MINISTÉRIO DA DEFESA
COMANDO DA AERONÁUTICA
DEPARTAMENTO DE PESQUISAS E DESENVOLVIMENTO
CENTRO TÉCNICO AEROESPACIAL
INSTITUTO DE FOMENTO E COORDENAÇÃO INDUSTRIAL

CERTIFICADO DE HOMOLOGAÇÃO SUPLEMENTAR DE TIPO

(Supplemental Type Certificate)

NÚMERO (Number) **2004S10-05**

Este certificado, emitido com base na Lei nº 7565 "Código Brasileiro de Aeronáutica", de 19 de dezembro de 1986,
(This certificate, issued in the basis of the Law No. 7565 "Código Brasileiro de Aeronáutica", dated 19 December 1986,

é conferido ao (à): (is granted to:) J.P.Instruments.
3185-B Airway Ave
Costa Mesa, CA 92626
USA

por ter a modificação ao projeto de tipo do produto abaixo citado, observadas as limitações e condições (for having the change to the type design of the product mentioned below, with the limitations and conditions therefor as)

especificadas, satisfeito aos requisitos de aeronavegabilidade aplicáveis.
(specified hereon, met the applicable airworthiness requirements.)

Produto Original - Número do Certificado de Tipo: (Original Product – Type Certificate No:) * see attached CTA Approved Model List, I.R.,dated 27 Oct. 2004, or later CTA approved revisions.

Fabricante: (Manufacturer:) *

Modelo(s): (Model(s):) *

DESCRIÇÃO DA MODIFICAÇÃO AO PROJETO DE TIPO:
(Description of Type Design Change:)

Installation of fuel flow transducer in accordance with J.P.Instruments (JPI) Fuel Flow Installation Manual, Report No. 503, Rev. B, dated 14 Mar. 1997, and manufactured in accordance with J.P.Instruments (JPI) Drawing List Report No. 500, Rev. B, dated 14 Mar. 1997, or later approved revisions, respectively.
This CHST validates in Brazil the STC # SA00432SE, issued by FAA (USA).

LIMITAÇÕES E CONDIÇÕES:
(Limitations and Conditions:)

See continuation sheet for applicable data.

DATAS:
(Dates of:)

Do Requerimento: (Application:) 07 Apr. 2004 **Da emissão**: (Issue:) 27 Oct. 2004 **Da reemissão**: (Reissue:)

CLÁUDIO PASSOS SIMÃO Ten Cel Eng
Chefe da Divisão de Certificação de Aviação Civil
(Chief, Divisão de Certificação de Aviação Civil)

VENÂNCIO ALVARENGA GOMES Cel Eng
Diretor do Instituto de Fomento e Coordenação Industrial
(Director, Instituto de Fomento e Coordenação Industrial)

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Folha de Continuação ao
(Continuation Sheet to)

CERTIFICADO DE HOMOLOGAÇÃO SUPLEMENTAR DE TIPO
(Supplemental Type Certificate)

NÚMERO (Number) **2004S10-05**

LIMITAÇÕES E CONDIÇÕES:
(Limitations and Conditions:)

I. This CHST requires the installation of J.P.Instruments (JPI) fuel flow option with the EGT-701 temperature indicating system per CHST 2004S10-04 (CTA) which validates in Brazil the STC SA2586NM issued by FAA.

II. The approval of this type design change should not be extended to other aircraft of these models on which other previously approved modifications are incorporated unless it is determined by the installer 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.

III. 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.

IV. A copy of this Certificate shall be maintained as part of the permanent records of the modified aircraft.

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CTA APPROVED MODEL LIST FOR CHST 2004S10-05

ITEM	AIRCRAFT MAKE	AIRCRAFT MODEL(S)	TYPE CERTIFICATE Nº	CERTIFICATION BASIS
1	American Champion Aircraft Corp.	8GCBC 8KCAB	A21CE (FAA)	FAR 23
2	American Champion Aircraft Corp.	7GCAA 7GCBC	A-759 (FAA)	CAR 4a
3	American General Aircraft Holdings, Grumman	AA-5	A16EA (FAA)	FAR 23
4	American General Aircraft Holdings, Grumman	AA-1	A11EA (FAA)	FAR 23
5	Aviat Aircraft Inc.	A-1 (Husky)	9801 (CTA)	RBHA 23 / FAR 23
6	Beagle (British Aerospace)	B121 series 1 B121 series 2	A22EU (FAA)	FAR 21.29 FAR 23
7	Beech (Raytheon Aircraft Company)	3NM D18S E18S G18S C-45H TC-45H	A-765 (FAA)	CAR 3
8	Beech (Raytheon Aircraft Company)	E33A F33A G33 35-33 35-A33 35-B33 35-C33 35-C33A H35 K35 M35 N35 P35 S35 V35 V35A V35B 36 A36 A36TC B36TC	3A15 (FAA)	CAR 3
9	Beech (Raytheon Aircraft Company)	B24R C23	A1CE (FAA)	CAR 3
10	Beech Aircraft Corporation	35 A35 B35 C35 D35 F35	A-777 (FAA)	CAR 3

