



Ground Personnel PROGRAM

GROUND PERSONNEL PROGRAM

TrainingPort provides **customized and comprehensive programs** that meet your needs. A Training Needs Assessment assists in determining requirements that, until recently, have been seen as optional in business aviation.

TOPICS OFFERED (TOPICS AND NUMBER OF LESSONS SUBJECT TO CHANGE)

The TrainingPort.net model is to find the premier expert in a particular subject and arrange for them to be our Content Expert. If a Subject Matter Expert cannot be identified, we create lessons using research and information known to be superior.

[OPERATIONAL TOPICS >>](#)

Aircraft Critical Surface Contamination – 4 lessons

Our lessons on aircraft critical surface contamination discuss the problems caused by ground icing, when you are likely to encounter ground icing, the basics of aircraft de/anti-icing fluids, and how to de-ice and anti-ice to ensure a clean aircraft. Background is provided through a discussion of the aerodynamic effects of surface contamination on critical surfaces, types of surface contamination, and how to identify weather conditions conducive to surface contamination. We also consider real-life accident and incident case studies that involved surface contamination.

Topic Outline

- Weather conducive to ice, frost and snow contamination
- Types of contamination
- Inspection before flight and removal of contamination
- Hazards related to critical surface contamination
- The effects of contamination
- Aircraft de-icing/anti-icing procedures
- Aircraft inspection and reporting procedures

Crew Resource Management (CRM) – 8 lessons

Our CRM topic explores the effective use of all resources available to individual flight department roles to improve safety and efficiency. An emphasis is placed on case studies, communication, operational risk, and crew coordination. Threat and error management and human factors are also key components of this topic.

Topic Outline

- Threat and error management
- Communication
- Situational awareness
- Pressure and stress
- Fatigue
- Workload management
- Decision making
- Leadership and team building
- Automation and technology management
- “Surprise and Startle” effect and its mitigation strategies
- Resilience development

Crew Resource Management (CRM) [FOR CANADIAN COMMERCIAL OPERATORS] – 8 lessons

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Delivery of the topic may be adjusted to meet specific requirements, e.g., it may be delivered as a “Standalone Initial Topic” per TC AC 700-042, which applies to Canadian commercial clients. Additional synchronous learning modules have been added to meet operator/trainee-specific requirements.

Topic Outline

- Threat and error management

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- “Surprise and Startle” effect and its mitigation strategies
- Resilience development
- Relevant case study template (TC AC 700-042 only)
- Current safety trends template (TC AC 700-042 only)
- Evacuation drills template (TC AC 700-042 only)

EPT for Ground Handling: Fuel Spills and Fires – 1 lesson

This topic reviews key emergency procedures for ground handling.

Topic Outline

- Personal protective equipment for fuel spills
- How to contain and respond to fuel spills
- Environmental concerns
- Fires

Fatigue Management – 3 lessons

Fatigue is an important safety issue for aviation. Numerous incident and accident investigations have cited fatigue as a contributing factor. It is important for all personnel to learn how to recognize the signs of fatigue, understand reporting procedures, and learn preventative and mitigation strategies.

Topic Outline

- Physiology
- Operational issues
- Causal and contributing factors
- Sleep requirements
- Circadian rhythms
- Strategic caffeine use
- Effective napping
- Environments conducive to sleep
- Sedatives
- Diet and exercise
- Light exposure and jet lag
- Controlled rest on the flight deck
- Fatigue Risk Management Systems (FRMS)

Fuelling – 1 lesson

This topic reviews aircraft fuelling, including types of fuel, procedures before and during fuelling operations, and safety and emergency procedures.

Topic Outline

- Fuelling methods
- Types of fuel
- Bonding procedures
- Fuelling procedures
- Fuel Spills
- Ground Vehicle Fuelling

Industry Best Practices

Industry best practices in ground handling are procedures that have consistently shown the best results and are used as a benchmark to ensure the safe and efficient travel of fixed-base operator (FBO) clients.

