

1. Approving Civil Aviation Authority/Country:
FAA/United States

AUTHORIZED RELEASE CERTIFICATE

3. Form Tracking Number:
1147889

4. Organization Name and Address:
Aviation Communication & Surveillance Systems
19810 N. 7th Ave.
Phoenix, AZ 85027 PAH # PT1571NM

5. Work Order/Contract/ Invoice Number:
CO-041,00

6. Item:	7. Description:	8. Part Number:	9. Quantity:	10. Serial Number:	11. Status, Work Order
1	TCAS DIRECTIONAL ANTENNA ADAPTER ASSY	7514081-911	1	ANE56821	NEW

12. Remarks:
Airworthiness Approval
Drawing: 7514081, Rev W
TSO AUTHORIZATION: C119a

13a. Certifies the items identified above were manufactured in conformity to:
 Approved design data and are in a condition for safe operation.
 Non-approved design data specified in Block 12.

13b. 14 CFR 43.9 Return to Service Other regulation specified in Block 12
 Certifies that unless otherwise specified in Block 12, the work identified in Block 11 and described in Block 12 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.

13b. Authorized Signature: *Peter Arenson*
 13c. Approval/Authorization No.: PT1571NM
 13d. Name (Typed or Printed): Peter Arenson
 13e. Date (dd/mm/yyyy): 23 Sep 2019
 14b. Authorized Signature:
 14c. Approval/Certificate No.:
 14d. Name (Typed or Printed):
 14e. Date (dd/mm/yyyy):

User/Installer Responsibilities

It is important to understand the existence of this document alone does not automatically constitute authority to install the aircraft engine/propeller/article. Where the user/installer forms work in accordance with the national regulations of an airworthiness authority different than the airworthiness authority of the country specified in Block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts aircraft engine(s)/propeller(s)/article(s) from the airworthiness authority of the country specified in Block 1.

State, parts / blocks 13a and 14a do not constitute installation certification. In all cases, aircraft maintenance records must contain an installation certification issued in accordance with national regulations by the user/installer before the aircraft may be flown.



Aviation Communications & Surveillance Systems
 Completed Traveler
 Work Order ID: WO-284266\1



Work Order ID Part ID Description Trace ID Rls Date Qty Drawing ID/Build Rev

WO-284266\1 7514081-911 TCAS DIRECTIONAL ANE56821 9/5/2019 1 7514081/W
 ANTENNA/ADAPTER
 ASSY



HDW MOD: A



7514081-911



ANE56821

WORK ORDER STATUS

Seq#	Shop Resources	Instructions	Operation Status	Completed By	Date
10	ANT-FINAL ASSY 40	ASSEMBLY PER METHOD SHEET 7514081-911	TCAS DIRECTIONAL 1	C 476241: ASHLEY TRANG ANE56821	9/5/2019 100.00

NCM STATUS

Part ID	Part Desc.	Serial No.	NCM ID	Disposition Type	NCM Status
7514081-911	TCAS DIRECTIONAL A	ANE56821	NONE		
7514060-711	TCAS DIRECTIONAL A	ANE56821	NONE		



FINAL INSPECTION COMPLETED BY: _____

Monday, September 9, 2019



Work Order ID	Part ID	Description	Trace ID	Rls Date	Qty	Drawing ID/Build Rev
WO-2766271	7514060-711	TCAS DIRECTIONAL ANTENNA	ANE56821	5/21/2019	1	7514060/AU



