

1.0 Purpose/Scope

- 1.1 This procedure describes the process for controlling the design and development of technical data for maintenance services to ensure the subsequent provision of services at [Your Company](#).
- 1.2 Maintenance service providers typically do not design and development products and this procedure applies to the design and development of technical data for maintenance programs.

2.0 Responsibilities and Authorities

- 2.1 The [Research & Development / Technical manager](#) has the prime responsibility and approval authority for this procedure.
- 2.2 In support of the [Research & Development / Technical manager](#), the [Project manager / design engineer](#) are responsible for initiating the design plan, getting appropriate approvals and holding design reviews.
- 2.3 Additional responsibilities for [project manager / design engineer / design team / sales and marketing](#) personnel are detailed in relevant paragraphs of section 5.0.

3.0 References and Definitions

- 3.1 Reference: This document relates to clause 8.3 of the AS 9110 C standard covering, Design and development of products and services.
- 3.2 Definitions
 - 3.2.1 Design Verification: Determination that the product meets requirements.
 - 3.2.2 Design Validation: Determination of the product's ability to meet user needs.
 - 3.2.3 Design Changes: Changes made to the inputs or plan during design and development activities.

4.0 Resources

- 4.1 None

5.0 Instructions

- 5.1 In support of the planning procedures P-810 for Operational planning and control, and P-910 for Monitoring, measurement, analysis and evaluation, design and development projects are initiated and planned for new technical data needed for maintenance programs.
 - 5.1.1 Design projects detail the requirements for products and services so that they are adequate for subsequent production or service provision.
 - 5.1.2 When authorized by the competent authority, a process for the development of technical data is established, implemented, and maintained.
 - 5.1.3 When developing repair data, the following are specified:

- Classification of the repair such as minor, or major
 - Description of the repair
 - Evidence of approval.
 - You may want to categorize the project on a scale of 1 to 10 where 10 indicates a complex (major) project and 1 a simple (minor) project.
- 5.1.4 When developing aircraft maintenance programs for continuing airworthiness, a process to ensure the control and availability of the aircraft and engine statuses and the preparation of the work order is maintained.
- When developing, and revising aircraft maintenance programs, maintenance schedules, such as maintenance planning data, as developed by the type certificate holders are used and consider the specific needs of the aircraft operator.
- 5.2 The R&D manager designates a project manager / project engineer for the project, assigns a project number, and logs the project in the log.
- 5.2.1 The project manager starts a Project plan to determine the stages and controls for design and development.
- 5.2.2 The Design plan, form F-830-001 considers the:
- Nature, duration and complexity/simplicity of the design and development activities,
 - Responsibilities and authorities of the design team involved in the design and development process,
 - Internal and external resources needed for design and development,
 - Need to control interfaces between individuals and parties involved in the design and development process,
 - Requirements that specify process stages, including applicable design inputs and design and development reviews,
 - Required design and development verification and validation,
 - Need for involvement of customer and user groups in the design and development process,
 - Level of control expected of the design and development process by customers and other relevant interested parties,
 - Necessary documented information and approvals to confirm that design and development requirements have been met.
- 5.3 The design team collects design inputs and documents them on the design plan or on an attachment to the design plan.
- 5.3.1 Inputs include:
- Functional and performance requirements essential to the products and services,
 - Applicable statutory and regulatory requirements,
 - Standards or codes of practice;

Design and Development

- Internal and external resource needs for the design and development of products and services,
 - Potential consequences of failure due to the nature of the products and services,
 - Information from previous designs and developments,
 - [Estimated costs,](#)
 - [Safety requirements,](#)
- 5.3.2 The design team reviews the inputs to make sure they are complete and adequate for design and development purposes. Incomplete, ambiguous, or conflicting inputs, are resolved by the team.
- 5.3.3 All continuing airworthiness input requirements are evaluated.
- 5.4 Design and development controls.
- 5.4.1 The design and development process is controlled to ensure that the:
- Results to be achieved are clearly defined,
 - Design and development reviews are carried out as planned,
 - Verification is conducted to ensure that the design and development outputs meet the design and development input requirements,
 - Validation is conducted to ensure that the resulting outputs can meet the requirements for the application or intended use,
 - [Product inspection and process monitoring information \(to be documented in the work instruction column of the Production Monitoring and Analysis Table F-910-001\)](#)
- 5.4.2 Design reviews are conducted as scheduled in the project plan [and/or as needed.](#)
- 5.4.2 The design review record form F-830-002 is used to document results of design reviews.
- [You may want to require a design review at this point in the project. Have the R&D manager or similar function review the project and approve it to move into the development stage.](#)
 - [Others identified as technical interfaces may also have approval responsibilities at this point.](#)
 - [Have these functions sign off on the project plan as evidence of their approval.](#)
- 5.5 Design outputs are documented and filed in the design project file. Design outputs are documented in a manner that enables them to be verified against the design inputs.
- 5.6.1 The design team ensures that design and development outputs:
- Meet the input requirements,
 - Are adequate for the subsequent processes of products and services,
 - Reference monitoring and measuring requirements, and acceptance criteria,