



Generic Hand Skills Trainer (GenSkill MK1 & MK2)



Introduction

The Generic Hand Skills Trainer (GenSkill) Mark 1 is a free standing physical representation of a typical Flying Control Run. The GenSkill provides training in the hand skills necessary to work on aircraft components in confined spaces through access panels in an aircraft fuselage.

The Mark 2 builds and enhances on the training capability of the standard GenSkill training device by introducing a functioning low voltage aircraft circuit as a fabrication and modification embodiment to extend training to avionic skills.



www.pennantplc.com

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Key Features (GenSkill MK1)

- Fuselage shaped shell containing access panels secured with a range of aircraft fasteners;
- Internal components typical of aircraft systems:
 - Control system (Control rods, pivot blocks, pivot arm. Torque tube);
 - Hydraulic components (PFCU, Rigid Pipes, Manifolds and Valves);
 - Avionic LRU (Cable, Connectors, Mounting Tray with aircraft tie-downs, LRU).
- Aircraft Component Recognition;
- Safetying by lock wire, Safe-T-Cable, split pin and torquing;
- Fastener recognition / identification;
- Control Linkage Rigging;
- Does not require expensive aircraft parts;
- Designed to allow the observation of repetitive tasks in training.

Key Features (GenSkill MK2 Addition)

- Covers knowledge and learning tasks involved with the following standards & qualifications: EASA/EMAR pt66, FAA, City & Guilds and CASA MEA Units;
- Introduction of a functioning low voltage aircraft circuit;
- Carry out a service bulletin which incorporates embodiment of an avionic modification;
- Electrical harness fabrication;
- Sheet metal fabrication;
- Testing of the system with a portable test set (One supplied free per delivery);
- Instructor controlled fault harness replaces the student harness with in-built faults (One supplied free per delivery);
- Interactive Electronic Technical Publication, S1000D laid out in ATA2200 format with performance support material.



Aviation Regulations Alignment Standard Genskill (Items in RED Mk2 additional)

| EASA/EMAR PT 66 | FAA | CITY & GUILDS | CASA MEA UNITS |
|---|--|---|--|
| Module 6 Materials & hardware | ATA 27 Flight Controls | 2675-01 City & Guilds Level 2 Certificate in Aircraft Maintenance (Military Aircraft) Units 104 & 109 | Common core units MEA151, 153, 155, 157, 158, 159 & MEA118 |
| Module 7 Maintenance practices | ATA 29 Hydraulic Power | | MEA201 Remove and install miscellaneous aircraft electrical hardware /components |
| Module 10 Aviation legislation | ATA 51 Standard Practices & Structures | 2675-02, 23 Level 2 Diploma in Aircraft Engineering:- Unit 102 | MEA223 Inspect aircraft electrical systems and components |
| Module 11 Aeroplane, aerodynamics, structures and systems | | 2675-05 Level 3 Diploma in Aircraft Maintenance (Civil Aircraft Mechanical):- Unit 204, 205 & 206 | MEA227 Test and troubleshoot aircraft electrical systems and components |
| Module 12 Helicopter aerodynamics, structures and systems | | 4608-50 Level 2 Diploma in Aerospace and Aviation Engineering (Military Foundation Competence):- Unit 201 & 202 & 203 | MEA238 Perform routine removal and installation of miscellaneous aircraft electrical hardware / components |
| Module 13 Aircraft structures and systems | | 4608-60 Level 3 Diploma in Aviation Maintenance (Military Development Competence):- Units 301, 302, 304 & 455 | MEA239 Fabricate aircraft electrical looms & harnesses |
| | | 4708-30 Level 3 Diploma in aircraft maintenance Military:- Units 306, 308 , 310 & 312 | MEA240 Use electrical test equipment to perform basic electrical tests |
| | | | MEA296 Use Electrical Test Equipment in aviation maintenance activities |
| | | | MEA305 Remove and install aircraft fixed wing flight control system components |
| | | | MEA318 Inspect aircraft hydro-mechanical, mechanical, gaseous and landing gear systems and components |
| | | | MEA321 Test and troubleshoot aircraft fixed wing flight control systems and components |
| | | | MEA398 Remove and install aircraft hydro-mechanical and landing gear system components |





Physical Specifications

| PARTICULAR | VALUE | UNIT |
|-------------------------------------|------------------------|------|
| Length | 1110 | mm |
| Width | 1575 ^{Note 1} | mm |
| Height | 1565 ^{Note 1} | mm |
| Weight | 120 | Kg |
| Note ¹ : Lid Open | | |

Supported Training

The students perform practical maintenance tasks, through the access panels. The flying control tasks include:

- Inspect Flying Control System
- Lubricate Flying Control Torque Tube & Lubricate Pivot Arm Assemblies
- Remove, Install & Examine Torque Tube Assembly & Outer Bell Crank;
- Remove & Install Powered Flying Control Unit, PFCU Control Rods, Pivot Arm Assemblies & Torque Tube Lever Assembly
- Rigging of PFCU and Control Linkage

The hydraulic practical tasks include inspect hydraulic system, remove and install the follow:

4 port manifold, 6 port manifold, 3 way depress valve, pressure transducer, rigid pipework and flexible pipework.

The GenSkill MK2 provides students with the opportunity to carry out and inspect electrical compartment LRU, remove and install line replaceable unit (LRU), carry out electrical harness continuity checks, troubleshoot/fault tree analysis, sheet metal fabrication and harness fabrication, as part of the avionics practical tasks.

On task completion the instructor/supervisor can open the hinged, shell top to inspect and debrief the student on their resultant standard of work.

A full list of practical tasks and simulated faults can be found in our technical brochure.



Supplied Documentation

Integrated Electronic Technical Publication (IETP)

Optional Accessories

Spares Pack (Scaled at 1-5 Genskills)

Consumables Starter Kit

GenSkill Joining Kit (Join two single Genskills together end to end)

Additional Test Set

Additional Fault Harness

Student Toolkit (Mark 1 Only)

Ordering Information

| | |
|-------------|--|
| 97520-0001A | Generic Hand Skills Trainer Mk2 |
| 97520-0002A | Mk2 Modification Kit |
| 97520-3020 | Consumables Starter Pack |
| 97520-3021 | Spares Pack |
| 97520-3022 | Ground Support Equipment (GSE) Kit (Includes Test Set and Fault Harness) |
| P002565 | Student Toolkit (Mark 1 Only) |
| 97500-0055A | Joining Kit |



