



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

**Transport Airplane Directorate  
Aircraft Certification Service**

1601 Lind Avenue SW  
Renton, Washington 98057-3356

**MAR 14 2017**

In Reply  
Refer To: 140S-17-32

Mr. Scott Philiben  
CiES, Inc.  
1375 SE Wilson Ave, Suite 150  
Bend, OR 97702

Dear Mr. Philiben:

We have completed our evaluation of your request for an approved model list (AML) supplemental type certificate (STC), Project Number ST12905SE-A, for installation of CiES, Inc. CC Series TSO C55a fuel quantity sender(s) per your application, dated June 16, 2016. We find that you have satisfactorily demonstrated compliance with the applicable certification regulations. Accordingly, we have enclosed STC and AML SA02511SE, both dated March 14, 2017, for the installation in accordance with the Installation Requirements Document as listed on the AML, or later Federal Aviation Administration (FAA) approved revision.

This STC is official FAA approval for your installation and may be used to authorize identical installations on other aircraft of the same model. It may be transferred or otherwise made available to another party by means of a licensee arrangement in accordance with Title 14 Code of Federal Regulations (CFR) section (§) 21.47. You are required to advise this office prior to the transfer, when you transfer or grant licensee rights to the STC, in order that we may take the necessary recording or reissuance action.

If you agree to permit another person to use this STC to alter the product, it is your responsibility to give the other person written evidence of that permission in the form of a "permission statement." This permission statement should contain the agreement specifying the product to be altered, the STC number, and the person who is being given the consent to use the STC.

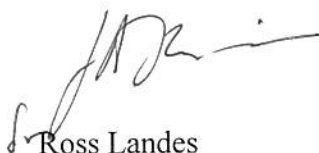
As recipient of this approval, except as provided in § 21.3(d), you are required to report any failure, malfunction, or defect in any product or article manufactured by you that you have determined has resulted or could result in any of the occurrences listed in § 21.3(c). The report should be communicated initially by telephone to the Manager, Propulsion Branch, ANM-140S, telephone number (425) 917-6593, within 24 hours after it has been determined that the failure has occurred. In addition, written notification to the Manager, Seattle Aircraft Certification Office, ANM-100S, at the above address is required. FAA Form 8010-4 (Malfunction or Defect Report) or any other appropriate format is acceptable in transmitting the required details.

If you plan to manufacture replacement or modification articles for sale in conformance with approved data listed on the certificate, a parts manufacturer approval (PMA) may be applied for under the provisions of § 21.303 and issued after establishing compliance with § 21.307 and § 21.308. The identification requirements for articles produced under a PMA are in § 45.15. Your application may be in letter form, with reference to the STC number, and should be addressed to the Federal Aviation Administration, Northwest Mountain Region, Attention: Manager, Seattle Manufacturing Inspection District Office, 1601 Lind Ave SW, Renton, Washington 98057-3356.

As the TSOA holder for the fuel quantity sending units installed by this STC, you may continue to make minor design changes to your TSO-approved articles under any existing TSOA minor change agreement you have with the FAA under § 21.619. For all other aspects of this STC type design, any minor changes would need to be approved in a manner acceptable to the FAA under § 21.95. We encourage you to work with our office in the near future to develop an agreement on the types of changes that can be classified as minor and on the process for approving such changes. Until such an agreement is established, you may correct typographical errors and change the format for presentation of otherwise unchanged data as minor changes to your type design. If you have any other changes you believe can be classified as minor under § 21.93, please contact our office to obtain agreement before incorporating that change in the type design. All minor changes should be submitted within approximately 90 days after incorporating the change in the type design. We suggest you plan to make regular quarterly submittals of your minor changes if you have a significant amount of minor change activity.

Since I am very much interested in the service we provide to the aviation community and the general public, it would be helpful if you would provide your thoughts and comments regarding how the approval process went. To gather this information, we have provided this letter and its enclosures electronically and also attached a short survey that I hope you will fill out and return via e-mail as indicated on the survey. Please make the subject line of the return e-mail read "Survey" to ensure proper receipt. You may rest assured that your comments will receive my full attention and that I will hold your comments in strict confidence, should you request I do so. Please note that this stakeholder survey is common to all Aircraft Certification offices within the FAA's Aircraft Certification Service and is aimed at enabling the Aircraft Certification Service to deliver the best services to each of our stakeholders.

