



APRON MANAGEMENT AND PROCEDURE MANUAL (AMPM)



Version 2 - January 29, 2016

**Annex D to the Owen Roberts and Charles Kirkconnell
International Airports Aerodrome Manuals**

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Revision History

1st Edition

May 01, 2012

The CIAA Apron Management and Procedures Manual has been written to provide the users of Owen Roberts and Charles Kirkconnell International Airports safe guidelines from which to conduct business on the aerodrome aircraft operating areas. The manual was produced in compliance to the requirements of the OTAR part 139.G.43, CAP 642, The Airport Services Manual Part 8 and ICAO Annex 11, and 14 relating to apron management. Based on CAACI regulatory comments on the 1st draft of the manual more definition and clarity have been brought to the responsibility for Aircraft Stand allocation and daily aircraft stand management as well as including **Standard Operating Procedures** for aircraft processes. The processes outlined in this manual now become the minimum acceptable behaviour for all airport organizations and are based on local observations and industry best practices, the IATA Airport Ground Handlers Operations Manual and the regulatory references listed above.

2nd Edition

January 29, 2016

The CIAA Apron Management and Procedures Manual has been completely modified to incorporate a standard writing script and incorporate outstanding Safety Directives such as “Procedures for Code “D” Aircraft”, “CIAA Lightning Procedures”, and “Procedures for Fuelling/Refuelling/or Defueling of Aircraft with Passengers On Board, Embarking, or Disembarking”. In section 4 the CIAA has also listed training requirements for personnel who are required to operate on the airside.

Record of Amendments

| Amendment Number | Amendment Date | Subject | Date Inserted into manual |
|-------------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| 1 | 7 Oct 2016 | Code “E” Aircraft Movement procedures | 7 Oct 2016 |
| 2 | 1 Apr 2017 | <ul style="list-style-type: none"> • Addition of several persons/organizations to distribution list • Correction to CIAA website address in the Introduction section • Update Safety Policy • Update GHE “Out of Service” procedure • Update CKIA ATC phone number • Update LOA between CAL/CIAA • Add Aircraft specifications for SAAB/B777 | 1 Apr 2017 |
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Preface

The Apron Management and Procedure manual was produced in response to a clear need for guidance about safe operating practices for all those engaged in activities taking place on the airside areas of the **Owen Roberts and Charles Kirkconnell International Airports**. The procedures in this manual were produced in close cooperation with various airline operational personnel, the airport operations team, the airport safety office, and the airport safety committee and safety sub-committee on apron safety. **Mandatory requirements in this manual are specified with the use of the term “shall” or “will” and optional requirements are indicated with the use of the term “should”**. This manual is part of the Aerodrome Manual for each airport and as such, any changes in this manual must be approved by the Civil Aviation Authority of the Cayman Islands (CAACI) prior to implementation.

Nothing contained in this manual is meant to supersede any standard, order, instruction or recommendation issued by the Director General Civil Aviation. In the event any discrepancy is noticed in the material contained in this manual or that published by the CAACI regulators, the reader is advised to bring the same to the notice of the **CIAA Chief Airport Operations Officer** so that a suitable amendment can be issued.

The CIAA management team has instituted a Safety Management System in order to identify hazards and keep the risk of injury to personnel or damage to equipment at a level that is as low as reasonably practicable. **All personnel working on the aerodrome shall read and become familiar with the SMS manual**. The SMS manual is available in electronic form and can be viewed by accessing our website-www.caymanairports.com and selecting the button at the top of the screen for “*at the airports*” and then selecting the link for “*publications*”. The **Chief Safety Management Officer** can be contacted at 916-5317 or 244-5835 if you require a hardcopy of this manual or have any queries or suggestions relating to the content of the manual.

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Introduction- Aerodrome Physical Characteristics

The following is a description of each airport under the control and supervision of the Cayman Islands Airports Authority.

Owen Roberts International Airport (ORIA)



Owen Roberts International Airport has one runway surface consisting of two active runways – designated as 08 (allowing landings and take-offs to the east) and 26 (allowing landings and take-offs to the west); four taxiways designated as A, B, C, & D from west to east; two aprons- one for General Aviation and one for Commercial Aviation; one service roadway connecting the General and Commercial Aviation aprons, one service road across the main apron and two service access roads at either end of the main apron.

Charles Kirkconnell International Airport (CKIA)



Charles Kirkconnell International Airport has one runway surface consisting of two active runways- designated as 09 (allowing landings and take-offs to the east), and 27 (allowing landings and take-offs to the west); one taxiway designated as A; and one Apron (also shown below).

CKIA APRON



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Manual Distribution Policy & Amendment Procedure

The latest version of this manual is available in electronic format on the CIAA's website - <http://www.caymanairports.com> and can be viewed by selecting the "at the airports" button at the top of the page, then click the tab for "publications". Hard copies are produced for distribution to the list of recipients in the tables below. Any hard copies printed by recipients of the electronic distribution are not controlled; therefore, care must be taken to ensure paper copies are replaced with the latest amended version.

CIAA/CAACI Personnel

| | |
|------------------------------------------------------------------|----------------------------------------------|
| Chief Executive Officer Cayman Islands Airports Authority | Chief Safety Management Officer |
| Director General of Civil Aviation | Chief Security Officer |
| Chief Airport Operations Officer | Manager CNS |
| Airport Manager (CKIA) | Airport Operations Manager |
| Manager Facilities & Projects | Airport Operations Command Centre |
| Manager Air Traffic Control | ORIA Rescue and Fire Fighting Service |
| Chief Financial Officer | |
| CKIA Rescue and Fire Fighting Service | |
| CKIA Air Traffic Control Tower | |
| ORIA Air Traffic Control Tower | |

Airlines/Handling Agents

| | |
|---------------------------------------------|-----------------------------------|
| Air Agencies Ltd. | Air Canada |
| American Airlines | British Airways |
| Cayman Airways Ltd. / Cayman Express | Cayman Islands Helicopters |
| Jet Blue Airlines | Delta Airlines |
| Executive Air Ltd. | Island Air Ltd. |
| FedEx | DHL |
| Sprint Services | UPS |
| United Airlines | WestJet Airline |
| Southwest Airlines | |

Ground Services Agents

| | |
|----------------------------------------|--------------------------------------|
| Airport Professional Services | Goddard Catering Services |
| Cayman Dispatch Services | Flowers Air Dispatch Services |
| Flowers Security Services | Reliable Industries Ltd. |
| Sol Petroleum Fuels Ltd. Cayman | Rubis Fuels Ltd. |

Government Agencies

| | |
|-------------------------------------------------------|------------------------------------|
| Department of Agriculture | H.M. Customs Department |
| Department of Environment (M.R.C.U.) | Department of Immigration |
| Postal Department | Royal Cayman Islands Police |
| Department of Tourism | Cayman Islands Fire Service |
| Civil Aviation Authority of the Cayman Islands | Office of the Governor |

Other Partners

| | |
|----------------------------|-------------------------------------|
| Bodden Funeral Home | Churchill's Funeral Home |
| Fosters | Progressive Distributors Ltd |
| Jacques Scott | |

The Apron Management and Procedures Manual (AMPM) is Annex D to the Owen Roberts and Charles Kirkconnell International Airport Aerodrome Manuals and any proposed change to this manual shall be reviewed to establish impact on these Aerodrome Manuals or any of their Annexes. The head of all companies listed shall ensure maximum distribution of the manual and any subsequent changes to it are available and read by all levels of persons in their respective company who for any reason must operate on the airside areas. The **Chief Airport Operations Officer** is responsible for the development and electronic distribution of amendments to the CIAA Apron Management and Procedures Manual. When the manual is to be amended, one electronic copy of the amended manual will be emailed to the Civil Aviation Authority of the Cayman Islands (CAACI) along with details of the amendment. Once the amended Manual is approved by the CAACI a copy of the approved manual will be returned to the Chief Airport Operations Officer (CAO). The CAO will provide the approved change to the Technical Librarian who will incorporate the change and load the approved amended version on the CIAA website <http://www.caymanairports.com>.

Glossary of Terms

| | |
|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Aerodrome - | A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft. |
| Airport Traffic - | All traffic on the manoeuvring area, apron and landside of an airport and all aircraft flying in the vicinity of an airport. |
| Airside - | That area of an airport used for aircraft operations, inclusive of runway, taxiways, aprons and support areas. |
| Airside Vehicle - Operator Permit (AVOP) | The document issued by the Senior Manager Airport Operations, certifying that the holder is authorized to operate vehicles on the airside. |
| Apron - | A defined area on a land aerodrome intended to accommodate aircraft for purposes of loading and unloading of passengers, mail or cargo, fuelling, parking or maintenance. |
| Apron Traffic - | All aircraft, vehicles, equipment and pedestrians using the apron of an airport |
| Cross-walk - | Any portion of a road, an apron or any other area designated by signs or surface marking to be used as pedestrian crossing. |
| Designated - Vehicle Corridor | A road delineated by surface markings on an apron. |
| Designated - Vehicle Crossing Point | A location on an apron, delineated by surface markings, where vehicles are to cross an aircraft taxi-line. |
| Ground - Handling Equipment | Any motor vehicle or mobile device, either self-propelled or towed, or of a specialized nature, used on the airside. |

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| Hold-Short - | Stop-line surface marking 75m from the runway centreline. Requires permission from the Control Tower to cross or proceed onto a runway. |
| Intersection - | The point at which a road, runway or taxiway meets or crosses another road, runway or taxiway. |
| Landside - | That area of an airport not intended to be used for activities directly related to aircraft operations, such as passenger and cargo terminal, car/coach parking area, access road, etc. |
| Light Gun - | A laser used by the tower to control airport traffic, on the airside, when there is no radio communication. |
| Manoeuvring Area- | That part of an aerodrome intended to be used for the landing, taking off, and taxiing of aircraft, excluding aprons. |
| Material Safety Data Sheet- | Provides workers and emergency personnel with procedures for handling or working with that substance in a safe manner such as physical data storage, disposal, protective equipment, and spill-handling procedures. |
| Movement Area - | That part of an aerodrome to be used for the surface movement of aircraft and includes the manoeuvring area and aprons. |
| Off the Runway - | Indicates a vehicle is at least 45m (150ft) to the side of the nearest edge of the runway in use, wherever practical. |
| Operational Stand | An area on an airport apron designated for the parking of aircraft for the purpose of loading and unloading of passengers and cargo, and the provision of ground service. |
| Operator - | The person responsible for the operation and safety of the vehicle and equipment usually referred to as a driver. |
| Restricted Area - | That area of an airport designated by a sign or marking to which access by persons or vehicles requires the presentation of a valid CIAA access pass. |
| Shall - | Used to indicate any instruction, directive or procedure which is mandated (compulsory). |

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| Should - | Used to indicate a process or procedure which is recommended (optional). |
| Taxiway - | <p>A defined path on a land aerodrome established for the taxiing of aircraft and intended to provide a link between one part of the aerodrome and another, including:</p> <p>a) Aircraft stand taxi lane. A portion of an apron designated as a taxiway and intended to provide access to aircraft stands only.</p> <p>b) Apron taxiway. A portion of a taxiway system located on an apron and intended to provide a through taxi-route across the apron.</p> <p>c) Rapid exit taxiway. A taxiway connected to a runway at an acute angle and designed to allow landing aircraft to turn off at higher speeds than are achieved on other exit taxiways thereby minimizing runway occupancy times.</p> |
| Threshold | The beginning of that portion of the runway used for landing. |
| Vehicle - | An automobile, bicycle, truck, bus or any self-propelled equipment, by which a person or thing may be transported, but does not include aircraft. |
| Vehicle and equipment corridors | A path marked on Aprons in a conspicuous colour to confine vehicle movement and reduce potential conflict with aircraft. |

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SECTION 1 SAFETY POLICY AND COMMITMENT

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SECTION 1 – SAFETY POLICY AND COMMITMENT

1.1 CIAA Safety Policy

Safety is one of our most important core values. We are committed to developing, implementing, and improving strategies, and processes to ensure that all our aviation activities uphold the highest level of safety performance and meet national and international standards. We will report incidents, train staff on safety management procedures, and strive to make continuous proactive improvement to the overall level of safety performance in our organization. All levels of management and all employees are accountable for the delivery of this highest level of safety performance, starting with the Chief Executive Officer.

Our commitment is to:

- Support the management of safety by creating an organizational “**Just Culture**”, an atmosphere of trust in which people are encouraged, even rewarded, for providing essential safety related information – but in which they are also clear about where the line must be drawn between acceptable and unacceptable behaviour.
- Enforce the management of safety as the **primary** responsibility of all managers and employees.
- Clearly define for all staff, managers and employees alike, their accountabilities and responsibilities under the safety management system.
- Establish and operate hazard identification and risk management programs, including a hazard reporting system, in order to decrease or eliminate hazards resulting from our operations or activities. At a minimum- drive hazard levels to a acceptable level of safety.
- Ensure that no action will be taken against any employee who discloses a safety concern through the hazard reporting system unless such disclosure indicates, beyond any reasonable doubt, an illegal act, gross negligence, or a deliberate or wilful disregard of regulations or procedures.
- Comply with, and wherever possible exceed, legislative and regulatory requirements and standards.
- Ensure sufficient number and training of personnel to a level of competency to be able to implement safety strategies and processes, and ensure personnel are allocated only tasks commensurate with their skills.
- Establish and measure our safety performance against realistic safety performance indicators and safety performance targets.
- Continually improve our safety performance through management processes that ensure relevant safety action is taken and is effective.
- Ensure externally supplied systems and services to support our operations are delivered meeting our safety performance standards.
- Review our Safety Policy annually or as required to ensure alignment with our strategic objectives.

Albert Anderson
Chief Executive Officer
Cayman Islands Airports Authority

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SECTION 2

APRON SAFETY

RISK MANAGEMENT

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SECTION 2 – APRON SAFETY RISK MANAGEMENT

2.1 Personnel Safety

The CIAA has put in place a Safety Management System to better understand the hazards and risks associated with all operations at its airports. It is the responsibility of all persons working on the airside areas to become familiar with the safety policies and procedures in the following paragraphs.

2.2 Personnel Safety Guidance

2.2.1 Personal Protective Equipment

Appropriate protective gear shall be worn at all times by all personnel who will be working outside (i.e. on foot) on the movement area. **This includes but is not limited to airline operators and members of aircrews, airline employees, airport employees, ground handlers, service providers, and anyone else who is not embarking or disembarking from an aircraft with other passengers.**

The minimum required P.P.E. is:

- **Hearing protection-** The noise level of aircraft engines, ground power unit, auxiliary power unit, air start unit, and tugs can cause permanent damage to your hearing. Therefore, always ensure ear defenders, earplugs or earmuffs are worn while working on the commercial or general aviation aprons or in any area on the airport where these hazards exist.
- **Protective clothing-** A reflective safety vest is required at all times. In some cases high visibility shirts have been approved for daytime operations. However, during nighttime operations high visibility shirts must be accompanied by a reflective safety vest or reflective safety harness. Other than this- **wearing of the reflective safety harness without a high visibility shirt is not authorized at anytime.** During heavy rain conditions high visibility yellow or lime green rain-suits will be worn and shall be marked with the appropriate company name of the employee.
- **Shoes-** Fully-enclosed sturdy footwear will be worn at all times by all personnel working on the aprons to protect feet from injury and reduce trip hazards. All ramp personnel engaging in loading/unloading/servicing or maintenance of any aircraft shall use some type of safety shoe/boot for optimum protection. **At no time are sneakers/tennis shoes/sandals to be worn on the commercial apron or the general apron by personnel listed above.**



The following gear is optional but highly recommended:

- Safety boots or steel toe shoes
- Protective gloves
- Safety hats or cranial
- Lifting/ back support belt
- Eye protection/ goggles
- Flashlight

2.2.2 Personal Safety

The following is a list of mandatory safety rules designed to limit injury to personnel in the daily performance of their duties:

- Never attempt to lift more than your personal physical capabilities, for one man this is 45 pounds;
- Lifting shall be done with legs and arms while the back is kept as straight as possible;
- Refrain from wearing jewellery such as chains and loose bracelets as these are prone to catching on handles, locks and straps of baggage/cargo or on conveyor belts, which can result in severe injury. If worn these items must remain inside clothing at all times;
- To avoid injuries to the feet and toes, cargo will be set down easily and not dropped;
- Ensure that baggage carts are loaded evenly so as to prevent tumbling that can result in accident/injury;
- When hitching baggage carts and tractor/tow tugs, attendants must ensure that hitches are securely latched and **remain clear of hitch during operation of the vehicle**;
- Always unload baggage/cargo from the top so as to avoid untimely spillage that can cause injuries;
- Walking on moving baggage conveyor belts is prohibited and guard rails will remain in the up position during operation;
- Ensure that the tow-bars of baggage carts, which also usually function as brakes, are properly set to prevent:
 - accidental rolling away
 - personal injury from the tow-bar falling

NOTE- Remember that oily or wet surfaces increase the risk of accidents. Oily or wet boots can slip off brake pedals, which can result in accidents.

2.3 **Airside Areas Safety Guidelines**

In the aviation industry **safety** is of utmost importance both in the air and on the ground. The following is a list of rules by category that shall be followed at all times while operating around aircraft:

2.3.1 **General Apron Safety**

- **Airport access badges** must be displayed at all times by personnel operating on the apron;
- No person shall smoke or carry a lighted cigarette, Cigar, match or naked flame on the apron, or any area where such is prohibited;
- No welding or other hot-work shall be undertaken without prior authorization and a approved **Hot Works Permit (Appendix A6)**;
- No **construction** or **airport repairs** of any kind shall be undertaken without an approved **Airside Works Permit (Appendix A7)**. The Safety Office will receive the permit application from project manager, review safety protocols and mitigation methods and if approved forward to department heads for dissemination;
- No person shall deposit or discharge in any manner garbage/ F.O.D. on the airside except in approved containers provided for this purpose.

2.3.2 **Apron Safety for personnel operating around aircraft**

- Movement inside the aircraft stand or under the aircraft engines and fuselage should be restricted to technical staff and flight crew only- **utilizing the proper personal protective equipment as previously outlined in paragraph 2.2.1;**
- Stabilizers protruding from vehicles must be clearly painted or labeled with reflector tape or reflectors depicting their potential hazard and must be in proper working order at all times;
- **Ensure passengers are kept away from the aircraft's wings, engines and fuselage at all times by providing appropriate supervision in addition to a safe lane to and from the airport terminal formed by safety cones;**
- Never stand behind or in front of aircraft engines while the anti-collision beacon is activated;
- Never approach a aircraft until the anti-collision beacon has extinguished or all clear has been verified with aircrew;
- On power-back operations stand clear of the engines;
- **All aircraft, including those taxiing, about to taxi, or being pushed or towed, have right of way over all vehicles and pedestrians.**

2.3.3 Apron Safety for drivers

Drivers will complete all requirements for obtaining the CIAA Airside Vehicle Operating Permit before driving on the airside of either airport.

All information relating to this permit may be found in the appropriate Airside Vehicle Operations Manual for the airport you wish to drive on.

