

FAA FAR Part 21, Subpart O - SO DIFFERENT TO CASR PART 21, SUBPART O

Technical Standard Order Approval

CASR Part 21, Subpart O is about TSO approvals. Major FAR changes requires TSO holder to have organisation & Q System. CASR Part 21, Subpart O was made in 1998 but the FAA modernised this Subpart in 2009 to harmonise with ICAO & FAA.

- Change numbering to match FAR Part 21, Subpart O. There is a conceptual change in manufacturing under TSO.

FAR	CASR	COMMENTS
Subpart O—Technical Standard Order Approvals	Subpart 21.O Australian Technical Standard Order Authorisations	
<p>§21.601 Applicability and definitions.</p> <p>(a) This subpart prescribes—</p> <ol style="list-style-type: none"> (1) Procedural requirements for issuing TSO authorizations; (2) Rules governing the holders of TSO authorizations; and (3) Procedural requirements for issuing letters of TSO design approval. <p>(b) For the purposes of this subpart—</p> <ol style="list-style-type: none"> (1) A TSO issued by the FAA is a minimum performance standard for specified articles used on civil aircraft; (2) <u>A TSO authorization is an FAA design and production approval issued to the manufacturer of an article that has been found to meet a specific TSO;</u> (3) <u>A letter of TSO design approval is an FAA design approval for an article that has been found to meet a specific TSO in accordance with the procedures of §21.621;</u> (4) An article manufactured under a TSO authorization, an FAA letter of acceptance as described in §21.613(b), or an article manufactured under a letter of TSO design approval described in §21.621 is an approved article for the purpose of meeting the regulations of this chapter that require the article to be approved; and (5) An article manufacturer is the person who controls the design and quality of the article produced (or to be produced, in the case of an application), including any related parts, processes, or services procured from an outside source. 	<p>21.601 Applicability</p> <p>(1) This Subpart prescribes:</p> <ol style="list-style-type: none"> (a) requirements for the issue of Australian Technical Standard Order (ATSO) authorisations; and (b) rules governing the holders of ATSO authorisations; and (c) requirements for the issue of a letter of ATSO design approval. <p>(2) For the purpose of these regulations:</p> <ol style="list-style-type: none"> (a) an ATSO is a minimum performance standard issued by CASA for specified articles (for the purpose of this Subpart, articles means materials, parts, processes, or appliances) used on civil aircraft; and (ab) a TSO is a Technical Standard Order issued by the FAA; and (b) an ATSO authorisation is: <ol style="list-style-type: none"> (i) a CASA design and production approval issued to the manufacturer of an article that has been found to meet a specific ATSO or TSO; or (ii) a CASA production approval issued to the manufacturer of an article manufactured in accordance with an FAA letter of TSO design approval; and (c) a letter of ATSO design approval is a CASA design approval for a foreign-manufactured article which has been found to meet a specific ATSO in accordance with the procedures of regulation 21.617; and (ca) an FAA letter of TSO design approval is an FAA design approval for an article manufactured outside the United States that has been found to meet a specific TSO in accordance with the procedures of FARs section 21.617; and (d) an article manufactured under an ATSO authorisation or an appliance manufactured under a letter of ATSO design approval described in regulation 21.617 is an approved article or appliance for the purpose of meeting the provisions of these regulations that require the article to be approved; and 	<p>Delete Over complicated Many regulation changes Adopt FAR</p> <p>Remove reference to TSO as this is a CASR Part 43 continuing airworthiness issue.</p>

