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7.2 FLIGHT INSTRUMENTS AND ANCILLARY SYSTEMS

7.2.1 ANCILLARY SYSTEMS

- **General**

The ancillary systems are composed of 3 Ancillary Systems Unit (ASU) cards to perform the ancillary service functions of the helicopter:

- Management of all audio warnings, some visual warnings, and the processing of specific electrical signals,
- Management of the engine fuel control back-up system.

- **Characteristics**

The ASU cards are supplied with a dual 28 VDC power supply and are protected by breakers.

- **Description**

ASU No.1 performs the following functions:

- Management of the  warning light,
- Generation of the audio high and low NR warnings,
- Management of other audio warnings:
 - . Due to red alarms: “Gong”,
 - . Due to MTOP overlimit: continuous low tone.

ASU No.2 performs the following functions:

- Management of the  warning light,
- Processing and filtering of VEMD electrical supply.

ASU No.3 is part of the Engine Back-up Control Ancillary Unit (EBCAU) and performs the following functions:

- Engine N2 indicator signal acquisition,
- Computing and signal processing for back-up fuel metering valve.
- “Back to neutral” function of back-up fuel metering valve (safety device or necessary after system maintenance test).

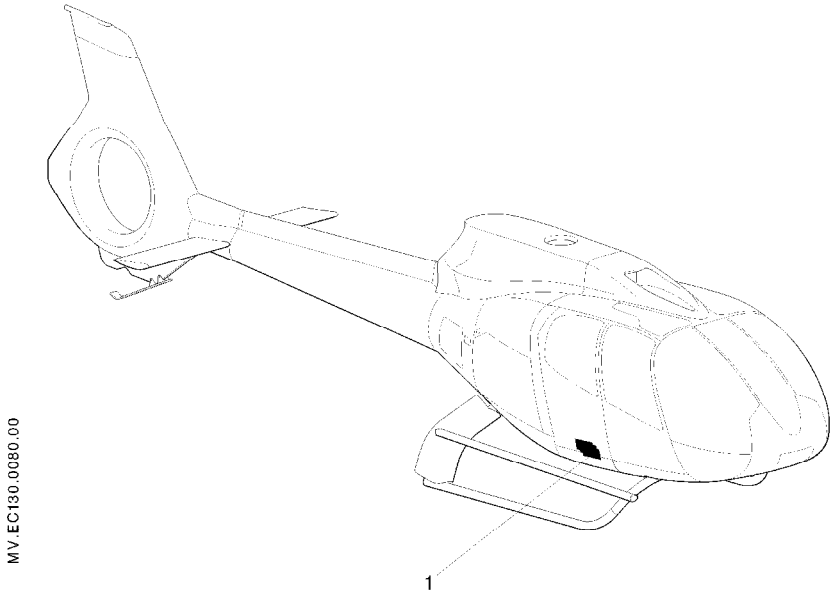


Figure 7 - 3: ASU cards location

7.2.2 CENTRAL WARNING SYSTEM

• Description

The caution and warning panel (CWP) comprises the following components:

- Red warning lights for alarms which require immediate action,
- Amber caution lights for alarms requiring action which can be deferred.

Audio alarms are generated through the intercommunication system. The audio warning system is activated when [HORN] on the central console is set to ON position. In this case, **HORN** on the caution and warning panel.

• Characteristics

The central warning system is supplied by a dual 28 V DC power supply and is protected by circuit breakers.

Pre MOD 07-4437



Post MOD 07-4437



Figure 7 - 4: Caution and warning panel

(*) If ECS installed

7.2.3 VEHICLE AND ENGINE MANAGEMENT DISPLAY

- **General**

The VEMD is a duplex indicator equipped with two matrix liquid crystal displays. It is located in the center of the instrument panel. The VEMD displays all necessary engine and vehicle parameters. The VEMD comprises 3 modules:

- Two processing modules : LANE 1 and LANE 2,
- One display module which includes two screens and the control pushbuttons.

- **Characteristics**

The VEMD is supplied with a dual 28 VDC power supply and is protected by circuit breakers.

- **Operating modes**

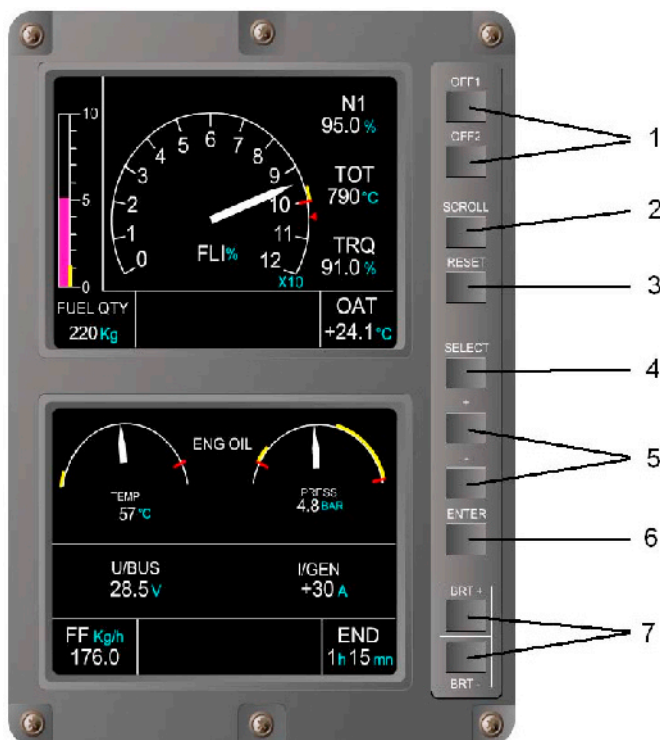
Three operating modes are accessible:

- **"OPERATIONAL" mode:** accessible in ground and flight condition, this mode constitutes the main operating mode of the equipment. It contains the ENGINE, VEHICLE, FLI, FLIGHT REPORT and ENGINE POWER CHECK pages.
- **"CONFIGURATION" mode:** only accessible in ground condition, this mode allows configuration of the VEMD.
 1. [OFF1] and [OFF2]PRESS to switch OFF the VEMD.
 2. [SELECT] and [ENTER].....PRESS and HOLD.
 3. [OFF1] and [OFF2]PRESS to switch ON the VEMD.
 4. Hold until message **RELEASE KEY** appears on both screens.
- **"MAINTENANCE" mode:** only accessible in ground condition. This mode allows the selection of the different maintenance functions: Flight report, Failure report, Overlimits, Engine Health Check, Operating times, EECU data and Data loading.

To access this mode use the same procedure as "CONFIGURATION" mode except item 2, replace by the following:

 2. [SCROLL] and [RESET]PRESS and HOLD.

• **VEMD controls**



- 1 - **[OFF1 / OFF 2]** pushbuttons:
 - . Switch ON/OFF processing module 1/2 and the upper or lower screen.
- 2 - **[SCROLL]** pushbutton:
 - . Scrolling through the pages.
- 3 - **[RESET]** pushbutton:
 - . Return to nominal display configuration.
- 4 - **[SELECT]** pushbutton:
 - . Select a data field.
- 5 - **[+ / -]** pushbutton:
 - . Increase/decrease the numerical values of the selected data.
- 6 - **[ENTER]** pushbutton:
 - . Validate the selected data.
 - . Go through a list of available data.
- 7 - **[BRT +/-]** pushbutton:
 - . Screen brightness control

Figure 7 - 5: VEMD controls