

Supplemental Type Certificate

Number SA00432SE

This certificate, issued to J. P. Instruments
P.O. Box 7033
Huntington Beach, CA 92646

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified herein meets the airworthiness requirements of Part 21 of the "Regulations."

Original Product—Type Certificate Number:

*See attached FAA Approved Model List (AML)
No. SA00432SE for a list of approved airplane
models and applicable airworthiness regulations

Note:
Model:

Description of the Type Design Change: Fuel flow transducer installed in accordance with J.P. Instruments (JPI) Fuel Flow Installation Manual, Report No. 503, Revision B, dated March 14, 1997, and manufactured in accordance with JPI Drawing List Report No. 500 Revision B, dated March 14, 1997.

Note: This STC requires the installation of either:

1. JPI Fuel flow option with the EGT-701 temperature indicating system per STC SA2586NM; or
2. JPI FS-450 fuel flow indicating system per STC SA00861SE.

Limitations and Conditions: Approval of this change in type design applies to the aircraft models listed on the AML 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. A copy of this certificate, and FAA Approved Model List (AML) No. SA00432SE must be maintained as part of the permanent records for the modified 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.

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: January 3, 1997

Date received:

Date of issuance: May 2, 1997

Date amended: December 18, 2000



By *John P. ...*
(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.

FAA Form 8112 (2-11-82)

This certificate may be transferred in accordance with FAR 21.47.

Subject: Permission to use STC.
To Whom It May Concern:

J.P. Instruments holder of STC SA00432SE and STC SA00861SE grants to the purchaser of the EDM-700 series (PN EGT-701) or the (FS-450) PN 450000 Series FUEL FLOW INSTALLATION permission to use the STC SA00432SE, or SA00861SE

Signed *PJZ*

Supplemental Type Certificate

Number SA00861SE

This certificate, issued to

J. P. Instruments
P.O. Box 7033
Huntington Beach, CA 92646

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified herein meets the airworthiness requirements of Part 21 of the "Regulations."

Original Product—Type Certificate Number:

*See attached FAA Approved Model List (AML)

Date:

No. SA00861SE for a list of approved airplane

Model:

models and applicable airworthiness regulations.

Description of the Type Design Change: Installation of J.P. Instruments (JPI) fuel flow indicating system in accordance with JPI Installation Manual FS-450, Report No. 400, Revision 1, dated August 16, 2000, or later FAA approved revision.

Limitations and Conditions: Approval of this change in type design applies to the aircraft models listed on the AML 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. A copy of this Certificate, FAA Approved Model List (AML) No. SA00861SE, and Airplane Flight Manual Supplement No. 1, dated December 18, 2000, or later FAA approved revision, must be maintained as part of the permanent records for the modified aircraft.

Note: This STC requires the installation of a fuel flow transducer per STC SA00432SE or aircraft listed on the FAA approved AML SA00432SE and that have been previously modified with a fuel flow indication system that utilizes the Flowscan fuel flow transducer, P/N: 201-A, 201-B, 201-C or 231 are eligible for installation for the FS-450. This certificate does not constitute installation approval of the fuel flow transducer.

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.

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: April 7, 2000

Date received:

Date of issuance: December 18, 2000

Date amended:



Adrian J. P. Instruments
(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.

FAA Form 8130-2 (10-43)



U.S. Department
of Transportation
**Federal Aviation
Administration**

Transport Airplane Directorate
Los Angeles Aircraft
Certification Office

3960 Paramount Boulevard
Lakewood, California 90712-4137

DEC - 1 2000

J.P. Instruments
Mr. Joseph Polizzotto
3402-I West MacArthur
Santa Ana, California 92704

Dear Mr. Polizzotto:

J.P. Instruments, Fuel Flowmeters;
Technical Standard Order C44b

Your application dated November 29, 2000, requesting the issuance of a Technical Standard Order (TSO) authorization in accordance with the procedural requirements of 14 Code of Federal Regulations (14 CFR) Part 21, Subpart O, has been reviewed. Based upon your data and statement of conformance certifying your article(s) has met the requirements of 14 CFR Part 21, Subpart O, and the minimum performance standards of TSO C44b (Ref. 14 § 21.305, authorization is hereby granted for the following.