Sincerely,



Ross Landes  
Manager, Seattle Aircraft  
Certification Office

2 Enclosures

Department of Transportation - Federal Aviation Administration

# Supplemental Type Certificate

*Number* SA02511SE

*This certificate, issued to*

**CiES Inc.  
1375 SE Wilson Ave, Suite 150  
Bend, OR 97702**

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

*Original Product—Type Certificate Number:*

\* See attached Federal Aviation Administration (FAA)

*Make:*

Approved Model List (AML) SA02511SE for approved

*Model:*

aircraft models and applicable airworthiness regulations

*Description of the Type Design Change:* Installation of replacement fuel quantity indicator sending unit(s) on aircraft models listed in AML SA02511SE, original issue date March 14, 2017, or later FAA-approved revision, in accordance with the CiES Inc., Master Drawing List and the CiES Inc., Installation Requirements & Instructions for Continued Airworthiness (ICA) documents as listed on that AML, or later FAA approved revisions.

*Limitations and Conditions:* Approval of this change in type design applies only to the aircraft listed on AML SA02511SE. Aircraft on which this type design change is installed must be maintained in accordance with the CiES Inc., Installation Requirements & ICA document as listed on AML SA02511SE, or later FAA-approved revision. There is no change to the operating instructions for the aircraft associated with installation of this STC. This approval should not be installed on aircraft of the approved models on which other previously approved modifications are incorporated unless it is determined by the installer that the relationship between this change and other previously approved modifications will introduce no adverse effect upon the airworthiness of that aircraft. A copy of this certificate, AML SA02511SE, and the ICA 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:* June 16, 2016

*Date reissued:*

*Date of issuance:* March 14, 2017

*Date amended:*



*By direction of the Administrator*

*[Signature]*

(Signature)

*For*

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.*

**FEDERAL AVIATION ADMINISTRATION (FAA) APPROVED MODEL LIST (AML) SA02511SE  
FOR  
CIES INC. CC284022 SERIES TSO C55a FUEL QUANTITY SENDERS**

ISSUE DATE: March 14, 2017

ITEM	AIRCRAFT MAKE	AIRCRAFT MODEL	ORIGINAL TC NUMBER	CERTIFICATION BASIS FOR ALTERATION	INSTALLATION REQUIREMENTS & INSTRUCTIONS FOR CONTINUED AIRWORTHINESS				CIES SENDER PART NUMBERS APPROVED FOR INSTALLATION	APPROVED SENDER AND INSTRUMENT COMBINATIONS	AML REV DATE
					Number	Revision*	Number	Revision**			
1.	Textron Aviation Inc. (formerly Cessna)	172, 172A, 172B, 172C, 172D, 172E, 172F, 172G, 172H, 172L, 172K, 172L, 172M, 172N, 172P, 172Q, 172R, 172S	3A12	CAR 3, 14 CFR 23	CC-TR-2840-031	N/C	CC2840 00 03	N/C	CC284022 0603-XX1 CC284022 0603-XX2 CC284022 0603-XX5 CC284033 0603-XX6 CC284022 0609-XX1 CC284022 0609-XX2	1-11, 14, 15, 18, 19	
2.	Textron Aviation Inc. (formerly Cessna)	182, 182A, 182B, 182C, 182D, 182E, 182F, 182G, 182H, 182J, 182K, 182L, 182M, 182N, 182P, 182Q, 182R, 182S, 182T, R182, T182, T182T, TR182	3A13	CAR 3, 14 CFR 23	CC-TR-2840-031	N/C	CC2840 00 03	N/C	CC284022 0602-XX1 CC284022 0602-XX2 CC284022 0602-XX5 CC284022 0602-XX6 CC284022 0608-XX1 (Tip)	1-11, 14, 15, 18, 19	
3.	Textron Aviation Inc. (formerly Cessna)	175, 175A, 175B, 175C, P172D, R172E, R172F, R172G, R172H, R172J, R172K, 172RG	3A17	CAR 3, 14 CFR 23	CC-TR-2840-031	N/C	CC2840 00 03	N/C	CC284022 0603-XX1 CC284022 0603-XX2 CC284022 0603-XX5 CC284033 0603-XX6	1-11, 14, 15, 18, 19	
4.	Textron Aviation Inc. (formerly Cessna)	210, 210A, 210B, 210C, 210D, 210E, 210F, 210G, 210H, 210J, 210K, 210L, 210M, 210N, 210R, T210F, T210G, T210H, T210J, T210K, T210L, T210M, T210N, T210R, 210-5 (205), 210-5A (205A), P210N, P210R	3A21	CAR 3, 14 CFR 23	CC-TR-2840-031	N/C	CC2840 00 03	N/C	CC284022 0602-XX1 (Strut) CC284022 0602-XX2 (Strut) CC284022 0602-XX5 (Strut) CC284022 0602-XX6 (Strut) CC284022 0608-XX1 (Tip)	1-11, 14, 15, 18, 19	
5.	Textron Aviation Inc. (formerly Cessna)	185, 185A, 185B, 185C, 185D, 185E, A185E, A185F	3A24	CAR 3, 14 CFR 23	CC-TR-2840-031	N/C	CC2840 00 03	N/C	CC284022 0602-XX1 CC284022 0602-XX2 CC284022 0602-XX5 CC284022 0602-XX6 CC284022 0608-XX1 (Tip)	1-11, 14, 15, 18, 19	
6.	Textron Aviation Inc. (formerly Cessna)	180, 180A, 180B, 180C, 180D, 180E, 180F, 180G, 180H, 180J, 180K	5A6	CAR 3, 14 CFR 23	CC-TR-2840-031	N/C	CC2840 00 03	N/C	CC284022 0602-XX1 CC284022 0602-XX2 CC284022 0602-XX5 CC284022 0602-XX6 CC284022 0608-XX1 (Tip)	1-11, 14, 15, 18, 19	

