



AIRWORTHINESS BULLETIN

AWB 02-062 Issue 2 - 7 January 2019

Use of Approved Model List (AML) Supplemental Type Certificates (STC)

An Airworthiness Bulletin is an advisory document that alerts, educates and makes recommendations about airworthiness matters. Recommendations in this bulletin are not mandatory.

1. Effectivity

All aircraft.

2. Purpose

Provide advice on use of Approved Model List (AML) – Supplemental type certificates (STC) to aircraft maintainers.

AML installations can vary in complexity from simple to complex installation and can include primary flight display systems which provide flight critical information.

3. Background

3.1 AML-STC approvals

FAA AML-STCs are taken to have been issued by CASA under r21.114 of CASR.

3.2 What is an AML STC?

A standard STC is an approval method for a change in type design that is limited to a single type certificate (TC). An AML-STC is a multi-model approval method that allows a set of compliance data i.e. type design data and substantiating data, to be designated as 'baseline data' that is applicable to various aircraft models.

This method of approval may apply to multiple aircraft on the same type certificate data sheet (TCDS), or multiple aircraft on various TCDSs. Whenever another model of aircraft is added, or a document is amended, the AML which accompanies the STC is changed.

An AML-STC is intended for installations that are identical or similar that share baseline data between models. If installation variation between models is such that the similarities and baseline data cannot be used, then an additional approval under Part 21 is required. For further information on creation of AML-STC see [FAA AC 20-180](#).

3.3 FAA field approvals vs AML-STC

FAA field approvals can allow a re-use of data from a single STC for multiple approvals where similarity is demonstrated. Under these cases Part 43 advisory circulars are used as acceptable data. The aircraft certification office (ACO) is not usually involved with field approvals.

Under an AML-STC the ACO is involved in approving the STC and subsequent models on the AML. The compliance data for the applicable airworthiness standards (e.g. Part 23 or 27) are addressed as per a standard STC compliance data.

3.4 When is additional approved data required for an AML-STC?

Previously approved installation data may not detail all the corresponding airworthiness standards, installation instructions, flight manual supplements or instructions necessary for continuous airworthiness.

A deviation is necessary when the installation does not match the equipment list and/or equipment integration approved in the original installation. Any deviations from the AML-STC need to be approved under Part 21.

Aircraft may have been modified over the years or may have been manufactured with systems which are not identified or assessed under the AML-STC baseline data. If this is the case, then an approval issued under Part 21 is required.

Use of an AML-STC does not consider all the modifications that have been incorporated in an aircraft since production.

Subsequent equipment installations installed may have problems in operation when using the AML-STC approved data, as these installations were not anticipated in the original certified aircraft design. The problems can range from electromagnetic interference to equipment incompatibility.

3.5 Further guidance to consider when using an AML-STC

Equipment installed by an AML-STC will have to take into account changes to the electrical power requirements which are addressed by an electrical loads analysis (ELA). For further information on ELA see [AWB 24-007](#).

If the aircraft manufacturer or AML-STC has not specified wiring practices it is acceptable to use standard practices in [AC 21-99](#) to wire the installation. If the aircraft manufacturer or AML-STC holder has not specified wire specifications, then an additional Part 21 approval is required.



Installation of new equipment can cause electromagnetic interference to required equipment and systems. If not specified by the aircraft manufacturer or AML-STC holder, it is acceptable to use Appendix A of [AC 21-53](#) to confirm by operational test that there is no unintended electromagnetic interference. Operation of aircraft equipment in accordance with approved data does not require any additional approval to confirm non-interference by test. If interference is confirmed, then configuration changes to correct the interference issues will require an additional Part 21 approval to correct.

Some AML STC may not cover detailed structural modifications for aircraft. AML STC can reference application of FAA AC 43-13-2B. This guidance has never been accepted formally by CASA for use without further consideration. Refer to [AWB 02-045](#) for guidance on the use of FAA AC 43-12-2B. Structural modifications if not sufficiently detailed in the AML STC, may require further approval issued under part 21 of CASR.

AML STC that do not provide full detailed installation instructions and additional data is required to complete the installation, then the additional data would require an approval issued under part 21. Without the additional installation data an Approved Maintenance Organisations may not be able to generate all the required task instructions.

Aircraft being maintained under CAR 2 require the keeping of log books which include recording details of embodied modifications in accordance with r50A of CAR. This same principle is applied to aircraft maintained by part 145 organisation under Division 42.C.3 of CASR.

A copy of the flight manual supplement accompanying the AML-STC should be incorporated with the alteration. If the AFM supplement does not match the intended installation, then any changes to the AFM supplement will need approval under Part 21. For further information on aircraft flight manuals see [AC 21-34](#). Flight manual supplements issued under an AML STC or STC usually apply to the state of design operating regulations. These supplements issued by a foreign state of design may contradict CASA operating regulations.



3.6 Installation aid

Caution: This list is not necessarily comprehensive to ensure complete airworthiness compliance for all aircraft and with all types of equipment. This checklist summarises the main points in this AWB.

If there are any doubts in the completeness of compliance, then an additional part 21 approval is required.

	Complies		
Requirement	Yes	No	Comments
Does the equipment come with an Authorised Release Certificate?			
Does the AML STC specifically cover the model of aircraft type?			
Are there any additional modifications installed in the aircraft which may preclude the use of the AML STC?			
Has there been any checks for electromagnetic interference?			
Is the equipment installed compatible with existing aircraft configuration?			
Is the aircraft Electrical Load Analysis current?			
Does the aircraft type certificate holder specify standard wiring practices?			
Are there any structural modifications required for incorporation that are not detailed in the AML STC?			
Does the AML STC detail Instructions for Continued Airworthiness or Airworthiness Limitations?			
Do any of the maintenance instructions refer to specific CASA maintenance regulations?			
Does the AML STC detail any aircraft flight manual supplements?			
Does the aircraft flight manual supplement reference foreign operational regulations?			

Any of the checklist items above are ticked No, the installation may require an additional part 21 approval and/or approval of maintenance data.



4. Recommendations

If the intended aircraft configuration is different from the baseline data in the AML-STC then an additional approval under Part 21 is required.

If the aircraft model is not listed in the AML-STC then contact the AML-STC holder for further guidance.

Alternatively contact either a CASR 21.J approved design organisation or CASR21.M authorised person who can provide further advice on what is required in addition to AML-STC baseline data.

5. Reporting

It is recommended to report any associated issues with AML-STC to CASA via the defect reporting system. CASA may refer cases to the specific FAA ACO responsible for approval if required.

6. Enquiries

Enquiries with regard to the content of this Airworthiness Bulletin should be made via the direct link email address:

AirworthinessBulletin@casa.gov.au

or in writing, to:

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Civil Aviation Safety Authority
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