MINISTRY OF DEFENCE

SECRETARIAT GENERAL OF DEFENCE AND NATIONAL ARMAMENTS
DIRECTORATE OF AIR ARMAMENTS AND AIRWORTHINESS

NATO AGS
RQ-4D AIR SEGMENT
CONTINUING AIRWORTHINESS RECORDS – AIR VEHICLE MISSION COMMAND & CONTROL, DEPLOYABLE UAV CONTROL ELEMENT AND UNMANNED AIR VEHICLE TECHNICAL LOGS

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LIST OF EFFECTIVE PAGES

ATTENTION: This regulation is valid only if it made of the pages listed below, duly updated.
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The issue dates of the original and amended pages are:

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1. INTRODUCTION

1.1 General

The AER(EP).00-1-APR-49 "Libretto Rapporti di Volo/Utilizzo e Registro della Manutenzione degli Aeromobili a Pilotaggio Remoto – Modelli DP/5069/APR" is the National reference regulation for the compiling and maintaining of the flight/utilization and maintenance logbooks. Paragraphs 2.1 and 3.1 of the AER(EP).00-1-APR-49, allow the possibility of dedicated procedures for Unmanned Aerial Systems (UASs) to manage peculiar data, through the issuing of a specific regulation that guarantees the general principles of the AER(EP).00-1-APR-49. Hence, the NATO AGS flight/utilization and maintenance logbooks procedures and templates for the UAS are defined in this dedicate regulation that follows the main principles of the AER(EP).00-1-APR-49.

1.2 Overview

The technical LOG, similar to the logbooks in accordance with (i.a.w.) AER(EP).00-1-24, is a continuing airworthiness record. The NATO AGS technical LOG(s) provide accurate information on the status and position of the NATO AGS Air Segment.

As the NATO AGS Air Segment as a whole consist of an Unmanned Air Vehicle (UAV) and the Air Vehicle Mission Command & Control (AVMC2), and considering the utilization of the Deployable UAV Control Element (DUCE) independently from the AVMC2, it is necessary to use specific technical LOGs for the UAV, AVMC2 and DUCE.

This regulation defines procedures and templates for compiling and maintaining the NATO AGS UAV, AVMC2 and DUCE Technical LOGs.

1.3 Aim

This regulation applies specifically to the NATO AGS Air Segment and defines and regulates the management of the:

- Technical LOG of the AVMC2, Form DP-5069/RQ-4D/AVMC2, hereafter identified as "AVMC2 Technical LOG";
- Technical LOG of the DUCE, Form DP-5069/RQ-4D/DUCE, hereafter identified as "DUCE Technical LOG"; and
- Technical LOG of the UAV, Form DP-5069/RQ-4D/UAV, hereafter identified as "UAV Technical LOG".

1.4 Applicability

This regulation is applicable to the registered NATO AGS Air Segment.

1.5 Validity

This regulation shall come into effect as of its approval date.

1.6 Related Documentation

A. AER.00-1-APR-49	*Libretto Rapporti di Volo/Utilizzo e Registro della Manutenzione degli Aeromobili a Pilotaggio Remoto – Modelli DP/5069/APR.*
B. AER(EP).P-7(EN)	Regulation for Recording and Maintaining the Military Aircraft Register - (Registro degli Aeromobili Militari – R.A.M.).
C. AER(EP).0-0-2/RQ-4D	NATO AGS RQ-4D Air Segment and Pilot Trainer Definition and Regulation of the DAAA System for Handling Technical Publications

1.7 Definitions

Refer to AER(EP).0-0-2/RQ-4D, Annex VI for the general definitions.

2. AVMC2 AND DUCE TECHNICAL LOGs – FORMs DP-5069/RQ-4D/AVMC2 & DP-5069/RQ-4D/DUCE

This paragraph describes the AVMC2 Technical LOG and it is applicable also to the DUCE Technical LOG if not differently indicated.
Paragraph 4 provides the facsimile for AVMC2 and DUCE Technical LOGs.

2.1 AVMC2 Technical LOG Description

The Technical LOG of the AVMC2 consists of the Parts described below. Each Part of the LOG consists of various blocks identified by a number.
The AVMC2 Technical LOG contains:

- A cover/instruction sheet;
- The four Parts described below.

  - PART I "AVMC2 - GCS FLIGHT REPORT LOG"
    The AVMC2 is made of more than one Ground Control Station (GCSs), for this reason individual Part I of the Technical LOG shall be filled in for each GCS (note that the DUCE has only one GCS).
    For each flight carried out under the control of the specific GCS, it contains a record of the flight's data (purpose, duration, etc.), data of the UAV employed, the utilization of the GCS and the personnel present in the GCS who participated in the flight. Part I is one sheet consisting of a "front" side (Part I.F) and a "rear" side (Part I.R).

  - PART II "AVMC2 OPERATIONS, INSPECTIONS AND MAINTENANCE LOG"
    It contains a continuous record of:

a. The position of the AVMC2 and its status (serviceable or unserviceable) with particular reference to the data necessary to identify the responsibilities for the serviceability of the AVMC2 in order to conduct the flight;
b. The AVMC2 usage and its components;
c. The status of the AVMC2 with regard to the applicable inspections performed or to be carried out, including scheduled inspections not executed at proper time;
d. All faults, deficiencies or inefficiencies noted on the AVMC2, as well as of the related corrective actions taken, including faults that have no influence on the serviceability of the AVMC2 for its utilization and whose corrective action can be deferred to the earliest opportunity;

Generally, one sheet of Part II is filled in for each utilization of the AVMC2 regardless a flight was carried out.

Part II is one sheet consisting of a "front" side (Part II.F) and a "rear" side (Part II.R).

- PART III "LIST OF AVMC2 DEFERRED CORRECTIVE ACTIONS"

  It contains a continuous record of the faults that have no influence on the serviceability of the AVMC2 for its use to conduct the flight and whose elimination can be deferred to the first earliest maintenance opportunity or scheduled inspection. In this part, the scheduled inspection/maintenance and Service Bulletins not carried out by the scheduled date are also recorded, only when the positive outcome of dedicated checks and/or inspections, foreseen by a Technical Publication (TP), allow for their deferral. Part III is one sheet consisting of a "front" side (Part III.F) and a "rear" side (Part III.R).

- PART IV " AVMC2 GENERAL CHARACTERISTIC DATA"

  This part contains:

  a. The characteristic data of the AVMC2;
  b. The AVMC2's calendar and hourly maintenance schedule and its accessories (when an accessory has been replaced, part IV shall be updated as well);
  c. Operating instructions, cautions, and/or operational limitations with reference to (w.r.t.) one or more of the following cases:
    - introduction or not of changes that could interfere with operational activities;
    - activation or deactivation of specific equipment;
    - faults for which the resolution has already been deferred to the earliest opportunity, as reported in Part III.
  d. The record of the inspections made on the LOG.

  Part IV is one sheet consisting of a "front" side (Part IV.F) and a "rear" side (Part IV.R).

The AVMC2 Technical LOG shall contain 30 sheets of Part II and the necessary sheets of Part I, Part III and Part IV associated with them. The sheets of Part I, separated for each GCS, are introduced before the first sheet of Part II, while the sheets of Part III and IV are inserted after the last sheet of Part II. Both the LOG and the sheets of Part I, II, III and IV are provided by a sequential numbering field as described in paragraph 2.4 "Filling in the AVMC2 Technical LOG". Each AVMC2 Technical LOG is defined as concluded when the thirtieth sheet of Part II is filled in.

2.2 AVMC2 Technical LOG First set up

The activity of associating a Technical LOG to a specific AVMC2 is indicated with the term "set up" and it consists of recording for the first time the characteristic data of the AVMC2 to which the Technical LOG refers (type, Experimental Tail Number - Military Registration Number, current use etc.). These data represents the status of the AVMC2 in relation to the activity carried out before set up.

The first LOG to be associated to the AVMC2 recorded in the Military Aircraft Register, shall be set up by the NAGSF no later than the tender for acceptance and in any case before the first operations under the responsibility of the NAGSF, on the basis of the data provided by the SDR. In relation to these data, the NAGSF is responsible solely for transcribing them onto the LOG. The original documentation of the SDR shall be retained by the NAGSF together with the LOG – i.a.w. the same time constraints – but shall not be updated. Once a LOG is completed, NAGSF shall set up the subsequent LOG relating to the same AVMC2. In particular, who set up the LOG shall fill in all the fields in the cover and the progressive numbering of each sheet of Part II.

NOTE

The activities of the AVMC2 carried out before the first set up of the Technical LOG, shall be contained in dedicated documents, which may have a different format from the LOG itself. Once the Technical LOG is set up, the documentation containing all information about the activity carried out previously, shall be stored by who set up the Technical LOG with the same procedures/times as the LOG, and shall be available for DAAA and Competent Body at all times.

2.3 AVMC2 Technical LOG Reproduction

NAGSF is authorized to use the faithful reproduction of the printouts of the AVMC2 Technical LOG shown in paragraph 4 of this regulation. In any case, each individual AVMC2 Technical LOG shall contain a number of sheets i.a.w. the provisions of paragraph 2.1 and be printed on both sides in such a way as to have a sheet containing on the "front" side the cover and on the "rear" side the instruction, the sheets of Part I consisting of the front side "Part I.F" and of the rear side "Part I.R", and similarly for the sheets of Part II, III and IV.

2.4 AVMC2 Technical LOG Filling In

To fill in the AVMC2 Technical LOG, follow the instructions provided below. All entries, with the exception of signatures, shall be written in block letters, for best clarity and legibility, and with a blue or black pen (indelible ink), unless otherwise specified herein.

Any corrections shall be made with a red pen and initialed, in manner that the original entry remains readable. Descriptions shall be precise and concise: when necessary, use more than one line or multiple sheets of the same type to obtain the utmost precision of expression.

NOTE

Before each mission, the crew shall review the status of the AVMC2 in terms of the serviceability and limitations/operating instructions of Part IV.

The detailed instructions for filling in all the Parts of the AVMC2 Technical LOG are provided below:

- **COVER**

  The Technical LOG cover shall be filled in by who set up the LOG, completing the following fields:

  - P/N

    Part Number (P/N) of the AVMC2 to which the LOG refers. If, during the employment of the AVMC2, modifications that change the P/N are introduced, maintaining the same serial number, in the LOG in use at that time, but not necessarily in the subsequent ones, both the old and the new P/N shall be indicated.

    In any case, the numbering of the LOG referred to the new AVMC2 P/N shall continue from that of the LOGs associated with the same AVMC2 Serial Number (S/N) of the old P/N.

  - S/N

    Serial Number (S/N) of the AVMC2 which the LOG refers to.

  - MRN

    Numerical part of the AVMC2 GCSs Military Registration Numbers (MRN) at the time the LOG is set up. In particular, if the number of the AVMC2 GCSs at the time of the setting up, is an Experimental Tail Number (e.g.: XSRCC-008-A/B), on the cover shall be shown only the numerical part (e.g.: MRN: 008).

    The information of the registration status of the AVMC2 in the Military Aircraft Register (Experimental Tail Number of MRN) can be found in the sheets of both Part I and Part II.

  - LOG no.

    Number of the AVMC2 Technical LOG. For each AVMC2, the numbering of the LOG shall be sequential.

- **AVMC2 – GCS TECHNICAL LOG - PART I**

A Part I sheet of the AVMC2 Technical LOG is filled in for each flight controlled by a specific GCS. If one sheet is not enough, additional ones (front and back page(s)) shall be added, taking care to number them sequentially in the dedicated block. The Part I shall be closed either when the flight, who it refers to, is over or when the flight is transferred to another GCS. In case the flight comes back to be controlled by that GCS a new Part I shall be filled in.
Before the flight, the Team Leader shall set up a new Part I sheet of the AVMC2 Technical LOG, filling in the data fields from 1 up to 5:

1. MDS
Mission Design Series (MDS) followed by "/AVMC2" (i.e.: RQ-4D/AVMC2).

2. EN/MRN
Block dedicated to recording the Experimental Tail Number (EN) or the Military Registration Number (MRN) associated with the AVMC2 GCS. In this field, the alphanumeric code shall be indicated, rather than just the numerical part of the number shown in the cover (e.g.: EN: XSRCC-008).

2a.GCS
Enter the EN/MRN identification letter of the specific GCS which the Part I is referred (N/A for DUCE).

3. LOG no. - Sheet no.
The "LOG no." data field is dedicated to recording the number of the AVMC2 Technical LOG being used. This number matches the one shown in the cover of the subject LOG. In the field "Sheet no.", the number of the Part I sheet being used shall be recorded. For each GCS, the numbering of the Part I sheet pages shall be sequential (e.g.; LOG no.: 2018 - Sheet no.:1).

NOTE

If additional sheets (front and/or back pages) are required to be added, the sheet number should be followed by a sequential letter. (e.g.; LOG no.: 2018 - Sheet no.:1A, 1B, 1C, etc.)

4. Unit
By default "NAGSF".

5. Location (ICAO)
Physical location (ICAO code) where the AVMC2 (or the DUCE) is operated (i.e.; "LICZ" for the AVMC2 or the relevant deployed location).

The Team Leader shall then fill in the data fields from 6 through 8:

6. Software
Unique identifier of the GCS Software used during the specific employment.

7. Starting date
Calendar day (dd/mm/yyyy) on which the Team Leader started his/her activities on the GCS or the calendar (dd/mm/yyyy) day on which the utilization of the DUCE started.

