



The AED Foundation Industry-Recognized Apprenticeship Program (IRAP) Manual A Roadmap

Established in 1919, Associated Equipment Distributors (AED) is an international trade association based in Schaumburg, IL, representing over 700 construction equipment distributors, manufacturers and industry-service firms nationwide. AED members sell, service and rent equipment to such markets as heavy and light construction, mining, agriculture, forestry, aggregates, engines and industrial. Established in 1991 and directed by AED members, the AED Foundation (AEDF) addresses professional education and workforce development in the industry. This includes AEDF Accreditation of college diesel-equipment technology programs and AEDF Recognition of high school diesel technology programs.

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The purpose of this manual serves to define:

- a. Roles of various entities involved with IRAPs
- b. A roadmap to designing and developing an IRAP
- c. Policies and procedures related to AEDF-Recognized IRAPs
- d. [AEDF Job Book](#)

What is an IRAP?

IRAPs are high-quality apprenticeship programs that provide individuals with opportunities to obtain workplace-relevant knowledge and progressively advancing skills.

The definition of a “high-quality” IRAP requires the following elements:

- a written training plan
- a paid work component
- on-the-job training/work experience with supportive mentorship and supervision
- related instruction
- safety and Equal Employment Opportunity
- An industry-recognized credential

What is the role of an IRAP Sponsor?

An IRAP sponsor is the entity responsible for administering an IRAP. An IRAP sponsor can be entities such as trade and industry groups, corporations, non-profit organizations, educational institutions, unions, and joint labor-management organizations.

It is the responsibility of the IRAP sponsor to ensure all elements of an IRAP are outlined, executed upon, and maintained.

What is the role of AEDF as a Standards Recognition Entity (SRE)?

It is the main responsibility of the SRE to recognize high-quality apprenticeship programs that train apprentices for employment in jobs that require specialized knowledge and experience and involve the performance of complex tasks. The SRE outlines industry standards and minimum requirements that define a high-quality apprenticeship program.

As a leader and SRE in construction equipment technology, the AED Foundation (AEDF) is qualified to recognize programs that train for the occupation of construction equipment technician/technologist as identified in the Occupational Information Network (O*Net) as

- 49-3042.00 - Mobile Heavy Equipment Mechanics, Except Engines
- 49-3041.00 - Farm Equipment Mechanics and Service Technicians
- 49-3031.00 - Bus and Truck Mechanics and Diesel Engine Specialists

The standards for competencies and skills have been outlined in the most current edition of *The AEDF Standards for Construction Equipment Technology*. The standards for achieving the competencies and skills are outlined here in the AEDF Industry Recognized Apprenticeship Program Manual.

What is the Industry Credential Earned from an AEDF-Recognized program?

Upon completion of the requirements outlined in the training plan and a passing score of 70% or above on the AEDF Technical Assessment, apprentices will earn the AEDF Certified Technician credential. This designation has been recognized as the only non-OEM certification available in the industry. The apprentices completing the IRAP will receive a certificate of completion from The AED Foundation.

The Roadmap

As mentioned above, an IRAP must include the following elements:

- a written training plan
- a paid work component
- on-the-job training/work experience with supportive mentorship and supervision
- related instruction
- safety and equal employment opportunity
- An industry-recognized credential

Within these elements are specific processes and more detailed requirements, which will be clarified in this manual.

The IRAP Training Plan

The Training Plan is the blueprint for the IRAP. It outlines all of the necessary elements and structure, and highlights details and requirements for successful completion of the program. This must be a written document presented to a potential apprentice prior to beginning the program. It must be designed to acknowledge progressively advancing, industry-essential skills. It must also include an apprenticeship agreement highlighting terms and conditions of employment and training, costs or expenses charged to the apprentice, competencies to be attained during the program and how those competencies will be assessed upon completion.

Paid Work Component

The paid work component is the first element of the Training Plan. The paid work component must describe an apprentice's wages throughout the program. Those wages should meet Federal, State, and local minimum wage requirements. It should specify if wages will increase throughout the program and, if so, at what points and under what circumstances those increases will occur. It must outline the program's charging of costs or expenses to apprentices which must comply with all applicable Federal, State, or local wage laws and regulations, including but not limited to the Fair Labor Standards Act [(FLSA)] and its regulations.