The following guidelines should be followed by all personnel operating on the airside;

- a) Drivers and airside personnel must be aware of the dangerous effects of contact injuries that could be caused by rotating propellers and potential jet blast or ingestion when in close proximity to a jet aircraft with its engines running;
- b) Drivers must make sure their vehicles are roadworthy before driving. Any abnormality discovered that would compromise safety to themselves and others, must be reported to their management immediately and corrected as soon as possible;
- c) Drivers transporting cargo across long distances, such as transfer between the Commercial and General Aviation Aprons on ORIA must check that loads and trailers are properly secured either by using:
 - 1) **Covered carts which will also protect cargo from rain and weather; or**
 - 2) **Open carts with a protective net tied down to secure load; or**
 - 3) **A second operator to shadow the same cargo transfer in order to detect any fallen items.**
- d) All drivers and cargo handlers shall use proper stacking techniques to ensure an open luggage cart is not overloaded or unbalanced;
- e) Drivers / operators shall not operate in the movement area at any time while under the influence or residual effect of alcohol or drugs. This applies to medicine or prescribed drugs which may impair the ability of the driver;
- f) Drivers will not operate any vehicle while using headphones or talking on a cell phone unless vehicle is equipped with appropriate "hands-free" device designed specifically for the vehicle. Drivers will come to a complete stop to talk on cell phones or radios;
- g) **Do not walk or drive a vehicle towards an aircraft or behind an aircraft while the aircraft engine is running. An aircraft with its engine running will display a flashing red light signal known as an anti-collision light;**
- h) Do not drive or park under aircraft or aircraft wings unless the vehicles are used for servicing the aircraft;
- i) **Approach stationary aircraft at an angle and keep the aircraft on the driver's side; try to stay in view of pilot;**

- j) **Always use a Marshall or guide man when reversing towards aircraft;**
- k) Do not leave any motorized vehicle unattended with the engine running on the movement area; **engage the handbrake and chock the vehicle whenever it is stationary;**
- l) Keep the Passenger Boarding safety zone free of any obstruction. Do not drive, stop or park in the Passenger Boarding safety zone;
- m) Deposit all Foreign Object Damage (FOD) in bins provided after handling of each flight;
- n) Report all fuel, oil and other chemical spillages;
- o) **Drivers of vehicles shall keep clear of the aircraft engines and shall not pass within 10 ft. (3 m) radius around the aircraft fuel tank vents;**
- p) Drivers of vehicles shall not drive over any hose or bonding cable laid during aircraft refueling;
- q) Refueling tankers are not permitted to park unattended within 50 feet (15m) of a terminal building.

2.3.4 Ground Handling Equipment (GHE) Apron Safety Rules

Only adequately trained, qualified and authorized personnel shall be permitted to operate ground handling equipment. Such personnel at all times will be in possession of a CIAA AVOP permit with an endorsement on the back of the license signifying they are qualified to drive specific equipment. The endorsement is an indication that the driver's organization has verified their qualification on this equipment and a copy of such will be available in their drivers safety file located in the CIAA Safety Office. The following safety guidelines shall apply- all equipment must;

- **Have a current CIAA inspection sticker on display at all times and be in good mechanical condition and capable of passing a vehicle inspection as outlined in appendix A3;**
- Be tagged "**OUT OF SERVICE**" when broken and removed from the Apron immediately until repairs can be affected. Once repaired, said equipment must pass inspection from the CIAA appointed mechanic before being put back into use on the Apron;
- Have hoses or cables on equipment securely stowed before the unit is moved;
- Have a working safety beacon **mounted in a location above the driver** which allows 360° visibility;
- Not have any defects to control or braking systems;
- Not have any leaks of lubricants, coolants or contents;
- Have proper seating, working lights, safe tires and sound bodywork;

- Have all manufacturer installed safeguards and bumpers in serviceable condition in the event it must come in contact with aircraft for proper operation;
- Present a clean and professional appearance as to paint (void of surface rust), markings and state of the equipment;
- Never move across the path of taxiing aircraft or embarking and disembarking passengers without a proper safety guide.
- Not be driven faster than **5 MPH** when approaching or leaving an aircraft;
- **Only be removed from the GHE staging area 15 minutes before flight is scheduled to arrive and may be positioned outside of the aircraft parking area.** G.S.E. will not move towards an aircraft until the aircraft has come to a complete stop, chocks are positioned, engines shut down, anti-collision beacons switched off, and if applicable, ground/ flight deck contact established.

Note- Once the aircraft has been serviced and either secured for the evening or pushed back to the taxi line for departure- **ALL GHE SHALL BE RETURNED TO THE APPROPRIATE PARKING SPOT IN THE GHE STAGING AREA!**

2.3.5 Hazards Associated With Aircraft Engines

Jet Intake

The air intake of a jet engine is powerful enough to ingest a human body. Even at a distance, the jet engine suction is strong enough to devour loose debris e.g. rags, bolts, paper, stones, catering foils, plastic cups and bags. All these will damage the jet engine.

Thrust Reversers

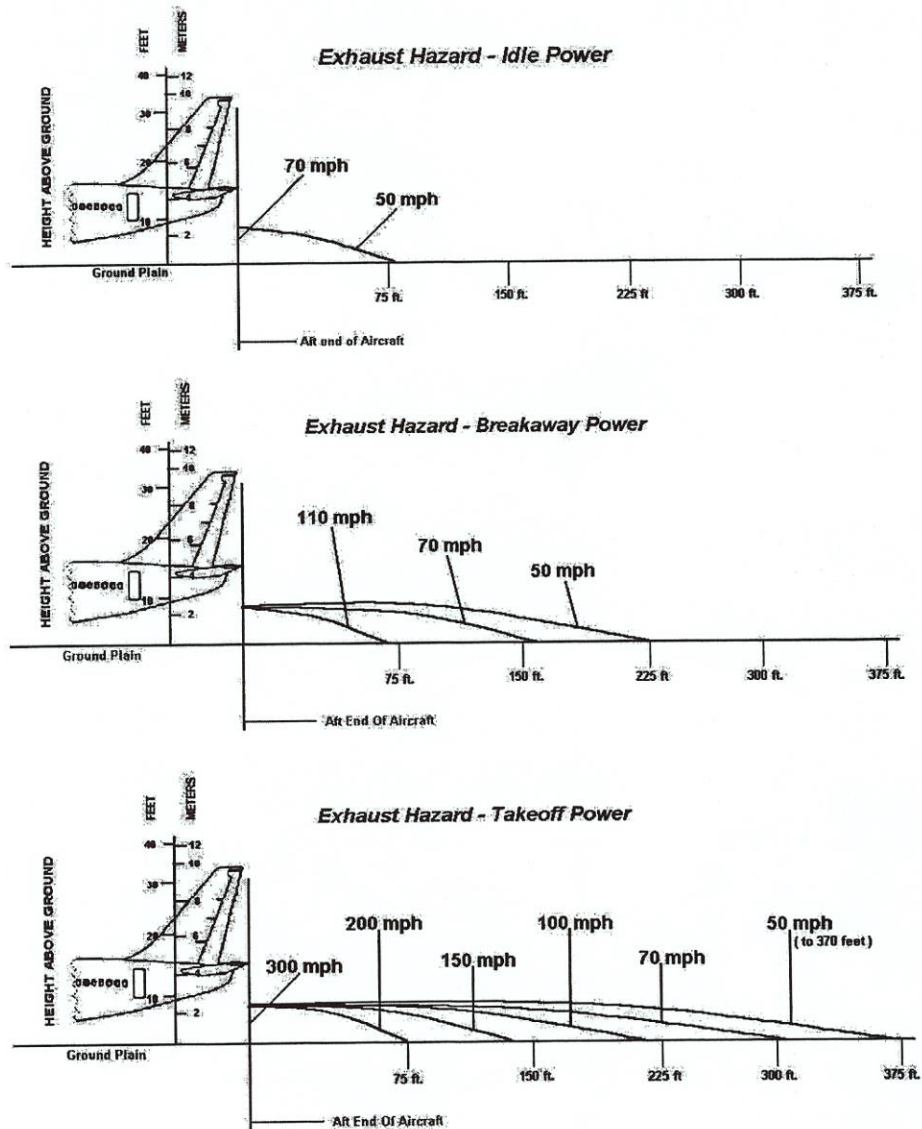
The thrust reversers are movable mechanical parts of the jet engine, which reverses the exhaust gas direction during landing to provide a braking effect. In some operations, they are used to reverse aircraft on departure (power back). When operated, they may extend or retract from the rear of the engine at a rate of approximately 2 meters per second. Anyone standing behind the engine and unaware of the thrust-reverse operation may be severely injured.

Jet Exhaust

Temperatures of the exhaust can severely burn the skin of a person standing too close. The jet blast can exceed 100 mph and is capable of moving or toppling heavy persons or equipment.

Jet Blast

The following diagrams point out why it is so important to use extreme caution when near a jet aircraft that has its engines running. The degree of hazard is dependent on the engine power setting and the distance behind the engine exhaust.



2.3.6 Propeller-Driven Aircraft and Helicopters

Staff members normally involved with the handling of jet aircraft is extremely susceptible to forgetting the inherent dangers of propeller-driven aircraft and helicopter rotors. Propellers and rotors will always be a potential hazard as they operate at head and chest level. Always approach from the front where you can see and be seen by the pilot.

NOTE- Never walk through or close to aircraft propellers or helicopter rotors, even when they are stationary, because there is no way of telling when they may begin to rotate.

2.3.7 Aerials and other Protrusions

To prevent personal injury from radio aerials, drain masts or ram-air turbines, elevator flaps and ailerons, avoid walking under the fuselage of an aircraft. In addition, the drain masts on certain aircraft heats up in flight and may be extremely hot on arrival.

2.3.8 Aircraft Doors

When dealing with aircraft doors the following rules shall apply:

- **NEVER attempt to operate any aircraft door unless you have been trained to do so;**
- When opening or closing passenger/catering doors carry out the correct procedure according to aircraft type. Ensure that the emergency chute is disengaged before opening doors; failure to do so could result in the door powering itself open (300+psi) causing injury or death of the person attempting to open the door;
- NEVER remove passenger/access steps from the open door of an aircraft unless the door SAFETY STRAP is fastened and the cabin crew is aware that the steps are being removed;
- Watch out for any passengers, in particular elderly passengers and children, who may inadvertently wander around or under an aircraft during boarding or disembarkation. Also ensure that during transit stops passengers who remain on board do not disembark and wander around the parking apron;
- REMEMBER -The safety of the aircraft is dependent, to a great extent, on the serviceability of the stall warning probes. To ensure safety of the aircraft REPORT to the Duty Engineer or the Aircraft Captain, any contact made with the Stall Warning probes by Passenger/Access Steps, Air Jetties, Catering Vehicles, etc. however minor.

2.3.9 Hold Loading

When handling damaged packages that have a restricted articles label attached, the following general precautions should be taken:

- Do not allow the contents of the package, to come in contact with any part of the body;
- Do not inhale any vapour or fumes;
- Guard against fire;
- Never load a damaged package or one suspected of being damaged, into an aircraft;
- Report all damage to your supervisor;

- Do not remove damaged radioactive packages without authorization due to possible contamination;
- On all aircraft strict precautions must be taken to ensure the serviceability of hold doors and locking mechanisms;
- Open hold doors with caution, carefully securing them in the open position: DO NOT throw them open; undue care could result in damage to the locking mechanisms and possible malfunctioning of the mechanism. Malfunctioning could also cause injury to persons and damage to equipment or load entering or leaving the hold;
- When closing hold doors, staff involved must ensure that all doors are correctly seated before the locking mechanism is activated;
- The integrity of aircraft structure and components may be adversely affected by spillage of powders or liquids in the aircraft holds. Report any spillage found in aircraft holds, as a matter of urgency, to either the Duty Engineer or the aircraft Captain;
- Extra care must be taken when handling cargo carrying a restricted articles label. Damaged packages could be hazardous to your safety. Damage to metal floors and sills of aircraft holds can produce jagged edges that are capable of damaging baggage/ cargo and can injure you. Report such jagged edges to the duty engineer or aircraft captain in order that repairs can be effected;
- **When reversing vehicle on the airside, always ensure adequate clearance and usage of a guide;**
- Always ensure that the sides of empty containers are locked into position;

2.3.10 Catering

The following guidelines should be followed for a safe operation:

- Check the security of the access equipment fitted to the elevating platform and the condition of the forward platform protective padding of your vehicle before use on the aircraft;
- **ALWAYS -ensure that the safety rails are in the correct position for the aircraft to be serviced;**
- **Before elevating platform is raised ensure back door of truck is properly secured to prevent personnel or items from falling during lift operations;**
- When loading or unloading beverage containers, always ensure that the lids of these containers are securely locked in place before lifting and removing them from their stowage's;
- Fit any protective device, e.g. protection pad, engine cover as soon as the door is opened. Also ensure that they are removed and stowed before closing the aircraft door.

2.4 Apron/Ramp Standard Operating procedures

The following Standard Operating Procedures in Section 2.4 are provided to increase safe practices and define the minimum acceptable standard on our airports. The CIAA has initiated a random audit program and will be monitoring compliance with recommended practices. Airline Operators and Ground Handling Companies will receive courtesy reports of such audits as well as the Airport Safety Office and CEO. The purpose of the audit program is to obviously monitor compliance but more importantly identify trends that can identify potential hazards and areas for further training as well as assist the Safety Office in building performance goals and targets which can be included in later versions of this manual.

2.4.1 Aircraft Chocking

Aircraft chocks are used to prevent the movement of an aircraft whilst on the ground. The method used for chocking will vary depending upon the aircraft type and the requirements of individual airline operators. The following procedures are the CIAA minimum requirements. In adverse weather conditions, particularly periods of high winds, the chocking procedures will change and high wind procedures should be followed.

Aircraft Arrival

1. Prior to aircraft arrival you must ensure that you have the correct number of chocks available and that you are positioned behind the aircraft stop line;
2. **All engines must be spooled down and the anti-collision lights turned off before approaching the aircraft and starting the chocking process;**
3. Multi-engine propeller driven aircraft are normally to be chocked at the nose wheel by placing one chock forward and one aft of the nose wheel. Single engine propeller driven aircraft should be chocked fore and aft of the main wheels;
4. All jet aircraft are to be chocked fore and aft of the outer main wheels. Always approach aircraft from the head of the stand and where possible avoid approaching from the side;
5. **When placing the chock in position leave a 1" gap between chock and tire for ease of removal. Never place your hand between the chocks and the tire;**
6. Once the chocks are in place, stand in clear view of the flight deck and use the appropriate recognized hand signal to confirm 'chocks in' by placing both hands above the head, fists clenched with thumbs extended inwards.

Aircraft departure-Pushback

1. Chocks should only be removed at the request of the aircraft commander;
2. Ensure that all chocks are removed before pushback commences. If a chock is found to be stuck it may be removed by tapping with a spare chock or by easing the aircraft off of the chock after the aircraft brakes have been released using the tug and tow bar. If a chock still cannot be removed request the advice of the Crew Chief;
3. Chocks must be returned to their designated storage area.

Free Standing Aircraft

1. Chocks should only be removed at the request of the Crew Chief;
2. One chock should normally remain forward of the nose wheel until the engine start sequence has been completed and the 'chocks away' signal is received from the flight deck. Single engine propeller driven aircraft should remain chocked forward of the main wheels until the 'chocks away' signal is received from the flight deck;
3. The Crew Chief will return the 'chocks away' signal by placing both hands above the head; fists clenched with thumbs extended outwards as part of his sign off procedure;

Note- After removal chocks must be returned to their designated storage area.

2.4.2 Aircraft Engine Ground Runs and use of Auxiliary Power Units

For the purpose of this instruction, an engine ground run is defined as any engine start-up not associated with a planned aircraft departure. The ORIA and CKIA ATC Units are responsible for granting permission for ground running of all aircraft engines on the aerodromes. This permission must be obtained in advance from the Air Traffic Control Tower. Each individual operator is responsible to all other users of the aerodrome for the control of blast, fumes and ground noise associated with this process. ATC can be reached at **ORIA on 345-945-1822** or on radio frequency **120.20**, or at **CKIA on 345-948-1543** or on radio frequency 118.40. The following details must be provided to ATC when seeking permission to carry out an engine run:

- Airline/ Operator name
- Aircraft type and registration
- Requested location for engine run
- Planned start time
- Expected duration
- Number of engines to be run simultaneously
- Level of engine power to be used
- Type of maintenance/check
- Why the engine run is required

Aircraft Parked on Stands

On stands in cul-de-sacs and other selected stands, engine ground runs will be **limited to check-starts and idle power**. For checks requiring the use of greater power settings it will be necessary to move the aircraft to **a more suitable location**. The aircraft must be positioned correctly on the stand in such a way that engine running will not harm persons or cause damage to aircraft, buildings, installations, vehicles or equipment in the vicinity. All apron equipment must be placed at a safe distance from the aircraft. Where applicable, the rear of stand road must be closed, to safeguard vehicular traffic, before any approved engine run is permitted. The aircraft anti-collision beacon(s) must be switched on before engines are started and must remain on for the duration of the ground run.

The engineer in charge of the ground run must ensure that the aircraft wheels are safely chocked and that the aircraft cannot move forward under any circumstances. Ground running must not take place when passengers are being embarked/ disembarked on any adjacent or opposite stands, except when such passengers are using an air bridge. A trained member of airline or handling staff is to be positioned on the stand in verbal contact with the flight deck. He/she will communicate by R/T or interphone with the flight deck to ensure that the engine(s) are shut down if persons or vehicles move into the danger area in front of, behind or in the vicinity of a live engine.

Aircraft in Other Areas

If engine ground running is approved to be carried out in any other location, it is the responsibility of the engineer in charge to ensure that the area behind the aircraft, which could be subjected to blast, is clear of persons, vehicles and equipment and that the ground is firm and free from loose tarmac, stones and other materials. The area immediately in front of the engine intake(s) must also be clear. A look out must be provided. During all ground running of engines, **other than in the maintenance area, taxiway or runway a fire watch with appropriate extinguisher and a listening watch with a radio** in constant contact with ATC must be maintained during the run.

NOTE- Any variation to the details given above must be the subject of a further permission.

Auxiliary Power Units

Aircraft APUs generate high levels of noise and significant fumes which can cause disturbance to those on nearby aprons, in buildings and in residential areas. The noise of an APU may mask the noise of an approaching vehicle, thus endangering staff. Airlines and handlers are to ensure that APUs are used for the absolute minimum time necessary to meet operational needs. APUs are not to be used as a substitute for either FEGP or GPUs.

2.4.3 Aircraft Push-Back

This procedure describes the pushback operation in which an aircraft is pushed backwards from its parking gate by a tug or tow tractor, to a position on the taxiway line where it can safely move off under its own power. In order to increase the efficiency of departures from the commercial apron ORIA ATC has agreed to the policy that once aircrew has **sealed the aircraft** and **attained final numbers** they can request a “push and start”. At that time permission is granted to **aircrews on a “first come, first served (FIFO) basis”** to push aircraft back and start engines. As pushback commences, **the wing walkers shall walk forward to the driving lane and ensure traffic is stopped in all directions, including any aircraft that may be travelling in the apron taxi lane before signalling for the movement of the aircraft.** As the aircraft moves back and each wing clears the driving lane the wing walkers will respectively move with that wing. Before disconnecting the tow tractor **ensure aircraft nose wheel is properly centered on taxiway line** to prevent wing from entering vehicular access lane while aircraft is turning.

