

APPENDIX Y

ENGINE RUNNING ONLOAD/OFFLOAD (ERO) PROCEDURES FOR C-130, C-141, C-17, AND C-5 AIRCRAFT

A. SCOPE

The Mobility Force Commander (MFC) may authorize EROs to expedite the flow of aircraft through airfields during all airland operations where the reduction of ground time warrants a departure from normal operating procedures.

B. ERO OPERATIONS

ERO operations may be conducted, provided:

1. The on/offload airfield is transited on an operational stop basis and no safety of flight conditions exist.
2. The decision to ERO should be properly coordinated between the aircraft commander and any existing local Command and Control (C2) function (i.e., Command Post, Alternate Mobility Command Center, Tanker Airlift Control Element, Mission Support Team, Arrival/Departure Airfield Control Group [A/DACG], or Combat Control Team) and the affected functional areas.
3. Consider operational risks:
 - a. Type of hazards.
 - b. Assess the risks.
 - c. Analyze risks control measures.
 - d. Make control decisions.
 - e. Implement risk controls.
 - f. Supervise and review prior to approving ERO operations. Evaluate such risks as day/night operations, weather, experience levels, type of cargo, passengers, and location of operations.
 - g. Braking action on the ramp is such that there is no danger of the aircraft sliding with brakes set. Chocks will not be used.
 - h. Normally, the ramp and cargo doors are used for on/offloading. Exception: Circumstances may dictate use of the crew entrance door for on/offloading. This will be coordinated through the aircraft commander, C2 function, and affected functional areas.
 - i. During adverse weather, ensure the vehicle operator's vision is not obscured by the elements. Self-propelled vehicles may require winch assistance if positive traction of vehicle wheels cannot be maintained throughout the on/offload operation. Arctic/nonskid shoring may be used in lieu of a winch.

- j. Do not use ERO procedures when explosive cargo is involved (with the exception of small arms ammunition--class/division 1.4) unless authorized by the MFC, contingency operations order, or air tasking orders.
- k. Troops are briefed on all safety requirements. Troops must have hearing protection prior to loading/offloading operations.

C. ERO TEAM

An ERO normally consists of load teams, maintenance, and user personnel formed as one overall and cohesive unit. The number of such teams depends on the number of aircraft anticipated to be on the ground at the same time. Close coordination is required at all times during EROs between air and ground crews. Team structure and equipment:

1. Aircraft Maintenance Team will: Direct and park aircraft, and control the aircraft perimeter. Consist of one marshalling qualified aircraft maintenance parking director and two assistants to ensure proper wing tip clearances are met. Airfield or MFC commander may direct use of ERO parking director assistants. Decision to require assistants will be based on airfield conditions (i.e., limited clearance, personnel/equipment, or traffic congestion). Non- maintenance personnel can perform as assistants if wing tip clearance is not critical.
2. Load Team will: Load and offload aircraft with trained ERO individuals. The team will consist of a team chief and additional personnel as determined by the type of aircraft and load.
3. User Personnel will: Consist of A/DACG or the deploying unit personnel. User personnel will assist maintenance teams and load teams to the maximum extent possible.
4. Equipment Requirements:
 - a. Onload and offload personnel will be equipped with gloves, steel-toed boots, hearing protection, and goggles (goggles are optional for C-17 operations). During hours of darkness or reduced visibility, reflective vests/belts will be worn.
 - b. Extra sets of C-130/C-141 auxiliary ground loading ramps as required.
 - c. Vehicle with front mounted pintle hook (prime mover).
 - d. C-130 ramp support (milk stool).
 - e. Materials Handling Equipment (MHE).
 - f. Reflective vests/belts and wands.
5. Briefing Requirements:
 - a. All personnel involved in the ERO at the aircraft will receive a briefing on procedures and safety prior to beginning ERO operations. The loading team supervisor conducts the briefing. The load team supervisor will brief the loadmaster at the aircraft.
 - b. The loading team supervisor highlights key topics such as hand signals, route to and from the aircraft, load team position, cargo type, special on/offloading instructions, and use of any

MHE. The load team supervisor will check to ensure all personnel and troops have the required safety items (i.e., hearing protection devices, steel-toed boots).