On-the-Job/ Work Experience

The on-the-job training and work experience is the crux of the IRAP. It must be documented, structured and supported through mentorship and consistent supervision. It must incorporate the Critical Job Functions, Key Activities, and Performance Descriptions outlined in the most current edition of *The AEDF Standards for Construction Equipment Technology*. The Critical Functions include the following:

- Safety and Administrative
- Electronics/Electrical
- Hydraulics/Hydrostatics
- Power Trains

- Diesel Engines and Fuel Systems
- A/C and Heating

In regards to safety, the program must provide a working environment for apprentices that adheres to all applicable Federal, State, and local safety laws and regulations. It must also outline any additional employer specific competencies that will be required by the sponsor. An IRAP must require an apprentice to spend a minimum of 3,000 hours over the course of at least 2 years on the job to qualify for recognition. Sponsors may use the provided [AEDF Job Book](#) to guide apprentices through the required on-the-job training requirements.

Credit for previous experience may be granted at the discretion of the sponsor but is limited to 25% of the term of the program (not to exceed 750 hours).

Mentors must be identified and meet minimum qualifications, which are as follows:

- AEDF Certified Technician
- Minimum 4 years experience in the construction equipment industry
- Top performer at their employer
- Volunteer

Consistent and regular supervision and feedback must be exhibited for evaluation and monitoring purposes.

Related Instruction

The related instruction component is meant to provide structured classroom education to each apprentice and compliment his/her learning on the job. The concept of related instruction is meant to be flexible for the sponsor and appropriate for the industry. It can be done at a community college, vocational school, online, in-house, or other. AEDF has set minimum standards and requirements for providers of the related instruction and the curriculum. As with the on-the-job training, curriculum must include topics that address the critical job functions outlined in the current edition of *The AEDF Standards for Construction Equipment Technology*. These topics include:

- Safety and Administrative
- Electronics/Electrical
- Hydraulics/Hydrostatics
- Power Trains
- Diesel Engines and Fuel Systems
- A/C and Heating

If an employer wishes to add to the curriculum, it must be related to the work experience. However, topics listed here are part of the minimum standards and cannot be omitted from the overall Training Plan, On-the-Job Training, or Related Instruction. A minimum of 1,000 structured instructional contact hours must be met over the course of the IRAP. Note, credit for previous related instruction is not permitted.

Additional requirements for related instruction and curriculum are listed below.

- Related Instruction Providers are defined
 - Type of organization
 - If the sponsor is providing the related instruction in-house, they must provide instructor qualifications, such as a resume including technical program(s) completed with date of graduation, work experience, areas of technical specialization if applicable, and professional certifications attained. This would include manufacturer training certificates. Any other relevant qualifications should be included.
 - If the provider is a community college, the sponsor must state the school's accrediting body (Federal, State, or other).
 - If the provider is a vocational school or online learning platform, the sponsor must state the institution's accreditation and/or certifications. If none are available, instructor resumes and qualifications will be required.
 - Address
 - Type of instruction
 - Point of contact
 - Any additional credentials earned
- Curriculum is defined
 - Individual courses should be outlined and linked to one or more of the six Critical Functions identified in *The AEDF Standards for Construction Equipment Technology*.
 - A brief description of the course and its content should be provided.
 - Identify a number of apprentice contact hours for each course.
 - A sponsor may use the [AEDF Job Book](#) to outline this information.
- Additional coursework is related to work experience (if applicable)
 - If a sponsor requires additional coursework outside of those related to the Critical Functions exhibited in *The AEDF Standards for Construction Equipment Technology*, it must ensure that it directly relates to an apprentice's work experience.

Equal Employment Opportunity

IRAPs must adhere to all Federal, State, and local laws pertaining to EEO. The employment practices including, but not limited to, recruitment, hiring, compensation, promotions, training, transfers, layoffs, and demotions should be administered without regard to protected characteristics.

AEDF requires an IRAP to administer policies and practices related to harassment, intimidation and retaliation and take precautionary steps to mitigate the risk of such activity (such as anti-harassment training).

AEDF requires an IRAP to outline a process to address EEO and harassment complaints from apprentices, prospective apprentices, authorized apprentice representatives, a personnel certification body or an employer. It must assign responsibility to an individual to receive,

process and dismissal of complaints. This process can be supported through the AEDF IRAP Complaint Procedure.

AEDF requires an IRAP to have policies and procedures in place that reflect comprehensive outreach strategies to reach diverse populations that may participate in the IRAP.

It is the responsibility of the sponsor to present all applicable and supporting documentation to AEDF prior to program recognition.

It is the policy of AEDF to obtain a letter of attestation confirming adherence to all federal, state and local EEO laws.

If the sponsor does not have an HR representative available to them to address matters relating to this policy, AEDF can assign an individual to assist and support them accordingly for a fee.

