
**SUBJ: USE OF DATA APPROVED BY DESIGNATED ENGINEERING REPRESENTATIVES
TO SUPPORT MAJOR ALTERATIONS**

- 1. PURPOSE.** This order clarifies Federal Aviation Administration (FAA) Order 8110.37C, Designated Engineering Representative (DER) Guidance Handbook, by describing how data approved by Designated Engineering Representatives (DERs) may be used to support major alterations to type-certificated products in cases where the alterations are to be approved by means other than type certificate changes or supplemental type certificates (STC).
- 2. DISTRIBUTION.** Distribute this order to the branch level of Washington headquarters for Aircraft Certification; to the branch level in the Aircraft Certification Directorates; to the Flight Standards Aircraft Maintenance Division; to all Flight Standards District Offices; to all Aircraft Certification Offices (ACO); to the Aircraft Certification Branch at the FAA Academy; to the Brussels Aircraft Certification Division; to all Flight Standards International Field Offices; and to all DERs.
- 3. DER APPROVAL OF MAJOR ALTERATION DATA.** FAA Order 8110.37C, Designated Engineering Representative (DER) Guidance Handbook, allows specially authorized DERs to approve data on FAA Form 8110-3 to support a major alteration to a type-certificated product. The order states that DERs are not authorized to perform FAA field approvals or to approve altered products for return to service. It recommends inclusion of a clarifying note in the body of each FAA Form 8110-3 by which a DER approves data for major alterations, stating, "This approval is for engineering design data only and is not an installation approval." This statement is not intended to prevent the data from being used as the basis for a major alteration, but to emphasize to the installer their responsibility to perform the alteration with all the required approved data.
- 4. USE OF DER DATA.** Major alterations must be accomplished under Title 14 of the Code of Federal Regulations (14 CFR) part 43. The altered product must be approved for return to service under 14 CFR parts 43, 65, 121, 135, or 145. An altered product may be approved for return to service if the alteration was accomplished in accordance with FAA approved data. DERs specifically authorized by their managing ACO may approve data for major alterations. If all the data supporting compliance with applicable airworthiness regulations is DER-approved, then the product can be altered in accordance with those data. The product can be inspected for conformity to the data by a person authorized to perform such an inspection, and approved for return to service by a person authorized to approve altered products for return to service. If only some of the data supporting compliance with applicable airworthiness regulations is DER-approved, then additional approval, such as an FAA field approval or STC, is required.

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5. LIMITATIONS ON DERS. Data approved by DERS may, or may not, be sufficient by itself to support a major alteration. Alterations involving flight manual supplements, airworthiness limitations, ground and flight test plans, ground and flight tests, compliance inspections, modifications to critical structure or life limited parts, instructions for continued airworthiness, special conditions, and equivalent level of safety findings may require data that a DER is not normally authorized to approve. If the alteration requires approval of data beyond the DER's authority, then additional approval, such as an FAA field approval or STC, is required.

6. DATA APPROVAL RESPONSIBILITY. The person performing the alteration work, not the DER(s) furnishing the approved data supporting it, is responsible for certifying that an alteration was accomplished in accordance with all applicable sections of 14 CFR and FAA-approved data. An installer who is unsure whether they possess FAA approved data adequate to completely support an alteration should contact his or her Flight Standards District Office (FSDO) for assistance. A DER supporting an alteration by furnishing approved data should indicate whether the data does, or does not, constitute all the data necessary to substantiate compliance of the alteration with all applicable airworthiness regulations. A DER unsure of the extent of his or her approval authority or authorization to approve all the data required to support a major alteration should contact their managing ACO.

7. PLAN TO INCORPORATE. This order will be incorporated into the next revision of FAA Order 8110.37, DER Guidance Handbook, and into future DER seminar presentations.

8. QUESTIONS, INFORMATION AND COMMENTS.

a. You can get additional information, or ask questions about this order, at the Aircraft Certification Service, Aircraft Engineering Division, Delegation and Airworthiness Programs Branch, AIR-140, telephone (405) 954-7074. Also, use this telephone number for urgently needed interpretations of this order.

b. Send suggestions, clarifications or comments for improvement of this order to: Aircraft Certification Service, Automated Systems Branch, AIR-520, Attention: Directives Management Officer.

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Aircraft Certification Service