Note- Irrespective of any ATC clearance or information given to you by the crew of the aircraft, while you are pushing or towing an aircraft, you are responsible for avoiding collisions with other aircraft, vehicles, buildings and obstructions.

This entire evolution must be done safely and with minimum delay in order not to interfere with any other aircraft ready to depart. Here are a few safety guidelines to be followed:

- ALWAYS use the correct marshalling signals as outlined in **Appendix A1**;
- Ensure that ground to air communication is established;
- Disconnect all ground equipment before towing;
- DO NOT apply the tractor brakes violently;
- DO NOT attempt to push/tow the aircraft before making sure that the bypass pin is in place; and
- Ensure that proper wands are being used at all times for both day and night marshalling and wing walking.

Selection of Tug and Tow-bar and Bypass pin

- First select the correct bypass pin;
- Bypass pins are machined to fit exactly in the systems of specific aircraft and only the correct pin can be used;
- Failure to use the correct bypass pin or any pin at all may result in damage to the aircraft and/or tow-bar and could endanger the pushback crew;
- Also remember to only use a pin that is marked as serviceable;

- Select the correct tow-bar. All tow-bars are designed to fit a range of particular aircraft types and are labeled accordingly, and if you are unsure of the suitability of a particular tow-bar you should consult your supervisor;
- Failure to use the correct tow-bar may result in damage to the aircraft;
- Select the correct tug;
- Carry out a full pre-trip inspection of both tug and tow-bar before use;
- Tow-bars should always be pulled behind the tug when driving to and from the aircraft, never pushed.

Arrival at the aircraft

- On approaching the aircraft the tug driver should carry out a **brake check** (at least 10m away from the aircraft), before lining up with the aircraft nose gear and stopping at a suitable distance from the aircraft to allow for tow bar connection;
- The tow-bar should now be uncoupled from the rear of the tug and aligned with the connection point of the aircraft nose leg;
- The steering bypass pin (if required) should now be fitted and permission sought from the flight deck crew for tow bar connection;
- The tow-bar can then be safely connected to the aircraft;
- If the tow-bar has an adjustable wheel carriage, this should be used to minimize the need to physically lift the bar;
- To connect some tow-bars may require the assistance of one or more other members of staff;
- You should always use correct lifting techniques, and be prepared to seek assistance when connecting or disconnecting tow-bars to prevent personal injury;
- When the tow-bar (and bypass pin if required) is correctly connected to the aircraft the tug can be driven very slowly forward to connect to the eye of the tow-bar;
- A guide person (usually the headset operative) is required for this operation, using recognized hand signals;
- This operation must be carried out under complete control, as any excess force used during the coupling of tug and bar could result in damage to the aircraft or tow-bar;
- If the tug is to be left unattended after it has been connected to the aircraft, the engine should be switched off and a wheel chocked for safety.

The commencement of the pushback.

- Prior to the commencement of the pushback you, the driver, will have carried out the pre-departure walk round as detailed earlier in these procedures and liaised with the headset operative to ascertain the type of pushback to be carried out;
- Now remove the wheel chock securing the tug (if applicable), and When seated safely in the tug check that Neutral or Park have been selected and the parking brake is applied before starting the engine;
- Wait for the 'brakes released' signal from the headset operative (as detailed in the section on hand signals- **Appendix A1**).
- When the 'brakes released' signal is received, select the required direction of travel and the correct gear (for most pushback's first gear will suffice), and while holding the tug on the foot brake, release the parking brake and then after a final visual check to confirm that it is safe to move off, slowly release the foot brake using the power of the engine tick over to gently take up any slack between tug/bar and aircraft;
- Using the throttle, slowly increase the power to set the speed of the pushback to a pace where the headset operative can comfortably hold position with the tug and aircraft without having to either run or dawdle;
- Where possible, the headset operative should always walk on the inside of a turn and he must remain in full view of both the flight deck and the tug driver throughout the pushback;
- You must remain fully aware of the position of other members of the pushback team at all times and be prepared to stop if you lose sight of any team member.

Continuation of the pushback

- The pushback should continue at a safe walking pace, and any changes of direction (turns) should be kept to the minimum necessary to achieve the final positioning of the aircraft at the release point. You should not attempt to change gear during the pushback maneuver;
- When turning the aircraft you must be careful not to exceed the limits marked on the nose leg or fuselage as to do so will result in severe damage to the aircraft's steering mechanism;
- The red line on the wheel bay doors shows the limit of turn allowable during a normal pushback operation, to exceed these lines without 'breaking' the steering scissors will result in damage to the aircraft steering mechanism even with a bypass pin in place.

Completion of the pushback

- As you come to the final few meters of the push back, you should endeavor to align the tug and tow[bar with the aircraft fuselage, this will make the disconnection process easier and far safer;
- You should slowly reduce the throttle power to tick over, and then gently apply the foot brake to finally stop the aircraft. Only when you are sure that a complete stop has been reached and you have selected neutral gear should you give the headset operative the 'brakes set' signal;
- The headset operative will signal confirmation when the aircraft brakes are 'set' and move in to lower the tow-bar wheel carriage. When the wheels are supporting the tow-bar the headset operative will remove the tow pin (this may require a slight forward or rearward movement of the tug to facilitate) to allow the tug to move clear of the aircraft;
- The tug should pull away from the tow bar eye (to a distance of at least 5m) to allow the bar to be safely removed from the aircraft
- The headset operative can now disconnect the bar from the aircraft nose leg. If the disconnection process requires two men, the tug driver should place the tug at ninety degrees to the aircraft after pulling back from the tow-bar eye and select Neutral/Park gear, apply the park brake and then assist with the tow-bar;
- Re-couple the tow-bar to the tug and then drive to the apron edge adjacent to the aircraft and await its departure;
- When the headset operative has released the aircraft, after showing the flight deck that he has removed the steering bypass pin (if fitted) and returned to the apron you should connect the bar to the rear of the tug in readiness to return to the park when the aircraft taxies away;
- The disconnection of tug and bar from the aircraft is a 'safety critical' time requiring a high level of concentration by all concerned;
- Under no circumstances should any bypass pin be removed before the tow-bar is disconnected and clear of the aircraft.

2.4.4 Use of Ground Support/ Handling Equipment on the Aprons

Before operating a motorized vehicle on the airside, the vehicle operator must first be familiar with the regulations and procedures in the Aerodrome Vehicle Operators Manual. This manual is part of the Aerodrome Manual and contains all the necessary requirements for obtaining the aerodrome vehicle operating permit (AVOP) for safe operation of vehicles on the airside. Once you have taken the appropriate steps to possess this permit it is then possible to have the necessary endorsements added to the back of this permit to safely operate specific Ground Support/Handling Equipment. The following steps are to be taken while using this equipment on the Apron/Ramps:

Pre-operational Inspection

All equipment must have proof of a pre-operational inspection having been performed by operators prior to each use. Operator initials on a sign-off sheet will be attached to equipment in a weatherproof holder. Older reports can be maintained in the organizations office, either must be accessible to inspectors. A monthly sheet will suffice and should be maintained after completion in each organizations maintenance files along with proof of any other periodic maintenance or calibration that is required for proper operation of equipment. Minimum periodic maintenance requirements should at least meet manufacturer specified intervals and procedures.

2.4.5 Use of Ground Power Units

Constantly running GPU's can cause high noise levels on the apron, are an additional obstruction to free movement around a parked aircraft and, if poorly maintained, may deposit oil spillage on the stand. Where there is no alternative to the use of GPU's they should be promptly shut down when power is no longer required and returned to the Ground Support/Handling equipment parking area. If purchasing new GPU's, airlines and handling agents are urged to make low working noise levels a prime requirement in the selection process. The following procedures should be followed for connection and disconnection of GPU to aircraft:

Connecting External Power

1. Open the EXTERNAL ACCESS PANEL door.
2. Push the GROUND POWER CONNECTOR firmly into the aircraft (plug) receptacle.
3. Switch ground power supply to ON only after following the instructions appropriate to the aircraft it is being used on and the ground power cart.

Disconnecting External Power

1. Signal or communicate to the Flight Crew that external power is being disconnected.
2. Ensure the ground power unit is turned OFF before disconnecting the GROUND POWER CONNECTOR CORD from the aircraft.
3. Remove the GROUND POWER CONNECTOR from the aircraft (plug) receptacle.
4. Close the EXTERNAL ACCESS PANEL door.

2.4.6 Use of Lavatory Equipment

The Lavatory Service is hazardous impacting personal health and safety. Protective clothing is mandatory when undertaking this service. Follow aircraft manufacturer's procedures written on the aircraft lavatory service panel for emptying the effluent and refilling the flushing liquid. Most aircraft require the use of a lavatory service plug removal tool. The plug must be removed and the hose connected before pulling the release mechanism. Do not overfill with flushing agent as this may cause damage to the aircraft lavatory floor area. After completing the service, clean down the lavatory servicing equipment, checking flushing liquid levels and all discharge and refill hoses have been correctly replaced to avoid damage. Dispose of all gloves and other protection equipment in the appropriate bins immediately

2.4.7 Adverse weather conditions precautions**Strong Winds**

Strong wind conditions can give rise to hazards from wind-blown items and in very strong winds there is a possibility of structural damage to aircraft. The principal threats are of **engine ingestion** or **airframe damage** to aircraft on stands, taxiways and runways; the severity of the threat of obstruction of a runway to an aircraft taking off or landing cannot be stated too strongly. There is also a danger of personal injury for apron staff and damage to vehicles and equipment. When a strong wind warning has been issued, or when strong wind conditions are experienced, the following actions must be taken by airlines, handling agents, operators and staff:

- Extra vigilance must be exercised to prevent accumulations of FOD and to ensure that all loose items are removed or safely stowed (plastic bags and sheeting are a particular threat to engine ingestion in all areas of the airfield.). Action must be taken to ensure that covers are securely fastened on all waste containers.
- All ground equipment and vehicles on the aprons, not in immediate use, must be parked in the areas provided with parking brakes applied. Equipment in use on stands must be secured with parking

brakes set. Equipment without parking brakes must be chocked or removed.

- Large items of equipment that are vulnerable to winds, such as empty freight containers, must be secured to a fixed object or removed to a protected area.
- All loose items in contractor's work areas must be secured or removed.
- Staff observing any obstruction or equipment moving in the wind, irrespective of ownership, must take action to secure it.
- Handling staff should take special precautions when towing aircraft and should refer to the company's operations manual for specific guidance.
- Aircraft rubbish and equipment that is normally temporarily placed on the stand, such as bagged waste, blankets or headsets, must be removed or securely stored immediately as it is removed from the aircraft.
- As wind speeds rise, baggage containers, unsecured equipment, large debris (mostly from the aprons), can be blown across the Movement Area causing a damage hazard to aircraft in all areas. There is also a risk of personal injury and damage to vehicles and equipment by 'flying' debris.
- It is not always feasible or necessary to position a large aircraft into wind at aerodromes. Where there is a requirement for aircraft to be positioned into wind and/ or picketed, this should be the responsibility of the airline, agent or owner concerned. Aerodrome operators may assist by the allocation of suitable stands and other airfield areas for this purpose.
- As wind speeds rise, there is a requirement for airline managers, agents or owners concerned to ensure that wind-milling propellers and rotors are feathered and/or secured.
- Airline operators are responsible for issuing instructions on the limiting wind speed for the towing of their aircraft.

Lightning-

The CIAA has implement the industry accepted “Flash to Bang” method for lightning detection in order to minimize the risk to all operations on the airports.

“By counting the seconds between the flash of the lightning and the bang of the thunder you can estimate the distance between you and the lightning strike”

| If thunder is heard: | The lightning is approximately; |
|---------------------------------|--------------------------------------------------|
| 5 seconds after a flash | 1.5 km (1 mile) away |
| <i>10 seconds after a flash</i> | 3 km (2 miles) away |
| 15 seconds after a flash | 5 km (3 miles) away- Red Alert |
| <i>20 seconds after a flash</i> | 6.5 km (4 miles) away |
| 25 seconds after a flash | 8 km (5 miles) away- Yellow (Amber) Alert |

Actions:

- 1. CINWS/Air Traffic Control (ATC)** notify Airport Operations Command Centre (AOCC) when thunderstorms/lightning detected approaching within **5 miles** of aerodrome. AOCC will pass **Yellow (Amber) Alert** via text message and all CIAA radio frequencies.
- 2. CINWS/Air Traffic Control (ATC)** notify AOCC when thunderstorm/lightning approaching within **3 miles** of aerodrome. AOCC will pass **Red Alert** via text message and all CIAA radio frequencies. It is expected that all operators and employees are to review their own company policies on this hazard and curtail certain outdoor activities.
- 3. CINWS/ATC/AOO/ASO or any observer** will notify AOCC when thunderstorm/lightning appears to be within **1 mile** of Aerodrome. **AOCC will pass message** to advise that **“All apron and outdoor airport operations should be discontinued until further notice”**, via text message and all CIAA radio frequencies. **It is expected that where possible, all operators and employees should find shelter inside of a building until the “all clear” is given.**
- 4. CINWS/ATC/AOO/ASO or any observer** will notify ASRC when thunderstorm/lightning has moved beyond 3 miles of the aerodrome. AOCC will pass the “All Clear” and return to normal operations, via text message and all CIAA radio frequencies.

Note- A map is provided on the following page for best forecasting results at ORIA.

2.5 Foreign Object Debris (FOD)

Throwaway items are inherently dangerous. In the working environment of an apron operation, they contribute to the damage or potential damage to aircraft, ground equipment and perhaps even endanger life. Foreign material such as mud and gravel can seriously damage aircraft engines. Vehicle operators, therefore, should ensure that the surfaces of movement areas are kept clean by checking that wheels and tires are clean before they enter these areas. If foreign materials are deposited on these surfaces, operators shall have these materials removed immediately. The following rules apply at ORIA Aerodrome at all times.



2.5.1 FOD BINS

ALL FOD will be deposited in appropriate FOD bins located near to aircraft operating areas. No person shall:

- Throw, deposit or knowingly leave on a road, apron or maneuvering area of an airport, any material that may cause damage to any aircraft, vehicle or person;
- Throw, deposit or knowingly leave any form of trash or garbage at an airport except in a container provided for that purpose. Segregating this debris will allow for later analysis of risk sources in the FOD program.

Note- At no time shall garbage such as meals, cleaning materials, or sanitary products be thrown in FOD bins! Garbage containers are provided throughout the facility for the disposal of these items.

2.5.2 Vehicle Cab Clean-up

It is essential that the cab of the vehicle is clean to give maximum visibility. Dirt in a vehicle can easily become that additional hazard which will result in an accident. Dirt in a vehicle cab can be blown by either normal winds or jet blasts, resulting in impaired visibility, irritation and blindness.

2.5.3 Apron Area Clean-Up

Items allowed to fall onto the apron are often the cause of damage to aircraft tires, thrust reversers, engine etc., consequently, risking the safety of the aircraft. Examples of such items are:

- stones
- oil cans or bottles
- nails, nuts, and bolts
- splintered wood from pallets or load spreaders
- metal tie bands, wires
- plastic bags or sheeting
- tie-down fittings
- suitcase wheels, handles, locks and straps
- catering items such as knives, forks, cups and foil containers
- Baggage tags

2.5.4 Food Refuse Clean-Up

A major problem to flight safety is what is commonly known as a "bird strike". In many cases the bird strike occurs on take-off or landing and may have been a direct result of an untidy apron operation. Nothing attracts birds more than a source of easy food. Aircraft cabin refuse and aircraft catering trucks provide an easy source of food if they are not left clean and secure.

2.5.5 Aerodrome FOD Walks

On a **quarterly basis** the Aerodrome Safety Office will organize and carryout a FOD walk of all airside areas. Each organization working airside will be contacted and assigned to a specific area and at the appropriate time will gather as many volunteers as possible and assemble in a straight line to sweep the area. All personnel should try to move at a pace that will allow each individual to move forward at the same time while focusing on the ground immediately in front of them. The purpose of the FOD walk is to remove all materials that are not growing out of the ground. All material will be placed in trash bags and turned in to the Safety Office for further analysis at completion of the FOD walk.

2.6 Dangerous Goods

All dangerous goods carried by air must be packaged in accordance with ICAO and IATA Dangerous Goods Regulations. This means that containers of dangerous goods are not likely to rupture or leak during normal handling. Due to breakage or mishandling spillage can occur. Without endangering yourself, find out the nature of the substances, by looking at its label or the manifest if possible. In the case of fuel or any other combustible call the **ARFFS @ 949-2276**, then notify the **Airport Operations Command Centre (AOCC) @ 244-5835 or 1-800-534-AOCC (2622)** and provide the following information:

- Your location;
- The name of the substance;
- The quantity spilt;
- The label on the package.

2.7 Spill Containment and Clean-up Procedures

Report all spills to the **AOCC @ 244-5835 or 1-800-534-AOCC (2622)** as soon as possible in order to ensure proper clean-up. The chart below can be used in reporting the spill and will assist in ensuring the proper instructions are given for cleaning up the spill:

Spill Containment Chart

| Category | Size | Response | Treatment Materials |
|----------|--------------------|----------------------------------|----------------------------------|
| Small | Up to 300 cc | Chemical Treatment or Absorption | Absorption or Spill Response Kit |
| Medium | 300 cc- 5 litres | Absorption | Spill Response Kit |
| Large | More than 5 litres | Call ARCC @ 244-5835 | Outside Help |

The following steps should be followed in the event of a spill:

1. Stop the Spill

- **Stop the source of the spill** (if safe to do so), appropriate to the chemical type (refer to Material Safety Data Sheet). This will reduce the level of contamination and impact on the environment;
- Immediately alert area occupants and supervisor, and evacuate the area if necessary;
- If there is a fire immediately call **ARFFS @ 949-2276**;
- Attend to any people who may be contaminated. Contaminated clothing must be removed immediately and the skin flushed with water for no less than fifteen minutes.

2. Contain the Spill

- Control the flow and contain the spill appropriate to the chemical type (refer to MSDS). Prevent the spill from entering the storm-water system by isolating or blocking of all drain inlets.
- If a volatile, flammable material is spilled, immediately warn everyone, control sources of ignition and ventilate the area.
- Don personal protective equipment, as appropriate to the hazards (refer to MSDS on the safety board).
- Determine the need for respiratory protection. The use of a respirator or self-contained breathing apparatus requires specialized training and medical surveillance and should only be used by trained personnel. If there is any question whether or not fumes are caustic, back off from the area to a safe distance that will still allow positive control of the area.

Note- Any spillage must be cleaned up immediately. Agencies will be held accountable for “spills”. All spills must be reported to the **Airport Operations Command Centre at 244-5835 or 1-800-534-AOCC (2622)**, so the appropriate steps may be taken to commence the “Clean-Up Process”.