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	<p>(e) an article manufacturer is the person who controls the design and quality of the article produced (or to be produced, in the case of an application), including the parts of them and any processes or services related to them that are procured from an outside source.</p> <p>(4) Despite subregulation 21.605 (4), CASA is not required to issue an ATSO authorisation for an article if the manufacturing facilities for the article are located outside Australian territory, unless the location of the manufacturer's facilities places no undue burden on CASA in administering the applicable airworthiness requirements.</p> <p><i>Source FARs section 21.601 modified.</i></p>	
	<p>21.603 ATSO marking and privileges</p> <p>(1) Except as provided in subregulation 21.617 (3), a person may identify an article with an ATSO marking only if:</p> <p>(a) the person holds an ATSO authorisation; and</p> <p>(b) the article meets applicable ATSO or TSO performance standards.</p> <p>Penalty: 50 penalty units.</p> <p>(2) An offence against subregulation (1) is an offence of strict liability.</p> <p><i>Note For strict liability, see section 6.1 of the Criminal Code.</i></p> <p><i>Source FARs section 21.603 modified.</i></p>	<p>Delete No longer relevant Markings to Part 45</p>
<p>§21.603 Application.</p> <p>(a) An applicant for a TSO authorization must apply to the appropriate aircraft certification office in the form and manner prescribed by the FAA. The applicant must include the following documents in the application:</p> <p>(1) A statement of conformance certifying that the applicant has met the requirements of this subpart and that the article concerned meets the applicable TSO that is effective on the date of application for that article.</p> <p>(2) One copy of the technical data required in the applicable TSO.</p> <p>(b) If the applicant anticipates a series of minor changes in accordance with §21.619, the applicant may set forth in its application the basic model number of the article and the part number of the components with open brackets after it to denote that suffix change letters or numbers (or combinations of them) will be added from time to time.</p> <p>(c) If the application is deficient, the applicant must, when requested by the FAA, provide any additional information necessary to show compliance with this part. If the applicant fails to provide the</p>		<p>Adopt FAR Application to manufacture</p>

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additional information within 30 days after the FAA's request, the FAA denies the application and notifies the applicant.		
<p>§21.605 Organization.</p> <p>(a) Each applicant for or holder of a TSO authorization must provide the FAA with a document—</p> <ol style="list-style-type: none"> (1) Describing how its organization will ensure compliance with the provisions of this subpart; (2) Describing assigned responsibilities, delegated authorities, and the functional relationship of those responsible for quality to management and other organizational components; and (3) Identifying an accountable manager. <p>(b) The accountable manager specified in paragraph (a) of this section must be responsible within the applicant's or production approval holder's organization for, and have authority over, all production operations conducted under this part. The accountable manager must confirm that the procedures described in the quality manual required by §21.608 are in place and that the production approval holder satisfies the requirements of the applicable regulations of subchapter C, Aircraft. The accountable manager must serve as the primary contact with the FAA.</p>	<p>21.605 Application and issue</p> <ol style="list-style-type: none"> (1) An article manufacturer may apply to CASA for an ATSO authorisation for the article. (2) An application must be accompanied by the following documents: <ol style="list-style-type: none"> (a) a statement of conformance certifying that the applicant has met the requirements of this Subpart and that the article concerned meets the applicable ATSO, ETSO or TSO that is effective on the date of application for that article; (b) one copy of the technical data required in the applicable ATSO, ETSO or TSO; (c) a description of the applicant's quality system in the detail specified in regulations 21.143 and 21.144. In complying with this regulation, the applicant may refer to current quality system data filed with CASA as part of a previous ATSO authorisation application. (3) When a series of minor changes in accordance with regulation 21.611 is anticipated, the applicant must set forth in the application the basic model number of the article and the part number of the components with open brackets after it to denote that suffix change letters or numbers (or combinations of them) will be added from time to time. (4) Subject to regulation 11.055, CASA must issue an ATSO authorisation for the article if CASA is satisfied that: <ol style="list-style-type: none"> (a) the design of the article complies with the applicable ATSO, ETSO or TSO, including any deviations approved under regulation 21.609; and (b) the applicant has established, and can maintain, a quality system to ensure that each article manufactured under the authorisation will comply with the applicable ATSO, ETSO or TSO, including any deviations approved under regulation 21.609. (5) For paragraph (4)(a), CASA may satisfy itself that the design of the article complies with the applicable ATSO, ETSO or TSO, including any deviations approved under regulation 21.609, on the basis of any of the following: <ol style="list-style-type: none"> (a) an examination of the design; 	<p>Application now covered in FAR 21.603 above</p> <p>Adopt FAR 21.605 Organisation manual</p>