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ITEM	AIRCRAFT MAKE	AIRCRAFT MODEL(S)	TYPE CERTIFICATE Nº	CERTIFICATION BASIS
11	Beech Aircraft Corporation	58 95 95-55 95-A55 95-B55 95-C55 95-D55 95-E55 B95	3A16 (FAA)	CAR 3
12	Beech Aircraft Corporation	58P 58TC	A23CE (FAA)	FAR 23
13	Beech Aircraft Corporation	A60 B60	A12CE (FAA)	FAR 23
14	Bellanca	17-30A	1A3 (FAA)	FAR 23
15	Boeing Airplane Company	A75	A-743 (FAA)	CAR 4a
16	Cessna Aircraft Company	170 170A 170B	A-799 (FAA)	CAR 3
17	Cessna Aircraft Company	172 172A 172B 172C 172D 172E 172F 172G 172H 172I 172K 172L 172M 172N 172P	3A12 (FAA)	CAR 3
18	Cessna Aircraft Company	172R 172S	9705 (CTA)	RBHA 23 / FAR 23
19	Cessna Aircraft Company	172RG R172K 175	3A17 (FAA)	CAR 3
20	Cessna Aircraft Company	177 177A 177B	A13CE (FAA)	FAR 23
21	Cessna Aircraft Company	177RG	A20CE (FAA)	FAR 23
22	Cessna Aircraft Company	182S T182T	9706 (CTA)	RBHA 23 / FAR 23

CTA APPROVED MODEL LIST FOR CHST 2004S10-05

ITEM	AIRCRAFT MAKE	AIRCRAFT MODEL(S)	TYPE CERTIFICATE Nº	CERTIFICATION BASIS
23	Cessna Aircraft Company	180 180A 180B 180C 180D 180E 180F 180G 180H 180J 180K	5A6 (FAA)	CAR 3
24	Cessna Aircraft Company	182 182A 182B 182C 182D 182E 182F 182G 182H 182J 182K 182L 182M 182N 182P 182Q 182R R182	3A13 (FAA)	CAR 3
25	Cessna Aircraft Company	185 185A 185B 185E A185E A185F	3A24 (FAA)	CAR 3
26	Cessna Aircraft Company	188 A188 A188A A188B T188C	A9CE (FAA)	FAR 21
27	Cessna Aircraft Company	195	A-790 (FAA)	CAR 3
28	Cessna Aircraft Company	207 207A T207 T207A	A16CE (FAA)	FAR 23
29	Cessna Aircraft Company	206H	1999T06 (CTA)	RBHA 23 / FAR 23

CTA APPROVED MODEL LIST
FOR CHST 2004S10-05

ITEM	AIRCRAFT MAKE	AIRCRAFT MODEL(S)	TYPE CERTIFICATE Nº	CERTIFICATION BASIS
30	Cessna Aircraft Company	206 P206A P206B P206D P206E U206 U206A U206B U206C U206D U206E U206F U206G TU206F TU206G	A4CE (FAA)	CAR 3
31	Cessna Aircraft Company	210 210-5 210A 210B 210C 210D 210E 210F 210H 210J 210K 210L 210M 210N 210R P210N T210L T210N	3A21 (FAA)	FAR 23
32	Cessna Aircraft Company	310 310C 310D 310F 310G 310H 310I 310J 310K 310L 310N 310P 310Q 310R T310R	3A10 (FAA)	CAR 3

