

## **Annex 03**

### **Example of Maintenance NVIS Inspection Checklist**



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## INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

### ANNEX 1

#### NVIS COMPATIBLE LIGHTING SYSTEM MAINTENANCE INSPECTION CHECKLIST

REV. IR XX/XX/XX

#### GENERAL

##### A. Objectives

1. Ensure aircraft cockpit, cabin, position lights are still NVG compatible after
  - a. STC holder specified inspection interval (ICA)
  - b. Maintenance to the aircraft instruments or cabin equipment that are NVG compatible.
  - c. Safety inspections (Company)

##### B. Overview

1. Three phases of evaluation
  - a. Daylight
    - 1) Ensure the pilot can read NVIS modified equipment in daylight and bright sunlight conditions
  - b. Night – Unaided
    - 1) Unaided means viewing the instrument panel by looking underneath the NVG when they are in the operational position.
  - c. Night – Aided
    - 1) Ability to see through the windscreen forward, right, and cross cockpit to the left/right.
2. Evaluators
  - a. NVG trained and qualified pilot
  - b. Maintainer or Maintenance QC/QA

#### I. REFERENCE DATA

##### Instructions:

1. Self-explanatory.

1. AIRCRAFT INFORMATION			
MAKE	MODEL	S/N	REGISTRATION #

2. EVALUATOR(S) INFORMATION		
NAME	COMPANY	TITLE

3. NVG(S) INFORMATION		
MANUFACTURER	MODEL	S/N

4. DRAWING INFORMATION (THE APPLICABLE FIGURES OF THE ICA APPENDIX SHOULD BE USED)			
ICA FIG #	REV	DATE	DESCRIPTION

## II. CONFORMITY EVALUATION

### Instructions:

1. Evaluate the aircraft installation to ensure that it conforms to the figures of the applicable Appendix to the ICA. Note any non-conformities or deviations found so that appropriate action can be taken to either (a) update the installed configuration to reflect the Appendix of the ICA or (b) update the Appendix of the ICA to reflect the installed configuration.

1. INSTALLATION DRAWING CONFORMITY	PASS	FAIL
The installed equipment configuration of the NVIS lighting system of the aircraft conforms with the figures in the applicable Appendix of the ICA		
NOTES:		

## III. UNAIDED DAYLIGHT READABILITY EVALUATION

### Instructions:

1. Ensure that lighting conditions reflect a clear, sunny day with relatively low sun angles (worst case).
2. Windows/doors should represent the operational configuration and windscreens should be clean.
3. Power up aircraft using ground power.
4. Evaluate the aircraft installation according to the applicable section of the 'STC HOLDER' NVIS Compatible Lighting System Evaluation Checklist, initialing the appropriate boxes and noting any failures.

5. For each failure, if any, determine a possible corrective action and state whether reevaluation will be necessary once the failure is corrected.

1. READABILITY EVALUATION	PASS	FAIL
Filtered displays and gauges are readable from both front seat positions with sunlight shining on display		
NOTES:		

2. NVIS RED EVALUATION	PASS	FAIL
Lights using NVIS Red are distinguishable as “red” compared to other lights on the instrument panel and are bright enough to capture pilot’s attention with sunlight shining on display		
NOTES:		

3. NVIS YELLOW EVALUATION	PASS	FAIL
Lights using NVIS Yellow are distinguishable as “amber/yellow” compared to NVIS Red lamps and are bright enough to capture the pilot’s attention with sunlight shining on display		
NOTES:		

4. UNIFORMITY EVALUATION	PASS	FAIL
Colors are uniform across the cockpit (i.e. there are not different shades of green, yellow, amber, or red that could lead to confusion)		
NOTES:		

#### IV. UNAIDED NIGHT READABILITY EVALUATION

Instructions:

1. Ensure that lighting conditions reflect a cloudy, moon-less night with very low light levels.
2. Windows/doors should represent operation configuration and windscreens should be clean.
3. Power up aircraft using ground power.
4. Evaluator must be familiar with aircraft power and dimming switch locations so that they can be activated during darkened conditions.
5. Evaluate the aircraft installation according to the applicable section of the 'STC HOLDER' NVIS Compatible Lighting System Evaluation Checklist, initialing the appropriate boxes and noting any failures.
6. For each failure, if any, determine a possible corrective action and state whether reevaluation will be necessary once the failure is corrected.