Topic Outline

- Persons of Reduced Mobility (PRM)
- Handling of irregularities
- Baggage acceptance and loading
- Weapons and ammunition handling
- Transportation of animals

Maintenance Resource Management

Maintenance Resource Management (MRM) is a variant of Crew Resource Management (CRM). Compared to CRM, MRM has received relatively little formal attention from the industry as a whole. While pilots' errors can have immediate and highly visible effects, maintenance errors can be less apparent, and therefore go undetected for longer periods of time. Our MRM topic provides individuals in the maintenance industry with practical strategies for reducing human error, which are reinforced through an array of maintenance-specific case studies and examples. The topic is designed not only for maintenance staff, engineers, and technicians, but also for managers, supervisors, and other personnel.

Topic Outline

- Human Factors issues (overview)
- Communication principles and strategies
- Safety culture/the maintenance operation as "system"
- Human error
- Decision-making and leadership
- Stress and fatigue management
- Norms
- Assertiveness
- Teamwork and conflict resolution
- Professionalism and integrity

Marshalling – 1 lesson

In this topic, we review aircraft marshalling information and procedures (fixed wing and rotary wing).

Topic Outline

- The importance of marshalling
- Preparation and safety
- Hand signals for arrivals and departures

No-Carry Operator Dangerous Goods Training – 2 lessons

This topic is for operators who are not authorized to carry dangerous goods but must learn to identify their presence to prevent unintentional carriage. These lessons focus on education and awareness concerning hidden, unidentified, and misdeclared articles and/or substances that may be dangerous goods. Emergency procedures and operator training requirements related to dangerous goods are also discussed.

Topic Outline

- General philosophy
- Limitations
- List of dangerous goods
- Labelling and marking
- Recognition of undeclared dangerous goods
- Provisions for passengers and crew
- Emergency procedures

Operations Manual, Regulations, and Standards Review – 2 lessons

This topic guides trainees through a review of their operations manual, critical components of their Safety Management System, and applicable regulations and standards. We provide different versions of this topic to meet various regulatory operating environments.

Topic Outline

- Regulations and standards
- Operations Manual review
- Aviation legislation
- Operating rules and operational practices
- Requirements and qualifications

Ramp Awareness – 1 lesson

With various aircraft taxiing in and out, FBO ramps can be a very busy and confusing place. Appropriate training in ramp awareness and safety is of utmost importance.

Topic Outline

- Ramp safety and preparation
- Foreign object damage
- Tie-downs
- Severe weather conditions

Runway Awareness for Ground Handling – 1 lesson

Runway safety is a vital component of aviation safety as a whole. A runway safety issue is any safety issue that deals with the runway environment (or any surface being used as a runway) and the areas immediately adjacent to it (e.g., overruns; high-speed taxiways). This topic specifically addresses runway incursion prevention for ground handlers.

Topic Outline

- Definitions
- Low Visibility
- Radio phraseology
- Human factors
- Hold short line
- Airport familiarization

Safety Management Systems – 4 lessons

This topic provides trainees with fundamental information concerning the ongoing support of a company's safety management system. It includes information on risk management, hazard analysis and change management. The topic also discusses risk assessment, safety studies and reviews along with SMS evaluation and improvement.

Topic Outline

- Hazard identification
- SHELL model
- Safety risk profile, including flight risk assessment tool
- Different management systems, including QMS
- Safety culture
- Performance monitoring
- Safety studies and reviews
- Internal safety investigations
- Other tools to assess safety (e.g., audits, surveys, meetings)

Security Management – 4 lessons

Our security lessons consider the changes that have taken place in aviation security since 9/11. We provide an overview of the core elements of a business aviation security program, including security risk assessment.

Topic Outline

- Elements of a business aviation security program
- Developing a security risk profile
- Threats and risks
- Threat assessment
- Determining event vulnerability, probability and criticality

Threat and Error Management – 1 lesson

Our TEM topic recognizes that every crew faces threats throughout a flight. Because our responses to threats can be erroneous, appropriate training and procedures must be implemented to trap errors before they lead to undesired aircraft states. Forming a cornerstone of our Crew Resource Management topic, this topic focuses on the application of TEM philosophy in day-to-day operations.

Topic Outline

- Definitions of threat, error, and undesired aircraft state
- Relationship between TEM and CRM

- Countermeasures against threats and errors
- TEM “toolkit” defenses
- Overcoming complacency

Towing – 1 lesson

In this topic, we review aircraft towing information and procedures.

