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Federal Aviation Administration

Memorandum

Date: March 15, 2016
To: Shawn Malekpour, Chicago Aircraft Certification Office, ACO-116C
From: Greg Bourne, Aviation Safety Inspector, Fort Worth Aircraft Evaluation Group, FTW AEG
Subject: Instructions for Continued Airworthiness (ICA)

The following ICA was accepted:

Project Number/STC Number/	ST07957CH-R
FTW AEG File No.	
Date Accepted	March 15, 2016
Company/Applicant	Airwolf Aerospace, LLC
ICA Title	Instructions for Continued Airworthiness For Airwolf Replacement Main Rotor Blade Tension-Torsion Strap Assemblies on Enstrom Helicopter Corporation TH-28, 480 & 480B Model Rotorcraft
Model Number	Enstrom TH-28, 480 & 480B & F-28/280 Model Series Rotorcraft
Report/Document Number	AA-EC0-084-280/-480-ICA
Revision Number	A
Date of ICA	March 07, 2016

The Airworthiness Limitations Section was not reviewed. Otherwise, the ICA complies with the applicable requirements of Appendix A to Federal Aviation Regulation Part 27.

Request you notify the applicant of this action.

Customer Feedback Form

In our continuing effort to improve the quality of service to our customers, Flight Standards Service would appreciate any comments you may have on our services and how to improve them. Your participation in meeting our goals for continuous improvement is greatly appreciated. Feedback form is located at:
http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/qms/

Instructions for Continued Airworthiness

For

**Airwolf Replacement Main Rotor Blade
Tension-Torsion Strap Assemblies**

on

**Enstrom Helicopter Corporation
TH-28, 480 & 480B Model Rotorcraft
&
F-28/280 Model Series Rotorcraft**

Prepared By: Joseph H. McGarvey, DER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
STATEMENT OF COMPLIANCE WITH AIRWORTHINESS STANDARDS

1. DATE
March 7, 2016

AIRCRAFT OR AIRCRAFT COMPONENT IDENTIFICATION

2. MAKE Enstrom Helicopter Corp.	3. MODEL NO. See Note	4. TYPE (Aircraft, Engine, Propeller, etc.) Aircraft	5. NAME OF APPLICANT Airwolf Aerospace, LLC
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LIST OF DATA

6. IDENTIFICATION	7. TITLE
Airwolf Aerospace, LLC Reports: AA-ECD-084-280/480 Installation, Rev. B, dtd. 3/7/16;	" Installation Instructions forThe Installation of Airwolf Aerospace,LLC Tension-Torsion Strap Assemblies , P/N AA-ECD-084-280/480, in Enstrom F-28/280 & TH-28/480 Model Series Helicopters"
AA-ECD-084-280/480-ICA, Rev. A, dtd. 3/7/16.	Airworthiness Limitations Section, Chapter 4 of below listed Instructions for Continued Airworthiness: " Instructions for Continued Airworthiness for Airwolf Replacement Main Rotor Blade Tension-Torsion Strap Assemblies on Enstrom Helicopter Corporation TH-28, 480 & 480B and F-28/280 Model Series Rotorcraft" NOTE: Eligible Models TH-28, 480, 480B & F-28/280 Model Series.

8. PURPOSE OF DATA

In support of STC SH03465CH

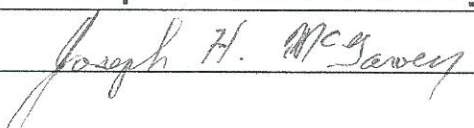
9. APPLICABLE REQUIREMENTS (List specific sections)

14CFR Part 27, Sections 27.571, Amdt. 27-26; 27. 27.1519, Amdt. 27-21; 27.1529, Amdt. 27-18 Airworthiness Limitations Section only; and Appendix A, Section A27.3(b)(3), Amdt. 27-24.

10. CERTIFICATION - Under authority vested by direction of the Administrator and in accordance with conditions and limitations of appointment under 14 CFR Part 183, data listed above and on attached sheets numbered None have been examined in accordance with established procedures and found to comply with applicable requirements of the Airworthiness Standards listed.

Recommend approval of these data
 Approve these data

I (We) Therefore

11. SIGNATURE(S) OF DESIGNATED ENGINEERING REPRESENTATIVE(S) Joseph H. McGarvey	12. DESIGNATION NUMBERS(S) DERT-410364-CE	13. CLASSIFICATION(S) Structures
		

Log of Revisions

Revision Number	Revision Description	Airwolf Aerospace, LLC Approved By	Revision Date
IR.....	Initial Release.....	Joe McGarvey, DER.....	July 1, 2014
A.....	Chap. 4: Increased Airworthiness..... Limitation for F-28/280 Model Series from 1200 flight-hours to 5 years from date of installation, subject to periodic inspections at 1200 flight -hour intervals. Chap. 5: Added 1200 flight- hour inspections and Changed Inspection/Rejection criteria from any broken wires to 25 at any corner or 200 total	Joe McGarvey, DER.....	March 7, 2016

List of Effective Pages

Page	Revision Level	Revision Date
1. Cover.....	IR.....	July 1, 2014
2. Log of Rev.....	A.....	Mar. 7, 2016
3. List Effective Pages.....	A.....	Mar. 7, 2016
4. Chapter 1.....	IR.....	July 1, 2014
5. List of Abbreviations, Definitions.....	IR.....	July 1, 2014
6. Chapter 4.....	A.....	Mar. 7, 2016
7. Chapter 5.....	A.....	Mar. 7, 2016
8. Chapter 6.....	IR.....	July 1, 2014

