



ANNEX TO PRINCIPLE (DEL.08)

Annex A to Principle (DEL.08) CAR 29A - Conduct a welding examination

December 2024



Acknowledgement of Country

The Civil Aviation Safety Authority (CASA) respectfully acknowledges the Traditional Custodians of the lands on which our offices are located and the places to which we travel for work. We also acknowledge the Traditional Custodians' continuing connection to land, water and community. We pay our respects to Elders, past and present.

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1. CAR 29A - Conduct a welding examination

1.1 Purpose

This annex describes the specific scope of the provision and supporting appointment criteria to appoint an applicant as an authorised person to conduct welding examinations under regulation 29A of the *Civil Aviation Regulations 1988 (CAR)*.

Note: Annex A is an annex to [Principle \(DEL.08\) Managing airworthiness-related external delegates and authorised persons](#) and is supported by Worksheet (DEL.08) Annex A - CAR 29A - Conduct a welding examination.

1.2 Scope

A person applying for appointment to conduct aircraft welding examinations may apply to conduct examinations in one or more of the following weld types:

- Type 1 – gas welding
- Type 2 – braze welding
- Type 3 – manual metal arc welding
- Type 4 – gas tungsten arc welding
- Type 5 – gas metal arc welding
- Type 6 – plasma arc welding.

1.3 Qualifications

While there are no mandatory qualifications for an applicant, one or more of the following credentials will be an advantage.

- Welding authority issued by CASA
- Welding authority issued by a recognised national airworthiness authority (NAA)
- Accreditation by the Welding Technology Institute of Australia
- Accreditation by the TWI World Centre for Materials Joining Technology
- Accreditation by the American Welding Society.

Note: Evidence of equivalent qualifications may be considered and will be subject to review by an airworthiness inspector (AWI) on a case-by-case basis.

1.4 CAAP 33-1 - Aircraft manual welding - Approvals and qualifications

Civil aviation advisory publication (CAAP) [CAAP 33-1 - Aircraft Manual Welding - Approvals and Qualifications](#) details the procedures for applying for a welding authority and the applicant must:

- demonstrate knowledge and understanding of the appropriate sections of the CAAP for the authority sought

- detail in their procedures manual how they ensure that their tests will meet the criteria of the CAAP.

For more information on the requirements for an applicant's procedures manual, refer to Appendix A in [Principle \(DEL.08\) Managing airworthiness-related external delegates and authorised persons](#).

1.5 Surveillance of IOAs

1.5.1 Condition - Individual conditions, scope and limitations

Each Instrument of Appointment contains conditions and limitations specific to the individual. Common to these conditions are:

- The scope of the appointment
- Requirement to comply with an approved procedures manual; and
- A requirement to ensure all documents and checklists used in the application and assessment are sent to the Civil Aviation Registrar within 7 days after issue.

For Surveillance activities, these areas may be validated by:

- Reviewing the DMNS and authorisation holders register to ensure tasks are within approved scope. Compare authorisation holders register against the DMNS.
- Sample outputs to validate the process has been undertaken in accordance with CAAP 33-1, including but not limited to, how the authorised person establishes:
 - the applicant has a demonstrated knowledge of a welder's responsibility and limitations as the holder of an aircraft welding authority
 - an applicant has adequate knowledge of welding terms and definitions as set out in Australian Standard [1] AS2812, the interpretation of drawings, joint preparation and welding defects and thermal stress
 - welding positions and metal groups are as specified, and the procedures and consumable materials are representative of those used in production
 - the metal selected satisfies a degree of difficulty similar to the welding characteristics of the production welding task, any pre and/or post weld heat treatment, if required, is performed in a similar manner to that required for production welds represented by the weld samples
 - welds are not dressed or sand-blasted after welding, and any weld residue (flux, slag) is removed in the normal manner from the weld samples
 - Welds are inspected for obvious defects, and further attempts by the applicant are permitted before submission of the weld samples for testing
 - That weld samples are correctly identified, and documentation completed and submitted
- Validating the process for a failed examination includes permitting a second attempt and some form of remedial training is undertaken before a further attempt
- Validate all activities associated with the conduct of the examination have been documented and maintained in a register
- Reviewing the DMNS and authorisation holders register to ensure tasks are forwarded to CASA within specified timeframes.

1.5.2 Condition - Maintaining a register

The delegate must maintain a register containing the following information:

- The name of the person undertaking the aircraft welding examinations

- a description of each welding examination undertaken
- the date of each welding examination
- The date of issue and date of expiry (if applicable) of each document

During surveillance, the register is validated by reviewing the DMNS records against the register held by the authorisation holder.

1.5.3 Condition - Maintaining records

The delegate must maintain copies of all documents associated with the exercise of power for at least 5 years after the date of issue. The inspector may review the following documents to determine whether the records are adequately maintained. Storage conditions and the content maintained should be accessible on site to the inspector. This can be paper based or electronic, however should be consistent with the authorisation holders procedures. If electronic (soft copy) then suitable back up files should be maintained.

1.5.4 Condition - Notification to CASA of intent to exercise powers

On engagement by a client, and prior to exercising their powers, the delegate must notify CASA through the Delegate Management Notification System. Compliance with this conditions may be validated by reviewing records within the evidence package to establish a reference point.

1.5.5 Condition - Notification of outcomes to CASA

The delegate must record the details of the outcome to CASA into the DMNS within 14 days after a power is exercised. Compliance with this condition may be verified by comparing the DMNS records task completed date against the date identified on the certificate issued.

1.5.6 Condition - Availability of records

It is a condition of an authorisation that a delegate must make their register and all documents available to a CASA inspector for inspection. Surveillance should sample tasks to ensure all required documents are retained.

1.5.7 Relating a regulatory breach to a delegation

If a breach of a condition is found during a surveillance event, the inspector is to record the deficiency against the relevant condition and use the relate function in EAP to relate the breach to the regulation CAR 29A. This will enable reporting against that delegation.

1.6 Revision history

Table 1. Revision history table

Version No.	Date	Parts / Sections	Details
1.1	December 2024	1.5	Add surveillance section
1.0	September 2024	All	First issue