Topic Outline

- Why training is important
- Preparation and safety for all towing procedures
- Towing procedures

OCCUPATIONAL HEALTH AND SAFETY TOPICS

Accident Reporting – 1 lesson

Our accident reporting lesson lists steps to take if a workplace accident occurs and discusses reporting expectations. It explains the procedures to be followed in case of a medical emergency, and it also discusses first aid and non-emergency care.

Topic Outline

- Keys to preventing accidents
- Notification and documentation of accidents
- Medical emergencies and non-emergency care
- First aid
- Required medical treatment for employees

Back Injury Prevention – 1 lesson

This lesson provides an overview of how back injuries occur and explains different strategies that can help prevent them. It discusses the anatomy of the body and includes safe lifting, carrying, and lowering techniques and postures.

Topic Outline

- Causes of back injuries
- Anatomy of the body
- Prevention strategies against back injuries
- Correct lifting, carrying and lowering techniques

Blood Borne Pathogens – 1 lesson

Any contact with bodily fluids can place an individual at risk of exposure to blood borne pathogens. This topic reviews methods of keeping workers safe from infection, emergency response procedures, and vaccines.

Topic Outline

- Types of blood borne pathogens
- How blood borne pathogens are transmitted
- What to do if you are potentially exposed to a blood borne pathogen

- Preventative methods

Confined Space Awareness – 1 lesson

In this lesson, we define confined spaces and describe the hazards associated with them. Tips are included on how to be safe in a workplace where confined spaces are present. Company requirements and procedures related to confined spaces.

Topic Outline

- Definition and types of confined spaces
- Confined space accidents
- Hazards associated with confined spaces
- Company requirements regarding confined spaces

CPR – 1 lesson

Our CPR topic presents current CPR procedures, including airway and breathing support. The lesson also discusses CPR variants, such as hands-only CPR. It also explains how to use the Automated External Defibrillator in concert with CPR.

Topic Outline

- Appropriate use of CPR in the case of a heart attack
- Evaluating the victim for responsiveness
- CPR procedures and guidelines
- AED use and considerations

Electrical Safety – 1 lesson

Our electrical safety topic provides trainees with information on preventing electrical injuries in the workplace and recognizing electrical hazards. The lesson discusses the main categories of electrical injuries and safe work practices that can prevent them. It also includes a review of electrical terminology and systems.

Topic Outline

- Electricity-related terms
- Three main categories of electrical injuries
- Electrical hazards and clues
- Safe work practices

Emergency Action Plan – 1 lesson

This lesson discusses procedures to follow when confronted with a fire, extreme weather event, or other emergency situations. Key teaching points focus on prevention and planning strategies. The lesson also discusses fire prevention and procedures to be followed during tornados or hurricanes.

Topic Outline

- Fire prevention
- Tornado or hurricane safe zones and safety procedures
- Workplace violence and prevention

Ergonomics for Ground Handling – 1 lesson

This topic teaches ground handlers how they can incorporate ergonomic principles into their daily routine.

Topic Outline

- Types of ergonomic injuries
- Risk factors
- Safe towing practices
- Safe fuelling practices
- Safe movement of equipment
- Safe lifting practices

Fall Protection – 1 lesson

In our fall protection topic, we consider how to avoid falls and recognize fall hazards. We also discuss the use of fall protection equipment (such as safety harnesses). We explain the two major categories of falls and the required protection for employees when they work in certain areas. The anatomy of a fall is described, as well as the training required to inspect and use fall protection equipment properly.

Topic Outline

- Two major categories of falls
- Required protection for workers
- Ways to prevent falls
- Systems that can protect an employee from injury
- Anatomy of a fall
- Training on how to inspect and use fall protection equipment properly

Fire Prevention Practices – 1 lesson

This topic focuses on how trainees can prevent fires in the workplace. The lesson includes tips on housekeeping and safe storage of solid and liquid materials. It explains the fire tetrahedron and electric hazards. Compartmentalization and fire door practices are also discussed.

Topic Outline

- Fire tetrahedron
- Good housekeeping to prevent fires
- Proper storage
- Electrical hazards
- Compartmentalization
- Fire door practices

First Aid Kits – 1 lesson

In this lesson, we review items that are commonly included in first aid kits and explain their uses. The lesson also explains how to administer medical oxygen, and it discusses blood sugar measurement and the equipment that is needed for the procedure.

