



MARITIME HELICOPTERS, INC. (APPENDIX C)

NVG Standard Operating Procedures

November 1, 2023
Version 2.0

These procedures are in addition to the guidance found in the Maritime Helicopters Operations Manual. Pilots are expected to be knowledgeable of and comply with all guidance in the Operations Manual as well as this Standard Operating Procedures.

Compliance with Maritime Helicopters Standard Operating Procedures (SOP) is mandatory. No portion of the SOP should be construed as contrary to any Federal Regulation (FAR) or State Regulation.

This document is available online for Maritime Helicopter Inc. employees on the SharePoint site. Contact the Chief Pilot for login information.

Ref: AC 120-71A Standard Operating Procedures for Flight Deck Crewmembers

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MARITIME HELICOPTERS
NVG STANDARD OPERATING PROCEDURES

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Section 1.0 HELICOPTER NIGHT VISION GOGGLE OPERATIONS (HNVGO).

A. Preface

This SOP contains specific procedures and information related to Helicopter Night Vision Goggle Operations (HNVGO) to assist all personnel in complying with CFR's while carrying out their duties and responsibilities. HNVGO shall be conducted in accordance with the procedures contained herein, the Operations Specifications, and all other applicable regulations. Emphasis shall be placed on a safe and orderly operation. Any reference herein to GOM and or Operations Specifications shall be understood to mean the GOM and Operations Specifications approved for or issued to Maritime Helicopters, Inc., hereafter referred to as Maritime Helicopters..

In the event of a conflict between a procedure found in this manual and a Federal Regulation, or other policy, the more conservative should be applied. Conflicts should be reported to the Chief Pilot.

The procedures contained in this supplement are based on the latest experience and provide the highest degree of safety while meeting the needs of our customers. These procedures will be updated occasionally as experience and new knowledge becomes available.

Flight crews shall comply with the policy and procedures contained in this manual during all HNVGO unless other approved Maritime Helicopters manuals or company procedural documents provide guidance.

Section 2.0. Aircraft (NVG) Visual Inspection (Preflight) and Operational Check

A. Perform IAW the applicable RFMS and applicable ICA.

1. The aircraft supplemental lighting system shall be checked for general condition, security and function.
2. The aircraft supplemental filtration system shall be checked for general condition, security and function.
3. Inspect blackout curtains (if installed) for serviceability.
4. Insure windscreen/windows are clean and free from defects, which degrade visual acuity (dust, haze, scratches, etc).

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Section 3.0 NVG Maintenance and Inspections

- A. The NVGs shall be maintained IAW Operations Specifications D093.
- B. Check the F4949 Discrepancy and Repair Form (stored in the NVG case) for unresolved discrepancies.
- C. Check the yellow inspection / serviceable tag to ensure NVG serial number matches the serial number listed on the tag and that the 180-day inspection date has not been exceeded. The NVG's are required to be inspected every 180 days (or as directed in the Maritime Helicopters, Inc. Operations Specifications.)
- D. Perform a Daily Check of the Night Vision Goggle unit, adjust and focus the F4949 NVG's as per the Image Intensifier Set, Night Vision F4949 Operators Manual TM F4949-1.

NOTE

The F4949 Discrepancy and Repair form shall be kept in the goggle storage case.

CAUTION

Rechargeable batteries are not authorized.

E. Restrictions to Night Vision Goggle Operations

1. Operational Defects:

- a. Shading
- b. Edge Glow
- c. Flashing, Flickering, or Intermittent Operations in one or both tubes (Single or dual tube failure).

CAUTION

If an Operational Defect is discovered before flight, record it on the F4949 Discrepancy and Repair Form and have the NVG's serviced by an authorized ITT repair facility prior to flight. If an Operational Defect occurs during flight, refer to EMERGENCY PROCEDURES.

