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Approach

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RDML Christopher J. Murray, Commander, Naval Safety Center
Col. Glen Butler, USMC, Deputy Commander
Margret Menzies, Head, Media and Public Affairs Department
Naval Safety Center (757) 444-3520 (DSN 564) Dial the following extensions any time during the greeting
Publications Fax (757) 444-6791

Approach Staff

LCDR John Lynch	**Acting Editor**
john.lynch@navy.mil	Ext. 7224
Allan Amen	**Art Director**
allan.amen@navy.mil	Ext. 7248

Aviation Safety Programs Directorate

CAPT Chris Saindon	**Director**
christopher.saindon@navy.mil	Ext. 7225
Kimball Thompson	**Deputy Director**
edward.thompson@navy.mil	Ext. 7226
LCDR Richard Thousand	**Aircraft Maintenance and Material Division**
richard.a.thousand@navy.mil	Ext. 7265
CDR Albon Head	**Aircraft Operations Division**
albon.head@navy.mil	Ext. 7203
CDR Robert Stephenson	**Aircraft Mishap Investigation Division**
robert.l.stephenson@navy.mil	Ext. 7236
CAPT Robert Frick	**Aeromedical Division**
Robert.frick@navy.mil	Ext. 7228
CDR Rudolph Ohme	**Safety Culture and Risk Management Division**
rudolph.ohme@navy.mil	Ext. 7212

Analysts

CDR Albon Head	**NATOPS/WESS Program Manager**
albon.head@navy.mil	Ext. 7203
Leslee Duncan	**Asst Div Head, WESS, ATC, NEXTGEN, MISREC**
leslee.duncan@navy.mil	Ext. 7245
LtCol Adam Hyams, USMC	**Marine Liaison, H-1, H-46, CH-53E, MH53E, V-22**
adam.hyams@navy.mil	**Ext. 7209**
LCDR John Lynch	**FA-18E/F, MFOQA, ARSAG**
john.lynch@navy.mil	Ext. 7224
Maj. W.D. Hodgins, USMC	**AV-8B, F-35**
wynn.d.hodgins@navy.mil	Ext. 7216
LCDR Brian Donovan	**EA-18G, UAS, C-12/20/26/35/37**
brian.m.donovan@navy.mil	Ext. 7142
Maj. Scott Symons, USMC	**FA-18A-D, F-16, F-5, T-38, F-35, LSO**
scott.symons@navy.mil	Ext. 7217
Maj. James Trotter, USMC	**EA-6B**
james.trotter@navy.mil	Ext. 7261
LT Jake Emig	**T-39/45/6/44/34, FA-18E/F**
peter.emig@navy.mil	Ext. 7071
LT Steve Whiteway	**MH-60S, TH-57,**
stephen.whiteway@navy.mil	Ext. 7266
LCDR Jim Landis	**ORM, Culture workshop**
james.r.landis@navy.mil	Ext. 7263
LT John Betza	**MH-60R, SH-60B, SH-60F, HH-60H**
john.betza@navy.mil	Ext. 7242
LCDR Ken Tallarico	**P-3, EP-3. P-8, C-9/40/130, E-6B, T-44, E-2, C-2**
Kenneth.tallarico@navy.mil	Ext. 7272
LCDR Tracy Mackey	**Facilities Branch, Fuels, CFR/ARFF, BASH**
tracy.mackey@navy.mil	Ext. 7281
LCDR Paul Kite	**ATC**
paul.kite@navy.mil	Ext. 7218
ABCM (AW/SW) Tyrone Roseborough	**ALRE/Air Terminal**
tyrone.roseborough@navy.mil	Ext. 7282
ACC(AW/SW) Chris Sweet	**ATC**
christopher.e. sweet@navy.mil	Ext. 7240
All Analysts	**All**
safe-code11@navy.mil	Ext. 7811

Mishaps cost time and resources. They take our Sailors, Marines and civilian employees away from their units and workplaces and put them in hospitals, wheelchairs and coffins. Mishaps ruin equipment and weapons. They diminish our readiness. This magazine's goal is to help make sure that personnel can devote their time and energy to the mission. We believe there is only one way to do any task: the way that follows the rules and takes precautions against hazards. Combat is hazardous; the time to learn to do a job right is before combat starts.

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CON

Features

Welcome RDML Murray

In October, Rear Admiral Christopher J. Murray took over from RDML Kenneth Norton as Commander Naval Safety Center. RDML Murray has served tours with VF-1, VF-124, VF-111, and VF-14, culminating this phase of his career as C.O. of VF-143. He served as Commander of Carrier Air Wing Nine from November 2006 to December 2009.

RDML Murray

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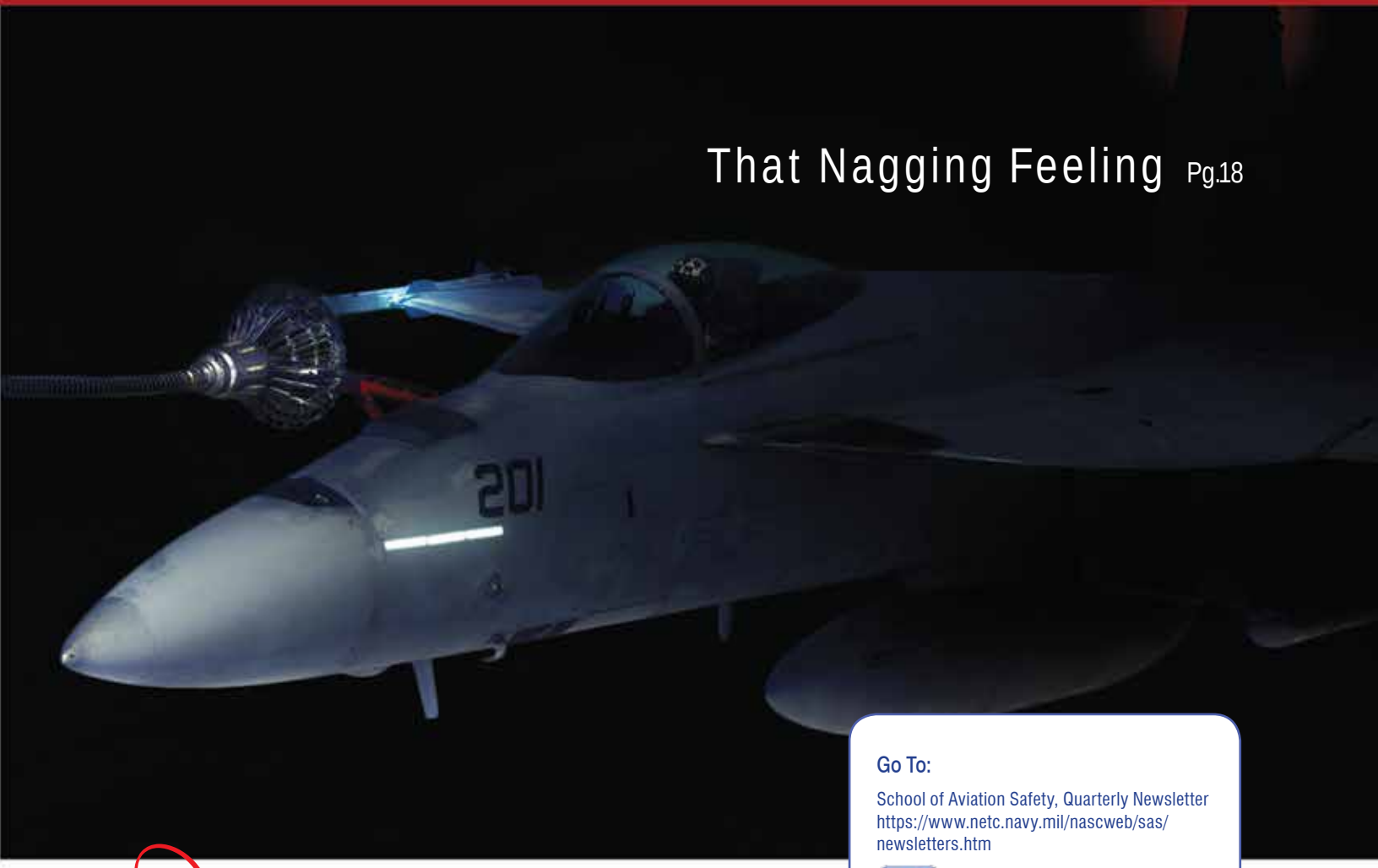

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Front cover: AB3 Tration Humphrey directs an AV-8B Harrier aboard the multipurpose amphibious assault ship USS Bataan (LHD 5). Photo by MCSA Michael J. Lieberknecht.

