Pennant

GenFly

GENERIC FLYING CONTROLS TRAINER (GenFly)

OVERVIEW BROCHURE

OVERVIEW

The Generic Flying Controls Trainer (GenFly) is a facsimile airframe to enable fast, realistic, effective training and to impart a thorough understanding of the principles and practices related to aircraft hydraulic, landing gear and flying control maintenance.

GenFly training rigs enable students to do progressive and demanding exercises. The training rigs allow the instructor to demonstrate and for each student to perform realistic maintenance tasks with a high degree of independence to consolidate and complement their theoretical knowledge.

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KEY FEATURES

- Synthetic training device with modular open frame structure;
- Representative cockpit incorporating controls and indicators;
- Control surfaces and landing gear activated by electro-mechanical systems to simulate hydraulic actuators;
- Access to the cockpit area is affected by the provision of servicing stepped platforms; all other areas are accessible from the floor level;
- Use of commercially available components to minimise life-cycle costs;
- Included Ground Support Equipment (GSE)

AVIATION REGULATIONS ALIGNMENT

EASA/EMAR PT 66	FAA	City & Guilds	CASA MEA Units
Module 6 Materials & hardware **Module 7** Maintenance practices **Module 10** Aviation legislation **Module 11** Aeroplane, aerodynamics, structures & systems **Module 13** Aircraft structures & systems	**ATA 12** Servicing **ATA 22** Auto flight **ATA 27** Flight Controls **ATA 29** Hydraulic Power **ATA 31** Indicating / Recording systems **ATA 32** Landing Gear **ATA 51** Standard Practices & Structures **ATA 55** Stabilizers **ATA 57** Wings **ATA 73** Engine Fuel & Control **ATA 77** Engine Indicating	**2675-01** City & Guilds Level 2 Certificate in Aircraft Maintenance (Military Aircraft) Units 104, 106, 109 **2675-02, 23** Level 2 Diploma in Aircraft Engineering: Unit 102 **2675-03** Level 3 Diploma in Aircraft Maintenance (Military/ Civil) Aircraft Mechanical/ Avionics: Units 202, 203, 204, 205, 206, 210 & 218 **2675-05** Level 3 Diploma in Aircraft Maintenance (Civil Aircraft Mechanical): Units 203, 204, 205 & 206 **4608-50** Level 2 Diploma in Aerospace and Aviation Engineering (Military Foundation Competence): Units 201, 202, 203 & 240 **4608-60** Level 3 Diploma in Aviation Maintenance (Military Development Competence) units 301, 302, 304 & 455	**MEA107** Interpret & use aviation industry manuals & specifications **MEA118** Conduct self in the aviation maintenance environment **MEA154** Apply work health & safety practices in aviation maintenance **MEA155** Plan & organise aviation maintenance work activities **MEA157** Complete aviation maintenance industry documentation **MEA158** Perform basic hand skills, standard trade practices & fundamentals in aviation maintenance **MEA303** R & I aircraft pneumatic system components **MEA305** R & I aircraft fixed wing flight control system components **MEA318** Inspect aircraft hydro-mechanical, mechanical, gaseous & landing gear systems & components **MEA320** Test & troubleshoot aircraft hydro-mechanical, gaseous & landing gear systems & components **MEA321** Test & troubleshoot aircraft fixed wing flight control systems & components **MEA328** Maintain &/or repair aircraft mechanical components or parts **MEA398** – R & I aircraft hydro-mechanical & landing gear system components

PHYSICAL SPECIFICATIONS

PARTICULAR	VALUE	UNIT
GenFly Airframe		
Length	6200	mm
Width	5100 Note 1	mm
Height	3340	mm
Weight	2300	Kg
Instructor Operating Station		
Length	1650	mm
Width	1028	
Height	1594	mm
Weight	230	Kg
Note[1]: 5537m with the addition of Servicing Steps		