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Section 4.0 Reporting of NVIS irregularities and Discrepancies

- A. F4949 NVG's- The person (pilot or additional personnel) discovering defects or discrepancies will record the defect or discrepancy on the F4949 Discrepancy and Repair Form
- B. Interior and exterior lighting, Cockpit windshield, windows and chin bubble, Radar Altimeter- The person (pilot or additional personnel) discovering defects or discrepancies will record the defect or discrepancy on aircraft logbook.
- C. The PIC shall inform maintenance of the discrepancy, and shall not use the NVGs/NVIS until the discrepancy is cleared by authorized maintenance personnel.

Section 5.0 Security of Night Vision Goggles

- A. Night Vision Goggles and associated equipment are considered "security sensitive" by the U.S. government and shall be maintained under the control of Maritime Helicopters personnel.
- B. The NVG'S shall not be taken away from Maritime Helicopters controlled property except when in use for their stated purpose by NVG qualified personnel.
- C. The stated purpose is to enable Maritime Helicopters to conduct FAR Part 135 Operations I.A.W. Operations Specification Helicopter Night Vision Goggle Operations A050 and FAR Part 91 HNVGOs.
- D. Unauthorized use of the NVG'S is prohibited.
- E. The NVG'S shall be stored in the provided container and kept in a secure location when not in use, or NVGO is not anticipated.
- F. The NVG'S should not be left unsecured at any time. This does not prohibit brief periods away from the aircraft during passenger patient loading or unloading. In these circumstances, the PIC shall always maintain visual contact with the aircraft and remain in a position to ensure that no persons except crewmembers approach the aircraft.

Section 6.0 Minimum Crew Requirements: All NVG Operations require one pilot.

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Section 7.0 Crewmember Duties, Responsibilities, Authority and Training

A. Pilot in Command

1. The Pilot in Command is responsible for performing the tasks in Section A 2 thru 4 and that they meet the requirements of Section A 6 thru 8.
2. Aircraft NVG Visual Inspection and Operation Check.
3. Perform a Night Vision Google (NVG) Daily Check on the NVG equipment.
4. Conduct crew briefing at the beginning of each work shift, including:
 - i) Current and forecast weather
 - ii) Review light discipline during takeoff and landing phases.
 - iii) Confirm that the NVG equipment designated for the work shift or flight has been inspected I.A.W. Section 2 above (**Night Vision Google (NVG) Daily Check**), and there are no operational defects on the NVGs.
 - iv) Other work shift briefing items specified by the GOM.
5. Conduct crew briefing prior to each flight, including:
 - i) Weather conditions forecast for the flight route. Weather minima shall be equal to or greater than those in Section 8.0 Flight Operations.
 - ii) Obstacles and significant terrain along the route of flight.
 - iii) Other pre-flight briefing items specified by the GOM.
 - iv) Encourage SIC to use inquiries as necessary to maintain crew situational awareness.
6. Insure that the NVG'S are stored in a secure area when not in use. The NVG'S should not be left unsecured at any time.
7. Training and Qualification
 - i) A pilot may use night vision goggles only if that person has received and logged night vision goggle ground and flight training from an authorized instructor and has satisfactorily completed a NVG Competency Check IAW the Maritime Helicopters, Inc. Pilot Training Program.
 - ii) No pilot may act as pilot in command in an HNVGO unless, during the preceding 12 calendar months, that person has completed an approved NVG initial or recurrent qualification ground and flight training course of instruction and has satisfactorily completed a NVG Competency Check IAW the Maritime Helicopters, Inc. Pilot Training Program.

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- iii) Logging HNVGO'S (HNVGO'S will be logged on the Maritime Helicopters Pilot Diary)
 - a. Pilots shall maintain a log of HNVGO'S. HNVGO currency shall be tracked to ensure compliance with FAR Part 61.57(f).
 - b. An HNVGO consists of a series of tasks as described in FAR Part 61.57(f).
- 8. Night Vision Goggle Recency of Experience

Pilots must comply with FAR Part 61.57(f) in order to operate with passengers on board during HNVGO. To determine compliance with HNVGO Recency of Experience, refer to the following example and extract:

Example

Today is 24 February 2009 and the pilot intends to act as pilot in command using NVGs. To determine recency of experience, the pilot would count backwards 2 calendar months from the date of the intended flight. This means the pilot would count backwards from 24 February 2009, through the month of January 2009, and through the month of December 2008 to 1 December 2008. Therefore, the pilot would have to have performed and logged the required HNVGO experience between 1 December 2008 and 24 February 2009.