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7.	Textron Aviation Inc. (formerly Cessna)	177, 177A, 177B	A13CE	14 CFR 23	CC-TR-2840-031	N/C	CC2840 00 03	N/C	CC284022 0601-XX1 CC284022 0601-XX5	1-11, 14, 15, 18, 19	
8.	Textron Aviation Inc. (formerly Cessna)	207, 207A, T207, T207A	A16CE	14 CFR 23	CC-TR-2840-031	N/C	CC2840 00 03	N/C	CC284022 0602-XX1 CC284022 0602-XX2 CC284022 0602-XX5 CC284022 0602-XX6 CC284022 0608-XX1 (Tip)	1-11, 14, 15, 18, 19	
9.	Textron Aviation Inc. (formerly Cessna)	177RG	A20CE	14 CFR 23	CC-TR-2840-031	N/C	CC2840 00 03	N/C	CC284022 0601-XX1 CC284022 0601-XX5	1-11, 14, 15, 18, 19	
10.	Cessna Aircraft Company	Cessna F177RG	A26EU	14 CFR 23	CC-TR-2840-031	N/C	CC2840 00 03	N/C	CC284022 0601-XX1 CC284022 0601-XX5	1-11, 14, 15, 18, 19	
11.	Cessna Aircraft Company	Cessna F182P, Cessna F182Q, Cessna FR182	A42EU	CAR 3, 14 CFR 23	CC-TR-2840-031	N/C	CC2840 00 03	N/C	CC284022 0602-XX1 CC284022 0602-XX2 CC284022 0602-XX5 CC284022 0602-XX6 CC284022 0608-XX1 (Tip)	1-11, 14, 15, 18, 19	
12.	Textron Aviation Inc. (formerly Cessna)	206, P206, P206A, P206B, P206C, P206D, P206E, U206, U206A, U206B, U206C, U206E, U206D, U206F, U206G, TP206A, TP206B, TP206C, TP206D, TP206E, TU206A, TU206B, TU206C, TU206D, TU206E, TU206F, TU206G, 206H, T206H	A4CE	CAR 3, 14 CFR 23	CC-TR-2840-031	N/C	CC2840 00 03	N/C	CC284022 0602-XX1 CC284022 0602-XX2 CC284022 0602-XX5 CC284022 0602-XX6 CC284022 0608-XX1 (Tip) CC284022 0611-XX5 CC284022 0612-XX6	1-11, 14, 15, 18, 19	
13.	Cessna Aircraft Company	Cessna F172D, Cessna F172E, Cessna F172F, Cessna F172G, Cessna F172H, Cessna F172K, Cessna F172L, Cessna F172M	A4EU	CAR 3, CAR 10, 14 CFR 23	CC-TR-2840-031	N/C	CC2840 00 03	N/C	CC284022 0603-XX1 CC284022 0603-XX2 CC284022 0603-XX5 CC284022 0603-XX6	1-11, 14, 15, 18, 19	



