



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

**Transport Airplane Directorate
Aircraft Certification Service**

1601 Lind Avenue Southwest
Renton, Washington 98057-3356

MAR 19 2015

In Reply
Refer To: 130S-15-60

Mr. Scott Philiben
President
CIES Inc.
1375 S.E. Wilson Ave.
Suite 150
Bend, OR 97702

Dear Mr. Philiben:

Subject: Technical Standard Order (TSO) Authorization Application C55a - Fuel and Oil Quantity Instruments

This is in reply to your letter dated March 10, 2015, requesting TSO authorization for your Fuel and Oil Level Sender. The statement of conformance to TSO C55a and the submitted data are accepted. Effective the date of this letter, you are authorized to identify the following Fuel Senders with the marking requirements defined in Title 14 Code of Federal Regulations (14 CFR) section (§) 21.616(d)(e) and in TSO C55a.

Model	Part Number	Description
CC284022	CC284022-()-()	Fuel and Oil Level Sender

The letter states the aforementioned part number meet the applicable requirements of aforementioned TSO, and is in conformance with 14 CFR part 21, subpart O.

The Seattle Manufacturing Inspection District Office (MIDO) ANM-108S reviewed and approved your revised Quality Manual (QM), Revision C, dated March 4, 2015.

Your Quality Control Systems, as defined in your QM currently on file at the Seattle MIDO is considered satisfactory for production of this article at: 1375 S.E. Wilson Ave., Suite 150, Bend, OR 97702, facility.

The following design data, submitted with your letter, has been added to our TSO file:

Document No.	Description	Rev.	Date
Certification Documents			
CC-CR-2840-002	TSO Compliance Report	IR	11/12/14
CC-TR-2840-021	Plan for Hardware Aspects of Certification	A	9/25/14
CC-TR-2840-022	Hardware Verification Procedure	IR	12/5/14
CC-TR-2840-023	Hardware Accomplishment Summary	A	3/10/15
CC-TR-2840-024	Hardware Configuration Management	A	3/10/15
CC-TR-2840-025	Hardware Configuration Index	IR	7/24/14
CC-TR-2840-026	Hardware Requirements	IR	4/24/14
CC-TR-2840-027	Environmental Qualification Fuel Level Sensor (PT Series)	IR	12/2/14
CC-TR-2840-030	Hardware Verification Results	IR	3/10/15
CC-TP-2840-002	Acceptance Test Procedure	-	9/22/14
	Quality Manual	C	3/4/15
CC-TR-2840-029	Installation Requirements CC Series	A	1/12/15
CC2840000002	CC2840 Fuel Transducer Master Drawing List	B	2/5/15
CB2840440001	Details – Transducer	N	2/5/15
CC2840220001	Fuel Sender – OUTBD SR22	-	11/6/14
CC2840220003	Fuel Sender – IPS SR22	-	11/6/14
CC2840220002	Fuel Sender – INBD SR22	-	11/6/14
CC2840220005	Fuel Sender – OUTBD SR20	-	11/6/14
CC2840220204	Fuel Sender – INBD, Quest	-	12/2/14
CC2840220203	Fuel Sender – OUTBD, Quest	-	12/2/14
CC2840250001	Electromechanical Assembly – Fuel Sender	-	11/6/14
CC2840550001	PCB Assembly – Fuel Sender	-	11/6/14
CC2840570001	PCB Wire Harness Assembly – Fuel Sender	-	11/6/14
CC2840660001	PCB Altered Item Document (FPGA)	-	11/7/14
CC2840770001	PCB Schematic	A	11/11/14
CB-TR-1001	Reliability Report	IR	4/14/14
	DO-160(F) Environmental Test Results	1.0	10/28/13
CC2840220004	Fuel Sender – IWBD SR20	-	11/6/14
CC2840510001	PCB – Fuel Sender	-	11/6/14

Your letter CB2840L008B, dated January 5, 2015, requesting deviation from the requirements of TSO-C55a Section 4, "Marking," for the Model CC284022 was reviewed by the Seattle Aircraft Certification Office (SACO). Approval was granted for the deviation to TSO-C55a via Action Stamp Number AS/130S/15/41 from SACO, dated January 12, 2015.

Your letter CB2840L0010, dated March 4, 2015, requesting deviations from the requirements of TSO-C55a to use a later version of RTCA/DO-160 for the Model CC284022 was reviewed by the SACO. Approval was granted for the deviations to TSO-C55a via Action Stamp Number AS/130S/15/277 from the SACO, dated March 5, 2015.

As required by the TSO, the following statement must be furnished with each manufactured article:

"The parts contained in this shipment have been manufactured and inspected in accordance with TSO C55a. The conditions and tests required for TSO approval of this instrument are minimum performance standards. Those installing this instrument, on or in a specific type or class of aircraft, must determine that the aircraft installation conditions are within the TSO standards. TSO articles must have separate approval for installation in an aircraft. The instrument may be installed only according to 14 CFR part 43 or the applicable airworthiness requirements"

This TSO authorization, issued under §21.611, is effective until surrendered, withdrawn or otherwise terminated under the provisions of §21.613. With notice, we may withdraw this TSO authorization if articles aren't in compliance with the applicable TSO performance standards per §21.2.

This authorization pertains only to manufacturing operations at the above address. Without further FAA approval, we don't allow manufacturers to mark articles after they change their company's name, address, or ownership. You must notify the ACO and MIDO of name, address, or proposed ownership changes.

You must obtain FAA approval prior to making any changes to the location of your manufacturing facilities pursuant to §21.609(b). This office must be notified at least 30 days in advance of any proposed facility relocation to preclude interruption while awaiting quality control approval of that facility. As required by §21.616(f), you must also notify the FAA when you no longer manufacture a TSO approved article. Copies of the data must be sent to the FAA when you no longer manufacture a TSO approved article.

Per §21.614, a holder of a TSOA may not transfer it. If you wish to transfer it, you must request a transfer from the FAA.

Any design change(s) to this TSO article must be forwarded to this office as outlined in §21.619(a) with minor changes submittal intervals not to exceed six months. Notification of changes should be made prior to shipment.

As a recipient of this TSO authorization you are required to report any failure, malfunction, or defect in any product or part manufactured by you or your contracted suppliers, and which you have determined has resulted or could result in any of the occurrences listed in §21.3(c).

Please note that technical data retained by the FAA may be subject to Freedom of Information Act request. As such, this office will notify you of all such requests pertaining to your data and afford you the opportunity to defend the release of the data.

If you have any questions, please contact Ms. Thuan T. Nguyen with the Systems and Equipment Branch, at telephone number (425) 917-6458, at facsimile number (425) 917-6590, or by electronic mail at thuan.t.nguyen@faa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Ross Landes". The signature is written in a cursive style with a large initial "R".

for
Ross Landes
Manager, Seattle Aircraft
Certification Office