If the pilot does not meet these requirements, the pilot is given an additional 2 calendar months to perform and log the required HNVGO experience but may not carry passengers until after performing and logging the required HNVGO experience.

Extract

To understand "NVG operations," (HNVGO) it is necessary to further clarify the term "flight." "Flight" means a takeoff and landing, with each landing involving a flight in the traffic pattern. For example, a person who performs six takeoffs and landings, with each landing involving a flight in the traffic pattern, and uses NVGs to maintain visual reference, may log six "NVG operations". (Extract from the Federal Register; Part IV; Department of Transportation; Federal Aviation Administration; 14 CFR Parts 61, 91 and 141 Pilot, Flight Instructor, and Pilot School Certification; Final Rule dated Friday, August 21, 2009, effective 20 October 2009; Item #32; page 42519)

- i) An NVG "flight" may occur either in the traffic pattern or during revenue or non-revenue and training operations conducted between airports, heliports, improved and unimproved or remote LZs.
- ii) A pilot who fails to meet the recency of experience listed in FAR Part 61.57(f) shall not act as PIC in HNVGO until after passing an NVG proficiency check administered by a Check Airman designated to conduct NVG testing and checking IAW Maritime Helicopters, Inc. Pilot Training Program.

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B. Second in Command (When utilized)

1. General. Second in Command(s) (SIC), when applicable, assist the pilot(s) by providing information on hazards, obstacles, and unintentional drift or movement of the aircraft during maneuvers. No (SIC) should assume another crewmember or the pilot(s) sees or recognizes a potential danger. SICs are responsible for performing the tasks in Section 2 b. and that they meet the requirements of Section B 2 thru 3. SICs shall receive the same NVG training as pilots in command and must be trained and current prior to performing these duties. This training shall be documented, and the training records shall be maintained by Maritime Helicopters.

2. Duties, Responsibilities, and Authority

- i) Perform a Night Vision Google (NVG) Daily Check on the NVG equipment for their individual use.
- ii) Participate in crew briefings at the beginning of each work shift, including;
 - a. Being familiar with the general weather conditions.
 - b. Maintain light discipline.
 - c. Confirm that the NVG equipment for their individual use has been pre-flighted for any restrictions to NVGO.
- iii) Participate in crew briefings prior to each flight, including;
 - a. General knowledge of the weather conditions along the route of flight.
 - b. General knowledge about obstacles and significant terrain along the route of flight.
 - c. Use crew resource management principles to maintain crew situational awareness.
- iv) Perform a Before Takeoff NVG check
 - a. Verify NVG's adjusted to present a single, round image with a crisp, distinct edge and the full FOV.
 - b. Both NVG tubes are focused to infinity.
 - c. NVGs adjusted for a suitable "look under" view of the interior work area.
 - d. Configure cabin lights for NVG flight (as appropriate).

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3. Training and Qualification

- i) A (SIC) pilot may use night vision goggles only if that person has received and logged night vision goggle ground and flight training from an authorized instructor and has satisfactorily completed a NVG Competency Check IAW the Maritime Helicopters, Inc. Pilot Training Program
- ii) No (SIC) pilot may act as pilot in command in an HNVGO unless, during the preceding 12 calendar months, that person has completed an approved NVG initial or recurrent qualification ground and flight training course of instruction and has satisfactorily completed a NVG Competency Check IAW the Maritime Helicopters, Inc. Pilot Training Program.
- iii) Logging HNVGO'S (HNVGO'S will be logged on the Maritime Helicopters Pilot Diary)
 - a. SIC Pilots shall maintain a log of HNVGO'S. HNVGO currency shall be tracked to ensure compliance with FAR Part 61.57(f).
 - b. An HNVGO consists of a series of tasks as described in FAR Part 61.57(f).
 - c. Night Vision Goggle Recency of Experience
 - d. SIC Pilots must comply with FAR Part 61.57(f) for currency in order to operate with passengers on board during HNVGO. To determine compliance with HNVGO Recency of Experience, refer to the following example and extract:

