



NON-CONFORMANCE CONTROL SHEET

NCCS	2 CETE 102 i.A
Date:	22/02/2021
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IDENTIFICATION	Component Family:	SFC 035, 040 and SPF 035, 040			ESCC Generic Spec. and Issue:	3008 i.3	
	ESCC Comp. Type No:	/	Purchase Order No:	/	ESCC Detail Spec. and Issue:	3008/031 i.3 + 3008/032 i.2 + 3008/025 i.3 + 3008/014 i.4	
	Manufacturer Name:	/	Order placed by:	/			
	Lot No:	/	Date Code see annex1	Serial No or Range all batches		/	Plant Location:
NC DETECTED AT		Qualification/MoQ <input checked="" type="checkbox"/>	Procurement <input type="checkbox"/>	Receiving Insp. <input type="checkbox"/>	Manufacturing <input type="checkbox"/>	In-process Insp. <input type="checkbox"/>	
		Precap Visual Insp. <input type="checkbox"/>	Final Prod. Tests <input type="checkbox"/>	Burn-In / Screening <input type="checkbox"/>	Lot Accept. <input type="checkbox"/>	Other <input type="checkbox"/>	
NON-CONFORMANCE DESCRIPTION	(a) Observed Non-Conformance						
	see § "Failure description"						
	(b) Suspected cause						
	see § "Root cause"						
Initiator :	V. Baccarrère	Chief Inspector :	V. Baccarrère	ESCC Executive:	J.P. Bussenot	LEVEL 1 : <input type="checkbox"/>	
Date :	22/02/2021	Date:	22/02/2021	Date:	22/02/2021	LEVEL 2 : <input checked="" type="checkbox"/>	
RESOLUTION	Place of NRB:	NRB members (Name and signature):				DCR Required Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
	Date:						
	Actual / detected cause of non-conformance:						
	see § "Root cause"						
NRB decision and actions (incl. individual(s) responsible for action(s) and due date(s)):							
CLOSE-OUT	NRB decision implemented	Chief Insp. Name:		Date			
	ESCC Executive certification	Name:		Date			
	Diffusion: ESCC secretariat, ESCC Executive, Chief Inspector						

Failure Description

Historical:

- from 08/1998 to 05/2018: under certificate 252 of the QPL, all variants were qualified as is
- from 06/2018 to 05/2020: under certificate 252 of the QPL, partial variants were qualified under the NCCS 2CETE 704
- since 06/2020: removal of the certificate 252 of the QPL, all variants were concerned
- 08/2020: internal validation of the corrective actions in order to fix the topic of the NCCS 2CETE 704
- on going: updating of the PID 905.95.390 from i.H to i.J
 - launch of qualification manufacturing orders of test vehicles according to:
 - the PID 905.95.390 from i.J
 - the ESCC generic specification 3008 i.3 versus its content
 - the ESCC generic specification 3008 draft of the next issue versus the chart F4A qualification flow chart
 - the above ESCC detail specifications

test vehicles:

manufacturing order	Designation	ESCC detail specification	chart II / vibration test	
			required**	performed
MG313201000783	SFC 030 3222 SV 100	3008/020 i.3	no	no
MG313201000785	SFC 030 3223 SV 050	3008/020 i.3	no	no
MG313201000773	SFC 030 3333 SV 050 R	3008/020 i.3	no	no
MG313201000776	SFC 040 3102 IR 100	3008/032 i.2	yes	no
MG313201000780	SFC 040 3682 IR 100	3008/032 i.2	yes	no
MG313201000784	SFP 035 1041 UR 050B	3008/025 i.3	yes	no
MG313201000789	SFP 040 1026 UR 100	3008/014 i.4	yes	no
MG313201000781	SFC 030 3223 SV 050	3008/020 i.3	no	no
MG313201000751	SFC 030 3223 SV 050	3008/020 i.3	no	no

So, during the back to qualification process, for 4 tests vehicles, the "chart II / vibration test" was required and not performed

Identification of the Scope

Perimeter of application of the vibration test:

- ** : at iso internal structure, the chart II / vibration test is systematically:
- required when the variant is with a screw-on body
 - not required when the variant with a to be soldered body (SFC 030 SV only)
 - in MOQ / chart II: on all the FM parts of a concerned batch
 - in commercial / chart II: on all the FM parts of a concerned batch
 - in MOQ / chart V / LAT1A: on 6 dedicated parts
 - in commercial / chart V / LAT1A: on 6 dedicated parts when requested by the orderer

- performed:

- in **MOQ / chart II**:

- year 2018, certificate 252 i.J, data packs:170743 / (16/1021 + 170956) / (171395 + 180162) / (180056 + 180637):

manufacturing order	designation	detail specification	vibration test			
			chart II		chart V / LAT1	
			required	performed	?	performed
32016060102	SFP 100 1066 IV 300	3008/028 i.3	yes	yes	yes	yes
32017050001	SFC 030 3101 SV 200	482.93.390 i.D	no	no	no	no
32017100095	SFC 040 3222 IR 200	3008/032 i.2	yes	no	yes	yes
32017100109	SFC 030 3682 SV 100	3008/020 i.3	no	no	no	no