MODEL NO.

DESCRIPTION

FS-450

450000() Fuel Flowmeter

The technical data submitted with your application have been accepted to fulfill the requirements for your TSO authorization and will be retained in our files. For your information the conditions and tests required for TSO authorization are minimum performance standards. The article(s) may be installed on or within a specific type or class of aircraft only if further evaluation by the user/installer documents an acceptable installation that is approved by the Administrator.

The quality control procedures contained in your quality control manual, currently on file at the Los Angeles Manufacturing Inspection District Office, and your statement that those procedures will be applied to the manufacture of the subject articles at the above address, are considered adequate in accordance with 14 CFR § 21.143.

Effective this date, your authorization to use TSO procedures is extended to include the subject article(s). You may identify this article(s) with the applicable TSO markings as required by TSO C44b.

Regulation		Method of Compliance
2) Scope	Types: Type I Type II	Type II -- Counter type instrument that indicates both fuel consumed and quantity remaining.
3) General Requirements	3.1.1 materials	
	3.1.2 Workmanship	
	3.2 Identification	
	3.3 Environmental	See section 5, 6, 7
	3.3.1 Temperature	Instrument Location: Power Plant Compartment PASSED
	3.3.2 Humidity:	PASSED
	3.3.3 Vibration	Power Plant Mounted: PASSED
	3.3.4 Altitude	PASSED
	3.4 Radio Interference	PASSED Additional testing see section 6.0
	3.5 Magnetic Effect	PASSED
	4.0 Detail Req.	
	4.1.1 Indicating Method	Type II instrument with a counter to indicate both fuel consumed and quantity remaining.
	4.2 Dial Markings	
	4.2.1 Finish	PASSED
	4.2.2 Numerals	PASSED
	4.2.3 Graduations	PASSED
	4.2.4 Counters	PASSED
	4.2.5 Visibility	PASSED
	4.3 Flow Direction	PASSED
	4.4 fuel Characteristics	All transmitters are specifically designed to operate with all aviation fuel.
	4.5 Power Variations	PASSED
	4.6 Safety Provision	PASSED
	5.0 to 5.5	PASSED
	6.0 Individual performance req. Additional testing: DO-160D.	Tested to Category "M". This category may be suitable for equipment and associated interconnecting wiring located in the electronic bay of an aircraft. Section 21.3 Conducted RF Emission a). Passed category M b). Passed category M Section 21.4 Radiated RF Emission Passed category M
	Section 21, Emission of Radio Frequency Energy	
	6.1 Scale Error	PASSED
	6.2 Dielectric	
	6.2.1 Insulation res.	Not Applicable
	6.2.2 Overpotential	Not Applicable
	6.2.2.1 Hermetically sealed	Not Applicable
	6.3 Leak test	PASSED
	7.1 Low and High temperature	PASSED
	7.2 Extreme Temperature Exposure	PASSED
	7.3 Magnetic Effect	PASSED
	7.4 Humidity	PASSED
	7.5 Vibration	PASSED
	7.5.1 Resonance:	
	7.5.2 Cycling:	PASSED
	7.6 Locked rotor	PASSED

J.P. INSTRUMENTS FAA APPROVED MODEL LIST (AML) FOR :

1- INSTALLATION OF THE EGT 701 SERIES FUEL FLOW TRANSDUCER NO SA00432SE

2- INSTALLATION OF THE (FS-450) 450000 SRIES STC SA 00861SE FUEL FLOW INSTRUMENT and TRANSDUCER

Issue Date: December 18, 2000

ITEM	AIRCRAFT MAKE	AIRCRAFT MODEL	TYPE CERT NUMBER	CERT BASIS	AML REVISION DATE
1.	Aerostar (Piper)	PA-60-600, 601, 601P PA-60-602P, -700P	A17WE	FAR 23	12-18-2000
2.	Aerostar (Piper)	650, 680, 700, 700A, 700CR	A17WE	FAR 23	12-18-2000
3.	Aero Commander	100-180	1A21	CAR 3	5-31-2001
4.	American Champion Aircraft Corp.	8KCAB	A21CE	FAR 23	12-18-2000
5.	American Champion Aircraft Corp.	7GCBC, 7ECA, 7GCB, 7GCAA, 7KCAB	A-759	CAR 4a	12-18-2000
6.	American Champion Aircraft Corp.	6GCBC	A21CE	FAR 23	4-9-2002
7.	American General Aircraft Holdings, Grumman	AA-5, AA-5A, AA-5B	A16EA	FAR 23	12-18-2000
8.	American General Aircraft Holdings, Grumman	AG-5B	A16EA	FAR 23	12-18-2000
9.	American General Aircraft Holdings, Grumman	AA-1, AA-1A, AA-1B, AA-1C	A11EA	FAR 23	4-9-2002
10.	American General Aircraft Holdings, Grumman	GA-7 Twin	A17SO	FAR 23	5-31-2001
11.	Aviat Aircraft Inc.	A-1, A-1A, A-1B	A22NM	FAR 23	4-9-2002
12.	Beagle (DeHavilland Support Ltd.) (British Aerospace)	B121 series 1 and 2, 3	A22EU	FAR 21.29 FAR 23	2-9-2004
13.	Beech	D-17S	A-849	CAR 3	11-30-2005
14.	Beech Twin	D18S, D18C, E18S, C-45G, TC-45G, C-45H, TC-45H, TC-45J or UC-45J (SNB-5), RC-45J (SNB-5P), G18S, JRB-8, 3N, 3NM, 3TM, P & W Wasps Jr.	A-765	CAR 3	5-31-2001
15.	Beech	E18S-9700	A-765	CAR 3	7-8-09
16.	Beech	35-C33A, E33A, E33C	3A15	CAR 3	5-31-2001
17.	Beech	(YT-34) 45, (T-34A, B-45) A45, (T-34B) D45 Cont. E-225-8	5A3	CAR 3	12-18-2000
18.	Beech	19A, M19A, A23-19, B19 C24R, B24R	A1CE	CAR 3	2-9-2004
19.	Beech	B23, C23	A1CE	CAR 3	12-18-2000
20.	Beech	35, A35, B35, C35, D35, E35, F35, G35, 35R	A-777	CAR 3	12-18-2000
21.	Beech	H35	3A15	CAR 3	7-8-09
22.	Beech	J35, K35, M35, N35, V35, V35A, V35B, 35-33, 35-A33, 35-B33, 35-C33, 35-C33A, S35, P35, N35 E33, F33, F33A, F33C, G33, 36, A36, A36TC, B36TC	3A15	CAR 3	12-18-2000
23.	Beech	V35, V35A, V35B	3A15	CAR 3	5-31-2001

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Issue Date: December 18, 2000

