on case-by-case arguments by the helicopter operator, sometimes straining the relationship between helicopter operators and their customers. This standardised approach is universally applicable focusing on minimum helideck equipment serviceability standards independent of the acceptance of individual helicopter operators and/or helideck owner/operators.

The helicopter operator is requested to make the MMHEL part of their processes and procedures, train employees, that in their activities might be impacted by the implementation of the MMHEL, in the concept, use and practical application of the MMHEL, in addition to providing assurance that processes and procedures related to the MMHEL are adhered to.

1.5.6 Helicopter Pilots and Dispatchers

As part of the new daily routine, Go/No-go decisions are backed by the systemic approach of use of the MMHEL; therefore, the helicopter pilot's and dispatcher's decisions are supported and less likely to be challenged. The MMHEL also provides improved communications (NOTAMs) regarding helideck equipment serviceability and standardized verbiage that will keep helicopter pilots and dispatchers informed to make the right decisions.

Contact the HeliOffshore Helideck Workgroup to provide your feedback (see paragraph 1.12).

1.5.7 Helicopter Operator Training Departments

In addition to the Leadership, Pilots, and Dispatcher takeaways, training departments should assure that students make the MMHEL recommended practice part of their new, daily routine, and advocate for this best industry aligned safety practice with students.

Contact the HeliOffshore Helideck Workgroup to provide your feedback (see paragraph 1.12), and ask students what they think.

1.5.8 National Aviation Authorities

The MMHEL supports Offshore Helideck Owner/Operator Organisations to align the management, structure the maintenance and serviceability of helideck equipment, and provide helideck safety assurance. This robust recommended practice has been developed and agreed by aviation experts in

the HeliOffshore Helideck Workgroup, with participation from helicopter operators, helideck owner/operator organisations, helideck inspectors, and other regulatory and industry bodies. Although an initial reaction may be to mandate the use of the MMHEL and make it part of national regulatory requirements, please allow for the industry to implement this initiative voluntarily and self-regulate.

The MMHEL concept can be used to advocate for this industry aligned safety practice, and the authority's continued monitoring of helideck equipment serviceability status and assurance that annual helideck inspections are performed is encouraged.

1.5.9 International Maritime Organisation (IMO) Leadership

The MMHEL supports Offshore Helideck Owner/Operator Organisations to align the management, structure the maintenance and serviceability of helideck equipment, and provide helideck safety assurance. This robust recommended practice has been developed and agreed by aviation experts in the HeliOffshore Helideck Workgroup, with participation from helicopter operators, helideck owner/operator organisations, helideck inspectors, and other regulatory and industry bodies.

IMO Leadership are encouraged to request their members to adopt the MMHEL in their respective member organisations, as there is no significant cost associated with the introduction and continued use of the MMHEL. IMO can make the MMHEL Recommended Practice part of their members routine through referencing

this Recommended Practice in their own standards and advocate for the MMHEL as best industry aligned safety practice with members globally.

1.5.10 Helideck Team Training Organisations

The MMHEL supports the training organization's helideck team course attending students to assure alignment of the management, maintenance and serviceability of helideck equipment, and provide helideck safety assurance. This robust recommended practice has been developed and agreed by aviation experts in the HeliOffshore Helideck Workgroup, with participation from helicopter operators, helideck owner/operator organisations.

Training organisations are requested to assure that helideck team course attending students make the MMHEL part of their new daily routine, they should also advocate for this best industry aligned safety practice with these students.

Contact the HeliOffshore Helideck Workgroup to provide your feedback (see paragraph 1.12), and ask students what they think.

1.6 From MMHEL to Minimum Helideck Equipment List (MHEL)

A Minimum Helideck Equipment List (MHEL) can be prepared by a Helideck Owner/Operator Organisation in conformity with, or more restrictive than, the Master MHEL (MMHEL) established for the Helideck Type (Attended or NUI) by HeliOffshore. The MHEL may differ in format from the MMHEL, but cannot be less restrictive than the MMHEL.

The helideck owner shall include the MHEL (as a minimum approved by the Helideck Owner/Operator Organisation and, where applicable, by the Helideck Owner's national aviation authority) in the Helideck Operations Manual (HOM) for each facility. This MHEL will enable the Helicopter Landing Officer (HLO) to determine whether helideck operations may be commenced, should any helideck operations related instrument, equipment or system become inoperative. The MHEL must not deviate from local regulatory requirements or equipment manufacturer's installation-, operating-, and/or maintenance requirements.

1.7 Operational or maintenance procedures

For several MMHEL items, operational and/or maintenance procedures are issued as indicated by a (M) or (O) symbol. The procedure itself, if applicable, is listed in the document.

The (M) symbol indicates a requirement for a specific maintenance procedure, which shall be accomplished prior to operation with the listed item inoperative.

The (O) symbol indicates a requirement for a specific operational procedure, which shall be accomplished in planning for and/or operating with the listed item inoperative.

1.8 Exceptions or variances

A helideck owner may not operate a helideck which is not in conformance with the approved MHEL, except with the explicit permission of the Appropriate Regulatory Authority. This permission is usually granted by the NAA when the MHEL is approved by them. If this is not the case, the explicit permission shall be provided by the helideck owner organisation and helicopter operator organisation in case the MHEL is approved by the helideck owner organisation. Such permission will not be granted to allow the helideck to be used outside conditions/requirements set by the MMHEL.

1.9 Multiple unserviceabilities

In most cases, multiple unserviceabilities of unrelated helideck equipment/systems cannot be addressed by the MMHEL nor, therefore, by an MHEL. The decision as to whether or not to accept for use, a helideck which has multiple unserviceabilities, which would individually be allowable by MHEL provisions, ultimately rests with the designated HLO, subject to guidance promulgated on a proactive or ad hoc basis by the helideck owner.

In any case, if multiple unserviceabilities exist, the MHEL should be consulted for each individual item to check if there are any incompatibilities for each of the associated readiness-for-use conditions.

1.10 Closing a Helideck

Repair categories are assigned to each individual item that is allowed to be temporarily unserviceable. If repair or other rectification of the unserviceability cannot be completed within the indicated repair category rectification interval, the helideck shall remain closed, or limitations or restrictions may be applied, until such rectification is completed and the helideck is again in conformance with the MHEL.

Limitations and restrictions may be created by the helicopter operator after discussion with the helideck operator to allow continuation of safe operations. Any such limitations or restrictions shall be communicated through NOTAM and/or (temporary) change to the Helideck Information Plate (HIP).

1.11 Escalation/Communication

Certain conditions shall be met when a helideck is opened for helicopter operations with allowable MHEL items maintenance or replacement activities being deferred (see paragraph Operational and maintenance procedures above). If a pilot identifies a defect or remedy that is not in accordance with the MHEL requirements, the air operator has the obligation to report such identified discrepancy to the helideck owner as soon as possible; however not exceeding a period of 24 hours for a written report.

1.12 Feedback regarding the MMHEL

Feedback from all MMHEL users will assist in keeping the document current and assure continuous improvement. Contact your company's designated focal point for this purpose, or contact the HeliOffshore Helideck Workgroup directly to provide your feedback at info@helioffshore.org.