Topic Outline

- First aid kit compartments
- Items contained within the compartments
- How to use the kit and its equipment
- How to administer medical oxygen
- Blood sugar measurement

Fuel and Ignition Source Control – 1 lesson

In this lesson, we present guidelines for controlling substances that can cause fires and explosions in the workplace, and review procedures for assessing and mitigating the risks of a particular substance or work process. We provide examples of fuel and ignition sources and explain the zoning process. We also explain workplace fire hazards and discuss strategies to prevent fires from occurring.

Topic Outline

- Fuel and ignition sources
- Assessing and mitigating risk
- Zoning
- Workplace fire hazards
- Fire prevention strategies

Ground Service Equipment – 1 lesson

In this topic, we cover common operations carried out at an FBO and the ground service equipment needed for the procedures.

Topic Outline

- Lavatory service
- Potable water
- Oxygen carts
- Aircraft oxygen system
- Ground power units

Hazard Communication (including WHMIS) – 1 lesson

Our hazard communication lesson reviews systems for communicating hazards, including the requirements and structure of Safety Data Sheets (SDS), labels, and pictograms. It also lists different hazards and explains the proper storage for each type of hazard. We also offer a version of the lesson based on the 2015 WHMIS, which is aligned with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Topic Outline

- Written hazard communication program
- Different hazards and their proper storage
- SDS requirements and structure
- Labelling system and requirements
- NFPA and HMIS labels

Housekeeping and Material Handling (incl. Storage and Stacking) – 1 lesson

This lesson consists of a discussion of good housekeeping practices. We consider safe material handling, stacking, and storage practices. We discuss hazards and strategies to prevent accidents that result from improper storage of materials, including ergonomic principles.

Topic Outline

- Good housekeeping practices (workplace and personal)
- Slips, trips and falls and how to prevent them
- Proper handling and storage of materials
- Assessing hazards

Ladder Safety – 1 lesson

In this topic, we consider safe setup, usage, maintenance, and storage practices for different types of ladders. The different types of ladders are explained, as well as the different ladder materials and their characteristics.

Topic Outline

- Ladder selection
- Types of ladders and ladder material
- Ladder set-up
- Inspecting ladders
- Ladder maintenance

Lockout / Tagout of Energized Equipment – 1 lesson

In this lesson, we discuss procedures for safely locking and tagging out energized equipment during maintenance or other events. We also review specific energy hazards and how lockout/tagout can prevent them. We explain the criteria for lockout/tagout items and explain the six key steps in the procedure.

Topic Outline

- Energy hazards that lockout/tagout can prevent
- Step-by-step procedures for each item in lockout/tagout
- Criteria for lockout/tagout devices
- Safe electrical practices

Personal Protective Equipment – 2 lessons

Our personal protective equipment lessons thoroughly discuss the proper use, storage, and maintenance of PPE for the eyes, face, hearing, limbs, and respiratory system. This lesson explains the hazards that PPE can prevent.

Topic Outline

- PPE for the eyes and face, including goggles and safety glasses
- Hearing protection and noise hazards
- Hard hats that prevent head injuries

Platforms and Manlifts – 1 lesson

This lesson describes safe use practices and procedures for scissor lifts, boom platforms, and other aerial devices. It also lists minimum clearance requirements for working around electrical wires and fall protection.

Topic Outline

- Types of aerial devices
- Safe work practices
- Fall protection
- Minimum clearance requirements

Powered Industrial Trucks/Materials Handling Equipment – 1 lesson

This lesson consists of a review of safe use practices for forklifts and other industrial trucks. The training required to use a forklift is described, as well as the different classes of powered industrial trucks.

Topic Outline

- Classes of powered industrial truck
- Manoeuvring a powered industrial truck
- Pre-operational inspection
- Important work practices
- Managing loads

Welding Safety – 1 lesson

This lesson provides trainees with information on different types of welding and safety measures against fire. Basic and special precautions against fire are discussed, including personal protective equipment for welders.

Topic Outline

- Basic and special fire precautions
- Safety measures for welding operations, including the use of PPE
- Types of welding

Topics are regularly updated and further topics are always under development, based on industry issues and customer requests.

For more information, please see www.TrainingPort.net or contact us at:

(+1) 604.270.1343

Info@TrainingPort.net