Example

Today is 24 February 2009 and the pilot intends to act as pilot in command using NVGs. To determine recency of experience, the pilot would count backwards 2 calendar months from the date of the intended flight. This means the pilot would count backwards from 24 February 2009, through the month of January 2009, and through the month of December 2008 to 1 December 2008. Therefore, the pilot would have to have performed and logged the required HNVGO experience between 1 December 2008 and 24 February 2009.

If the pilot does not meet these requirements, the pilot is given an additional 2 calendar months to perform and log the required HNVGO experience but may not carry passengers until after performing and logging the required HNVGO experience.

Extract

To understand "NVG operations," (HNVGO) it is necessary to further clarify the term "flight." "Flight" means a takeoff and landing, with each landing involving a flight in the traffic pattern. For example, a person who performs six takeoffs and landings, with each landing involving a flight in the traffic pattern, and uses NVGs to maintain visual reference, may log six "NVG operations". (Extract from the Federal Register; Part IV; Department of Transportation; Federal Aviation Administration; 14 CFR Parts 61, 91 and 141 Pilot, Flight Instructor, and Pilot School Certification; Final Rule dated Friday, August 21, 2009, effective 20 October 2009; Item #32; page 42519)

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- i) An NVG “flight” may occur either in the traffic pattern or during revenue or non-revenue and training operations conducted between airports, heliports, improved and unimproved or remote LZs.
- ii) A SIC pilot who fails to meet the recency of experience listed in FAR Part 61.57(f) shall not act as PIC in HNVGO until after passing an NVG proficiency check administered by a Check Airman designated to conduct NVG testing and checking.

C. NVG Instructors and Check Airman

A flight instructor or check airman may not conduct pilot or additional personnel training, testing or checking for Night Vision Goggle Operations unless that person meets the requirements in Section 8a NVG Instructor and Check Airman of the Maritime Helicopters Pilot Training Program, and the following:

1. Is designated by Maritime Helicopters as an Instructor to provide NVG training.
2. Is designated by Maritime Helicopters and the FAA as a Check Airman to conduct NVG testing and checking.
3. Holds the appropriate pilot and flight instructor certificate with the applicable category and class rating. If appropriate, has a type rating on his or her pilot certificate for the aircraft in which the training is given.
4. Has logged at least 100 HNVGOs as the sole manipulator of the controls.
5. Has logged 20 NVGOs as the sole manipulator of the controls in the category, class and type of aircraft, if aircraft class and type is appropriate.
6. Has logged at least 100 hours of NVG flight as Pilot-in-Command..
7. Is qualified to act as a pilot in command in Night Vision Goggle operations.

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Section 8.0 Flight Operations

A. Flight Planning

1. Weather Minimums When Operating in Class G Airspace

Non-Mountainous		Mountainous	
Local	Cross Country	Local	Cross Country
Ceiling - Visibility			
800 - 3	1000 - 3	1000 - 3	1000 - 5

2. HNVGO Ceiling and Visibility Requirements

- i) Since A050 no longer requires a ceiling/visibility for NVG operations. The Visual Flight Rules (VFR) listed above will be strictly adhered to.
- ii) At no time shall NVG'S be utilized to continue flight into weather minimums less than those listed above. A050 no longer lists this requirement.

3. HNVGO Local Flying Area for determining minimum ceiling/visibility above:

- i) Local Flying Area #1- 50 NM radius from Fairbanks International Airport Fairbanks, Alaska.
- ii) Local Flying Area #2- 50 NM radius from Homer Airport, Homer, Alaska.
- iii) Local Flying Area #3- 50 NM radius from Kenai Airport, Kenai, Alaska
- iv) Remaining Area of Operations- No Change from the GOM.