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14.	Textron Aviation Inc. (formerly Cessna)	170, 170A, 170B	A-799	CAR 3	CC-TR-2840-031	N/C	CC2840 00 03	N/C	CC284022 0603-XX1 CC284022 0603-XX2 CC284022 0603-XX5 CC284033 0603-XX6	1-11, 14, 15, 18, 19	
15.	Textron Aviation Inc. (formerly Cessna)	150, 150A, 150B, 150C, 150D, 150E, 150F, 150G, 150H, 150J, 150K, 150L, 150M, A150 A150K, A150L, A150M, 152, A152	3A19	CAR 3, 14 CFR 23	CC-TR-2840-031	N/C	CC2840 00 03	N/C	CC284022 0616-XX1 CC284022 0617-XX1	3, 4, 7, 8, 11	
16.	Cirrus Design Corp.	SR20, SR22, SR22T	A00009CH	14 CFR 23	CC-TR-2840-031	N/C	CC2840 00 03	N/C	CC284022 0001-XX1 CC284022 0002-XX1 CC284022 0004-XX1 CC284022 0005-XX1 CC284022 0006-XX1 CC284022 0007-XX1 CC284022 0007-XX2 CC284022 0008-XX1 CC284022 0008-XX2 CC284099 0001 (Installation) CC284099 0002 (Installation) CC284099 0003 (Installation) CC284099 0004 (Installation)	3, 4, 7, 8, 11, 18, 19	
17.	Cirrus Design Corp.	SR22, SR22T (w/TKS Sender)	A00009CH	14 CFR 23	CC-TR-2840-031	N/C	CC2840 00 03	N/C	CC284022 0003-XX1 CC284022 0003-XX2	3, 4, 7, 8, 11, 18, 19	

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18.	Textron Aviation Inc. (formerly Beechcraft)	35-33, 35-A33, 35-B33, 35-C33, 35-C33A, E33, E33A, E33C, F33, F33A, F33C, G33, H35, G36, J35, K35, M35, N35, P35, S35, V35, V35A, V35B, 36, A36, A36TC, B36TC	3A15	CAR 3, 14 CFR 23	CC-TR-2840-031	N/C	CC2840 00 03	N/C	CC284022 2201-XX1 CC284022 2201-XX5 CC284022 2202-XX1 CC284022 2202-XX2 CC284022 2203-XX1 CC284022 2203-XX5 CC284022 2215-XX1 CC284022 2215-XX2 CC284022 2215-XX5 CC284022 2215-XX6 CC284022 2216-XX1 CC284022 2216-XX2 CC284022 2217-XX1 CC284022 2217-XX5 CC284022 2218-XX1 CC284022 2219-XX1 (Tip) CC284022 2219-XX5 (Tip)	1-11, 14, 15, 18, 19	
19.	Textron Aviation Inc. (formerly Beechcraft)	B95A, D95A, E95, 95-55, 95-A55, 95-B55, 95-B55A, 95-B55B (T-42), 95-C55, 95-C55A, G58, D55, D55A, E55, E55A, 56TC, A56TC, 58, 58A, 95, B95	3A16	CAR 3, 14 CFR 23	CC-TR-2840-031	N/C	CC2840 00 03	N/C	CC284022 2204-XX1 CC284022 2204-XX5 CC284022 2205-XX1 CC284022 2206-XX1 CC284022 2207-XX1 CC284022 2208-XX1 CC284022 2203-XX1 CC284022 2203-XX5 CC284022 2209-XX1 CC284022 2209-XX5 CC284022 2210-XX1 CC284022 2211-XX1 CC284022 2211-XX5 CC284022 2212-XX1 CC284022 2212-XX5 CC284022 2213-XX1 CC284022 2214-XX1 CC284022 2219-XX1 (Tip) CC284022 2219-XX5 (Tip)	1-11, 14, 15, 18, 19	

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20.	Beechcraft Corporation	58P, 58PA, 58TC, 58TCA	A23CE	14 CFR 23	CC-TR-2840-031 N/C	CC2840 00 03 N/C	CC284022 2204-XX1 CC284022 2204-XX5 CC284022 2205-XX1 CC284022 2206-XX1 CC284022 2207-XX1 CC284022 2208-XX1	1-11, 14, 15, 18, 19	
21.	Maule Aerospace Technology, Inc.	Bee Dee M-4, M-4, M-4C, M-4S, M-4T, M-4-180C, M-4-180S, M-4-180T, M-4-210, M-4-210C, M-4-210S, M-4-210T, M-4-220, M-4-220C, M-4-220S, M-4-220T, M-5-180C, M-5-200, M-5-210C, M-5-210TC, M-5-220C, M-5-235C, M-6-180, M-6-235, M-7-235, MX-7-235, MX-7-180, MT-7-235, M-8-235, MX-7-160, MXT-7-160, MX-7-180A, MXT-7-180A, MX-7-180B, M-7-235B, M-7-235A, M-7-235C, MX-7-180C, M-7-260, MT-7-260, M-7-260C, MX-7-160C, MX-7-180AC, M-9-235	3A23	CAR 3, 14 CFR 23	CC-TR-2840-031 N/C	CC2840 00 03 N/C	CC284022 2401-XX1	3, 4, 7, 8, 11, 18, 19	
22.	Mooney Intl. Corp.	M20, M20A, M20B, M20C, M20D, M20E, M20F, M20G, M20J, M20K, M20L, M20M, M20R, M20S, M20TN	2A3	CAR 3, 14 CFR 23	CC-TR-2840-031 N/C	CC2840 00 03 N/C	CC284022 0705-XX1 CC284022 0705-XX2 CC284022 0706-XX1 CC284022 0706-XX2 CC284022 0706-XX5 CC284022 0706-XX6 CC284022 0707-XX1 CC284022 0707-XX2 CC284022 0708-XX1 CC284022 0709-XX1	1-11, 14, 15, 18, 19	
23.	Pilatus Aircraft Ltd.	PC-6	7A15	CAR 10, CAR 3	CC-TR-2840-031 N/C	CC2840 00 03 N/C	CC284022 2301-XX5	1, 2, 5, 6, 9, 10, 14, 15	



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24.	Piper Aircraft, Inc.	PA-23, PA-23-160, PA-23-235, PA-23-250, PA-23-250 (Navy UO-1), PA-E23-250	1A10	CAR 3	CC-TR-2840-031	N/C	CC2840 00 03	N/C	CC284022 0808-XX1 CC284022 0809-XX1	3, 4, 7, 8, 11, 18, 19	
25.	Piper Aircraft, Inc.	PA-22, PA-22-108, PA-22-135, PA-22S-135, PA-22-150, PA-22S-150, PA-22-160, PA-22S-160.	1A6	CAR 3	CC-TR-2840-031	N/C	CC2840 00 03	N/C	CC284022 0816-XX1 CC284022 0816-XX5	1-11, 14, 15, 18, 19	
26.	Piper Aircraft, Inc.	PA-24, PA-24-250, PA-24-260, PA-24-400	1A15	CAR 3	CC-TR-2840-031	N/C	CC2840 00 03	N/C	CC284022 0812-XX1 CC284022 0813-XX1	3, 4, 7, 8, 11, 18, 19	
27.	Piper Aircraft, Inc.	PA-28-140, PA-28-150, PA-28-160, PA-28-180, PA-28-235, PA-28S-160, PA-28S-180, PA-28R-180, PA-28R-200, PA-28-151, PA-28-161, PA-28-181, PA-28R-201, PA-28R-201T, PA-28-236, PA-28RT-201, PA-28RT-201T, PA-28-201T	2A13	CAR 3, 14 CFR 23	CC-TR-2840-031	N/C	CC2840 00 03	N/C	CC284022 0810-XX1 CC284022 0810-XX2 CC284022 0810-XX5 CC284022 0811-XX1	1-11, 14, 15, 18, 19	
28.	Piper Aircraft, Inc.	PA-30, PA-39, PA-40	A1EA	CAR 3, 14 CFR 23	CC-TR-2840-031	N/C	CC2840 00 03	N/C	CC284022 0812-XX1 CC284022 0813-XX1	3, 4, 7, 8, 11, 18, 19	
29.	Piper Aircraft, Inc.	PA-31, PA-31-300, PA-31- 325, PA-31-350,	A20SO	CAR 3, 14 CFR 23	CC-TR-2840-031	N/C	CC2840 00 03	N/C	CC284022 0804-XX1 CC284022 0805-XX1 CC284022 0806-XX1 CC284022 0807-XX1	3, 4, 7, 8, 11, 18, 19	