8. Utilization No.
   Progressive number of the utilization of the GCS.

9. Major Configuration Items
   The Team Leader shall fill in "Nomenclature", "P/N" and "S/N" stating all major configuration items utilized by the GCS during the specific utilization. The data fields "Start-up time" and "Shutdown time" shall instead be filled in by the Pilot In Command (PIC) as occurred. In particular, the PIC while a major configuration item is started up and/or shut down shall record the related times in the dedicated data fields, complying with the provisions of paragraph 2.4.1 "Specific Instructions".
   In case of replacement of a major configuration item, after the PIC records the time of shutdown of the first serialized item employed, the Team Leader shall use a new line to record "Nomenclature", "P/N" and "S/N" relating to the new serialized item utilized.

After the pre-flight inspection of the UAV assigned to the flight, the PIC of the 1st shift shall fill in data fields 10 up to 16 with the exclusion of field 14 which shall be filled in by the PIC of the last shift.

10. Aerial Vehicle Employed
    Mission Design Series (MDS) followed by "/UAV" (i.e.; RQ-4D/UAV).

11. UAV EN/MRN
    Block dedicated to recording the Experimental Tail Number (EN) or the MRN associated with the UAV. In this field, the alphanumeric code shall be indicated, rather than just the numerical part of the number shown in the cover (e.g.; EN: X-AV-SA-0001).

12. Mission Code
    Code of the mission to be carried out during the flight.

13. Purpose
    Reason why the flight is conducted.

14. Altitude
    Maximum altitude reached during the flight.

15. Sortie n.
    Identifying the alphanumeric number of the flight. The number of the flight shall remain the same even if the UAV is handed over between two GCSs.

16. Start of Control
    In "Location (ICAO)", the take-off location of the UAV shall be indicated; in "Date", indicate the date on which the UAV take-off; in "Time" the time of the UAV take-off, complying with the provisions of paragraph 2.4.1 "Specific Instructions".
    If the flight took-off under the control of another GCS (e.g.; from DUCE 1 to DUCE 2, GCS A to DUCE 1, GCS A to GCS B), in "Location", "date" and "time" shall be entered the location, the date and time when the UAV started being controlled by the GCS to which the Part I refers.

17. End of Control
The PIC of the last shift shall enter the location of the landing of the UAV in "Location (ICAO)", the date of the landing of the UAV in "Date" and the time of the landing of the UAV in "Time", complying with the provisions of paragraph 2.4.1 "Specific Instructions". If, during the flight, the UAV control was transferred to another GCS, in "Location (ICAO)", "date" and "time" of block 17 shall be entered the location, the date and time when the UAV stopped being controlled by the GCS which the Part I refers to.

- Notes
The block is reserved to the recording of any notes.

18. Pilots Ranks, Last Names and First Names
Pilots' (PIC and Co-Pilot) ranks, last names and first names, written in block letters.

19. Crew Position
The Pilot shall indicate his/her position (e.g.: PIC, Co-Pilot) during the shift in which he/she participated.
If, during the utilization of the GCS:
- *different positions from the initial ones are assigned to the Pilot; or*
- *a new Pilot joins the GCS operations,*

a new shift shall be created.
If during the flight the Pilot other than the PIC leaves the station, it will be necessary and sufficient to record in block 20 his/her shift end time and total time, without initiating a new shift.

20. Crew Flight Time
Pilots operating the GCS shall record, in "start", the time his/her flight control started, in "end" the time when his/her flight control ended, and in "total" the duration of his/her shift. The starting time of the 1st shift coincides with the start of control recorded in block 16 and the ending time of the last shift coincides with the end of control recorded in block 17. "Total" shall be the difference between the "End" and "Start" times of the PIC. The times shall be recorded i.a.w. the provisions of paragraph 2.4.1 "Specific Instructions".

21. Gear Cycles
Number of Landing Gear Cycles completed during the specific shift.

22. Landing
The block shall be filled in exclusively by the PIC of the last shift. In particular:
- *in case of landing, the number "1" shall be entered*
- *if the UAV is transferred to another GCS, the number "0" shall be entered.*

23. Crew Desk
"Crew Desk" is dedicated to record the desk of the AVMC2 utilized by the Pilot during the relevant shift. If during his/her flight control the Pilot moves to a different desk of the same GCS, a new shift shall be created.

24. PWS
"PWS" is dedicated to record the Pilot Workstation of the AVMC2 utilized by the Pilot during the relevant shift.
If during his/her flight control the Pilot moves to a different workstation of the same GCS, a new shift shall be created.

25. Note
Block dedicated to record any notes by the Pilots.

26. Pilot Signature
Signature of the PIC in the specific shift. This signature guarantees all recordings made for the specific shift.

At the end of the mission control, the PIC shall fill in the blocks 27, 28 and 29 "Aerial Vehicle Flight Report". The PIC assumes responsibility for filling in these fields by the signature at the end of the sheet.

27. Flight Hours
"Flight Hours - Before Control Start" shall be taken from:

- the UAV Technical LOG - Part II relating to the flight corresponding to, block 20 "Flight hours / Prev.Op."; or
- the AVMC2 GCS - Part I block 27 "Flight hours / At End of Control" of the GCS that controlled the UAV before transferring it to the GCS to which the subject Part I refers to – if the UAV took-off under the control of a different GCS.

"Flight Hours - During the Control" shall record the flight hours completed under the control of the GCS. It shall be calculated as sum-up of all blocks 20 "Crew Flight Time / Total".
"Flight hours - At End of Control" is the sum of the values recorded in "Before Control Start" and "During the Control".

28. LNDGs
"LNDGs - Before Control Start" shall be taken from:

- the UAV Technical LOG - Part II relating to the flight corresponding to, block 20 "Landings / Prev.Op."; or
- the AVMC2 GCS - Part I block 28 "LNDGs / At End of Control" of the GCS that controlled the UAV before transferring it to the GCS to which the subject Part I refers to – if the UAV took-off under the control of a different GCS.

"LNDGs - During the Control" shall record the number of landing completed under the control of the GCS ("1" or "0"). It shall be taken from block 22 "Landings".
"LNDGs - At End of Control" is the sum of the values recorded in "Before Control Start" and "During the Control".

29. G.Cycles

"G. Cycle - Before Control Start" shall be taken from:

- the UAV Technical LOG - Part II relating to the flight corresponding to, block 20 “Gear Cycles / Prev.Op."; or

- the AVMC2 GCS Part I block 29 “G.Cycles / At End of Control” of the GCS that controlled the UAV before transferring it to the GCS to which the subject Part I refers to – if the UAV took-off under the control of a different GCS.

“G. Cycle - During the Control” shall record the cycle(s) completed under the control of the GCS. It shall be calculated as sum-up of all blocks 21 “Gear Cycles”.

“G. Cycle - At End of Control" is the sum of the values recorded in "Before Control Start" and "During the Control".

30. Operators

In the "Rank, Last Name and First Name" field, each Operator on duty in the AVMC2 during the operating shall indicate his/her rank, last name and first name written in block letters.

In the "Duty" data field, each operator shall indicate the duty (e.g.: Sensor Operator "SO") he/she performed during utilization of the AVMC2. If during operating the AVMC2 an operator changes his/her duty, he/she shall record the end of the first set of duties carried out ("End Time" data field) and use a subsequent line to record the new duty.

In the "Start Time" data field, the operator shall indicate the time when he/she started to perform the specific duty (this time could precede the time of “Start of Control”). The times shall be recorded i.a.w. the provisions of paragraph 2.4.1 "Specific Instructions", with the exception of the rounding, which shall be to the nearest 5 minutes unless operational orders prescribe more stringent approximations.

In the "End Time" data field, the operator shall indicate the time when he/she stopped performing the specific duty (this time could be later than the time of the “End of Control”). The times shall be recorded i.a.w. the provisions of paragraph 2.4.1 "Specific Instructions", with the exception of the rounding, which shall be to the nearest 5 minutes unless operational orders prescribe more stringent approximations.

In the “OWS” data field the Operator shall record the Workstation he/she utilized during the relevant duty. If during his/her duty the Operator moves to a different workstation, a new shift shall be created.

- Notes

The block is reserved to the recording of any notes. In particular:

  - *any changes of GCS that took place during a same flight shall be indicated;*

- *the data field "Page ___ out of ___" shall be filled in only if it was necessary to use several sheets of Part I to record the data relating to a same flight.*

31. GCS Utilization Time
The block is reserved to recording the utilization time of the GCS. In "Start up time", the 1st shift Pilot shall record the time when GCS has been switched on. In "Shut down Time", the last shift Pilot shall record the time when GCS has been switched off, and in "Duration Time" the difference between the "Shut down Time" and "Start up Time". The times shall be recorded i.a.w. the provisions of paragraph 2.4.1 "Specific Instructions".

- Pilot in Command
The Pilot that has been in Command either at the end of the flight or when the flight has been transferred to another GCS shall put his/her signature in this field.

➢ **AVMC2 TECHNICAL LOG - Part II**

A Part II sheet is filled in, in case:
a) the AVMC2 is used for conducting a flight;
b) any AVMC2 fault raises;
c) any AVMC2 maintenance activity is executed.

The Part II has to be opened when any of the above events occur and has to be closed either at the end of the flying day or, in case the fault has not been fixed or the maintenance activity has not been completed by then, the Part II shall be closed when the maintenance tasks are over. If one sheet is not enough, more shall be filled in, taking care to number them sequentially in the dedicated data field.

NOTE

The start and the end of the flying day coincide respectively, in terms of date and time, with the start of the first flight of the day and the end of the last flight started in the same calendar day. In particular, If the last flight will be flown over three calendar days, the flying day shall end at landing date.

The Team Leader shall set up a new Part II sheet of the AVMC2 Technical LOG, filling in blocks 1 up to 8 in a similar way to the one indicated above for the same data fields of Part I.

32. Major Configuration Items
In the dedicated data fields, indicate the "Nomenclature", the "P/N" and the "S/N" of the major configuration items installed on the AVMC2.

33. Current Status
Once Part II is completed, it is taken out from the AVMC2 Technical LOG. Faults that were not eliminated shall be either transferred to:

- Part III of the AVMC2 Technical LOG; or

- The subsequent Part II of the AVMC2 Technical LOG;

based on the urgency and on the importance of the work, on the availability of parts and equipment, special local conditions, etc.

Before the next flight, the necessary corrective measures are normally adopted. If one or more faults marked with red symbols remain open, the most severe symbol (defined as "dominant") shall be affixed in block 33. For the definition and management of the symbols, refer to paragraph 2.4.1 "Specific Instructions". Only red symbols have to be placed in block 33. Whenever the fault with the initial dominant symbol is eliminated but not all the other red symbols, the next most severe red symbol shall be affixed in the subsequent field of block 33, and it will then become the dominant one.

If a symbol is affixed in block 33 by mistake (i.e. there is no correspondence with the symbols of block 39), the correction shall be made by the Technical Officer, who shall proceed as follows:

i. (S)he shall indicate the erroneous symbol in block 39 and cross it out, covering it with his/her initials;
ii. (S)he shall explain the error in block 40 (normally: symbol erroneously indicated in block 33);
iii. (S)he shall indicate in block 41 the change of symbol to be made (caption: change of symbol from ... to...);
iv. (S)he shall enter the date in the dedicated column and sign the validation in block 42 to take responsibility for the change;
v. (S)he shall write the correct predominant red symbol in the cell following the one of the erroneous symbol in block 33.

34. Exceptional Release to Service

An “Exceptional Release to Service” *shall not be granted when there is a (simple or circled) Red X as the dominant symbol.*

An “Exceptional Release to Service” *is required to utilize the AVMC2 to carry out a flight of the UAV every time a Red Dash or a Red Diagonal appears in block 33. The purpose of the* “Exceptional Release to Service” *is to certify that the Technical Officer or the PIC, who is granting it, has carried out thorough investigations on the faults/conditions that originated the dominant red symbol and the other red symbols affixed in block 39 and whose outcome is such as to justify his/her assessment that the AVMC2 can be used to carry out the flight.* “Exceptional Release to Service” *for flight may be granted only by the Technical Officer or by the PIC who conducts the flight, with the difference that:*

– *The authorization granted by the Technical Officer is normally valid for an entire flying day, except in case of a "Ferry Flight" in which it is valid solely for the specific flight, unless a new fault emerges, which shall in any case be submitted to him/her for evaluation. The conditions/faults that lead to*

the granting of the authorization by the Technical Officer normally pertain to technical aspects that are of a particular nature and/or that do not require limitations in the employment of the AVMC2 for flight purposes.

- *The Pilot's authorization, granted by the PIC, is valid only for the flight in which (s)he participates. It is granted when the fault entails limitations to the employment of the AVMC2 according to the evaluations and indications expressed by the Technical Officer, but as per the Pilot's assessment these limitations do not compromise the performance of the planned mission.*

The authorization shall be granted by affixing the legible signature of the person who is granting it.

In general, in granting the authorization it is mandatory always to indicate the row of column 40 where the fault corresponding to the red symbol to which the authorization refers has been entered. In addition, if the Technical Officer is the one who signs, (s)he shall place the acronym TO after his/her name.

35. Next inspection

The Team Leader, in the "Insp. Type" block, enters the next inspections to carry out and in the "Due Date/Time" block the corresponding dates when they have to be executed and/or hours of operation of the AVMC2 by which the next inspection or replacement shall be carried out. It is written in black/blue ink. These data are recorded at the time Part II is set up for all major inspections, whereas for daily inspections (e.g.: pre and post flight) they are recorded after the inspections are carried out.