4. Crew flight time and rest requirements

- i). No Change from GOM.

5. Aircraft Performance

- i) Minimum Equipment List - Check for MEL deferred items critical to NVG flight.
- ii) Other aircraft performance requirements as specified by the GOM and the applicable RFM.

6. Flight Maneuvers will be conducted IAW the Maritime Helicopters, Inc Helicopter Maneuvers Manual.

7. Route Planning. When HNVGO'S are to be conducted, the following shall be considered during route planning:

- i) The potential impact of terrain, obstacles such as wires and towers, and other significant features along the route of flight.
- ii) Alternate routes or mode of flight (i.e. transition to IFR if IFR flight is authorized) if unanticipated weather is encountered or NVG failure occurs.

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- iii). Other preflight planning information as specified by the GOM.
- 8. Minimum safe altitudes
 - i) No change from GOM.
- 9. Fuel Requirements
 - i) No change from the GOM.
- 10. Crew flight time and rest requirements
 - i) No change from the GOM.
- 11. Briefing of Passengers
 - i) The normal passenger briefing (Chapter 3 of the GOM) will be expanded to include:
 - a. That the crew will utilize NVGs during flight.
 - b. Maintaining light discipline in the passenger compartment is essential to the safe operation of the aircraft.
 - c. Passengers will be restricted from using any personal light sources unless it has been determined by the PIC that the light is NVG compatible.
 - ii) Other briefing items as specified by the RFM and GOM.
- 12. Equipment Requirements (HNVGO)
 - i) To conduct HNVGO, the following equipment must be on the aircraft and fully operational (exceptions allowed as per approved MEL):
 - a. Instruments and equipment as per FAR Part 91.205(b), (c), and (h).
 - b. NVG'S for pilot and SIC, as specified in the RFM or RFMS.
 - c. Other equipment for night flight as specified in the RFM and GOM.

B. Departure

- 1. Before Takeoff NVG Check
 - i). Verify NVG's adjusted to present a single, round image with a crisp, distinct edge and the full FOV.
 - ii) Both NVG tubes are correctly focused to infinity.
 - iii) No operational defects present (Shading, edgeglow, flashing or flickering power.
 - iv) NVG's adjusted so that the pilot has an unrestricted view of the aircraft instruments.
 - v) Cockpit lighting and external lighting is configured for NVG flight and light discipline is maintained.

CAUTION

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Incompatible (unfiltered) cockpit equipment and lights will cause reflections and/or glare on the windscreen limiting the flight crew's ability to see clearly outside the cockpit. Using only standard (unfiltered) cockpit lighting or a mixture of NVG lighting and unfiltered lighting is prohibited.

C. After Takeoff

1. Configure exterior and interior lights for enroute conditions. Turn anti-collision and strobe lights on, as appropriate. (see Light Discipline)

D. Enroute

1. Helicopter Surface Reference
 - i) The aircraft shall not be operated under VFR unless the pilot has visual surface reference or, at night, visual surface light or aided reference as per FAR Part 61.1(12) and (13), sufficient to safely control the helicopter.
- b. Overwater Operations- Refer to Chapter 20 of the SOP.

E. Approach and Landing

1. Maritime Maid/ Horizon Lines Vessel Operations- Refer to Chapter 12 and 14 of the SOP.
2. Off Airport/Heliport/Unimproved Landing Area operations
 - i) Employ aircraft search lights and landing lights during the reconnaissance, approach and landing phases as necessary to enhance NVG effectiveness and identify and avoid obstacles.
 - ii) During passenger carrying operations, all landing areas used for aided night operations will be marked and lighted by boundary or runway marker lights.
 - iii) During passenger carrying operations, prior to landing, the pilot must determine wind direction from a lighted wind indicator or by radio from personnel on the ground at the landing area.
 - iv) Other off Airport / Heliport operations requirements as specified in the GOM remain in effect.
3. Airport / Heliport / Improved Landing Area operations
 - i) Employ aircraft search lights and landing lights during the approach and landing phases to enhance NVG effectiveness and identify and avoid obstacles.
 - ii) During passenger carrying operations, all landing areas used for aided night operations will be marked and lighted by boundary or runway marker lights.
 - iii) During passenger carrying operations, prior to landing, the pilot must determine wind direction from a lighted wind indicator or by radio from personnel on the ground at the landing area.
4. Abort / Go Around Criteria

