

Inherent Hazards of Towing or Spotting Military Aircraft



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HAZARDS OF TOWING AIRCRAFT

Towing military aircraft requires precision, skill and strict adherence to safety protocols. Whether on the flight lines, in hangars, along the runway or aboard a ship, this task demands a comprehensive understanding of aircraft specifications, towing equipment and a commitment to safety.

This task comprises precision, expertise and inherent danger, making it a high-risk maintenance event rather than a routine task. The complexities of military aircraft require heightened caution and awareness due to their intricate nature and unpredictable challenges. Towing military aircraft involves attention to detail and strict adherence to established procedures. From initially deciding to tow an aircraft to successfully completing the procedure, a meticulously coordinated series of steps ensures personnel safety, asset protection and aircraft integrity.

Individuals responsible for towing military aircraft must understand the technical complexities of both the aircraft and the towing equipment. Assigning a novice as a wing walker is less than ideal. Military aircraft, diverse in shapes and sizes, present distinct specifications and requirements, necessitating comprehensive knowledge. This knowledge includes understanding the aircraft's specifications, weight distribution, landing gear configuration and unique features that could impact the towing process. Technical proficiency ensures precise execution of towing operations aligned with aircraft publication guidelines. A thorough understanding of the specific aircraft being towed is essential. Before initiating any towing operation, the towing team must be familiar with these specifics to ensure a safe and efficient procedure.

The first critical step in the towing process involves conducting a comprehensive pre-tow inspection. This inspection includes a careful examination of both the towing equipment and the aircraft. Towing vehicles, or tugs, undergo scrutiny for wear, damage or malfunctions, highlighting the need for regular maintenance to ensure reliability. Similarly, the aircraft's landing gear, brakes and structural components are assessed to verify their optimal condition for towing. A review of the aircraft data book must also confirm the aircraft is capable of being towed.

Once the pre-tow inspection is completed and the towing team is satisfied with the condition of the equipment and aircraft, a pre-tow briefing is conducted. This meeting involves communication between the towing team, maintenance control, quality assurance and air traffic control as needed. Essential information, such as the towing route, potential obstacles and emergency procedures, is discussed. Effective communication during this phase is critical to the towing operation's success, as any misunderstandings could lead to accidents or delays.

Before beginning the actual towing process, careful consideration is given to the aircraft's weight and balance. Maintaining a delicate balance is crucial to prevent undue stress on the landing gear or structural components. The towing team must remain aware of the aircraft's center of gravity and ensure the towing equipment is correctly positioned to maintain balance throughout the operation.

During the towing process, a slow and controlled pace is essential. The towing team must exercise caution to prevent sudden movements that could jeopardize control or cause damage to the aircraft. Clear communication signals between the tow director and ground crew members ensure synchronization, contributing to a smooth and safe towing operation.

Environmental factors play a significant role in towing procedures, with adverse weather conditions posing challenges and increasing the risk of accidents. Adjustments or

HAZARDS OF TOWING AIRCRAFT

postponements of towing operations are necessary if weather conditions compromise safety.

In case of an emergency or unexpected complication, a well-established contingency plan must be in place. This plan outlines procedures for disconnecting the tow, securing the aircraft and addressing potential hazards. Regular drills and simulations prepare the towing team for such scenarios, facilitating a quick and coordinated response in critical situations.

In conclusion, towing or spotting military aircraft is an inherently hazardous high-risk maintenance event necessitating a meticulous approach. The coordination of personnel, effective communication and a steadfast commitment to safety at every stage are paramount. Only through precision, adherence to established procedures and constant vigilance can military aircraft towing be executed successfully, ensuring the protection of valuable assets and the well-being of all involved.

The unique configurations of military planes, coupled with high-stakes operational environments and constant security risks, underscore the impracticality and risks of routine practices. Those entrusted with these responsibilities must approach each operation with utmost caution, recognizing the exceptional challenges inherent in handling military aviation assets and ensuring the evolution is not just a routine task.

AIRCRAFT MOVE RISK MANAGEMENT SAFETY BRIEFING CARD

- Is aircraft safe to move (operable brakes, critical doors and panels installed, overall integrity, etc.)?
- Has a comprehensive safety brief been conducted with all personnel before the move?
- Are a qualified Plane Captain, licensed tractor driver, qualified brake rider, two wing walkers and one tail walker assigned to the move?
- If the aircraft does not have operable brakes, are there two additional chock walkers assigned to the move?
- Are all personnel aware of their responsibilities regarding emergency procedures, hand signals, walking distances and towing speed?
- Are the ejection seat and canopy pinned and safe?
- Are the APU and the Emergency Brake Accumulator pressurized to minimum 2,900 psi?
- Are the wing/tail walkers equipped with operable whistles/wands (as applicable)?

Cover: Aviation Boatswain's Mate (Handling) 2nd Class Andres Carlon, assigned to the air department of USS Gerald R. Ford (CVN 78), connects an aircraft tow bar to an aircraft tractor on the flight deck in the Mediterranean Sea, Oct. 9, 2023. (U.S. Navy photo by Mass Communication Specialist 2nd Class Nolan Pennington)