Back cover: Photo by Matthew Thomas.

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The Initial Approach Fix

All Bets Are Off When You Color Outside The Lines

As I am putting pen to paper to write this Initial Approach Fix for the November - December 2014 edition of Approach, we are very close to the end of fiscal year 2014. The end of the Fiscal Year marks not only the end of the budget year for the Department of Defense, but also the time of year when we round up all of our mishap and hazard reports and summarize the annual safety statistics for Naval Aviation. Doing the analysis deep-dive, it quickly became apparent that FY-14 would not go down in the record books as a good year for Naval Aviation safety. During FY-14 the Navy and Marine Corps team flew over 1,086,000 flight hours, but suffered 29 Class A/B Flight mishaps, resulting in the loss of 14 aircraft, over $755 million in mishap costs and the tragic loss of 5 aviators and aircrewmen. The real tragedy though is that every one of these mishaps was completely preventable.

"Preventable" is a word that you've probably heard quite frequently in almost every post-mishap narrative. Looking at this year's aviation mishaps though, I'm compelled to come up with a different adjective to put in front of the word "mishap" that more accurately describes exactly why these mishaps should have never happened. In almost all of the aviation Class A and B mishaps that occurred in FY-14, lapses in both NATOPS and/or maintenance procedures were found directly causal. Whether it was failure to follow our tried and true Naval Aviation Maintenance Program procedures, failure to conduct effective pre-flight planning as outlined in OPNAVINST 3710, failure to execute a mission as briefed, or exceeding hard NATOPS limits, these mishaps all could have been prevented had we followed our established procedures.

If there is a step in the maintenance procedure that requires a Collateral Duty Inspector (CDI) to check torque on a fastener, that step requires a CDI because it is a critical step that will likely cause a mechanical failure if not done correctly. In other words, it's in the book for a very good reason! If a squadron SOP requires landing with a minimum amount of fuel, that minimum fuel quality is defined for a good reason. If NATOPS dictates that a takeoff should not be aborted above a particular speed, that limit is there to prevent you from burning up your brakes and/or having a high-speed runway excursion. We have CV NATOPS procedures to follow for Case III operations, FCLP procedures, and even local procedures for places like Fallon and Twentynine Palms…all designed to help us operate safely.

So why did we not follow our procedures in many of these mishaps? Some might argue operational pressures or chasing readiness requirements are causing folks to cut corners. Others might say that we are not flying enough to remain proficient. I would assert that we have always had the challenges of dealing with operational pressure, balancing limited resources and obtaining readiness goals. Those challenges are not new to Naval Aviation. I go back to the basics of my Naval Aviation training: Know your procedures cold and follow your procedures to the letter. As we all know, many of the procedures were "written in blood" so don't make the mistake of thinking that "NATOPS is for new guys" or "only rookies do maintenance with the book open" or "I can push the limits of NATOPS just a little because I'm a better than average pilot." The mishaps this past year serve as a stark reminder that procedural compliance is the foundation of safe and effective mission execution in our profession. Start "coloring outside the lines" of procedures and all bets are off.

So, when you look back and think about the Naval Aviation Mishaps that occurred in FY-14, rather than thinking about these mishaps simply as "preventable," think about how procedural failures made these mishaps "needless mishaps." Most if not all of this year's "needless mishaps" would have never happened had we executed professionally and followed our established maintenance and operational procedures. This reminds us that "safety" is nothing special, or extra — it's merely a byproduct of professionalism, and must be embedded up front into mission planning and executions.

— CAPT Chris Saindon, Director, Aviation Safety Programs, Naval Safety Center.

The Dirty Way to Souda Bay

BY LTJG ALEX FLETCHER

As the most junior pilot in the squadron, I was excited to be on my first cruise and the second combat deployment for the USS *George H. W. Bush* (CVN 77).

We were underway for less than a month conducting operations to maintain proficiency in the Mediterranean Sea. I was scheduled for a night simulated bombing hop dedicated to Joint Direct Attack Munition (JDAM) employment. As usual for the F/A-18C, we launched with just enough fuel to safely recover 1.5 hours later.

To practice JDAM employment at tactical airspeeds we would need to refuel once airborne. The air wing was conducting bingo operations, meaning when any aircraft reached a minimum fuel state, it would divert from the ship to a land-based field. Our primary divert

was NSA Souda Bay, on the Greek island of Crete, approximately 110 nm from the ship.

My wingman and I were fragged to receive 1,500 pounds of fuel from an F/A-18F tanker. That had been tasked to refuel a jet on the previous recovery and couldn't give us our fragged fuel.

On to plan B. Our mindset shifted to a max endurance profile for the entire cycle in order to stretch our fuel till the recovery.

The F/A-18C is well-known for two major issues in the carrier environment. First, it has the least amount of endurance of any current carrier-based aircraft. Second, it has the most restrictive landing weight. A standard, 1.5-hour mission at night becomes a continuous time-versus-fuel problem, even before launching from the ship. Because of this, we use a "ladder" built with times and fuel states to determine how much "extra" fuel we will have over the course of a mission. If we reach a point inflight when we have no extra fuel remaining, we consider ourselves "on ladder" and fly at max endurance airspeed until we land. Generally, a 1.5-hour mission requires airborne refueling to stay above ladder.

An hour after takeoff at 27,000 feet, we checked in with the marshal controller and began our descent to the marshal stack aft of the aircraft carrier, affectionately called "mom." My wingman and I separated in the descent and proceeded to our holding altitudes. I was relieved to be back above ladder prior to commencing the CV1 approach.

As I descended through 1,600 feet preparing to level off, I heard the master caution tone. I felt an adrenaline rush as I saw the master caution light and the words "HYD 2A" on my left display. I thought, "Of all times to get a HYD 2A, why now?" I was only one minute from extending the gear, a service that is provided solely by the HYD 2A system. At this point my fuel state was 6,000 pounds.

After leveling off at 1,200 feet, I requested assistance from our squadron rep on the ship. While we discussed my issues, approach instructed me to dirty up. I reported "unable" and was immediately vectored off the final bearing and given a climb to 2,000 feet.

The rep read through emergency procedure for a HYD 2A failure until we arrived at the final step: the Landing Gear Emergency Extension procedure. As I prepared to emergency extend the gear, the HYD 2A caution cleared.

Before I could breathe a sigh of relief, the HYD 2B caution appeared. The cycling of the HYD 2 system circuits indicates that the reservoir level sensing (RLS) system is working. The RLS is designed to isolate a hydraulic leak and retain functionality of the hydraulic systems by alternating between the two circuits of the HYD 2 system until the reservoir level is stabilized. Initially it turns off the A circuit, but if the leak persists, it turns the A circuit back on and turns off the B circuit. If the leak continues, both systems are reactivated until the remaining hydraulic fluid depletes leaving the entire HYD 2 system inoperable.

My rep and I decided to lower the gear and select half flaps with the recently regained HYD 2A system. The gear came down without any issues, and I received normal three-down-and-locked indications. After reporting my status to approach, I received a descent to the pattern altitude of 1,200 feet and a turn to the final bearing. Prior to intercepting glideslope, I selected full flaps for a normal approach configuration. At 1 nm aft of mom, just prior to the ball call, I was instructed to discontinue the approach, climb to 2,500 feet, and proceed to the tanker.

I didn't know that I'd been sent to the tanker because the preceding aircraft had a nosewheel steering failure on touchdown, thus requiring a tow out of the landing area. My rep told me to remain dirty, select half flaps, and proceed to rendezvous with the tanker.

I climbed to 2,500 feet and switched to the departure controller, who told me that the tanker was on my 12 o'clock for 4 miles at 8,000 feet. I was visual two aircraft, but because of the difference in altitude, I couldn't tell which one was my tanker.