36. Times of Operation

In the data fields "Par.1", "Par.2", "Par.3", "Par.4" and "Par.5" shall be recorded the data relating to any AVMC2 parameters to be monitored or its components (e.g.: hours of operation of the battery, of the GCSs, for the DUCE the relevant hours of operation), specifying the name of the parameter (e.g.: Par.1: battery hours, GCSs hours):

- *At the data field "Prev. Op." the value of the parameter before utilization of the AVMC2;*
- *At the data field "Utilization Op." the utilization in relation to the parameter, carried out during the specific utilization of the AVMC2;*
- *At the data field "Total Op." the sum of the values indicated in the same line for "Prev. Op." and "Utilization Op." data fields.*

37. Daily inspections

The purpose of this block is to record all those scheduled inspections/checks that are necessary for the execution of each AVMC2 utilization (e.g.: pre and post flight, not the 150 FH inspection).

After filling in the header fields of Part II, the Team Leader shall enter in the "Type" data field the list of scheduled inspections/checks and in the "SME" data field the specialty associated with them (see list in the Section related to Block 38).

The subsequent data fields of block 37 shall be filled in by the Specialist/Pilot who shall carry out the inspection/check and shall affix his/her legible "signature" in the appropriate data field next to the inspection/check he/she carried out. In particular, for every inspection/check carried out and recorded in the "Type" data field, the data pertaining to the "Date" and "Time" of the end of execution shall be recorded i.a.w. the provisions of paragraph 2.4.1, at the end of the execution of that inspection/check, along with the "Outcome" and any "Notes".

NOTE

If an inspection or a check is not completed successfully, the noted fault shall be recorded in Block 40 and the text "recorded in Block 40" shall be entered in the data field Notes.

38. SME

For every noted fault or work to be carried out, recorded in Block 40, the distinctive code of the involved specialty shall be entered Block 38.

The list of the identification codes of the Subject Matter Experts (SMEs) is as follows:

01	*Mechanics*
03	*Technical Office*
05	*Avionics*
CIST	*CIS Technician*
TL	*Team Leader*
CC	*Maintenance Crew Chief*
TO	*Technical Officer*
PIL	*Pilot*
SO	*Sensor Operator*

39. Symb.

For every fault noted or work to be carried out per Block 40, the corresponding symbol shall be recorded following the directives of paragraph 2.4.1.

When a symbol used does not match the real conditions of the AVMC2, or the system which the item refers to, the Technical Officer, after noting the fault, has the authority to make the change. The procedure is as follows:

- *In Block 39, he/she cancels the erroneous symbol covering it with his/her own initials;*
- *In the corresponding Block 41, he/she writes: "symbol changed from ... to ..." and affixes date and signature in the corresponding field;*
- *He/she marks the correct symbol in the first free field of Block 39, and in the adjacent fields transcribes the specialty (Block 38) and the fault (Block 40);*
- *He/she updates Block 33 if necessary.*

When the Red Dash is placed in Block 39 (planned work to be carried out), this symbol can be crossed out only after completing the required work or as a result of a waiver authorized by a Service Bulletin. In this case, the Red Dash shall be closed referencing, in Block 41, the waiving Service Bulletin and the favorable outcomes of any checks/inspections required by that Service Bulletin. The scheduled work will then be rewritten in the next free data field, placing the Black Dash as a symbol and also indicating the terms of validity of the waiver in Block 40. In this case, the transcription may be entered in Part III of the AVMC2 Technical LOG. At the expiration of the granted waiver, the symbol shall be changed again, returning to the Red Dash in Part II of the AVMC2 Technical LOG.

40. Fault Report/Work Details

Block 40 shall be filled in as follows:

- *Every fault noted at any time by a Specialist/Pilot shall be described appropriately and concisely in this block;*
- *As soon as an inspection expires, an annotation shall be placed in this block, e.g.: "Battery P/N UPA13498 S/N 1308 expired". In this case, as for the expiration of a Service Bulletin/Airworthiness Directives, this annotation may also be entered by the Technical Officer or by the Technical Office as well as by the Specialist and by the Pilot after Part III and IV acknowledgment;*
- *When an accessory is replaced, an appropriate annotation shall be placed in this block, specifying the reason for this replacement (e.g.: part to be used as a spare part on another aircraft);*
- *When a maintenance (even a scheduled inspection) is performed;*
- *Every time an Airworthiness Directive or Service Bulletin is received that involves the AVMC2 for "Immediate, Urgent or Routine" action – when its missed introduction within the prescribed times results in a suspension from the service of the material concerned – the number, date and title of the AD or SB shall be entered in this block;*
- *Every time there is an incident at the AVMC2, the causes and the extent of the damage shall briefly be annotated in this block;*
- *After each utilization the Pilot/Specialist shall report in this block all the faults (one per data field) arose during the utilization, followed by his/her signature; any other fault noted by the Pilot/Specialist shall be entered in the next data field. In case everything went well during the utilization of the AVMC2, the annotation of the Crew Chief shall be: "utilization OK";*
- *If a serviceable item has to be removed temporarily from the AVMC2, to carry out any kind of work, the acronym E.T.R. (Equipment Temporary Removed) shall be written next to the description of the removal.*

For each entry transcribed in this block, the relevant "date and Signature" and "'Work Order (WO) #" (if any) shall be filled in by the compiler.

41. Corrective Actions

Each fault recorded or work to be carried out in Block 40 shall be matched, on this Block, by a corrective action taken. This can be one of the following:

description of the work carried out to solve the fault or execution of the scheduled maintenance. (e.g.: "Replaced battery S/N 1308 with similar serviceable battery S/N 1306"). If an item is replaced, it is mandatory to enter the P/N and, if the item is serialized, the S/N. In the "Man Hours" field, enter the time needed (in man-hours and man-minutes) to complete the work, but only when the Fault Report/Work Details transcribed in Block 40 is fixed/completed.

- *If the fault is not severe and thus its resolution is not urgent, with the approval of the Technical Officer, it can:*
  - *a) be postponed to the following day, in this case "CARRIED FORWARD" shall be written in Block 41;*
  - *b) be postponed to the next available opportunity, in this case the reason why the work cannot be carried out, and the text "TRANSFERRED TO PART III", shall be entered in Block 41. In this case, the fault is transcribed on Part III of the AVMC2 Technical LOG.*

  In cases "a" and "b", the field "MAN HOURS" shall be crossed out.

Every time there is an entry in Block 41, the “date” and the “signature” of the Specialist shall be entered next to it. If the work carried out (described in Block 41) eliminates the fault transcribed in Block 40, the Specialist that performed the work shall place his/her initials on the corresponding symbol in Block 39. Upon closing Part II, any unresolved fault shall be entered in the new Part II or in Part III of the AVMC2 Technical LOG. The decision to entry it in the new Part II or to Part III will be taken on case by case basis based on the urgency and on the importance of the work, on the availability of parts and equipment, etc.

42. Validating Signature

The signature of the Technical Officer in this Block certifies that the corresponding actions were carried out by licensed and qualified personnel. It is needed in the following cases:

a) Transfer of the work to Part III of the AVMC2 Technical LOG;

b) Maintenance work execution which was marked with a Red X or a Circled Red X.

If the corrective actions are performed by the Company, the validation shall be signed by responsible personnel specifically authorized by the Company itself.

- Notes

The field is reserved to the recording of any notes. In particular:

- *The field "Page ___ out of ___" shall be filled in only if it was necessary to use several sheets of Part II to record the data relating to a same utilization/maintenance.*

- **AVMC2 TECHNICAL LOG - Part III**

The Team Leader shall set up a Part III sheet in each AVMC2 Technical LOG and shall fill in the data fields 1 and 2 similarly to the same data fields as Part I and II. Until the end of the AVMC2 Technical LOG, all the Part III sheets necessary for recording the specific information described below shall be added, taking care to number them sequentially in the dedicated data field 3 (see Part I block 3). Once the AVMC2 Technical LOG is complete, the unresolved faults recorded in Part III shall be transcribed in the Part III of the new AVMC2 Technical LOG. The Part III sheets containing only faults transcribed back to Part II shall be taken out from the LOG and archived at the responsible Technical Office.

Before proceeding with the description of the data fields in Part III, general information is provided about the management of Part III itself.

Upon closing Part II, any unresolved fault shall be entered in the new Part II or transferred on to Part III. The decision has to be taken on case by case basis, based on the urgency and on the importance of the activity, on the availability of parts and equipment, special local conditions, etc.

In any case if a corrective action is deferred by few days, it shall be transcribed in the new Part II of the AVMC2 Technical LOG until the related work is performed. If the execution of the work is expected to be delayed by several days, then the annotation shall be entered in Part III of the AVMC2 Technical LOG.

No fault marked with Red X, Circled Red X, Red Dash, Red Diagonal and in general, any measure that cannot be postponed, shall be transcribed in Part III. Some examples for which a fault shall not be transferred to Part III of the AVMC2 Technical LOG are provided below:

a) *Airworthiness Directive/Service Bulletins concerning Flight Safety (Urgent and Immediate action);*
b) *Need to replace a part not in Stock, important for Flight Safety.*

The transcription of a fault in Part III shall always be reviewed and approved by the Technical Officer, whose rank, last name written in block letters and legible signature shall be entered in Block 46 "Annotation approved by". Upon reaching a major inspection, all the existing faults in Part III shall be transferred in Part II and the sheets of Part III shall be taken out and handed over to the Technical Office.

After the inspection, a new recording cycle shall be started.

43. SME

For every fault recorded in Block 45, the distinctive code of the involved specialty shall be entered, as it was already entered in Block 38 of Part II.

44. Symb.

For each fault recorded in Block 45, the corresponding symbol shall be recorded following the instructions of paragraph 2.4.1, as it was already entered in Block 39 of Part II.

45. Fault

The fault to be deferred according to the procedures set out above shall be recorded as it was already transcribed in Block 40 of Part II. A very short annotation on the causes that delayed the action entered in Block 41 of Part II should also be entered in this Block.

46. Annotation approved by (date and Signature)

The transcription of a fault in Part III of the AVMC2 Technical LOG shall be carried out by the Specialist or Team Leader, but it shall always be reviewed and "validated" by the Technical Officer, who shall put his/her signature preceded by the last name written in block letters in this Block.

In addition, the date on which the transcription from Part II to Part III of the AVMC2 Technical LOG shall be entered in this Block.

47. Authorization validity

When it can be defined, indicate the date and time until which the authorization is valid; if it cannot be defined, indicate the conditions (e.g.: upon receipt of material).

48. Date entered in Part II

The date on which the fault is again entered in Part II of the AVMC2 Technical LOG is recorded, because the time to carry out the work has arrived. In Part II of the AVMC2 Technical LOG of that day, Blocks 38, 39 and 40 shall be filled in.

Once the AVMC2 Technical LOG is complete, the unresolved faults recorded in Part III shall be transcribed in the Part III of the new AVMC2 Technical LOG, in this Block shall be entered the sentence as follows: "transferred to Part III of the next AVMC2 Technical LOG".

- **AVMC2 TECHNICAL LOG - Part IV**

This Part contains information about the inspections and the operating instructions/employment limitations applicable to the AVMC2.

The Team Leader shall set up a Part IV sheet in each AVMC2 Technical LOG and shall fill in the data fields 1 and 2 similarly to the same data fields as Part I, II and III. Until the end of the AVMC2 Technical LOG, all the Part IV sheets necessary for recording the specific information described below shall be added, taking care to number them sequentially in the dedicated data field 3 (see Part I block 3).

Once the AVMC2 Technical LOG is completed the data recorded in Part IV shall be transcribed in the Part IV of the new AVMC2 Technical LOG. The Part IV sheets containing only deleted "Operating Instructions – Caution – Employment Limitations" (block 53) and "Scheduled Maintenance" (Block 55) transcribed back to Part II shall be taken out from the LOG and archived at the responsible Technical Office. In this case even any data field still blank of "Audit Log" (Block 54) shall be crossed out, signed and dated by the Technical Officer.

The data to fill in the blocks of Part IV shall be obtained from the approved Technical Publications of the AVMC2. If modifications are made to the characteristics reported therein, a new Part IV sheet shall be set up, entering the related changes and reporting all the “Operating Instructions – Caution – Employment Limitations” (block 53) and “Scheduled Maintenance” (Block 55) still open. In this case any data field on the previous Part IV still blank of “Audit Log” (Block 54) shall be crossed out, signed and dated by the Technical Officer.
When the AVMC2 Technical LOG, and with it the related Part IV, is set up, the Team Leader shall fill in the blocks from 49 through 52 as follows:

49. Electrical Power Supply
The characteristic data of the electrical power supply shall be entered: "Type (No. of Phases)", "Voltage and Type", "Frequency", "Current" and "Power".

50. Connector Type
Type of connector(s) to which the AVMC2 has to be connected to be powered up.

51. Conditioning
Type of conditioning(s) the AVMC2 needs.

52. Temp. Utilization
Minimum and maximum operating temperature within the AVMC2.

53. Operating Instructions - Cautions – Employment Limitations
In this block, the Technical Officer shall enter the AVMC2 (and/or its parts) Airworthiness Directives/Service Bulletins that entail operating instructions and/or cautions for the Personnel operating in the AVMC2. In it shall also be highlighted all information which the Technical Officer considers necessary to provide to the Personnel for a correct and safe operation of both AVMC2 and UAV.
In the respective data fields “No. Seq.", “Ref. Doc.” and “Description” shall be entered the sequential number, the identifying information of the reference document and the description of the operating instructions/cautions/ limitations with relevant W.O. if any.
The Technical Officer shall approve the record of the operating instructions/cautions/limitations, dating and signing the appropriate data field “Approval (Date and Signature)”. In case one of the operating instructions/cautions/limitations is no longer applicable, the Technical Officer shall cross it out, dating and signing the respective data field “Deletion (Date and Signature”.

54. Audit LOG (Date and Signature)
Constant oversight is necessary throughout the entire maintenance process, along with careful supervision both filling in the AVMC2 Technical LOG and performing the work. Audits are performed with different criteria, according to the competence of those who carry them out (Technical Officer and Higher Authority). The signatures affixed in this data field certify completion of the

audit and any corrective action taken, when necessary and recorded in a dedicated form. Therefore, there is also a data field dedicated for the signature of a Higher Authority whenever it carries out the audit. The Technical Officer shall periodically monitor the upkeep of the AVMC2 Technical LOG. Audits are at his/her sole discretion, but they shall be carried out at least once a month.

55. Scheduled Maintenance

The purpose of this block is to indicate, at any time, the current situation of scheduled inspections and, hour-based and calendar-based replacements of the various parts and/or of the AVMC2 itself.

This block lists the checks that shall take place at provided time intervals, not shown in the Periodic Inspection Certificate, regardless of the hours of operation completed. In particular:

a) "Subject of the Insp./Repl.": identifies the type of work to be carried out, whose scheduled expiration date is not shown in the Periodic Inspection Certificate and the involved material indicating the P/N and S/N;

b) "Frequency": the time interval between two inspections of the part shall be shown, in terms of days and/or months and/or operating hours;

c) "Due Date/Time": the date and/or hours of operation of the AVMC2 by which the next inspection or replacement shall be carried out is written in black/blue ink. Once the inspection or replacement is completed, the Specialist who performed the operation shall use a new line to record the next due date/time of the same inspection/replacement. At the expiration of the terms prescribed for the performance of a special inspection or for the replacement of the item listed therein, the work required (inspection or replacement) shall be transcribed in Part II. The value shown in the "Due Date/Time" data field shall be crossed out leaving it still legible, if the Technical Officer decides to postpone the work using the tolerance within the limits indicated in the next data field. In this case, the new due date/time recalculated using the tolerance shall be entered in the data field "Tolerance Due Date/Time";

d) "Max Tolerance": when provided, indicate the max tolerance relating to the Due Date/Time of the inspection/replacement (e.g.: 10%, 10 days, 10 cycles, 20 Flight Hours, etc.);

e) "Tolerance Due Date/time": as indicated above ("Due Date/Time" data field), this data field shall be filled in only if the Technical Officer decides to postpone the work using a tolerance within the limits indicated in the next data field.

When the first AVMC2 Technical LOG is set up, all data about scheduled maintenance, with the exception of the "Tolerance Due Date/Time", shall be filled in by the Technical Office. After the set up of the first LOG, the "scheduled maintenance" of Part IV shall be filled in/updated by specialists.

The "Tolerance Due Date/Time" data field shall always be filled in by the Technical Officer i.a.w. point "e".

NOTE

Since the list of scheduled maintenance is the same for every AVMC2, when proceeding to printout the AVMC2 Technical LOG according to the procedures of paragraph 2.3, Part IV could be printed out with the list already entered in the "Subject of the Inspection/Replacement" data field and with the "Frequency" and "Max Tolerance" data fields already filled in. In this case, the Technical Officer shall still be responsible for checking the pre-printed data and indicating the specific due dates/times.

2.4.1. Specific Instructions

SYMBOLOGY

The main function of the AVMC2 Technical LOG is to present at all times the status of the AVMC2 with regard to its ability to conduct the flight. For this purpose, special symbols are established to immediately provide the aforesaid information.

– Red X (X)

With this symbol, the AVMC2 shall not be employed for flight operations. It warns that the AVMC2 is not capable of conducting a flight or is in such conditions that flight would be dangerous because of the extent of the problems noted.

A Red X is affixed as soon as an Airworthiness Directive or an "Immediate" Service Bulletin is received which requires the completion, prior to the next flight, of operations applicable to that AVMC2 or to its parts.

The corrective actions performed to eliminate the conditions that had led to the Red X shall be validated by the Technical Officer or, when the corrective actions are performed by Company, the validation shall be performed by responsible personnel specifically authorized by the Company itself.

The validation of Red X elimination shall be certified with a signature in block 42 of Part II "Validating Signature", next to the signature of the personnel who carried out the action.

This signature certifies:

- that the assessment process has been supervised and any corrective actions have been agreed with the specialists
- the subsequently verification of the corrective actions successful introduction.

An "Exceptional Release to Service" to conduct the flight shall not be granted when the AVMC2 is marked with a Red X.

– Circled Red X (⊗)

This symbol has to be used when the AVMC2 shall not be employed to conduct the flight, awaiting compliance with an "Urgent" Service Bulletin whose

established time limits have expired. For this symbol, the same provisions of the previous point, concerning the validation signature, shall apply. An “Exceptional Release to Service” to conduct the flight may not be granted when the AVMC2 is marked with a circled Red X.

- Red Dash (—)
  This symbol has to be used when a work (inspection, maintenance, change of an item upon reaching its operating limit, etc.) has not been carried out yet, although the execution times according to the applicable standard have expired. The status of the AVMC2 is not well known, because the work that can exactly define the conditions of the AVMC2 and of its accessories has not been carried out. Therefore, to conduct a flight with an AVMC2 marked with Red Dash, an “Exceptional Release to Service” is required, which may be granted only by the Technical Officer for technical deficiency, or by the Pilot for operational deficiency that do not compromise the safety of flight, but limits the AVMC2 in some conditions.

- Red Diagonal (⁄)
  This symbol has to be used when a deficiency was noted on the AVMC2, but without the level of severity indicated with the Red X. In any case, an “Exceptional Release to Service” is required to employ the AVMC2 in the conduct of a flight. A Red Diagonal is affixed when an "Urgent" Service Bulletin is received which refers to that AVMC2 or to its parts. If the aforesaid Service Bulletin requires the execution of operations within determined time intervals (in hours of flight/operation and/or in calendar terms), at the expiration of which the AVMC2 is no longer fit to be employed for flight, when these due dates/times are reached the recording of the Service Bulletin shall be marked with the circled Red X.

- Black Dash (—)
  This symbol has to be used when a scheduled maintenance work (inspection - overhaul - replacement of parts etc.) was not carried out in accordance with the prescribed due date/time but a regulation postpones its application if specific checks and/or inspections are successfully performed. This symbol is also used when recording an inspection and/or replacement of parts and/or Routine Service Bulletin to be carried out, whose execution due date/time has not yet expired.

- Black Diagonal (/)
  This symbol indicates that a defect has been observed on the AVMC2, which does not jeopardize the serviceability of the AVMC2 in order to conduct the flight.

TIMES

All times shall be indicated in hours and minute ZULU expressed as decimal according to the conversion table in the instruction sheets. These data shall be

read on the instruments of the UAS; in the absence of such instruments, the timing shall be requested to the tower while the utilization data of the RCSS and of the UAV shall be taken by a clock present in the station itself throughout the utilization.
In any case, if the configuration includes a system capable of automatically measuring the times and/or the duration of the flight and/or the hours of flight/operation, then the times and/or the duration of the flight and/or the hours of operation/flight measured by the system itself shall be recorded in the appropriate squares.
In addition, all dates to be recorded shall be i.a.w. ZULU time. *(dd/mm/yyyy)*

2.5 AVMC2 Technical LOG Storage

During utilization/flight/maintenance, the AVMC2 Technical LOG shall be stored in the AVMC2 itself. If different AVMC2 are used during a same flight, the AVMC2 Technical LOG shall in any case remain in the AVMC2 to which it refers.
At the end of utilization/flight/maintenance, the Parts of the AVMC2 Technical LOG shall be stored as follows:

- PART I:

  At the end of the flight, the relevant sheet shall be handed over to the Operations Office after transcribing the necessary data (e.g.: hours flown during the flight) in the UAV Technical LOG block 20 of Part II relating to the same flight;

  For flights carried out by the Manufacturer/Overhaul Company, the Parts I shall be retained by the Company and placed in the record together with the other documentation of work of the specific AVMC2.

- PART II

  At the end of utilization/maintenance, the relevant sheet shall be taken out from the insert of the Technical LOG, after entering in the subsequent Part II and/or III sheet any maintenance operations/overhauls to be performed, and it is delivered to the office in charge of controlling and storing such sheets.

  If the AVMC2 is suspended from operations for the execution of inspections and/or the elimination of faults, the same Part II sheet shall be utilized until the AVMC2 returned to operations. The aforesaid office shall maintain for each AVMC2 a file where all Part II sheets shall be stored, to provide documentation of the maintenance work carried out on the same AVMC2.

  For maintenance work carried out by the Manufacturer/Overhaul Company, Part II sheets shall initially be retained and filled in by the Company. Part II sheets shall be returned to NAGSF with the delivery of the AVMC2.

- PART III

  Part III sheets shall remain in the AVMC2 Technical LOG in use, with the exception of those closed following an inspection (all entries in Part III have been transferred to Part II) which shall be taken out and stored in the office in charge of controlling and storing such sheets. When a new AVMC2 Technical

LOG is set up, the Part III sheets present in the old LOG (e.g.: deferred corrective measures not yet carried out) shall be entered in the new one.

- PART IV

  Part IV sheets shall remain in the AVMC2 Technical LOG in use, with the exception of the closed ones (all entries in Part IV were transferred to Part II or to a new Part IV) which shall be taken out and stored in the office in charge of controlling and storing such sheets. When a new AVMC2 Technical LOG is set up, the Part IV sheets present in the old LOG (e.g.: still active operating instruction) shall be entered in the new one.

All the AVMC2 Technical LOGs and the related Parts shall be stored in a manner that ensures protection from damage, alteration and theft. They shall remain readable and accessible for the duration of the storage period. In particular, the Technical LOG shall be stored at least for 10 years and in such a way that it can be consulted, even after the retirement from the line of the NATO AGS RQ-4D Air Segment. If during storage period any controversy arise, the above mentioned period will become effective from the end of the controversy.
Access to the Technical LOGs by DAAA and Competent Body shall be granted by NAGSF upon request.

3. UAV TECHNICAL LOG – FORM DP-5069/RQ-4D/UAV

The following paragraph describes the UAV Technical LOG.
Paragraph 4 provides the facsimile for UAV Technical LOG.

3.1 UAV Technical LOG Description

The Technical LOG of the UAV consists of the Parts described below. Each Part of the LOG consists of various blocks identified by a number.
The UAV Technical LOG contains:

- A cover/instruction sheet;
- The three Parts described below.

NOTE

Part I is not present in the UAV Technical LOG because the crew carries out its activities not aboard the UAV but directly in the AVMC2 whose LOG already comprises the Part I where the flight data are recorded.

- PART II "UAV OPERATIONS, INSPECTIONS AND MAINTENANCE LOG"

  It contains a continuous record of:

  a. The position of the UAV and of its status (airworthy or no airworthy) with particular reference to the data necessary to identify the responsibilities for the airworthiness of the UAV;

b. The status of the UAV with regard to the applicable inspections performed or to be carried out, including scheduled inspections not executed at proper time;
c. All faults, deficiencies or inefficiencies noted on the UAV, as well as of the related corrective actions taken, including faults that have no influence on the airworthy of the UAV and whose corrective action can be deferred to the earliest opportunity;
d. The total operation Hours: UAV Flight hours and Engine hours;
e. The servicing carried out concerning the fuel, lubricant and coolant, and the condition of the UAV with regard to the aforesaid refills.

Generally, one sheet of Part II is filled in for each flight carried out by the UAV. Part II is one sheet consisting of a "front" side (Part II.F) and a "rear" side (Part II.R).

- PART III "LIST OF UAV DEFERRED CORRECTIVE ACTIONS"

  It contains a continuous record of the faults that have no influence on the airworthiness of the UAV and whose elimination can be deferred to the first earliest maintenance opportunity or scheduled inspection. In this Part, the scheduled inspection/maintenance and service bulletins not carried out by the scheduled date are also recorded, only when the positive outcome of dedicated checks and/or inspections, foreseen by a TP, allow for their deferral. Part III is one a sheet consisting of a "front" side (Part III.F) and a "rear" side (Part III.R).

- PART IV "UAV GENERAL CHARACTERISTIC DATA"

  This Part contains:
  a. The characteristic data of the UAV;
  b. The UAV/Engine’s calendar and hourly maintenance schedule and its accessories (when an accessory has been replaced, part IV shall be updated as well);
  c. Operating instructions, cautions, and/or operational limitations with reference to (w.r.t.) one or more of the following cases:
     - Introduction or not of changes that could interfere with operational activities;
     - Activation or deactivation of specific equipment;
     - Faults for which the resolution has already been deferred to the earliest opportunity, as reported in Part III.
  d. The record of the inspections made on the LOG.

  Part IV is one sheet consisting of a "front" side (Part IV.F) and a "rear" side (Part IV.R).

The UAV Technical LOG shall contain 30 sheets of Part II and the necessary sheets of Part III and Part IV associated with them. The Part III and IV sheets shall be inserted after the last sheet of Part II. Both the LOG and the sheets of Part II, III

and IV are provided by a sequential numbering field as described in paragraph 3.4 "Filling out the UAV Technical LOG". Each UAV Technical LOG is defined as concluded when the thirtieth sheet of Part II is filled in.

3.2 UAV Technical LOG first set up

The activity of associating a Technical LOG to a specific UAV is indicated with the term "set up" and it consists of recording for the first time the characteristic data of the UAV to which the Technical LOG refers (Type, Experimental Tail Number - Military Registration Number, current use etc.). These data represents the status of the UAV in relation to the activity carried out before set up.

