

Master Data Listing

Aeronautical Designs: Replacement Comanche Stabilator Horn P/No ADS 1008020828

Revisions Notes

This report at its latest revision status superseded all previous revisions. Only a total reprint of the report promulgates revisions. All pages bear the same revisions/date status

Rev No.	Revision Date	Signature	Details of Change
0	10 Nov 2010		Original Issue
1	18 Nov 2010		Updated Report Revision Status
2	6 July 2012		Drawing 1010280280 Updated to Rev 3, P/No Reference in Title Corrected
3	25 Feb 2013		Upgrades to Reflect Document Package as it has been revised for FAA Acceptance
4	22 May 2013		Upgraded to Reflect Document Revision numbers as it has been further revised for FAA Acceptance and to incorporate additional reports recommended by the FAA. Changes made by this revision are coloured Blue (the same as this text) to distinguish these changes
5	25 May 2013		Additional corrects made to report references as amended for FAA Acceptance. Changes made by this revision are coloured green (the same as this text) .
6	17 June 2013		Correction of Dwg No 1008020828 which was incorrectly listed.
7	10 July 2013		New Document ADS 100517-1-15-FAA added. This document is applicable to the FAA STC approval.

1. Scope

This report lists the documentation which forms the Type Data and Justification Package for the subject component.

2. Type Data Listing

Document Number	Document Type	Revision	Date	Title / Comments
FAA AC43-13-1b	Manual			Advisory Circular Acceptable, Techniques, and Practices – Aircraft Inspection and Repair
PA24 Comanche Service Manual	Manual			Piper Publication Number 753-516 at the latest Revision
Twin Comanche Service Manual	Manual			Piper Aircraft Publication 753-645 at the latest revision
ADS 1010250946	Drawing	2	25 Oct 2010	Stabilator Horn Assembly Drawing
ADS 1008020828	Drawing	3	24 Feb 2012	Stabilator Horn Manufacturing Drawings
ADS Tolerance -01	Drawing	0	20 June 2011	Tolerance Specification Drawing
ADS 100517-1-14	Report	8	21 Feb 2013	Installation Instructions Covering the incorporation of the modification.
ADS 100517-1-15	Supplement	5	5 Jul 2011	Instructions for Continuing Airworthiness.
ADS 100517-1-15-FAA	Supplement	7	11 July 2013	Instructions for Continuing Airworthiness, (Applicable to FAA STC Approval)

3. STC Data Package Listing

Data Reference	Form	
ADS 100517-1-A01 Rev 0 Dated	Form	CASA Form 733: Application for STC : Stabilator Horn

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REPORT NO
ADS 100517-1-MDL

PROJECT: COMANCHE STABILATOR HORN REPLACEMENT

CAR 3	Standard	
FAA TCDS 1A15 (Rev 34 Dated 7 Aug 2007)	Data Sheet	TCDS Covering PA-24, PA-24-250, PA-24-260, PA-24-400
FAA TCDS A1EA (rev 17 Dated 7 Aug 2006)	Data Sheet	TCDS Covering PA-30, PA-39, and PA-40
Mil Handbook 5J (Dated 31 January 2003)	Handbook	Metallic Materials and Elements for Aerospace Vehicle Structures
ADS 100517-1- IP1 (Rev 1) Original Dated 27 Aug 2010)	Issue Paper	Certification Basis for Project
ADS 100517-1-IP2 (Rev 2 Dated 27 Aug 2010)	Issue Paper	Acceptance of Maximum Pilot Effort condition as a replacement for Aerodynamic Hinge Moment calculations for the Horizontal Stabilator
ADS 100517-1-IP3 (Original dated 30 Aug 2010)	Issue Paper	Acceptance of simplified means of compliance with Fatigue Requirements
ADS 100517-1-01 (Rev 0 Dated 25 Jul 2010)	Report	Design Appraisal and Summary of the Proposed Project Plan.
ADS 100517-1-01-01 (Rev 0)	Report	Supplementary Report: balance Arm length Supporting Data
ADS 100517-1-02 (Rev 1 Dated 10 Sept 2010)	Report	Design Loads Determination: Comanche Stabilator Horn
ADS 100517-1-03 (Rev 3 Dated 7 Feb 2012)	Report	Fatigue Life Management : Replacement Comanche Stabilator Horn
ADS 100517-0-04 (Rev 4 Dated 24 Sept 2010)	Report	Test Plan: Static Load Testing of the Stabilator Horn P/No ADS 1008020828
ADS 100517-1-06 (Rev 0 Dated 21 Sept 2010)	Report	Conformity Inspection Report: Comanche Stabilator Horn (P/No ADS 1008020828, S/No 002)
ADS 100517-1-07 (Rev 1 Dated Feb 2013)	Report	Test Report: Static load Testing of Comanche Stabilator Horn P/No ADS 1008020828
ADS 100517-1-08 (Rev 0 Dated 5 Oct 2010)	Report	Analytical Report: Comanche Stabilator horn P/No 1008020828, Strength Justification in FX Direction.
ADS 100517-1-09 (Rev 2 Dated 5 July 2011)	Report	Test Plan: Ground Vibration Survey: Comanche Stabilator Assembly
ADS 100517-1-10 (Rev 4 Dated 5 April 2013)	Report	Design Appraisal: Comanche Stab Horn; Resistance to Stress Corrosion Cracking.
ADS 100517-1-11 (Rev 0 Dated 12 Oct 2010)	Report	Design Appraisal and Test Plan: Evaluation of the use of LOCTITE in the Balance Arm to Stabilator Horn Joint.
ADS 100517-1-12 (Rev 1 Dated Feb 2013)	Report	Test Report: Ground Vibration Survey: Comanche Stabilator Assembly
ADS 100517-1-13 (Rev 1 Dated Feb 2013)	Report	Test Report: Static Load testing of Comanche Stabilator Horn P/No 1008020828 with Clearance Fit Joint
ADS TR 100915-01 (Rev 0 dated 15 Sept 2010)	Report	Test Report: Strain Gauge Survey of Original Piper Stab Horn under bolt clamp up
ADS TR 100915-02 (Rev 1 dated Feb 2013)	Report	Test Report: Strain Gauge Survey
ADS 100517-1-Ref 01	Test Procedure	ADS Procedure : Aircraft Ground Vibration Tests: Conducting the Test, and Data Processing
ADS 100517-1- Ref 02	Presentation	Presentation by ICS at the Aging Conference Kansas City 2009
ADS 100517-1- Ref 03	Presentation	Presentation by ICS on Cracked Torque Tube Horn Survey Results_Rev A
ADS 100517-1-Ref 04	Document	List of Critical Dimensions for Stabilator Horn and associated components. (supplied by Hans Neubert (ICS USA)

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ADS 100517-1-MDL

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ADS 100517-1-Ref 05	Document	NAIR Examination of Piper Stabilator Horn Assembly_Rev6
ADS 100517-1-Ref 06	Hand Notes	Collage of information on Stress Corrosion Cracking, Supplied by Marvin Nuss (FAA)
ADS 11215-1 (Rev 1) Dated 20 Oct 2012	Report	Discussion Paper (100517-1-03 SRev 1 Section 5-2)
ADS 1007220811	Drawing	Tooling Bush 5/16" Dia Long
ADS 1007221324	Drawing	Tooling Bush 5/16" Dia Short
ADS 1007230639	Drawing	Alignment Key 3/16" Diameter
ADS 1007230930	Drawing	Alignment key 1/4" Diameter