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Guidance for use of non-installed equipment (NIE) on board Norwegian military aircraft

MAA-NOR has received several inquiries regarding the use of non-installed equipment (NIE) on board Norwegian military aircraft. This MAIB is issued to provide guidance to the regulated community on this subject.

An application to MAA-NOR for the use of NIE should come from the operator. In the Norwegian defence sector, the CAMO is regarded as the operator.

EMAR 21 Subpart K – Parts and Appliances, especially 21.A.303, deals with the showing of compliance of parts and appliances. The general idea is that if a part or an appliance is relevant or required for the safe operation of the aircraft, it will be regarded as “installed”, and thus part of the approved design. The term “approved design” may be used for “as released” by the aircraft manufacturer’s Design Organisation / a *Coordinating Design Organisation* (e.g. USN/USAF), or an EMAR Part 21J Design Organisation.

Military aircraft may however be used in different roles, and will therefore be required to carry equipment suited to a particular role, e.g. MedEvac equipment, handheld radios, power banks etc. This type of equipment could be crucial for carrying out the mission, but would not be relevant or needed for the safe operation of the aircraft.

On the contrary; if not qualified for the particular aircraft type, the equipment (if activated) may even have a negative effect on the safe operation of the aircraft. Therefore, the equipment needs to be *qualified* for use on board, and the equipment / aircraft combination *tested for compatibility*. If there is a need for mechanical / structural or electrical provisions, e.g. brackets, power supply etc; that specific portion needs to be covered by a Change Approval (Minor or Major).

In practice; an operator (CAMO) wanting to use a specific equipment on board, would apply for an MAA-NOR approval with, for example, a TCTO based on Minor Change (for any mechanical / structural or electrical provisions), and a statement from a qualified source regarding the equipment qualification. Statement(s) would normally refer to qualifying documents against officially recognized standards, e.g. DO-160, DO-178, EMC test reports from aircraft/equipment combinations, etc. Safe / secure storage must also be considered and described.

This is in line with the handling of e.g. Electronic Flight Bag (EFB) and other electronic devices in EMAD AMC 20-25.

References and further reading:

- EMAR 21 Subpart K (EMAR 21.A.307)
- EMAR GM 21.A.301 / 303 / 303 (c), 307(d)

MAIB-NOR 22/08 06 DEC

- EMAD 20-25
- EASA Easy Access Rules for Air Operations Rules, May 2022
- FAA Advisory Circular 20-168 Certification Guidance for Installation of Non-Essential, Non-Required Aircraft Cabin Systems & Equipment (CS&E), 22JUL2010