ITEM	AIRCRAFT MAKE	AIRCRAFT MODEL	TYPE CERT NUMBER	CERT BASIS	AML REVISION DATE
24.	Beech	G36	3A15	CAR 3	7-8-09
25.	Beech	B50, C50, D50	A1CE	CAR 3	7-8-09
26.	Beech	56TC, A56TC	3A16	CAR 3	7-8-09
27.	Beech	58, 58A	3A16	CAR 3	12-18-2000
28.	Beech	58P, 58PA, 58TC, 58TCA	A23CE	FAR 23	12-18-2000
29.	Beech	95-55, -A55, -B55, -B55A, -C55, C55A, D55, D55A, E55, E55A	3A16	CAR 3	12-18-2000
30.	Beech	B95A, D95A, E95, 95-B55B	3A16	CAR 3	11-30-2005
31.	Beech	G58	3A16	CAR 3	7-8-09
32.	Beech	60, A60, B60	A12CE	FAR 23	1-27-2003
33.	Beech	65-80, 65-A80, 65-A80-8800, 65-88, 65-B80	3A20	CAR 3	7-8-09
34.	Beech	76	A29CE	FAR 23	1-27-2003
35.	Beech	95, B95	3A16	CAR 3	12-18-2000
36.	Bellanca	14-19-2	1A3	CAR 3	4-9-2002
37.	Bellanca	17-30	1A3	CAR 3	12-18-2000
38.	Bellanca	17-30A, 17-31, -A,	1A3	FAR 23	2-09-2004
39.	Bellanca	17-31ATC	1A3	FAR 23	2-9-2004
40.	Boeing Stearman	75, A75, E75, A75L300, A75, B75, A75N1, A75J1	A-743	CAR 4a	12-18-2000
41.	Boeing (Stearman)	A75L3	A-743	CAR 4a	7-8-09
42.	Cessna	120, 140, 1B75A, E75N1, B75N1, D75N1	A-768	CAR 3	5-31-2001
43.	Cessna	140A	5A2	CAR 3	5-31-2001
44.	Cessna	150, 150A, B, C, D, E, F, G, H, J, K, L, M, A150K, A150L, A150M, 152, A152	3A19	CAR 3	4-9-2002
45.	Cessna	170, 170A, B	A-799	CAR 3	12-18-2000
46.	Cessna	172, 172A, B, C, D, E, F, G, H,	3A12	CAR 3	12-18-2000
47.	Cessna	172 I, K, L, M, N, P, Q	3A12	CAR 3	12-18-2000
48.	Cessna	172R	3A12	FAR 23	12-18-2000
49.	Cessna	172S	3A12	FAR 23	1-27-2003
50.	Cessna	172RG, R172E, F, G, H, J, K, 175, 175A, B, C, P172D	3A17	CAR 3	12-18-2000
51.	Cessna	177, 177A, 177B	A13CE	FAR 23	12-18-2000
52.	Cessna	177RG	A20CE	FAR 23	12-18-2000
53.	Cessna	180, 180A, B, C, D, E, F, G, H, J, K	5A6	CAR 3	12-18-2000
54.	Cessna	182, 182A, B, C, D, E, F, G, H, J, K, L, M, N, P, Q, R	3A13	CAR 3	12-18-2000
55.	Cessna	182T, T182T	3A13	CAR 3	5-31-2001
56.	Cessna	182 Series, Air Planes Corp.	3A13	CAR3	12-18-2000
57.	Cessna	182S	3A13	FAR 23	12-18-2000
58.	Cessna	R182, T182, TR182	3A13	CAR 3	12-18-2000

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- 1- INSTALLATION OF THE EGT 701 SERIES FUEL FLOW TRANSDUCER NO SA00432SE
- 2- INSTALLATION OF THE (FS-450) 450000 SERIES STC SA 00861SE
- FUEL FLOW INSTRUMENT and TRANSDUCER

