Van Horn Aviation, L.L.C.
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FAA APPROVED

ROTORCRAFT FLIGHT MANUAL SUPPLEMENT

For

VHA TAIL ROTOR BLADES

Installed On

ROBINSON AIR CRANE UH-1F, TH-1F, UH-1P HELICOPTERS

REGISTRATION No. _____

SERIAL No. _____

This supplement must be attached to the T.O. 1H-1(U)F-1, TH-1F, UH-1F and UH-1P Flight Manual when the Van Horn Aviation **VHA Tail Rotor Blades** are installed in accordance with STC No. SR02051LA.

The information contained herein supplements or supersedes the information in the Flight Manual only in those areas listed herein. For limitations, procedures, and performance data not contained in this supplement, consult the Flight Manual and applicable Flight Manual Supplements.

FAA Approved: _____
Manager, Flight Test Branch, ANM-160L
Federal Aviation Administration
Los Angeles Aircraft Certification Office
Transport Airplane Directorate

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LOG OF PAGES

Rev. No.	Page No.	Page Rev.	Description	FAA Approval
0	1 2 3 4 5 6	0 0 0 0 0 0	Original issue of complete supplement.	/s/ Seyed-Youssef Hashemi Mgr, Flt Test Br, ANM-160L FAA, Los Angeles ACO Transport Airplane Directorate Date: 4/17/2008
1	1* 2* 3* 4* 5* 6*	1 1 1 1 1 1	Revised supplement to incorporate Van Horn Aviation's new address.	/s/ Seyed-Youssef Hashemi Mgr, Flt Test Br, ANM-160L FAA, Los Angeles ACO Transport Airplane Directorate Date: 07/02/2012
2	1* 2* 3* 4* 5* 6*	2 2 2 2 2 2	Revised supplement to remove tail rotor part number.	[signature] Mgr, Flt Test Br, ANM-160L FAA, Los Angeles ACO Transport Airplane Directorate Date: March 2, 2017

Revised pages marked with "*" symbol.

NOTE
Revised text is indicated by a black vertical line.
Insert latest revision pages; dispose of superceded pages.

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SECTION I
DESCRIPTION

TAIL ROTOR

The tail rotor is a two-bladed, semi-rigid, delta hinged type employing preconing and underslinging. Each blade is connected to a common yoke by a grip and pitch change bearings. The blade and yoke assembly is mounted on the tail rotor shaft by a delta-hinge trunnion to minimize rotor flapping. Blade pitch is altered by movement of the tail rotor control pedals to control or maintain heading. This blade pitch change provides anti-torque control. Power to drive the tail rotor is supplied from a take-off on the lower aft section of the main rotor transmission.

TAIL ROTOR BLADES

The VHA 2042200-101/-103 tail rotor blade is an all composite blade employing an advanced high efficient airfoil. The blade length is the same as the existing production blade, but the chord has been increased by .80 inches. Erosion protection is provided by a full span stainless steel abrasion strip adhesively bonded to the leading edge. Stainless steel bushings are pressed into the inboard end, which react to the attachment bolt loads. The blade is constructed primarily of carbon/epoxy unidirectional tape. The grip plates, tip closure and root closure are fabricated from fiberglass/epoxy fabric. The blades are statically balanced at the factory using a brass balance weight threaded into the tip closure. The interior of the blade is filled with closed cell rigid foam.

SECTION II
NORMAL PROCEDURES

ENGINE RUNUP

4.(a.)(4) Tail Rotor Controls – CHECK (Move pedals slowly to verify that Tail Rotor Pitch change can be make, “BOOST OFF”, and moves smoothly without vibration.

NOTE

Without hydraulic boost and with the VHA 2042200-101/-103 tail rotor blades installed, a significantly higher force will be required to move the left pedal forward than to move the right pedal forward. However, little or no pedal force is required to maintain pedal position.

SECTION III
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NOTE

Without hydraulic boost and with the VHA 2042200-101/-103 tail rotor blades installed, a significantly higher force will be required to move the left pedal forward than to move the right pedal forward. However, little or no pedal force is required to maintain pedal position.

SECTION IV
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No change.

SECTION V
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No change.

SECTION VI
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BOOST OFF CHARACTERISTICS

NOTE

Without hydraulic boost and with the VHA 2042200-101/-103 tail rotor blades installed, a significantly higher force will be required to move the left pedal forward than to move the right pedal forward. However, little or no pedal force is required to maintain pedal position.

SECTION VII
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No change.

SECTION VIII
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No change.

SECTION IX
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NOTE

Without hydraulic boost and with the VHA 2042200-101/-103 tail rotor blades installed, a significantly higher force will be required to move the left pedal forward than to move the right pedal forward. However, little or no pedal force is required to maintain pedal position.

APPENDIX I
PERFORMANCE DATA

No change.