I tried to contact the tanker and request that he join on me due to my low fuel state and "dirty" configuration. With the large altitude split, distance, and difficulties in establishing comms, we were not joined until 4 minutes and 45 seconds from when I was initially instructed to tank. My fuel state was 4,500 pounds as I prepared to connect to the basket of the tanker at 180 knots.

The rep gave me the bingo numbers to Souda Bay: 2.9 clean, 4.2 dirty. We needed to quickly decide about my configuration, especially since we decided to leave the gear down and execute a dirty bingo. We could assume that the leak was isolated in the HYD

Attempting to tank dirty at 180 knots (70 knots slower than normal) proved to be much harder than I expected.

2B system, but if we were wrong, I might completely lose all HYD 2 systems, ultimately resulting in the loss of the landing gear extension, nosewheel steering, and brakes. We decided to plan for the dirty bingo.

Attempting to tank dirty at 180 knots (70 knots slower than normal) proved to be much harder than I expected. I experienced frequent pilot induced oscillations (PIO) because of the increased drag of the landing gear and slower airspeed. The first indication that something wasn't normal was when a green light, which indicates fuel is flowing from the tanker's air refueling store (ARS), did not illuminate.

Over the course of two minutes, I received just 150 pounds of fuel. The tanker pilot requested that I disconnect from the basket and we make another attempt at a higher airspeed. At this point I realized that I'd actually burned more fuel over the previous two minutes than I had received. I was at my dirty bingo number. After reporting my fuel state to the rep, I heard the words that told me this night was far from over: "407, your signal is divert."

I placed Souda Bay on my nose and began to accelerate, executing the dirty bingo profile up to 32,000 feet. After a short level-off at altitude, I prepared to begin my descent into Souda Bay. Several considerations were in the forefront of my mind that are not normally a concern when operating in CONUS. The most significant three were communicating with the foreign controllers, dealing with high terrain, and being unfamiliar with the divert.

From the moment I established comms with Souda Bay Approach, the language barrier proved to be even more difficult than I had imagined. It took multiple comm calls to obtain information on the status of the arresting gear and flight following (to stay clear of the mountainous terrain). I requested the gear to be rigged on both ends in the event that I either missed the short field gear on runway 11, or decided to change to runway 29.

The biggest concern now was the 8,500-foot mountains between my position and the runway. I used the moving map on my jet's display and TACAN cuts to delay my descent until I was safely across the terrain. At 20 miles east of the field, while assessing my fuel state and the light winds on deck, I decided to land on runway 29, opposite of the runway in use. I executed a straight-in approach to a short field arrested landing. After catching the wire, I noticed that I had touched down with 1,450 pounds of fuel remaining – just 50 pounds less than the bingo profile prescribed.

Overall, a number of factors led me to divert that evening. First, the tanker was not in the normal position, which caused a lot of confusion and ultimately a substantial delay to rendezvous. Also, my communication could have been more clear and directive.

With no experience tanking dirty, I should have elected to raise the flaps to auto and requested a higher airspeed to keep the jet in a more familiar flight regime. This would have allowed the ARS to operate more effectively. We should also have considered raising the gear and ultimately using clean bingo numbers. Although this may have led to a required emergency extension of the gear, this emergency procedure has a high rate of success.

Finally, the dirty bingo profile was executed properly, but the communication barrier with the air traffic controllers proved to make the recovery more challenging. The use of standard ATC phraseology with plain language when required provided sufficient situational awareness between me and ATC.

The entire event turned out to be a valuable learning experience with a plethora of lessons learned to pass down to the ready room. If I see this issue again in my career, I'm confident that I won't be taking the dirty way to Souda Bay, or anywhere else.

LTJG ALEX FLETCHER IS THE SCHEDULES OFFICER AT STRIKE FIGHTER SQUADRON 87, DEPLOYED WITH CARRIER AIR WING EIGHT ABOARD CVN 77 IN THE 5TH FLEET AREA OF OPERATIONS.

"THIRD TIME IS THE CHARM"

BY LCDR TRAVIS LIKES

The E-6, while one of the newer aircraft in naval aviation, has begun showing its age. Just like any vehicle, as it ages you start seeing problems and things stop working as well as they used to. The E-6 uses the CFM-56 engine, the most widely used turbofan engine in the world. It is super reliable and takes both age and abuse quite well. Engine problems are, therefore, still quite rare.

Imagine my surprise when I was sitting in crew rest enjoying a lovely snack and heard my flight engineer yell, "Sir! You may want to come here!" My first thought was either someone was getting ready to play a practical joke on me or that one of the other pilots needed a relief. I hopped up to the cockpit.

The flight engineer was simultaneously opening the NATOPS and pointing to an oil-temperature gauge that was about 10 degrees above the upper limit and climbing. All pressures and other indications looked normal. I told the pilot to reduce power to that engine, which I knew was the first step of the NATOPS procedure for oil high-temperature.

He did so, but the temperature kept climbing. After consulting the NATOPS, we elected to perform a precautionary engine shutdown based on the indication that we had. We had a variety of options at this point, because the 3710 allows three- and four-engine aircraft to overfly suitable landing sites as long as everything else looks good. We didn't have enough fuel to go all the way back to home base, so we proceeded to Patuxent River where we knew that we had both maintenance support and parts if needed. I hopped in the seat and performed the uneventful landing.

My flight engineer and maintenance personnel broke out the electronic technical manual (ETM) and began troubleshooting with help from the mechs back home. The most likely cause was a bad transmitter, which they replaced. They drained and filled the oil, and then we performed low- and high-power turns. The aircraft passed satisfactorily, and it was an up aircraft again.

Fast forward two more long flights. I was again staring at an out-of-limits oil-temperature gauge, but this time with a lot more fuel and options. We shut the engine down again and headed back to Tinker AFB, our happy home. Maintenance took the jet off of our hands and replaced the oil/fuel heat exchanger, which was the next step in the ETM. They also performed turns for several hours; the aircraft passed. In the midst of this, our community was still faced with the aftermath of a tornado rated at F5 that had destroyed the flight engineer's house, along with other damage.

The President was coming to visit the local area on the day of our scheduled departure. We arrived in the morning in plenty of time to take off prior to the Presidential Temporary Flight Restriction that was going to shut down Tinker AFB for the rest of the day.

We made it out and were on our way to the West Coast when we were again faced with the same oil high-temperature indication. By this time, we strongly suspected that the oil was not in fact hot. Still, based on all other factors, we elected to shut down the engine and attempt to return to base. This decision was made after some heavy duty CRM. I spoke with my flight engineers,

our command duty officer, our maintenance control, and other pilots on board. The President had landed and we were now faced with a long wait. I spoke to Fort Worth center on the radio and relayed our situation. I did not want to declare an emergency since I did not feel that having three-fourths of our engines working in perfect weather was a dire situation. They instructed us to hold and wait for further instructions.

I was surprised to hear back from Fort Worth Center about 10 minutes later, starting our descent into an approach. We landed uneventfully again, only this time we were greeted by the Tinker fire department and with Air Force One sitting on the ramp. I asked the tower if someone had declared an emergency, and they said that was indeed the case. In order to get us in during the TFR, ATC had declared the emergency for us. We were cleared by the fire chief to go to our parking spot.

Our maintenance pros dug very deep this time and found a wire bundle that had chafed and grounded, causing the indication. Our AE team fixed the gripe after spending hours of troubleshooting, and we were on our way, this time for good.

After 14 years in naval aviation, a few things never cease to amaze me. First is the training that we receive. When there is an obstacle to overcome, big or little, we fall back on that training and it works.

During this ordeal, I was faced with many different situations and factors where I had to make a decision on what to do, where to take the aircraft and what procedures to follow. I was glad that I didn't have to make these decisions alone. Everyone, from the guys sitting next to me to the maintainers waiting on the ground, had a huge part in solving that puzzle. Crew resource management isn't just a class that we attend every year. It is one of our greatest strengths.

LCDR LIKES IS THE SAFETY OFFICER OF VQ-4

SLIDING INTO HOME

BY LT RICHARD A. BOWERS

While conducting an advanced multi-engine training flight from NAS Corpus Christi with two student military aviators (SMAs) onboard, we experienced a landing gear malfunction that resulted in an intentional gear-up landing.