Issue Date: December 18, 2000

ITEM	AIRCRAFT MAKE	AIRCRAFT MODEL	TYPE CERT NUMBER	CERT BASIS	AML REVISION DATE
58.	Cessna	185, 185A, B, C, D, E, A185E, A185F	3A24	CAR 3	12-18-2000
59.	Cessna	188, 188A, 188B, A188, A188A, A188B, T188C	A9CE	FAR 21	12-18-2000
60.	Cessna	195, -A, -B	A-790	CAR 3	12-18-2000
61.	Cessna	206, P206, P206A, B, C, D, E, TP206A, B, C, D, E, U206, U206A, B, C, D, E, F, G, TU206A, B, C, D, E, F, G	A4CE	CAR 3	12-18-2000
62.	Cessna	206H	A4CE	CAR 3	5-31-2001
63.	Cessna	T206H	A4CE	FAR 23	12-18-2000
64.	Cessna	207, 207A, T207, T207A	A16CE	FAR 23	12-18-2000
65.	Cessna	210, 210A, B, C, D, E, F 210-5, 210-5A, T210F, T10G, T210G, 210H, T210H, 210J, T210J, T210K, 210K, 210L, T210L, 210M, T210M, 210N, P210N, T210N, 210R, 210R, T210R	3A21	FAR 23	12-18-2000
66.	Cessna	T303	A34CE	FAR 23	1-27-2003
67.	Cessna	310, 310A, B, C, D, E, F, G, H, E310H, E310J, 310I, J, K, L, N, P, Q, R 310J-1, T310P, Q, R, T310Q, 310R, T310R	3A10	CAR 3	12-18-2000
68.	Cessna	320, A, B, C, D, E, F, 320-1, 335, 340, 340A	3A25	CAR 3	12-18-2000
69.	Cessna	336	A2CE	CAR 3	12-18-2000
70.	Cessna	337, 337A, B, C, D, E, F, G, H, T337B, C, D, E, F, G, H, M337B, P337H, T337H-SP	A6CE	CAR 3	12-18-2000
71.	Cessna	401, 401A, B, 402, 402A, B, C, 411, 411A, 414, 414A, 421, 421A 421B, 421C	A7CE	CAR 3	12-18-2000
72.	Cessna	404	A25CE	FAR 23	2-9-2004
73.	Cessna (Columbia)	LC41-550FG	A00003 SE	FAR 23	7-8-09
74.	Chaparral Motors (Great Lakes)	2T-1A-1, -2	A18EA	AERO BULL 7-A FAR 23	7-8-09
75.	Cirrus	SR-20	A00009 CH	FAR 23	5-31-2001
76.	Cirrus	SR-22	A00009 CH	FAR 23	1-27-2003
77.	Commander (Gulfstream America)	112, B, TC, TCA, 114, A, B, TC	A12SO	FAR 23	12-18-2000
78.	Consolidated Aeronautical (LanShe)	LAKE 250	1A13	CAR 3	7-8-09

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79.	De Havilland	DHC-2 Mk. I	A806	CAR 3	7-8-09
80.	Enstrom Helicopter	F-28A	H1CE	CAR 6	7-8-09
81.	EXTRA FLUGZEUGBAU	EA-300, S. L. EA-300/200	A67EU	FAR 21.29 FAR 23	12-18-2000
82.	EXTRA FLUGZEUGBAU	EA-400	A43CE	FAR 23	4-9-2002
83.	GENERAL AVIA	F20	A38EU	CAR 3	12-18-2000
84.	GENERAL AVIA	F22B F22C	A75EU	FAR 23	12-18-2000
85.	Grumman (Dennis Buehn)	HU-16C	A23NM	FAR 21.25	1-27-2003
86.	Grumman	G-44, G44A	A-734	CAR 4A	11-30-2005
87.	Helio (Alliance Aircraft)	H-295, HT-295, H-395	1A8	CAR 3	1-27-2003
88.	Helio (Alliance Aircraft)	H-391B	1A8	CAR 3	2-9-2004
89.	Helio (Alliance Aircraft)	H-391, H-800	1A8	CAR 3	11-30-2005
90.	Hughes Helicopter (Schweizer)	269A, 269A-1, 269B, 269C	4H12	CAR 6	7-8-09
91.	Jobmaster Company	DGA-15P (Army UC-70, Navy GH-1, GH-2, GH-3, NH-1)	A-717	CAR 4a	12-18-2000
92.	Lancair	LC40-550FG	A00003 SE	FAR-23	5-31-2001
93.	LanShe Aerospace LLC. (Micco)	MAC-145B	3A1	FAR23	2-9-2004
94.	Maule	MX-7-180, A, B MXT-7-180, A, B	3A23	CAR 3	12-18-2000
95.	Maule	MXT-7-160	3A23	CAR 3	1-27-2003
96.	Maule	M-7-260	3A23	CAR 3	12-18-2000
97.	Maule	M-7-260C, MT-7-260,	3A23	CAR 3	4-9-2002
98.	Maule	M-4-210, C, S, T, M-5-210C	3A23	CAR 3	12-18-2000
99.	Maule	M-5-180C, MX-7-180C, MX-7-235, -235C; M-4-220	3A23	CAR 3	7-8-09
100.	Maule	M-5-200	3A23	CAR 3	2-9-2004
101.	Maule	M-5-235C	3A23	CAR 3	12-18-2000
102.	Maule	M-4-220C	3A23	CAR 3	5-31-2001
103.	Maule	M-4-220S,T, M5-235,	3A23	CAR 3	11-30-2005
104.	Maule	M-6-235, MX-7-180AC	3A23	CAR 3	4-19-2002
105.	Maule	M-7-235A, B, C, MT-7-235	3A23	CAR 3	4-9-2002