6. Team duties—Onload.

a. Maintenance:

- (1) As the aircraft taxis into a parking spot, the parking director and assistants will locate themselves in a position to expeditiously accomplish their assigned tasks.
- (2) The maintenance parking director directs the aircraft to the parking spot. After the aircraft comes to a complete stop, clear the area forward of the aircraft and position one person immediately aft and 20 Feet (ft) outboard of each wing tip to ensure the area remains clear.

b. Load team:

- (1) The load team chief will ensure a combination safety briefing and safety check is conducted prior to the start of ERO operations. Briefing topics include hand signals, route to aircraft, position of load team, type of cargo, specific on/offloading instructions, and use of MHE. Check for personal safety items such as goggles, reflective vests/belts, gloves, ear protection devices, and steel-toed boots. Vehicle and troop directors utilize distinctive clothing/equipment such as reflective vest and wands for night operations. Vehicle operators will remain in their vehicles when within 50 ft of aircraft (C-5: 150 ft, C-17: 25 ft) and until vehicle is secured aboard aircraft with one chain forward and one aft.
- (2) Loading team chiefs maintain complete control of their teams, positioning them in a preplanned area clear of engine exhaust, and a minimum of 50 ft aft (C-5: 150 ft, C-17: 25 ft) of the aircraft when it has stopped. The preplanned area should be on the outside of the aircraft's turning radius and clear of engine exhaust.
- (3) The loading teams will not approach the aircraft until all engines are in low-speed ground idle or reverse thrust (C-5 loading team does not approach the aircraft until the crew entrance door is deployed and the scanner has deplaned). In all cases, the load team will not proceed to the aircraft until signaled by an aircrew member. C-5 load team members will always approach the aircraft from the front. When offloading/onloading pallets through the aft doors of the C-5, the person chocking the k-loader will approach the aircraft from the nose and be escorted to the rear of the aircraft by the scanner.
- (4) When the aircraft has stopped and engines are in low-speed ground idle or reverse thrust (on C-5 scanner has deplaned), the load team chief will rapidly position the team via a route that will take them perpendicular to the aircraft's fuselage, at least 50 ft aft (C-5: 150 ft, C-17: 25 ft) of aircraft, until reaching aircraft centerline where they will turn and approach the aircraft. **WARNING:** Load team personnel will remain clear of aircraft cargo ramp until positioned for onload.

- (5) The loading team positions support MHE as required. Trained team personnel install the extra set of aircraft auxiliary ground loading ramps. Team members may assist the aircraft loadmaster in positioning stabilizer struts. **WARNING:** When onloading and offloading, or transporting pallets on forklifts with rollerized tines, secure pallets to the forklift during movement.
- (6) Under the direction of the team chief, with the exception of the C-5, vehicle operators will position loads a minimum of 50 ft (C-17: 25 ft) aft and slightly to the right or left of aircraft fuselage, leaving a clear path behind the aircraft. The preferred method for offloading/onloading the C-5 is in the forward kneel, drive in position. (C-5 loads will be positioned a minimum of 150 ft forward and aft and slightly to the right or left of the aircraft fuselage). Only one piece of loading equipment is to be directed to approach the aircraft at any given time.
- (7) The aircrew loadmaster retains overall responsibility for loading aircraft. The load team chief will coordinate with aircrew loadmaster to present manifest, discuss load sequence, ground vehicle direction, and tie-down requirements.
- (8) Load team personnel will go aboard and assist in preparing the aircraft for a specific load. Other personnel position the first piece of equipment to be loaded at the bottom of the aircraft cargo ramp.
- (9) The ground vehicle director takes a position clearly visible to the vehicle driver. If trailers are pushed aboard, the vehicle director takes a position next to the driver's side cab of the prime mover.
- (10) Positioning the load inside the aircraft requires load team members' assistance in observing load clearance.
- (11) When cargo onload is complete, except for ramp load, troops are directed aboard by the troop commander. All personnel are to remain a minimum distance of 50 ft (C-5: 150 ft, C-17: 25 ft) from aircraft until reaching aircraft centerline where they will be directed by the team chief to the aircraft. Ramp loading will be completed after all troops are onboard.
- (12) Trained team members may assist C-141 aircrew loadmaster in relieving stabilizer strut pressure and stowing of struts. Loading teams assist in stowing the auxiliary loading ramps on the aircraft cargo ramp and placement of extra auxiliary loading ramps in ERO team vehicle. When the aircraft is secured, the team chief stops 50 ft aft (C-5: 150 ft fwd or aft, C-17: 25 ft) on aircraft centerline and signals with thumb up to inform the aircrew loadmaster the load team and equipment are all clear of aircraft.