Here's how it came about. Immediately after take-off, one of the SMAs called for the gear up. I selected the landing gear handle to the up position and immediately saw that the result was an unsafe-gear indication.

The landing gear indication system in the T-44C consists of three indicator lights that illuminate green when the gear is locked; a red light in the gear handle indicates when the gear are in transit or unsafe. When I selected the gear up, both my student and I observed that the red light in the gear handle was still illuminated, and all three gear indicator lights were extinguished. Something was wrong, but we didn't know exactly what.

I took the controls from the student and told him that this was an actual malfunction. Per our preflight brief, the student took out his NATOPS flight manual, and I coordinated with Navy Corpus Tower to enter the delta pattern to try to troubleshoot the gear malfunction. The NATOPS manual said to place the gear handle back to the down position; the expected result would be that the red light would go out and that we would have three green lights indicating that our gear was down and locked.

I placed the landing gear handle to the down position, but the result was not what we had anticipated. The red light in the gear handle remained on, and only two of the three green lights illuminated. The left main gear indicator light was not illuminated, indicating it was either up or in an unsafe, down position.

The next step was a visual inspection of the landing gear. I notified the command duty officer (CDO) via base frequency of what our cockpit indications were and of my intention to conduct a low pass for inspection. I executed a low approach near the tower (the CDO was in the observer window). We coordinated a Dash 2, and I was joined by a fellow instructor pilot in the overhead pattern who made a visual inspection from his aircraft, confirming that our left main gear was only partly extended.

On the ground, the squadron jumped into action. Our senior pilots, NATOPS evaluator, Sikorsky maintenance reps and Beechcraft technical experts determined that a mechanical failure of the landing gear had occurred and that there were few options available to me that might remedy the situation.

As a last-ditch effort, we thoroughly discussed and elected to cycle the gear, manually extending the gear and G-loading the aircraft in an attempt to safely get the gear down. Nothing worked.

Given the high probability of gear collapse, the evidence was increasingly in favor of executing a gear-up landing with the left main partially extended. We thoroughly briefed the gear-up landing procedures with our NATOPS officer via base frequency and discussed our evacuation plan once safely on deck. We then elected to conduct a practice low approach to the duty runway to get a read on the winds and to practice the ensuing procedure one final time. Then it was time to reenter downwind for the real thing.

AS WE MADE OUR TURN ONTO FINAL, the aircraft was in position to make the runway, and the runway was clear. Per NATOPS, I called for both condition levers to be placed to the fuel-cutoff position, resulting in the shutdown of both engines. The silence was deafening as I worked to bleed off the remaining airspeed and focused on centerline, ensuring my touchdown was as smooth as possible. The partly extended gear on the left side collapsed as anticipated. I had prepared for a rough ride, but it was surprisingly smooth as we slid down the runway. I was even able to use the toe brakes since the wheels in the T-44C remain partly exposed in the up position. Once the aircraft stopped, we evacuated through the emergency hatch and were met by the crash and rescue.

Crash landing an airplane is not something I imagined myself having to accomplish as a flight instructor. In the months following this landing, I learned that there was nothing we could have done to correct or prevent the landing gear malfunction. A critical piece of material had failed. I attribute our success to thorough knowledge of NATOPS procedures and great teamwork. Most importantly, we didn't rush a bad situation and panic. We used our fuel state and favorable weather as a commodity in order to thoroughly discuss and build our situational awareness, rehearsing the most favorable course of action and executing our plan methodically.

LT BOWERS FLIES WITH VT-31

WITH OR WITHOUT AN HRS BAR?

BY LTJG GRANT DAISS

So there I was, halfway to Hawaii on board USS *Freedom* (LCS 1), the Navy's newest warship, during the third week of my first deployment. I'd been scheduled for a night sortie in support of Surface, Surveillance and Coordination (SSC) in our MH-60R, Battlecat 707. What wasn't apparent to me or the crew was that I had really been scheduled for my first Helicopter Aircraft Commander preparation flight.

The weather in the Pacific had been pleasant all day with mostly partly cloudy skies, a few scattered showers and high illumination. The sea state, at approximately 5 to 7 feet, was within the ship's pitch-and-roll limits for both day and night helicopter ops.

After we launched, light showers and clouds developed. We easily detected and avoided them, thanks to our NVDs, but we weren't able to see (while operating above 2500 feet) the increase in sea swells as our ship proceeded west.

We completed the mission and called back to the ship at our scheduled flight-quarters time to make sure they'd be prepared for our recovery. The ASTAC reported they had just called away flight quarters but didn't mention the increased sea state. Shortly thereafter, we checked in with tower and discussed the most appropriate shipboard lighting configuration for the environmental conditions. To optimize the available light level, we elected an aided recovery. Since LCS 1 does not have a horizon reference system (HRS) visual landing aid, we called to secure the stabilized glide slope indicator (SGSI); that would make it easier for us to see the horizon through our NVDs.

We asked for the landing numbers, and tower informed us that pitch-and-roll was out-of-limits. For LCS 1, night landing limits are a pitch of two and roll of four. During the manning of flight quarters, tower reported pitch up to three and roll up to nine. We were then informed that the ship was maneuvering to get pitch-and-roll within limits and that we should stand by for new numbers. After several minutes with no resolution and no new numbers passed, we asked tower for an update. There was no response over land/launch (L/L).

The ASTAC reported they had just called away flight quarters but did not communicate the increased sea state.

As we monitored L/L, it became obvious that tower lost communications with us. As the ASTAC and HCO began trouble-shooting the malfunction, the HAC re-established communications with the OOD via Maritime Channel 16. Several minutes later, L/L was restored and communications between our helo and HCO resumed. We had approximately 30 minutes of fuel remaining; the ship still unable to determine a suitable Foxtrot Corpen to support relative winds, pitch and roll.

The weather, which we had assumed wouldn't be a factor, was just the opposite. Originally, we asked to conduct two approaches for four clear deck landings in order to build my deck landing proficiency on NVDs. However, our OIC announced a new plan over L/L: "This will be a one-for-one,

guys." The HAC called for the controls, which I willingly passed.

Given the little amount of flight time remaining and the high seas, the ship's captain picked the best heading possible. This course provided 15 knots of relative wind on the beam, true winds abaft the beam, and pitch-and-roll near the edge of our NATOPS night-landing limits. An occasional roll of six was identified by the OIC and called over L/L from the HCO tower. On top of all of that, an isolated shower formed on the horizon, partly obscuring its reference from the starboard side of the ship. If ever there had been a perfect time for a recovery assist (RA) landing, this was it. Unfortunately, LCS class ships don't have that option.

We had transferred our remaining fuel from our auxiliary fuel tank to the main tank. We had no diverts available, so our fuel state was a growing concern. Our only option, other than accepting the less-than-optimal deck conditions, was to ditch the aircraft, which, at this point, was not crossing anybody's mind. During all of my previous DLQ experiences at home guard, I always had a warm fuzzy that if something went wrong, you could just head back to the beach. All I now felt was a sense of urgency.

I focused on the key areas that I had struggled with during our recent WOWU refresher: glideslope control, referencing the horizon while on final approach, and actively moving my scan over the deck. As the HAC sensed the increased tension in the aircraft, he pointed out that even though we were low on fuel, there was no need to rush the landing. Our fuel on board was sufficient to conduct a couple approaches and establish a feel for the actual conditions over the flight deck. Our CRM discussion eased the anxiety of the situation.

We developed a solid game plan to conduct a normal TACAN approach to a slightly higher than normal hover over the flight deck in order to compensate for the ship's excessive pitch-and-roll. All members of the crew provided directive positional calls in order to backup the HAC throughout the approach and over the flight deck.

