

WPR21FA143

SURVIVAL FACTORS

Specialist's Factual Report - Attachment 1
ELT Teardown Report

May 27, 2022



Following card ELT ELT KANNAD 406 AF-COMPACT

OROLIA reception n° SER16382

Orolia SAS - Z.I des 5 Chemins, CS 10028, 56520, Guidel, France

Devis Accepté: OUI/NON
Date:
Statut:
OH [] RE []
VE [] MODIF [] SCRAP []

P/N : S1840501-01 AMDT: U
S/N : LX1100445796 DOM: 02/2017
CSN: 429151 Expiry date: 08/2023
Type: ELT KANNAD 406 AF COMPACT

Customer information:
Name BUREAU D'ENQUETES ET D'A
Repair order N° EMAIL
P/N customer N/A

Ref. applicable document: CMM 25-63-03 Rev 07 (27/02/2018) Garantie: PART145

Observation: accident mortel d'un AS350 B3 en Alaska (N351SH) qui a eu lieu le 27/03/2021. Le NTSB souhaite nous confier l'ELT pour examen,	Motif de retour Inspection	accessoires:	Name / Date / Visa reception Le Goff Michele 21-avr.-22
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Check Data

Matching of Product/SAP/Access : PN; SN; AMDT; CSN. Identification picture for tracability; CSN; instruction labels

Check in entance /Sortance

Designation	Specification	Result IN <i>Sur Batterie</i>			Result OUT <i>Sur Alimentation</i>				
		measurement	OK	NOK	N/A	measurement	OK	NOK	N/A
General									
Visual inspection	switch,no corrosion,no crack,labels	/	<input checked="" type="checkbox"/>	<input type="checkbox"/>		/	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Self-test	Done (1 long flash or 3+4 flashes)	3+2	<input type="checkbox"/>	<input checked="" type="checkbox"/>		long flash	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Software Control	Read 15hex ID with PR600	ADC6499005DD255	<input checked="" type="checkbox"/>	<input type="checkbox"/>		ADC6499005DD255	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G-switch	ELT activates with G-switch	/	<input checked="" type="checkbox"/>	<input type="checkbox"/>		/	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Buzzer	Buzzer operates	/	<input checked="" type="checkbox"/>	<input type="checkbox"/>		/	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tests counters	A maximum of 350 tests	40	<input checked="" type="checkbox"/>	<input type="checkbox"/>		40	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bursts counters	A maximum of 72 bursts	12884	<input type="checkbox"/>	<input checked="" type="checkbox"/>		12884	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Battery									
P/N		0141823	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0141823	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Amdt		J	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	J	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SN Battery		1639 0393	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1639 0393	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expiry date		08/2023	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	08/2023	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Battery matches with the labelling of the ELT		/	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	/	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No corrosion or visible damage		/	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	/	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check the clamping of battery's connector		/	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	/	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Board									
Current in stand by mode	Isby < 30µA	6,7 µA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6,7 µA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RF measurement									
406 Frequency	406,028 MHz ± 1 KHz		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	406,0277	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
406 Power	37 ± 2 dBm		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	35,6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
121 Frequency	121,500 MHz ± 6 KHz		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	121,4991	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
121 Power	20 dBm < P < 26 dBm		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21,2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Modulation (121,5 Mhz)	Higher than 85 %		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	96,6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

La version en vigueur de ce document est celle disponible sous SharePoint et générée automatiquement par la base de données d'édition des documents. Modalités de classement et d'archivage : conservé dans le dossier client.

FORM-D6-051
Rev C
Dated 31/03/2022

DATA-D6-010
Rev A
Dated 01/12/2021



Following card ELT ELT KANNAD 406 AF-COMPACT

OROLIA reception n° SER16382

Orolia SAS - Z.I des 5 Chemins, CS 10028, 56520, Guidel, France

Transmission coding	15Hex identical to software control	/	<input type="checkbox"/> <input checked="" type="checkbox"/>	/	<input checked="" type="checkbox"/> <input type="checkbox"/>
Watertightness		measurement	OK NOK N/A	measurement	OK NOK N/A
Watertightness		/		/	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
Test finalization		measurement	OK NOK N/A	measurement	OK NOK N/A
Counter reset	(if applicable)	/		/	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Update Eprog		/		/	<input type="checkbox"/> <input type="checkbox"/>
Labelling Inspection Date	MM/YYYY printed on outside label				<input type="checkbox"/> <input type="checkbox"/>
Next Control According To Regulation control	by default 12 months for Automatic ELTs	/		/	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Load in BDD the equipement number	Battery tester, Current tester, Torque driver	/		/	<input type="checkbox"/> <input type="checkbox"/>
Load in BDD the equipement number	BT100, multimeter, spectrum, programmer	/		/	<input type="checkbox"/> <input type="checkbox"/>
Load in BDD the equipement number	power, load	/		/	<input type="checkbox"/> <input type="checkbox"/>
Check if the work to carry is correct	Same into the following card and BDD	/		/	<input type="checkbox"/> <input type="checkbox"/>

Comment:

Résumé opération

SER16382

EXPERTISE le 26/04/2022 10:13:54 par TLM temps : 03:00H

-Constat avant ouverture:

Selftest 3+2 flashes ; no power on each frequency

The auxilliary antenna is damaged

ELT transmitted more than 72 bursts (12884 burst 178hours)

The battery voltage is very low (1,97V instead of 6V typical)

-Constat après ouverture:

In power supply, all the parameter of the ELT is correct

The electronics of the ELT is working properly; No fault found

-Commentaires:

BEA inspection

Additional test : The auxillary antenna is test with a Mokup work proprely

Additional test : RCP No fault found

Additional test : we have ckeck the cable lost of the coax cable: 1,4dBm @406Mhz 0,7dBm @121,5Mhz :OK

Conclusion: During the crash the ELT activated, it transmitted for 178H; The discharge of the battery is due to normal operation

REPARATION le 26/04/2022 10:01:07 par TLM temps : H

-Actions correctives:

N/A

-COMPOSANTS REMPLACES:

S1840510-01; 1; ; ; Kit BAT200; aucune traça renseigné ; Sous garantie

A

Expertise:
Finalisation:

Name:

LE NEUR TH.

Date:

26.04.2022

Signature: