


REV	B	APPLICATION			REVISIONS		
		PRODUCT LINE	REV	DESCRIPTION	DATE	APPROVED	APPROVED
SH	1	IDU-III	A	Initial Release per DCN W4550	6-8-05	R. DuRall	R. Talken
			B	Revised per DCN W4558	06/13/05	D.Boston	V.Wallace
DWG. NO.	150-045061						

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APPROVALS				DATE		
DRAWN	Robert DuRall	6/7/05		TITLE: SERVICE BULLETIN WSB IDU-III-16 (SHADIN ADC-2000 REPLACEMENT)		
CHECKED	Dean Boston	6/7/05				
PRODUCT MANAGER	---	---				
ENGINEER	Robert DuRall	6/7/05	SIZE A	CAGE CODE 1B7G3	DWG NO. 150-045061	REV B
ISSUED	R. Talken	6-8-05				
Typed signatures indicate approval. Handwritten signature approval of this document is on file at Wulfsberg Electronics, Prescott, Arizona.			SCALE: NONE		DO NOT SCALE DRAWING	



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MANDATORY SERVICE BULLETIN

EQUIPMENT: ADC-2000

DATE: 06/13/05

BULLETIN NUMBER: WSB IDU-III-16 Revision B

EFFECTIVITY

This service bulletin applies to the Shadin ADC-2000 P/N 962830A-[]-S-8 installed under Chelton Flight Systems STCs SA02203AK, SA02220AK, SA02232AK, SR02209AK, SR02230AK, and SR02238AK.

REASON

Shadin has published mandatory Service Bulletin SB28-05-002 to convert ADC-2000, P/N 962830A-[]-S-8 to new part number 962831A-[]-S-8. Service bulletin IDU-III-16 allows the replacement of the ADC-2000 with the new part number.

DESCRIPTION

This document describes the removal and replacement of the Shadin ADC-2000, P/N 962830A-[]-S-8 (any mod) with new Shadin ADC-2000, P/N 962831A-[]-S-8.

COMPLIANCE

Replacement of the ADC-2000, P/N 962830A-[]-S-8 is mandatory.

WARRANTY INFORMATION

Inquiries should be directed to "Technical Support" at the address listed below:

Chelton Flight Systems
1109 Main Street, Suite 560
Boise, ID 83702
Phone: (208) 389-9959
Fax: (208) 389-9961

APPROVAL

This Service Bulletin has been reviewed and approved by the FAA.
This modification does not affect the original approval.

MANPOWER

2.0 Man-hours per aircraft.

REFERENCES

EFIS System Installation Instructions, 150-045264,
Shadin ADC-2000 Installation Manual, IM2831-AYS8,
and the following Instructions for Continued Airworthiness:

150-045261, Rev P	Part 23 AML STC
150-045284, Rev D	Rotorcraft STC
150-045008, Rev C	DHC-6 STC
150-045005, Rev D	Citation 501 STC

MATERIAL INFORMATION

The parts required to replace the ADC-2000 in accordance with this service bulletin may be obtained by contacting Chelton Flight Systems at (208) 389-9959.

PARTS REQUIRED

<u>ITEM</u>	<u>QTY</u>	<u>U/M</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
1	1	Ea	962831A-[]-S-8	Shadin ADC-2000

TEST EQUIPMENT REQUIRED

Vacuum source

Pressure source

MODIFICATION PROCEDURE

1. Remove and replace the ADC per the applicable Chelton EFIS ICA (see REFERENCE section above for document number).
2. Program the OAT Calibration and fuel flow K-factor per the Shadin ADC-2000 Installation Manual, Doc. IM2831-AYS8.

PITOT/STATIC LEAK TEST PROCEDURE

NOTE: *The following tests are functional and leak tests only, and are not considered accuracy or calibration tests.*

NOTE: *For pressurized aircraft, consult the aircraft manufacturer's maintenance manuals for recommended pitot-static leak test requirements.*

1. Attach a vacuum source to a static port feeding the ADC and seal all other static ports. Attach a pressure source to the pitot probe feeding the ADC.
2. Apply power to the aircraft and ensure the system is operating.
3. Set the barometric correction to the current field correction pressure (field elevation) on the reference altimeter. The EFIS altimeter, stand-by altimeter, or suitable test equipment may be used as the reference altimeter. Note the altitude reading.
4. Apply a vacuum to raise the indicated altitude approximately 1000 feet above the noted reading from Step 3.
5. Stop the vacuum pressure, maintaining a seal on the vacuum hose, and monitor the indicated altitude for 1 minute.
6. The indicated altitude should not change by more than 100 feet in 1 minute. If the altitude remains within this limit, the leak test is complete. Continue to Step 8.
7. If the altitude exceeds this limit, slowly release the vacuum until the indicated altitude returns to the original noted reading. Inspect the static system for loose connections, nicks, holes, or other sources of a pressure leak. Fix the static system leak. Repeat steps 3-6 as required until the system passes Step 6.
8. Apply a pressure to the pitot probe until the indicated airspeed reaches V_{mo}/V_{ne} . Note the airspeed reading.
9. Stop the pressure system, maintaining a seal on the pressure hose, and monitor the airspeed for 1 minute.
10. The indicated airspeed should not change by more than 3% or 5 knots (whichever is greater) in 1 minute. If the airspeed remains within this limit, the leak test is complete.
11. If the airspeed exceeds this limit, slowly release the pressure until the indicated airspeed returns to zero knots. Inspect the pitot system for loose connections,

nicks, holes, or other sources of a pressure leak. Fix the pitot system leak.

Repeat steps 8-10 as required until the system passes Step 10.

12. Slowly release the vacuum source and pressure source until the indicated altitude and airspeed return to the original noted reading.
13. Remove power from the aircraft. Remove vacuum source and all static port seals. Remove the pressure source from the pitot probe.
14. Inspect all static ports, pitot probes, and pitot-static system drains to confirm that all seals have been removed.

POST MODIFICATION TEST PROCEDURE

1. Apply power to the EFIS and ensure the system is operating.
2. Verify that the "NO AIRDATA" flag is removed after 90 seconds of operation.
3. Pull the ADC circuit breaker and verify the "NO AIRDATA" flag is present and the "AIR DATA FAILURE", "AIR DATA FAILURE" is annunciated on the aircraft's audio system.
4. Reset the ADC circuit breaker and verify the "NO AIRDATA" flag is removed within 90 seconds.

NOTE: *The green "ADC INIT" flag may appear after approximately 60 seconds and remain in view for 30 to 60 seconds.*

5. Set the baro setting on the PFD and the standby altimeter to 29.92 in. Hg (1013 Mb.)
6. Verify the altitude difference between the EFIS and the standby altimeter is less than 120 feet.
7. Remove power from the EFIS and secure aircraft power.