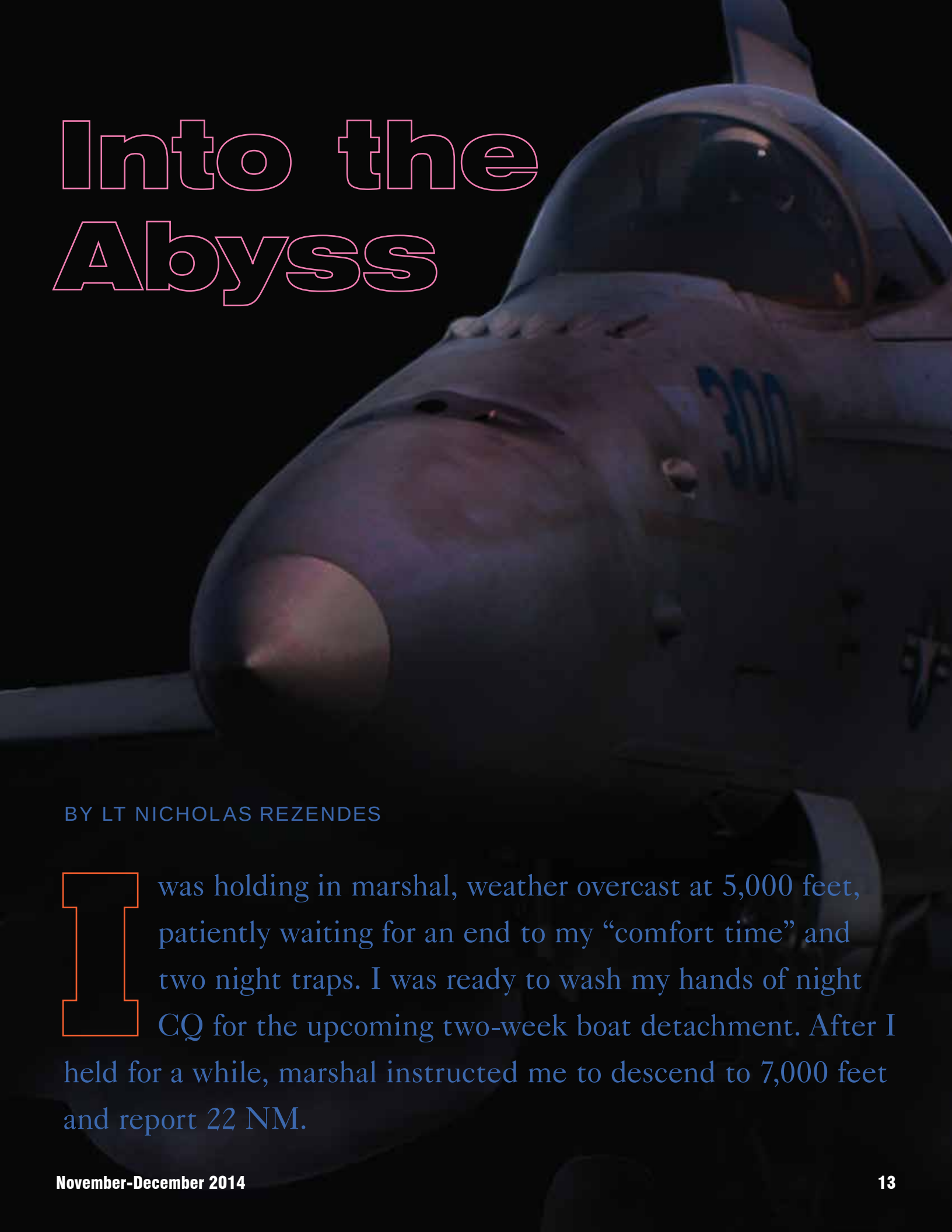
Although LCS 1 has a significantly larger flight deck than other single-spot ships, it also has a wider superstructure which obscures the horizon once over the deck and in the "crouch" position. The obscured horizon and gusty crosswinds required every bit of concentration from all members of the crew to maintain a steady hover over the deck. I called out a left drift, and the HAC made the corrections. It was nearly impossible to tell if the drift was from the moving deck, the HAC following a false horizon, or gusty crosswinds. In any case, the difficulty of eliminating the drift immediately brought concerns of dynamic rollover.

After a few more conning calls, I called "in position." The HAC lowered the collective. During the transition to land, I noticed and called out a right drift as the ship took one of the occasional larger rolls. As the deck dropped away, the aircraft continued to slide right on the deck with a slight left yaw. The HAC acknowledged the drift and tried to correct as the mainmounts struck the deck. With the aircraft on deck and no longer sliding, the HAC finished lowering the collective while I signaled to our LSE for chocks and chains.

WE HAD LANDED WITH THE MAIN-MOUNTS in the circle, but with the nose off centerline by approximately 20 degrees. As a result, our LSE gave the signal to lift in order to respot on the flight deck despite my signal for chocks. "Yeah, not going to happen!" responded the HAC, who directed me to signal again for chocks and chains. There was no way anyone in the aircraft was going to pull power to come back up into a hover. We discussed our deck landing position with HCO and determined lifting was not required. The aircraft was on deck, we were all safe and that was the end of flying for the night. The chocks-and-chains signal was given again and finally the LSE sent in the chock-and-chain runners. Without RSD beams pinning us to the deck, our anxiety did not subside until the chocks and chains were installed. Immediately thereafter, the HAC released his white knuckle grip from the controls, and I finally began breathing normally.

LTJG GRANT DAISS FLIES WITH THE "BATTLE CATS" OF HSM- 73. HE DEPLOYED WITH COMBAT ELEMENT ONE, "SPECIAL AGENTS," ON LCS 1'S MAIDEN DEPLOYMENT TO SOUTHEAST ASIA.

Into the Abyss



BY LT NICHOLAS REZENDES

I was holding in marshal, weather overcast at 5,000 feet, patiently waiting for an end to my "comfort time" and two night traps. I was ready to wash my hands of night CQ for the upcoming two-week boat detachment. After I held for a while, marshal instructed me to descend to 7,000 feet and report 22 NM.

What luck! No timing problem for this nugget!

Then my INS dumped. Goodbye precious velocity vector. I told marshal that I'd need to remain overhead for troubleshooting and asked to speak to a Hornet rep.

Aviate, navigate, communicate.

While speaking with the Hornet rep and marshal, I fluctuated between 10,000 and 11,000 feet, never taking a moment to assess the status of the standby gyro or my personal gyro. The former displayed a horizon approximately three degrees higher than reality and the latter took all this "information" as fact. A simple request to have both marshal and the rep take a step back while I flew my airplane would have helped mitigate issues throughout the night.

I got busy troubleshooting. With a functioning GPS and indication of a navigation unit failure, we decided to attempt an in-flight alignment of my INS. Following the instructions in NATOPS, I moved the switches, turned the knobs and flew the profile for the alignment. The rep told me to try another alignment after approximately three minutes. We repeated this process several times without success, eventually arriving at the next option: a standby night approach with no moon, under an overcast layer.

A nugget's dream – my first CQ night trap of the detachment. Marshal quickly began giving me vectors into the abyss. Once on lineup and approximately intercepting glide path, I set an appropriate VSI and noted the waterline symbol position, recognizing its unusual location at approximately two degrees. I focused on angle of attack and VSI.

Approaching the start, I descended below glide path and attempted to slime myself back up to above the datums. I made the ball call, referenced its position (low), and tried to continue decreasing my rate of descent, all the while breaking the major LSO rule of "Never lead the low." Paddles, recognizing my foolishness, elected to wave me off. They don't call 'em "rules to live by" for nothing.

I executed my waveoff procedures, bottoming out at 200 feet, and was told to take 1,200 feet and turn downwind. I requested to elevate to 3,000 feet for additional troubleshooting and some straight-and-level flight time. I noticed that the indicated aircraft heading was drifting to the right. With the ball centered and no angle of bank, I started to get vertigo and distrust my instruments.

This flight made me appreciate the importance of standby approaches in the simulator and during FCLPs as ways to become more proficient with the scan pattern required without a velocity vector.

My first instinct was to climb. Another pilot was directed to join up and drop me off on the ball. I was able to eventually join up, but afterwards found myself well in front of the ship and rapidly approaching bingo fuel state. Time for a bingo to North Island.

During the ascent, I noticed my headings had stabilized and my INS had kicked back on. Pleasantly surprised, we executed the bingo profile per NATOPS. Finding ourselves high and close, we initiated a speed-brake descent to our min vectoring altitude at the bottom of the cloud layer. After spotting the runway, I reported the field in sight and executed a descent to get on a comfortable glide path, focusing on the anti-skid switch to ensure I didn't blow a tire on rollout. I failed however, to raise my tailhook, resulting in an embarrassing inadvertent trap at NAS North Island. I was safe on deck.

