



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
US ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND
AVIATION AND MISSILE RESEARCH, DEVELOPMENT, AND ENGINEERING CENTER
5400 FOWLER RD
REDSTONE ARSENAL, ALABAMA 35898-5000

AMSRD-AMR-AE-D

6 October 2004

MEMORANDUM FOR AMCOM Procurement Office (AMSAM-AC-LS-A, Mr. Jim Lang)

SUBJECT: US Army Research and Development Command (USA RDECOM) Aviation Engineering Directorate (AED) Authorization to use Version 12 Software and all Subsequent Releases of Version 12 Software, Herein Identified as Version 12.xx, for Avion Manufacturing, Inc. Universal Static Balance Fixture (TTS 9621)

1. Avion Manufacturing, Inc designed, built and tested the Universal Static Balance Fixture (USBF) to perform static balancing of main rotor blades for OH-58D, UH-1H, CH-47D/MH-47E, AH-1S, AH-64 and UH-60 series helicopters. The USBF provides an easy-to-use tool that accurately measures the blade's span and chord moments and generates recommended weight adjustments to return the blades to the original manufacturer's production specification. Avion Manufacturing, Inc has recently introduced an improved version of software, Version 12.xx.
2. AED has performed a commercial validation and verification of the USBF, Version 12.xx software. Main rotor blades of the OH-58, UH-1H, CH-47D/MH-47E, and AH-64 series aircraft were successfully static balanced using a fixture with Version 12.xx software.
3. Since the USBF is to be utilized as test equipment to measure the critical characteristics of Critical Safety Items, the self-calibration and tolerance measuring capabilities of the USBF were evaluated by AED. This evaluation ensured adherence to US Army Aviation and Missile Command QE-STD-2, Revision A and Original Equipment Manufacturers' standards for each main rotor blade.
4. The USBF, part number AV-001-002, with Version 12.xx software, is capable of enhancing the U.S. Army's main rotor blade static balancing and is authorized for use at all levels of maintenance. This memorandum for record is not an authorization to procure any material or services as "Sole Source". Procurement of the USBF and any spare parts must be accomplished through "Local Purchase" at this time. The sole purpose of this memorandum for record is to authorize the use of the USBF.

AMSRD-AMR-AE-D

SUBJECT: US Army Research and Development Command (USA RDECOM) Aviation Engineering Directorate (AED) Authorization to use Version 12 Software and all Subsequent Releases of Version 12 Software, Herein Identified as Version 12.xx, for Avion Manufacturing, Inc Universal Static Balance Fixture

5. The affected end items are as follows:

| <u>AIRCRAFT</u> | <u>BLADE PART NUMBER</u> | <u>BLADE NATIONAL STOCK NUMBER</u> |
|-----------------|--------------------------|------------------------------------|
| AH-1F | K747-003-403 | 1615-01-289-2694 |
| AH-64 | 7-31141200 (note 1) | 1615-01-147-4873 |
| | 7-311412000-3 (note 1) | 1615-01-310-4978 |
| | 7-311412000-5 (note 1) | 1615-01-332-0702 |
| CH-47D | 114R1702-37 (note 1) | 1615-01-145-7109 |
| | 11441702-38 (note 1) | 1615-01-145-7110 |
| MH-47E | 114R1702-37 (note 1) | 1615-01-145-7109 |
| | 114R1702-38 (note 1) | 1615-01-145-7110 |
| UH-60 | 70150-09101-041 (note 1) | 1615-01-074-5150 |
| | 70150-09101-043 (note 1) | 1615-01-106-1903 |
| OH-58D | 406-015-101-113 | 1615-01-239-7004 |
| UH-1H | 204-011-250-113 | 1615-01-092-1256 |

Note 1: If erosion protection is installed, this part number requires that the USBF be equipped with, and the blade be balanced with, the appropriate erosion protection blade software option.

6. All levels of maintenance may static balance the main rotor blades listed in paragraph 5. Balancing must be performed in accordance with procedures contained in the Avion Manufacturing Inc. Universal Static Balance Fixture Operator's Manual, Version 12.xx dated 28 October 2003 or later. The operator's manual is written for the Avion Manufacturing, Inc. part number AV-001-002. No additional tools to the AVUM shop set are necessary to static balance rotor blades.

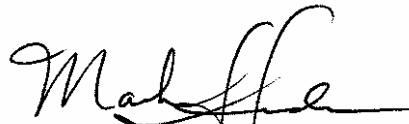
7. A copy of this memorandum for record shall be inserted into the Avion Manufacturing, Inc. USBF operator's manual as authority to utilize the fixture for the blades listed in paragraph 5.

8. This memorandum augments the memorandum dated 13 March 2002. Both Version 11.09 software and Version 12.xx are authorized for use.

AMSRD-AMR-AE-D

SUBJECT: US Army Research and Development Command (USA RDECOM) Aviation Engineering Directorate (AED) Authorization to use Version 12 Software and all Subsequent Releases of Version 12 Software, Herein Identified as Version 12.xx, for Avion Manufacturing, Inc Universal Static Balance Fixture

9. The points of contact for this action are Mr. Bruce Albert, AMSRD-AMR-AE-D, DSN 897-2350, extension 9814, or commercial (256) 705-9814, Bruce.Albert@rdec.redstone.army.mil and Mr. Bob Branhof, AMSRD-AMR-AE-A, DSN 897-2350, extension 9630 or commercial (256) 705-9630, Robert.Branhof@rdec.redstone.army.mil .

A handwritten signature in black ink, appearing to read 'M. Jude', with a stylized flourish extending from the end of the signature.

MARK J. JUDE
Chief, Apache Division