WORK ORDER STATUS

Seq#	Shop Resource	Instructions	Operation Status	Completed By	Date
10	ANT-ASSY1 80	ASSEMBLY	C	500248: Greene Jeremiah	5/22/2019
15	ANT-ASSY1 IPI	PFXFORM IN PROCESS INSPECTION	C	476241: ASHLEY TRANG	5/22/2019
30	ANT-PRETEST	PRE-TEST 1	C	480510: ONG WILLIAM	5/23/2019
31	ANT-DISASSEMBLE	DISASSEMBLE RADOME / BACKING PLATE ASSY	C	500248: Greene Jeremiah	5/24/2019
32	ANT-PSPREP1	CLEAN SURFACES OF RADOME AND BACKING PLATE	C	500248: Greene Jeremiah	5/24/2019
33	ANT-PROSEAL1	PRO-SEAL RADOME	C	500248: Greene Jeremiah	5/30/2019
34	ANT-PSMATE1	MATE RADOME TO BACKING PLATE	C	476241: ASHLEY TRANG	5/30/2019
36	ANT-RMVTEMPHW	REMOVE TEMPORARY HARDWARE AFTER PRO-SEAL 1 55 HOUR CURE	C	10059323: GONZALES FIDELIA	6/4/2019
37	ANT-ASSY2	RESOLDER CONTACTS FROM CCA TO RADOME POSTS	C	10059323: GONZALES FIDELIA	6/4/2019
38	ANT-ASSY2 IPI	IN PROCESS INSPECTION - ANT ASSEMBLY 2	C	476241: ASHLEY TRANG	6/5/2019
40	ANT-CONATHANE	CONATHANE	C	10059323: GONZALES FIDELIA	6/12/2019
45	ANT-IPI CON	IPI CONATHANE SOLDER CONNECTIONS	C	500248: Greene Jeremiah	6/12/2019
48	ANT-PROSEALPREP	PREPARE ANTENNA FOR PRO-SEAL 2	C	10059323: GONZALES FIDELIA	6/19/2019
51	ANT-PROSEAL2	APPLY PROSEAL BETWEEN RADOME ASSEMBLY AND ADAPTOR PLATE	C	500248: Greene Jeremiah	6/19/2019
61	ANT-PROSEALMAT	MATE RADOME ASSEMBLY TO ADAPTOR PLATE	C	10059323: GONZALES FIDELIA	6/19/2019
65	ANT-PROSEALCLN	REMOVE WET EXCESS PROSEAL	C	476241: ASHLEY TRANG	6/19/2019
70	ANT-PROSEALCLND	VERIFY PROSEAL IS CURED. CLEAN EXCESS. SEND TO PAINT.	C	500248: Greene Jeremiah	6/24/2019
80	ANT-VCNPAINT	RECEIVE FROM PAINT. PERFORM TQC INSPECTION.	C	476241: ASHLEY TRANG	7/29/2019
85	ANT-COLORBAND	COLORBAND ANTENNA CONNECTORS	C	476241: ASHLEY TRANG	7/29/2019



FINAL INSPECTION COMPLETED BY: _____

Thursday, August 8, 2019



Aviation Communications & Surveillance Systems
Completed Traveler
Work Order ID: WO-276627\1



86	ANT MODA	PERFORM MOD A PER METHOD SHEETS.	C	10059323: GONZALES FIDELIA	7/30/2019
90	ANT-FINALTEST	PERFORM FINAL TEST.	C	379211: EDCITY BROOKS	8/8/2019

NCM STATUS

<u>Part ID</u>	<u>Part Desc.</u>	<u>Serial No.</u>	<u>NCM ID</u>	<u>Disposition Type</u>	<u>NCM Status</u>
7514060-711	CAS DIRECTIONAL A	ANE56821	NONE		
7514074-911	C/A - BEAM FORMING	0FR76-00193518	NONE		

FINAL INSPECTION COMPLETED BY: _____



Thursday, August 8, 2019

ENGINEERING SPECIFICATION

SECURITY NOTATION

DOC NO. IT7514060
 CAGE CODE 1WYD3

Revision **U**

SEE THE TITLE PAGE FOR PROPRIETARY AND DATA RIGHTS NOTATIONS.