→ there is one vehicle test type for which it was required in chart II but declared as not performed

- year 2016, certificate 252 i.H, data packs 150239 / (14/0766 + 1504279):

manufacturing order	designation	detail specification	vibration test			
			chart II		chart V / LAT1	
			required	performed	?	performed
3201403804	SFC 030 3282 SR 100 D	RA050110610 i.G	no	no	no	no
3201435001	SFC 030 3122 SV 050 HT	3008/020 i.3	no	yes	yes	yes

→ there is one vehicle test type for which it was not required in chart II but declared performed, and as we are talking about bodies of filters to be soldered, the most probably it is that it has not been done

- year 2014, certificate 252 i.G, data packs 140451 / (131159 + 140452) / (130497 + 140456):

manufacturing order	designation	detail specification	vibration test			
			chart II		chart V / LAT1	
			required	performed	?	performed
3201302902	SFP 035 1041 YR 050	3008/025 i.2	yes	yes	yes	yes
3201319201	SFL100 5001 UV 080	3008/029 i.1	yes	yes	yes	yes
3201402803	SFC 035 3223 YR 050	3008/031 i.3	yes	yes	yes	yes

→ nothing to report

- year 2012, certificate 252 i.F, data packs 120761 / 1200782 / 120785:

manufacturing order	designation	detail specification	vibration test			
			chart II		chart V / LAT1	
			required	performed	?	performed
3201200301	SFC 040 3471 IR 100	3008/032 i.1	yes	yes	yes	yes
3201200302	SFL100 5001 UV 080	3008/029 i.1	yes	yes	yes	yes
3201200305	SFP 035 1041 YR 050	3008/025 i.2	yes	yes	yes	yes

→ nothing to report

- year 2010, certificate 252 i.E, data packs 101146 / 101148 / 101149:

manufacturing order	designation	detail specification	vibration test			
			chart II		chart V / LAT1	
			required	performed	?	performed
3201005701	SFP 035 1041 YR 050	3008/025 i.2	yes	yes	yes	yes
3201005702	SFL 100 5118 IV 100	3008/029 i.1	yes	yes	yes	yes
3201005703	SFC 030 3222 SV 050	3008/020 i.1	no	yes	yes	yes

→ there is one vehicle test type for which it was not required in chart II but declared performed, and as we are talking about bodies of filters to be soldered, the most probably it is that it has not been done

- in commercial / chart II:

due to information above, there is a doubt on the reality of the realization of these tests when they are declared to be done
 Syrlinks on not shipped SFC 035 3471 YR 100: customer use as is under RFW NC21001809_Signé
 Comcraft on shipped SFP 040 1026 UR 100: customer request to perform the service for under RMA rc300210100017

and for information:

- in MOQ / chart V / LAT1:

done

- in commercial / chart V / LAT1A:

as all the variants were in QPL, done when requested by the orderer

Root Causes

- The no-realization of the chart II / vibration test on the test vehicles dedicated to the back to qualification when required is due to the fact that the vibration step is not in the manufacturing ranges in the ERP V.11
 → the various manufacturing ranges in the ERP V.11 come from ones in the ERP V.6, with a change on 07/2020
 → the manufacturing ranges in the ERP V.6 have never contained a chart II / vibration step

Failure Analysis

Due to the root cause analysis, the final status about the realization of the vibration test the is:

- in MOQ / chart II: very high suspicion that it was never done
- in commercial / chart II: very high suspicion that it was never done
- in MOQ / chart V / LAT1: done
- in commercial / chart V / LAT1A: done

in the literature, the mechanical stresses seem to be highlighted by a vibration test when the product has degrees of freedom (with moving components), and if not by VRT which is our case

Risk Assessment

- non-hermetic SFC035 according to 3008/031
 SFC040 according to 3008/032
 SFP035 according to 3008/025
 SFP040 according to 3008/014
 SFP060 according to 3008/030: the design includes end-to-end through-connection (without any intermediary in to out soldering), so
 without technical risk

- hermetic SFC100 according to 3008/027
 SFL100 according to 3008/029
 SFP060 according to 3008/021
 SFP100 according to 3008/028: the design includes connection with intermediary in to out soldering: so, potential technical risk

But, for both of these sub-families:

- mechanical: risk to damage the plating on the threading
- historic: never failure communicated by customer during operational application to have used filters without being tested in vibration

- MIL-PRF-28861 i.E - PERFORMANCE SPECIFICATION FOR FILTERS AND CAPACITORS, RADIO FREQUENCY/ELECTROMAGNETIC INTERFERENCE SUPPRESSION, GENERAL SPECIFICATION: no vibration test during the assembly / control

STATUS

/

CONCLUSION

- under current ESCC 3008 i.3:
as parts are non-qualified yet, to perform the chart II / vibration test is at the Exxelia/orderer discretion

- next revision of the ESCC 3008:
Exxelia proposal to edit a specific DCR, at the same time of the DCR 1232 managing the total re-write of the generic ESCC 3008 i.3, in order to remove the chart II / vibration test