1.13 Examples

Several practical examples on how to use the (M)MHEL are available in Section 2.

1.14 MMHEL Guidance Template

The following text aims to explain how the MMHEL is laid out, with a descriptor of each column.

1 System and Sequence Number:

Reference relating to Section, System and Item e.g. 01 -01-01 is the Helideck Lighting Section; Circle and H Lighting System; and TD Circle and H lighting item.

2 Repair Category:

Repair categories are assigned to each individual item that is allowed to be temporarily unserviceable.

Category A: Must always be serviceable for operations to take place.

Category B: Must be repaired within a 30 day period.

Category C: Must be repaired within a 90 day period.

Category D: Must be repaired within a 120 day period.

See Section 2.2 for further descriptions.

3 Number Installed:

Typical / required number of items installed.

Items marked with ‘-’ means any number of number installed, it does not mean that none are installed.

4 Number Required for Helideck Operations:

Helideck operations may continue if other expectations in this MMHEL item are met. 1 or more: This number of MMHEL items are required for Helideck Operations to continue, unless exempt in ‘Remarks or Exceptions’.

5 Remarks or Exceptions:

Parameters defining if / how Helideck Operations can be continued.

6 Maintenance Procedures:

Maintenance-related procedures to be implemented.

7 Operational Procedures:

Operational-related procedures to be implemented.

8 Suggested Notification to Air Operator(s):

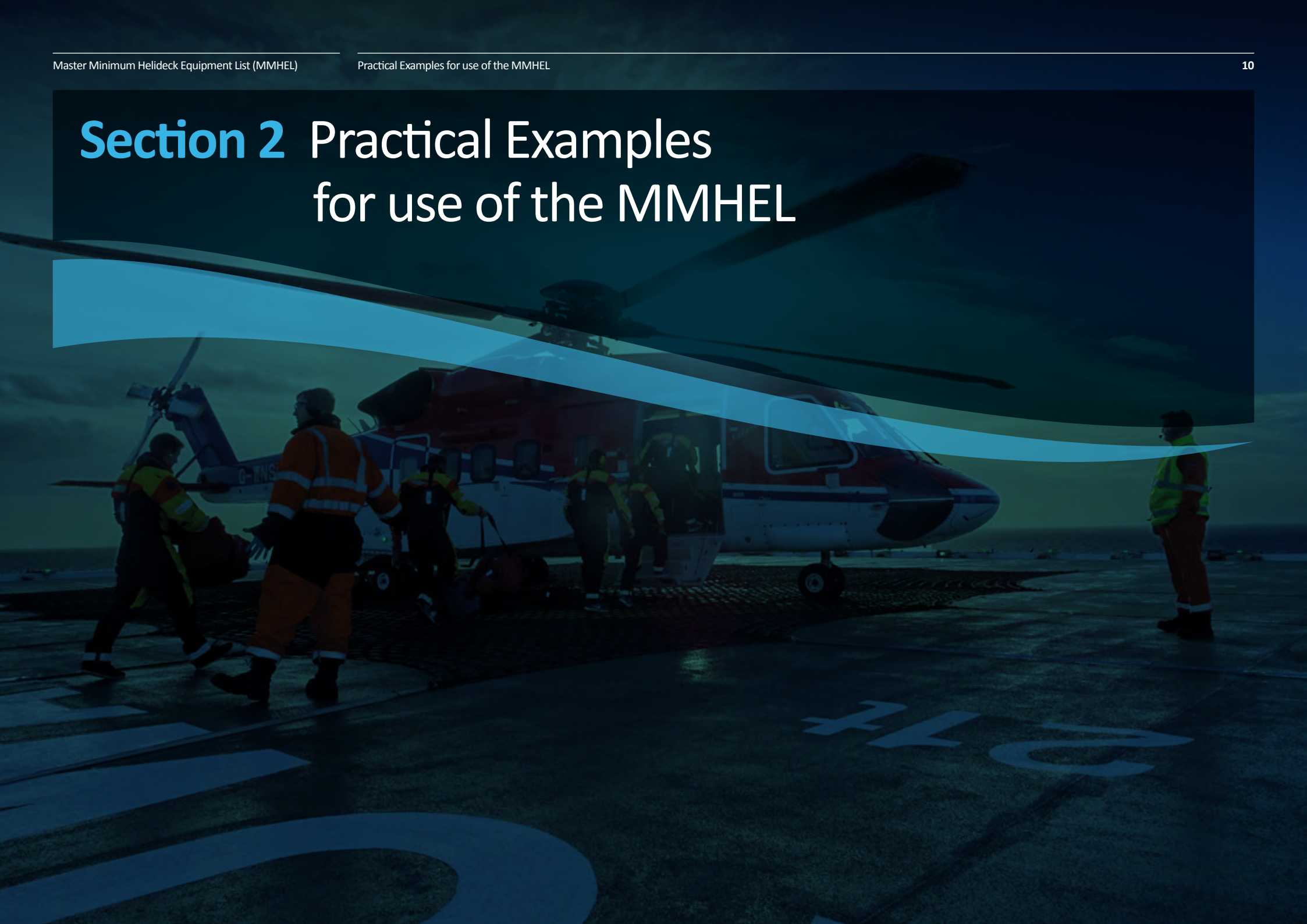
Guidance on communication of issue to Air Operator.

9 NUI:

Defines whether this equipment item is required for a Normally Unattended Installation (NUI).

1 System & Sequence Numbers		2 Repair Category	3 Number Installed/ Available	4 Number Required for Helideck Operations	5 Remarks or Exceptions	6 (M) Maintenance Procedures	7 (O) Operational Procedures	8 Suggested Notification to Air Operator(s)	9 NUI
01- Circle & H Lighting									
01-01-01	TD Circle and H lighting – if installed (Daylight)	B	1	0	Lights may be fully or partly inoperative for daylight operations only. If not installed: Flood lighting arrangement could function as alternative.	- Isolate power to Circle and H lighting system. - Placard switches to show system U/S .	- Issue NOTAM to restrict helideck operations to daylight only. - Helideck Operator to notify their contracted Helicopter operator(s).	Helideck operations restricted to daylight only	✓

Section 2 Practical Examples for use of the MMHEL



Section 2

Practical Examples for use of the MMHEL

2.1 Scenario 1

The HLO as part of his normal duties and in accordance with company specific SOPs in the Helideck Operations Manual will conduct a pre helicopter operations check of the helideck and surrounding areas to ensure operations can commence safely, to include visual verification that all equipment is functional and available.

As part of the walk around the helideck prior to start of operations, the HLO notices that two of the installed helideck TDPM lighting segments are not working.

The defect is noted and reported to the services department to check if there is an electrical issue. They will isolate the power and placard any switches in accordance with local SOPs and MMHEL, because the helideck owner/duty holder has adopted the MMHEL as provided by HeliOffshore as the leading document. Having checked and found the segments are still not functioning, the HLO in consultation with the appropriate on-board authority checks the MMHEL and local regulations/guidelines based on the area of operation (CAP437, NORMAM 27, HSAC RPs, ICAO Annex 14, etc.)

As this is a daytime flight, and in accordance with the (M)MHEL (01 Helideck Lighting

01-01) the TD Circle and 'H' lights maybe fully or partially inoperative for daylight operations only. A decision is taken to allow flights to operate to the helideck during daylight hours only. The leadership / safety team will contact the contracted helicopter operator informing them (either via NOTAM or other official means) of the issue and in accordance with the MMHEL the helideck is now restricted to daylight operations only.

The leadership has a 30-day window to rectify the TDPM segment issue as it is classified a Category B repair item.

However, despite the restriction in place regarding day operations only, based on a Risk Assessment, the helideck maybe used at night for emergency operations such as Medivac, down manning etc.

2.2 Scenario 2

HDA and Firefighters are conducting pre arrival checks on the fire-fighting equipment and find that one of the two hydrants allocated to helideck firefighting is not functional due to a stuck valve. After several attempts to free the valve, the HDA reports the defect to the HLO who in turn verifies the defect.

The helideck owner/duty holder company has adopted a company specific MHEL for their helidecks in the region, which is based upon the MMHEL provided by HeliOffshore, but has some more restrictive limitations. For firefighting equipment, the MHEL is identical to the MMHEL for this attended facility.

The HLO reports the defect to maintenance who in turn cannot immediately fix the issue. HLO in consultation with the leadership team, using their company MHEL, notes that at least 2 hydrant systems shall be fully operational for helicopter operations. There are no other hydrants in the vicinity of the helideck to back up the one serviceable hydrant. A decision is made to close the helideck as it is noted in the MHEL that it is a Repair Category A. The leadership team will immediately inform the helicopter operator and the helideck shall remain closed until the hydrant is again fully functional.

2.3 Scenario 3

The vessel's Heli-admin is preparing the briefing room for the morning flight using the vessel's helideck by setting up the DVD / media player with the helicopter safety briefing video. The Heli-admin notices that the electronic baggage scales are not reading zero. Upon checking via maintenance, they

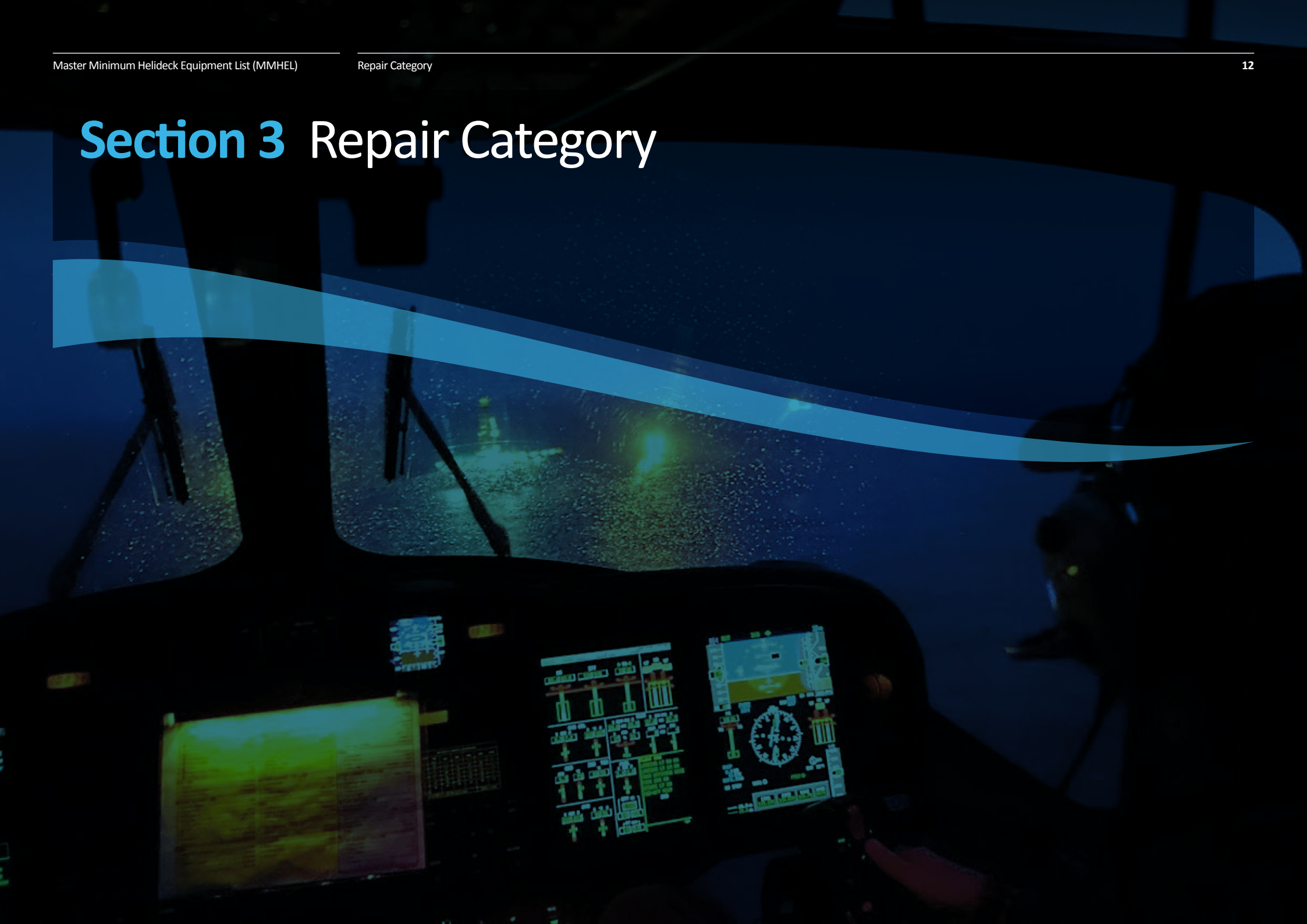
are deemed unserviceable with no spare scales held on-board.

Upon consulting the MHEL remarks and exceptions section, Heli-admin could use the same weights for the passengers and their bags as for the original inbound flight they arrived on (usually found in the retained inbound flight manifest). The helideck will remain open to flights, however as the scales are a Repair category A, priority should be given to obtaining a serviceable set of scales, preferably allocated on the next flight out to the installation.

Additionally, upon consultation with the leadership team a NOTAM will be issued in accordance with Suggested Notification to the Air Operator from the MHEL.

Note that if working on a NUI. With the above scenario, No additional baggage is permitted to be added to the outbound flight from the NUI; therefore no additional bags should be allowed onto the aircraft as they will not have been weighed, whereas the allowed on-going bags will have been weighed at the heliport and manifested accordingly for the previous arriving flight.

Section 3 Repair Category



Section 3

Repair Category

3.1 Definition

All users of an (M)MHEL must effect repairs of inoperative systems and equipment items related to helideck operations, deferred in accordance with the (M)MHEL, at or prior to the repair times established by the following letter designators. Exceedance of repair times will result in the helideck having to be closed for helicopter operations until the affected helideck system(s) are serviceable again.