This flight made me appreciate the importance of standby approaches in the simulator and during FCLPs as ways to become more proficient with the scan pattern required without a velocity vector. I should have been more familiar with the special procedures portion of the PCL, specifically the INS re-alignment procedure. I also renewed my respect for the importance of CRM in a single-seat community.

LT NICHOLAS REZENDES FLIES WITH VFA-113.

Where Did the Ship Go?

BY LCDR JEREMIAH BINKLEY

Every multi-crewed aviator experiences moments that affirm the importance of thorough NATOPS briefs and CRM. My moment came during my H2P cruise, at night, while launching for my first of two planned sorties. While we didn't end up completing a sortie that night, NATOPS and CRM ensured that our total number of landings equaled our total number of takeoffs.

Our crew met in CIC at 2200 for a brief with the ASTAC and TAO to discuss the night's SSC tasking and the weather. We knew that operating in the Gulf of Oman in April could make for some interesting weather, but the forecast appeared benign: overcast skies and good visibility. We knew it would be dark, but the current ceiling of 3,000 feet and visibility of five miles was no cause for concern… or so we thought.

After thoroughly preflighting our venerable SH-60B, we strapped in at flight quarters, started up, donned our NVGs, and prepared to launch. There was no natural visible horizon that evening, but all of us were comfortable thanks to the horizon present through our NVGs. We launched as scheduled, and as we launched, my HAC was preparing to give our "ops normal" call to the LSO. Then the ship disappeared.

My radalt indicated 150 feet AGL, and we were solidly in the goo.

We climbed ahead to 500 feet, completed our post-takeoff checks and gave the LSO our "Ops not-so-normal" call. We explained the situation and that we would be coming back to call it a night; the weather was definitely not 3000/5. As we turned downwind to set up for an approach back to the ship, my HAC and I formulated our plan. Weather minimums to shoot the TACAN approach back to our cruiser were 200-½. We estimated the ceiling to be somewhere around 150 feet, which presented a slight problem. Our normal approach profile did not have us below 150 feet until somewhere between .5 nm and .25 nm from the ship. Still on NVGs, we decided to come down to 150 feet and see if we could make out the ship through the clouds.

No such luck. We leveled off at 125 feet, which turned out to be low enough to provide what we had been hoping for: A view of our ship with a beckoning green-deck status light.

I COMPLETED THE LANDING CHECKLIST, and my HAC turned to intercept the approach course. We were about 45 degrees to the right of lineup, but at 3 miles astern, we still had plenty of time to correct back to the final approach radial.

As we continued in, I backed up my HAC, suggesting we use a larger intercept to get behind the ship. He responded, "Roger," and came to the left. The correction wasn't enough, and at about 1.5 miles, I mentioned it to him and received a similar response. Now inside 1 mile, we were approaching the cruiser at an offset similar to an approach to a Flight I DDG, not yet uncomfortable but certainly indicative that something was not right in the cockpit.

I decided to make the call that we should wave off, re-set and try it again. My HAC responded, "I've got it," and came left a little bit more. Again, not enough. This is where I should have stepped in and taken the controls, but he and I had flown together numerous times and I was confident that if he felt like he "had it" then he "had it." I was wrong… the fun was just starting.

As we hit .5 miles, my HAC started to descend even though we were already below glide slope. I called him on it and we leveled off. At this point I again urged that we wave off and got the same response from my HAC. We continued inbound, still 45 degrees off the approach radial and as we closed in on .25 miles, we started to descend again. While looking up at the flight deck of the cruiser just inside .25 miles, I called for power, got no response, took the controls, and executed a waveoff over the missile deck of the cruiser that got everyone's attention.

After we were clear to port and on downwind at 125 feet, I made a radio call to the LSO, letting her know that we were fine and would be coming back around for another approach to land. I flew the aircraft out to 2 miles, established the aircraft on the approach radial and landed uneventfully. Surprisingly, there was very little discussion in the cockpit during the waveoff or the approach, short of the usual CRM that takes place during a landing evolution to the back of the ship. While shutting down, my HAC told me that he would do the water wash tonight and would meet me in the wardroom once complete.

As I went into the hangar, our AW grabbed me, got very close and thanked me for saving our lives that night. He also apologized for not being more vocal when it came to calling for the waveoff. It dawned on me then just how close we were to putting a perfectly good aircraft into the water or the side of a guided missile cruiser. I stowed my gear, logged the flight, grabbed a soda, and made my way to the wardroom to wait for my HAC.

When he came into the wardroom, we looked at each other with "What now?" expressions. We talked about what had happened and what had gone wrong. He apologized for not waving off when I called for it. He was not the only one who had committed an error. I was also at fault for not being more assertive and taking the controls when he didn't wave off as requested.

During our NATOPS brief a few hours earlier, we had stressed that anyone could call for a waveoff without questions. Both of us were to blame for the adventure that night. We had both disregarded our NATOPS brief until it was obvious that we were about to be in extremis. Self-preservation and CRM training took over before disaster struck, and we were both able to walk away with a valuable lesson.

LCDR. BINKLEY FLIES WITH HSM-72.

High, Hot, and Heavy — Beware!

BY LCDR PAUL FLUSCHE

While our C-12 unit was in Bahrain, the Naval Air Logistics Office assigned us a mission to Sana'a, Yemen. We hadn't been to this airfield before, and the mission was labeled "high priority" by the tasking agency.

When the aircrew started doing research for the mission and airfield, interesting facts started to arise. First, a security team would be required to protect the crew and aircraft at the airfield. Because of the distance to the nearest suitable airfield and diplomatic-clearance routing, a max-gross-weight takeoff would be required.

Secondly, the airfield elevation is high! Mission planners had missed the high elevation of the field (7,216 feet), perhaps because it was displayed as "2,199 meters" in the airfield information, higher than most airports in the U.S. The altitude of the city is actually 2,300 meters (7,500 ft.), and this makes Sana'a one of the highest capital cities in the world.

Sana'a is near the mouth of the Red Sea, across from Djibouti, Africa. The mission was scheduled for late spring when the temperature regularly reaches 40 degrees Celsius (104 degrees Fahrenheit), in other words, extremely hot.

The aircraft commander assigned to this mission was very experienced and caught the high elevation right away. A thorough review of the performance charts and NavyOps data led the aircraft commander to cancel this mission. Based on the environmental conditions, the aircraft did not have the climb performance necessary for this mission.

Trust but verify performance data at an unfamiliar field. Mission planners are not experts on your aircraft performance. When you're going to a place that is high and hot, and your aircraft is heavy, the hair on the back of your neck should stand up.

LCDR FLUSCHE FLIES WITH VR-62.

That Nagging Feeling

BY LT KORY KEYMER

It was a sunny afternoon in the Gulf of Oman, with a hint of clouds on the horizon. The USS *George H. W. Bush* was on her second month of the long, 9-month deployment, and I was just starting to get used to flight operations in our new AOR.

We thoroughly briefed a 1.5-hour day launch and night recovery, and everything went as planned – until the return home. After the mission portion of the flight, I fenced out, came back and checked in with strike and marshal. They gave standard instructions for a normal CV 1 approach.

Once I commenced, I completed my habit pattern of adjusting gross weight to arrive at max trap on the ball. I dumped my extra fuel and reset the bingo bug to briefed tank state. Passing through 5,000 feet, marshal told me to switch to approach button 17. I checked in with approach, and they passed, "99 MOVLAS, Hornets half flaps, 33K."

This was completely unexpected. Per the brief, it was supposed to be a normal case 3 recovery. At this point, I reached down and turned my dumps on to adjust the last 1,000 pounds required to reach the 33K fuel state. CATCC then said, "303, turn right 130."

Another change! Every other time I'd executed the CV 1, it had been a standard, self-contained approach. To respond to the call, I took my hand off the dump switch to actuate the comm switch and then executed my right hand turn to 130. I continued to fly the aircraft by CATCC's vectors to get to final bearing. As I was executing my turn to arrive on final bearing, things started to settle down. I returned to my normal habit patterns around the boat.