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ITEM	AIRCRAFT MAKE	AIRCRAFT MODEL	TYPE CERT NUMBER	CERT BASIS	AML REVISION DATE
106.	Prop-Jet inc. (Meyers)	200B, C, D	3A18	CAR 3	4-9-2002
107.	Micco Aircraft Co.	MAC-145A,B	3A1	CAR 4a	7-8-09
108.	Moravan (Zlin)	Z 143 L	A76EU	FAR 23	4-9-2002
109.	Moravan (Zlin)	Z 242 L	A76EU	FAR 23	11-30-2005
110.	Revo Inc. LAKE	LA-4, LA-4-200 Lake Model -250	1A13	CAR 3 FAR 23	12-18-2000
111.	Mooney	M20A, B, C, D, E, F, G, J, K, M, R	2A3	CAR 3	12-18-2000
112.	Mooney	M20S	2A3	CAR3	4-9-2002
113.	Mooney	M20L	2A3	CAR 3	11-30-2005
114.	Mooney	M22	A6SW	CAR 3	12-18-2000
115.	Piper	PA-12, -12S	A-760	CAR 3	4-9-2002
116.	Piper	PA-18, PA-18S, PA-18 "105" (Special), PA-18S "105" (Special) PA-18A, PA-18 "125" (Army L-21A) PA-18S "125", PA-18AS "125", PA-18 "135" (Army L-21B), PA-18A "135", PA-18S "135", PA-18AS "135", PA-18 "150", PA-18A "150", PA-18S "150", PA-18AS "150", PA-18A, PA-18A "135", PA-18A "150"	1A2 AR-7	CAR 3 CAR 8.10b	5-31-2001
117.	Piper	PA20, PA20S, PA20"115", PA20S"115", PA20"135", PA20S"135"	1A4	CAR 3	12-18-2000
118.	Piper	PA22, PA22-108, PA22-135, PA22S-135, PA22S-150, PA22-160, PA22S-160	1A6	CAR 3	12-18-2000
119.	Piper	PA-22-150	1A6	CAR 3	2-9-2004
120.	Piper	PA 23, PA23-160, PA23-250, -E23-250	1A10	CAR 3	12-18-2000
121.	Piper	PA 23-235	1A10	CAR 3	4-9-2002
122.	Piper	PA24, PA24-250, PA24- 260	1A15	CAR 3	12-18-2000
123.	Piper	PA24-400	1A15	CAR 3	12-18-2000
124.	Piper	PA25-235, PA-25-260	2A8	CAR 3	2-9-2004
125.	Piper	PA28-140,-150,-151,-160,-161,-180, PA-28S-160, PA-28S-160 PA28R-180	2A13	CAR 3	12-18-2000
126.	Piper	PA28-181, PA28R-200, PA28R-201, -201T, PA28-201T, PA28RT-201, PA28RT-201T	2A13	CAR 3	12-18-2000
127.	Piper	PA28-235, -236	2A13	CAR 3	12-18-2000
128.	Piper	PA30, PA39, PA40	A1EA	CAR 3	12-18-2000

- J.P. INSTRUMENTS FAA APPROVED MODEL LIST (AML) FOR :
- 1- INSTALLATION OF THE EGT 701 SERIES FUEL FLOW TRANSDUCER NO SA00432SE
 - 2- INSTALLATION OF THE (FS-450) 450000 SERIES STC SA 00861SE FUEL FLOW INSTRUMENT and TRANSDUCER