CHAPTER 1, INTRODUCTION

- 1 Type Design Change:** This Type Design change consists of the installation of Airwolf Aerospace, LLC Tension-Torsion Strap Assemblies as a direct replacement for the Bertrand Products, Corp. -manufactured Tension-Torsion Strap Assemblies, Enstrom Helicopter Corp. Part Number ECD084-1.
NOTE: There is no weight & balance change associated with this Type Design Change.
- 2 Scope:** The scope of this Instructions for Continued Airworthiness (ICA) focuses exclusively on Maintenance, Inspection & Airworthiness Limitations associated with this FAA-approved Type Design Change.
- 3 Purpose:** The purposes of this ICA are to apprise Owner/Operators who have modified their rotorcraft pursuant to this Type Design change: (1) When, where & how to inspect; and (2) When & under what conditions to replace the T-T Strap Assemblies to assure continued operational safety.
- 4 Arrangement:** This ICA is a single document comprised of four (4) chapters:
Chapter 1, Introduction
Chapter 4, Airworthiness Limitations
Chapter 5, Inspection Requirements & Overhaul Schedule
Chapter 6, Installation & Removal
- 5 Superseded Documents:** This ICA does not supersede any Enstrom Helicopter maintenance document. This ICA specifies how Owner/Operators who modify their rotorcraft with Airwolf Aerospace, LLC T-T Strap Assemblies must life-manage their rotorcraft in accordance with the inspection requirements and Airworthiness Limitations cited in this ICA.
- 6. Applicability:** This ICA is applicable to the following Enstrom Helicopter Corp. Models:
TH-28, 480 & 480B & F-28/280 Model Series.
- 7. Precautions:** There are no precautionary notes associated with this Type Design change other than those stated in Chapters 4 & 5 of this ICA
- 8. Referenced Publications:** Enstrom TH-28/480 Series Maintenance Manual, Revision 19, dated 4/25/13.
Enstrom F-28F & 280F Series Maintenance Manual, Revision 5, dated 1/2/14.
- 9. Distribution:** Airwolf Aerospace, LLC will maintain a list of all Enstrom Owner/Operators that have purchased its T-T Strap Assemblies, and should the need arise to modify this ICA, the revision will be sent to all Owner/Operators. For Owner/Operators having internet access, the latest revision to this ICA will be available for downloading from the Airwolf Aerospace, LLC website:
<http://www.AirwolfAerospace.com>

10. List of Abbreviations:

Abbreviation	Definition
CFR.....	Code of Federal Regulations
DER.....	Designated Engineering Representative
FAA.....	Federal Aviation Administration
ICA.....	Instructions for Airworthiness
LLC.....	Limited Liability Corporation
MM.....	Maintenance Manual
RPM.....	Revolutions Per Minute
T-T.....	Tension-Torsion

CHAPTER 4, AIRWORTHINESS LIMITATIONS

Airworthiness Limitations

For TH-28/480 Model Series:

(1) 1200 flight hours from date of installation

OR

(2) 36 months from date of installation,
whichever occurs first.

For F-28/280 Model Series:

5 Years from the date of installation subject to periodic inspections at 1200 flight – hour intervals.

The Airworthiness Limitations Section is FAA approved and specifies inspections and other maintenance required under 14CFR 43.16 and 14CFR 91.403 of the Federal Aviation Regulations unless an alternate program has been FAA approved.

FAA Approved


for Karol Mordasiewicz,
Manager, Airframe & Administrative Branch
Chicago Aircraft Certification Office
Des Plaines, IL 60018

3/8/16
Date

CHAPTER 5, INSPECTION REQUIREMENTS & OVERHAUL SCHEDULE

1) Inspection Requirements

(A) When to Inspect: There are scheduled inspections for the Tension-Torsion Strap Assemblies at 1200 flight – hours from the date of installation and at 1200 flight -hours intervals thereafter. Additionally, there is a required conditional inspection that must be conducted following the occurrence of a Main Rotor Overspeed as follows:

- (1) Following 385 to 405 RPM for 5 second; or
- (2) Following 406 to 420 RPM

NOTE: When 420 RPM is exceeded, remove T-T Strap Assembly and return to Enstrom for inspection, overhaul/replacement.
Reference: Enstrom TH-28/480 Model Series Maintenance Manual, Rev. 19, dated 4/25/13 or later FAA-accepted revision.

(B) How to Inspect/ Rejection Criteria: Visually inspect each T-T Strap Assembly, and replace with an airworthy assembly, any assembly exceeding any one of the below listed rejection criterion:

- 1) There are 25 or more broken wires (50 wire ends) at any corner, or a total of 200 or more broken wires (400 wire ends) protruding through the urethane coating; or
- (2) There is evidence of a crack in either Bushing.

(C) Required Consultation with Airwolf Aerospace,LLC: Should results of the T-T Strap Assembly's visual inspection reveal evidence of any of the below listed conditions, Owner/Operators must consult with Airwolf Aerospace,LLC before returning the T-T Strap Assembly to service:

- 1) Cracks in the Urethane Coating;
- 2) Delamination of the Urethane Coating; and
- 3) Strap swelling or bulging

CHAPTER 6, INSTALLATION & REMOVAL

- (A) Installation:** Install T-T Strap Assemblies in accordance with Enstrom TH-28/480 Maintenance Manual, Revision 19, dated 4/25/13 Section 9-18 B ,paragraphs (1) through (10) , page MM-9-46; and paragraph 9-18 C. , paragraph (17), page MM-9-49.
- (B) Removal:** Disassemble T-T Strap Assemblies from the Main Rotor Retention Assembly in accordance with Enstrom TH-28/480 Maintenance Manual, Revision 19, dated 4/25/13 Section 9-15 B., paragraphs (1) through (8), pages MM-9-31 and MM-9-32.