

Recurrent Training for Composite Repair Personnel

SAE International ARP6262

This a training program set up by EFC which includes provisions for recurrent training and is set up to continually update a composite repair personnel on new technology, materials and other changes regarding composite maintenance and repair. Records of this **recurrent** training are sent to your organization and per the individual composite repair technician.

On the first course day, each participant receives a multiple choice level test (proficiency check) about all theoretical and practical topics as stated in the SEA-Int. AIR 4938.

Gambling on answers in this level test is not allowed. Not knowing the answer means skipping the question to get a good view of his/her current knowledge level. Having this done, we can determine the current level of knowledge per individual student to address this during theoretical sessions which save time for the Hands-on practical

This course content is derived from and in accordance with the following documents:

As described in the SAE INTERNATIONAL-ARP 6262 document:

Recurrent Training: A training program should include provisions for recurrent training to continually update persons on technology, materials and other changes regarding composite maintenance and repair. Records of recurrent training should be maintained by the organization and the individual
SEA-International AIR 4938 (last revision)

EFC Course ID : TECH-023

Nr. of days: 5

Advised pre-requisites

Aviation Technicians, having completed the following EFC Composite courses successfully or an approved level of training in advanced composite repair of commercial aircraft parts:

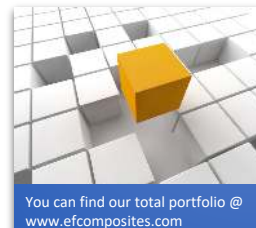
EFC TECH-001, course (Level 1-2)

EFC TECH-010, course (Level 2)

EFC TECH-020, course (Level 3)

Participants

Minimum required 2 and maximum 8 per course. The course will be confirmed by EFC as soon as sufficient applications are received!



Objectives

A knowledge and skill update for Composite Repair personnel demonstrating continued competence in the repair of advanced composite parts

To provide participants with the necessary lagging update in existing and new theoretical and new practical Hands-On skills gained from the personal level test necessary to carry out the actual repairs.

At the end of the course, the participants are updated with the following:

Will be attentive to details

Can work according to Safety regulations and recognize hazardous situations & materials

Can work with the OEM manuals (SRM, AMM, OHM etc in the repair of composite parts

is familiar with all necessary existing and new materials & properties and is "Handling & Storage" of frozen materials

Use dry glass fabric and liquid Epoxy resin to impregnate wet in wet (Wet Lay-Up) repair

Can practice damage assessment plan work and work as planned

Can handle Repair Steps to be taken in the Aircraft type related OEM manuals for interior parts

Application of fundamental vacuum bagging, bleeder & breather concepts

Repair single/double curved panels with Nomex[®] honeycomb and foam core

Repair of half depth, full depth core repair and

Able of recognizing of core types and density

Cutting of core into the right height

Is familiar with ATA-100- reading necessary OEM manuals, in order to carry out repairs

Is familiar with all SAE-Int. ARP chapters (Aerospace Recommended Practice)

Course content theory

At the first-course day, we have determined the current level of knowledge each individual student by the outcome of the level test (Proficiency -check or Prof.-check) of

The instructor uses this in-depth current information to address the necessary course content topics needed to be discussed including the new materials, methods during the theoretical sessions.

This saves valuable time for the practical hands-on sessions to come!

Subjects (level 1,2 and 3)

- Health and Safety (MSDS)
- History of composites, recent developments and terminology
- Handling & Storage of Frozen materials
- Material Forms: dry cloth and wet resins vs. pre-preg, weave styles
- Fundamentals of Fabrication: dry cloth and pre-preg handling, ply orientation, layup procedures, vacuum bagging techniques
- Advanced composite materials/structures
- Resin, adhesive systems: thermosets vs. thermoplastics, mix ratios, viscosity, service temperature limits, cold storage requirements/shelf life limits, mix ratios pot life, etc.
- Material Data Sheet (MDS) reading to determine Open time, Shelf life, and material Cure cycles
- OEM Play lay-up blue print reading



- Composite awareness & reporting damage incidents
- NDI of composites parts and tapping
- Minor Damage assessment, and reporting dents scratches and others
- Various repairs by OEM SRM
- Sanding techniques, scarf angels, ratios and step repairs, ply cutting

Workshop exercises

Workshop exercises (level 3)

(Level 3)

Participants will be daily intensively, individually monitored and evaluated by the instructor while repairing their individual parts!