Issue Date: December 18, 2000

ITEM	AIRCRAFT MAKE	AIRCRAFT MODEL	TYPE CERT NUMBER	CERT BASIS	AML REVISION DATE
129	Piper	PA31-350	A20SO	CAR 3 FAR 23	12-18-2000
130	Piper	PA31-325	A20SO	CAR 3	12-18-2000
131	Piper	PA31	A20SO	CAR 3	1-27-2003
132	Piper	PA31P	A20SO	CAR 3	11-30-2005
133	Piper	PA32-300, PA32S-300, PA32R-301, PA32R-300, PA32-301	A3SO	CAR 3	12-18-2000
134	Piper	PA32RT-300	A3SO	CAR 3	12-18-2000
135	Piper	PA32-260, PA32RT-300T, PA32-301T	A3SO	CAR 3	12-18-2000
136	Piper	PA32R-301T	A3SO	CAR 3	7-8-09
137	Piper	PA34-200, PA34-200T, -220T	A7SO	FAR 23	12-18-2000
138	Piper	PA-38-112	A18SO	FAR 23	7-8-09
139	Piper Twin	PA44-180, -180T	A19SO	FAR 23	12-18-2000
140	Piper	PA46-350P, PA46-310P	A25SO	FAR 23	12-18-2000
141	Robinson Helicopter Co.	R22, R22 ALPHA, R22 BETA, R22 MARINER	H10WE	FAR 27	12-18-2000
142	Robinson Helicopter Co.	R44	H11NM	FAR 27	12-18-2000
143	Robinson Helicopter Co.	R44 II	H11NM	FAR 27	7-8-09
144	Sky Enterprises (Republic)	RC-3	A-769	CAR 3	12-18-2000
145	Navion Aircraft Company LTD (Thompson)	Navion, Navion A, B with IO-470 Series eng.	A-782	CAR 3	12-18-2000
146	Navion Aircraft Company LTD (Thompson)	Navion, Navion A, B, C, D, E	A-782	CAR 3	12-18-2000
147	Navion Aircraft Company LTD (Thompson)	Navion F, G, H	A-782	CAR 3	12-18-2000
148	S.O.C.A.T.A. Aerospatiale	TB10, TB20, TB21, 200	A51EU	FAR 21.29	12-18-2000
149	S.O.C.A.T.A. Aerospatiale	TB9	A51EU	FAR 21.29	2-9-2004
150	Sial-Marchetti	F.260, F.260B, F.260C, F.260D, F.260E, F.260F	A10EU	FAR 23 CAR 10	12-18-2000
151	Sial-Marchetti	F20	A38EU	FAR 23 CAR 10	12-18-2000
152	Sky International (Pitts)	S-2B	A8SO	FAR 23	7-8-09
153	Univair Aircraft Corp. (Stinson)	108, 108-1, -2, -3, -5	A-767	CAR 3	7-8-09
154	Swift	GC-1B	786	CAR 4a	7-8-09

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Issue Date: December 18, 2000

ITEM	AIRCRAFT MAKE	AIRCRAFT MODEL	TYPE CERT NUMBER	CERT BASIS	AML REVISION DATE
155	Twin Commander Aircraft Corp.	500-A, 685	6A1 2A4	CAR 3	12-18-2000
156	Twin Commander Aircraft Corp.	500-B; 500-B, S, U with Merlyn STC SA01142SE or SA1212SE	6A1	CAR 3	11-30-2005
157	VARGA Augustair, Inc.	2150A	4A19	CAR 3	7-8-09
158	Waco	F5, F5C	ATC 542	AERO BULL 7-A	7-8-09

STC00432SE Issue Date: May 2, 1997

Revisions: June 23, 1997 (Rev B), October 9, 1997 (Rev C), July 16, 1999 (Rev D), June 5, 2000 (Rev E), May 31, 2001 (Rev F), April 19, 2002 (Rev G), January 27, 2003 (Rev H), February 9, 2004 (Rev I), November 30, 2005 (Rev J), July 8 2009 (Rev K)

STC000861SE Issue Date: December 18, 2000

Revisions: May 31, 2001 (Rev A), April 9, 2002 (Rev B), January 27, 2003 (Rev C), February 9, 2004 (Rev D), Nov 30, 2005 (Rev E), July 8 2009 (Rev F)

FAA Approved 
 Manager, Seattle Aircraft Certification Office
 Approval Date Jul - 6 2009