Industry-Recognized Credential

An IRAP must offer the AED Foundation's Technical Certification Assessment to apprentices that complete the program. Upon completion of the program and a score of 70% or greater on the assessment, apprentices will earn the AED Foundation Technician Certification credential. This is the only non-OEM certification available in the heavy equipment industry demonstrating consumer and labor-market value.

It will be issued by the AED Foundation and is associated with O*Net code 49-3042.00 - Mobile Heavy Equipment Mechanics, Except Engines. The AED Foundation overlaps with 49-3041 - Farm Equipment Mechanics and Service Technicians as well as 49-3031 - Bus and Truck Mechanics and Diesel Engine Specialists and NAICS Code 423810 - Construction and Mining Machinery and Equipment Merchant Wholesalers.

If an IRAP is offering any additional credentials it must be identified in the Training Plan and the Apprenticeship Agreement. It must also disclose any additional assessment strategies.

Apprenticeship Agreement

The final component of the overall Training Plan is the Apprenticeship Agreement. This agreement must be signed by the apprentice and a representative of the sponsor emphasizing a mutual understanding of expectation of the sponsor and of the apprentice.

The Apprenticeship Agreement must incorporate the following items:

- Terms and conditions of employment and training
- Wages and an outline of increases (if applicable)
- Costs and/or expenses charged to the apprentice
- Skills and competencies to be achieved
- Assessment strategies
- Credential earned
- Attendance policy
- Code of conduct

IRAP Evaluation and Recognition

Once a sponsor is interested in recognizing their program, they will submit their preliminary application and their one-time application fee to AEDF. AEDF will then assign an Evaluation Team Leader (ETL) and schedule an on-site visit to perform a Gap Analysis. The ETL will be the sponsor's point of contact and consultative resource throughout the development and recognition process.

Following the Gap Analysis, a report will communicate any necessary and/or applicable revisions, additions, and/or omissions required to recognize the program.

If no revisions, additions, and/or omissions are necessary, the full application with all required documentation is submitted to AEDF.

Once the ETL recommends recognition, the IRAP progresses to the AEDF Staff and IRAP Manager for final approval, and a Recognition Certificate will be issued.

Monitoring and Reporting

AEDF will monitor recognized programs each year through virtual and/or on-site visits, and sponsors will be required to attest to annual compliance of IRAP standards. Sponsors will also be required to report the following information to AEDF on an annual basis:

- Up-to-date contact information
- Total number of new and continuing apprentices
- Total number of apprentices that successfully complete the IRAP
- Annual completion rate (calculated by comparing the number of apprentices in a designated cohort who successfully completed the IRAP requirements and attained an industry-recognized credential with the number of apprentices in that cohort who initially began training in the IRAP)
- Median length of time for IRAP completion
- Post-apprenticeship employment retention rate (calculated at 6 months and 12 months after IRAP completion)
- Credentials earned (AEDF and other if applicable)
- Annualized average earnings of an IRAP's former apprentices, calculated over the 6 month period after IRAP completion
- Training costs per apprentice
- Basic demographic information of apprentice participants

Term and Cost of Recognition

The term of IRAP recognition is 5 years, after which the IRAP must reapply and be re-evaluated by the process currently established by AEDF. AEDF will not re-recognize an IRAP without the IRAP seeking re-recognition. An IRAP sponsor must seek recognition 6 months prior to recognition expiration.

The recognition application fee is \$5,000 and includes application materials, ETL on-site visits, and consultative resources. The cost of re-recognition is \$2,500.

Re-recognition, Suspension or De-recognition

Once an IRAP seeks recognition or re-recognition, AEDF management and the ETL will set a due date by which the sponsor must address all deficiencies noted in the ETL report. The ETL will require the sponsor's development of a remedial plan with realistic due dates based on the program's individual situation: finances, budget lead times, human resources, resources available, etc. The ETL can assist the sponsor with the plan; however, the onus is on the sponsor to develop and execute such a plan.

The AED Foundation reserves the right to, at its sole discretion, at any time suspend or revoke AEDF recognition status where there is non-compliance with AEDF's requirements as stated in the current AED publication of *Standards for Construction Equipment Technology*, the AEDF IRAP Manual or the stated policies of this manual, including a lack of a good faith effort to remedy deficiencies.

Policies and Procedures

AEDF IRAP Complaint Procedure

If an apprentice, prospective apprentice, an apprentice's authorized representative, personnel certification body or an employer believes an issue exists that adversely affects participation in an IRAP or violates the provisions of the Apprenticeship Agreement, the applicant or the apprentice has the right to file a complaint with the SRE.