7. Team duties—offload.

- a. Maintenance. Same as onload.
- b. Load team. Same as onload with the additional requirements outlined below. **WARNING:** Load team personnel will remain clear of aircraft cargo ramp until positioned for offload.
 - (1) If troops are aboard, they are deplaned at the direction of the aircraft loadmaster. Instruct troops to proceed a minimum of 50 ft aft (C-5: 150 ft forward and aft, C-17: 25

ft aft) of the aircraft before turning left or right and continue parallel to the aircraft's wing a minimum of 300 ft (C-17: 200 ft) before stopping.

- (2) Team chief will coordinate offload procedures and conditions with the aircrew loadmaster and receive manifests.
 - (3) Additional team members position themselves to the side of the aircraft ramp until all troops have deplaned. Team chief directs team aboard to remove any remaining tiedown restraints, beginning with the first vehicle to be offloaded and working forward or aft for specific aircraft.
 - (4) The ground vehicle director takes a position 25 feet to the rear of the aircraft and directs vehicles 50 ft aft (C-5: 150 ft forward and aft, C-17: 25 ft aft) before turning to left or right to the receiving area.
 - (5) Offloading team departs aircraft after ensuring all tiedown equipment is positioned on aircraft centerline and auxiliary loading ramps are placed on the aircraft ramp as required. (C-5--stow tiedown in containers during kneeling and unkneeling if time permits.)
 - (6) Trained team members may assist C-141 aircrew loadmaster in relieving stabilizer strut pressure and stowing of struts. Offloading team assists in stowing the auxiliary loading ramps on the aircraft cargo ramp and placement of extra auxiliary loading ramps in ERO team vehicle.
 - (7) When aircraft is secured, the team chief stops 50 ft (C-5: 150 ft forward or aft) aft of aircraft centerline and gives thumbs up to inform aircrew loadmaster the team and equipment are all clear of aircraft.
- c. Troop Loading/Offloading.
- (1) Exiting through the aft cargo door and ramp is the preferred method when troops are involved on the C-130, C141, and C-17. The preferred method for the C-5 is through the forward ramp. Deplane passengers before offloading cargo and load passengers after unloading cargo, unless cargo size and location dictate otherwise.
 - (2) Troops being onloaded and offloaded will be briefed on the hazards involved with ERO procedures. Minimum items that should be briefed include securing loose articles, hearing protection, and any local conditions, etc.
 - (3) Crew entrance door loading/offloading will be in accordance with publications. Deplaning personnel must be briefed to remain forward of the extended interphone cord. **WARNING:** When loading or unloading personnel, baggage, or equipment through the crew entry door with engines operating, stay clear of engine inlets. Secure all loose personal items before passing in front of operating engines. Personnel will not proceed aft of the crew entrance door while engines are operating.
 - (4) When offloading troops through the front crew door, troop buses will park in front of the aircraft on the left side with the nose of the bus pointing away from the aircraft, and no closer than 50 ft (C-5: 150 ft) forward of the left wing movement.

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