

FOR

# INFO VIB Report

104	S2	UTCHMS	N1VB	N1VIBCNT	N2VB	FVN1	PH
105		NNNNNN	NN.N	NNNN	NN.N	NN.NN	NN
106							
107	S3	FVN2	FFAN	RVN1	RVN2	RFAN	AUTOE
108		NN.NN	NN.NN	NN.NN	NN.NN	NN.NN	N
109							
110	S4	MNE	N2A	N1A	ALT	CAS	
111		N.NNN	NNN.NN	NNN.NN	SNNNNN	NNN.N	
112							
113	S5	UTCHMS	N2VB	N2VIBCNT	N1VB	FVN1	PH
114		NNNNNN	NN.N	NNNN	NN.N	NN.NN	NN
115							
116	S6	FVN2	FFAN	RVN1	RVN2	RFAN	AUTOE
117		NN.NN	NN.NN	NN.NN	NN.NN	NN.NN	N
118							
119	S7	MNE	N2A	N1A	ALT	CAS	
120		N.NNN	NNN.NN	NNN.NN	SNNNNN	NNN.N	
121							
122	S8	CNT1S136					
123		NNNN					
124							
125	S9	UTCHMS	N2VB	N2VIBCNT	N1VB	FVN1	PH
126		NNNNNN	NN.N	NNNN	NN.N	NN.NN	NN
127							
128	S0	FVN2	FFAN	RVN1	RVN2	RFAN	AUTOE
129		NN.NN	NN.NN	NN.NN	NN.NN	NN.NN	N
130							
131	T1	MNE	N2A	N1A	ALT	CAS	
132		N.NNN	NNN.NN	NNN.NN	SNNNNN	NNN.N	
133							
134	T2	CNT1S136					
135		NNNN					
136							
137	T3	UTCHMS	N2VB	N2VIBCNT	N1VB	FVN1	PH
138		NNNNNN	NN.N	NNNN	NN.N	NN.NN	NN
139							
140	T4	FVN2	FFAN	RVN1	RVN2	RFAN	AUTOE
141		NN.NN	NN.NN	NN.NN	NN.NN	NN.NN	N
142							
143	T5	MNE	N2A	N1A	ALT	CAS	
144		N.NNN	NNN.NN	NNN.NN	SNNNNN	NNN.N	
145							
146	T6	CNT1S136					
147		NNNN					
148							
149	T7	UTCHMS	N2VB	N2VIBCNT	N1VB	FVN1	PH
150		NNNNNN	NN.N	NNNN	NN.N	NN.NN	NN
151							
152	T8	FVN2	FFAN	RVN1	RVN2	RFAN	AUTOE
153		NN.NN	NN.NN	NN.NN	NN.NN	NN.NN	N
154							
155	T9	MNE	N2A	N1A	ALT	CAS	
156		N.NNN	NNN.NN	NNN.NN	SNNNNN	NNN.N	
157							
158	T0	CNT1S136					
159		NNNN					
160							

10TH HIGHEST  
EXCEEDANCE  
N1 > 5CU

more than 5.000  
and duration  
computed in  
HIGHEST  
EXCEEDANCE  
N2 > 5CU  
seconds

2ND HIGHEST  
EXCEEDANCE  
N2 > 5CU

3ND HIGHEST  
EXCEEDANCE  
N2 > 5CU

4TH HIGHEST  
EXCEEDANCE  
N2 > 5CU

N\_MM\_313773\_0\_VAB2\_03\_01

Figure 31-37-73-23310-02-A (SHEET 3/5) - Engine N1/N2 Vibration Report <76>  
\*\* ON A/C FSN 601-629, 631-650, 751-757

ability:

A320NEO Aircraft powered with Pratt & Whitney engines and fitted with:

- **SAGEM FDIMU P/N ED48A200WR**, loaded with DMU System Software :
  - Pre-ADC : P/N 360-04409-060 database P/N 360-04410-060
  - Post-ADC : 263321997-0185 / 263322027-0185, database P/N 263322080-0185 / 263322093-0185
- **Teledyne FDIMU P/N 2234320-02-02**, loaded with DMU Software :
  - Pre-ADC : P/N D11SAWP02C00000
  - Post-ADC : P/N D18SAWP03C00000

On D21SAWP04C00000, the report 07 has been updated in order to monitor the engine vibrations.

## References:

N/A

## Background

Airbus customer support develops provides specification of AIDS reports to support the monitoring of Engine Vibrations on A320 NEO PW.

Purpose of this article is to provide A320NEO operators with detailed specification about engine vibration reports to be implemented in FDIMU customisation.

## Description

As per design, N1 VIB and N2 VIB parameters (corresponding to engine vibration warning) are sent by the EIU to the FDIMU, and used in AIDS report 07 triggering logics.

The legacy AIDS report <07> did does not gather all the parameters need needed to troubleshoot the Transient (short duration) N2 Vibration events. In order to help the troubleshooting of this condition (TSM 71-00-00-810-873-A), the duration of N2 VIB between 5CU and 6CU, and above 6 CU; above 5 CU; and the max value of vibration can be recorded.

Both FDIMU software TELEDYNE and SAFRAN are affected except D21SAWP04C00000, which has been updated in order to solve the issue.

As a mitigation, Airbus provided speciation in order to help operators to create new reports in their customisation, reports to further characterize engine vibration data (level, peak and duration above threshold) in order to support the troubleshooting action.

### 1. AIDS reports <073> and <074>:

The Engine N1/N2 Vibration Report 73 (74) collects engine vibration level and oil system parameters:

- Max NF Vib
- Max N1 Vib
- Max N2 Vib

**AIDS reports <075> and <076>** useful to troubleshoot the engine vibrations

The Engine N1/N2 Vibration Reports <075> (<076>) collects high engine vibration values (>5.0 CU leading to ECAM alert) and durations computed in seconds.

AIDS reports are triggered when N1 or N2 vibrations are above threshold (5.0 CU leading to ECAM alert)

- N1 Vib loop when ECAM alert is generated
- N2 Vib loop when ECAM alert is generated
- N2 Vib loop when N2 Vib CU > 6 CU

### Description and layout of Report <075> and <076>:

Report <075> is the Engine N1/N2 vibration report for Engine 1.

Report <076> is the Engine N1/N2 vibration report for Engine 2.

For SAGEM, reports <075> and <076> are composed of the following:

- First sequence of 10 events of N1vib > 5CU;
- Then, starting from line S2: 10 events of N2vib > 5CU;

For SAGEM and Teledyne, reports <075> and <076> are composed of the following:

- Sequence of 10 events from line C2 to line S4 of N1vib > 5CU
  - VB1TOL being the duration of vibrations above 5 C.U for each event
- Sequence of 10 events from line S5 to line E4 of N2vib > 5CU
  - VB2TOL being the duration of vibrations above 5 C.U for each event

The difference between both sequences is noticeable as N1 vib events are displayed on 3 lines while N2 vib events are displayed on 4 lines (1 additional parameter: N2 vib counter > 6 CU);

Please find below the description of parameters for one N1 vibration event:

Please find below the description of parameters for one N2 vibration event:

The duration of vibration between 5CU and 6 CU can be obtained by subtracting N1VIB25CNT value to CNT1S136\_E1 value.

Please find below an example of the ACARS version of the Report <075> (truncated):

```
QU XYTS07X
.TLSOP7X 011648
```