The first LOG to be associated to the UAV recorded in the Military Aircraft Register, shall be set up by the NAGSF no later than the tender for acceptance and in any case before the first flight under the responsibility of the NAGSF, on the basis of the data provided by the SDR. In relation to these data, the NAGSF is responsible solely for transcribing them onto the LOG. The original documentation of the SDR shall be retained by the NAGSF together with the LOG – i.a.w. the same time constraints – but shall not be updated. Once a LOG is completed, NAGSF shall set up the subsequent LOG relating to the same UAV.

In particular, who set up the LOG shall fill in all the fields in the cover and the progressive numbering of each sheet of Part II.

NOTE

The activities of the UAV carried out before the first set up of the Technical LOG, shall be contained in dedicated documents, which may have a different format from the LOG itself. Once the Technical LOG is set up, the documentation containing all information about the activity carried out previously, shall be stored by who set up the Technical LOG with the same procedures/times as the LOG, and shall be available for DAAA and Competent Body at all times.

3.3 UAV Technical LOG Reproduction

NAGSF is authorized to use the faithful reproduction of the printouts of the UAV Technical LOG shown in paragraph 4 of this regulation. In any case, each individual UAV Technical LOG shall contain a number of sheets i.a.w. the provisions of paragraph 3.1 and be printed on both sides in such a way as to have a sheet containing on the "front" side the cover and on the "rear" side the instruction, the sheets of Part II consisting of the front side "Part II.F" and of the rear side "Part II.R", and similarly for the sheets of Part III and IV.

3.4 UAV Technical LOG Filling In

To fill in the UAV Technical LOG, follow the instructions provided below. All entries, with the exception of signatures, shall be made written in block letters, for best clarity and legibility, and with a blue or black pen (indelible ink), unless otherwise specified herein.

Any corrections shall be made with a red pen and initialed, in manner that the original entry remains readable. Descriptions shall be precise and concise: when necessary, use more than one line or multiple pages of the same type to obtain the utmost precision of expression.

NOTE

Before each mission, the crew shall review the status of the UAV in terms of the airworthy and limitations/operating instructions of Part IV.

The detailed instructions for filling in all the Parts of the UAV Technical LOG are provided below:

- **COVER**

  The Technical LOG cover shall be filled in by who set up the LOG, completing the following fields:

  - P/N

    Part Number (P/N) of the UAV to which the LOG refers. If, during the employment of the UAV, modifications that change the P/N are introduced, maintaining the same serial number, in the LOG in use at that time, but not necessarily in the subsequent ones, both the old and the new P/N shall be indicated. In any case, the numbering of the LOG referred to the new UAV P/N shall continue from that of the LOGs associated with the same UAV Serial Number (S/N) of the old P/N.

  - S/N

    Serial Number (S/N) of the UAV to which the LOG refers to.

  - MRN

    Numerical part of the UAV Military Registration Number (MRN) at the time the LOG is set up. In particular, if the number of the UAV at the time of the setting up, is an Experimental Tail Number (e.g.: X-AV-SA-0001), on the cover shall be shown only the numerical part (e.g.: MRN: 0001). The information of the registration status of the UAV in the Military Aircraft Register (Experimental Tail Number or MRN) can be found in the sheets of Part II.

  - LOG no.

    Number of the UAV Technical LOG. For each UAV, the numbering of the LOG shall be sequential.

- **UAV TECHNICAL LOG - Part II**

  A Part II sheet is filled in, in case:

  a) any UAV flight;
  b) any UAV fault raises;
  c) any UAV maintenance activity is executed.

A Part II sheet of the UAV Technical LOG is filled in for each flight of the UAV. If one sheet is not enough, more shall be filled in, taking care to number them sequentially in the dedicated data field.

The Maintenance Crew Chief or Team Leader shall set up a new Part II sheet of the UAV Technical LOG, filling in boxes 1 up to 8.

1. MDS
   Mission Design Series (MDS) followed by "/UAV" (i.e.; RQ-4D/UAV).
2. EN/MRN
   Block dedicated to recording the Experimental Tail Number (EN) or the MRN associated with the UAV. In this field, the alphanumeric code shall be indicated, rather than just the numerical part of the number shown in the cover (e.g.; EN: X-AV-SA-0001).
3. LOG no. - Sheet no.
   The "LOG no." data field is dedicated to recording the number of the UAV Technical LOG being used. This number matches the one shown in the cover of the subject LOG. In the field "Sheet no.", the number of the Part II sheet being used shall be recorded. For each UAV Technical LOG, the numbering of the Part II pages shall be sequential (e.g.; LOG no.: 2018 - Sheet no.:1).

   NOTE

   If additional sheets (front and/or back pages) are required to be added, the sheet number should be followed by a sequential letter. (e.g.; LOG no.: 2018 - Sheet no.:1A, 1B, 1C, etc.)
4. Date
   Opening and closing date of Part II. This calendar date (dd/mm/yyyy) normally coincides with the start of a flight or an inspection/maintenance, whichever occurs first. Similarly, the calendar date of the end of the flight or the ending date of the last inspection/maintenance, whichever ends later, shall be entered into the second line of block 4.
5. Maintenance Crew Chief
   Rank or duties, last name and first name of the Maintenance Crew Chief responsible for the UAV.
6. Unit
   By default "NAGSF".
7. Location (ICAO)
   By default, the ICAO code "LICZ".
8. Sortie n.
   Identifying number of the flight.
9. Next Inspection
   The Team Leader, in the "Type of Insp" block, enters the next inspections to carry out and in the corresponding "Due Date/Time" block:

- *The hours of the UAV on the due time of these inspections; or*
- *The date in case of calendar due date.*

These data are recorded at the time Part II is set up for all major inspections, whereas for daily inspections (e.g.: pre and post flight) they are recorded after the inspections are carried out.

10. Optional Equipment

In the white data field of block 10 above the "YES"/"NO" field shall be entered the description of the optional equipment that as per approved technical publications could be either installed or not.
Before the flight, the Maintenance Crew Chief shall verify the presence of the optional equipment and shall cross out "YES" or "NO".

11. Current status

Once Part II is completed, it is taken out from the UAV Technical LOG. Faults that were not eliminated shall be either transferred to:

- Part III of the UAV Technical LOG; or
- The subsequent Part II of the UAV Technical LOG;

based on the urgency and on the importance of the work, on the availability of parts and equipment, special local conditions, etc.
Before the next flight, the necessary corrective measures are normally adopted. If one or more faults marked with red symbols remain open, the most severe symbol (defined as "dominant") shall be affixed in block 11. For the definition and management of the symbols, refer to paragraph 3.4.1 "Specific Instructions".
Only red symbols have to be placed in block 11. Whenever the fault with the initial dominant symbol is eliminated but not all the other red symbols, the next most severe red symbol shall be affixed in the subsequent field of block 10, and it will then become the dominant one.
If a symbol is affixed in block 11 by mistake (i.e. there is no correspondence with the symbols of block 23), the correction shall be made by the Technical Officer, who shall proceed as follows:

i. (S)he shall indicate the erroneous symbol in block 23 and cross it out, covering it with his/her initials;
ii. (S)he shall explain the error in block 24 (normally: symbol erroneously indicated in block 11);
iii. (S)he shall indicate in block 25 the change of symbol to be made (caption: change of symbol from ... to...);
iv. (S)he shall enter the date in the dedicated column and sign the validation in block 26 to take responsibility for the change;
v. (S)he shall write the correct predominant red symbol in the cell following the one of the erroneous symbol in block 11.

12. Exceptional Release to Service

An "Exceptional Release to Service" *shall not be granted when there is a (simple or circled) Red X as the dominant symbol.*

An "Exceptional Release to Service" *is required to carry out a flight of the UAV every time a Red Dash or a Red Diagonal appears in block 11.*

The purpose of the "Exceptional Release to Service" *is to certify that the Technical Officer or the PIC, who is granting it, has carried out thorough investigations on the faults/conditions that originated the dominant red symbol and the other red symbols affixed in block 23 and whose outcome is such as to justify his/her assessment that the UAV can fly.* "Exceptional Release to Service" *for flight may be granted only by the Technical Officer or by the PIC who conducts the flight, with the difference that:*

- *The authorization granted by the Technical Officer is normally valid for an entire flying day, except in case of a "Ferry Flight" in which it is valid solely for the specific flight, unless a new fault emerges, which shall in any case be submitted to him/her for evaluation. The conditions/faults that lead to the granting of the authorization by the Technical Officer normally pertain to technical aspects that are of a particular nature and/or that do not require limitations in the employment of the UAV.*

  NOTE

  In particular cases, e.g. the flights for ferrying the UAV to the Company or to another unit, even if the fault requires limitations in the employment of the UAV, the Technical Officer may authorize solely the ferry flight. In this case, at the recording of the fault, the Technical Officer shall indicate in column 25: "only the ferry flight is authorized" and in case of specific cautions/limitations for the flight (s)he shall add "for the condition, the Pilot shall refer to block 38 of Part IV of the UAV Technical LOG". (S)he shall then date and sign the appropriate column.

  In these cases, the symbol of column 23 shall not be crossed out. At the end of the ferry flight, Part II of the UAV Technical LOG shall be taken out from the LOG and the aforesaid symbol and the indication of the fault shall be recorded in the new Part II of the UAV Technical LOG.

- *The Pilot's authorization, granted by the PIC, is valid only for the flight in which (s)he participates. It is granted when the fault entails limitations to the employment of the UAV according to the evaluations and indications expressed by the Technical Officer, but as per the Pilot's assessment these limitations do not compromise the performance of the planned mission.*

The authorization shall be granted by affixing the legible signature of the person who is granting it.

In general, in granting the authorization it is mandatory always to indicate the row of column 24 where the fault corresponding to the red symbol to which the authorization refers has been entered. In addition, if the Technical Officer is the one who signs, (s)he shall place the acronym M/O (Maintenance Officer) after his/her name.

13. Engine Oil Servicing
The Specialist shall indicate a "Ref. No" (e.g.: 1°, 2°…), the "Type/Cart Number" of oil serviced, its quantity expressed in "Pounds", the "Location (ICAO)", and shall sign the field "Performed by".

- Notes
Block dedicated to the recording of any notes.

14. Liquid Servicing Data
The Specialist shall indicate the servicing data. In particular for each system (hydraulic, nitrogen, gen, PAO) shall indicate in the relevant data field the "Type/Cart Number", the "Serviced to", the "Location (ICAO)", and shall sign the field "Performed by".

- Notes
Block dedicated to the recording of any notes.

15. Fuel Servicing
In this block, shall be indicate by the specialist, the fuel quantity in the main tank and the relevant fuel refills/draining.
S(he) shall cross out the refill or the draining in the appropriate column "Ref" or "Drain", recording the relevant progressive number ("Prog."), the fuel grade ("Grade") and the quantity expressed in pounds ("Pounds").
After a fuel refills/draining, the specialist shall sign and dated the field "Inspected by (date and signature)" and enters the location ("Location (ICAO)").
The specialist shall also fill in, the field "Inspected by (date and signature)" after a flight or a "weight & balance" check.
The field "In the Tank" shall provide the actual fuel quantity in the tank and shall be entered by the specialist at the end of each line. The value reported in the last line shall be recorded in the first line of the same field "In the Tank" of the next Part II.

16. Fuel Density
In this block, the density of the fuel shall be indicated.

17. Fuel Temperature
In this block, the temperature of the fuel shall be indicated.

- Notes
Block dedicated to the recording of any notes.

18. Configured Empty Weight
The Maintenance Crew Chief shall enter the configured empty weight of the UAV.

19. Total Take-Off Weight

Sum of the "Configured Empty Weight" data field 18 and "In the tanks" of block 15.

20. Times of Operation

This block, to be filled in by the Maintenance Crew Chief, consists of a sector for the flight hours of the UAV, one for landing, one for cycles of the gear and one for the Engine hours.

The Maintenance Crew Chief shall fill in the "Prev. Op." data at the conclusion of the previous flying day, while (s)he shall fill in the "Op. in the Flight" and "Total Op." data at the end of the flying day to which Part II refers.

- **AERIAL VEHICLE**

*The following values shall be entered in the column **"Flight Hours"**:*

- *At the data field "Prev. Op." the total flight hours of the UAV before the flight shall be entered;*
- *At the data field "Op. in the Flight" the hours flown during the specific flight shall be entered, i.e. the sum of the values entered in the blocks 27 "Flight Hours in the Control" of Parts I of the GCS(s) that operated the UAV during the specific flight;*
- *At the data field "Total Op." the sum of the hours indicated in the data field "Prev. Op." plus the hours indicated in the line "Op. in the Flight" shall be entered.*

*The following values shall be entered in the column **"Landings":***

- *At the data field "Prev. Op.", the total landings of the UAV before the flight shall be entered;*
- *At the data field "Op. in the Flight" the number "1" shall be entered at the end of the flight.*
- *At the data field "Total Op." the sum of the landings indicated in the data field "Prev. Op." plus "1" as indicated in the data field "Op. in the Flight", shall be entered.*

*The following values shall be entered in the column **"Gear Cycles"**:*

- *At the data field "Prev. Op." the total Gear Cycles of the UAV before the flight shall be entered;*
- *At the data field "Op. in the Flight" the Gear Cycles carried out during the specific flight shall be entered, i.e. the sum of the values entered in the boxes 29 "Gear Cycle" of Parts I of the GCS(s) that operated the UAV during the specific flight;*
- *At the data field "Total Op." the sum of the Gear Cycles indicated in the data field "Prev. Op." plus the Gear Cycles indicated in the data field "Op. in the Flight" shall be entered.*

*The following values shall be entered in the column **"Number of Flights"**:*

- *At the data field "Prev. Op." the total number of flights performed by the UAV before the flight, shall be entered;*

- *At the data field "Op. in the flight" the number 1 shall be entered or "0" if there is not a flight relevant the specific Part II.*
- *At the data field "Total Op." the sum of the numbers indicated in the data field "Prev. Op." plus the number indicated in the line "Op. in the Flight" shall be entered.*

➢ **ENGINE**

*The following values shall be entered in the block **"Engine Hours"**:*

- *At the data field "Prev. Op." the total hours of the engine (Engine Hours) before the flight or the utilization shall be entered;*
- *At the data field "Op. in the Flight" the engine hours of operation during the flight shall be entered;*
- *At the data field "Total Op." the sum of the engine hours indicated in the data field "Prev. Op." plus the engine hours indicated in the data field "Op. in the Flight" shall be entered.*

21. Daily inspections

The purpose of this block is to record all those scheduled inspections/checks that are necessary for the execution of each UAV flight (e.g.: pre and post flight, not the 150 FH inspection).

