

LESLIE COMPOSITE REPAIR KIT

COMPOSITE MACHINING TOOLINGS FOR FABRICATION AND FOR REPAIR

INTRODUCTION

Leslie Composite Repair Kit performs the generic mechanical works necessary to **install a repair patch on an advanced carbon structure**.

They are used worldwide by major manufacturers like ATR, AIRBUS, AIR FORCES, Training Centers and by MROs. These tools result of the expertise of GMI in the repair process.

In order to offer a complete solution to the users, specific comprehensive kits have been designed. The more comprehensive version can be labeled as **Mobile Composite Repair Workshop or a Repair Technician Companion**.

CONSOLE COMPOSITION

To perform all the tasks of the repair, the Complete Mobile Workshop is composed of 5 groups of elements:

1. **Group 1:** A selection of accessories to prepare the repair by paint removal, honeycomb cut, lamination of dry fabrics, cutting and assembly of patches.
2. **Group 2:** Pneumatic machines necessary for the Attachments one router and one sander.
3. **Group 3:** The innovative kit of attachments. This kit comes with the necessary kit of diamond cutters and carbide cutters. These cutters are conceived specially to achieve specific repair machining quality. A first set of templates is added. The pneumatic adapted vacuum cleaner is included.
4. **Group 4:** First hand set of bagging products state of the art.
5. **Group 5:** (In option) A foldable oven for drying the sandwich area after core removal and before core installation or potting. The oven is useful to accelerate the potting curing; in some cases it can be used to heat the adhesive when. The oven temperature cycle is controlled by the ANITA Console. The oven is equipped with a specific heat gun.



Figure 1: Complete Mobile Repair Workshop



Figure 2: Some of the innovative surface machining tools

LESLIE COMPOSITE REPAIR KIT

A COMPREHENSIVE KIT FOR ALL SURFACE PREPARATION STEPS

The innovative tools designed by GMI to offer the technician the necessary instruments to face all possible tasks of a composite repair on an advanced carbon structure are gathered in the case. With tools, and complementary other selected accessories the repair phase preparation can be fully conducted. **The Kit will allow preparing fully the repair phases:**

- Remove the paint on the repair area
- Prepare the installation of the core and patch
- Dry the sandwich area after core removal with a foldable oven
- Rout and Step the skin
- Handle Wet Lay-Up operations if any, or the Prepreg cuts
- Manufacture the patch pre-cured or to be cocured
- Install the patch and make the vacuum bag (heat blanket not provided)



Figure 4: Compressed Air Machine Tool

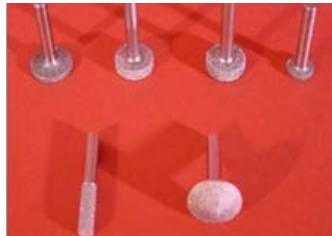


Figure 5: Diamond cones

A SIMPLE A SECURE USE

The use of templates allows the technician to work safely inside the guides, compared to the case of handworks. The tools use only two pneumatic machines and one set of diamond meshes preselected for the specific work.

The tools are mainly suitable for carbon structure but can be used on fiberglass and kevlar (please consult us for additional information)

The machining are of excellent precision and compatible with the different tolerances of repairs made by a technician.

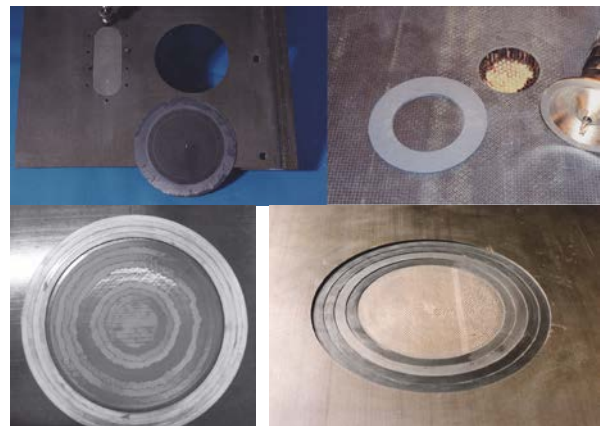


Figure 3: Illustration of routing, scarfing and stepping operations

MACHINING WORK SCHEMES

The works are categorized to cover the typical schemes met in advanced carbon repair on aircraft structures.

- Cutting of a carbon laminate doubler, chamfering the edges
- Routing of a sandwich skin or of a laminate box skin
- Easy control to remove the skin up to the adhesive or deeper
- Stepping ply by ply a carbon skin
- Scarfig with respect of a slope of 3 or 2° a carbon skin.

ORDER INFORMATION

A - The **Complete** Mobile Workshop:

Recommended for Airlines, MROs,

P/N: GMIAT87B02-320

Dimensions: 1230 x 535 x 285 mm; Weight: 30 Kg.



B - Restricted version limited to the innovative attachment and tools without accessories. (groups 2, 3, 4, 5 in option)

Recommended for training centers and constructors

P/N: GMICRT9201-WO

Dimensions: 800 x 450 x 300 mm; Weight 23 Kg.