— FOR INFO
V13 Report

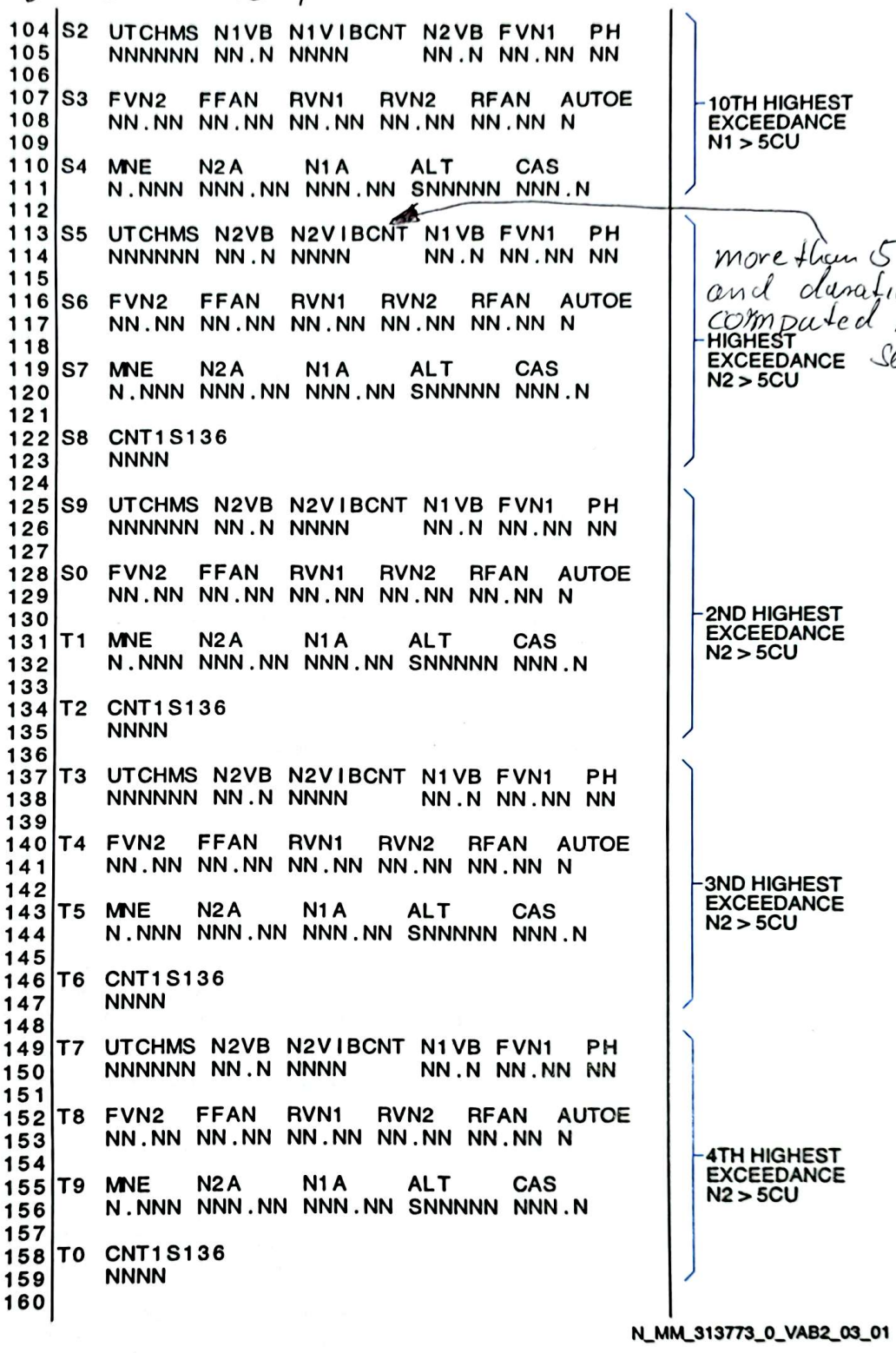

Figure 31-37-73-23310-02-A (SHEET 3/5) - Engine N1/N2 Vibration Report <76>
**** ON A/C FSN 601-629, 631-650, 751-757**

cability:

320NEO 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 XYTSO7X
.TLSOP7X 011648
```