2.8 Tool Control

Tools used in and around aircraft and aircraft engines must be accounted for. There are numerous ways to accomplish this including shadow boxing, bar coding, special canvass layouts with tool pockets, and even consolidated tool kits. At airside facilities all tools will be etched with the organizations code so as to be easily identifiable. It is the responsibility of each organization to provide the airport Safety Office with a letter verifying compliance with this policy and listing the appropriate organization code used. At the end of any maintenance action all tools must be accounted for. In the case of a missing tool the Chief Safety Management Officer must be notified at once @ 345-916-5317.

2.9 Fire Safety on the Apron

2.9.1 Fire Prevention

Fire prevention is easier than firefighting. The following are guidelines designed to minimize fire hazards on the aprons:

- Permission to transport or store flammable materials on the airport property, in particularly the apron, requires prior permission from the Chief Airport Operations Officer, or his designate.
- No person shall operate an acetylene torch, electric arc or similar flame or spark-producing device on any active portion of the airport without a **Hot Works Permit approved by the Safety Office** as outlined in **Appendix A6**
- Fire extinguishers on the Apron must be serviceable, checked monthly and clearly tagged showing date of last inspection;
- Garbage can be a source of fuel and should not be allowed to accumulate, but should be regularly disposed of into designated bins with lids or other approved containers. These should be emptied on a regular basis;
- Know the location of the fire-fighting equipment, fire alarms and telephones that can be used in an emergency;
- Know the types of fire-fighting equipment available, their location and how to use them;
- Report faults and discrepancies in the fire-fighting equipment immediately to your supervisor;
- Know how to call the **ARFFS, Telephone- 949-2276**
- Smoking is prohibited anywhere on the airside.

2.9.2 Aircraft Fire

In the event of an aircraft fire, the turnaround coordinator should immediately alert the captain/crew or personnel on board so that an orderly emergency evacuation can be carried out as necessary. Then notify the **ARFFS @ 949-2276 and the AOCC @ 244-5835 or 1-800-534-AOCC (2622)**. In the meantime a designated member of the ground handling crew should use the appropriate fire extinguisher to attempt to contain the fire.

2.9.3 Wheel Fire

When responding to a wheel fire, first call the **ARFFS @ 949-2276 and the AOCC @ 244-5835 or 1-800-534-AOCC (2622)**. You can approach wheel with caution from the front or rear using the appropriate fire extinguisher, never approach from the side!

2.9.4 Smoke and Fire Warnings in Aircraft Holds

When an aircraft arrives with suspected fire or smoke warning in the hold, a full passenger evacuation should be carried out before any hold door is opened. Hold-doors must not be opened, except by a firefighting crew with the necessary equipment. Failure to obey this instruction would result in an inrush of air into the hold, which could cause the fire to erupt with explosive forces causing disastrous results if passengers and crew are still onboard the aircraft.

2.9.5 Fire in Unattended Aircraft

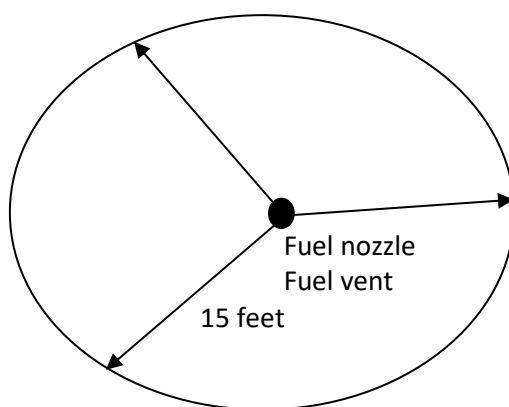
When a fire is discovered in an unattended aircraft, immediate action should be taken to extinguish it, either with fire extinguishers available in the aircraft or those situated on the apron. Notify the **ARFFS @ 949-2276 and AOCC @244-5835 or 1-800-534-AOCC (2622)**. Where it is not possible to extinguish the fire with the available equipment, reduce the rate of fire spread by closing the doors and hatches, etc.

2.10 Aircraft Fuelling Procedures

As aircraft ground handling activities take place at the same time as aircraft fuelling, these activities must be coordinated to ensure the safety and integrity of the operation. The position of all fuel trucks next to aircraft during fuelling is very critical and should follow all company safety regulations. Special attention must be made to ensure a clear means of egress is maintained at all times.

2.10.1 Fuel Safety Zones

Due to the fire hazard associated with fuel vapours all personnel must be cautioned to ensure that items and processes such as; cell phones, portable radios, pagers, matches, open flames, welding, and equipment performing aircraft servicing functions are kept out of the fuelling safety zone. **It is the responsibility of the fuelling personnel to establish and maintain a fuelling safety zone based on aircraft type and safe practices and shall be not less than 15 feet circular from the point of fuelling. Cones should be used to outline the fuel safety zone.** The fuelling zone is defined as a circular area around the point of contact between the fuel source and the fuel receptacle. This fuel safety zone also applies and extends circularly from any fuel vents on same equipment. **It is the responsibility of the person(s) conducting the fuelling operation to police these areas and ensure all personnel are aware of the location and hazards associated with these zones.** The fueller will be responsible for the fuel vent on the side of aircraft they are operating on. Airline personnel or contracted service providers will be responsible for the fuel vent located on the other side of aircraft and keeping it clear. **If for any reason these zones are breached-fuel flow will be interrupted until safety zones are cleared.**



2.10.2 Fuel Spillage

In the event of a fuel spillage the following actions should take place:

- The Turnaround Coordinator should **STOP** the refuelling operation, advise the Captain, call **ARFFS @ 949-2276**, and notify the **Airport Operations Command Centre @ 244-5835 or 1-800-534-AOCC (2622)**, **the Airport Duty Officer in charge will be responsible for coordinating the clean-up of the fuel.**

- Based on the severity of the spillage and advice of fire services evacuate all persons from the immediate area.
- Mobilise all available firefighting equipment as standby protection until the arrival of the airport emergency services.
- Control the movement of unauthorized personnel and equipment into the area.
- As far as possible, restrict all activities inside and outside the spill area to reduce the risk of ignition.
- All electrical equipment in use during the fuelling operation must be switched off immediately.
- Unload the APU and shut it down. Do not start the APU until the spilled fuel is removed and there is no further risk of spilled fuel or vapours. Emergency services will make this call.
- Normal operations must not be resumed on the aircraft or any engines started before the person in charge of the emergency determines it is safe to continue.
- If fuel is spilled on any load, then such items are NOT TO BE LOADED into the aircraft.

Note- The ARFFS will remain present until the spill has been completely cleaned and all materials properly disposed of. The Airport Duty Officer in charge of the AOCC will be responsible to arrange for proper cleanup of the spill. Based on the severity of the spill and the time it takes to clean there may be a charge for ARFFS services.

2.10.3 Vehicle Safety precautions during fuelling process

During the fuelling process the following rules are to be followed relating to any Ground Handling Equipment (GHE) in the immediate area:

- 1) The engines of all unattended vehicles should be switched off;
- 2) Vehicles must not be parked under the aircraft wingtip fuel vents;
- 3) Equipment must be positioned so that the fuelling vehicle has a **clear exit route** and can be **moved away from the aircraft in a forward direction**;
- 4) A distance of 15 feet should be maintained, wherever possible, between ground support equipment and any fuelling equipment;
- 5) A marshal or ground guide shall be used when reversing towards aircraft;
- 6) **Ground Power Units must not be operated unless they are positioned 20 feet from the aircraft fuelling vents and venting points**;
- 7) The use of metal wheeled equipment in close proximity to the aircraft is prohibited;

- 8) If the bonding cable connecting the fuelling vehicle to the aircraft becomes disconnected during ground operations the fuel operator must be immediately advised;
- 9) **Under no circumstances at any time while conducting a refueling process should fuel trucks be jump-started.**

2.10.4 Fuelling/Refuelling/or Defueling of Aircraft with Passengers On Board, Embarking, or Disembarking

Fixed-Wing Aircraft

All passengers should be disembarked prior to the commencement of fuelling; however circumstances might prevail where this is deemed to be impractical. At such time the Airport Operations Command Centre (AOCC) shall be notified at **345-244-5835 or 1-800-534-AOCC (2622)** three to five minutes before fuelling starts to allow ARFFS to be notified and go to an alert status. Airlines and fuel companies are responsible for the implementation of safety procedures during the fuelling process and should comply with the following main points:

- a) **Ensure** minimum aircrew/cabin crew positions needed to safely mitigate the hazards are onboard;
- b) During the fuelling, **ensure** at least one member of the cockpit crew/maintenance team be on the flight deck and maintain two-way communications with the ground crew supervising the fuelling;
- c) Passengers **should** be warned that refuelling will take place and that they must not smoke, operate switches or otherwise produce sources of ignition;
- d) the illuminated "No smoking" signs and exit lighting **should** be switched on;
- e) If, during refuelling, the presence of fuel vapour is detected in the aircraft interior, or any other hazard arises, refuelling and all cleaning activities using electrical equipment within the aircraft **should** be stopped until conditions permit resumption;
- f) Where passengers are embarking or disembarking during refuelling their route **should** avoid areas where fuel vapours are likely to be present and this movement should be under the supervision of a responsible person from the airline or their agents."
- g) **Ensure** the most rapid and efficient evacuation of passengers from the aircraft in the event of an emergency;

- h) In the case of medical flights, **ensure** into account the ability of the patient and attendant staff to effect a rapid evacuation from the aircraft;
- i) **Ensure** the ability of those whose mobility is impaired to effect a rapid evacuation from the aircraft;
- j) **Ensure** the ground area into which passengers would evacuate is kept clear of equipment and obstacles;
- k) **Ensure** vehicles attending the aircraft do not impede access to the site by Airport Rescue and Fire Fighting Service (ARFFS) vehicles and personnel, or the egress of passengers evacuating the aircraft;

Rotary-Wing Aircraft

Passengers should not remain on the helicopter whilst fuelling is in progress with engine(s) running if the only normal exit is on the same side as the fuelling points. **Under exceptional circumstances the helicopter operator may permit this procedure given that:**

- 1) All main exits should be available for immediate use and the external area adjacent to the exits should be kept clear;
- 2) Proper notification is made to the Airport Operations Command Centre (AOCC) at **345-244-5835 or 1-800-534-2622 (AOCC)** so the ARFFS can be notified and go to an alert status;
- 3) Every effort is made to comply with the procedures listed above (a-g) where applicable.

2.11 Aircraft Stand Management and Parking

Aircraft stands shall be assigned on a non-discriminatory basis, i.e., for similar types and volumes of operations, all carriers will have equal rights of access to aircraft stands. The principle of non-discrimination does not preclude the application of stand assignment practices that will promote efficiency in operations and optimize passenger levels of service. **Any concerns towards the application of these principles should be brought to the attention of the Chief Executive Officer or the Chief Airport Operations Officer who can both be reached by calling (345) 943-7070. Standard Internal CIAA complaint process will be used to resolve the matter which includes notification of resolution to the person who initiated the complaint.**

- To permit Airport Operations, Airport Security and the Air Carriers to plan their operations, gate assignment plans shall be developed (and subsequently revised) as soon as sufficient scheduling information is available. The following steps should be used to develop an aircraft stand assignment plan:

- Prior to each schedule revision, but no later than **15 September or 01 March**, each airline will submit its new schedule to the Cayman Airways Vice President Airports Operations
- The Cayman Airways Vice President Airports Operations will prepare a Preliminary Plan applying the gate assignment criteria.
- **The Cayman Airways** Cayman Airways Vice President Airports Operations **will submit the Preliminary Plan to the Airport Facilitation Committee for review and recommendations no later than 25 Sept. or 20 Mar.** Within assignment rules and facility utilization requirements, the preliminary plan will be revised to accommodate committee recommendations.
- All stands will be made available based on first departure flights. If the last flight of the day on a stand is not the first flight out the following day, then the air carrier will be expected to tow off the stand that evening.

Air Carriers will inform the Cayman Airways Vice president Airports Operations of all schedule changes as soon as they are known. Re-assignment due to schedule changes and assignment of additional flights will be made by the Cayman Airways Vice President Airports Operations. Changes in the schedule of 15 minutes or less will not be considered new flights. **Changes by more than 15 minutes will be considered as new flights for planning purposes.**

The Maximum Aircraft Stand Occupancy Time Chart on page 31 is a table of maximum on-stand times, which represents the maximum times an aircraft may be assigned to a stand when the stand is required for other operations. These maximum on-stand times shall be considered as standards for planning purposes and as guidelines throughout the day of operations. To allow for minor variations from schedule and for push-back time, aircraft assignments to a stand will be separated by at least 15 minutes when stand availability permits. This time shall be used as a standard for facility and operational planning purposes and as a guideline throughout the day of operations.

MAXIMUM AIRCRAFT STAND OCCUPANCY TIMES

| Aircraft Seating Capacity | Originating | Terminating | Through | Turnaround |
|--------------------------------------|--------------------|--------------------|----------------|-------------------|
| Over 450 | 1:00 | :45 | :45 | 3:00 |
| 401 - 450 | 1:00 | :45 | :45 | 3:00 |
| 351 - 400 | 1:00 | :45 | :45 | 3:00 |
| 301 - 350 | 1:00 | :45 | :45 | 2:00 |
| 251 - 300 | 1:00 | :45 | :45 | 2:00 |
| 201 - 250 | 1:00 | :45 | :45 | 2:00 |
| 151 - 200 | 1:00 | :45 | :45 | 2:00 |
| 101 - 150 | :45 | :30 | :45 | 1:30 |
| 51 - 100 | :45 | :20 | :30 | 1:30 |
| 26 – 50 | :30 | :20 | :30 | 1:30 |

2.11.1 Co-ordinated Management

At Charles Kirkconnell International Airport

The Air Traffic Control Unit is responsible for separation of known traffic and providing associate operational information, including assignment of taxiway to exit runway onto the Apron. In the event of any private aircraft ATC will designate the appropriate parking arrangement, for commercial operators ATC will issue aircrew instructions to “report to marshal in site”. On departure the ATC Unit is responsible for issuing aircraft start-up and pushback clearance on the Apron. Once started ATC will give instructions for entering the runway and assign departing runway to aircrew.

At Owen Roberts International Airport Commercial Apron

A two-tier coordinated apron management service is utilized. The **first tier** is the Air Traffic Control Unit. The Air Traffic Control Unit is responsible for separation of known traffic and providing associate operational information, including assignment of taxiway to exit runway onto the Apron. On departure the ATC Unit is responsible via radio link on **VHF Frequency 120.2** for issuing aircraft start-up and pushback clearance on the Aprons. The **second tier** is left to the responsibility of the individual air carrier and starts when the aircraft is less than a mile from the airport. At this time the pilot contacts the Air Carrier Station Manager for their respective organization and reports arrival stats by either radio or by SITA message. **Based on arrival time and turnaround requirements the airlines operations department then passes this information on to their respective ground handling company as identified in the table on the next page (49) to be Cayman Airways Ramp Control, Cayman Dispatch Services or Air Agencies.** The ground handling company will liaise with Cayman Airways Ramp Control for the latest aircraft stand assignment and pass this information to the aircrew.

| <u>AIRLINES</u> | <u>GROUND HANDLERS</u> | <u>STATION MANAGER</u> | <u>FREQUENCY</u> |
|--------------------------------|-------------------------------|-----------------------------------|-------------------------|
| CAYMAN AIRWAYS GRAND CAYMAN | CAYMAN AIRWAYS | JAISON WHITTAKER | 131.20 / 129.95 |
| CAYMAN AIRWAYS CAYMAN BRAC | CAYMAN AIRWAYS | LUCILLE WALTON | 131.20 |
| SOUTHWEST AIRLINES | CAYMAN AIRWAYS | SHALICO CHRISTIAN | 131.20 / 129.95 |
| UNITED AIRLINES | CAYMAN AIRWAYS | PHILIP EBANKS | 131.20 / 129.95 |
| AMERICAN AIRLINES | CDS | NADINE JENNINGS | 131.40 |
| BRITISH AIRWAYS | CDS | MARLENE MOORE | 131.20 / 129.95 |
| WESTJET | CAYMAN AIRWAYS | JAISON WHITTAKER | 131.20 / 129.95 |
| AIR CANADA | CAYMAN AIRWAYS | DAVID STEPHENSON | 131.20 / 129.95 |
| DELTA | AIR AGENCIES | KEVIN BOLEN | 131.35 |
| JET BLUE | AIR AGENCIES | LESLIE BROWN | 131.35 |

At Owen Roberts International Airport General Aviation Apron**Ground Handling Operations**

There are several different operations which use this area and the following procedures apply to ensure these operations are conducted professionally and without interfering with each other;

- All **Private and Military aircraft** will make communication with the Fixed Based Operator Island Air for parking instructions.
- **Mosquito Research and Control Unit** aircraft will follow taxi lane into the MRCU parking and hangar area where they will be met by appropriate personnel to assist them in parking the aircraft.
- **Commercial Cargo planes** will follow taxi lane into appropriate area on the G/A ramp and will be met by appropriate personnel who will assist with the parking, unloading and turnaround of these aircraft.
- **The Royal Cayman Islands Police Service** will be met by their own personnel who will assist in the safe parking and maintenance of the aircraft.

Note- All personnel who will take part in the Handling of aircraft will be registered with the CIAA Safety Office and provide relevant proof of training/qualification as well as regular updates to ensure recurrent qualifications.

1) Aircraft Parking

Island Air shall ensure that all aircraft which will be parked on the General Aviation Ramp overnight in the area under their charge, shall be marked with a reflective traffic cone equipped with a red obstruction light, indicating:

- The aircraft closest to the driving lane (nearest to the runway);

Note- This will give any flight crew who intends to operate on the General Aviation Ramp during the hours of darkness a clear path to operate.

