

DepartmentofTransportation\_FederalAviationAdministration

# Supplemental Type Certificate

*Number* SA00888SE

*This certificate, issued to:*

Cascade Flying Service LLC  
903 Grinnell Road  
Garfield, WA 99130

*certifies that the change in the type design for the following product with the limitations and conditions therefor as specified hereon meets the airworthiness requirements of Part 21.25 of the Federal Aviation Regulations.*

*Original Product—Type Certificate Number:* See AML SA00888SE  
*Make:* Air Tractor  
*Model:* See AML SA00888SE

*Description of the Type Design Change:* **Option 1:** Install Walter M601-E11S engine and a Hartzell HC-B3TW-3/T10282N+4 propeller or a Walter M601-E11 engine and a Avia V508-E-AG 106/A propeller per the Master Drawing List and Installation Instructions given in Approved Model List SA00888SE. **(Note: Prior to July 17, 2002, the model M601-E11S engine was designated as the model M601-E11 engine.)**

**Option 2:** Install a Walter M601-D11 engine and Avia V508-E-AG 106/A propeller per Cascade Flying Service Master Drawing List CFS-MDL-0001 Rev G, dated June 15, 2004, and Cascade Flying Service Document CFS-IM-107, Rev A, dated July 29, 2003, "Installation Instructions for Walter Turbine Installation on Air Tractor 300 & 400 Series Ag Aircraft," or later FAA-approved revisions to these documents.

NOTE: The Air Tractor model AT-400, AT-402B, AT-502, AT-502B, and AT-503A airplanes are not eligible for modification under option 2.

*Limitations and Conditions:* Approval of this change in type design applies to the above model aircraft only. This approval should not be extended to other aircraft of these models on which other previously approved modifications are incorporated unless it is determined that the relationship between this change and any of those other previously approved modifications, including changes in type design, will introduce no adverse effect upon the airworthiness of that aircraft.

If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission. A copy of this certificate and the appropriate Airplane Flight Manual Supplement (SEE AML SA00888SE) must be maintained as part of the permanent records of the modified aircraft.

(See Continuation Sheet – Page 3)

*This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.*

*Date of application:* October 24, 1997  
*Date of issuance:* March 12, 2001

*Date reissued:* December 30, 2003  
*Date amended:* 12/30/03; 6/18/04; 10/15/04; 4/25/08



*By direction of the Administrator*

\_\_\_\_\_  
(Signature)  
Acting Manager, Seattle Aircraft  
Certification Office  
\_\_\_\_\_  
(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

This certificate may be transferred in accordance with FAR 21.47.

# Supplemental Type Certificate

## (Continuation Sheet)

*Number* SA00888SE

**Cascade Flying Service, LLC**

**Issued:** March 12, 2001

**Amended:** 12/30/03; 6/18/04; 10/15/04; 4/25/08

**Reissued:** December 30, 2003

*Limitations and Conditions: (cont'd)*

### 1. ENGINES

- a) NUMBER OF ENGINES 1  
 b) ENGINE MANUFACTURER WALTER  
 c) ENGINE MODEL NUMBER M601-E11/E11S  
 d) OPERATING LIMITS

Power Setting	SHp	Torque ft-lb	Max. ITT°C	Gas Speed Ng RPM	Prop Speed Np RPM	Oil Pressure psig (MPa)	Oil Temp °F (°C)
Take-off	751	1895 100%	735	36660 100%	2080	26.1-39.1 (.18 to .27)	+20-+85 (-6 to +29)
Max Cont.	657	1895 100%	690	35560 97%	1900	26.1-39.1 (.18 to .27)	+20-+85 (-6 to +29)

### e) POWERPLANT INSTRUMENT MARKINGS:

INSTRUMENT	Redline Minimum	Green Arc Normal	Yellow Arc Caution	Redline Maximum
Torque	N/A	0-100	100-106	106
Tach RPM Ng	60	60-97	97-100	100
Tach RPM Np	N/A	800-2080	N/A	2080
Temp ITT (°C)	N/A	430-690	690-735	735
Oil Press (MPa)	.12	.18-.25	.12-.18 & .25-.35	.35
Oil Temp (°C)	N/A	20-95	-20-+20	95
Fuel Press Eng (kPa)	N/A	0-120	N/A	120
Fuel Press Filter (psig)	2	N/A	N/A	N/A

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Department of Transportation Federal Aviation Administration

# Supplemental Type Certificate

## (Continuation Sheet)

*Number* SA00888SE

**Cascade Flying Service, LLC**

Issued: March 12, 2001

Amended: 12/30/03; 6/18/04; 10/15/04; 4/25/08

Reissued: December 30, 2003

**Engines (Continued)**

- f) NUMBER OF ENGINES 1  
 g) ENGINE MANUFACTURER WALTER  
 h) ENGINE MODEL NUMBER M601-D11  
 i) OPERATING LIMITS

Power Setting	SHP	Torque ft-lb	Max. ITT °C	Gas Speed Ng RPM	Prop Speed Np RPM	Oil Pressure psig (MPa)	Oil Temp °F (°C)
Take-off 5 min	604	1630 86%	735	36660 100%	1950	26.1 to 39.1 (.18 to .27)	+20 to +85 (-6 to +29)
Max Cont.	604	1630 86%	690	36110 98.5%	1950	26.1 to 39.1 (.18 to .27)	+20 to +85 (-6 to +29)

## j) POWERPLANT INSTRUMENT MARKINGS:

INSTRUMENT	Redline Minimum	Green Arc Normal	Yellow Arc Caution	Redline Maximum
Torque	N/A	0-86	86 - 92	92
Tach RPM Ng	60	60 - 98.5	98.5 - 100	100
Tach RPM Np	N/A	800-1950	N/A	1950
Temp ITT (°C)	N/A	430-690	690-735	735
Oil Press (MPa)	.12	.18-.25	.12 - .18 & .25 - .35	.35
Oil Temp (°C)	N/A	20-95	-20 - +20	95
Fuel Press Eng (kPa)	N/A	0-120	N/A	120
Fuel Press Filter (psig)	2	N/A	N/A	N/A

**2. PROPELLERS:**

- (a) Number of propellers  
 (b) Propeller Manufacturer  
 (M60-E11S engine only)

1  
Hartzell

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# Supplemental Type Certificate

(Continuation Sheet)

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**Cascade Flying Service, LLC**

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**Propellers (Continued)**

(c) Blade Model	T10282N+4
(d) Number of Blades	3
(e) Hub Model	HC-B3TW-3
(f) Propeller Type	Hydraulically Operated, Constant Speed, Full Feathering, Reversible
(g) Diameter	Maximum 106 inches Minimum 102 inches

(a) Number of propellers	1
(b) Propeller Manufacturer	Avia Propellers
(c) Blade Model	106/A
(d) Number of Blades	3
(e) Hub Model	V508E-AG
(f) Propeller Type	Hydraulically Operated, Constant Speed Full Feathering, Reversible.
(g) Diameter	Maximum 106 inches, no cutoff allowed

**-END-**

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