Any maintenance defect shall be recorded and tracked in the normal way the helideck operator reports maintenance issues.

3.2 Categories

Repair Category A. This category item must be fully functional or helideck shall be closed for helicopter operations.

Repair Category B. This category item must be repaired within 30 consecutive calendar days excluding the day the malfunction was recorded. For example, if it were recorded at 10 a.m. on January 26th, the 30 day interval would begin at midnight the 26th and end at midnight February 25th. Can be extended once with an additional 30 day period if parts are on order and delivery is delayed or repair personnel availability is delayed (see paragraph Single Extension below).

Repair Category C. This category item must be repaired within 90 consecutive calendar days excluding the day the malfunction was recorded. For example, if it were recorded at 10 a.m. on January 26th, the 10 day interval would begin at midnight the 26th and end at midnight April 25th. Can be extended once with an additional 30 day period if parts are on order and delivery is delayed or repair personnel availability is delayed (see paragraph Single Extension below).

Repair Category D. This category item must be repaired within 120 consecutive calendar days excluding the day the malfunction was recorded. No extension possible. Helideck shall be closed if 120 days repair timeline is exceeded.

NOTE: Category D is normally only applied to items/systems which are in excess of minimum helideck requirements

3.3 Single Extension

A helideck operator using an MHEL, that has been authorized by the approver of this MHEL (local regulator or helideck owner organisation) in use may also receive the documented delegated authority to approve single (one-time) extension to the repair interval for repair category B or C. If such delegated approval authority for single extensions is not received in writing from the organisation overseeing the MHEL, this authorization for single extension remains with the oversight organisation.

The single extension process is to be used only for unforeseen circumstances rather than convenience.

3.4 Exceptions

MMHEL items that are mandatory in nature (Number Required > 0) will close the helideck for helicopter operations; however after risk assessment the helideck could temporarily be opened for emergency operations (e.g. Medevac, Facility evacuation, etc.), where the risk of losing life or limb for personnel outweighs the safety degradation of the helideck due to the unserviceability of mandatory MMHEL items/systems. This risk assessment shall be documented, signed by the facility manager (OIM, PIC, or Captain of the vessel) and archived for a minimum period of two years.

Section 4 Master Minimum Helideck Equipment List (MMHEL)



Section 4

Master Minimum Helideck Equipment List (MMHEL)

01 Helideck lighting

System & Sequence Numbers		Repair Category	Number Installed/ Available	Number Required for Helideck Operations	Remarks or Exceptions	(M) Maintenance Procedures	(O) Operational Procedures	Suggested Notification to Air Operator(s)	NUI
01-01 Circle & H Lighting									
01-01-01	TD Circle and H lighting – if installed (Daylight)	B	1	0	Lights may be fully or partly inoperative for daylight operations only. If not installed: Flood lighting arrangement could function as alternative.	- Isolate power to Circle and H lighting system. - Placard switches to show system U/S .	- Issue NOTAM to restrict helideck operations to daylight only. - Helideck Operator to notify their contracted Helicopter operator(s).	Helideck operations restricted to daylight only	✓
01-01-02	TD Circle and H lighting – if installed (Night)	A	1	1	At least 90% of the lights shall be functional for night operations. If not installed: Flood lighting arrangement could function as alternative.				✓
01-02 Flood Lights									
01-02-01	Helideck area floodlights – if installed (Daylight)	B	1	0		- Isolate power to flood lights. - Placard switch(es) to show system U/S (if applicable).			✓
01-02-02	Helideck area floodlights – if installed (Night)	A	1	1	If not installed: Circle and H Lighting shall be installed and operational.				✓

System & Sequence Numbers		Repair Category	Number Installed/ Available	Number Required for Helideck Operations	Remarks or Exceptions	(M) Maintenance Procedures	(O) Operational Procedures	Suggested Notification to Air Operator(s)	NUI
01-03 Perimeter Lights									
01-03-01	Helideck perimeter lights (Daylight)	B	1	0	Lights may be fully or partly inoperative for daylight VMC operations only.	<ul style="list-style-type: none"> - Isolate power to Perimeter lighting system. - Placard switches to show system U/S. 	<ul style="list-style-type: none"> - Issue NOTAM to restrict helideck operations to daylight VMC only. - Helideck Operator to notify their contracted Helicopter operator(s). 	Helideck operations restricted to daylight VMC only.	✓
01-03-02	Helideck perimeter lights (Night)	A	1	1	At least 90% of the lights shall be functional for night operations and providing that any unserviceable lights are not adjacent to each other.				✓
01-04 Obstruction Lights									
01-04-01	Lights attached to Fixed obstacles i.e. Antennae, cranes & flare booms (Daylight)	B	-	0	Any or all lights may be inoperative for daylight operations only.	<ul style="list-style-type: none"> - Isolate power to affected obstruction light(s). - Placard switch(es) to show system U/S. 	<ul style="list-style-type: none"> - Issue NOTAM - Helideck Operator to notify their contracted Helicopter operator(s). 	[specify obstruction] obstruction light inoperative until further notice.	✓
01-04-02	Lights attached to Fixed obstacles i.e. Antennae, cranes & flare booms (Night)	A	-	1	Helideck closed for night operations; however if (temporary) illumination (e.g. flood light) of the affected obstruction(s) is in place, this line item (obstruction lights during night operations) can be treated as Repair Category B and helideck can remain open for night operations for the specified period when facility complies with (M) and (O) procedures mentioned.	<ul style="list-style-type: none"> - Isolate power to affected obstruction light(s). - Placard switch(es) to show system U/S. - Other means (e.g. flood light)" to be placarded to avoid any inadvertent switching off during the helicopter operation. 	<ul style="list-style-type: none"> - Issue NOTAM - Helideck Operator to notify their contracted Helicopter operator(s). 	[specify obstruction] obstruction light inoperative and obstruction illuminated by [specify means] until further notice.	✓

System & Sequence Numbers		Repair Category	Number Installed/ Available	Number Required for Helideck Operations	Remarks or Exceptions	(M) Maintenance Procedures	(O) Operational Procedures	Suggested Notification to Air Operator(s)	NUI
01-04-03	Crane Operating Lights – if installed	B	1	0	Lights may be inoperative.	<ul style="list-style-type: none"> - Isolate power to affected crane operating light. - Placard switch(es) to show system U/S. 	<ul style="list-style-type: none"> - HLO shall confirm crane is not operating and in safe position. - HLO shall communicate cranes safe to flight crew during 5 minute call. - Issue NOTAM - Helideck Operator to notify their contracted Helicopter operator(s). 	specify crane] crane operating light inoperative until further notice. HLO will confirm crane status during 5 minute call.	✓
01-05 Helideck Status Lights									
01-05-01a	Hazard warning (status) light(s)	B	1	0	For Attended Facilities: Helideck status lights may be inoperative provided radio communications are established with helicopter and safe landing environment is confirmed.	<ul style="list-style-type: none"> - Isolate power to helideck status light(s). - Placard switch(es) to show system U/S (if applicable). 	<ul style="list-style-type: none"> - HLO shall confirm helideck status. - HLO shall communicate helideck status to flight crew during 5 minute call. - Issue NOTAM - Helideck Operator to notify their contracted Helicopter operator(s). 	Helideck status lights inoperative until further notice. HLO will confirm helideck status during 5 minute call.	✓
01-05-01b	Hazard warning (status) light(s)	A	1	1	<p>Where helideck status light systems installed on normally unattended installations (NUIs) malfunction, whether the outcome is light(s) permanently flashing or disabled/depowered, in these cases, to allow them to be manually reset at the platform, local protocols shall be in place.</p> <p>An example Protocol for operations against operating status lights or black decks is attached at CAP 437 Appendix I.</p>		<ul style="list-style-type: none"> - Issue NOTAM - Helideck Operator to notify their contracted Helicopter operator(s). 	Helideck status lights inoperative until further notice.	✓

