



# NAVAL SAFETY COMMAND

## SAFETY AWARENESS DISPATCH



SA 22-26

### *Falls From Height*

Fall protection may be a modern term, but falls from height have been an issue for more than two centuries in the naval services. The first issue of Fathom (the former Navy afloat safety magazine), published in 1969, contains an article on this very subject (see photo from the issue on page two). In the Navy and Marine Corps, falls from height are one of the leading causes of injury and death. Bringing this hazard to the forefront, the first three Naval Safety Command Local Area Assessments\* noted 160 fall protection discrepancies, ranging from poorly maintained handrails to a lack of a unit fall protection program. As you read the following fall protection-related examples, consider your work environment and the steps you take to prevent falls from height.



- A civilian employee was performing scheduled maintenance on air handlers located on the rooftop of a building. After changing numerous belts on the handler, the employee stepped back to walk away from the unit during start-up procedures. The employee lost her balance and fell through a nearby ski light approximately 20 feet to the lower level. She sustained injuries to her head, shoulder, and arms, requiring eight days in the hospital and 45 days on light duty. The report noted that the employee had not completed training on working from height; the supervisor did not complete the pre-operation-risk assessment brief or the job hazard analysis, and there was no cover installed over the skylight — *all are required actions aimed at preventing such a severe accident.*
- A Marine maintainer was inspecting multiple panels on the left wing of a V-22 Osprey aircraft. The maintainer climbed onto the left wing wearing a cranial but not a harness. The maintainer was sitting on the wing with his feet on the left flaperon, which was in the neutral (near parallel to the ground) position. As he attempted to get the attention of another maintainer, who was walking by the aircraft at the time, he shifted his body weight, causing the flaperon control surface to move to the full down position. The maintainer fell off the plane, hitting the ground feet first, followed by both wrists. He was transported to the local emergency room, where he was treated for bilateral broken wrists. The unit's policy states that a harness must be worn when working above the sponson of the aircraft — *and there was a fall arrest anchorage available close by. The maintainer read and acknowledged the policy and attended fall protection training but didn't take the time to grab a harness and use it — we bet he will next time.*
- A Sailor was climbing down an escape trunk when she slipped and fell approximately 30 feet, hitting the protective grating on the main deck on the way down. She fell through an opening created by one half of a deck grating in the up position to accommodate temporary services being routed down the escape trunk into main engine room 2. The Sailor landed head first, with her head and upper back absorbing most of the impact. She was transported to a local trauma center, and diagnosed with a fractured rib. The ship was in an extended dry-dock availability at the time, a higher safety risk period with hatches and scuttles open that would typically be closed. — *This mishap was preventable had the maintenance team completely closed the grate or if the ship's force secured the escape trunk from personnel transiting. If transiting the trunk was necessary, the Sailor should have used proper fall arrest gear. Ship's force voiced concern about the open grating in multiple reports, leading the maintenance team to only half close it to allow them to route temporary services through it. Strict coordination between the ship's force and shipyard supervisors regarding adherence to fall protection measures is critical for everyone's safety.*
- While working aloft on the ship's kingpost, a civilian mariner lost situational awareness and removed his safety harness to gain access to his water bottle that was obstructed by the fall protection equipment. The assigned safety observer and fall protection assistant could not see the mariner at the time of the incident. Only the ship's master noticed the mariner without this harness on and instructed him to correct the gross

\* Local Area Assessments are completed by multidisciplinary teams focused on day-to-day unit level standards and compliance. The teams visit multiple units including ships, submarines air stations and facilities in a given fleet concentration area.

## Falls From Height

violation of fall protection procedures. — *Aside from the mariner's lapse in judgment, this near miss highlights the importance of an adequately stationed safety observer. If you cannot see the person aloft, you are not observing — and working aloft isn't the time to have a mental lapse. Make sure you're up to the task mentally and physically before you climb.*



Sailors using stacked trash cans as a makeshift work platform. Fathom magazine 1969

- A Sailor was inspecting a paint job over the side of the ship. He climbed through the ship's lifelines and over the rail of the paint float. Within seconds of boarding, the Sailor fell down a ladder access six levels to the deck (approximately 36 feet), sustaining head, back, and knee injuries. The report isn't clear if the Sailor was attempting to climb down the ladder or if he tripped into the ladder opening, but two safety issues were identified in the report. Responders noted the ladder rungs were bare metal with no nonskid and the ladder extended an uninterrupted height of 40 feet with no fall arrest system. — *Paint floats are **not** exempt from meeting fall protection requirements, mainly when they include scaffolding. The unit owning them (usually port operations) is responsible for meeting all safety requirements — taking ownership is the right thing to do.*

- A Sailor spent the afternoon on liberty out to eat and then at the beach, where he and two friends shared a bottle of tequila and several beers. Upon clearing the entry control point to the ship, the Sailor walked up the enlisted brow, stepped onto the ship and then fell to his right and backward, resulting in him falling overboard onto a barge between the vessel and the pier. The ship's force responded immediately, followed by shore medical assistance within minutes. The Sailor was transferred to a local medical center, where he was later pronounced deceased. — *There were no safety barriers between the brow and flight deck net frames, which would have prevented the fall. Brows are high-risk transit areas in the best of conditions, so excess use of alcohol and lack of passive fall protection measures such as safety lines and safety nets compound the risk. Here is a risk management question: How many ships have only non-drinking Sailors returning from liberty? Our best guess is "Zero." Even moderate alcohol consumption can impair balance and reflexes. Fall protection measures are essential on the brow. Look for the gaps and mitigate them.*

### Key Takeaways

Whether you're working atop an aircraft, on a ship's mast, or on a roof or scaffolding (to name a few), the risk of injury from a fall is *high*. Bad pun aside, that's why fall protection requirements exist. Each of the examples in this dispatch was preventable with proper adherence to fall protection guidance at some level. Here are a couple of points to help ensure you have a healthy fall protection program.

1. **Safety is an all-hands evolution.** Regarding safety, the more informed and aware you are, the safer you will be. Safety officers are responsible for maintaining a safe work environment by managing a safety program that includes fall protection. Supervisors and individuals should be trained on the basic requirements for fall protection gear and mitigation. If your gut tells you, "this doesn't look right," it probably isn't. Tell your supervisor if something seems unsafe and follow all available fall protection mitigation measures.
2. **Fall protection isn't a catchphrase; it's a mindset.** To most of us, this concept is obvious, but as this dispatch shows, some have yet to embrace it. Fall protection isn't about passing an inspection; it's about keeping you safe. However annoying that harness is, or how burdensome the extra precautions to mitigate a fall hazard seem, they are small investments in your safety or your life. You shouldn't **feel** like you **have** to comply with fall protection requirements; you should **want** to. That's the key to a culture of excellence and, safety.

#### References:

OPNAV 5100.19F (afloat)

OPNAVINST M-5100.23 CH2, which references the DoN Fall Protection Guide

NAVMC Directive 5100.8, Marine Corps Occupational Safety and Health Program Manual

*And remember, "Let's be careful out there"*