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	<p>(b) the technical data for the design approved under regulation 21.009;</p> <p>(c) a certificate from an approved design organisation under subregulation (7).</p> <p>(6) Subregulation (7) applies if, under regulation 21.251, CASA authorises a relevant approved design organisation to determine whether the design of the article complies with the applicable ATSO, ETSO or TSO, including any deviations approved under regulation 21.609.</p> <p>(7) If the approved design organisation is satisfied that the design of the article complies with the applicable ATSO, ETSO or TSO, including any deviations approved under regulation 21.609, the organisation may give CASA a certificate to that effect.</p> <p>Source FARs section 21.605 modified.</p>	
<p>§21.607 Quality system. Each applicant for or holder of a TSO authorization must establish a quality system that meets the requirements of §21.137.</p>		Adopt FAR
<p>§21.608 Quality manual. Each applicant for or holder of a TSO authorization must provide a manual describing its quality system to the FAA for approval. The manual must be in the English language and retrievable in a form acceptable to the FAA.</p>		Adopt FAR
<p>§21.609 Location of or change to manufacturing facilities.</p> <p>(a) An applicant may obtain a TSO authorization for manufacturing facilities located outside of the United States if the FAA finds no undue burden in administering the applicable requirements of Title 49 U.S.C. and this subchapter.</p> <p>(b) The TSO authorization holder must obtain FAA approval before making any changes to the location of any of its manufacturing facilities.</p> <p>(c) The TSO authorization holder must immediately notify the FAA, in writing, of any change to the manufacturing facilities that may affect the inspection, conformity, or airworthiness of its product or article.</p>	<p>21.609 Approval for deviation</p> <p>(1) An article manufacturer who requests approval to deviate from any performance standard of an ATSO or TSO must show that the standards from which a deviation is requested are compensated for by factors or design features providing an equivalent level of safety.</p> <p>(2) The request for approval to deviate, together with all pertinent data, must be submitted to CASA. If the article is manufactured in another country, the request for approval to deviate, together with all pertinent data, must be submitted to CASA through the NAA of that country.</p> <p>(3) Subject to regulation 11.055, CASA must grant the approval.</p> <p>Source FARs section 21.609 modified.</p>	Delete No longer relevant Adopt FAR
<p>21.610 Inspections and tests. Each applicant for or holder of a TSO authorization must allow the FAA to inspect its quality system, facilities, technical data, and any manufactured articles and witness any tests, including any inspections</p>		Adopt FAR Replaces CASR 21.615

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<p>or tests at a supplier facility, necessary to determine compliance with this subchapter.</p>		
<p>§21.611 Issuance. If the FAA finds that the applicant complies with the requirements of this subchapter, the FAA issues a TSO authorization to the applicant (including all TSO deviations granted to the applicant).</p>	<p>21.611 Design changes <u>Minor changes by the manufacturer holding an ATSO authorisation</u> (1) An article manufacturer manufacturing an article under an ATSO authorisation may make minor design changes (any change other than a major change) without further approval by CASA. In this case, the changed article keeps the original model number (part numbers may be used to identify minor changes). (2) The manufacturer must forward to CASA any revised data that are necessary for compliance with subregulation 21.605 (3). Penalty: 25 penalty units. (2A) An offence against subregulation (2) is an offence of strict liability. <i>Note For strict liability, see section 6.1 of the Criminal Code.</i> <u>Major changes by manufacturer holding an ATSO authorisation</u> (3) Any design change by the manufacturer that is extensive enough to require a substantially complete investigation to determine compliance with an ATSO or TSO is a major change. Before making such a change, the manufacturer must assign a new type or model designation to the article and apply for an ATSO authorisation under regulation 21.605. <u>Who may apply for approval of change</u> (4) A person may apply for approval for a change to the design of an article under this Subpart only if the person: (a) is the manufacturer that submitted the statement of conformance for the article; or (b) has applied for an ATSO authorisation for the article. <i>Note</i> A person may apply to CASA or an authorised person, in writing, for a modification/repair design approval for the design of a modification of, or a repair to, an appliance — see Subpart 21.M. <i>Source</i> FARs section 21.611 modified.</p>	<p>Delete CASR Refer FAR 21.619 for Design Changes Adopt FAR 21.611</p>
<p>§21.613 Duration. (a) A TSO authorization or letter of TSO design approval is effective until surrendered, withdrawn, or otherwise terminated by the FAA. (b) If a TSO is revised or canceled, the holder of an affected FAA letter of acceptance of a statement of conformance, TSO authorization, or letter of TSO design approval may continue to manufacture articles that meet the original TSO without obtaining a new acceptance, authorization, or approval but must comply with the requirements of this chapter.</p>	<p>21.613 Record keeping requirements Keeping the records (1) An article manufacturer holding an ATSO authorisation must, for each article manufactured under that authorisation, keep the following records at its factory: (a) a complete and current technical data file for each type or model article, including design drawings and specifications;</p>	<p>Delete No longer relevant Adopt FAR</p>

