

**DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION**

**A00009DE**  
Revision 10  
Triton Aerospace LLC  
(previously Adam Aircraft)  
A500  
Issue Date: May 11, 2005  
Revision Date: April 29, 2010

**TYPE CERTIFICATE DATA SHEET NO. A00009DE**

This data sheet which is part of Type Certificate No. A00009DE prescribes conditions and limitations under which the product for which the type certificate was issued meets the Airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: Triton Aerospace LLC  
11768 Westar Lane, Suite B  
Burlington, WA 98233

Previous Type Certificate Holders:  
(prior to January 27, 2010) Triton America LLC  
1905 Skyline Way  
Anacortes, WA 98221

(prior to April 28, 2009) AAI Acquisition, Inc.  
12876 E. Adam Aircraft Circle  
Englewood, CO 80112

(prior to April 15, 2008) Adam Aircraft  
12876 E. Adam Aircraft Circle  
Englewood, CO 80112

**I. Model A500, 6PCLM (Normal Category), Approved May 11, 2005**

Engines (Front & Rear) Teledyne Continental Motors TSIO-550-E,  
Engine Type Certificate E5SO

Fuel 100LL (blue) minimum grade aviation gasoline

Engine Limits Maximum takeoff power 350 horsepower at 2700 rpm and 38.5 In. Hg.  
(limited to 5 minutes maximum)  
Maximum continuous power 324 horsepower at 2500 rpm and 38.5 In.  
Hg. (continuous full rich)  
See Engine Type Certificate Data Sheet E5SO for additional limitations

Propeller and Propeller Limits Hartzell Model PHC-H3YF-2UF/FC7693DF (Front)  
Hartzell Model PHC-H3YF-2LUF/FLC7693DF (Rear)  
Hartzell Spinner Assembly Part Number D4512-5LP  
Propeller Type Certificate P35EA  
(See NOTE 4 for rear Propeller Vibration Limits.)  
Maximum Diameter: 78 inches  
Minimum Diameter: 76 inches  
Number of blades: 3  
Feathering: 81.1° +2°/-0° (Front)  
78.1° ±1° (Rear)  
Low Pitch: 16.9° ±0.2° (Front)  
16.4° ±0.2° (Rear)  
Pitch limits measured at 30 inches radial distance  
See Propeller Type Certificate Data Sheet P35EA for additional  
limitations

Airspeed Limits

Vo (7,000 lbs)

166 KCAS (164 KIAS)

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	Vo (6,150 lbs) 154 KCAS (152 KIAS) V <sub>FE</sub> (Fully Extended) 150 KCAS (147 KIAS) V <sub>NE</sub> 228 KCAS (225 KIAS)
C.G. Range	For A500 configured for 25,000 ft. Forward limits: 244.2 inches aft of datum up to 6,500 lbs with a straight line taper to 245.0 inches at 7,000 lbs.  Aft Limits: 252.0 inches aft of datum up to 7,000 lbs, with a straight line down to 250.5 at 5600 lbs.
	Datum: Station 0 (STN 0) is located 143.0 inches forward of forward bulkhead.  For all other configurations CG limits are specified in applicable AFM, see NOTE 5.
Empty Weight. C.G. Range	None.
Leveling Means	Cabin floor inside door
Weight Limits	Max. Ramp 7,050 lbs Max. Takeoff 7,000 lbs Max. Landing 6,750 lbs Max. Zero Fuel 6,500 lbs Min. Flying 5,600 lbs.
Minimum Crew	1 Pilot
Number of Seats	6 Total: 2 Front at 180 to 185 inches aft of datum 2 Center Forward at 239 inches, Aft at 231 inches 2 Aft at 278 inches aft of datum
Maximum baggage	100 lbs. at 287.85 aft of datum 0 lbs for aircraft 0004, 0006, 0007, 0008, 0009, 0010, prior to incorporation of Aircraft Modification Instructions (AMI-01-06-0009). See NOTE 9 for Design Change 2 (DC2) modification instructions.
Fuel Capacity	230 gallons total; 200 gallons useable 180 gallons useable for Serial numbers 0004, 0006, 0007, 0008, 0009, 0010, prior to incorporation of AMI-01-06-0003 LH & RH wing tanks each at 258 inches aft of datum (See NOTE 1 for data on Weight and Balance)
Oil Capacity	Forward Engine - 12 quarts in sump plus 1 quart in filter at 116.0 inches aft of datum Aft Engine - 12 quarts in sump plus 1 quart in filter at 333.0 inches aft of datum
Maximum Operating Altitude	Takeoff 10,000 ft MSL Operating Altitude 25,000 ft MSL. For a listing of aircraft manufactured to a configuration limiting operating altitude to 12,500 ft or 18,000 feet prior to modifications, (See NOTE 9 for DC2 modification instructions.) Operating 12,500 ft MSL for serial numbers 0004 thru 0010 prior to incorporation of AMI 01-06-0010, or AMI 01-07-0004. Operating 18,000 ft MSL with incorporation of AMI 01-06-0010. Operating 25,000 ft MSL with incorporation of AMI 01-07-0004. Operating Altitude for serial number 0011, maximum operating altitude is 18,000 ft MSL prior to incorporation of AMI 01-07-0004.
Control Surface Movements	at the trailing edge: Elevator UP 27°±1° DOWN 17°±1°  Elevator Trim Tab UP 10°±2° DOWN 23°+0°/-1.0° Ailerons UP 24° ± 1° DOWN 9°±2°

Rudder	LEFT	$25^{\circ} \pm 1^{\circ}$	RIGHT	$25^{\circ} \pm 1^{\circ}$
Flaps	Cruise	$0^{\circ} \pm 1^{\circ}$		
	Takeoff	$15^{\circ} \pm 1^{\circ}$		
	Landing	$40^{\circ} \pm 1$ for Serial Numbers 0004 0006 thru 0010		
	Landing	$32^{\circ} \pm 1$ for Serial Numbers 0005, 0011 and up (Serial Number 0004,0006 thru 0010 upon incorporation of AMI-01-06- 0001, specified in NOTE 9.		

## Additional Limitations:

Limited Life Parts: Airframe 1200 flight hours  
(See NOTE 3)

Operations: Day and night, VFR / IFR  
Day/VFR for serial numbers 0004, 0006 thru 0010  
prior to incorporation of AMI-01-06-0001, specified in  
NOTE 9. Flight into known icing conditions is not  
approved

Environmental Limitations: No flight in temperatures:  
Below  $-40^{\circ}\text{F}$  ( $-40^{\circ}\text{C}$ )  
No takeoff below  $-7^{\circ}\text{F}$  ( $-22^{\circ}\text{C}$ )  
(See NOTE 5)

Aircraft configured with air-conditioning system installed by AMI-01-07-  
0008 must be operated in accordance with the AFM limitation restricting  
operation from takeoff to 1200 ft. AGL.

## Design Data:

The airplane shall be manufactured in accordance with the latest FAA  
approved revision of Master Drawing List:, Document E-01-000-01,  
Revision S, or later FAA approved revision.  
Serial numbers 0004, 0006, 0007, 0008, 0009, 0010, were  
manufactured in accordance with the FAA approved revision of Master  
Drawing List:, Document E-01-000-01, Revision R, prior to incorporation  
of AMI-01-06-0001, specified in NOTE 9.

## Serial Nos. Eligible

0004 and up.

## Certification Basis

14 CFR Part 23 effective February 1, 1965, as amended by 23-1 thru  
23-55 (Normal Category) and 14 CFR 36 as amended by 36-1 thru 36-  
25. Original application for type certification, dated March 23, 2001,  
extended to February 12, 2002, and reapplication on March 4, 2005.

Special Conditions:  
23-135-SC for High-Intensity Radiated Fields (HIRF). See NOTE 6.  
23-165-SC for Inflatable Four-Point Safety Belt with an Integrated  
Airbag Device

Findings of Equivalent Levels of Safety:  
Equivalent Levels of Safety findings (ACE-05-01) made to the  
provisions of 14 CFR 23.161(d). Refer to FAA ELOS letter dated  
January 4, 2005 for Adam model A500.

Exemptions:  
None

## Production Basis

The following Serial Numbers were produced under Type Certificate  
only: 0004, 0005. Prior to original certification of each aircraft, an FAA  
representative must perform a detailed inspection for workmanship,  
materials, conformity with the approved technical data, and a check of  
the flight characteristics

The following Serial Numbers were produced under an Approved  
Production Inspection System: 0006, 0007, 0008.

The following Serial Numbers were produced under PC number PC720NM: 0009 through 0012.

#### Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations must be installed in the aircraft for certification.

In addition to the above required equipment, the following equipment are also required:

1. Airplane Flight Manual and Pilot's Operating Handbook for the Adam Aircraft A500, document number C-01-001-01, Revision 1 for Serial Numbers 0004, 0006, thru 0010, prior to incorporation of AMI-01-06-0001, Rev C, specified in NOTE 9.
2. Airplane Flight Manual and Pilot's Operating Handbook for the Adam Aircraft A500, document number C-01-001-01, Revision A or later FAA approved revisions for Serial Numbers 0005, 0011 and up. Serial Numbers 0004, 0006 thru 0010 after incorporation of AMI-01-06-0001, specified in NOTE 9.
3. Kinds of Operation Required Equipment as defined in "Airplane Flight Manual and Pilot's Operating Handbook for the Adam Aircraft A500", Document No. C-01-001-01.

#### NOTES

##### NOTE 1

A current weight and balance report including list of equipment included in the certificated empty weight, and loading instructions when necessary, must be provided for each aircraft at the time of original certification. The certificated empty weight and loading corresponding center of gravity location must include unusable fuel of 180 lbs at (+258.0 inches) for model A500.

For Serial Numbers 0004, 0006, 0007, 0008, 0009, 0010, the certified empty weight and loading corresponding center of gravity location must include unusable fuel of 300 lbs at (+258.0 inches) prior to incorporation if AMI-01-06-0001, specified in NOTE 9.