System & Sequence Numbers		Repair Category	Number Installed/ Available	Number Required for Helideck Operations	Remarks or Exceptions	(M) Maintenance Procedures	(O) Operational Procedures	Suggested Notification to Air Operator(s)	NUI
01-06 Illuminated Windsock									
01-06-01	Illuminated windsock (Night) – if installed	A	-	1		<ul style="list-style-type: none"> - Isolate power to windsock light. - Placard switch(es) to show system U/S (if applicable). 	<ul style="list-style-type: none"> - Issue NOTAM - Helideck Operator to notify their contracted Helicopter operator(s). 	Helideck closed for night operations until further notice due to inoperative windsock lighting.	✓
01-07 UPS									
01-07-01	Uninterrupted Power Supply (Night)	A	1	1	Installation/vessel UPS should include all lighting systems covered in this section 'Helideck Lighting' under 01 through 06.		<ul style="list-style-type: none"> - Issue NOTAM - Helideck Operator to notify their contracted Helicopter operator(s). 	Helideck closed for night operations until further notice due to inoperative UPS. The helideck could temporarily be opened for emergency operations (e.g. Medevac, Facility evacuation, etc.), where the risk of losing life or limb for personnel outweighs the safety degradation of the helideck due to the unserviceability of the UPS.	✓

02 Visual Aids / Markings

System & Sequence Numbers		Repair Category	Number Installed/ Available	Number Required for Helideck Operations	Remarks or Exceptions	(M) Maintenance Procedures	(O) Operational Procedures	Suggested Notification to Air Operator(s)	NUI
02-01 Helideck Markings									
02-01-01	Touchdown/ Positioning Marking (TDPM)	B	1	0	<p>TDPM could be degraded or less visible to flight crew for the following reasons:</p> <ul style="list-style-type: none"> - Degraded Paint - Old markings showing through - Guano <p>Repaint Helideck Markings.</p>		<ul style="list-style-type: none"> - Issue NOTAM - Helideck Operator to notify their contracted Helicopter operator(s). <p>NOTE: In the facility specific NOTAM consideration shall be given to any of the following elements that may be applicable:</p> <ul style="list-style-type: none"> - Obstacle clearances - Sub 1D operations - Other Identify any limitations and/or restrictions due to degraded TDPM marking and add to NOTAM. 		✓
02-01-02	Identification 'H' Marking	C	1	0	<p>'H' could be degraded or less visible to flight crew for the following reasons:</p> <ul style="list-style-type: none"> - Degraded Paint - Old markings showing through - Guano <p>Repaint Helideck Markings.</p>		<ul style="list-style-type: none"> - Issue NOTAM - Helideck Operator to notify their contracted Helicopter operator(s). 	'H' marking visibility is degraded. The helideck heading is xx degrees.	✓
02-01-03	Perimeter Line Marking	C	1	0	<p>Perimeter Line Marking could be degraded or less visible to flight crew for the following reasons:</p> <ul style="list-style-type: none"> - Degraded Paint - Old markings showing through - Guano <p>Repaint Helideck Markings.</p>		<ul style="list-style-type: none"> - Issue NOTAM - Helideck Operator to notify their contracted Helicopter operator(s). <p>NOTE: Identify any limitations and/or restrictions due to degraded perimeter line marking and add to NOTAM.</p>	Perimeter Line marking visibility is degraded.	✓

System & Sequence Numbers		Repair Category	Number Installed/ Available	Number Required for Helideck Operations	Remarks or Exceptions	(M) Maintenance Procedures	(O) Operational Procedures	Suggested Notification to Air Operator(s)	NUI
02-01-04	Chevron (210° OFS – Obstacle Free Sector marking / 150° LOS – Limited Obstacle Sector Marking)	D	1	0			- Helideck team to assure OFS / LOS clearance before commencing helicopter operations.		✓
02-01-05	Prohibited landing heading marking – where applicable	B	1	0	If obstacle is clearly visible for flight crew, the helideck may be opened for day light operations only. Landings/ Take-offs must be with the aircraft nose within +/- 90 degrees of the obstacle to ensure visibility of the obstacle.		- Issue NOTAM - Helideck Operator to notify their contracted Helicopter operator(s).	Prohibited Landing Heading marking visibility is degraded. Obstacle at [location] is clearly visible to flight crew; therefore helideck open for day light operations only until further notice. Restricted helicopter headings over helideck between xx and yy degrees. Landings/Take-offs must be with the aircraft nose within +/- 90 degrees of the obstacle to ensure visibility of the obstacle.	✓
02-01-06	Prohibited landing marker – where applicable	C	1	0	For temporary closures only.	- If helideck is fitted with Helideck Status Lights that can be operated 24/7, these Status Lights shall be switched ON. - Otherwise consider alternative means of clearly identifying the closure of the helideck.	- Issue NOTAM - Helideck Operator to notify their contracted Helicopter operator(s).	Helideck Closed until further notice.	✓
02-01-07	Helideck Name Marking	B	1	0	Marking could be degraded or less visible to flight crew for the following reasons: - Degraded Paint - Old markings showing through Repaint Helideck Markings.		- Issue NOTAM - Helideck Operator to notify their contracted Helicopter operator(s).	Identification Marking is degraded or less visible. Facility name can be found at [location]. Flight crew is to confirm facility name from platform side signage before landing.	✓

System & Sequence Numbers		Repair Category	Number Installed/ Available	Number Required for Helideck Operations	Remarks or Exceptions	(M) Maintenance Procedures	(O) Operational Procedures	Suggested Notification to Air Operator(s)	NUI
02-01-08	Helideck T & D value	C	1	0	<p>Markings could be degraded or less visible to flight crew for the following reasons:</p> <ul style="list-style-type: none"> - Degraded Paint - Old markings showing through <p>Repaint Helideck Markings.</p>		<ul style="list-style-type: none"> - Issue NOTAM - Helideck Operator to notify their contracted Helicopter operator(s). 	T & D value markings are degraded or less visible. D-Value marking = [99] meters/feet ¹ and t-value marking = [99.9] tonnes/pounds.	✓
02-01-09	Exit Marking on the helideck – where applicable	C	-	0	<p>Markings could be degraded or less visible.</p>		<ul style="list-style-type: none"> - Perform a risk assessment and review passenger management plan in place for suitability. 		✓

¹ Use the units that are prevalent in the region. Metric units: identify the d-value marking in meters (m) by max. 2 numeric characters (e.g. 21m for Sikorsky S-92A) and t-value in metric tonnes (t) by max. 2 numeric characters before the decimal point and 1 numeric character after the decimal point (e.g. 12.0t for Sikorsky S-92A). Imperial units: identify the d-value marking in feet (ft.) by max. 2 numeric characters preceded by the letter D (e.g. D69 for Sikorsky S-92A) and t-value in thousands of pounds (lbs) by max. 2 numeric characters before the decimal point and 1 numeric character after the decimal point (e.g. 26.5 for 26,500 lbs as MTOM for Sikorsky S-92A).