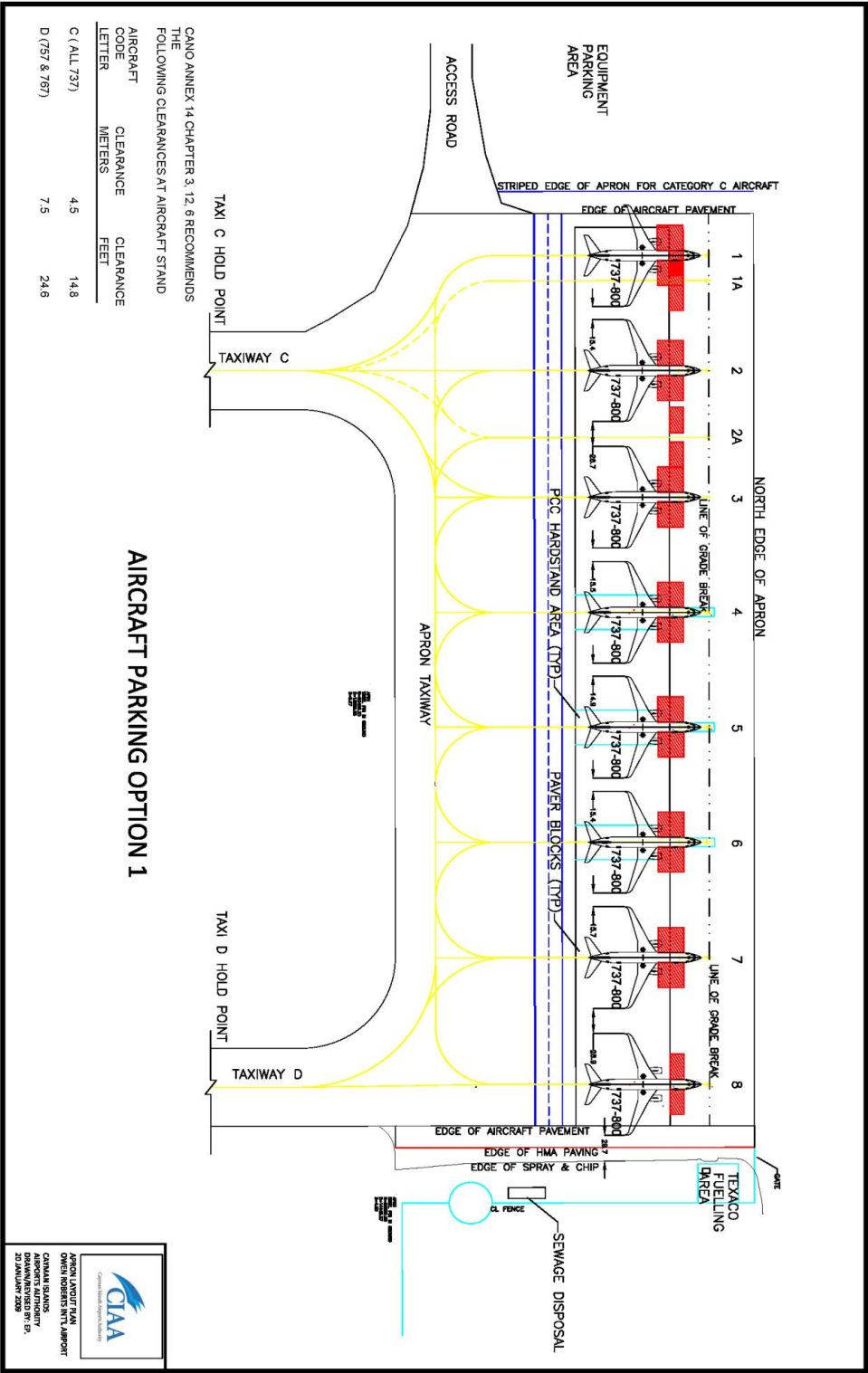
2.11.2 ORIA Apron/Ramp Control

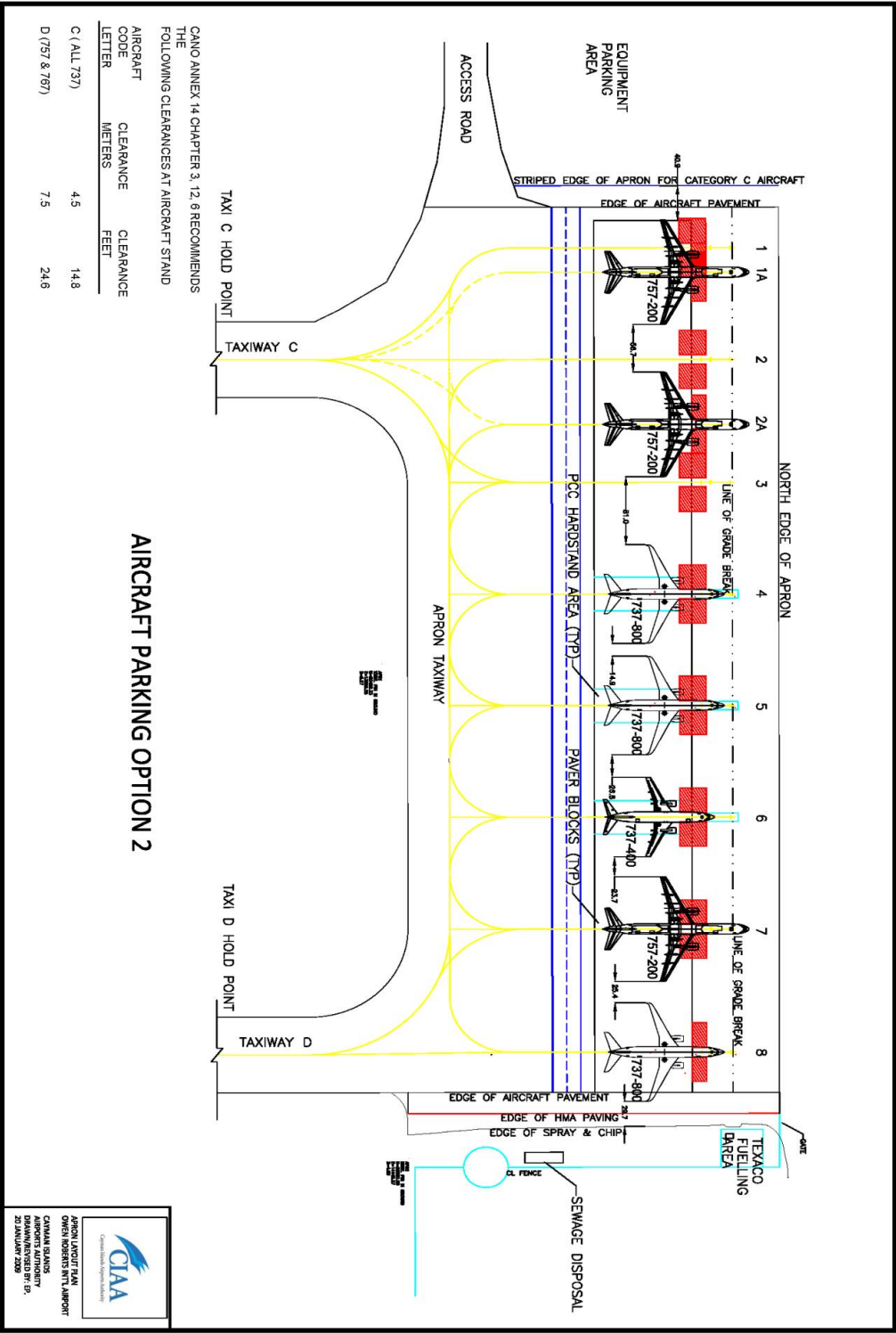
A Letter of Agreement dated 15th January 2016 between The **Cayman Islands Airports Authority** and **Cayman Airways Ltd.** to allow Cayman Airways to have jurisdiction over the ORIA commercial apron aircraft parking and stand management. Under this agreement they will provide aircraft stand allocation and dissemination of aircraft movement information (arrival times, landings and take-offs) for all carriers on a daily basis with updates throughout the day. However, it is the responsibility of each air carrier to coordinate with Cayman Airways Ramp Control to provide proper information to effect this coordination. **(See Appendix A2)**

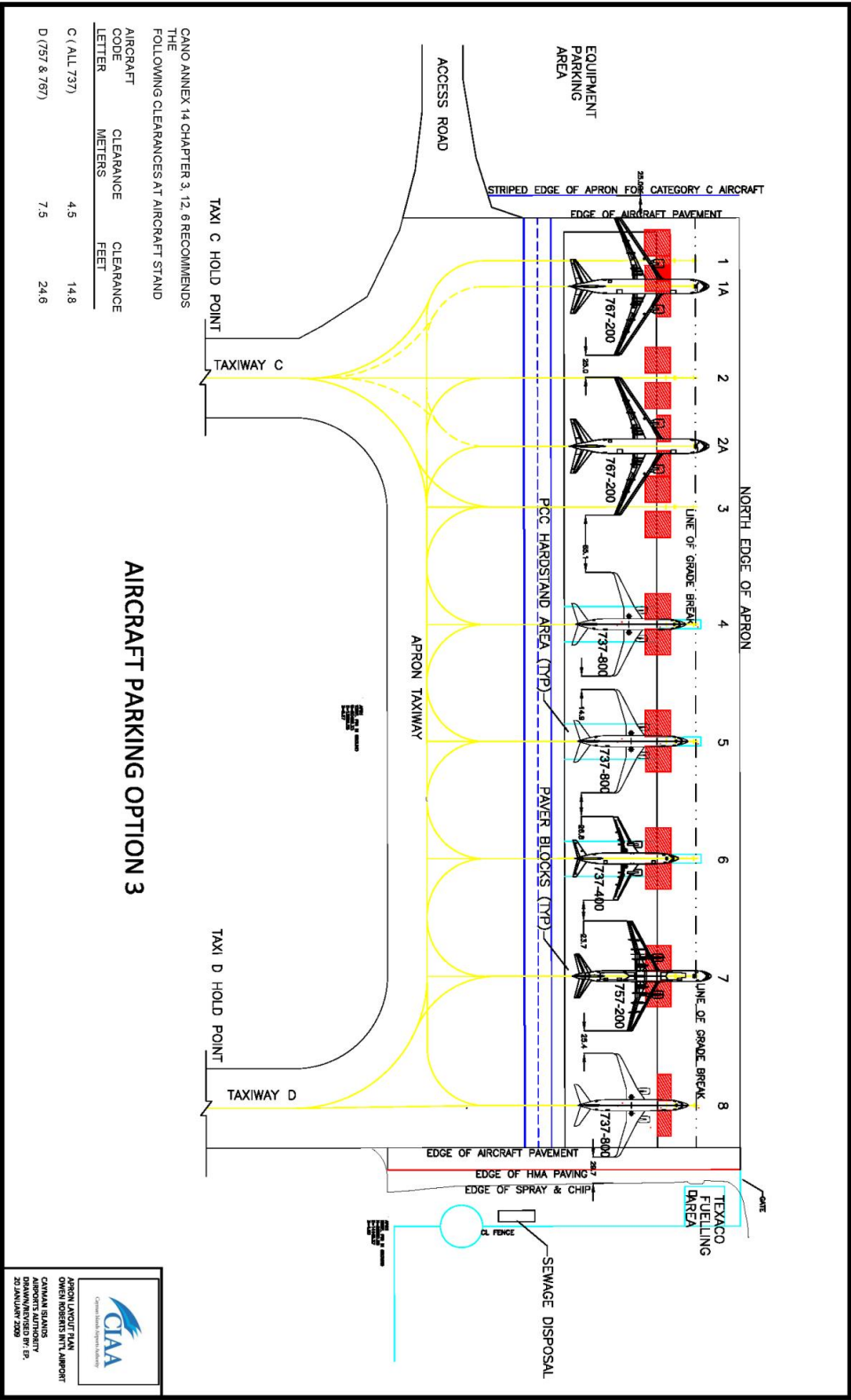
This agreement and its provisions will be monitored by the Airport Facilitation Committee, Airport Operators Committee and the ORIA Safety Committee and CIAA Operations and Safety Offices and will be renewed each year.

On the following pages the Cayman Islands Airports Authority provides the following guidelines and examples of apron parking layouts to facilitate the efficient and safe parking of aircraft on the ORIA commercial apron. More detailed instructions and tools can be found in **Appendix A4:**

- a) **Stands 1A and 2A are exclusively for the purpose of code “D” wide-body aircraft (B757 or larger);**
- b) When a code “D” wide-body aircraft is parked on 1A, the adjacent stands (1 & 2) are unusable for any aircraft. When a code “D” wide-body is on 2A, Stands 2 & 3 are unusable;
- c) **Stands 1,2 and 7,8 have been designated for Cayman Airways Express use when available.** If the entire commercial apron is empty Cayman Airways Express aircraft can be placed on any available stand once this is coordinated between the Aircrew and Cayman Airways Ramp Control.
- d) With aircraft on all stands, Stand 7 can accommodate a code “D” **B757-200 but not B757-200 with winglets.**







2.11.3 Procedures for the movement of Code “D” aircraft

On ORIA Commercial Apron

1) All ORIA Ground Handlers, Ramp Control personnel and Air Traffic Controllers shall work together to ensure the following CIAA Aircraft Parking Guidelines are followed for Code “D” aircraft:

- **Stands 1A and 2A are exclusively for the purpose of code “D” wide-body aircraft (B757 or larger);** When these stands are assigned- **ATC will have the aircraft exit and enter the runway on Taxiway “C”.** In order to re-enter the Runway from stand 1A or 2A via Taxiway “C” the aircraft must be pushed back tail “East” to accommodate.
- **Stand 7 or 8 can also accommodate code “D” wide-body aircraft (B757 or larger).** When stands 7 or 8 are assigned ATC will have the aircraft **exit and enter the Runway on Taxiway “D”.** In order to re-enter the Runway from stand 7 or 8 via Taxiway “D” the aircraft must be pushed back tail “West” to accommodate.
- When a code “D” wide-body aircraft is parked on 1A, the adjacent stands (1 & 2) are unusable for any aircraft. When a code “D” wide-body is on 2A, Stands 2 & 3 are unusable;

Note- When a code “D” wide-body is on stand 8, stand 7 is unusable and if code “D” is on stand 7, stands 6 & 8 are unusable.

- Stands 1, 2 and 7, 8 have been designated for Cayman Airways Express use when available. If the entire commercial apron is empty Cayman Airways Express aircraft can be placed on any available stand once this is coordinated between the Aircrew and Cayman Airways Ramp Control.
 - With aircraft on all stands, Stand 7 can accommodate a code “D” B757-200 but not B757-200 with winglets.
- 2) In the event ATC is not able to comply with the procedure due to the flow of traffic or emergency situations, ATC will notify the AOCC and advise the taxiway to be used by the approaching Code “D” aircraft. ATC will instruct the aircraft to exit on appropriate taxiway and hold until they receive further instructions. The AOCC will dispatch appropriate personnel and report when in place and ready for aircraft movement to ATC. Upon AOCC confirmation, ATC will direct aircraft to assigned parking stand.

Note- When approaching the painted “STOP” signs that are on the ground at the entryways to the Commercial Apron vehicular service lane (Area 2 on map), or attempting to enter this lane from any other location on the Apron, all drivers will come to a full stop and look for signs of aircraft movement in any direction. In the event that an aircraft, wing walkers, or other personnel directing traffic are present in the apron service lane, do not proceed into the lane but rather wait until the aircraft or personnel have exited the lane before continuing on your journey. If you are already in this lane please give way to aircraft and vacate lane as soon as possible to avoid incident or injury.

- 3) Marshal and Wing Walkers will position themselves to execute appropriate hand signals to the captain (**Appendix A1**).

Note- Wing walkers are there to ensure proper clearance for the aircraft on the parking stand is available, and in the event that aircraft wing is getting too close to another wing or object they will immediately signal for the marshal to stop aircraft movement.

Arrival

The marshal will provide directional signals as the aircraft approaches the gate to ensure the aircraft nose wheel remains centred on the lead in line. Wing Walkers will take up a final position outboard on the wing tip.

Departure

Prior to commencement of Push Back Wing Walkers will walk towards the vehicle service road and take up a position to stop all traffic. As the aircraft wing clears the vehicle service road the wing walkers will take up their final position for disconnection of the tow tractor.



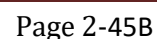
2.11.4 Procedures for the movement of Code “E” aircraft on ORIA Commercial Apron

1) CODE “E” aircraft parking guidelines w/ marshal and tow tractor

All ORIA Ground Handlers, Ramp Control personnel, Airport Duty Officers and Air Traffic Controllers shall work together to ensure the following CIAA **Code “E”** Aircraft Parking Guidelines are followed:

- a) Stand 1A has been marked for use by the **Code “E”** wide-body aircraft **B777-200**. When the aircraft lands- **ATC** will have the aircraft exit the runway on **Taxiway “C”** and **follow the lead in line up to the beginning of aircraft stand 1A where he will be met by Marshal and wing walkers (See figure 1 next page)**.
- b) The marshal will give the signal to stop at the designated stop mark at the beginning of the stand and shut down the engines at which time the tractor will be hooked up to the aircraft and final parking of the aircraft will be done using the tractor.
- c) When a **Code “E”** wide-body aircraft is parked on stand 1A, the adjacent stands (1, 2 & 2A) are unusable for any aircraft.

Note- When approaching the painted “STOP” signs that are on the ground at the entryways to the Commercial Apron vehicular service lane, or attempting to enter this lane from any other location on the Apron, all drivers will come to a full stop and look for signs of aircraft movement in any direction. In the event that an aircraft, wing walkers, or other personnel directing traffic are present in the apron driving lane, do not proceed into the lane but rather wait until the aircraft or personnel have exited the driving lane before continuing on your journey. If you are already in this driving lane please give way to aircraft and vacate lane as soon as possible to avoid incident or injury.



- a) AOCC Airport Duty Officer will contact the Airside Duty Officer, Safety Office, and Security Office and dispatch appropriate personnel to take up post as shown in **figure 2** on the next page, in order to stop the flow of traffic in the driving lane;
- b) Upon confirmation from the Airside Duty Officer of appropriate personnel in place the Airport Duty Officer will report back to ATC that personnel are in place and ready for aircraft movement. ATC will then direct aircraft to proceed to stand 1A.

- c) Once aircraft has come to the **beginning of aircraft stand 1A**, **he will be met by the Marshal and wing walkers** and follow the procedures for **code “E” aircraft parking guidelines**. Once the aircraft has been parked in the appropriate aircraft parking stand the Airside Duty Officer can initiate a “Stand Down” and return to normal duties. AOCC will ensure this message is passed to all concerned parties including ATC.

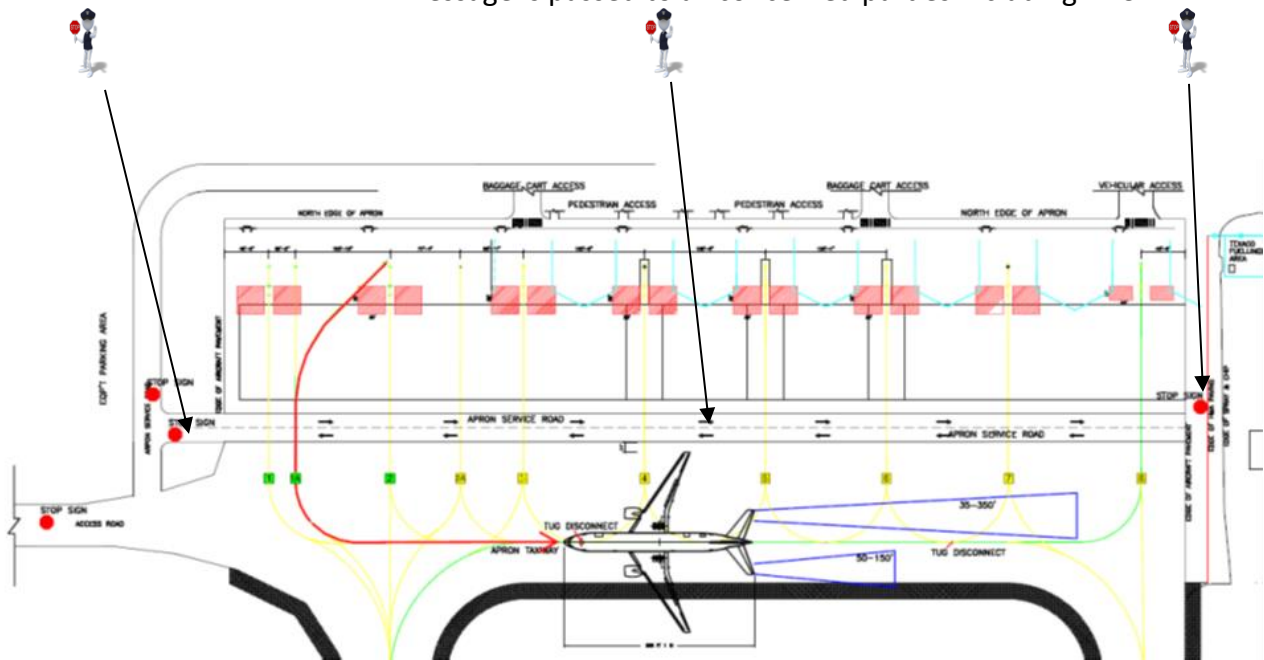


Figure. 2

Note- When approaching the painted “STOP” signs on the ground at the entryways to the Commercial Apron vehicular service lane (figure 1), or attempting to enter this lane from any other location on the Apron, all drivers will come to a full stop and look for signs of aircraft movement in any direction. In the event that an aircraft, wing walkers, or other personnel directing traffic are present in the apron driving lane, do not proceed into the lane but rather wait until the aircraft or personnel have exited the driving lane before continuing on your journey. If you are already in this driving lane please give way to aircraft and vacate lane as soon as possible to avoid incident or injury.

3) **Code “E” Aircraft Push-Back Guidelines**

In order to maintain an acceptable level of safety and prevent damage from the Jet Blast of a **Code “E”** aircraft engine, the following procedures are to be followed whenever a Code “E” aircraft is to return to the runway.

a) Enter Runway via Taxiway “C”

When ready to depart, with Marshal in position at the nose of the aircraft and a wing walker on each wing, communication is established with the aircrew to verify permission has been granted to push-back. The Marshal will signal his intention to move the aircraft back and the wing walkers shall face the driving lane and walk forward, taking up a position in the driving lane in order to ensure traffic is stopped in all directions to accommodate safe passage of the aircraft. As each wing clears the driving lane the wing walkers will respectively move with that wing. Before disconnecting the tow tractor will **ensure aircraft nose wheel is properly centered on taxiway line** at a point behind the designated “Tug Disconnect” marker near taxiway “C” (**see figure 3**). At this point the Marshal can now signal for the pilot to start their engines.

b) Enter Runway via Taxiway “D”

In the event ATC is not able to route the aircraft back to the runway using taxiway “C”, ATC will notify the AOCC of the need for the Code “E” aircraft to go across the apron. The AOCC will carry out the following procedures:

- i. AOCC Airport Duty Officer will contact the Airside Duty Officer, Safety Office, and Security Office and dispatch appropriate personnel to take up post as shown in **figure 3** in order to stop the flow of traffic in the driving lane;
- II. Upon confirmation from the Airside Duty Officer of appropriate personnel in place the Airport Duty Officer will report back to ATC that personnel are in place and ready for aircraft movement.

- III. With Marshal in position at the nose of the aircraft and a wing walker on each wing, communication is established with the aircrew to verify permission has been granted to push-back. The Marshal will signal his intention to move the aircraft back and the wing walkers shall face the driving lane and walk forward, taking up a position in the driving lane in order to ensure traffic is stopped in all directions to accommodate safe passage of the aircraft. As each wing clears the driving lane the wing walkers will respectively move with that wing. The Aircraft will be pushed back to a point on taxiway "C" and then pulled forward on the taxilane in the direction of taxiway 'D'. Before disconnecting, the tow tractor driver will **ensure aircraft nose wheel is properly centered on taxiway line** at a point behind the designated "Tug Disconnect" marker near taxiway "D" (see figure 3 below). At this point the Marshal can now signal for the pilot to start their engines.

Note- When approaching the painted "STOP" signs on the ground at the entryways to the Commercial Apron vehicular service lane (Figure 3), or attempting to enter this lane from any other location on the Apron, all drivers will come to a full stop and look for signs of aircraft movement in any direction. In the event that an aircraft, wing walkers, or other personnel directing traffic are present in the apron driving lane, do not proceed into the lane but rather wait until the aircraft or personnel have exited the driving lane before continuing on your journey. If you are already in this driving lane please give way to aircraft and vacate lane as soon as possible to avoid incident or injury.

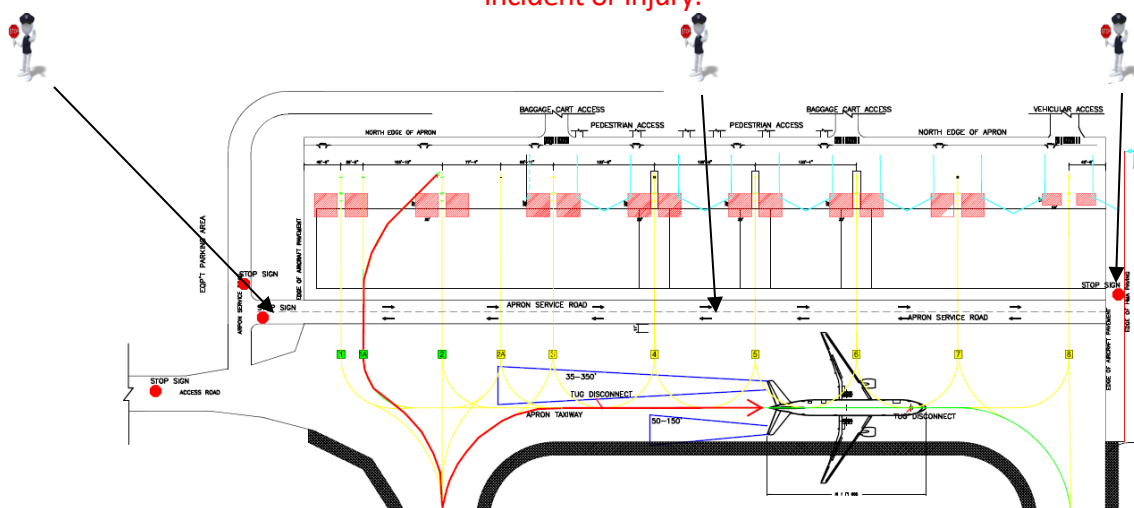


Figure 3

2.12 Standard Operating Procedures for Aircraft Turnaround

2.12.1 Turnaround Coordinator (TRC)

The CIAA is responsible to monitor and approve the rules and procedures that safeguard the arrival and departure movements of aircraft on the airports under its control. **In order to keep an acceptable level of safety on the apron the CIAA requires that each airline or ground handling service provider must provide to the CIAA for approval a Ground Handling Manual for their individual operation, and train and designate Turnaround Coordinators from their staff to monitor each aircraft evolution.** In the case where these functions are conducted by contracted service providers it is the responsibility of the **Airline Country/Station Manager** to provide oversight and surveillance of the service provider to ensure the contracted job functions are completed as required in this manual. The Turnaround Coordinator (TRC) will;

- 1) Wear an orange arm badge for immediate recognition on the apron;
- 2) Organize turnaround activities, discuss plans and ensure each member of ground crew understands their role and responsibility;
- 3) **On aircraft arrival** Supervise the **unloading of passengers and their baggage**, and make sure it is done according to company standards and **the minimum CIAA safety requirements** as set forth in this manual;
- 4) **On aircraft departure** supervise the **boarding of passengers and their baggage**, and make sure it is done according to **the minimum CIAA safety requirements** as set forth in this manual;
- 5) Coordinate and monitor operational activities within the turnaround;
- 6) Manage any disruptions to turnaround activities;
- 7) Act as a central point of contact during turnaround operations for all service providers;
- 8) Acts as safety coordinator for the duration of turnaround activities.

The following minimum requirements are necessary in order to become a TRC:

- Minimum six (6) months working on the ramp
- First Aid Qualified
- Dangerous Goods Certified
- Trained on Loading and Unloading applicable aircraft
- Familiarization Training on Ground Handling Equipment
- Training on Spill containment and clean-up kits
- Wing walking / Marshalling / Pushback and Headset training
- Fuelling Process checkout
- AVOP licensed
- Attend CIAA SMS annual refresher training

Note- Paragraphs 2.12.2 through 2.12.6 represent turnaround procedures that might be used at any international airport. These procedures are intended to act as an example that can be modified to suit the actual arrangements and procedures used by any commercial aircraft operator or ground handling company in the Cayman Islands. They are intended to illustrate the type of procedures that the CIAA considers to be the minimally acceptable standard per international regulatory requirements for an aircraft evolution. The Turnaround Coordinator represents the most qualified person from each organization for aircraft turnarounds and is expected to ensure the minimum requirements are met in order to adequately manage the safety of aircraft and people in airside areas.

The CIAA has initiated a random audit program and will be monitoring compliance with these recommended practices. Airline Operators and Ground Handling Companies will receive courtesy reports of such audits as well as the Airport Safety Office and CEO. The purpose of the audit program is to obviously monitor compliance but more importantly identify trends that can identify potential hazards and areas for further training as well as assist the Safety Office in building performance goals and targets which can be included in later versions of this manual.

2.12.2 Pre-Arrival

- Complete FOD inspection of designated aircraft stand and ensure aircraft stand is FOD free. Report all instances of FOD to the **AOCC @244-5835**;
- Verify presence and appearance of aircraft handling crew;
- Conduct brief and provide each handling crew member with an assignment of duty, discuss emergency procedures and designate fire-watch;
- Verify the aircraft stand is free of all objects and that the proper ground equipment is present for aircraft type, passed all pre-operational checks and ensure the correct pre-arrival position of all ground equipment has been achieved.

2.12.3 Arrival

It is the policy of the CIAA that all aircraft utilizing the commercial aprons will be marshalled in to aircraft stand. For aircraft being diverted from the General Aviation Ramp it is the responsibility of the organization making that decision to ensure notification is given to Cayman Airways Ramp Control in order to ensure proper equipment and personnel are assigned to meet the aircraft. Marshalling crew will consist of 1 marshal and two wing men (one on each wing) at all times. The following guidelines shall be followed by TRC at all times:

- Ensure marshalling agent and 2 wing-walkers are wearing appropriate PPE and have in their possession the required marshalling wands (orange day-glow wands during daylight and lighted wands during night operations or inclement weather);
- Ensure marshalling agent and wing-walkers position themselves to execute appropriate hand signals to the captain. The marshal will provide directional signals (**see Appendix A1**) as the aircraft approaches the gate to ensure the aircraft nose wheel remains centred on the lead-in-line;
- Ensure wing walkers take up a final position outboard on the wingtip clearance line and slightly forward of the area where the aircraft wings will be positioned after the aircraft is parked. Wing Walkers are there to ensure proper clearance for the aircraft on the parking stand is available and in the event that aircraft wing is getting too close to another wing or object they will immediately signal for the marshal to stop aircraft movement.
- Wing walkers will execute only approved wing walker to marshal hand signals (**see Appendix A1**);

- Once parking brake is set by captain, and the lower and or upper red beacon light is turned off, place chocks in appropriate location for type of aircraft being parked. **When placing the chock in position leave a 1" gap between chock and tire for ease of removal. Never place your hand between the chocks and the tire;**
- Obstruction cones should be placed along the periphery of the wing overhang and horizontal stabilizer. When aircraft are to overnight, obstruction cones are to be laid out around the aircraft. **These cones shall be banded with reflective tape or lighted;**
- Give the mobile stair operator clearance to approach the aircraft;
- Verify the appropriate ground equipment (conditioned air, ground power, etc.) is correctly installed on the aircraft. **Appendix A5** is an example of typical locations on the aircraft stand for ground equipment.
- Perform an aircraft walk-around to ensure the aircraft has not been damaged enroute or at the down line station. The TRC must physically walk completely around the aircraft and look at the fuselage, bin door areas, service doors and wing tips. If any excessive fluid leaks or damage is noted, contact the maintenance and engineering section immediately and advise the captain.
- Ensure obstruction cones are positioned to avoid damage to aircraft and injury to persons during disembarkation of passengers. **The handling crew is required to put down enough cones to form a safe path from the bottom of the aircraft stairs to the appropriate sidewalk to be used for access to or from the terminal.** Routes to the aircraft should not pass below aircraft wings or beneath fuel vents, or close to propellers or rotors of the aircraft they are boarding/disembarking or those of aircraft on adjacent stands. Routes should also be clear of vehicular traffic around the aircraft, electrical cables, fuel hoses and other ramp equipment.
- It is the responsibility of each **individual air carrier** to ensure that their assigned handlers maintain eye contact with their passengers as they move to and from the airport terminal.
- Once all passengers have departed aircraft, give clearance for fuelling, catering, and service vehicles;
- Verify offload of all terminating baggage.

2.12.4 Departure

Ensure aircraft is properly configured with mobile stairs to facilitate passenger loading;

- Ensure ground support/handling equipment and any other obstructions are clear of the passenger loading area. **The handling crew is required to put down enough cones to form a safe path from the bottom of the aircraft stairs to the appropriate sidewalk to be used for access to or from the terminal.** Routes to the aircraft should not pass below aircraft wings or beneath fuel vents, or close to propellers or rotors of the aircraft they are boarding/disembarking or those of aircraft on adjacent stands. Routes should also be clear of vehicular traffic around the aircraft, electrical cables, fuel hoses and other ramp equipment;
- It is the responsibility of each individual **air carrier** to ensure that their assigned handlers maintain eye contact with their passengers as they move to and from the airport terminal.
- Prior to departure the TRC will meet at the nose gear of the aircraft to discuss with handling crew members the departure role assignments and pushback procedures, disconnect procedures and safety;
- Ensure proper operation of headsets;
- Ensure all handling crew members have on appropriate PPE and possess appropriate signalling devices;
- Verify proper connection of pushback tractor and tow bar;
- Await Captain's signal to remove chocks, which should then be stowed. The Captain is to be advised if chocks are being removed before his signal.
- After chocks removal, proceed at your discretion after the proper signals from the flight crew. Ensure all areas around the aircraft are clear before Signalling the crew to release brakes.
- Push aircraft back until nose wheel is lined up with taxiway line;
- Verify tow bar and tractor in line with aircraft at conclusion of pushback;
- Verify disconnection of communication device/ close communication panel access door;
- Verify removal of bypass pin and proper hand signals to aircrew for notification of disconnect.

2.12.5 Post departure

- Conduct FOD check of aircraft stand;
- Prepare gate for next arrival;
- Return all unnecessary ground handling equipment to appropriate parking area.

SECTION 3

APRON SAFETY ASSURANCE

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SECTION 3- SAFETY ASSURANCE

3.1 Monitoring

The procedures outlined in this manual have been created to ensure a high level of safety while continuing to do the daily tasks each organization is faced with. It is the CIAA's responsibility through the safety office that these procedures continue to be in place and they work as intended. The CIAA will continually monitor the operations and environment at the aerodrome to assure that it recognizes changes in the operational environment that could signal the emergence of new and unmitigated hazards, and for degradation in operational processes, facilities, equipment conditions, or human performance that could reduce the effectiveness of existing safety risk controls. Methods of examination, analysis, and assessment of these controls must continue throughout the daily operation of the system and will include:

- a) Daily walk-around inspections of the aerodrome facilities to include parking lots, terminals, airside work spaces, aprons/ramps, vehicular access roads, baggage handling areas and walkways;
- b) Daily operational inspections of the taxiways, runways, lighting systems and navigational aids;
- c) Random Spot checks at unannounced times to observe operational practices;
- d) Regular audits of aircraft turnarounds to determine extent of compliance.

3.2 Feedback

To facilitate consistent reporting and subsequent storage and analysis of data the following information is provided to delineate responsibility in reporting.

3.2.1 Accidents/ Incidents Reporting

All accidents/incidents must be immediately reported to the Airport Operations Command Centre @ 244-5835. This is the responsibility of anyone who witnesses the incident or accident. The following information must be given when the report is being made:

- Location of accident/incident
- Nature of Emergency
- Any injuries or deaths
- Equipment involved in the accident/incident

Airport Operations will be notified and shall immediately assess the situation and implement immediate corrective action to prevent and minimize disruption to airport operations. A written report must be submitted to the Safety Office by the relevant agency (**See Appendix A8**), within 24 hours giving, in addition to the above, the following:

- Time and location of accident/incident;
- Names and personal statement of persons involved in accident/incident;
- Names and personal statement of any persons who witnessed the accident/incident;
- Owner of equipment involved in accident/incident;
- Type(s) of equipment involved in accident/incident.

Note- The operator of any vehicle/equipment involved in an accident, which results in injury or death to a person or damage to property, must immediately stop at the scene of the accident and render assistance as may be necessary!

3.2.2 Accidents to Passengers

Apron Attendants **must** observe the operating procedures for the equipment under their charge, to ensure that passengers are not exposed to accidents while embarking/disembarking an aircraft. It is the responsibility of each air carrier to ensure the safety of all passengers in their care to and from the airport terminal and the aircraft. This responsibility is not diminished when using contracted service providers! If proper eye contact is being kept on transiting passengers an airline representative should always be first to respond to a passenger who has been injured. Airport Security will render appropriate assistance when needed. It is the responsibility of the air carrier/operator to send a copy of the incident/accident report to the CIAA Safety Office.

3.2.3 Accidents to Staff Members

If you are injured it costs the Company time, money and inconvenience. It also causes pain and grief to you and your family and perhaps loss of earnings. Therefore you owe it to yourself, your colleagues and the Company, to maintain a high level of vigilance at all times. Always follow the proper safety precautions and use the appropriate personal protective equipment for the equipment's being used! It is the responsibility of the immediate supervisor to submit a copy of the report to the Safety Office

3.2.4 Damage to Aircraft

Damage to aircraft, as minor as it may appear, could be serious since it could affect the safety of aircraft in-flight. Therefore, damage must immediately be reported to your immediate supervisor and further filed in the appropriate report. Most aircraft incidents will require filing of a Mandatory Occurrence report (MOR). It is the responsibility of the air carrier/ handling company to ensure proper report is filled out and a copy is forwarded to the Safety Office.

3.2.5 Damage to Equipment and Vehicles

It is extremely important both for operational and safety reasons, that all damaged to equipment be reported for corrective action. This will preclude the equipment being used in a degraded state by someone who is unaware of the defect. It is the responsibility of the operator to file the report with the Safety Office. The safety Office will then ensure the equipment is taken out of service until properly repaired.

NOTE- Do not drive or operate equipment you are not trained on or authorized to operate (including the appropriate endorsement on the back of your AVOP license); if you fail to comply you and your company will be held responsible for your actions in the event of an accident.

3.2.6 Airside Safety Infraction Tickets

As a means of distinguishing the airside personnel who have difficulty following the policies and procedures outlined in this manual the CIAA has developed an airside ticket program. In line with SMS best practices- rather than focus on negative consequences this program is set to address poor safety behaviour while identifying areas for possible improvements to procedures or training. CIAA Airport Duty Officers, Safety Office Personnel, Security Officers and management team members will approach the offending party and issue the first copy of the ticket (white copy). The next copy (blue) will be turned in to the CIAA Safety Office prior to end of shift, and the last copy (yellow) will remain in the ticket book for future reference. Once the ticket is issued the individual is responsible to contact the safety office within 24 hours to either accept the infraction or set a time for discussion of the incident. If this is not complied with the Safety Office will escalate to the manager level of the company. **See Appendix A9** For details, listing of infractions and explanation of point system.