Something nagged at the back of my brain. I knew I'd forgotten something but I couldn't quite put my finger on it. Suddenly it dawned on me: fuel! I looked at my fuel gauge, and to my dismay found that I was only 500 pounds above tank state. I had taken my hand off the dump switch without resetting my bingo bug.

I turned off the dumps and assessed what my fuel state would be on the ball. Even if I held off on dropping the landing gear as long as possible, I would be just above tank state when I called the ball. Using my best radio voice, I called CATTC: "Approach, 303 is going to be tank on the ball." This wasn't what they were expecting, since just 5-10 minutes earlier I updated my fuel state well above tank. I sat there waiting for a response for what seemed like an eternity, knowing that everyone on board knew that I had screwed up. I was sure that all of the big wigs in CATCC were discussing what to do with me.

After a minute or so, I got heard the dreaded call: "303, clean up, take angels 2. Your signal is tank."

After my earlier mistake, I wasn't going to screw up twice. I set the bingo bug to 3,000 pounds, which was the fuel required to execute a minimum-fuel profile to land at the nearest divert field with the minimum fuel state required by SOP.

Upon joining on my tanker, I realized that my night was nowhere near over. I got into the pre-contact position and found the refueling basket bouncing all over the place. The clouds on the horizon had moved in, and the same weather conditions that drove the boat into a MOVLAS approach were wreaking havoc on the basket. This would be a challenging plug under any conditions, but I had just made an idiot mistake and I knew it. Worse yet, I knew that everyone on board the ship knew it too. I was angry about getting into this situation, so I found myself recklessly stabbing at the basket. I jousted with the basket for what felt like 20 minutes to no avail. I looked down at my fuel (3,200 pounds) and realized I had maybe two more shots at getting in the basket before I had to divert.

It took everything I had to forget about what all of my friends were going to say and focus on nothing but getting into the basket. I pulled back into the pre-contact position and sat there for 10 seconds or so, wiggling my fingers and toes, releasing my anger, tension, worry, and shame. Once I had forgotten everything except for the task at hand, it became much easier. I got into the basket on my next try, with just 100 pounds above bingo fuel. Once I received enough gas to put me back at max trap on the ball, I got out of the basket and contacted CATTC to let them know I was tanking complete.

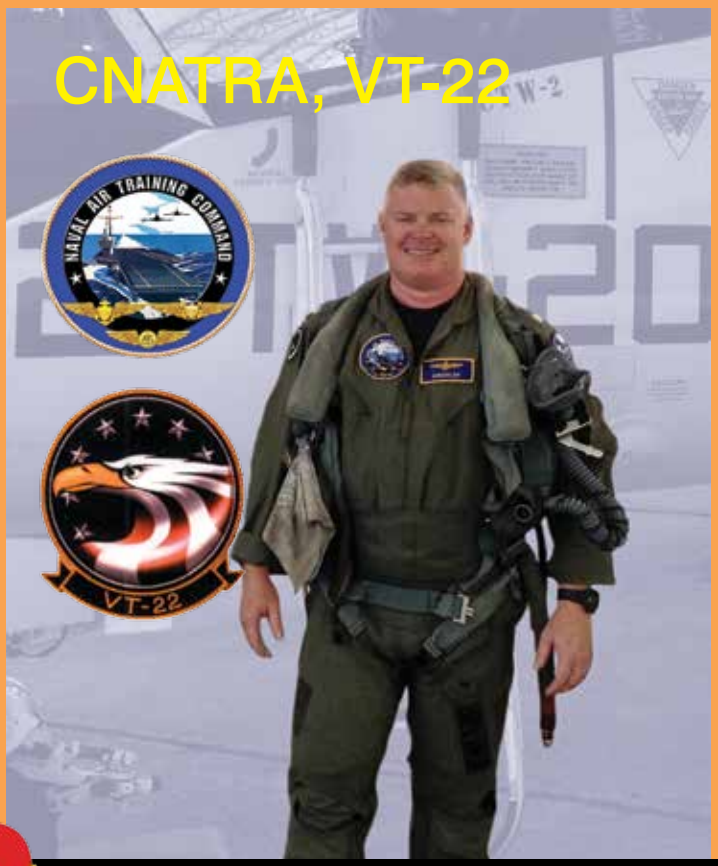
My night was still only half over. I had to come back and land on the carrier at night. Nothing had changed. It was still a MOVLAS recovery at night to a pitching deck. The only thing I had going for me was the valuable tool I had just practiced: compartmentalization. I forgot about everything else and told myself nothing else in the world mattered except flying the ball. I made my final radio call, thinking of nothing else except the next 15-18 seconds of my life; "303, Hornet ball, 4.8."

After recovering back aboard, I had to compartmentalize one more time. I had to face my ready room.

LT KEYMER FLIES WITH VFA-15

BRAVO Zulu

CNATRA, VT-22



On 27 February 2014, CDR Charles Brady III, the CNATRA landing signal officer and a flight instructor with VT-22, had a bird strike in his T-45C aircraft. He had been instructing from the rear cockpit while flying in starboard parade position as the flight approached the "carrier break" at NAS Kingsville, Texas. One and one-half miles from the airfield, a turkey vulture struck his aircraft on the lower leading edge of the right-side engine intake. Most of the bird was ingested into the engine intake, resulting in an audible pop and immediate degradation of engine performance. CDR Brady immediately took the controls from the student pilot, broke away from the formation and initiated a climbing left-hand turn to intercept a low-key precautionary approach profile. After taking separation from the lead aircraft, he saw the engine revolutions per minute degrading, accompanied by master alert warning lights and caution tones. He set the throttle to an intermediate setting consistent with that of a precautionary approach, but the engine did not respond to throttle movements. He executed a 360-degree turn while the aircraft continued to lose thrust and key instrumentation. With rapidly degrading engine performance, he configured the aircraft for landing while maintaining enough airspeed to safely reach the runway. He successfully maneuvered for a safe, short-field arrested landing.

VT-6

On 25 January 2014, LT Matthew Miller, USN (a flight instructor with VT-6 at NAS Whiting Field, Florida) and 2ndLt Garrett Dennis, USMC (a flight student also with VT-6) were on a T-6B training flight at Artesia Municipal Airport, New Mexico. During landing-pattern training, a light civilian airplane began an opposite direction approach to the landing runway. Lifting off from a touch-and-go, 2ndLt Dennis spotted the civilian aircraft at the departure end of the runway on a collision course. He immediately began an evasive maneuver and alerted LT Miller, who assumed control of the aircraft and, just 50 feet above the ground, safely separated from the oncoming traffic. The two planes narrowly missed, passing at the same altitude with just 1,000 to 2,000 feet of lateral separation.

HT-8

On 27 February 2014, LT Ryan Roy (a flight instructor with HT-8 at NAS Whiting Field, Florida) and LTJG Aric McGee (a flight student with HT-8) were conducting the TH-57 pre-takeoff checklist on deck at Bay Minette Airport. They saw a light civil aircraft land sideways and depart the runway. LT Roy immediately dispatched LTJG Logan Donahey, USCG (also a flight student with HT-8) to render assistance to the downed aircrew. LT Roy and LTJG McGee then notified airport operations over the radio, quickly shut down the engine, exited the helicopter and hurried to help the downed aircrew. No major injuries had been suffered by the downed pilot, and the airplane had moderate damage.

Left to right: LTJG Aric McGee, LT Ryan Roy, and LTJG Logan Donahey.

VMFAT-101

Maj David Thompson and Capt Jacob Hempen of VMFAT-101 were conducting 1v1, high-aspect, basic fighter maneuvers (BFM) training in F/A-18Cs north of NAF El Centro during weekend, non-local operations. Maj Thompson was the instructor pilot leading the section, and Capt Hempen was a Fleet Replacement Squadron student approximately halfway through his initial syllabus.

Immediately after the third engagement, Maj Thompson saw a right-engine-flameout caution with the associated indications. Completing the boldface and starting to execute follow on procedures per NATOPS, he began navigating to intercept a straight-in landing profile for the active runway at El Centro. While Maj Thompson dealt with his emergency, Capt Hempen arranged for the flight's departure from the range and recovery into the airfield.