Participants will fill in their personal logbook daily which is signed of by the instructor(s)

The participant will be able to:

- perform Damage assessment by inspection and photography and have to keep a record
- prepare a Quick support Tool, cure it at low temp and apply release agent to it
- perform vacuum leak checks on every repair, keep a record of it
- make use of different types of heating equipment
- apply the 'Felt part support technique' for repair
- prepare surface and repair steps and determination of working order steps
- prepare a support doubler/caul plate (Tool) on a damaged part
- perform a post-repair inspection on all repair and keep a record
- program & monitor Hot bonding equipment, change programs and parameters during a high temp. cures.
- Take the necessary steps to secure and store all necessary paperwork and witness samples for record keeping of the specific part

Examinations

- Successful completion is 75% correct answers
- The examination will be closed book and can be conducted by a Part 147 approved Examiner upon request
- The practical mark will be the average of all marks gained from the practical exercises
- All grades will be recorded in the participant individual training records and kept on record at EFC for unlimited time (compliant with Reference EASA Commission Regulation (EU) No 1321/2014) and the GDPR rules
- A certificate of accomplishment is handed out to each participant
- Assessment activities are built into our courses, to give feedback on the achievement and personal potential and kept a record in their personal logbook.
- The final outcome of the participant's Examination, assessment document and practical logbook per student will be digitally sent to your company responsible manager or HR department



- We also comply with the European [GDPR rules](#) as effective on May 25th, 2018 concerning storage of private information of participants who attended our courses.

SAE INTERNATIONAL- ARP6262

- Currency: Composite repair personnel should demonstrate continued competence every three years by performing a repair or by completing a practical assessment under the direct supervision of an examiner authorised and designated by the organisation or by having participated in, or performed at least six composite repairs in the 3-year period
- Loss of Certification: If the individual is shown to perform unsatisfactorily, the certification will be withdrawn.
- Recertification: Remedial training and testing may be required to become re-certified..

Leipzig, Germany

This course can also be held on our new location nearby Leipzig Airport, Germany. Here we use classrooms and practical workshop in the HEICO Aircraft Maintenance Part 145 facility. We can run this course on a course start date of your choice.

Please contact our purchasing manager [Rolf Hovener](#) via his personal page on the website of Eart & Flight Composites: <https://www.efcomposites.com>.

Course run on site and at special request

- For your company to benefit, this course can be held 'On-Site' at your facility under certain conditions.
- Click on this link to the [Onsite information webpage!](#)
- Courses as noted on our [course schedule page](#) can be run on request to meet your required start and end date.

Course pricing

All listed course prices are **Excl VAT**. (Dutch VAT is 21%). EFC complies with Dutch tax laws. On request, companies can be sent an invoice instead of paying direct On-line with PayPal, IDEAL or credit card. Payment is securely arranged via Mollie.nl . More information can be found on [the website of Mollie](#).





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Vacuum Valves/ Vacuum Sniffers



Smart vacuum Valve/Ports for a curved surface
In the images shown the vacuum valves/ports are fitted with standard quick connect couplings.

These quick connect standard couplings are not supplied with the vacuum valves/ports. They merely serve to show the connectivity options. These conventional couplings, male or female type, are available at many vacuum equipment suppliers. EFC can deliver them to you if required.

Contact us by email at info@efcomposites.com
These Vacuum ports/valves are specially designed and patented by EFC owner Bert Groenewoud
Tha can be used use with Hot bonders, in ovens, autoclaves on flat and curved surfaces.

Visit our [webshop](#) for more information!

B- Aluminium tap hammer



The B- Aluminium tap hammer, is used to detect delamination (separation of plies) and dis-bonds from the core in advanced composite structures.

This tap Hammer is a must have, for Composite Repair Technicians, Composites certifying staff Composite engineers and Quality inspectors to perform a correct damage assessment in thin laminates and metal bonded parts!

It is fabricated to OEM standard drawings and sizes and anodized for a better protection of the material. The material used is Alum type EN_AW_ 6082-T6
let us know if you want to order the B-tap hammer in larger quantities and ask us for a quotation
Coming soon; A tap-hammer lanyard with a B-tap-hammer plastic click-in holder

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