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Section 4

Safety Promotion

SECTION 4- SAFETY PROMOTION

4.1 Safety training and Education

An organizations safety culture is linked to the success of its safety management training program. All personnel must understand the organizations safety philosophy, policies, procedures and practices, in order to understand their roles and responsibilities within the safety management framework. Safety training should begin with the initial familiarization of employees and continue throughout their employment. Competency training requirements for each area of work such as Turnaround Coordinator or Marshal will be documented and training files maintained for each employee by the CIAA Safety Office in order to assist in identifying and tracking employee training requirements.

The following are CIAA minimum training requirements for airside personnel:

1. **Airside Safety Brief Course (2 hours)- Valid for 2 years**
 - Required for all temporary or long term contracted personnel who require access to the airside for any amount of time.
2. **Annual Safety Management Systems Course (6 hours)**
 - Required for all Airport personnel.
3. **Annual Apron Management and Procedures Course (4 hours)-**
 - Required for all CIAA personnel who require “All Areas” security access pass;
 - Required for all airline or Ground Handling Company personnel who will work on the airside;
 - Required for all Aircraft Support Personnel, Couriers, Border Control or any other type of business where employees require regular access to the airside;
4. **Apron Vehicle Operator Permit Initial Course (4 hours)- Permit valid 2 years**
 - Required for all personnel who will need to operate any type of motorized vehicle on the airside areas.
5. **Apron Vehicle Operator Permit Renewal Course (2 hours)-**
 - Required for all airside drivers every 2 years after initial training course.

APPENDIX A1

Marshal Hand and Arm Signals

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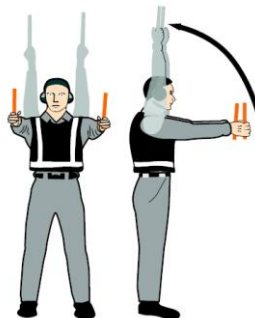
Marshal Hand/Arm Signals

The following hand signals are standard as stated in the Air Navigation (Overseas Territories) order. High visibility wands must be used during daylight hours. The use of lighted wands after sunset is mandatory. These signals are designed for use by the marshal facing the aircraft in a position to the pilots left. **For fixed wing aircraft** – within view of the pilot at all times. **For helicopters** – where the marshal can best be seen by the pilot. The following are safety guidelines for the marshal to follow:

- a) All persons conducting marshalling/dispatching operations are required to wear high visibility safety vests and ensure their wands are serviceable before the marshalling operation commences. Marshal should be in position at least fifteen (15) minutes prior to aircraft arrival to allow time to conduct aircraft stand/ramp (arrival path) inspections for FOD and proper equipment staging (parking).
- b) All approved ground to cockpit signals will be clearly executed by a designated marshalling agent in view of the captain.

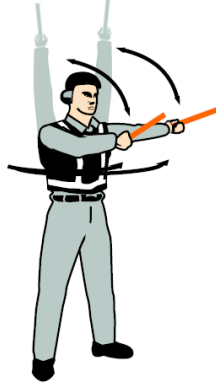
“This Bay” Marshalling

The first contact with the inbound taxiing aircraft is the “This Bay” signal. The arms placed above the head in a vertical position. This signal should be executed when the aircraft is considered in visual contact, and maintained until the aircraft has turned onto the bay centre of guideline. Hand signals must be positive in motion; a relaxed gesture should not be adopted.

**Proceed Under Guidance of another Marshal**

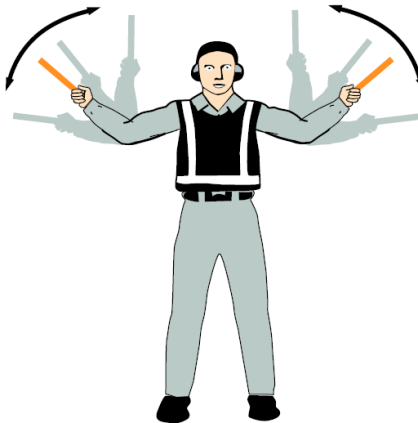
Where a situation develops where aircraft movements are simultaneous and an error is made, whereby the aircraft begins to turn into the wrong bay, the “Proceed under Guidance” of another marshal should be used. The right or left arm is down, the other arm moved across body and extended to indicate position of other marshal.

Once the aircraft is proceeding directly towards the gate or bay stop point, the marshal now controls the speed and direction. It should be remembered that the pilot's vision is now limited as he or she is reliant on the marshal to control his direction and speed to avoid contact with ground equipment or personnel. In congested areas, secondary marshal or "wing men" are required to constantly signal the marshal that enough clearance exists on the aircraft stand by holding one (1) wand up vertically.



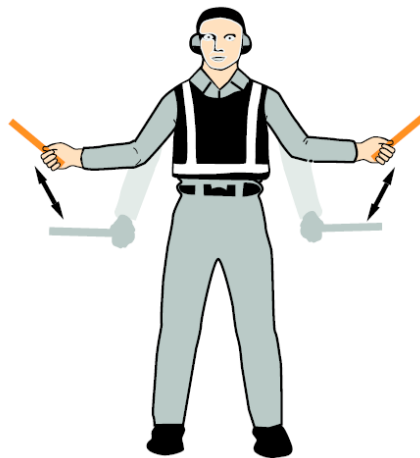
Move Ahead

Both Arms repeatedly moving upward and backward, beckoning onward.



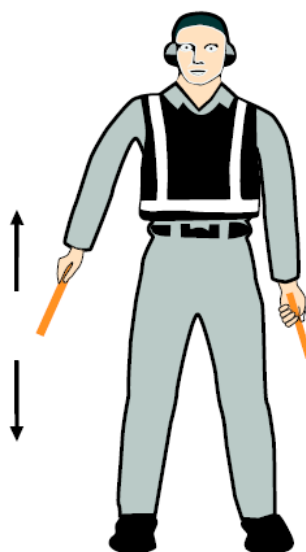
Slow Down

Arms placed down, with the palms towards the ground, then moved up and down several times.



Slow Down Engines on Indicated Side

Arms placed down, with the palms towards the ground, then either the right or left arm moved up and down indicating that the engine on the left or right side, as the case may be, should be slowed down.



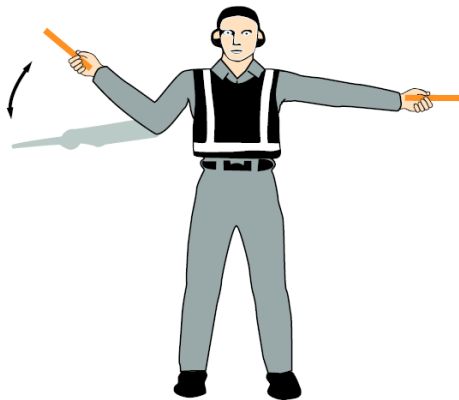
Open Up Right Engine or Turn Left

Right arm down, left arm repeatedly moved upward and backward. The speed of the arm movement indicates the rate of turn.



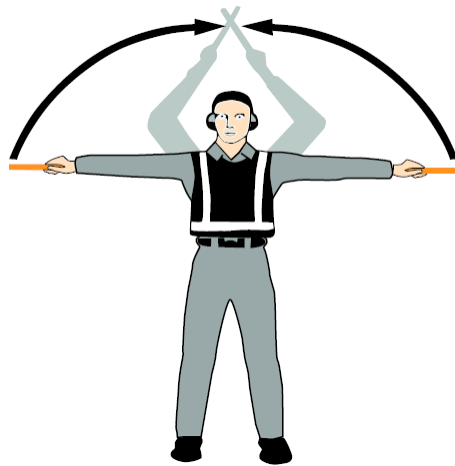
Open Up Left Engine or Turn Right

Left arm down, right arm repeatedly moved upward and backward. The speed of the arm movement indicates the rate of turn.



Stop

Arms repeatedly crossed above the head. The speed of the arm movement indicates the urgency of the stop.



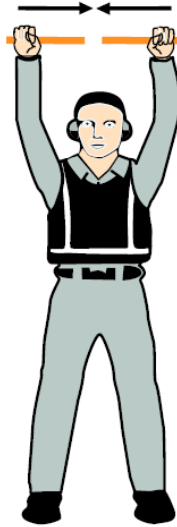
Emergency Stop

Abruptly extend arms and wands to top of head, crossing wands.



Chocks Inserted

Arms extended, the palms facing inwards, then swung from the extended position inwards.



Release Brakes

This signal is used once the “Chocks In” signal is executed. Raise arm with clenched fist, horizontally in front of body, then extend fingers.



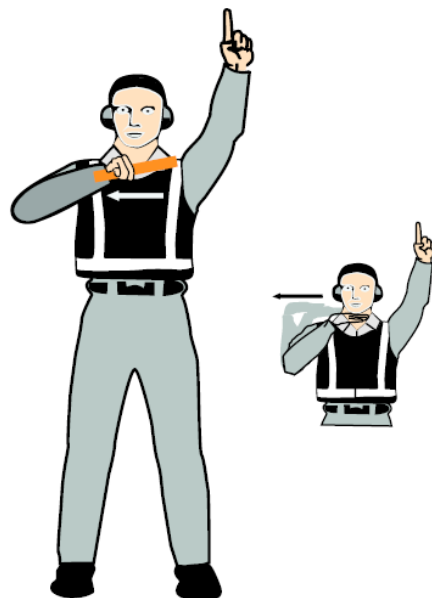
Engage Brakes

Raise arm and hand, with fingers extended horizontally in front of body, then clench fist.



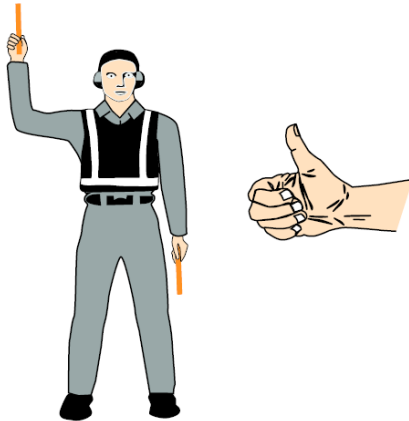
The “Cut Engines” Signal

Either arm or hand placed level with the chest, and then moved laterally with the palm downwards.



All Clear - Marshalling Finished

Raise right arm at the elbow, with the arm facing forward.



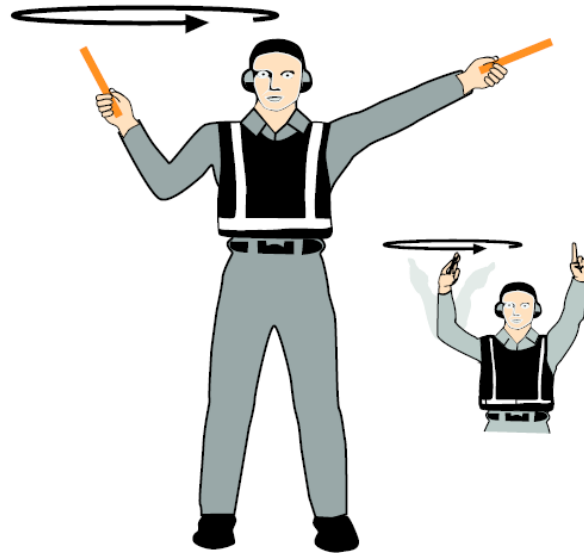
Chocks Away

Arms down, the palm facing outwards, then swung outwards.



Start Engines

A circular motion of the right hand at head level, with left arm pointing to the appropriate engine.



Wing walker

Raise right hand above head level with wand pointing up, move left hand wand pointing down toward body.



APPENDIX A2

Apron Management Letter of Agreement

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Letter of Agreement between
Cayman Islands Airports Authority and
Cayman Airways Ramp Control

Subject: Agreement for responsibility to prepare and maintain the Aircraft Parking Plan for the Commercial Apron at Owen Roberts International Airport

1. OBJECTIVE

- 1.1** The objective of this letter of agreement is to establish a working relationship between Cayman Airways Ramp Control Office and CIAA Airport Operations in order to outline procedures for the creation, dissemination, and daily modification of the aircraft parking plan at Owen Roberts International Airport.

2. EFFECTIVE DATE: January 15, 2016

3. SCOPE

- 3.1** The procedures contained in this letter of agreement set out to define the relationship between the two organizations listed. Although it is recognized that aircraft parking is a function of the Airport, through a gentleman's agreement made several years ago between airlines and airport it was determined that Cayman Airways would be responsible for ramp operations. In recent months the CIAA has made great progress in outlining new procedures for ramp operations and with the exception of aircraft parking the CIAA is now ready to assume control of ramp operations. Recognizing the vast experience and efficiency of Cayman Airways in maintaining the aircraft parking plan it is through this agreement that we would like for Cayman Airways to continue to promulgate the parking plan while CIAA monitors and prepares to assume this function.

4. ORGANIZATIONS

- 4.1** The organizations referred to in this letter of agreement are:
- I. Cayman Islands Airports Authority (CIAA)
 - II. Cayman Airways Ltd (CAL)



5. ROLE OF EACH ORGANIZATION

- 5.1 The Cayman Islands Airports Authority-** will publish, provide training and monitor effectiveness of all apron management procedures. For the duration of this agreement the CIAA will recognize that Cayman Airways Ltd will have jurisdiction over the ORIA commercial apron aircraft parking and stand management. This responsibility includes coordination amongst air carriers and the airport facilitation committee to ensure plan is fair for all.
- 5.2 Cayman Airways Ltd-** will continue to act as coordinator and creator for the aircraft parking and stand management plan at ORIA. This responsibility includes coordination amongst air carriers and the airport facilitation committee to ensure plan is fair for all. In the case of daily changes to the plan Cayman Airways will accommodate changes to the plan based on current events and efficiency of the apron and will promulgate such changes to all affected parties in a timely manner.

6. OPERATIONAL PROCEDURES

- 6.1 Aircraft Stand Management and Parking-** Aircraft stands shall be assigned on a non-discriminatory basis, i.e., for similar types and volumes of operations, all carriers will have equal rights of access to aircraft stands. The principle of non-discrimination does not preclude the application of stand assignment practices that will promote efficiency in operations and optimize passenger levels of service. Please refer to the **CIAA Apron Management and Procedures Manual Section 2, on page 2-34, paragraph 2.11** for details.
- 6.2** The Cayman Airways Station Manager will approve the Aircraft Stand Assignment Plan in collaboration with **CIAA Airport Operations** and publish it. In the event of changes throughout the day, Cayman Airways Ramp Control personnel will make these changes as the need arises and inform the **Airport Operations Command Centre** at **345-244-5835** or **1-800-534-AOCC (2622)** **immediately of any changes**. Air Carriers will inform Cayman Airways Ramp Control of all schedule changes as soon as they are known. Re-assignment due to schedule changes and assignment of additional flights will be made by Cayman Airways Ramp Control. Changes in the schedule of 15 minutes or less will not be considered new flights. Changes by more than 15 minutes will be considered as new flights for planning purposes.

Note- All changes MUST be communicated to the AOCC.



7. COMMUNICATIONS

- 7.1** Cayman Airways currently provides aircraft stand allocation and dissemination of aircraft movement information (arrival times, landings and take-offs) for all carriers on a daily basis via email with updates throughout the day. However, it is the responsibility of each air carrier to coordinate with Cayman Airways Ramp Control to provide proper information to effect this coordination.

8. AMMENDMENT, CANCELLATION

- 8.1** This letter of agreement represents the specific terms between the two organizations and shall continue in force from January 15, 2016 until January 15, 2018. After that date, this agreement may continue in effect if the parties agree in writing to extend its term at least sixty (60) days prior to date of expiration. Termination by either Party of all or any part of the agreement requires sixty (60) days written notice to the other Party.

REPRESENTING CIAA

**DALE DAVIS
CHIEF AIRPORT
OPERATIONS OFFICER**

**CAYMAN ISLANDS AIRPORTS
AUTHORITY**

Signature _____

Date _____

DAI
2016/02/12

REPRESENTING CAYMAN AIRWAYS

**IVAN FORBES
VICE PRESIDENT
AIRPORT OPERATIONS**

CAYMAN AIRWAYS LTD

Signature _____

Date _____

IF
FEBRUARY 05, 2016

APPENDIX A3

CIAA Vehicle Inspection Form

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CIAA Vehicle Inspection Form

Company Name: _____ Fleet ID #: _____

Vehicle Type: _____

Manufacturer: _____

Year: _____ Model: _____ Colour: _____

Engine #: _____ Chassis #: _____

Date of Last Inspection: _____ Last GSE Permit # _____

Inspection Checklist

| Stationary Checks | Satisfactory | Needs Attention | Unsatisfactory |
|----------------------------------------------------------------|---------------------|------------------------|-----------------------|
| Steering free of play: | | | |
| Hand Brake: | | | |
| Service Brake: | | | |
| Tires: L/F L/R R/F R/R | | | |
| Lights: Headlamps Tail Lamps Indicators Safety Beacon | | | |
| Horn: | | | |
| Wipers: | | | |
| Fluid Leaks: | | | |
| Drivers Seating: | | | |
| Bumpers: | | | |
| Bodywork: | | | |
| Undercarriage Checks | | | |
| Chassis Integrity: | | | |
| Exhaust System: | | | |
| Suspension: | | | |
| Mobile Checks | | | |
| Speedometer: | | | |
| Brakes: | | | |
| Gears (smooth changes): | | | |
| Wheel Bearings: | | | |

| | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------|--|
| Other Items Checked: | | | |
| Equipment Status: Fail Pass New GSE Permit # Remarks: Re-Inspection Comments: | | | |
| Inspectors Name & Signature: | | Inspection Date: | |
| Notes: a). If NEEDS ATTENTION is recorded for ANY item on the checklist, corrective action must be taken regarding the item within 5 days in order to bring it to SATISFACTORY condition. b). If UNSATISFACTORY condition is recorded for ANY item on the checklist, the equipment shall not be used on the Airside until the corrective action has been completed and repair confirmed by a designated CIAA inspector after re-inspection. | | | |

APPENDIX A4

Apron Stand Clearance Procedures

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The following charts and illustrations are provided to assist in determining the best possible use of available aircraft parking:

| Aircraft Type | FAA Airport ref code | ICAO Ref Code | Wingspan in feet/ inches or meters | Passenger capacity in seats | Tail height in feet /inches | Outer main gear wheelspan |
|---------------|----------------------|---------------|------------------------------------|-----------------------------|-----------------------------|---------------------------|
| B727-200 | C-III | C | 108' | 134 | 34'-11"/ 31' - 7" | 18'-9" or 5.72m |
| B737-200 | C-III | C | 93' | 136 | 36'-10"/ 37'-3" | 17'-2" or 5.23m |
| B737-300 | C-III | C | 94'-9" | 128 | 36'-7"/ 36'-4" | 17'-2" or 5.23m |
| B737-400 | C-III | C | 94'-9" | 146 | 36'-7" | 17'-2" or 5.23m |
| B737-500 | C-III | C | 94'-9" | 108 | 36'-7" | 17'-2" or 5.23m |
| B737-600 | C-III | C | 112'-7" | 130/108 | 41'-3" | 18'-9" or 5.72m |
| B737-700 | C-III | C | 112'-7" or 34m | 148/128 | 41'-3" | 18'-9" or 5.72m |
| B737-700W | C-III | C | 117'-5" or 35.8m | 148/128 | 41'-7" | 18'-9" or 5.72m |
| B737-800 | C-III | C | 112'-7" or 34m | 184/160 | 41'-2" | 18'-9" or 5.72m |
| B737-800W | D-III | C | 117'-5" or 35.8m | 184/160 | 41'-5" | 18'-9" or 5.72m |
| MD88 | C-III | C | 107'-10" or 33m | 172 | 30'-2"/29'-7" | 16'-8" or 5.08m |
| A319 | C-III | C | 111' or 34m | 134 | 39'-6" | 24'-11" or 7.59m |
| A320 | C-III | C | 111'-10" or 34m | 132-164 | 38'-10'/40'-10" | 24'-11" or 7.59m |
| B757-200 | C-IV | D | 124'-10' or 38m | 186 | 45'-1" | 30'-6" or 9.3m |
| B767-300 | C-IV | D | 156'-1" or 47.57m | 269 | 52'-7"/50'-6" | 30'-6" or 9.3m |
| B777-200 | D-V | E | 199'-11" or 60.9m | 440 | 60'-9" | 36'-0" or 11.0m |
| E190 | C-III | C | 94'-3" or 28.72m | 98 | 33'-9"/34'-8" | 19'-6" or 6m |
| CRJ200 | C-II | B | 69'-8" or 21.23m | 50 | 20'-9"/20'-3" | 10'-4" or 3.14m |
| DHC-6/300 | A-II | B | 65' or 19.8m | 22 | 19'-6" | |
| SAAB-340B | | B | 70'-4" or 21.44m | 37 | 22'-6" | |

Clearance requirements

An aircraft stand should provide the following minimum clearances between aircraft using the stand as well as Between buildings or other fixed

aircraft and adjacent objects.