After filling in the header fields of Part II, the Team Leader shall enter in the "Type" data field the list of scheduled inspections/checks and in the "SME" data field the specialty associated with them (see list in the Section related to Block 38 of AVMC2 Technical LOG).

The subsequent data fields of block 21 shall be filled in by the Specialist/Pilot who shall carry out the inspection/check and shall affix his/her legible "signature" in the appropriate data field next to the inspection/check he/she carried out. In particular, for every inspection/check carried out and recorded in the "Type" data field the data pertaining to the "Date" and "Time" of the end of execution shall be recorded i.a.w. the provisions of paragraph 3.4.1, at the end of the execution of that inspection/check, along with the "outcome" and any "notes".

NOTE

If an inspection or a check is not completed successfully, the noted fault shall be recorded in Block 24 and the text "recorded in Block 24" shall be entered in the data field Notes.

22. SME

For every noted fault or work to be carried out, recorded in Block 24, the distinctive code of the involved specialty shall be entered Block 22.

For the list of the distinctive codes of the SMEs, refer to block 38 of Part II of the AVMC2 Technical LOG

23. Symb.

For every fault noted or work to be carried out per Block 24, the corresponding symbol shall be recorded following the directives of paragraph 3.4.1.

When a symbol used does not match the real conditions of the UAV, or the system which the item refers to, the Technical Officer, after noting the fault, has the authority to make the change. The procedure is as follows:

- *In Block 23, he/she cancels the erroneous symbol covering it with his/her own initials;*
- *In the corresponding Block 25, he/she writes: “symbol changed from ... to ...” and affixes date and signature in the corresponding field;*
- *He/she marks the correct symbol in the first free field of Block 23, and in the adjacent fields transcribes the specialty (Block 22) and the fault (Block 24);*
- *He/she updates Block 11 if necessary.*

When the Red Dash is placed in Block 23 (planned work to be carried out), this symbol can be crossed out only after completing the required work or as a result of a waiver authorized by a Service Bulletin. In this case, the Red Dash shall be closed referencing, in Block 25, the waiving Service Bulletin and the favorable outcomes of any checks/inspections required by that Service Bulletin.The scheduled work will then be rewritten in the next free data field, placing the Black Dash as a symbol and also indicating the terms of validity of the waiver in Block 24. In this case, the transcription may be entered in Part III of the UAV Technical LOG. At the expiration of the granted waiver, the symbol shall be changed again, returning to the Red Dash in Part II of the UAV Technical LOG.

24. Fault Report/work Details

Block 24 shall be filled in as follows:

- *Every fault noted at any time by a Specialist/Pilot shall be described appropriately and concisely in this block;*
- *As soon as an inspection expires, an annotation shall be placed in this block, e.g.: "Battery P/N UPA13498 S/N 1308 expired". In this case, as for the expiration of a Service Bulletin/Airworthiness Directive, this annotation may also be entered by the Technical Officer or by the Technical Office as well as by the Specialist and by the Pilot after Part III and IV acknowledgment;*
- *When an accessory is replaced, an appropriate annotation shall be placed in this block, specifying the reason for this replacement (e.g.: part to be used as a spare part on another aircraft);*
- *When a maintenance (even a scheduled inspection) is performed;*
- *Every time an Airworthiness Directive or Service Bulletin is received that involves the UAV for "Immediate, Urgent or Routine" action when its missed introduction within the prescribed times results in a suspension*

from the service of the material concerned – the number, date and title of the AD or SB shall be entered in this block;

- *Every time there is an incident at the UAV, the causes and the extent of the damage shall briefly be annotated in this block;*
- *After each utilization the Pilot/Specialist shall report in this block all the faults (one per data field) arose during the utilization, followed by his/her signature; any other fault noted by the Pilot/Specialist shall be entered in the next data field. In case everything went well during the utilization of the UAV, the annotation of the Crew Chief shall be: "utilization OK";*
- *If a serviceable item has to be removed temporarily from the UAV, to carry out any kind of work, the acronym E.T.R. (Equipment Temporary Removed) shall be written next to the description of the removal.*

For each entry transcribed in this block, the relevant "date and Signature" and "'Work Order (WO) #" (if any) shall be filled out by the compiler.

25. Corrective Actions

Each fault recorded or work to be carried out in Block 24 shall be matched, on this Block, by a corrective action taken. This can be one of the following:

- *description of the work carried out to solve the fault or execution of the scheduled maintenance. (e.g.: "Replaced battery S/N 1308 with similar serviceable battery S/N 1306").*

  If an item is replaced, it is mandatory to enter the P/N and, if the item is serialized, the S/N. In the "Man Hours" field, enter the time needed (in man-hours and man-minutes) to complete the work, but only when the Fault Report/work Details transcribed in Block 24 is fixed/completed.
- *If the fault is not severe and thus its resolution is not urgent, with the approval of the Technical Officer, it can:*
  - *a) be postponed to the following day, in which case "Carried Forward" shall be written in Block 25;*
  - *b) be postponed to the next available opportunity, in which case the reason why the work cannot be carried out, and the text "Transferred To Part III", shall be entered in Block 25. In this case, the fault is transcribed on Part III of the UAV Technical LOG.*

  In cases "a" and "b", the field "Man Hours" shall be crossed out.

Every time there is an entry in Block 25, the "date" and the "signature" of the Specialist shall be entered next to it. If the work carried out (described in Block 25) eliminates the fault transcribed in Block 24, the Specialist that performed the work shall place his/her initials on the corresponding symbol in Block 23.

Upon closing Part II, any unresolved fault shall be entered in the new Part II or in Part III of the UAV Technical LOG.

The decision to entry it in the new Part II or to Part III will be taken on case by case basis based on the urgency and on the importance of the work, on the availability of parts and equipment etc.

26. Validating Signature

The signature of the Technical Officer in this Block certifies that the corresponding actions were carried out by licensed and qualified personnel. It is needed in the following cases:

a) Transfer of the work to Part III of the UAV Technical LOG;

b) Maintenance work execution which was marked with a Red X or a Circled Red X.

If the corrective actions are performed by the Company, the validation shall be signed by responsible personnel specifically authorized by the Company itself.

- Notes

The field is reserved to the recording of any notes. In particular:

- *The field "Page ___ out of ___" shall be filled in only if it was necessary to use several sheets of Part II to record the data relating to a same utilization/maintenance.*

➢ UAV TECHNICAL LOG - Part III

The Team Leader shall set up a Part III sheet in each UAV Technical LOG and shall fill in the data fields 1 and 2 similarly to the same data fields as Part II. Until the end of the UAV Technical LOG all the Part III pages necessary for recording the specific information described below shall be added, taking care to number them sequentially in the dedicated data field 3 (see Part II block 3). Once the UAV Technical LOG is complete the unresolved faults recorded in Part III shall be transcribed in the Part III of the new UAV Technical LOG. The Part III sheets containing only faults transcribed back to Part II shall be taken out from the LOG and archived at the responsible Technical Office.

Before proceeding with the description of the data fields in Part III, general information is provided about the management of Part III itself.

Upon closing Part II, any unresolved fault shall be entered in the new Part II or transferred on to Part III. The decision has to be taken on case by case basis, based on the urgency and on the importance of the activity, on the availability of parts and equipment, special local conditions, etc. In any case if a corrective action is deferred by few days, it shall be transcribed in the new Part II of the UAV Technical LOG until the related work is performed. If the execution of the work is expected to be delayed by several days, then the annotation shall be entered in Part III of the UAV Technical LOG.

No fault marked with Red X, Circled Red X, Red Dash, Red Diagonal and in general, any measure that cannot be postponed shall be transcribed in Part III. Some examples for which a fault shall not be transferred to Part III of the UAV Technical LOG are provided below:

a) *Airworthiness Directive/Service Bulletins concerning Flight Safety (Urgent and Immediate action);*

b) *Need to replace a part not in Stock, important for Flight Safety.*

The transcription of a fault in Part III shall always be reviewed and approved by the Technical Officer, whose rank, last name written in block letters and legible signature shall be entered in Block 30 "Annotation approved by". Upon reaching a major inspection, all the existing faults in Part III shall be transferred in Part II and the sheets of Part III shall be taken out and handed over to the Technical Office. After the inspection, a new recording cycle shall be started.

27. SME

For every fault recorded in Block 29, the distinctive code of the involved specialty shall be entered, as it was already entered in Block 22 of Part II.

28. Symb.

For each fault recorded in Block 29, the corresponding symbol shall be recorded following the instructions of paragraph 3.4.1, as it was already entered in Block 23 of Part II.

29. Fault

The fault to be deferred according to the procedures set out above shall be recorded as it was already transcribed in Block 24 of Part II. A very short annotation on the causes that delayed the action entered in Block 25 of Part II should also be entered in this Block.

30. Annotation approved by (date and Signature)

The transcription of a fault in Part III of the UAV Technical LOG shall be carried out by the Specialist or Team Leader, but it shall always be reviewed and "validated" by the Technical Officer, who shall put his/her signature preceded by the last name written in block letters in this Block.

In addition, the date on which the transcription from Part II to Part III of the UAV Technical LOG shall be entered in this Block.

31. Authorization validity

When it can be defined, indicate the date and time until which the authorization is valid; if it cannot be defined, indicate the conditions (e.g.: upon receipt of material).

32. Date entered in Part II

The date on which the fault is again entered in Part II of the UAV Technical LOG is recorded, because the time to carry out the work has arrived. In Part II of the UAV Technical LOG of that day, Blocks 22, 23 and 24 shall be filled in. Once the UAV Technical LOG is complete and the unresolved faults recorded in Part III shall be transcribed in the Part III of the new UAV Technical LOG, in this Block shall be entered the sentence as follows: “transferred to Part III of the next AVMC2 Technical LOG”.

- **UAV TECHNICAL LOG - Part IV**

This part contains information about the inspections and the operating instructions/employment limitations applicable to the UAV.

The Team Leader shall set up a Part IV sheet in each UAV Technical LOG and shall fill in the fields of the header 1 and 2 similarly to the same fields in Part II and III. Until the end of the UAV Technical LOG all the Part IV sheets necessary for recording the specific information described below shall be added, taking care to number them sequentially in the dedicate data field 3 (see Part II block 3).

Once the UAV Technical LOG is complete the data recorded in Part IV shall be transcribed in the Part IV of the new UAV Technical LOG. The Part IV sheets containing only deleted “Operating Instructions – Caution – Employment Limitations” (block 38) and “Scheduled Maintenance” (Block 40) transcribed back to Part II shall be taken out from the LOG and archived at the responsible Technical Office. In this case even any data field still blank of “Audit Log” (Block 39) shall be crossed out, signed and dated by the Technical Officer.

The data to fill in the blocks of Part IV shall be obtained from the approved Technical Publications of the UAV. If modifications are made to the characteristics reported therein, a new Part IV sheet shall be set up, entering the related changes and reporting all the “Operating Instructions – Caution – Employment Limitations” (block 38) and “Scheduled Maintenance” (Block 40) still open. In this case any data field on the previous Part IV still blank of “Audit Log” (Block 39) shall be crossed out, signed and dated by the Technical Officer.

When the UAV Technical LOG, and with it the related Part IV, is set up, the Team Leader shall fill in the blocks from 33 through 37 as follows:

33. Fuel

Enter the total tanks capacity. The "grade" and "NATO code" fields shall be filled in with reference to the type of usable fuel.

34. Hydraulic

Enter the total tanks “Capacity”. The "Type" and "NATO code" fields shall be filled in with reference to the type of usable Hydraulic liquid.

35. Coolant Liquid

Enter the capacity of the (PAO) coolant tanks. The "Type" and "NATO code" fields shall be filled in with reference to the type of usable coolant liquid.

36. Nitrogen

For the Ku-System enter in the dedicated fields the relevant “Capacity”, “Type” and “NATO Code”.

For the Emergency enter in the dedicated fields the relevant “Capacity”, “Type” and “NATO Code”.

37. ENGINE

Indicate the installed Engine “S/N”, the engine Oil “Capacity”, “Type” and “NATO Code”.

38. Operating Instructions - Cautions - Employment Limitations

In this block, the Technical Officer shall enter the UAV (and/or its parts) Airworthiness Directives/Service Bulletins that entail operating instructions and/or cautions for the Personnel operating in the UAV. In it shall also be highlighted all information which the Technical Officer considers necessary to provide to the Personnel for a correct and safe operation of the UAV.