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i) The pilot will immediately abort the approach and execute a go around if any of the following conditions occur:

a). When aided surface reference is lost or if, in the pilot's judgment, continuing the approach may result in loss of surface reference (aided or unaided).

b). Additional abort / go around criteria is specified in the Maritime Helicopters, Inc Helicopter Maneuvers Guide.

F. Crew Concept

1. The pilot will ensure all additional personnel are familiar with their duties and responsibilities.

2. The pilot will communicate properly with additional personnel during flight and respond to additional personnel voice calls/recommendations accordingly.

a. Pilot in Command (HNVGO): The person designated as PIC is directly responsible for, and is the final authority as to, the operation of the aircraft. He is expected to utilize all available resources in reaching a final decision. The PIC shall require participation by any SIC who is utilizing NVG.

b. SIC (HNVGO): A person designated as SIC is responsible to act as directed by the pilot in command. Additional personnel shall participate in the decision making process by offering timely observations, suggestions, and opinions.

G. Crew Callouts

1. Crews shall use standard or generally accepted aviation terminology during critical phases of flight. The pilot in command will ensure that all additional personnel understand these terms prior to HNVGO.

a. Examples of standard terminology are;

i) Go Around: Means to immediately discontinue the approach and climb clear of the landing area.

ii). Abort the Takeoff: Means to immediately discontinue the takeoff and bring the aircraft to a full stop.

iii). Drifting left, Drifting Aft, etc. Means the aircraft is moving in the direction announced and the person making the callout judges the movement to be unintentional.

iv). Move left 10 feet (right, forward, aft, etc): Means to move the aircraft in the stated direction without turning the nose/tail of the helicopter about the main rotor mast. All commands should be accompanied by a distance.

v). Moving left 10 feet (right, forward, aft, etc): Means to move the aircraft in the stated direction without turning the nose/tail of the helicopter about the main rotor mast. All announcements should be accompanied by a distance.

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vi). Turn the tail left 45° (or right): Means perform a pedal turn about the mast in the stated direction, with the tail of the helicopter to move in the stated direction. All commands should be accompanied by a number of degrees.

NOTE

All directional movements are assuming a view from the pilot seat looking forward.

H. Sterile Cockpit

1. No change from the GOM.

I. Light Discipline

All types of aircraft lighting will affect the performance of NVGs. Proper training and good crew judgment will minimize or eliminate adverse affects and enhance the positive effects. The pilot and SIC should always evaluate the effect of cabin lights, utility lights, flashlights and lip lights, etc on the pilot's and the SIC's ability to see through the windscreen and cockpit windows (glare and reflections). Blackout curtains (if installed) separating the aircraft cabin from the cockpit will allow nearly unrestricted use of cabin lights without adversely affecting pilot visibility.

1. When conducting HNVGO, no cockpit, cabin or personal (flashlights, etc.) lighting shall be utilized if it interferes with NVG operations.
2. Aircraft Instrument Panel lighting – Aircraft instruments, radios and navigation gear are easier to read under higher levels of illumination. NVG compatible instrument panel lighting, set to high light levels, will cause little or no reduction in NVG performance and will enhance the pilot's ability to quickly read the instruments. While instrument panel lighting may require dimming during operations in very low ambient lighting situations, the default starting position should be a higher level.
3. Interior lights – Although NVG compatible cockpit and cabin lighting has little or no adverse effect on NVG performance, blackout curtains (if installed) should always be closed to ensure cabin lighting glare does not adversely impact the pilot(s) and reduce her / his ability to detect hazards. NVG compatible cockpit utility and map lights should be used only as needed and not left in the "on" position during the approach phase of flight or any flight operation in very low ambient light conditions.
4. Lip lights and finger lights – These lights are valuable cockpit management tools but should be used only when needed and turned off when not. A pilot's lip light left "on" while flying over urban areas will normally have little effect but the same lip light in the "on" position during the approach phase of flight or any flight operation in very low ambient light conditions may cause glare that reduces the pilot's ability to detect hazards and aircraft drift.
5. Search lights and landing lights – Search lights and landing lights, properly employed by trained pilots, will greatly enhance the ability of the pilot and SIC to detect obstacles and hazards to flight. They will also reduce the adverse effects of bright ground lighting (bright helipad lighting, etc). Landing and search lights will be used during approach, landing and takeoff phases, as required by conditions, to assist the pilot and SIC in detecting obstacles and hazards.