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	<p>(b) complete and current inspection records showing that all inspections and tests required to ensure compliance with this part have been properly completed and documented.</p> <p>Retention of records</p> <p>(2) The manufacturer must retain the records mentioned in paragraph (1)(a) until it no longer manufactures the article. Penalty: 50 penalty units.</p> <p>(3) If the manufacturer stops manufacturing the article, the manufacturer must send copies of the records mentioned in paragraph (1)(a) to CASA within 30 days after ceasing that manufacture. Penalty: 50 penalty units.</p> <p>(4) The manufacturer must retain the records mentioned in paragraph (1)(b) for at least 2 years. Penalty: 50 penalty units.</p> <p>(5) An offence against subregulation (2), (3) or (4) is an offence of strict liability.</p> <p>Note: For strict liability, see section 6.1 of the Criminal Code. Source FARs section 21.613 modified.</p>	
<p>§21.614 Transferability. The holder of a TSO authorization or letter of TSO design approval may not transfer the TSO authorization or letter of TSO design approval.</p>		Adopt FAR
	<p>21.615 CASA inspection</p> <p>(1) Upon the request of CASA, an article manufacturer manufacturing an article under an ATSO authorisation must allow CASA to:</p> <ul style="list-style-type: none"> (a) inspect any article manufactured under that authorisation; and (b) inspect the manufacturer's quality system; and (c) witness any tests; and (d) inspect the manufacturing facilities; and (e) inspect the technical data files on that article. <p>(2) If the manufacturer does not comply with a request under subregulation (1), the ATSO authorisation is suspended until the request is complied with.</p> <p>Source FARs section 21.615 modified.</p>	Delete Adopt FAR 21.610 Worded to check 21.616 responsibility on TSO manufacturer.
<p>§21.616 Responsibility of holder. Each holder of a TSO authorization must—</p>		Adopt FAR

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<p>(a) Amend the document required by §21.605 as necessary to reflect changes in the organization and provide these amendments to the FAA.</p> <p>(b) <u>Maintain a quality system</u> in compliance with the data and procedures approved for the TSO authorization;</p> <p>(c) Ensure that each manufactured article conforms to its approved design, is in a condition for safe operation, and meets the applicable TSO;</p> <p>(d) <u>Mark the TSO article</u> for which an approval has been issued. Marking must be in accordance with part 45 of this chapter, including any critical parts;</p> <p>(e) Identify any portion of the TSO article (e.g., sub-assemblies, component parts, or replacement articles) that leave the manufacturer's facility as FAA approved with the manufacturer's part number and name, trademark, symbol, or other FAA approved manufacturer's identification;</p> <p>(f) Have access to design data necessary to determine conformity and airworthiness for each article produced under the TSO authorization. The manufacturer must retain this data until it no longer manufactures the article. At that time, copies of the data must be sent to the FAA;</p> <p>(g) Retain its TSO authorization and make it available to the FAA upon request; and</p> <p>(h) Make available to the FAA information regarding all delegation of authority to suppliers.</p>		<p>Organisation responsible for conformity inspections.</p>
	<p>21.617 Issue of letters of ATSO design approval: import appliances</p> <p>(1) A letter of ATSO design approval may be issued for an appliance that is manufactured in a foreign country with which Australia has an agreement for the acceptance of these appliances for export and import and that is to be imported into Australian territory, if:</p> <p>(a) the NAA of the country in which the appliance was manufactured certifies that the appliance has been examined, tested, and found to meet the applicable ATSO approved under an ATSO authorisation, or letter of ATSO design approval, under paragraph 21.305 (b) or the applicable performance standards of the country in which the appliance was manufactured and any other performance standards CASA prescribes to provide a level of safety equivalent to that provided by the ATSO approved under an ATSO authorisation, or letter of ATSO design approval, under paragraph 21.305 (b); and</p>	<p>Delete Adopt FAR 21.621 instead</p>