In the respective data fields "No. Seq.", "Ref. Doc." and "Description" shall be entered the sequential number, the identifying information of the reference document and the description of the operating instructions/cautions/ limitations with relevant W.O. if any.

The Technical Officer shall approve the record of the operating instructions/cautions/limitations, dating and signing the appropriate data field "Approval (Date and Signature)". In case one of the operating instructions/cautions/limitations is no longer applicable, the Technical Officer shall cross it out, dating and signing the respective data field "Deletion (Date and Signature".

39. Audit LOG (Date and Signature)

Constant oversight is necessary throughout the entire maintenance process, along with careful supervision both filling in the UAV Technical LOG and performing the work. Audits are performed with different criteria, according to the competence of those who carry them out (Technical Officer and Higher Authority). The signatures affixed in this data field certify completion of the audit and any corrective action taken, when necessary and recorded in a dedicated form. Therefore, there is also a data field dedicated for the signature of a Higher Authority whenever it carries out the audit.

The Technical Officer shall periodically monitor the upkeep of the UAV Technical LOG. Audits are at his/her sole discretion, but they shall be carried out at least once a month.

40. Scheduled Maintenance

The purpose of this block is to indicate, at any time, the current situation of scheduled inspections and, hour-based and calendar-based replacements of the various parts and/or of the UAV itself.

This block lists the checks that shall take place at provided time intervals, not shown in the Periodic Inspection Certificate, regardless of the hours of operation completed. In particular:

f) "Subject of the Insp./Repl.": identifies the type of work to be carried out, whose scheduled expiration date is not shown in the Periodic Inspection Certificate and the involved material indicating the P/N and S/N;

g) "Frequency": the time interval between two inspections of the part shall be shown, in terms of days and/or months and/or operating hours;

h) "Due Date/Time": the date and/or hours of operation of the UAV by which the next inspection or replacement shall be carried out is written in black/blue ink. Once the inspection or replacement is completed, the

Specialist who performed the operation shall use a new line to record the next due date/time of the same inspection/replacement. At the expiration of the terms prescribed for the performance of a special inspection or for the replacement of the item listed therein, the work required (inspection or replacement) shall be transcribed in Part II. The value shown in the "Due Date/Time" data field shall be crossed out leaving it still legible, if the Technical Officer decides to postpone the work using the tolerance within the limits indicated in the next data field. In this case, the new due date/time recalculated using the tolerance shall be entered in the data field "Tolerance Due Date/Time";

i) "Max Tolerance": when provided, indicate the max tolerance relating to the Due Date/Time of the inspection/replacement (e.g.: 10%, 10 days, 10 cycles, 20 Flight Hours, etc.);

j) "Tolerance Due Date/time": as indicated above ("Due Date/Time" data field), this data field shall be filled in only if the Technical Officer decides to postpone the work using a tolerance within the limits indicated in the next data field.

When the first UAV Technical LOG is set up, all data about scheduled maintenance, with the exception of the "Tolerance Due Date/Time", shall be filled in by the Technical Office. After the set up of the first LOG, the "Scheduled Maintenance" of Part IV shall be filled in/updated by specialists. The "Tolerance Due Date/Time" data field shall always be filled in by the Technical Officer i.a.w. point “e”.

NOTE

Since the list of scheduled maintenance is the same for every UAV, when proceeding to printout the UAV Technical LOG according to the procedures of paragraph 3.3, Part IV could be printed out with the list already entered in the "Subject of the Inspection/Replacement" data field and with the "Frequency" and "Max Tolerance” data fields already filled in. In this case, the Technical Officer shall still be responsible for checking the pre-printed data and indicating the specific due dates/times.

3.4.1.Specific Instructions

SYMBOLOGY

The main function of the UAV Technical LOG is to present at all times the status of the UAV with regard to its ability to conduct the flight. For this purpose, special symbols are established to immediately provide the aforesaid information.

- Red X (X)

  With this symbol, the UAV shall not fly. It warns that the UAV is not capable of conducting a flight or is in such conditions that flight would be dangerous because of the extent of the problems noted.

A Red X is affixed as soon as an Airworthiness Directive or an "Immediate" Service Bulletin is received which requires the completion, prior to the next flight, of operations applicable to that UAV or to its parts.
The corrective actions performed to eliminate the conditions that had led to the Red X shall be validated by the Technical Officer or, when the corrective actions are performed by Company, the validation shall be performed by responsible personnel specifically authorized by the Company itself.
The validation of Red X elimination shall be certified with a signature in block 26 of Part II “Validating Signature”, next to the signature of the personnel who carried out the action.
This signature certifies:
- that the assessment process has been supervised and any corrective actions have been agreed with the specialists
- the subsequently verification of the corrective actions successful introduction.
An “exceptional release to service” to conduct the flight shall not be granted when the UAV is marked with a Red X.

– Circled Red X (⊗)
This symbol has to be used when the UAV shall not fly, awaiting compliance with an "Urgent" Service Bulletin whose established time limits have expired. For this symbol, the same provisions of the previous point, concerning the validation signature, shall apply. An “Exceptional Release to Service” for the flight may not be granted when the UAV is marked with a Circled Red X.

– Red Dash (—)
This symbol has to be used when a work (inspection, maintenance, change of an item upon reaching its operating limit, etc.) has not been carried out yet, although the execution times according to the applicable standard have expired. The status of the UAV is not well known, because the work that can exactly define the conditions of the UAV and of its accessories has not been carried out. Therefore, to employ an UAV marked with Red Dash, an exceptional authorization is required, which may be granted only by the Technical Officer for technical deficiency, or by the Pilot for operational deficiency that do not compromise the safety of flight, but limits the UAV in some conditions.

– Red Diagonal (⁄)
This symbol has to be used when a deficiency was noted on the UAV, but without the level of severity indicated with the Red X. In any case, an “Exceptional Release to Service” is required to employ the UAV in the flight. A Red Diagonal is affixed when an "Urgent" Service Bulletin is received which refers to that UAV or to its parts. If the aforesaid Service Bulletin requires the execution of operations within determined time intervals (in hours of flight/operation and/or in calendar terms), at the expiration of which the UAV is no longer fit for flight, when these due dates/times are reached the recording of the Service Bulletin shall be marked with the circled Red X.

- Black Dash (—)
  This symbol has to be used when a scheduled maintenance work (inspection - overhaul - replacement of parts etc.) was not carried out in accordance with the prescribed due date/time but a regulation postpones its application if specific checks and/or inspections are successfully performed. This symbol is also used when recording an inspection and/or replacement of parts and/or Routine Service Bulletin to be carried out, whose execution due date/time has not yet expired.
- Black Diagonal (/)
  This symbol indicates that a defect has been observed on the UAV, which does not jeopardize the airworthiness of the UAV.

TIMES

Refer to paragraph 2.4.1

3.5 UAV Technical LOG Storage

During utilization/flight/maintenance, the UAV Technical LOG shall be stored in the GCS engaged in the flight.

If different GCSs are used during the same flight, the UAV Technical LOG shall remain in the initial GCS at least until the conclusion of that flight. Subsequently, the Maintenance Crew Chief/Team Leader shall supplement the Technical LOG signed by him/her, in particular using the data entered in the Parts I of the logs of the other GCSs which conducted the flight.

At the end of utilization/flight/maintenance, the Parts of the UAV Technical LOG shall be stored as follows:

- PART II
  At the end of utilization/maintenance, the relevant sheet shall be taken out from the insert of the Technical LOG, after entering in the subsequent Part II and/or III sheet any maintenance operations/overhauls to be performed, and it is delivered to the office in charge of controlling and storing such sheets.
  If the UAV is suspended from operations for the execution of inspections and/or the elimination of faults, the same Part II sheet shall be utilized until the UAV is returned to operations. The aforesaid office shall maintain for each UAV a file where all Part II sheets shall be stored, to provide documentation on the maintenance work carried out on the same UAV.
  For maintenance work carried out by the Manufacturer/Overhaul Company, Part II sheets shall initially be retained and filled in by the Company. Part II sheets shall be returned to NAGSF with the delivery of the UAV.
- PART III
  Part III sheets shall remain in the UAV Technical LOG in use, with the exception of those closed following an inspection (all entries in Part III have been transferred to Part II) which shall be taken out and stored in the office in charge of controlling and storing such sheets. When a new UAV Technical LOG is set

up, the Part III sheets present in the old LOG (e.g.: deferred corrective measures not yet carried out) shall be entered in the new one.

- PART IV

  Part IV sheets shall remain in the UAV Technical LOG in use, with the exception of the closed ones (all entries in Part IV were transferred to Part II or to a new Part IV) which shall be taken out and stored in the office in charge of controlling and storing such sheets. When a new UAV Technical LOG is set up, the Part IV sheets present in the old LOG (e.g.: still active operating instruction) shall be entered in the new one.

All the UAV Technical LOGs and the related Parts shall be stored in a manner that ensures protection from damage, alteration and theft. They shall remain readable and accessible for the duration of the storage period. In particular, the Technical LOG shall be stored at least for 10 years and in such a way that it can be consulted, even after the retirement from the line of the NATO AGS RQ-4D Air Segment. If during storage period any controversy arise, the above mentioned period will become effective from the end of the controversy.

Access to the Technical LOGs by DAAA and Competent Body shall be granted by NAGSF upon request.

4. FACSIMILE OF LOGs

The facsimiles of the LOGs are shown in the following pages.

MINISTRY OF DEFENCE

SECRETARIAT GENERAL OF DEFENCE AND NATIONAL ARMAMENTS
DIRECTORATE OF AIR ARMAMENTS AND AIRWORTHINESS

NATO AGS RQ-4D
AIR VEHICLE MISSION COMMAND & CONTROL
TECHNICAL LOG

AVMC2 P/N_____S/N_____

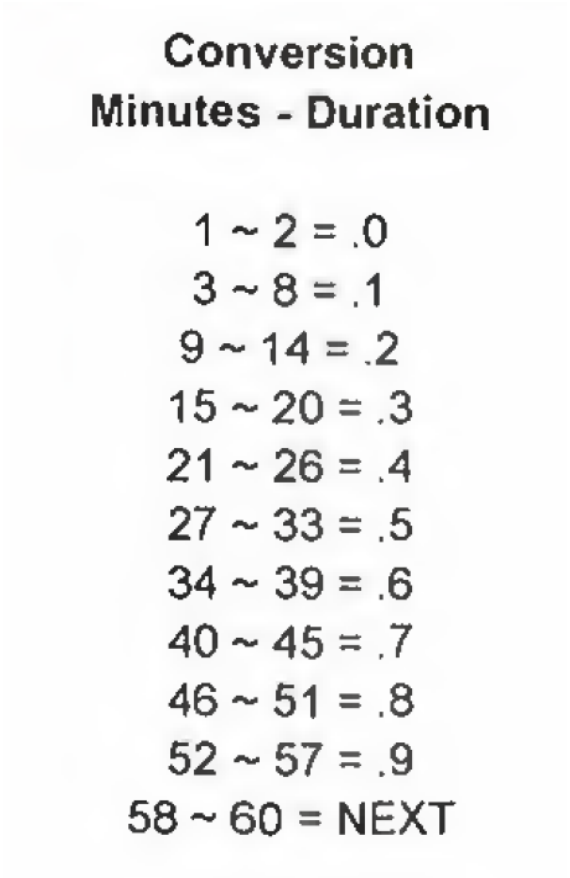
MRN_____

LOG no._____

INSTRUCTION SHEET

To fill in and store the AVMC2 Technical Logs, refer to the paragraph 2 of the AER(EP).00-1-APR-49/RQ-4D current version.

All times shall be indicated in hours and minute ZULU expressed as decimal according to the following conversion table:



PART I.F - AVMC2 - GCS FLIGHT REPORT LOG	1. MDS	2. EN/MRN	3. LOG no.
		2a. GCS	Sheet no.

4. Unit	5. Location (ICAO)	6. Software	7. Starting Date	8. Utilization No.

9. Major Configuration Items

	Nomenclature	P/N	S/N	Start-up Time	Shut-down Time

10. Aerial Vehicle Employed	11. UAV EN/MRN	12. Mission Code	13. Purpose	14. Altitude	15. Sortie n.

16. Start of Control				17. End of Control			Notes
Location (ICAO)	Date	Time		Location (ICAO)	Date	Time	

	18. Pilots Ranks, Last Names and First Names	19. crew Position	20. Crew Flight Time			21. Gear Cycles	22. Landing	23. Crew Desk	24. PWS	25. Note	26. Pilot signature
			Start	End	Total						
1st Shift											
2nd Shift											
3rd Shift											
4th Shift											
5th Shift											
6th Shift											
7th Shift											
8th Shift											

Aerial Vehicle Flight Report	27. Flight Hours	Before Control Start		28. LNDGs	Before Control Start		29. G. Cycles	Before Control Start	
		During the Control			During the Control			During the Control	
		At End of Control			At End of Control			At End of Control	

PART I.R - AVMC2 - GCS FLIGHT REPORT LOG

30. Operators

Rank Last Name and First Name	Duty	Start Time	End Time	OWS		Rank Last Name and First Name	Duty	Start Time	End Time	OWS

Notes

Page ____ out of_____

31. GCS Utilization Time

Start up Time	Shut down Time	Duration Time

Pilot in Command

_____

PART II.F - AVMC2 OPERATIONS, INSPECTIONS AND MAINTENANCE LOG	1. MDS	2. EN/MRN	3. LOG no. Sheet no.