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30.	Piper Aircraft, Inc.	PA-32-301XTC, PA-32-301FT, PA-32S-300, PA-32-260, PA-32-300, PA-32R-300, PA-32RT-300, PA-32RT-300T, PA-32R-301(SP), PA-32R-301(HP), PA-32R-301T, PA-32-301, PA-32-301T	A3SO	CAR 3, 14 CFR 23	CC-TR-2840-031 N/C	CC2840 00 03 N/C	CC284022 0810-XX1 CC284022 0810-XX2 CC284022 0810-XX5 CC284022 0811-XX1	1-11, 14, 15, 18, 19	
31.	Piper Aircraft, Inc.	PA-34-200, PA-34-200T, PA-34-220T	A7SO	14 CFR 23	CC-TR-2840-031 N/C	CC2840 00 03 N/C	CC284022 0810-XX1 CC284022 0810-XX2 CC284022 0810-XX5 CC284022 0811-XX1	1-11, 14, 15, 18, 19	
32.	Piper Aircraft, Inc.	PA-44-180, PA-44-180T	A19SO	14 CFR 23	CC-TR-2840-031 N/C	CC2840 00 03 N/C	CC284022 0814-XX1 CC284022 0815-XX1	3, 4, 7, 8, 11, 18, 19	
33.	Vulcanair S.p.A	P.68, P.68 "Observer 2", P.68B, P.68C, P.68 "Observer", P.68TC "Observer", P.68C-TC	A31EU	14 CFR 23	CC-TR-2840-031 N/C	CC2840 00 03 N/C	CC284022 0401-XX1	3, 4, 7, 8, 11, 18, 19	
34.	Fairchild Personal Planes	24 C8C, 24 C8CS	A-535	Aero Bulletin 7-A	CC-TR-2840-031 N/C	CC2840 00 03 N/C	CC284022 2101-XX5	1, 2, 5, 6, 9, 10, 14, 15	
35.	GA 8 Airvan (Pty) Ltd (formerly Gippstand)	GAB, GAB-TC320	A00011LA	14 CFR 23	CC-TR-2840-031 N/C	CC2840 00 03 N/C	CC284022 0301-XX1 CC284022 0302-XX5	1-11, 14, 15, 18, 19	
36.	B-N Group Ltd.	BN2A MK III, BN2A MK III-2, BN2A MK III-3	A29EU	14 CFR 23	CC-TR-2840-031 N/C	CC2840 00 03 N/C	CC284022 2001-XX1 CC284022 2002-XX1	3, 4, 7, 8, 11, 18, 19	
37.	American Champion Aircraft Corp.	8KCAB, 8GCBC	A21CE	14 CFR 23	CC-TR-2840-031 N/C	CC2840 00 03 N/C	CC284022 2501-XX5	1, 2, 5, 6, 9, 10, 14, 15	
38.	American Champion Aircraft Corp.	TECA, 7GCAA, 7KCAB, 7GCBC	A-759	CAR 4a, 14 CFR 23	CC-TR-2840-031 N/C	CC2840 00 03 N/C	CC284022 2501-XX5	1, 2, 5, 6, 9, 10, 14, 15	

**FEDERAL AVIATION ADMINISTRATION (FAA) APPROVED MODEL LIST (AML) SA02511SE**  
**FOR**  
**CIES INC. CC284022 SERIES TSO C55a FUEL QUANTITY SENDERS**  
**ISSUE DATE: March 14, 2017**

ITEM	AIRCRAFT MAKE	AIRCRAFT MODEL	ORIGINAL TC NUMBER	CERTIFICATION BASIS FOR ALTERATION	INSTALLATION REQUIREMENTS & INSTRUCTIONS FOR CONTINUED AIRWORTHINESS		STC MASTER DRAWING LIST	CIES SENDER PART NUMBERS APPROVED FOR INSTALLATION	APPROVED SENDER AND INSTRUMENT COMBINATIONS	AML REV DATE
39.	Beechcraft Corp.	45 (YT-34), A45 (T-34A, B-45), D45 (T-34B)	5A3	CAR 3	CC-TR-2840-031	N/C	CC2840 00 03	N/C	CC284022 2203-XX1	3, 4, 7, 8, 11, 18, 19

.. Or later FAA Accepted ICA and FAA Approved Airworthiness Limitations Revision  
 .. Or later FAA Approved Revision  
 Note: CIES part numbering system for STC AML is CC284022 – (ZZ ZZ) – (XX Y), where (ZZ ZZ) designates the Aircraft manufacturer, Aircraft Model, and Physical Location, (XX) designates Minor change designation, and (Y) designates sender Output Signal Type.

