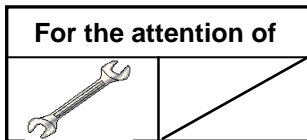


SERVICE BULLETIN

PRODUCT IMPROVEMENT

CENTRAL MAINTENANCE SYSTEM Retrofit of M'ARMS ground station - MGS



Revision No.	Date of issue
Revision 0	2017-12-22
Revision 1	2018-06-08
Revision 2	2019-10-10
Revision 3	2020-07-01
Revision 4	2021-07-19
Revision 5	2022-05-04

Summary:

The purpose of this Service Bulletin is to upgrade the M'ARMS (Modular Aircraft Recording and Monitoring System) ground station. This update makes the latest standard of the ground station available and provides access to the latest upgrades, contributing to an improved functional performance.

Reason for last Revision:

The purpose of revision 5 of this Service Bulletin is to install MGS (Maintenance Ground Station) V1.9 software. This update modifies the EVM parameters to have them compliant with SHE specifications.



Compliance:

Compliance with this Service Bulletin is left to the Operator's initiative.

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1. PLANNING INFORMATION

1.A. EFFECTIVITY

1.A.1. Helicopters/installed equipment or parts

Not applicable.

1.A.2. Non-installed equipment or parts

M'ARMS ground station P/N 703A97-6824-00 or 703A97-6351-00 or equivalent PC (Personal Computer) with AGS (ARMS Ground Station) software AGS V5.1 (P/N 707A49438267) or MGS V1.0 (P/N X135P51S0100) or MGS V1.2 (P/N X135P11S0102) or MGS V1.3 (P/N X135P11S0103) or MGS V1.4 (P/N X135P11S0104) or MGS V1.5 (P/N X135P11S0105) or MGS V1.6 (P/N X135P11S0106) or MGS V1.7 (P/N X135P11S0107) or MGS V1.8 B (P/N X135P11S0108B) used for the maintenance of helicopters equipped with the M'ARMS installation and a VPU (Vibration Processing Unit).

1.B. ASSOCIATED REQUIREMENTS

Not applicable.

1.C. REASON

The purpose of this Service Bulletin is to upgrade the M'ARMS (Modular Aircraft Recording and Monitoring System) ground station. This update makes the latest standard of the ground station available and provides access to the latest upgrades, contributing to an improved functional performance.

Purpose of revision 0

The purpose of Revision 0 of this Service Bulletin was to install MGS (Maintenance Ground Station) V1.4 software.

Purpose of revision 1

The purpose of Revision 1 of this Service Bulletin was to install MGS (Maintenance Ground Station) V1.5 software.

This update allowed access to the latest upgrades, contributing to an improved functional performance:

- MGS library "moyenne synchrone" fixed,
- technology upgrade:
 - . server updated to 64 bits,
 - . database updated to 64 bits,
 - . Windows 10 compatibility,
- new setup to import previous MGS backup from a previous version: 1.2, 1.3, 1.4,
- SD Card Connectivity taken into account.

Revision 1 did not affect compliance with Revision 0 of this Service Bulletin.

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Purpose of revision 2

The purpose of revision 2 of this Service Bulletin was to install MGS (Maintenance Ground Station) V1.6. software.

This update allowed the addition of the "System Status" function, which is necessary to filter and display error messages from the Vibration Processing units (VPU), as well as those from the MGS (Maintenance Ground System).

Revision 2 of this Service Bulletin did not affect compliance with the previous revisions of this Service Bulletin.

Purpose of revision 3

The purpose of revision 3 of this Service Bulletin was to install MGS (Maintenance Ground Station) V1.7. software.

This update allowed access to the latest upgrades, contributing to an improved functional performance.

Revision 3 of this Service Bulletin did not affect compliance with revision 2 of this Service Bulletin.

Purpose of revision 4

The purpose of revision 4 of this Service Bulletin is to install MGS (Maintenance Ground Station) V1.8 B software.

This update makes the latest standard of the ground station available and provides access to the latest upgrades, contributing to an improved functional performance.

This new version fix security breach of the MGS software.

Revision 4 of this Service Bulletin does not affect compliance with previous revisions of this Service Bulletin.

Purpose of revision 5

The purpose of revision 5 of this Service Bulletin is to install MGS (Maintenance Ground Station) V1.9 software.

This update modifies the EVM parameters to have them compliant with SHE specifications.

Revision 5 of this Service Bulletin does not affect compliance with the previous revision of this Service Bulletin.

1.D. DESCRIPTION

The modification consists in installing the MGS V1.9 software on the hardware that correspond to the performance criteria defined in the paragraph [2.C](#). "special tools". This installation is performed using the SIM (Software Installation Manual) X135P11S0109 issue A document.

The MGS V1.9 software allows the use of new functionalities described in the software user manuals for the MGS V1.9 HB X135P11S0109 software.

Consequently, the retrofit can be performed by:

- either the installation of the MGS V1.9 software on a compatible equipment item,
- or by acquiring an equipment item that is already configured by Airbus Helicopters.

For the acquisition of already configured equipment, Airbus Helicopters offers several types of computer according to your needs, at prices equivalent to COTS (Commercial Off-The-Shelf) prices.

We invite you to contact your usual Airbus Helicopters contact persons as indicated in paragraph [2.C](#). "Special tools".

1.E. COMPLIANCE

1.E.1. Compliance at H/C manufacturer level

Not applicable.

1.E.2. Compliance in service

Helicopters/installed equipment or parts:

Not applicable.

Non-installed equipment or parts:

Compliance with this Service Bulletin is left to the Operator's initiative.

Comply with paragraph [3.B.](#) of this Service Bulletin.

1.F. APPROVAL

Approval of modifications:

Not applicable.



Approval of this document:

The technical information contained in this Service Bulletin Revision 2 was approved on October 09, 2019 under the authority of EASA Design Organization Approval No. 21J.700 for civil version helicopters subject to an Airworthiness Certificate.

The technical information contained in this Service Bulletin Revision 3 was approved on May 28, 2020 under the authority of EASA Design Organization Approval No. 21J.700 for civil version helicopters subject to an Airworthiness Certificate.

The technical information contained in this Service Bulletin Revision 4 was approved on July-08, 2021 under the authority of EASA Design Organization Approval No. 21J.700 for civil version helicopters subject to an Airworthiness Certificate.

The technical information contained in this Service Bulletin Revision 5 was approved on April 29, 2022 under the authority of EASA Design Organization Approval No. 21J.700 for civil version helicopters subject to an Airworthiness Certificate.

1.G. MANPOWER



For compliance with this Service Bulletin, Airbus Helicopters recommends the following personnel qualification:

Qualification: 1 HUMS Specialist.



The Estimated Man-hours are indicated for reference purposes only and based on a standard helicopter configuration.

Estimated Man-hours: 4 hours for HUMS Specialist.

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1.H. WEIGHT AND BALANCE

Not applicable.

1.I. POWER CONSUMPTION

Not applicable.

1.J. SOFTWARE UPGRADES/UPDATES



RNS (Release New Software) MGS V1.9 No. X135P11S0109 software.

Key word	P/N
MGS V1.9 software	X135P11S0109
MGS V1.9 configuration file	707A49439743B

1.K. REFERENCES

The following documents are required for compliance with this Service Bulletin.

- Document SIM X135P11S0109 "Software Installation Manual" (not enclosed with this Service Bulletin),
- Document HB X135P11S0109 "Handbook / Software User Manual" (not enclosed with this Service Bulletin).
- IN 3785-I-00: Introduction of the digital Service Bulletin reporting SB Insight.

NOTE 1

Reference documents SIM X135P11S0109 issue A and HB X135P11S0109 are included in the MGS V1.9 Maintenance Ground Station CD (1) indicated in paragraph [2.C](#).

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1.L. OTHER AFFECTED PUBLICATIONS



CAUTION

TO COMPLY WITH THIS SERVICE BULLETIN, THE OPERATOR MUST ENSURE THAT ALL THE MAINTENANCE DOCUMENTS REQUIRED FOR THE MAINTENANCE OF THIS INSTALLATION ARE AVAILABLE. OTHERWISE, IT IS THE OPERATOR'S RESPONSIBILITY TO PROCURE THE PUBLICATIONS VIA THE USUAL AIRBUS HELICOPTERS CONTACT.

The modification will be integrated into the following manual:
Tools Catalog (ICO).

The document concerned will be updated for the next revision.

NOTE 2

The new tool part numbers will be integrated into the Aircraft Maintenance Manual (AMM) in a further Revision.

1.M. PART INTERCHANGEABILITY OR MIXABILITY

Interchangeability:

The new M'ARMS ground station MGS V1.9 and the old M'ARMS ground stations are not interchangeable.

Mixability:

Not applicable.

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2. EQUIPMENT OR PARTS INFORMATION

2.A. EQUIPMENT OR PARTS: PRICE - AVAILABILITY - PROCUREMENT

Price

For any information concerning price of modification kits and/or components or for assistance, contact the Airbus Helicopters Network Sales and Customer Relations Department.

Availability

Delivery deadlines will be indicated by Sales and Customer Relations Department on Operator's request.

Procurement

Order the required quantity from the Airbus Helicopters HUMS Department:

Alexandre DIAZ - HUMS Customer Support
E-mail: alexandre.diaz@airbus.com
Tel.: +33 (0)4 42 85 99 25
Airbus Helicopters
Etablissement de Marignane
13725 MARIGNANE CEDEX
France

2.B. LOGISTIC INFORMATION

For any information concerning the modification components or for assistance, contact the Airbus Helicopters HUMS Technical Support.

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2.C. EQUIPMENT OR PARTS REQUIRED PER HELICOPTER/COMPONENT

Equipment or parts supplied by the operator:

Tools mentioned in paragraph 2.C. "Special tools".

Equipment or parts required for non-installed components:

Key Word	Qty	New P/N	Item	Former P/N →	Instruction
Maintenance, Ground Station MGS V1.9 CD	1	X135P11S0109	1	707A49438267 or X135P51S0100 or X135P11S0102 or X135P11S0103 or X135P11S0104 or X135P11S0105 or X135P11S0106 or X135P11S0107 or X135P11S0108B	
MGS CONF FILE	1	707A49439743B	2	707A49439597B	

Special tools:

Key Word	Qty	New P/N	Item	Former P/N →	Instruction
Ground station M'ARMS	1	X130P7101101 or X130P7102101 or X130P7103101	zz	703A97-6824-00 or 703A97-6351-00	
or PC		or Commercial P/N		or Commercial P/N	

Taking in to account the different configurations possible, in order to define the equipment or parts specification adapted to your operations please contact:

Alexandre DIAZ - HUMS Customer Support
E-mail: alexandre.diaz@airbus.com
Tel.: +33 (0)4 42 85 99 25

2.D. EQUIPMENT OR PARTS TO BE RETURNED

Not applicable.

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3. ACCOMPLISHMENT INSTRUCTIONS

3.A. GENERAL

Not applicable.

3.B. WORK STEPS

NOTE 1

*To know the license number to be filled in during the installation process, contact directly:
Alexandre DIAZ - HUMS Customer Support
E-mail: alexandre.diaz@airbus.com
Tel.: +33 (0)4 42 85 99 25*

3.B.1. Preliminary steps

- Make sure that M'ARMS ground station or equivalent PC (zz) complies with the hardware requirements described in paragraph 2.C. "Special tools".
- As required, replace M'ARMS ground station or equivalent PC (zz).
- Prepare M'ARMS ground station or PC (zz) for installation of MGS software V1.9.

3.B.2. Work steps for non-installed equipment or parts

Install the MGS V1.9 on the M'ARMS ground station or the PC (zz) as per the procedure in the MGS SIM X135P11S0109 issue A "Software Installation MGS" software document included in the Maintenance Ground Station V1.9 CD (1) using MGS CONF FILE (2).

3.B.3. Final steps

Prepare M'ARMS ground station or PC (zz) to receive HUMS data recorded during each flight.

3.C. RECORD OF COMPLIANCE

Compliance with this document:

- Record compliance with this Service Bulletin (see IN 3785-I-00 for instructions):
QR code or hypertext link



NOTE 2

The recording of compliance with Service Bulletins in the SB Insight does not replace the recording in the helicopter documents.

[SB EC155 45-013](#)

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3.D. OPERATING AND MAINTENANCE INSTRUCTIONS

Operating instructions:

Refer to the user manual for the MGS software: HB X135P11S0109 "Handbook / Software User Manual".

Maintenance instructions:

Not applicable.