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6. Position, anti-collision and strobe lights – Position lights may reduce visibility in blowing dust or snow. Anti-collision and strobe lights can be very distracting to pilots and SIC and should be turned off anytime they become a hazard to safety. The pilot should evaluate the LZ conditions and ambient light before every landing and turn the anti-collision and strobe lights off prior to beginning the approach if conditions warrant. After take-off, the pilot must remember to turn the anti-collision lights back on.

7. Taxi lights, loading lights, tail logo lights, etc – These lights must be evaluated on a case by case basis. In some situations, they will provide benefits to the crew and enhance their visibility and situational awareness and at other times they will degrade the NVG's with no corresponding benefit.

8. The PIC may, in the interest of safety due to operating conditions, turn off the anti-collision light(s), as per CFR 14 PART 91.209.

J. Emergency Procedures.

1. **Inadvertent IMC**-If IIMC is encountered, the crew will initiate the inadvertent IMC recovery procedure as described in the RFM, Maritime Helicopters Inc Helicopter Maneuvers Manual, and / or local IMC recovery procedures and transition to unaided / instrument flight as appropriate.

2. **NVG Operational Defects**- When any of following operational defects are present in flight, the affected pilot(s) will initiate the Respond to Night Vision Goggle Malfunction/Failure procedure as described in the Maritime Helicopters Inc Helicopter Maneuvers Manual:

- a. Single Tube NVG Failure.
- b. Dual Tube NVG Failure.
- c. Shading or Edge Glow.
- d. Flickering or Flashing.

K. **Maneuvers**- Flight maneuvers will conducted in the manner described in the Maritime Helicopters Helicopter Maneuvers Manual.

L. Reports and Forms

1. Training forms

- a. See the Maritime Helicopters, Inc Pilot Training Manual.

2. F4949 Discrepancy and Repair Form (See Figure 1)

3. **Yellow Serviceable Inspection Tag** – Provided by Aviation Specialties Unlimited; NVG Service Department.

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M. Definitions

1. The following definitions, abbreviations and acronyms are provided for use with this section and may not accurately reflect current definitions, abbreviations and acronyms as used or published in the Federal Register or in aircraft flight manuals.

- a. **Aided** – Aided flight with NVGs in an operational position where pilot uses the NVGs to maintain visual surface reference.
- b. **Helicopter Night Vision Goggle Operation (HNVGO)** - The portion of a flight that occurs during the time period from 1 hour after sunset to 1 hour before sunrise where the pilot or other crewmembers maintain visual surface reference using night vision goggles in an aircraft that is approved for such operation. This does not prohibit use of night vision goggles anytime time between sunset and sunrise.
- c. **Improved landing area** – An airport, heliport, or other landing site approved by the FAA or Maritime Helicopters. Any sites approved by Maritime Helicopters must meet the following conditions: A daylight site survey must have been conducted, noting appropriate approach and departure paths, obstacles and other hazards.
- d. **Land as Soon as Practicable** - Landing at a suitable area where visual surface light reference permits a safe approach and touchdown.
- e. **Night Vision Goggles** - An appliance worn by a pilot or other crewmember that enhances that crewmember's ability to maintain visual surface reference at night.
- f. **NVG Check Airman / Flight Instructor Training** - The training specified for pilots to serve as check airman or flight instructors for the certificate holder employing night vision goggles in a specific make and model of aircraft.
- g. **NVG Compatible Lighting** – Lighting that has been modified or filtered to emit light that has little or no negative impact on the performance of the NVGs.
- h. **NVG Initial Equipment Training** - This category of training is for personnel who have been previously trained for a duty position by the operator and is being reassigned, but has not been previously trained and qualified by the operator with NVG'S.
- i. **NVG Recurrent Training** - This category of training is for an person who has been trained and qualified by the operator, who will continue to serve in the same duty position and aircraft type, and who must receive recurring training and/or checking within an appropriate eligibility period to maintain currency.