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ITEM	AIRCRAFT MAKE	AIRCRAFT MODEL(S)	TYPE CERTIFICATE Nº	CERTIFICATION BASIS
33	Cessna Aircraft Company	336	A2CE (FAA)	CAR 3
34	Cessna Aircraft Company	337A 337C 337D 337G	A6CE (FAA)	CAR 3
35	Cessna Aircraft Company	401 402 402B 402C 411 411A 414 414A 421 421B 421C	A7CE (FAA)	CAR 3
36	Cessna Aircraft Company	404	A25CE (FAA)	FAR 23
37	Commander Aircraft Company	112	A12SO (FAA)	FAR 23
38	Helio	H-295 HT-295 H-391B	1A8 (FAA)	CAR 3
39	Jobmaster Company	DGA-15P	A-717 (FAA)	CAR 4a
40	Maule Aircraft Inc.	M-6-235 M-7-235B MT-7-235 MX-7-180 MXT-7-180	3A23 (FAA)	CAR 3
41	Maule Aircraft Inc.	MXT-7-160 MX-7-180A MX-7-180B MXT-7-180A M-7-235C	9310 (CTA)	CAR 3
42	Mooney Aircraft Corporation	M20A M20B M20C M20E M20F	2A3 (FAA)	CAR 3
43	Mooney Aircraft Corporation	M20J M20K M20M M20R	8701 (CTA)	CAR 3
44	Navion Aircraft Company Ltd.	Navion E Navion G Navion H	A-782 (FAA)	CAR 3

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ITEM	AIRCRAFT MAKE	AIRCRAFT MODEL(S)	TYPE CERTIFICATE Nº	CERTIFICATION BASIS
45	Navion Aircraft Company Ltd.	Navion E (*) Navion G (*) (*) with IO-520 Series engine	A-782 (FAA)	CAR 3
46	Piper Aircraft	PA-12	A-780 (FAA)	CAR 3
47	Piper Aircraft	PA-18 PA-18A PA-18-105 (Special) PA-18-135 (US Army L-21B) PA-18-150 PA-18A-150	1A2 (FAA)	CAR 3
48	Piper Aircraft	PA-18A (Restricted) PA-18A-150 (Restricted)	AR-7 (FAA)	CAR 8.10b
49	Piper Aircraft	PA-20 PA-20-135	1A4 (FAA)	CAR 3
50	Piper Aircraft	PA-22 PA-22-108 PA-22-135 PA-22-150 PA-22-160	1A6 (FAA)	CAR 3
51	Piper Aircraft	PA-23 PA-23-160 PA-23-250	1A10 (FAA)	CAR 3
52	Piper Aircraft	PA-24 PA-24-250 PA-24-260	1A15 (FAA)	CAR 3
53	Piper Aircraft	PA-28-140 PA-28-150 PA-28-151 PA-28-160 PA-28-161 PA-28-180 PA-28-181 PA-28-235 PA-28-236 PA-28R-180 PA-28R-200 PA-28R-201 PA-28R-201T PA-28RT-201 PA-28RT-201T	2A13 (FAA)	CAR 3
54	Piper Aircraft	PA-30	A1EA (FAA)	CAR 3
55	Piper Aircraft	PA-31-350	A20SO (FAA)	CAR 3 / FAR 23
56	Piper Aircraft	PA-31 PA-31-325	A20SO (FAA)	CAR 3

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CTA APPROVED MODEL LIST FOR CHST 2004S10-05

ITEM	AIRCRAFT MAKE	AIRCRAFT MODEL(S)	TYPE CERTIFICATE Nº	CERTIFICATION BASIS
57	Piper Aircraft	PA-32-260 PA-32-300 PA-32R-301 PA-32R-301T	A3SO (FAA)	CAR 3
58	Piper Aircraft	PA-34-200 PA-34-200T PA-34-220T	A7SO (FAA)	FAR 23
59	Piper Aircraft	PA-46-350P	9501 (CTA)	RBHA 23 / FAR 23
60	Revo Inc. (LAKE)	LA-4 LA-4-200	1A13 (FAA)	CAR 3 / FAR 23
61	Robinson Helicopter Co.	R22 R22 ALPHA R22 BETA R22 MARINER	8714 (CTA)	RBHA 27 / FAR 27
62	Robinson Helicopter Co.	R44	9402 (CTA)	RBHA 27 / FAR 27
63	Sky Enterprises	RC-3	A-769 (FAA)	CAR 3
64	SOCATA Groupe Aerospatiale	TB9 TB10 TB20 TB21	9211 (CTA)	RBHA 23 / FAR 23
65	Univair Aircraft Corporation	108-1 108-2 108-3	A-767 (FAA)	CAR 3
66	Weatherly Aviation Company	620B	9309 (CTA)	RBHA 21. 25 FAR 21.25

CTA Approved: _____

Cláudio Passos Simão Ten Cel Eng
Chief, Divisão de Certificação de Aviação Civil

CTA Approved Date: **27 OUT. 2004.**

Revision: **I.R.**