##### NOTE 2

All placards specified in the FAA Approved Airplane Flight Manual and Pilot's Operating Handbook for the Adam Aircraft A500 (AFM), document number C-01-001-01 Rev - or later FAA approved revisions must be displayed in the airplane in the appropriate locations.

##### NOTE 3

Refer to Section 4 of the Instructions for Continued Airworthiness, Document No. C-01-001-02, for all airworthiness limitations.

##### NOTE 4

The rear engine must be equipped with Teledyne Continental Motor's part number 656018, Revision D, and 656019, Revision D, tail pipe assemblies. For Aircraft serial numbers 0004 – 0014, prior to incorporation of AMI-01-07-0008, the external shape of the rear cowling must be as defined by the following drawings: 01-88500-500, Revision D, 01-88541-500, Revision G, 01-88542-500, Revision D or later FAA approved revisions.

For Aircraft serial numbers 0004 – 0012, after incorporation of AMI-01-07-0008, and serial numbers 0015 and subsequent external shape of the rear cowling must be as defined by the following drawings: 01-88500-501 Rev-, 01-88541-501 Rev -, 01-88542-503 Rev -, o r later FAA approved revisions.

##### NOTE 5

Refer to FAA Approved Airplane Flight Manual and Pilot's Operating Handbook for the Adam Aircraft A500 (AFM), document number C-01-001-01, Revision 1 for additional environmental limitations for Serial Numbers 0004, 0006, 0007, 0008, 0009, 0010, prior to incorporation of AMI-01-06-0001, specified in NOTE 9.

Refer to FAA Approved Airplane Flight Manual and Pilot's Operating Handbook for the Adam Aircraft A500 (AFM), document number C-01-001-01, Rev A, or later FAA approved revision, for additional environmental limitations for Serial Numbers 0005, 0011 and up. Serial

Number 0004, 0006, 0007, 0008, 0009, 0010 after incorporation of AMI-01-06-0001, specified in NOTE 9

- NOTE 6 Installation of additional flight-critical electronic equipment will require review by the FAA Aircraft Certification Office to determine whether aircraft-level lightning and/or High Intensity Radiated Field (HIRF) testing is required.
- NOTE 7 Exterior colors are limited to those specified in Adam Aircraft "A500 External Paint Color Limitations" Document No. C-01-012-01.
- NOTE 8 Major structural repairs must be accomplished in accordance with FAA approved Adam Aircraft repair methods or other methods approved by the FAA.
- NOTE 9 Serial No. 0004, 0006, 0007, 0008, 0009, 0010 eligible with reconfiguration as per Aircraft Modification Instructions AMI-01-06-0001, Revision D, or later FAA approved revision. Aerodynamic modifications as per AMI-01-06-0003 are required on Serial No. 0004, 0006, 0008, 0009, 0010. Baggage upgrade for aircraft 0004, 0006, 0007, 0008, 0009, 0010, will require incorporation of AMI-01-06-0009. See Table 1 AMI Matrix below.
- NOTE 10 Post production installation of optional equipment may be installed on aircraft serial No's 0004 through 0012 as incorporation of design data contained in Aircraft Modification Instructions in AMI's listed in Table 2 AMI Matrix
- OR-

Configuration	AMI #	Description	Design Data					
			MDL R	MDL S	MDL T-V	MDL Y	MDL Z	MDL AB
DC2	AMI-01-06-0001	DC2 Upgrades	X	O	O	O	O	O
"	AMI-01-06-0002	E Exit Mods	X	O	O	O	O	O
"	AMI-01-06-0003	Aero Mods	X	O	O	O	O	O
"	AMI-01-06-0004	Powerplant Mods	X	O	O	O	O	O
"	AMI-01-06-0005	Pressurization Mods	X	O	O	O	O	O
"	AMI-01-06-0006	ECS/Dfog Mods	X	O	O	O	O	O
"	AMI-01-06-0007	Inst Panel Mods	X	O	O	O	O	O
"	AMI-01-06-0008	Autopilot Mods	X	O	O	O	O	O
"	AMI-01-06-0009	Interior Mods	X	O	O	O	O	O
18,000 ft	AMI-01-06-0010	18,000 ft Mods	X	X	O	O	O	O
25,000 ft	AMI-01-07-0004	25,000 ft Mods	X	X	X	X	O	O

Table1 AMI Matrix

Optional Equipment	AMI #	Options						
"	AMI-01-07-0001	Traffic	X	X	X	O	O	O
"	AMI-01-07-0002	Prop Heat	X	X	X	O	O	O
"	AMI-01-07-0003	Ann System Upgrade	X	X	X	O	O	O
"	AMI-01-07-0005	X-M Weather	X	X	X	O	O	O
"	AMI-01-07-0006	Windshield Heat	X	X	X	X	O	O
"	AMI-01-07-0007	Terrain	X	X	X	X	O	O
"	AMI-01-07-0008	Air Conditioning	X	X	X	X	X	X

Table 2 AMI Matrix

'X' denotes requirement for AMI to incorporate feature.

'O' denotes Option to install per AMI if not installed at production per type design.

.....END.....