03 Communications Equipment (Applicability)

System & Sequence Numbers		Repair Category	Number Installed/ Available	Number Required for Helideck Operations	Remarks or Exceptions	(M) Maintenance Procedures	(O) Operational Procedures	Suggested Notification to Air Operator(s)	NUI
03-01 VHF Radios									
03-01-01	VHF Air Band Radio	B	2	0	VHF Air Band Radio may be temporarily unavailable when Portable VHF Air Band Hand-Held Radio is in service.		<ul style="list-style-type: none"> - Portable VHF Air Band Hand-Held Radio shall be in service and monitored. 	VHF Air Band Radio not available. Portable VHF Radio will be monitored and used when aircraft is in the vicinity of the facility.	✗
03-01-02	Portable VHF Air Band Hand-Held Radios with Headset	B	-	0	Portable VHF Air Band Hand-Held Radios may be temporarily inoperative provided 1 VHF Air Band Radio is operative and alternative communication between HLO and Radio Operator is established.		<ul style="list-style-type: none"> - Helideck communications using hand signals. - HLO – Pilot radio communications are relayed through Radio Operator. 	Helideck team is not in possession of functional VHF Hand-held radios. Helideck communications using hand signals. Communications with helicopter are relayed through Radio Operator.	✓

04 Helicopter Payload Management (Applicability)

System & Sequence Numbers		Repair Category	Number Installed/ Available	Number Required for Helideck Operations	Remarks or Exceptions	(M) Maintenance Procedures	(O) Operational Procedures	Suggested Notification to Air Operator(s)	NUI
04-01 Scales									
04-01-01a	Passenger/ Baggage Scales	A	-	1	<p>No passengers or baggage shall be presented for air transport unless actual weights can be assured e.g. scales calibrated and serviceable, and manifested.</p> <p>One round-trip flight allowed for shipping a new set of scales if they cannot be repaired on-board.</p>	<p>Placard the passenger/ baggage scales as unserviceable.</p> <p>- Do not use</p> <p>- Arrange for scales to be shipped ashore for repair.</p>	<p>- If available, use Cargo Scales to weigh passengers and baggage;</p> <p>- otherwise postpone flights until calibrated Passenger/ Baggage Scales are available.</p> <p>NOTE: In case of evacuation/ de-manning of facility, previously manifested weights or standard weight can be used if assessed as acceptable and not resulting in an overweight helicopter.</p>	<p>Helideck closed until further notice due to inoperative passenger/baggage scales.</p> <p>One round-trip flight allowed for shipping a new set of scales if they cannot be repaired on-board.</p>	X
04-01-01b	Passenger/ Baggage Scales – if available	A	-	1	<p>If scales are not available or unserviceable then the same weights shall be used for the outbound flight as for the inbound flight.</p>	<p>Placard the passenger/ baggage scales as unserviceable.</p> <p>- Do not use</p>	<p>No additional baggage is permitted to be added to the outbound flight from the NUI.</p> <p>NOTE: In case of evacuation/ de-manning of facility, previously manifested weights or standard weight can be used.</p>	<p>Helideck scales unavailable/ unserviceable.</p> <p>- Passengers and baggage shall be weighed before inbound flight. Same weights shall be used for the outbound flight as for the inbound flight. No additional baggage is permitted to be added to the outbound flight from the NUI.</p>	✓
04-01-02	Cargo Scales – if available	C	-	0	<p>If heavy duty passenger scales can handle cargo for the weights of the cargo presented for air transport, a separate cargo scale is not necessary. If not, the cargo that cannot be weighed shall not be transported by air until the cargo scales deficiency has been rectified.</p>	<p>Placard the cargo scales as unserviceable.</p> <p>- Do not use</p>	<p>- Use heavy duty passenger/ baggage scales if adequate for cargo weights.</p> <p>- If cargo weight exceeds passenger/baggage scales limitations, cargo shall not be presented for air transport until the cargo scales deficiency has been rectified.</p>	<p>Helideck cargo scales unavailable/unserviceable.</p> <p>- Cargo shall be weighed before inbound flight. Same weights shall be used for the outbound flight as for the inbound flight. No additional cargo or baggage is permitted to be added to the outbound flight.</p>	✓

05 Miscellaneous Safety Critical Equipment (Applicability)

System & Sequence Numbers		Repair Category	Number Installed/ Available	Number Required for Helideck Operations	Remarks or Exceptions	(M) Maintenance Procedures	(O) Operational Procedures	Suggested Notification to Air Operator(s)	NUI
05-01 Rescue Equipment									
05-01-01	Rescue Equipment (Crash-box)	B	-	1	Crash-box inventory shall be in accordance with ICAO Heliport Manual Table 1-6-1 – Rescue equipment. Items in inventory shall be available, serviceable and in good working condition.	Missing or unserviceable crash-box inventory items shall be replenished with (fit for purpose) alternatives available on the facility pending receipt of replacement items.	<ul style="list-style-type: none"> - If items in crash-box are missing or unserviceable, and no fit for purpose alternatives are available at the facility for replenishment, the HLO will inform duty holder/ facility responsible person of crash-box conditions and advises associated closure of helideck. - If applicable, issue NOTAM to communicate (temporary) helideck closure. - Helideck Operator to notify their contracted Helicopter operator(s). 	Helideck closed until further notice.	✓
05-01-02	Personal Protective Equipment (PPE)	A	-	1	All responding rescue and fire-fighting personnel should be provided with appropriate Personal Protective Equipment (PPE), in accordance with ICAO Heliport Manual 6.9 PERSONAL PROTECTIVE EQUIPMENT (PPE), to allow them to carry out their duties in an effective manner.		<ul style="list-style-type: none"> - If PPE items are missing or unserviceable, and no fit for purpose alternatives are available at the facility for replenishment, the HLO will inform duty holder/facility responsible person and advises associated closure of helideck. - If applicable, issue NOTAM to communicate (temporary) helideck closure. - Helideck Operator to notify their contracted Helicopter operator(s). 	Helideck closed until further notice.	✓