Timeframe for Reporting Complaints: AEDF encourages prompt reporting of complaints so that rapid response and appropriate action can be taken. Due to the sensitivity of this type of problem, no specific timeframe will be established for reporting complaints of discrimination or harassment. Delayed reporting of a complaint will not, in and of itself, preclude AEDF from taking appropriate action.

Investigation of the Complaint: As soon as the documentation process is completed, an officer of the AEDF will initiate an investigation. If necessary, the officer receiving the complaint may designate another manager or officer to assist him/her in the investigation. The investigation will include an interview with the individual(s) who made the initial report, the target of the harassment or discrimination or other, and the accused individual(s). Any other person who may have information regarding the incident may also be interviewed.

After investigation, any party found to have violated AEDF's policies will be subject to appropriate action. If an investigation results in finding that a complainant has falsely accused another of discrimination, unfair treatment or harassment, the complainant will be subject to appropriate action.

AEDF will make publicly available the aggregated number of complaints pertaining to each IRAP in a format and frequency prescribed by the Administrator as outlined in CFR 29.22 (k).

AEDF SRE Complaint Procedure

An apprentice, apprentice's authorized representative, a personnel certification body, an employer, or an IRAP has the right to file a complaint against the SRE to the administrator if one believes an issue of non-compliance to Subpart B of the Apprenticeship Program, Labor Standards for Registration Final Rule exists.

Timeframe for Reporting Complaints: Prompt reporting of complaints is encouraged so that rapid response and appropriate action can be taken. However, complaints must be submitted in writing and must be submitted within 180 calendar days from the complainant's actual or constructive knowledge of the circumstances giving rise to the complaint.

Investigation of the Complaint: Complaints in this section are addressed exclusively through a review process outlined in §29.26 of Subpart B of the Apprenticeship Program, Labor Standards for Registration Final Rule. See the link below for more details.

<https://www.federalregister.gov/>

It is AEDF policy to notify the public and the IRAP Administrator regarding any complaint filed against it as an SRE.

Mandatory Delivery of AED Foundation Technical Assessments to All Apprentices Participating in AEDF-Recognized IRAPs

The AED Foundation requires that all apprentices participating in AEDF-Recognized IRAPs take the AEDF Technical Certification Assessment within the final eight weeks of the related instruction component of the IRAP. This is mandatory to retain status as an AEDF-Recognized IRAP. Should an apprentice not achieve the required 70% for technician certification, he/she is permitted to retake the assessment up to two additional attempts with an interval of 6 months between tests for additional test preparation.

Note:

This is required to:

- Allow the Foundation to better monitor and analyze individual and overall program performance and serve AED members better through continuous improvement of the individual IRAP.
- Let students know where they stand as to the Foundation's national benchmarks.
- Compile and provide more comprehensive benchmarking information, which will better assist all programs with continuous improvement.
- Provide apprentices with the opportunity to earn industry certification as an AEDF Certified Technician.

<https://www.federalregister.gov/d/2020-03605/p-885>

Offering Credit for Prior Knowledge and Previous Experience for Apprentices Participating in AEDF-Recognized IRAPs

The IRAP sponsor may grant to new apprentices up to 25% credit toward the required number of on-the-job training/work experience contact hours (not to exceed 750 hours). Credit will be

given at the discretion of the IRAP sponsor and based on demonstration of previous skills or knowledge equivalent to those identified in the On-the-Job Work Experience element of the Training Plan.

Apprentice applicants seeking credit for prior knowledge and previous experience gained outside of the supervision of the sponsor must submit the request at the time of the application and furnish such records and affidavits to substantiate the claim. Applicants requesting credit for previous experience who are selected into the apprenticeship program will start at the beginning wage rate. The request for credit will be evaluated and a determination made by the sponsor during the first 90 days, when actual on-the-job performance can be examined. Prior to completion of the first 90 days, the amount of credit to be awarded will be determined after review of the apprentice's previous work and training/education record and evaluation of the apprentice's performance and demonstrated skill and knowledge during the first 90-day period.

An apprentice granted credit will be advanced to the wage rate designated for the period to which such credit accrues if applicable. The AED Foundation will be advised of any credit granted and the wage rate to which the apprentice is advanced.

The granting of advanced standing will be uniformly applied to all apprentices.

The AED Foundation limits the amount and source of credit an apprentice can be granted for previous knowledge and/or experience gained through on-the-job training.

The 25% limitation is meant to ensure the apprentices are subject to the most relevant and applicable best practices and current technology in the industry. No credit will be permitted for previous related instruction.