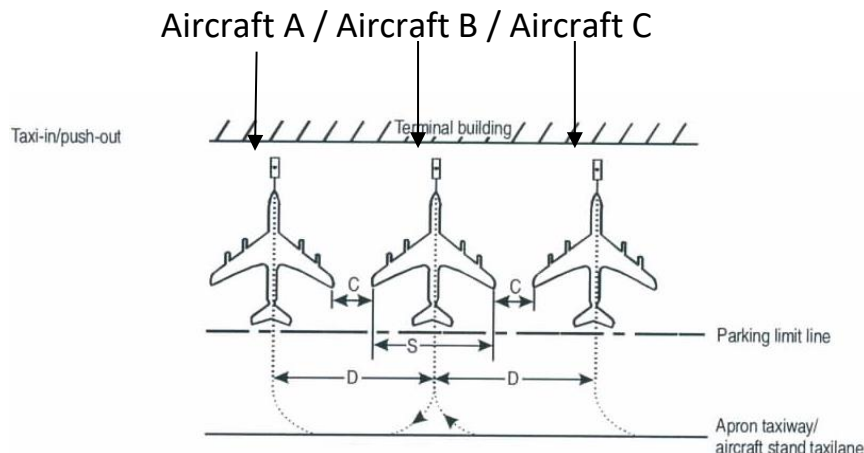
| <u>Code Letter</u> | Clearance meters | Clearance feet |
|--------------------|------------------|----------------|
| A | 3.0 | 9.8 |
| B | 3.0 | 9.8 |
| C | 4.5 | 14.8 |
| D | 7.5 | 24.6 |
| E | 7.5 | 24.6 |
| F | 7.5 | 24.6 |

The clearances for code letters D, E and F can be reduced in the following locations (for aircraft using a taxi-in, push-out procedure only):

- Between the terminal (including passenger loading bridges) and the nose of an aircraft; and
- over a portion of the stand provided with azimuth guidance by a visual docking guidance system.

Stand spacing

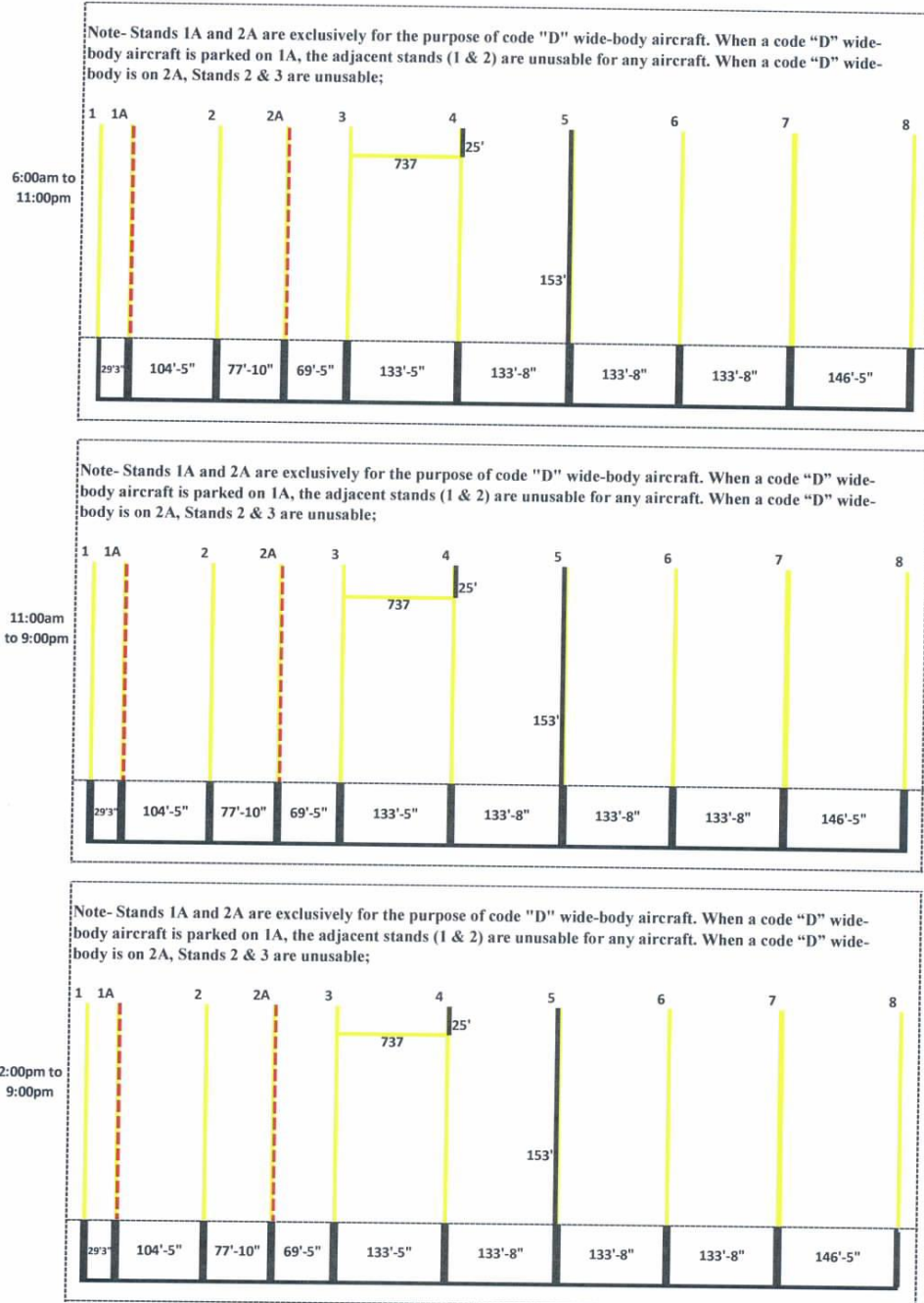
General formulae have been developed in a number of cases to calculate the required distance between aircraft stands. The simplest case is for aircraft that taxi in perpendicular to the terminal building and push out straight back. As shown in the figure above, the minimum stand spacing (D) equals the wing span (S) plus the required clearance (C).



Note: To verify correct spacing between 2 aircraft to be parked on stands use the following rule:

(D) is greater than the Sum of;
(1/2 wingspan A) + (Value C) of largest aircraft + (1/2 wingspan B)

The following chart provides the exact dimension of each aircraft stand



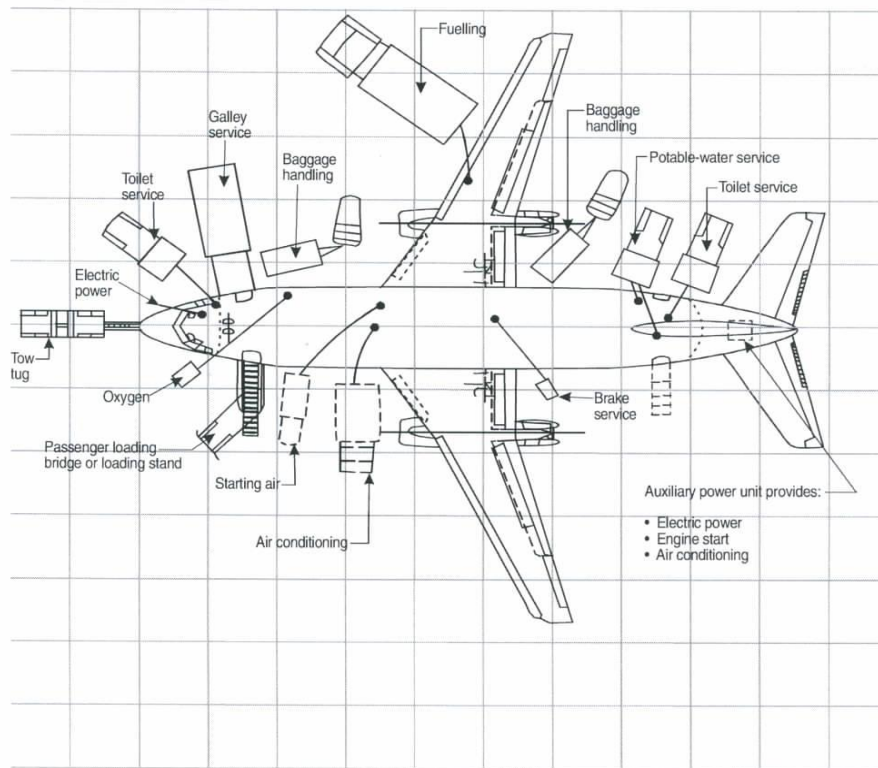
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APPENDIX A5

Typical Ground Equipment Layout

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Typical Ground Equipment Layout



Typical ground equipment service layout

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Appendix A6

Hot Works Permit

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Cayman Islands Airport Authority

CONTROL No. _____

HOT WORK PERMIT

A Hot Work Permit is required for any operation that involves open flames or produces heat and/or sparks. This includes, but is not limited to, Brazing, Cutting, Grinding, Flame-Soldering, Pipe Thawing, Torch-Applied Roofing, and Welding.

PROJECT NAME: _____ PROJECT No: _____

CIAA WORK ORDER No: _____ CONTRACTOR JOB No: _____ DATE WORK TO BE DONE: _____

PERFORMING CONTRACTOR: _____ ☐ GC ☐ SUB PHONE No: _____

WORK TO BE DONE BY: EMPLOYEE: _____ SUPERVISOR: _____ FIRE WATCH: _____

HOT WORK is to be performed at one location per permit.

FACILITY, BUILDING, and FLOOR _____

NATURE OF JOB: _____

SPECIAL PRECAUTIONS: _____

REQUIRED PRECAUTIONS CHECKLIST

General Contractor or designee to verify that each precaution has been taken or to indicate that it is Not Applicable (NA).

- ☐ Available sprinklers, hose streams, and extinguishers are in service/operable.
- ☐ Hot Work equipment is in good repair.
- ☐ Entrances to work area have been posted with NO SMOKING signs.
- ☐ No welding or open flames within 100 feet of aircraft or a flammable spill.
- ☐ Work area enclosed to contain sparks and prevent vision flash burn.
- ☐ Ventilation is adequate to remove smoke/vapor from work area.

Requirements within fifty feet (fifteen meters) of work:

- ☐ Flammable liquids, dust, lint, and oily deposits have been removed.
- ☐ Explosive atmosphere in area has been eliminated.
- ☐ Floors have been cleaned of debris.
- ☐ Combustible floors have been wet down, covered with damp sand, or covered with fire-resistive sheets.
- ☐ Other combustibles have been removed, where possible, or protected with fire-resistive tarpaulins or metal shields.
- ☐ All wall and floor openings have been covered.
- ☐ Fire-resistive tarpaulins have been spread beneath work to collect sparks.

For work on walls or ceilings:

- ☐ Construction is noncombustible and without combustible covering or insulation.
- ☐ Combustible materials or items on other side of walls have been moved away.
- ☐ When welding, cutting, or heating is performed on walls, floors, or ceiling, since direct penetration of sparks or heat transfer may introduce a fire hazard to an adjacent area, the same precautions shall be taken on the opposite side as are taken on the side on which the work is being performed.

For work on enclosed equipment (tanks, ducts, etc.):

- ☐ Enclosed equipment has been cleaned of all combustibles.
- ☐ Containers have been purged of flammable liquids/vapors.

Fire Watch / Hot Work area monitoring:

- ☐ Fire Watch will be provided during and for thirty minutes after work, including any coffee or meal breaks.
- ☐ Fire Watch is supplied with suitable extinguishers/a charged small hose.
- ☐ Fire Watch is trained in use of this equipment and in sounding alarm.

I VERIFY that the above named location has been examined, that the precautions checked on the Required Precautions Checklist have been taken to prevent fire, and I request authorization to perform this work.

SIGNED _____

Printed Name _____ Date _____

General Contractor Firm _____ Phone Number _____

AUTHORIZATION:

SIGNED _____

Printed Name _____ Date _____

A/E Consultant/CIS Firm Name _____ Phone Number _____

WORK PERFORMED:

START: _____ END: _____

PERMIT EXPIRES (Good for one day only):

DATE: _____ TIME: _____

FINAL CHECK:

The work area and all adjacent areas to which sparks and heat might be spread were inspected during the fire watch period and for at least thirty minutes after the work was completed and no fire conditions were found.

SIGNED _____

Fire Watch _____ Date _____

Printed Name: _____

IN CASE OF FIRE - - - CALL 345-949-2276

HOT WORK PERMIT

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APPENDIX A7

Airside Works Permit

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CONTROL No. _____

AIRSIDE WORKS PERMIT

An Airside Works Permit is required for any organization that needs to perform repairs to equipment or facilities on the airside.

WORK TO BE PERFORMED: _____ PROJECT No: _____

CIAA WORK ORDER No: _____ CONTRACTOR JOB No: _____ DATE WORK TO BE DONE: _____

PERFORMING CONTRACTOR: _____ ☐ GC ☐ SUB PHONE No: _____WORK TO BE PERFORMED BY- Employee- _____ Supervisor- _____ Equipment- _____
WORK is to be performed at one location per permit.FACILITY, BUILDING, and
FLOOR _____

NATURE OF JOB: _____

SPECIAL PRECAUTIONS: _____

REQUIRED ACTIONS CHECKLIST

Safety manager to verify the following sections have been notified!

- ☐ Airport Operations
- ☐ Air Navigation Services
- ☐ Airport Security
- ☐ Engineering and Projects.
- ☐ Telecommunications and I.T.
- ☐ Administration(if access badges required)

AUTHORIZATION:

SIGNED _____

Printed Name Date_____
Title Phone Number**WORK PERFORMED:**

START: _____ END: _____

PERMIT EXPIRES (Good for one day only):

DATE: _____ TIME: _____

FINAL CHECK:

The work area and all adjacent areas were inspected and no unsafe conditions were found.

SIGNED _____
Safety Manager Date

Printed Name: _____

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Appendix A8

Accident and Incident Report Form

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Cayman Islands Airports Authority

NOTICE OF ACCIDENT

Name of injured

Address

Occupation/Business

Telephone No:

State Carefully:

Date of Accident _____ Time _____

Place where accident occurred _____

Give full details of how accident occurred:

Give Names and Addresses of all Witnesses:

At the time of the Accident what were you doing?

Were any particulars taken by the Police? If 'yes', give names and number of officer and Station:

Address of Police

Does the injured have any insurance Policies? Or pre-existing conditions?

I/We hereby declare the foregoing particulars to be true and correct:

Signature

Of Injured: _____

Date _____

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APPENDIX A9

CIAA AIRPORT TICKET BOOK

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C.I.A.A AIRPORT TICKET BOOK**INFRACTION****DEMERITS DEDUCTED**

| | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 1) Failure to wear proper PPE () | 4 |
| 2) Failure to load baggage cart properly | 4 |
| 3) Failure to properly chock ground equipment | 6 |
| 4) Riding or walking on moving conveyor belt loader | 6 |
| 5) Failure to use proper wands for directing aircraft | 5 |
| 6) Failure to place, or improper placement of safety cones | 6 |
| 7) Failure to have or turn on a vehicle safety beacon light | 3 |
| 8) Driving in an unsafe manner around an aircraft | 8 |
| 9) Parking or driving under a aircraft wing | 8 |
| 10) Failure to turn off all ground service equipment when not in use | 5 |
| 11) Driving over a fueling or GSE hose and/or cable | 8 |
| 12) Use of cell phones around aircraft while being fueled | 8 |
| 13) Failure to hand guide vehicles to aircraft (where appropriate) | 6 |
| 14) Failure to remove all GSE equipment from ramp 15 mins after departure | 4 |
| 15) Failure to drive in proper appointed vehicle lanes | 6 |
| 16) Driving beyond the speed limit of 10 mph on the airport | 5 |
| 17) Driving beyond the speed limit of 5 mph within 30ft of parked aircraft | 8 |
| 18) Driving a vehicle without due care on the aerodrome | 8 |
| 19) Failing to conform to traffic signs regulating the movement of traffic or indicating the route to be followed by traffic in the aerodrome | 3 |
| 20) Failing to comply with the directions or verbal instructions given by an authorized officer regulating traffic in the movement area | 5 |
| 21) Failing to give way or failing to give maximum clearance to aircraft in the movement area | 8 |
| 22) Failing to comply with requirements, procedures and instructions relating to airport security | 8 |
| 23) Throwing garbage into F.O.D containers | 6 |
| 24) Smoking anywhere on the airside | 8 |

DATE: _____

NAME: _____

POSITION: _____

EMPLOYER: _____

TOTAL NUMBER OF DEMERITS DEDUCTED: _____

ISSUING OFFICER: _____

Please report to the Safety Office on the next business day or your immediate supervisor will be notified.

A driver who:

- a) Accumulates 12 demerit points or more within a period of 12 months from the date of the first offence;
- b) Is involved in an accident causing injury to personnel or damage to CIAA property and /or aircraft;
- c) Is involved in 2 minor accidents within a period of 12 months;

Will be suspended from driving on the airside and then be required to attend the CIAA mandated AVOP Initial Training Class and pass both theory and airside performance, under supervision, before the permit can be reinstated.

Note- **Notwithstanding any enforcement or penalty process described herein, the CIAA, through the Chief Executive Officer, reserves the right to withdraw permission to enter and drive on the airside, at any time.**