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	<p>(b) the article manufacturer has submitted to CASA one copy of the technical data required in the applicable performance standard through the NAA of the country in which the appliance was manufactured.</p> <p>(2) The letter of ATSO design approval will be issued by CASA and must list any deviation granted to the manufacturer under regulation 21.609.</p> <p>(3) After CASA has issued a letter of ATSO design approval and an airworthiness approval mentioned in paragraph 21.502 (1) (b) has been issued, the manufacturer is authorised to identify the appliance with the ATSO marking requirements described in paragraph 21.607 (c) and in the applicable ATSO. Each appliance must be accompanied by an airworthiness approval mentioned in paragraph 21.502 (1) (b).</p> <p><i>Source FARs section 21.617 modified.</i></p>	
<p>§21.618 Approval for deviation.</p> <p>(a) Each manufacturer who requests approval to deviate from any performance standard of a TSO must show that factors or design features providing an equivalent level of safety compensate for the standards from which a deviation is requested.</p> <p>(b) The manufacturer must send requests for approval to deviate, together with all pertinent data, to the appropriate aircraft certification office. If the article is manufactured under the authority of a foreign country or jurisdiction, the manufacturer must send requests for approval to deviate, together with all pertinent data, through the civil aviation authority of that country or jurisdiction to the FAA.</p>		<p>Adopt</p>
	<p>21.619 Non-compliance</p> <p>CASA may suspend or cancel the ATSO authorisation or letter of ATSO design approval of any article manufacturer who identifies with an ATSO marking an article not meeting the performance standards of the applicable ATSO, ETSO or TSO (including any deviations approved under subregulation 21.609(3)).</p> <p><i>Source FARs section 21.619 modified.</i></p> <p>Note: See also regulations 21.002C and 21.002E in relation to suspension and cancellation of ATSO authorisations or letters of ATSO design approval.</p>	<p>Review Renumber if required</p>
<p>§21.619 Design changes.</p> <p>(a) Minor changes by the manufacturer holding a TSO authorization. The manufacturer of an article under an authorization</p>		<p>Adopt FAR</p>

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<p>issued under this part may make minor design changes (any change other than a major change) without further approval by the FAA. In this case, the changed article keeps the original model number (part numbers may be used to identify minor changes) and the manufacturer must forward to the appropriate aircraft certification office, any revised data that are necessary for compliance with §21.603(b).</p> <p>(b) Major changes by the manufacturer holding a TSO authorization. Any design change by the manufacturer extensive enough to require a substantially complete investigation to determine compliance with a TSO is a major change. Before making a major change, the manufacturer must assign a new type or model designation to the article and apply for an authorization under §21.603.</p> <p>(c) Changes by persons other than the manufacturer. No design change by any person (other than the manufacturer who provided the statement of conformance for the article) is eligible for approval under this part unless the person seeking the approval is a manufacturer and applies under §21.603(a) for a separate TSO authorization. Persons other than a manufacturer may obtain approval for design changes under part 43 or under the applicable airworthiness regulations of this chapter.</p>		Major/minor is defined.
<p>§21.620 Changes in quality system. After the issuance of a TSO authorization—</p> <p>(a) Each change to the quality system is subject to review by the FAA; and</p> <p>(b) The holder of the TSO authorization must immediately notify the FAA, in writing, of any change that may affect the inspection, conformity, or airworthiness of its article.</p>		Adopt FAR
<p>§21.621 Issue of letters of TSO design approval: Import articles.</p> <p>(a) The FAA may issue a letter of TSO design approval for an article—</p> <p>(1) Designed and manufactured in a foreign country or jurisdiction subject to the export provisions of an agreement with the United States for the acceptance of these articles for import; and</p> <p>(2) For import into the United States if—</p> <p>(i) The State of Design certifies that the article has been examined, tested, and found to meet the applicable TSO or the applicable performance standards of the State of Design and any other performance standards the FAA may</p>	<p>21.621 Duration</p> <p>(1) An ATSO authorisation or letter of ATSO design approval continues in force until surrendered or cancelled.</p> <p>(2) However, an ATSO authorisation or a letter of ATSO design approval is not in force during any period of suspension.</p> <p>Source FARs section 21.621 modified.</p>	Delete CASR No longer relevant Refer FAR 21.613 Adopt FAR

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<p>prescribe to provide a level of safety equivalent to that provided by the TSO; and</p> <p>(ii) The manufacturer has provided to the FAA one copy of the technical data required in the applicable performance standard through its State of Design.</p> <p>(b) The FAA issues the letter of TSO design approval that lists any deviation granted under §21.618.</p>		