1. NVIS COMPATIBLE LIGHTING CONTROLS	PASS	FAIL
NVIS compatible lighting controls are easily identified and manipulated with one hand from both front seat positions		
NOTES:		

2. NVIS COMPATIBLE LIGHTING SWITCH	PASS	FAIL	N/A
If the NVIS compatible lighting is controlled through a different switch than the primary lighting, that switch is easily distinguishable from the primary lighting switch			
NOTES:			

3. NVIS COMPATIBLE LIGHTING ILLUMINATION	PASS	FAIL
NVIS compatible lighting illumination is balanced across all areas of the instrument panel		
NOTES:		

4. NVIS COMPATIBLE LIGHTING DESIGN	PASS	FAIL
NVIS compatible lighting design does not cause inadvertent action of controls		
NOTES:		

5. NVIS COMPATIBLE LIGHTING OVERLAYS	PASS	FAIL	N/A
If NVIS compatible lighting overlays are used, they do not obscure instrument or gauge markings, symbols, or numbers from both front seating positions			
NOTES:			

6. POST LIGHT ILLUMINATION EVALUATION	PASS	FAIL	N/A
Instruments and gauges illuminated with post lights are sufficiently illuminated so that the entire display is readable from both front seating positions and no distracting glare or reflections are present			
NOTES:			

7. WINDSCREEN/WINDOW GLARE/REFLECTIONS	PASS	FAIL
If the NVIS compatible lighting system is different than the primary lighting system, it does not cause more glare or reflections in the windscreen and windows of the cockpit than the primary lighting system		
NOTES:		

8. MAP/EMERGENCY/FLOOD LIGHT EVALUATION	PASS	FAIL
Map/emergency/flood lights do not shine into the pilot's		

eyes or cause reflections off instrument or gauge displays that shine into the pilot's eyes and do not cast shadows on portions of the instrument panel that obscure readability		
NOTES:		

9. NVIS RED EVALUATION	PASS	FAIL
Lights using NVIS Red are distinguishable as "red" compared to other lights on the instrument panel and are bright enough to capture pilot's attention		
NOTES:		

10. NVIS YELLOW EVALUATION	PASS	FAIL
Lights using NVIS Yellow are distinguishable as "amber/yellow" compared to NVIS Red lamps and are bright enough to capture the pilot's attention		
NOTES:		

11. UNIFORMITY EVALUATION	PASS	FAIL
Colors are uniform across the cockpit (i.e. there are not different shades of green, yellow, amber, or red that could lead to confusion)		
NOTES:		

12. DISPLAY DEFAULT BRIGHTNESS	PASS	FAIL
Displays that do not have filter overlays have default brightness (failure mode brightness) levels that do not interfere with pilot's ability to operate aircraft		

NOTES:

## V. NVG AIDED NIGHT READABILITY EVALUATION

Instructions:

# WARNING!

ONLY ACTIVATE NVGS UNDER NO-LIGHT CONDITIONS  
TO PREVENT DAMAGE TO PHOTOTUBES

1. Ensure that lighting conditions reflect a no-light environment.
2. Verify NVGs are functioning properly and have no defects that would affect evaluation results.
3. Windows/doors should represent the operational configuration and windscreens should be clean.
4. Power up aircraft using ground power.
5. Evaluator must be familiar with aircraft power and dimming switch locations so that they can be activated during darkened conditions.
6. Evaluate the aircraft installation according to the applicable section of the NVIS Compatible Lighting System Evaluation Checklist, initialing the appropriate boxes and noting any failures.
7. For each failure, if any, determine a possible corrective action and state whether reevaluation will be necessary once the failure is corrected.

1. NVIS COMPATIBLE LIGHTING SYSTEM NIGHT EVALUATION						
NVIS INSTRUMENTS	NVIS AVIONICS	MAP / EMER / FLOOD LIGHTS	AFT COMPARTMENT LIGHTS	CAUTION/ WARNING LIGHTS	IR LEAKS PRESENT?	UNACCEPTABLE REFLECTIONS PRESENT?
OFF	OFF	ON	OFF	OFF		
ON	OFF	OFF	OFF	OFF		
ON	ON	OFF	OFF	OFF		
ON	ON	ON	OFF	OFF		
ON	ON	ON	ON	OFF		
ON	ON	ON	ON	ON		

NOTES:

2. DISPLAY DEFAULT BRIGHTNESS	PASS	FAIL
Displays that do not have filter overlays have default		



brightness (failure mode brightness) levels that do not cause "blooming" in the NVGs		
NOTES:		

## VI. OVERALL EVALUATION RESULTS

### Instructions:

1. Self-explanatory.

	The aircraft <b>PASSES</b> the overall evaluation.
	The aircraft <b>FAILS</b> the overall evaluation due to failed individual portions of the evaluation that will require reevaluation upon completion of required corrective actions (C/A).

## VII. CERTIFICATION

### Instructions:

1. Self-explanatory.

I hereby certify that the evaluation above was completed to the best of my ability and the results are accurate to the best of my knowledge.

\_\_\_\_\_  
EVALUATOR SIGNATURE

\_\_\_\_\_  
DATE

\_\_\_\_\_  
EVALUATOR SIGNATURE

\_\_\_\_\_  
DATE