



## *Underway Replenishment Mishaps*

Underway Replenishment (UNREP) is a critical (*and often dangerous*) operation to resupply ships at sea, and it carries inherent risks that must be carefully managed. The proximity of vessels, adverse weather, fatigue, and loss of situational awareness (*to name a few*) in this dynamic environment can risk personnel safety and mission success. As you'll see in this dispatch, seemingly minor mistakes can turn into potential severe mishaps in seconds. Please read our examples of UNREPs gone wrong and share them with your deck crews before your next replenishment evolution.



- **Oops, Did I Do That?** During UNREP, the messenger line was accidentally dropped into the water at station #2. While putting a turn on a winch drum to retrieve the messenger, the line ran through the operator's hands, causing friction burns to three fingers on his right hand. The motion also wrenched the Sailor's shoulder, arm and back. He was treated for burns and pain in sickbay. —*This is a classic example of how fast things can go wrong and someone can get hurt. Someone must always observe the other ship's UNREP stations to quickly catch mistakes like dropping lines. Once a line goes in the water, there are only seconds to react. Stay watchful and never allow anyone to stand in the bight of a line.*

- **It's the Real Thing!** When a receiving ship was alongside and connected, the replenishment ship sent over the fuel hose to the ship's refueling station. Five to ten minutes after the fuel transfer began, the clamp on the fueling JP-5 hose at the ship's fueling station unseated. The rig captain called "Cease pumping," which was acknowledged by the ship's bridge team and the replenishment ship. The rig captain tried to reconnect the clamp, but in doing so, fuel sprayed onto his body, mouth, ears, and nose (*but not his eyes; he must've been wearing his goggles*). The station safety observer ordered the rig captain to medical, where he was treated and released. The fueling hose "pig tail" at the connection point was too short (6 feet vs 10 feet). Had the replenishment ship sent over the correct hose, the "wedding band" would not have disconnected, according to the report. While the replenishment ship crew was new and inexperienced and sent over the wrong hardware, the report also noted that the rig captain should have recognized the hose was too short and not attempted to reconnect it. —*This mishap highlights the importance of knowing your gear both on the replenishment ship and the receiving ship and recognizing when there is a problem rather than trying to forge ahead. Know the setup and recheck it every time. Important Side Note: Wear your PPE, such as non-vented goggles, when connecting fuel hoses. Additionally, the rig captain should be watching all involved at the station and the riggers should be connecting the hose, NOT the rig captain.*

- **This is Not a Drill.** While alongside the replenishment ship, the receiving ship started receiving fuel. Personnel at the fueling station stated they heard one of the receiving ship's main engines stop running and they could see their ship start to slow down and fall behind the replenishment ship. The ship's bridge personnel announced, "Engineering casualty, loss of propulsion" and were ready for emergency breakaway. The officer of the deck requested to conduct an emergency breakaway from the replenishment ship and sounded five short blasts of the ship's whistle. As the receiving ship initiated the emergency breakaway, the fueling station attempted to release the F-44 2.5" D-2 Nozzle. Still, it got stuck because the pressure from the replenishment ship's pumps was too great, and the riggers couldn't shut the valve. It was stuck against the bulkhead and the angle to release the probe kept narrowing as their ship continued falling behind the replenishment ship. After the station personnel managed to release the nozzle, the probe assembly then got stuck on drain pipes that were forward of the rig as it released back toward the delivery ship. Sailors 1 and 2 started pushing the probe away with their hands so prevent damage to the nozzle and pipes. The report noted that there was no maul on station, which could have helped release the assembly. The probe eventually released on its own and the carriage assembly struck Sailor 1's hand against the pipes. Sailor 1 sustained a 2 ½ inch laceration on his hand and was flown to a nearby aircraft carrier for

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treatment. Sailors 3 and 4 finished de-rigging the station and all lines were cleared. —*An emergency breakaway is simply a standard accelerated breakaway, but when it's for real, there's nothing simple about it. Real emergencies will point out our flaws "real quick", as in this case. Ensure you have all available tools on station for every evolution, because saying, "Hey, someone go find a maul" during an emergency isn't going to cut it.*

- *"Focus, Po. Focus". – Master Shifu. While conducting UNREP, the receiving ship requested an emergency breakaway drill at the completion of the delivery, which the replenishment ship's master*

approved. After the sound signal to commence the emergency breakaway drill, the receiving ship released the double probe and the station gave the hand signals to the replenishment ship to retrieve the rig. As the replenishment ship's deck personnel heaved in on the #1 and #2 saddles, the #1 saddle came to the top of the station as deck personnel continued heaving it in...while looking and focusing solely on saddle #2. This action snapped the retrieving line wire causing the double probe and the remaining hose to slide down the span-wire back toward the receiving ship. The receiving ship released the span wire, causing the double probe and remaining hose to fall into the water and drag alongside the replenishment ship's hull, destroying the probe assembly.—*UNREPS are high-risk, dynamic evolutions that take teamwork and concentration from everyone involved. If a team is losing focus, the safety observer or rig captain should break the error chain. That's why we have them. Everyone can be a "safety observer" and provide backup.*

- *What a Drag. During UNREP in 10-20 knot winds and heavy seas, the weather forced the two ships to roll away from each other causing line handlers to drop a line unexpectedly. One line handler's foot became caught in a bight in the line, which dragged him approximately 20 feet across the deck. Other line handlers were able to jump on the line and free him, who was treated for scrapes and bruises. —This misplaced foot could have easily led to a man overboard or a severe injury. Heavy seas and high winds elevate risk. Put the strongest, most experienced Sailors in critical roles, and remember that **everyone** is a safety observer. "Do not step in the bight of a line" is part of every line-handling safety brief to prevent this very incident from occurring.*

### Key Takeaways

Safe UNREP takes effective communication, training, teamwork, supervision, physical conditioning, experience, qualifications and well-maintained equipment. Consider these takeaways when training and briefing your teams for your next UNREP.

1. **"It's not the will to win, but the will to prepare to win that makes the difference."** — *Bear Bryant.* UNREP stations are a team sport with all the associated elements, such as member synergy, practice, conditioning, leadership and a balance of talent. Working UNREP stations is a physical job that requires personnel in reasonable shape who can work effectively as a team. Balance your line teams based on strength and experience. Train as a team, perform as a team.
2. **"Effective teamwork begins and ends with communication"** — *Mike Krzyzewski.* Continuing the team theme, effective communication is critical to safe operations. NO one wants "unplanned events" during UNREP, but any experienced UNREP deck officer or Sailor knows it happens more often than they would like. Expect the unexpected and be ready to react immediately. That's why clear and timely communication is so important. Whether it's bridge-to-bridge, bridge-to-station, station-to-station or at the station, standard commands need to be heard and understood by everyone. Unexpected events happen, but no one should be surprised or confused by routine steps in the process.
3. **"Champions adjust. They take what they have and adjust to the situation."** — *Billie Jean King.* Leadership and supervision play a crucial role in safe Deck operations during UNREP, or any operation for that matter. When things don't go according to the plan, that's when leaders step up and take decisive action to maintain team coordination and safety. Levelheaded, experienced supervision will prevail when routine turns to chaos. Supervisors who learn to anticipate ship and environmental forces' effects on UNREP operations can prevent line runaways or span wire surges from hurting someone. It's a skill that, once mastered, will save limbs and lives.

*And, like we always remind you, "Let's be careful out there."*