

# AERONAUTICAL ACCESSORIES, INC.

P.O. BOX 3689 BRISTOL, TENNESSEE 37625-3689 USA
TELEPHONE: 423-538-5151 TOLL FREE: 800-251-7094
TELEFAX: 423-538-8469 E-MAIL: sales@aero-access.com

techsupport@aero-access.com



## Technical Bulletin TB No. AA-08098 No Revision

SUBJECT:

Bell Helicopter Vibration Monitor (BHVM) Kit

P/N 412-262-001\* / 412-262-002\*

\*with SmartCycle+ Interface Kit installed,

P/N 412-261-006

Bell Helicopter Vibration Monitor (BHVM) Kit with

SmartCycle+ P/N 412-262-003 / 412-262-004

MODELS AFFECTED:

Bell Helicopter Textron model 412 and 412EP helicopters with subject BHVM with SmartCycle+installed in accordance with STC SR09373RC-D.

**COMPLIANCE:** 

Compliance with this bulletin is per Customer's option or upon replacement of obsolete parts. AAI strongly recommends the incorporation of this bulletin

to improve reliability of the system.

**DESCRIPTION:** 

This Technical Bulletin is being issued to allow SmartCycle+ processors to be upgraded to software version V5.0.6. Refer to Appendix for details.

**FAA/DER APPROVAL:** 

The engineering aspects of this Technical Bulletin are

FAA/DER approved.

**MANPOWER:** 

Approximately .5 hours.

Manhours are based on hands-on time and may vary with personnel or facilities available.

IF OWNERSHIP OF AIRCRAFT HAS CHANGED. PLEASE FORWARD THIS BULLETIN TO NEW OWNER.

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#### **WEIGHT AND BALANCE:**

**Not Applicable** 

Any questions regarding this bulletin should be addressed to:

AERONAUTICAL ACCESSORIES, INC. P.O. Box 3689
Bristol, TN 37625-3689
PRODUCT SUPPORT
1-800-251-7094
techsupport@aero-access.com

#### 1.0 <u>ACCOMPLISHMENT INSTRUCTIONS:</u>

#### 1.1 For Kits Installed on Aircraft:

- 1. Turn "ON" aircraft battery power.
- 2. Plug in the Altair communication cable to the download port of the aircraft and to the laptop computer.
- 3. Set the download cable RUN / CONF switch to "CONF" position.
- 4. Open the Monitor Link Program on the laptop and select Edit> Communication Port >Autodetect.
- 5. Once communication has been detected, on the tool bar select MLU> MLU Status (Refer to Figure 2).
- 6. Note the software version displayed on the top of the screen.
- 7. If the software version is V5.0.6, no further action is required. If the software version is V5.0.0 to V5.0.5, the processor can be returned for upgrade.
- 8. Close the Monitor Link Program.
- 9. Disconnect the Altair communication cable from the download port of the aircraft and the laptop computer.
- 10. Turn "OFF" aircraft battery power.
- 11. Refer to the Appendix for processor upgrade instructions.
- 12. Make an entry in helicopter historical records indicating compliance with this technical bulletin.

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#### 1.2 For Kits Not Installed on Aircraft:

- 1. Locate the decal on the processor denoting the software version (Refer to Figure 1).
- 2. If the software version is V5.0.6, no further action is required. If the software version is V5.0.0 to V5.0.5, the processor can be returned for upgrade.

#### NOTE

If the decal on the processor does **not** denote the software version, contact Pratt & Whitney Engine Services, Inc. and provide customer support with the serial number of the processor. The serial number will aid customer support in determining the processor's software version. Refer to the Appendix for Pratt & Whitney Engine Services, Inc. contact information.

- 3. Refer to the Appendix for processor upgrade instructions.
- 4. Make an entry in helicopter historical records indicating compliance to this technical bulletin.

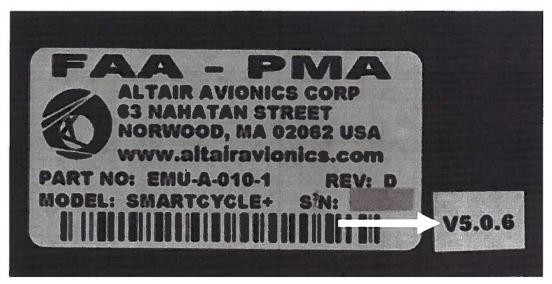


FIGURE 1 SOFTWARE VERSION DECAL

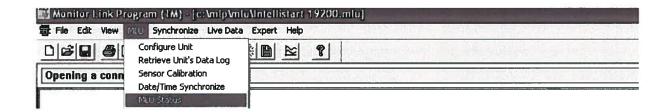


FIGURE 2 MONITOR LINK PROGRAM, MLU STATUS

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## **APPENDIX**



#### SERVICE BULLETIN

INTELLISTART+, SMARTCYCLE+, ADAS+, TRENDCHECK+, ADASh, and ADASd SOFTWARE WITH REVISION K PROCESSOR BOARDS UPGRADE TO VERSION 5.0.6 CODE

Document Number: SB-0016
Release Date: November 1, 2008

Revision: B

#### **PRODUCTS AFFECTED**

IntelliStart + (DPU-A-010-1 and -3), SmartCycle+ (EMU-A-010-1), ADAS+ (EMU-A-010-3 and -5), TrendCheck+ (EMU-A-010-2), ADASd (DAAS-A-010-1), ADASh (ADHY-A-010-1 and -2), and ADAS+ Upgrade (TWIN-A-010-2) processors with software versions V5.0.0 to V5.0.5.

#### **SUBJECT**

Unable to communicate with processor due to data flash being put into unknown state.

#### **AIRCRAFT OR ENGINE(S) AFFECTED**

IntelliStart+ certified on:

- Bell Helicopter Textron Models: 206A, 206A-1, 206B, 206L, 206L-1, 206L-3 and 206L-4
- MD Helicopter Models: 369, 369A, 369H, 369HM, 369HS, 369HE, 369D, 369E, 369F, 369FF and 500N
- Schweizer Models: 333, 269D, 269D configuration A SmartCycle+ certified on:
- Bell Helicopter Textron Models: 204B, 205A, 205A-1, 205B, 212, 412, 412EP, 412CF, 222, 222B, and 222U
- Agusta Bell Models: AB-412 and AB-412EP
- Eurocopter Deutschland GmbH Models: BK117 A-1, BK117 A-3, BK117 A-4, BK117 B-1, BK117 B-2

BK117 C-1, BO-105A, BO-105C, BO-105S and BO-105LS A-1

Pratt & Whitney Engine Services, Inc., 249 Vanderbilt Avenue, Norwood, MA 02062, Phone 781-762-8600, Fax 781-762-2287

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- Eurocopter France Models: AS-350B, AS-350B1, AS-350B2, AS-350BA, AS-350C, AS-350D, AS-350D1, AS-355E, AS-355F, AS-355F1 and AS-355F2

- Honeywell T53 Engine Models: T5309A, T5309B, T5309C, T5311A, T5311B, T5313B, T5317A, T5317A-1and T5317B
- Sikorsky Aircraft S76 Models: Sikorsky S-76A, S76A+, S76A++, S76C

ADAS+ certified on:

- -Air Tractor Models: 402, 502, 602 and 802 -Cessna Models: 208, 208A and 208B
- -Raytheon Models: C90 Series, 200 Series, 300 Series and 1900 Series

ADASh certified on:

-Cessna Models: 560 Ultra/Oncore -Beechcraft Model: 400A(400XP) TrendCheck+ certified on:

Pratt & Whitney Canada **Engines Models: PT6A Series** 

ADASd certified on:

- -Augusta Models A109E and A119
- -Bombardier Model DHC-8-300
- -Cessna Models 560XL and 560XLS

#### IMPLEMENTATION AND COMPLIANCE

Implementation Date: Not Applicable

Compliance: Recommended but not mandatory.

#### **SUMMARY DESCRIPTION**

Processor will not communicate with MLP program and trend lamp is on solid.

Processor data flash erasure is being interrupted by aircraft power surges, thus causing data flash to be put into an unknown state. If this issue occurs send processor to P&WES for upgrade to version 5.0.6 software.

#### **FAA/DER APPROVAL INFORMATION**

The engineering design change represented by this Service Bulletin has been shown to comply with the applicable Federal Aviation Regulations and is FAA approved.

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#### **TOOLING**

N/A

#### **MATERIALS COST & AVAILABILITY**

Version 5.0.6 software upgrade is free of charge. P&WES will <u>not</u> cover the shipping costs to our facility and the labor for removal/reinstallation of processor.

#### **MANPOWER**

Estimated at 0.5 Man-hours to remove and replace the processor.

#### **ACCOMPLISHMENT INSTRUCTIONS**

P&WES can accomplish the upgrade of the code in the processor. Units sent back to P&WES will be upgraded and shipped to the customer within 5-10 business days of receipt. Call P&WES Customer Support for questions.

- 1. Obtain RMA (Return Material Authorization) from P&WES Customer Support.
- \*\*PLEASE NOTE THAT ANY PROCESSOR SENT BACK FOR SB COMPLIANCE WITHOUT AN RMA# WILL INCUR A \$525.00 USD CHARGE FOR PROCESSING FEES.\*\*
- 2. Remove processor from aircraft.
- 3. Send processor to P&WES for the upgrade.
- 4. Install updated processor into aircraft.
- 5. Obtain latest version of MLP from TurbineTrackerTM
- 6. Upload current configuration file into processor
- 7. Record service bulletin compliance in Aircraft or Engine log books.

#### **WEIGHT & BALANCE**

No effect on aircraft weight and balance.

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#### **ELECTRICAL LOAD DATA**

No effect on aircraft electrical load.

#### SOFTWARE ACCOMPLISHMENTS SUMMARY

Enhancement - Program Flash Routines and Memory Recover Algorithm

#### **PUBLICATIONS AFFECTED**

None

#### **INTERCHANGEABILITY & SUBSTITUTION OF PARTS**

None

#### **REFERENCES**

None

#### **CONTACT INFORMATION**

Pratt & Whitney Engine Services, Inc. Altair Engine Diagnostic Solutions Customer Support 249 Vanderbilt Avenue Norwood, MA 02062 Tel. (781) 762-8600

Email: turbinetrackersupport@altairavionics.aero

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