4. Unit	5. Location (ICAO)	6. Softw are	7. Starting Date	8. Utilization No.

32. Major Configuration Items

	Nomenclature	P/N	S/N

33. Current Status				34. Exceptional Release to Service				35. Next Inspection	
								Isp. Type	Due Date/Time
1		5		1		5			
2		6		2		6			
3		7		3		7			
4		8		4		8			

36. Times of Operation

	Par. 1	Par. 2	Par. 3	Par. 4	Par. 5
Prev. Op.					
Utilization Op.					
Total Op.					

37. Daily Inspections

SME	Type	Date	Time	Outcome	Signature	Notes

38. SME	39. Symb	40. Fault Report/Work Details	Date and Signature	41. Corrective Actions	Man Hours	Date and Signature	42. Validating Signature
		W.O. #:					
		W.O. #:					

PART II.R - AVMC2 OPERATIONS, INSPECTIONS AND MAINTENANCE LOG

38. SME	39. Symb	40. Fault Report/Work Details	Date and Signature	41. Corrective Actions	Man Hours	Date and Signature	42. Validating Signature
		W.O. #:					
		W.O. #:					
		W.O. #:					
		W.O. #:					
		W.O. #:					
		W.O. #:					

Notes

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PART III.F - LIST OF AVMC2 DEFERRED CORRECTIVE ACTIONS	1. MDS	2. EN/MRN	3. LOG no. Sheet no.

43. SME	44. Symb	45. Fault	46. Annotation approved by (Date and Signature)	47. Authorization Validity	48. Date Entered in Part II
		W.O. #:			
		W.O. #:			
		W.O. #:			
		W.O. #:			
		W.O. #:			
		W.O. #:			
		W.O. #:			

PART III.R - LIST OF AVMC2 DEFERRED CORRECTIVE ACTIONS

43. SME	44. Symb	45. Fault	46. Annotation approved by (Date and Signature)	47. Authorization Validity	48. Date Entered in Part II
		W.O. #:			
		W.O. #:			
		W.O. #:			
		W.O. #:			
		W.O. #:			
		W.O. #:			
		W.O. #:			

PART IV.F - AVMC2 GENERAL CHARACTERISTIC DATA	1. MDS	2. EN/MRN	3. LOG no. / Sheet no.

49. Electrical Power Supply				
Type (No. of PHASES)	Voltage and Type	Frequency	Current	Power

50. Connector Type		51. Conditioning		52. Temp. Utilization	

53. Operating Instructions - Cautions - Employment Limitations					54. Audit LOG (Date and Signature)	
Seq. No.	Ref. Doc.	Description	Approval (Date and Signature)	Deletion (Date and Signature)	Technical Officer	Higher Authority
		W.O. #:				
		W.O. #:				
		W.O. #:				
		W.O. #:				
		W.O. #:				
		W.O. #:				

PART IV.R - AVMC2 GENERAL CHARACTERISTIC DATA

55. Scheduled Maintenance

Subject of the Insp./Repl.	Frequency	Due Date/Time	Max Tolerance	Tolerance Due Date/Time

MINISTRY OF DEFENCE

SECRETARIAT GENERAL OF DEFENCE AND NATIONAL ARMAMENTS
DIRECTORATE OF AIR ARMAMENTS AND AIRWORTHINESS

NATO AGS RQ-4D
UNMANNED AIR VEHICLE
TECHNICAL LOG

UAV P/N_____S/N_____

MRN_____

LOG no._____

INSTRUCTION SHEET

To fill in and store the UAV Technical Logs, refer to the paragraph 3 of the AER(EP).00-1-APR-49/RQ-4D current version.

All times shall be indicated in hours and minute ZULU expressed as decimal according to the following conversion table:

Conversion
Minutes - Duration

1 ~ 2	.0
3 ~ 8	.1
9 ~ 14	.2
15 ~ 20	.3
21 ~ 26	.4
27 ~ 33	.5
34 ~ 39	.6
40 ~ 45	.7
46 ~ 51	.8
52 ~ 57	.9
58 ~ 60	NEXT

PART II.F - UAV OPERATIONS, INSPECTIONS AND MAINTENANCE LOG	1. MDS	2. EN/MRN	3. LOG no. / Sheet no.

4. Date	5. Maintenance Crew Chief	6. Unit	7. Location (ICAO)	8. Sortie n.	9. Next inspection	
					Type of insp.	Due Date/Time

10. OPTIONAL EQUIPMENT

YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO

11. Current Status

1		5	
2		6	
3		7	
4		8	

12. Exceptional Release to Service

1		5	
2		6	
3		7	
4		8	

Aircraft	
( )	
Engine	
( )	

13. Engine Oil Servicing

Ref. No.	Type / Cart Number	Pounds	Location (ICAO)	Performed by	Notes

14. Liquid Servicing Data

System	Type / Cart Number	Serviced to	Date	Location (ICAO)	Performed by	Notes
Hydraulic						
Nitrogen (KU)						
25 KVA Gen.						
PAO						

15. Fuel Servicing

	Prog.	Ref.	Drain	Grade	Pounds	Inspected by (Date and Signature)	Location (ICAO)	In the Tank
Main								Lbs
								Lbs
								Lbs
								Lbs

16. Fuel Density		17. Fuel Temperature		Notes
18. Configured Empty Weight (See applicable W&B Form)	Lbs	19. Total Take Off Weight	Lbs Lbs Lbs	

20. Times of Operation

	Aerial Vehicle				Engine
	Flight Hours	Landings	Gear Cycles	Number of Flights	(Engine Hours)
Prev. Op.					
Op. in the Flight					
Total Op.					

21. Daily inspections

SME	Type	Date	Time	Outcome	Signature	Notes

PART II.R - UAV OPERATIONS, INSPECTIONS AND MAINTENANCE LOG

22. SME	23. Symb	24. Fault Report/work Details	Date and Signature	25. Corrective Actions	Man Hours	Date and Signature	26. Validating Signature
		W.O. #:					
		W.O. #:					
		W.O. #:					
		W.O. #:					
		W.O. #:					
		W.O. #:					

Notes

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PART III.F - LIST OF UAV DEFERRED CORRECTIVE ACTIONS	1. MDS	2. EN/MRN	3. LOG no. Sheet no.

27. SME	28. Symb	29. Fault	30. Annotation approved by (Date and Signature)	31. Authorization Validity	32. Date Entered in Part II
		W.O. #:			
		W.O. #:			
		W.O. #:			
		W.O. #:			
		W.O. #:			
		W.O. #:			
		W.O. #:			

PART III.R - LIST OF UAV DEFERRED CORRECTIVE ACTIONS

27. SME	28. Symb	29. Fault	30. Annotation approved by (Date and Signature)	31. Authorization Validity	32. Date Entered in Part II
		W.O. #:			
		W.O. #:			
		W.O. #:			
		W.O. #:			
		W.O. #:			
		W.O. #:			
		W.O. #:			

PART IV.F - UAV GENERAL CHARACTERISTIC DATA	1. MDS	2. EN/MRN	3. LOG no. Sheet no.

33. Fuel				34. Hydraulic				35. Coolant Liquid			
	Capacity	Grade	NATO Code		Capacity	Type	NATO Code		Capacity	Type	NATO Code
Total				Total				PAO			

36. Nitrogen								37. Engine	S/N:		
	Capacity	Type	NATO Code		Capacity	Type	NATO Code		Capacity	Type	NATO Code
KU-System				Emergency				Engine Oil			

38. Operating Instructions - Cautions - Employment Limitations					39. Audit LOG (Date and Signature)	
Seq. No.	Ref. Doc.	Description	Approval (Date and Signature)	Deletion (Date and Signature)	Technical Officer	Higher Authority
		W.O. #:				
		W.O. #:				
		W.O. #:				
		W.O. #:				
		W.O. #:				
		W.O. #:				

PART IV.R - UAV GENERAL CHARACTERISTIC DATA

40. Scheduled Maintenance

Subject of the Insp./Repl.	Frequency	Due Date/Time	Max Tolerance	Tolerance Due Date/Time

MINISTRY OF DEFENCE

SECRETARIAT GENERAL OF DEFENCE AND NATIONAL ARMAMENTS
DIRECTORATE OF AIR ARMAMENTS AND AIRWORTHINESS

NATO AGS RQ-4D
DEPLOYABLE UAV CONTROL ELEMENT
TECHNICAL LOG

DUCE P/N_____S/N_____

MRN_____

LOG no._____

INSTRUCTION SHEET

To fill in and store the DUCE Technical Logs, refer to the paragraph 2 of the AER(EP).00-1-APR-49/RQ-4D current version.

All times shall be indicated in hours and minute ZULU expressed as decimal according to the following conversion table:

Conversion
Minutes - Duration

1 ~ 2	.0
3 ~ 8	.1
9 ~ 14	.2
15 ~ 20	.3
21 ~ 26	.4
27 ~ 33	.5
34 ~ 39	.6
40 ~ 45	.7
46 ~ 51	.8
52 ~ 57	.9
58 ~ 60	NEXT

PART I.F - DUCE - GCS FLIGHT REPORT LOG	1. MDS	2. EN/MRN	3. LOG no. Sheet no.

4. Unit	5. Location (ICAO)	6. Softw are	7. Starting Date	8. Utilization No.

9. Major Configuration Items

	Nomenclature	P/N	S/N	Start-up Time	Shut-dow n Time

10. Aerial Vehicle Employed	11. UAV EN/MRN	12. Mission Code	13. Purpose	14. Altitude	15. Sortie n.

16. Start of Control				17. End of Control			Notes
Location (ICAO)	Date	Time		Location (ICAO)	Date	Time	

	18. Pilots Ranks, Last Names and First Names	19. Crew Position	20. Crew Flight Time			21. Gear Cycles	22. Landing	23. Crew Desk	24. PWS	25. Note	26. Pilot signature
			Start	End	Total						
1st Shift											
2nd Shift											
3rd Shift											
4th Shift											
5th Shift											
6th Shift											
7th Shift											
8th Shift											

Aerial Vehicle Flight Report	27. Flight Hours		28. LNDGs		29. G. Cycles	
	Before Control Start		Before Control Start		Before Control Start	
	During the Control		During the Control		During the Control	
	At End of Control		At End of Control		At End of Control	

PART I.R - DUCE - GCS FLIGHT REPORT LOG

30. Operators

Rank Last Name and First Name	Duty	Start Time	End Time	OWS	Rank Last Name and First Name	Duty	Start Time	End Time	OWS

Notes

Page ____ out of_____

31. GCS Utilization Time

Start up Time	Shut down Time	Duration Time

Pilot in Command

_____

PART II.F - DUCE OPERATIONS, INSPECTIONS AND MAINTENANCE LOG	1. MDS	2. EN/MRN	3. LOG no. / Sheet no.

4. Unit	5. Location (ICAO)	6. Softw are	7. Starting Date	8. Utilization No.

32. Major Configuration Items

	Nomenclature	P/N	S/N

33. Current Status				34. Exceptional Release to Service				35. Next Inspection	
								Isp. Type	Due Date/Time
1		5		1		5			
2		6		2		6			
3		7		3		7			
4		8		4		8			

36. Times of Operation

	Par. 1	Par. 2	Par. 3	Par. 4	Par. 5
Prev. Op.					
Utilization Op.					
Total Op.					

37. Daily Inspections

SME	Type	Date	Time	Outcome	Signature	Notes

38. SME	39. Symb	40. Fault Report/Work Details	Date and Signature	41. Corrective Actions	Man Hours	Date and Signature	42. Validating Signature
		W.O. #:					
		W.O. #:					

PART II.R - DUCE OPERATIONS, INSPECTIONS AND MAINTENANCE LOG

38. SME	39. Symb	40. Fault Report/Work Details	Date and Signature	41. Corrective Actions	Man Hours	Date and Signature	42. Validating Signature
		W.O. #:					
		W.O. #:					
		W.O. #:					
		W.O. #:					
		W.O. #:					
		W.O. #:					

Notes

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PART III.F - LIST OF DUCE DEFERRED CORRECTIVE ACTIONS	1. MDS	2. EN/MRN	3. LOG no. Sheet no.

43. SME	44. Symb	45. Fault	46. Annotation approved by (Date and Signature)	47. Authorization Validity	48. Date Entered in Part II
		W.O. #:			
		W.O. #:			
		W.O. #:			
		W.O. #:			
		W.O. #:			
		W.O. #:			
		W.O. #:			

PART III.R - LIST OF DUCE DEFERRED CORRECTIVE ACTIONS

43. SME	44. Symb	45. Fault	46. Annotation approved by (Date and Signature)	47. Authorization Validity	48. Date Entered in Part II
		W.O. #:			
		W.O. #:			
		W.O. #:			
		W.O. #:			
		W.O. #:			
		W.O. #:			
		W.O. #:			

PART IV.F - DUCE GENERAL CHARACTERISTIC DATA	1. MDS	2. EN/MRN	3. LOG no. / Sheet no.

49. Electrical Power Supply

Type (No. of PHASES)	Voltage and Type	Frequency	Current	Power

50. Connector Type		51. Conditioning		52. Temp. Utilization	

53. Operating Instructions - Cautions - Employment Limitations

54. Audit LOG (Date and Signature)

Seq. No.	Ref. Doc.	Description	Approval (Date and Signature)	Deletion (Date and Signature)	Technical Officer	Higher Authority
		W.O. #:				
		W.O. #:				
		W.O. #:				
		W.O. #:				
		W.O. #:				
		W.O. #:				

PART IV.R - DUCE GENERAL CHARACTERISTIC DATA

55. Scheduled Maintenance

Subject of the Insp./Repl.	Frequency	Due Date/Time	Max Tolerance	Tolerance Due Date/Time