RF
LT

QUALITY CONTROL FUNCTIONAL TEST REPORT

PART NO. 7514060-711 SERIAL/SHOP NO. ANE56821
 TESTED TO IT 7514060 REV. U

TEST FIXTURES AND SUPPORT EQUIPMENT

TEST FIXTURE OR TYPE	SERIAL	MODEL	SPC/ID	CAL DUE DATE
PC				
DMM		8842A	L-3 16	01/04/2020
NETWORK ANALYZER		8753E	L-3 106	01/21/2020
POSITIONER CONTROLLER		AL4806-3A O.1	L-3 5276	NCR
MONOPOLE ANTENNA		9001096-001	N/A	NCR
			REVISION	
ACSS AntennaTest Software		9000710-003	Rev B	Revision -
ACSS Configuration Files		9000708-001	Rev A	Revision -
1.0 INPUT DC RESISTANCE			5.0 90 DEG RECEIVE BEARING TEST	
1.1 J1 '0990 to 1010	1002.00	OHMS	5.2 90 DEG PCO OK	PASS CHECK
1.2 J2 '7980 to 8140	3049.00	OHMS	5.3.1 BEAM 1 SCO	PASS
1.3 J3 '3980 to 4060	4016.00	OHMS	5.3.2 BEAM 2 SCO	PASS
1.4 J4 '1980 to 2020	1992.00	OHMS	5.3.3 BEAM 3 SCO	PASS
			5.3.4 BEAM 4 SCO	PASS
2.0 ANTENNA TRANSMIT GAIN TEST			5.4 90 DEG MARGINS OK	
2.3 70 DEG GAIN OK	PASS	CHECK		
2.4 80 DEG GAIN OK	PASS	CHECK		
2.5 90 DEG GAIN OK	PASS	CHECK	6.0 100 DEG RECEIVE BEARING TEST	
2.6 100 DEG GAIN OK	PASS	CHECK	SECTION DELETED	
2.7 105 DEG GAIN OK	PASS	CHECK		
3.0 70 DEG RECEIVE BEARING TEST			SECTION DELETED	
4.0 80 DEG RECEIVE BEARING TEST			SECTION DELETED	

TESTER 1379211  DATE 08/08/2015 FTR SHEET 1 OF 1



AW/CRITICAL NOTATION

SECURITY NOTATION

SUPPLEMENTS

A-1 PAGE

COPY



Parameters:

Reference Decode:
Symbol Contrast:
Fixed Pattern Damage:
Axial Non-Uniformity:
Grid Non-Uniformity:
Modulation:
Unused ECC:

Results	Grade	130N
PASS	4 (A)	PASS
75%	4 (A)	PASS
----	4 (A)	PASS
0.00	4 (A)	PASS
0.03	4 (A)	PASS
----	4 (A)	PASS
100%	4 (A)	PASS

Final Grade:

4 (A) PASS

4/05/660/45

Non-Graded Parameters:

Print Growth: 0.01 Symbol Size: 24x24
Symbol Type: ECC100 Element Size: 9.4 Pixels 0.012"

Symbol Data: [] > R₅ 06^G S17V1WYD3^S 0714081-911^G SANE56821^R S[#] O_T

UII: D1WYD37514081-911ANE56821

Format: DI

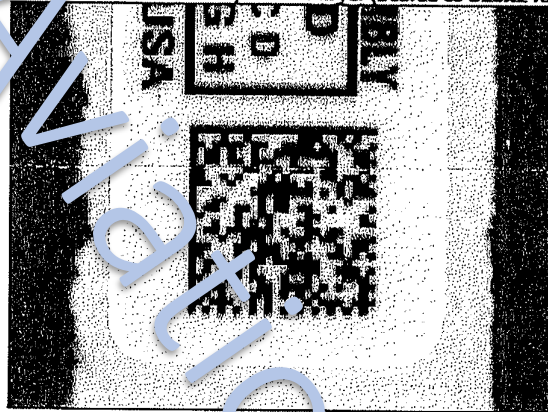
P/N (1P): 7514081-911

S/N (S): ANE56821

IAC: D

EID (17V): 1WYD3

Symbol Image: (scaled to 328x248)



Aperture: 0.005"
Wavelength: 660 nm
Angle: 45 degrees

Firmware Version 35-676201-15
Verifier Serial Number 0975398
Monday, September 09, 2019 at 14:34:05
Microscan ESP Version 6.3.0.11
Company: ACSS
Operator:
Datamatrix Verification Documents

This report created using Microscan ESP software

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