System & Sequence Numbers		Repair Category	Number Installed/ Available	Number Required for Helideck Operations	Remarks or Exceptions	(M) Maintenance Procedures	(O) Operational Procedures	Suggested Notification to Air Operator(s)	NUI
05-01-03	Respiratory protective equipment (RPE)	A	-	1	All responding rescue and fire-fighting personnel should be provided with appropriate Respiratory Protective Equipment (RPE) to allow them to carry out their duties in an effective manner.		<ul style="list-style-type: none"> - If RPE items are missing or unserviceable, and no fit for purpose alternatives are available at the facility for replenishment, the HLO will inform duty holder/facility responsible person and advises associated closure of helideck. - If applicable, issue NOTAM to communicate (temporary) helideck closure. - Helideck Operator to notify their contracted Helicopter operator(s). 	Helideck closed until further notice.	✓
05-02 Helideck Operational Equipment									
05-02-01	Ice and Snow Removal Equipment – where applicable	A	-	1	<p>Applicable for situations where snow and ice are present on the helideck and the HLO deems helideck operations are unsafe.</p> <p>NOTE: A helideck net may be required. See Paragraph HELIDECK FIXED EQUIPMENT – 02 Helideck Net.</p>		<ul style="list-style-type: none"> - HLO will inform duty holder/facility responsible person of helideck conditions and advises closure of helideck until further notice. - Issue NOTAM to communicate (temporary) helideck closure. - Helideck Operator to notify their contracted Helicopter operator(s). 	Helideck closed due to snow and/or ice until further notice.	✓
05-03 Passenger Briefing Room Equipment									
05-03-01	Video/ DVD Player/ Computer	B	1	0			<ul style="list-style-type: none"> - When Passenger Safety Briefing Video cannot be shown, due to malfunction of equipment, a pilot or designated person shall perform a verbal safety briefing in a briefing area away from helicopter noise for clear understanding. 	Notify Air Operator to inform them that pilots or additional flying staff will need to perform verbal safety briefing until further notice.	✗

06 Weather Reporting Equipment

System & Sequence Numbers		Repair Category	Number Installed/ Available	Number Required for Helideck Operations	Remarks or Exceptions	(M) Maintenance Procedures	(O) Operational Procedures	Suggested Notification to Air Operator(s)	NUI
06-01 Wind Speed & Direction Indicator									
06-01-01	Anemometer	B	1	0	<ul style="list-style-type: none"> - The anemometer may be inoperative provided a serviceable windsock and calibrated hand-held anemometer and radio communications with helicopter are available, or - Weather information from a nearby facility (as allowed by local regulator) may be used as alternative. 		<ul style="list-style-type: none"> - HLO or Radio operator (depending on location of weather reporting equipment) will communicate wind speed. - Air Operator may impose payload restrictions. 	Failure shall be notified to the helicopter operator.	✓
06-01-02	Wind Direction Indicator	B	1	0	<ul style="list-style-type: none"> - The wind direction indicator may be inoperative provided a serviceable windsock and calibrated hand-held anemometer and radio communications with helicopter are available, or - Weather information from a nearby facility (as allowed by local regulator) may be used as alternative. 		<ul style="list-style-type: none"> - HLO or Radio operator (depending on location of weather reporting equipment) will communicate wind direction. - Air Operator may impose payload restrictions. 	Failure shall be notified to the helicopter operator.	✓
06-01-03	Handheld Anemometer	C	-	0	<ul style="list-style-type: none"> - At least one (1) calibrated handheld anemometer shall be fully serviceable, unless weather information is available from the primary anemometer and wind direction indicator, or - Weather information from a nearby facility (as allowed by local regulator) may be used as alternative. 		<ul style="list-style-type: none"> - HLO or Radio operator (depending on location of weather reporting equipment) will communicate wind speed and direction. 	Unavailability of handheld anemometer shall be notified to the helicopter operator.	✗
06-02 Precision Outside Air Temperature Sensor									
06-02-01	Thermometer	C	1	0	<ul style="list-style-type: none"> - Weather information from a nearby facility (as allowed by local regulator) may be used as alternative. 			Unavailability of thermometer shall be notified to the helicopter operator.	✓

System & Sequence Numbers		Repair Category	Number Installed/ Available	Number Required for Helideck Operations	Remarks or Exceptions	(M) Maintenance Procedures	(O) Operational Procedures	Suggested Notification to Air Operator(s)	NUI
06-03 Precision Barometric Pressure Sensors									
06-03-01	Barometer	C	1	0	- Weather information from a nearby facility (as allowed by local regulator) may be used as alternative.			Unavailability of barometer shall be notified to the helicopter operator.	✓
06-04 Visibility									
06-04-01	Visibility Measuring Equipment	C	1	0	- If visibility measuring equipment inoperative, HLO might use support vessel or other vessel available to determine horizontal visibility, bearing in mind that visibility from helideck to sea surface might not be indicative of horizontal visibility at helideck elevation, or - Weather information from a nearby facility (as allowed by local regulator) may be used as alternative.		- HLO or Radio operator (depending on location of weather reporting equipment) will communicate visibility at deck level.	Unavailability of Visibility Measuring Equipment shall be notified to the helicopter operator.	✓
06-05 Cloud Base									
06-05-01	Cloud Base Measuring Equipment	C	1	0	- If cloud base measuring equipment inoperative, HLO shall determine cloud base using visual vertical reference on the platform (if available), or - Weather information from a nearby facility (as allowed by local regulator) may be used as alternative.		- HLO or Radio operator (depending on location of weather reporting equipment) will communicate cloud base.	Unavailability of Cloud Base Measuring Equipment shall be notified to the helicopter operator.	✓

07 Fire Fighting Systems

System & Sequence Numbers		Repair Category	Number Installed/ Available	Number Required for Helideck Operations	Remarks or Exceptions	(M) Maintenance Procedures	(O) Operational Procedures	Suggested Notification to Air Operator(s)	NUI
07-01 Monitors									
07-01-01	Foam monitors (shall be installed if no DIFFS is installed)	A	-	2			- Issue NOTAM - Helideck Operator to notify their contracted Helicopter operator(s).	Helideck is closed until further notice due to unavailability of firefighting system.	✓
07-02 DIFFS									
07-02-01	Deck Integrated Fire Fighting System (DIFFS) – if installed	A	1	1	If the helideck can be observed and the DIFFS can be manually initiated, then a failure of just the auto-sensors does not automatically render the system unavailable.		- Issue NOTAM - Helideck Operator to notify their contracted Helicopter operator(s).	Helideck is closed until further notice due to unavailability of firefighting system.	✓
07-03 Hydrant System									
07-03-01	Hydrant Points, Hand lines, Inductors and Foam Branches	A	-	2	At least two (2) hydrant systems shall be fully operational.		- Issue NOTAM - Helideck Operator to notify their contracted Helicopter operator(s).	Helideck is closed until further notice due to unavailability of firefighting system.	✗
07-04 Concentrate									
07-04-01	Foam Concentrate (not required on decks with passive firefighting helideck with water only DIFFS)	A	-	1	The amount of foam concentrate as depicted in ICAO Heliport Manual (Doc 9261) Paragraph 6.2. shall be available for immediate use.		- Issue NOTAM - Helideck Operator to notify their contracted Helicopter operator(s).	Helideck is closed until further notice due to unavailability of firefighting system.	✓
07-05 Complementary Media									
07-05-01	Complementary Media	A	-	1	The amount and type of complementary media as depicted in ICAO Heliport Manual (Doc 9261) Paragraph 6.4. shall be available for immediate use.		- Issue NOTAM - Helideck Operator to notify their contracted Helicopter operator(s).	Helideck is closed until further notice due to unavailability of firefighting system.	✓