SUPPLIED DOCUMENTATION

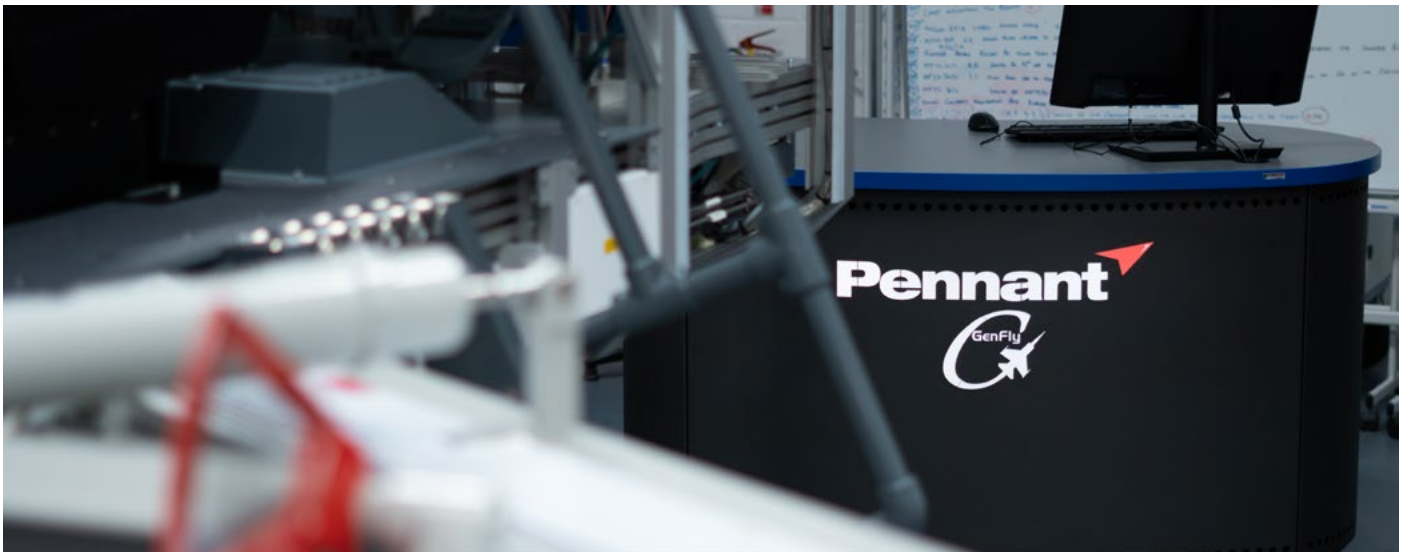
Operation Manual
Maintenance Manual
Student Manual (Technical Publications)

SUPPORTED TRAINING

SIMULATED SYSTEMS	PRACTICAL TASKS	SIMULATED FAULTS
LANDING GEAR	1. Jacking 2. Inflate Shock Strut 3. Functional Test of Selector Lever 4. Extension and Retraction (Individual Gear) 5. Extension and Retraction (All Gear) 6. Remove and Install Main Gear Door Sequence Valves 7. Remove and Install Main Gear Sequence Valves 8. Remove and Install Main Gear Pressure Regulating Valves 9. Remove and Install Nose Gear Sequence Valve 10. Remove and Install Emergency Lowering Selector Valve 11. Functional Test of Brake System 12. Bleeding of Brake Unit 13. Brake Wear Inspection 14. Remove and Install Auto Brake Valve 15. Remove and Install Brake Accumulator 16. Remove and Install Main Wheel 17. Remove and Install Ant-Skid Sensor 18. Functional Test of Arrestor Hook 19. Functional Test of Nose Wheel Steering 20. Functional Test of Emergency Lowering System	1. Landing Gear Depressurising Valve fails closed 2. Landing Gear Depressurising Valve fails open 3. Landing Gear Input NRV fails closed 4. Emergency Lowering Valve fails closed 5. Emergency Lowering Selector Valve failed open 6. Landing Gear One Way Restrictor NRV fails closed 7. Landing Gear One Way Restrictor NRV fails open 8. Landing Gear Selector Valve fails in down position 9. Landing Gear Selector Valve fails in Up position 10. Main Gear RH Sequence Valve fails closed (de-energised position) 11. Nose Door Sequence Valve fails closed 12. Nose Door Sequence Valve fails open 13. Nose Gear Jack Fully Up Valve fails open 14. Nose Gear Sequence Valve fails closed 15. Nose Gear Up Inhibit Valve fails closed 16. Nose Gear Up Inhibit Valve fails open 17. LH landing gear leg not locked down 18. LH Door Sequence Valve failed closed
FLYING CONTROLS	1. Remove and Install Elevator PFCU 2. Operational test of the pitch control system 3. Rigging check of the pitch control system 4. Operational test of pitch artificial feel system 5. Remove and Install Aileron PFCU 6. Remove and Install Spoiler PFCU 7. Operational test of roll control system 8. Operational test of spoiler system 9. Rigging check of the roll control system	1. Airbrake Emergency Control Valve fails closed 2. Airbrake Emergency Control Valve fails open 3. Airbrake Flow Divider unbalanced flow 4. Airbrake Package NRV fails open 5. Airbrake Selector Valve fails open (extension) 6. Airbrake Selector Valve fails open (retraction) 7. Airbrake Selector Valve fails to open 8. Airbrake Throttle Valve blocked 9. Flap Drive Unit No 2-motor seize