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j. **NVG Requalification Training** – This category of training is for an person who has been trained and qualified by the operator, but has become unqualified to serve in a particular duty position and/or aircraft due to not having received recurrent training and/or a required flight or competency check within the appropriate eligibility period.

k. **NVG Transition Training** - This category of training is for personnel who have been previously trained and qualified for a specific duty position by the operator and who are being assigned to the same duty position on a different aircraft type.

l. **Second in Command (SIC)** – An additional pilot, equipped with NVG's who may be designated to assist the pilot in avoiding obstacles during landing and takeoff operations. Additional personnel may be required by FAR's, the General Operations Manual, the RFMS, or host country rules and regulations.

m. **Unaided** – Unaided flight is a flight without NVGs or a flight with NVGs in a non-operational (stowed / flipped-up) position.

n. **Unimproved landing area** – Any site that is not an airport, heliport, or other landing site approved by the FAA or Maritime Helicopters.

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N. Abbreviations / Acronyms

AFM	Aircraft Flight Manual
AFMS	Aircraft Flight Manual Supplement
AGL	Above Ground Level
AIM	Aeronautical Information Manual
ANVIS	Aviator Night Vision Imaging (Image) System
CFRs	Code of Federal Regulations
CG	Center of Gravity
CRM	Crew Resource Management
C/W	Caution / Warning Panel
DA	Density Altitude
ETL	Effective Translational Lift
FAR	Federal Aviation Regulation(s) (14 CFR)
FOV	Field of View
FOR	Field of Regard
FPM	Feet per Minute
GOM	General Operations Manual for Maritime Helicopters
GW	Gross Weight
HNVGO	Helicopter Night Vision Goggle Operation
IAW	In Accordance With
ICA	Instructions for Continued Airworthiness
IGE	In Ground Effect
IMC	Instrument Meteorological Conditions
IIMC	Inadvertent Instrument Meteorological Conditions
IP	Instructor Pilot
KIAS	Knots Indicated Air Speed
LZ	Landing Zone (off airport / heliport locations)
MSL	Mean Sea Level
Ng	Gas Producer Speed
NVG	Night Vision Goggle
NVGO	Night Vision Goggle Operation
NVIS	Night Vision Imaging System
Nr	Rotor Speed
OGE	Out of Ground Effect
PIC	Pilot in Command / Aircraft Captain
PA	Pressure Altitude
RFM	Rotorcraft Flight Manual
RFMS	Rotorcraft Flight Manual Supplement
RPM	Revolutions Per Minute
SOP	Standard Operations Procedures
T/O	Take Off
TQ	Torque

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F4949 Discrepancy and Repair Form (Figure 1)

		Model No.	Serial Number
		F-4949	

Date:			
Discrepancy:			
Found By:	Printed Name	Signature	Certificate Number:
Date:			
Corrective Action:			
Action Taken By:	Printed Name	Signature	Certificate Number:
Date:			
Discrepancy:			
Found By:	Printed Name	Signature	Certificate Number:
Date:			
Corrective Action:			
Action Taken By:	Printed Name	Signature	Certificate Number:
Date:			
Discrepancy:			
Found By:	Printed Name	Signature	Certificate Number:
Date:			
Corrective Action:			
Action Taken By:	Printed Name	Signature	Certificate Number: