



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
UNITED STATES ARMY AVIATION AND MISSILE COMMAND
REDSTONE ARSENAL, ALABAMA 35898-5000

AMSAM-RD-AE-I-D-O

14 MAR 03

MEMORANDUM FOR Scout/Attack Helicopter Product Manager's Office (SFAE-AV-AS-ASH), Redstone Arsenal, AL 35898-5000

SUBJECT: Airworthiness Release for OH-58D Helicopters Desert Operations Power Assurance Check (3002R0)

1. References:

a. Memorandum, HQ USAAMCOM, AMSAM-RD-AE-I-D-O, 25 Feb 02, subject: Interim Statement of Airworthiness Qualification, Improved OH-58D(I) Helicopter (CDS2) (2428R0).

b. Technical Manual 1-1520-248-10, Operator's Manual for Army OH-58D Helicopter, 15 Nov 01, with all changes.

c. Modification Work Order 1-1520-248-50-15, 30 Oct 01, subject: Modification of OH-58D Helicopters to incorporate new Engine Barrier Filter (EBF) system which includes Inlet Barrier Filter (IBF) and an Engine Compressor Inductor Vent Filter (IVF) (NSN 1520-01-125-5476).

2. This memorandum constitutes an Airworthiness Release (AWR) in accordance with (IAW) Army Regulation (AR) 70-62 for flight of OH-58D CDS2 configured helicopters with the T703-AD-700A engine without the Engine Barrier Filter installed to perform an alternate Power Assurance Check for in Desert and Dust situations while deployed to Southwest Asia (SWA).

3. The configuration of subject OH-58D helicopters is defined in the Interim Statement of Airworthiness Qualification (ISAQ), reference 1a, Engine Barrier Filter not installed, reference 1c, and this release.

CAUTION

Any deviation from installation instructions as stated herein, is not authorized. Any deviation from installation instructions shall void this AWR.

NOTE

This AWR is temporary and does not render invalid any other AWRs currently covering the OH-58D helicopters indicated above. Any interference (physical or operational) between this installation and other installations shall be reported prior to flight to

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4. The flight envelope, operating instructions, procedures and limitations shall be IAW the Operator's Manual, reference 1b, the ISAQ, reference 1a, and this release. In the event of a conflict, the limitations in this release shall prevail.

a. Flight tests are currently being conducted to develop a Desert Operations Power Assurance Check. To date only the configuration denoted in this AWR has been tested. The results of this testing indicates the procedure will work provided the procedure is followed.

b. The Alternate procedure described in Para 4.c of this AWR can be used in place of Paragraph 8-26, Hover Check, of reference 1b.

c. Desert Operations Power Assurance Check.

CAUTION

The Desert Operations PAC may be performed only in extreme environmental conditions, such as sand, dust or snow. Performance of the Desert Operations PAC is restricted to air speeds of 30 to 60 KIAS while maintaining skid height IAW height velocity restrictions in reference 1b. The Desert Operations PAC should be performed prior to the beginning of mission execution (first flight of the day). The Maximum altitude tested to date has been 8000 feet DA.

NOTE

The Desert Operations PAC should be performed in STRAIGHT and LEVEL, FORWARD flight. The pilot should maintain constant airspeed while performing this procedure. If the indicated TQ% is less than the value shown on the Power Assurance Chart, the engine may not meet the performance data contained in Reference 1b. This would indicate a NO GO criterion. The aircraft must be returned to the maintenance facility. An entry shall be made on DA Form 2408-13-1/E and the aircraft shall not be flown again until maintenance is performed.

(1) IN-FLIGHT POWER ASSURANCE CHECK – PERFORM ON THE FIRST FLIGHT OF THE DAY

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- (a) Perform normal take-off.
- (b) After level off, note current altimeter setting. Set altimeter to 29.92 and climb to selected pressure altitude.
- (c) HTR and ENG ANTI ICE switches – OFF.
- (d) DC GEN LD % - Check below 35%
- (e) Stabilize ACFT for one minute with NG speed above 90%.
- (f) Aircraft stabilized in STRAIGHT and LEVEL, FORWARD flight with speeds of 30 to 60 KIAS.
- (g) FAT, TGT, ENG TQ, and PA - Record
- (h) Enter Power Assurance Chart (fig 8-2, reference 1b) at FAT and move up to the indicated TGT, then across to the current pressure altitude, then down to engine torque.
- (i) Set altimeter to current altimeter setting. Continue the mission or return to the maintenance facility as applicable.

5. Special Inspections and Instructions:

- a. The aircraft shall be inspected and maintained IAW applicable maintenance manuals, any associated Safety-of-Flight and Aviation Safety Action Messages, and reference 1a, ISAQ, as applicable. Any discrepancies shall be evaluated/repared prior to the next flight to ensure continued airworthiness of the helicopter.
- b. In the event any operating limit, or limits established by this release, is exceeded in addition to the normal entry on DA Form 2408-13, appropriate inspection plus special inspection for security and condition of modifications shall be performed prior to next flight. Any incident or malfunction of the aircraft suspected of being related to these configuration modifications shall be reported immediately to this Headquarters, US Army Aviation and Missile Command, AMSAM-RD-AE-I-D-O.

6. Aircraft Logbook Entries:

- a. In accordance with Department of the Army (DA) Pamphlet (PAM) 738-751, the following entries will be made on the DA Form 2408-13-1/2408-13-1-E and shall be perpetuated on each form during the period of installation or until superseded by another Airworthiness Release, or until reason for limitation is removed.

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- (1) Place a circled red "X" on the form IAW DA PAM 738-751. In the Fault Information Block, make the following entry: "Operate within limitations prescribed in the enclosed Airworthiness Release dated **14 MAR 03**."
 - (2) The remaining blocks in the Fault Information Block will be completed per DA PAM 738-751.
 - (3) For DA Form 1352 reporting purposes, the above write-ups shall not cause the aircraft to be reported as Partially Mission Capable (PMC). Aircraft that are nonstandard configured and operating under this release may be reported as Fully Mission Capable (FMC).
 - b. An exact copy of this Airworthiness Release describing the operating procedure, limitations, and restrictions will be inserted in the aircraft logbook and another copy inserted in the Aircraft Historical Record File.
7. This Airworthiness Release is terminated upon the completion of operations in SWA.
8. The point of contact for this effort is Mr. Martin Ohrenberg, AMSAM-RD-AE-I-D-O, DSN 897-2350 extension 9847 or commercial (256) 705-9847, or email at martin.ohrenberg@rdec.redstone.army.mil.



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