08 Helideck Monitoring System & Reporting Equipment (Attended Mobile Facility Only)

System & Sequence Numbers		Repair Category	Number Installed/ Available	Number Required for Helideck Operations	Remarks or Exceptions	(M) Maintenance Procedures	(O) Operational Procedures	Suggested Notification to Air Operator(s)	NUI
08-01 Pitch, Roll and Heave Rate Measuring Sensors									
08-01-01	Motion reference unit	C	1	0	May be fully or partly inoperative.	Disable the MRU.	<ul style="list-style-type: none"> - Operations limited to stable deck conditions (i.e. $\leq 1^\circ$ Pitch & Roll and 0.4m/s SHR). Stable deck conditions may be established using an inclinometer mounted on the bridge of the vessel for Pitch and Roll, and by visual estimation of the heave rate (heave amplitude divided by half of the heave period) for SHR. - Issue NOTAM - Helideck Operator to notify their contracted Helicopter operator(s). 	MRU inoperative. Operations limited to stable deck conditions only ($\leq 1^\circ$ Pitch & Roll and 0.4m/s SHR).	X
08-02 HMS Display									
08-02-01	HMS display	C	1	0	May be fully or partly inoperative. Individual elements of the display that operate correctly (e.g. historic data presentation or wind information) may be used.		<ul style="list-style-type: none"> - Operations limited to stable deck conditions (i.e. $\leq 1^\circ$ Pitch & Roll and 0.4m/s SHR). Stable deck conditions may be established using an inclinometer mounted on the bridge of the vessel for Pitch and Roll, and by visual estimation of the heave rate (heave amplitude divided by half of the heave period) for SHR. - Issue NOTAM - Helideck Operator to notify their contracted Helicopter operator(s). 	HMS display inoperative or limited. Operations limited to stable deck conditions only ($\leq 1^\circ$ Pitch & Roll and 0.4m/s SHR).	X

System & Sequence Numbers		Repair Category	Number Installed/ Available	Number Required for Helideck Operations	Remarks or Exceptions	(M) Maintenance Procedures	(O) Operational Procedures	Suggested Notification to Air Operator(s)	NUI
08-03 Visual Motion Status Indication									
08-03-01	Helideck Motion Status Lights – if installed	C	1	0	Individual lights may be inoperative provided either: <ol style="list-style-type: none"> At least one set is visible to the pilot with the aircraft on deck, or Operations are limited to stable deck conditions. Facility shall monitor and provide HMS data to pilot by radio during helideck operations. 		<ul style="list-style-type: none"> Full or limited operations may be possible depending on the operative lights. Advise of any lights that operate correctly with their position on the helideck, to enable the crew to reference them to the likely landing direction. If lights will not be visible, stable deck conditions apply. Issue NOTAM Helideck Operator to notify their contracted Helicopter operator(s). 	Helideck Motion Status Lights are (partially) inoperative. Pilot will be notified HMS status specifics by radio during helideck operations.	X
08-04 Wind Sensor Input									
08-04-01	Wind sensor input to HMS	C	1	0	The wind sensor input may be inoperative.	Placard the display accordingly.	<ul style="list-style-type: none"> Operations based on calculation of Wind Severity Index (WSI) will not be possible. Ensure helicopter is landed as close to into wind as possible. Issue NOTAM Helideck Operator to notify their contracted Helicopter operator(s). 	Wind sensor inoperative, WSI calculations unavailable. Ensure helicopter is landed as close to into wind as possible.	X

09 Helideck Fixed Equipment

System & Sequence Numbers		Repair Category	Number Installed/ Available	Number Required for Helideck Operations	Remarks or Exceptions	(M) Maintenance Procedures	(O) Operational Procedures	Suggested Notification to Air Operator(s)	NUI
09-01 Perimeter Netting or Shelving									
09-01-01	Perimeter netting or shelving	C	-	1	Operations are limited to 30 knots wind speed.	Rope off or otherwise isolate the unserviceable section(s). Caution: Remain within helideck obstacle height limitations.	<ul style="list-style-type: none"> - Warn deck crew, passengers and aircraft crew of the unserviceable section. - Helideck Team should request appropriate positioning of aircraft. - On/Offloading of pax and baggage/cargo should be performed avoiding the unserviceable sections of the perimeter netting/shelving. - Issue NOTAM - Helideck Operator to notify their contracted Helicopter operator(s). 	Perimeter netting (or shelving) is (partially) unserviceable. (provide the specific location on the helideck).	✓
09-02 Helideck Net									
09-02-01	Helideck net (applicable for snow and ice conditions only)	A	1	1			<ul style="list-style-type: none"> - Issue NOTAM - Helideck Operator to notify their contracted Helicopter operator(s). 	Helideck Net unserviceable. Helideck closed until further notice.	✓
09-03 Helideck Drainage									
09-03-01	Helideck drainage	B	-	0	Drain ports must be clear. No water pooling on the helideck surface.	<ul style="list-style-type: none"> - Remove pooled water from helideck surface prior to helicopter operations. - Ensure all drain ports are clear. 			✓
09-04 Helideck Tie Down Points									
09-04-01	Helideck tie down points	D	-	0	Individual tie down points may be inoperative provided that an aircraft can be secured using the usable tie down points.		<ul style="list-style-type: none"> - No planned aircraft shutdowns, unless alternative means of securing the aircraft are available. 	One or more tie down points inoperative [if adequate tie down is not possible, add: 'no planned shutdowns to be performed.'].]	✓

System & Sequence Numbers		Repair Category	Number Installed/ Available	Number Required for Helideck Operations	Remarks or Exceptions	(M) Maintenance Procedures	(O) Operational Procedures	Suggested Notification to Air Operator(s)	NUI
09-05 Helideck Friction									
09-05-01	Helideck friction	D	-	0	<p>The helideck friction may be below the required values provided a net is installed and operative.</p> <p>Note: See Fixed Helideck Equipment – Helideck Net</p> <p>Note: Guano build-up could be a reason for reduced helideck friction. If this is a local problem, it should be managed.</p>	- Install helideck net			✓
09-06 Under Helideck Air Gap									
09-06-01	Air gap	C	-	0	<p>The air gap may be fully or partially blocked provided the air operator is informed.</p>		<ul style="list-style-type: none"> - Air operator will advise of any operating weight restrictions. - Inform air operator that the air gap is partially or fully blocked and request they inform the installation of any operating weight restrictions. - Issue NOTAM - Helideck Operator to notify their contracted Helicopter operator(s). 	Air gap under helideck is partially or fully blocked.	✓

MMHEL specialists are encouraged to participate in our online, secure collaboration tool: HeliOffshore Space.

You can find out more about HeliOffshore, our safety plan, and the workstreams at www.helioffshore.org

This guidance will be updated regularly. If you have comments or suggested amendments, please email: info@helioffshore.org



HeliOffshore
Safety Through Collaboration