SUPPORTED TRAINING

SIMULATED SYSTEMS	PRACTICAL TASKS	SIMULATED FAULTS
FLYING CONTROLS	10. Rigging check of the spoiler system 11. Operational test of roll artificial feel system 12. Operational test of yaw artificial feel system 13. Remove and Install Slat Actuator 14. Operational Test of flap system 15. Operational Test of slat system 16. Rigging check of the flap system 17. Rigging check of the slat system 18. Remove and Install airbrake actuator 19. Remove and Install airbrake emergency control valve 20. Operational test of airbrake system 21. Rigging check of the airbrake system 22. Remove and Install airbrake emergency control valve 23. Operational test of airbrake system 24. Rigging check of the airbrake system 25. Functional test of autopilot system 26. Functional test of auto trim system 27. Functional test of auto stab system 28. Functional test of stall protection system 29. Operational test of pitch electrical signaling system 30. Operational test of roll electrical signaling system 31. Operational test of yaw electrical signaling system 32. Change of role – Mechanical to Electrical signaling 33. Change of role – Electrical to Mechanical signaling	10. Flap Selector valve in flap down position (Note: Flap Selector valve fails at extend) 11. Flap Selector valve in flap up position (Note: Flap Selector valve fails at retract). 12. Flap Selector failed 13. PFCU Spoiler LH seized 14. RH Aileron PFCU No. 2 By-Pass Valve fails open 15. No.1 Slat Package Blow Back Valve fails closed 16. No.1 Slat Package Blow Back Valve fails open 17. No.1 Slat Package Flow Divider unbalanced flow 18. No.1 Slat Package NRV No.1 fails open 19. Slat Selector Valve fails open (retraction). 20. Slat Selector Valve fails neutral 21. Slat Selector Valve fails open (extension). 22. Slat Throttle Valve No.2 system blocked 23. No.2 Slat Package PRV fails open



SUPPORTED TRAINING

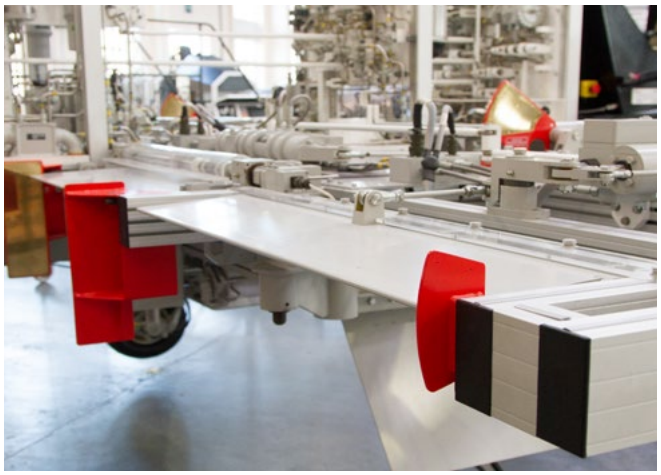
SIMULATED SYSTEMS	PRACTICAL TASKS	SIMULATED FAULTS
HYDRAULICS	1. Reservoir Replenishment 2. Remove and Install system filters 3. Remove and Install Engine Driven Pump 4. Remove and Install Accumulator 5. Remove and Install EDP Off-Load Valve 6. Remove and Install Pressure Maintaining Valve 7. Remove and Install Electric Hydraulic Pump 8. Remove and Install EHP Auto Cut-Out Valve 9. Remove and Install Main Pressure Switch 10. Remove and Install Temperature Transmitter 11. Functional Test No 1 Main System 12. Functional Test No 2 Main System 13. Functional Test No 1 Auxiliary System 14. Functional Test No 2 Auxiliary System 15. Functional Test No 1 Indication System 16. Functional Test No 2 Indication System	1. Hyd 1 Accumulator slow leak 2. Hyd 1 Automatic Change Over Valve fails open 3. Hyd 1 Automatic Change Over Valve relief pressure too low 4. Hyd 1 EDP delivering too high a pressure output 5. Hyd 1 EDP delivering too low a pressure output 6. Hyd 1 EDP drive shaft sheared 7. Hyd 1 EDP NRV fails shut 8. Hyd 1 EHP NRV fails closed. 9. Hyd 1 EHP NRV fails open 10. Hyd 1 EHP Pump sheared shaft 11. Hyd 2 Hand Pump fails on downstroke 12. Hyd 2 Hand Pump fails on upstroke 13. Hyd 1 hand pump NRV fails open 14. Hyd 1 hand pump Pressure Relief Valve fails open 15. Hyd 1 Off Load Valve fails closed ('offload' condition) 16. Hyd 1 Off Load Valve fails open ('on load condition') 17. Hyd 1 Pressure Release Valve fails open 18. Hyd 1 Pressure Relief Valve fails open 19. Hyd 1 supply line filter blocked (by-passed) 20. Hyd 1 supply line filter partially blocked 21. Hyd 2 brake accumulator slow leak 22. Hyd 2 EDP delivering too high a pressure 23. Hyd 2 EDP drive shaft sheared 24. Hyd 2 Hand Pump NRV fails closed 25. Hyd 2 Low-Level Isolating Valve fails closed (energised position) 26. Hyd 2 Low-Level Isolating Valve fails open (de-energised position) 27. Hyd 2 Pressure Maintaining Valve fails closed 28. Hyd 2 Off Load Valve fails closed 29. Hyd 1 Pressure Relief Valve fails closed 30. No.1 EDP has high internal leakage 31. Hyd 2 supply line filter blocked (by-passed) 32. Slow leak on Hyd 1 Reservoir

OPTIONAL ACCESSORIES

Student Toolkit

ORDERING INFORMATION

97610-0001A	Generic Flying Controls Trainer (GENFLY)
97603-3014	Spares and Consumables
P000836	Student Toolkit



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