**FAA Approved:**

  
 For Manager, Seattle Aircraft  
 Certification Office

**AMENDED:  
 REISSUED:**

**FEDERAL AVIATION ADMINISTRATION (FAA) APPROVED MODEL LIST (AML) SA02511SE**  
**FOR**  
**CIES INC. CC284022 SERIES TSO C55a FUEL QUANTITY SENDERS**  
**ISSUE DATE: March 14, 2017**

Item	Cockpit Display Manufacturer	Cockpit Display Model	Data Converter (LRU <sup>1</sup> )	Fuel Sender Output Capability	Instrument Input Capability	CIES Fuel Sender Part Numbers
1	JP Instruments	EDM 900	N/A	Voltage 0-5 VDC	0-4.7 VDC	CC284022-(ZZZZ)- (XX5) or -(XX6)
2	JP Instruments	EDM 930	N/A	Voltage 0-5 VDC	0-4.7 VDC	CC284022-(ZZZZ)- (XX5) or -(XX6)
3	JP Instruments	EDM 900	N/A	Digital Frequency 64Hz-10kHz	0-100 kHz	CC284022-(ZZZZ)- (XX1) or -(XX2)
4	JP Instruments	EDM 930	N/A	Digital Frequency 64Hz-10kHz	0-100 kHz	CC284022-(ZZZZ)- (XX1) or -(XX2)
5	Electronics International	MVP-50	EDC-33P	Voltage 0-5 VDC	0-18 VDC	CC284022-(ZZZZ)- (XX5) or -(XX6)
6	Electronics International	CGR-30P	EDC-33P	Voltage 0-5 VDC	0-18 VDC	CC284022-(ZZZZ)- (XX5) or -(XX6)
7	Electronics International	MVP-50	EDC-33P	Digital Frequency 64Hz-10kHz	0-6 kHz	CC284022-(ZZZZ)- (XX1) or -(XX2)
8	Electronics International	CGR-30P	EDC-33P	Digital Frequency 64Hz-10kHz	0-6 kHz	CC284022-(ZZZZ)- (XX1) or -(XX2)
9	Ultra FEI	Auracle CRM2120	N/A	Voltage 0-5 VDC	0-5 VDC	CC284022-(ZZZZ)- (XX5) or -(XX6)
10	Aerospace Logic	FL25X	N/A	Voltage 0-5 VDC	0-5 VDC	CC284022-(ZZZZ)- (XX5) or -(XX6)
11	Aerospace Logic	FL20XD	N/A	Digital Frequency 64Hz-10kHz	10-300 Hz	CC284022-(ZZZZ)- (XX1) or -(XX2)
12	Aerospace Logic	FL21X	N/A	Voltage 0-1 VDC	0-1 VDC	CC284022-(ZZZZ)- (XX7) or -(XX8)
13	Aerospace Logic	FL20X	N/A	Voltage 0-1 VDC	0-1 VDC	CC284022-(ZZZZ)- (XX7) or -(XX8)
14	Garmin	G1000	GEA 71	Voltage 0-5 VDC	0-5 VDC	CC284022-(ZZZZ)- (XX5) or -(XX6)
15	Garmin	G950	GEA 71	Voltage 0-5 VDC	0-5 VDC	CC284022-(ZZZZ)- (XX5) or -(XX6)
16	Garmin	G1000	GEA 71	Voltage 0-1 VDC	0-1 VDC	CC284022-(ZZZZ)- (XX7) or -(XX8)
17	Garmin	G950	GEA 71	Voltage 0-1 VDC	0-1 VDC	CC284022-(ZZZZ)- (XX7) or -(XX8)
18	Garmin	G1000	GEA 71	Digital Frequency 64Hz-10kHz	0-100 kHz	CC284022-(ZZZZ)- (XX1) or -(XX2)
19	Garmin	G950	GEA 71	Digital Frequency 64Hz-10kHz	0-100 kHz	CC284022-(ZZZZ)- (XX1) or -(XX2)
20	Rochester Gauges	FQ-40XX Series	N/A	Voltage 0-1 VDC	0-1 VDC	CC284022-(ZZZZ)- (XX7) or -(XX8)

<sup>1</sup>LRU – line replaceable unit receives or converts the fuel sender output signal to provide the input signal to the cockpit display instrument.