During the transit, Capt Hempen relayed frequencies and followed his flight lead through the pocket checklist, allowing Maj Thompson to focus on his emergency. On short final, Maj Thompson saw a rapid rise in EGT and decrease in RPM in the malfunctioning engine. Because the crew had efficiently handled the emergency and coordinated the recovery, Maj Thompson was able to land uneventfully. On deck, Maj Thompson and Capt Hempen then coordinated with ground control to tow the aircraft to an area suitable for follow-on maintenance.

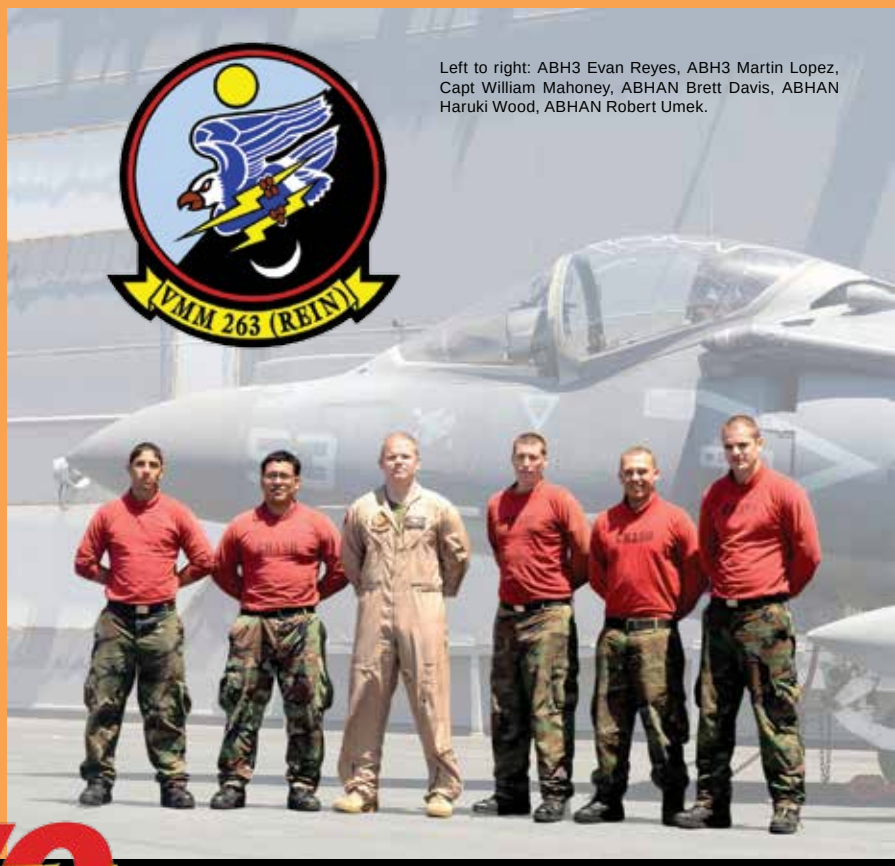
Their actions testify to the squadron's emphasis on CRM and emergency procedures in the F/A-18. Capt Hempen's performance is particularly noteworthy due to his lack of experience in the aircraft at the time. His efforts as a wingman would have been considered above average for a seasoned fleet aviator.

Capt Jacob Hempen

VMM-263 (REIN)

Crafty 54, an AV-8B with VMM-263 (REIN), took off from USS Bataan (LHD-5) for a night training flight. After takeoff, Capt William Mahoney tried to retract the landing gear and saw an unsafe-nose-gear indication. Attempts at troubleshooting were unsuccessful, and he flew by the tower to confirm the gear was not extended. The Air Boss and the landing signal officer (LSO) confirmed that the main and outrigger gear were down but the nosegear remained retracted. Capt Mahoney then completed all NATOPS procedures using the challenge-and-response method with the LSO, which resulted in no change to the landing gear indication.

The flight deck crew set up the crash cradle on the tram line at spot 7. Capt Mahoney flew a Case III recovery to Spot 7. Using excellent CRM with an LSO in the tower and a second LSO on the tram line forward of Spot 7, he flew his aircraft to a precision hover and landed directly to the cradle with minimal damage to the airframe.



Left to right: ABH3 Evan Reyes, ABH3 Martin Lopez, Capt William Mahoney, ABHAN Brett Davis, ABHAN Haruki Wood, ABHAN Robert Umek.

BRAVO Zulu

Mishap-Free Milestones

VAQ-132	73,989.8 hours	44 years
HSC-28	60,000 hours	13 years

Land as Soon as Practicable, as defined by NATOPS, means that extended flight is not recommended, and that the landing site and duration of flight is at the discretion of the pilot in command.

Practicable? What Does That Mean, Exactly?

By LT Joel Strong

The dictionary definition of "practicable" is "capable of being put into practice or of being done or accomplished; feasible."

Land as Soon as Practicable (LSAP) has different implications during different missions. If you are on a local mission with low operational necessity, you may elect to return to home field or the nearest divert. If there is impending damage to a system that would hinder a safe landing, you may elect to terminate and land immediately. On a cross-country, depending on the emergency, you could continue to your intended destination or find a suitable divert en route, so that you could evaluate the aircraft on deck. This option, in turn, might depend on the availability of ground support equipment or maintenance personnel. LSAP is a gray area.

Carrier aviators have another variable. Emergency procedures in the carrier environment require us to ask permission to bring the aircraft back aboard the boat. In doing so, there are only four options for the air wing commander and the captain of the boat:

- Land immediately with an emergency pull forward.
- Land at the next recovery.
- Continue the flight and land during your intended recovery time.
- Divert to the beach.

The PIC must explicitly communicate the condition of the aircraft and whether extended flight is even possible. If it is, might a more serious emergency arise?

When NATOPS prescribes LSAP or says "extended flight is not recommended," the captain of the ship faces a serious decision: whether to bring the aircraft aboard or to order an extended flight due to deck/boat/weather conditions.

During our recent Composite Training Unit Exercise

(COMPTUEX), we had a situation in which a judgment was made to push a flight past a recovery window and bring back at a later scheduled recovery time aboard the ship. This difficult decision was taken out of the hands of the PIC.

We had been scheduled to fly a double cycle with a day launch for a night recovery off the coast of Florida. Following a hot pump/crew switch into a returning aircraft from a previous mission, our crew was tasked to execute a CATCC casualty approach, more commonly referred to as an HCA, and then recover the following cycle.

Our crew was senior. Both pilots were carrier aircraft plane commanders (CAPCs), and all three NFOs were fully qualified combat information center officers (CICOs). On man-up, we were told that our plane was down due to FOD, and the pilot parachute was down because the infamous emergency oxygen "green apple" had been pulled, meaning there was no oxygen to bail out with if required.

We switched to the back-up aircraft that had also just recovered from a single-cycle functional check flight "C" profile for an aileron actuator change.

We taxied to cat 1, ran through our takeoff checks and proceeded into the shuttle for our day Case 1 launch. After spreading the wings and resetting the flaps to the one-third position, the pilot at the controls (PAC) noticed the flap indicator gauge indicating between one-third and one-half flaps. We can't normally select one-half flaps, because normal is in one-third increments. One-half flaps can result from malfunctions on some aircraft; for example, the flap indications might not show the exact flap position because of a calibration error.

The PAC announced the position, but with the squadron final checkers giving a thumbs-up, the crew was confident that the flaps were in the desired position. The salute was given and we were launched. On climb-out off the bow, the PAC did his normal right-hand clearing turn and brought up the gear. We selected the flaps to up and noticed that the flap indicator and the flaps themselves (confirmed by the NFOs in the back) didn't move.

With stuck flaps, we were prohibited from flying our prescribed CV NATOPS airspeed of 250 knots due to the 190-knot airspeed limitation on the flaps. We communicated this to departure and took a small cut away from the ship's base recovery course (BRC) so we wouldn't interfere with the Hornets launching behind us. The mission commander broke out the pocket checklist and started reading through the emergency procedure with the aircraft commander who was in the copilot seat.

We executed the emergency procedure down to the point where we lowered the flaps via emergency electrical means to the two-third position, which is required for a normal arrested landing.

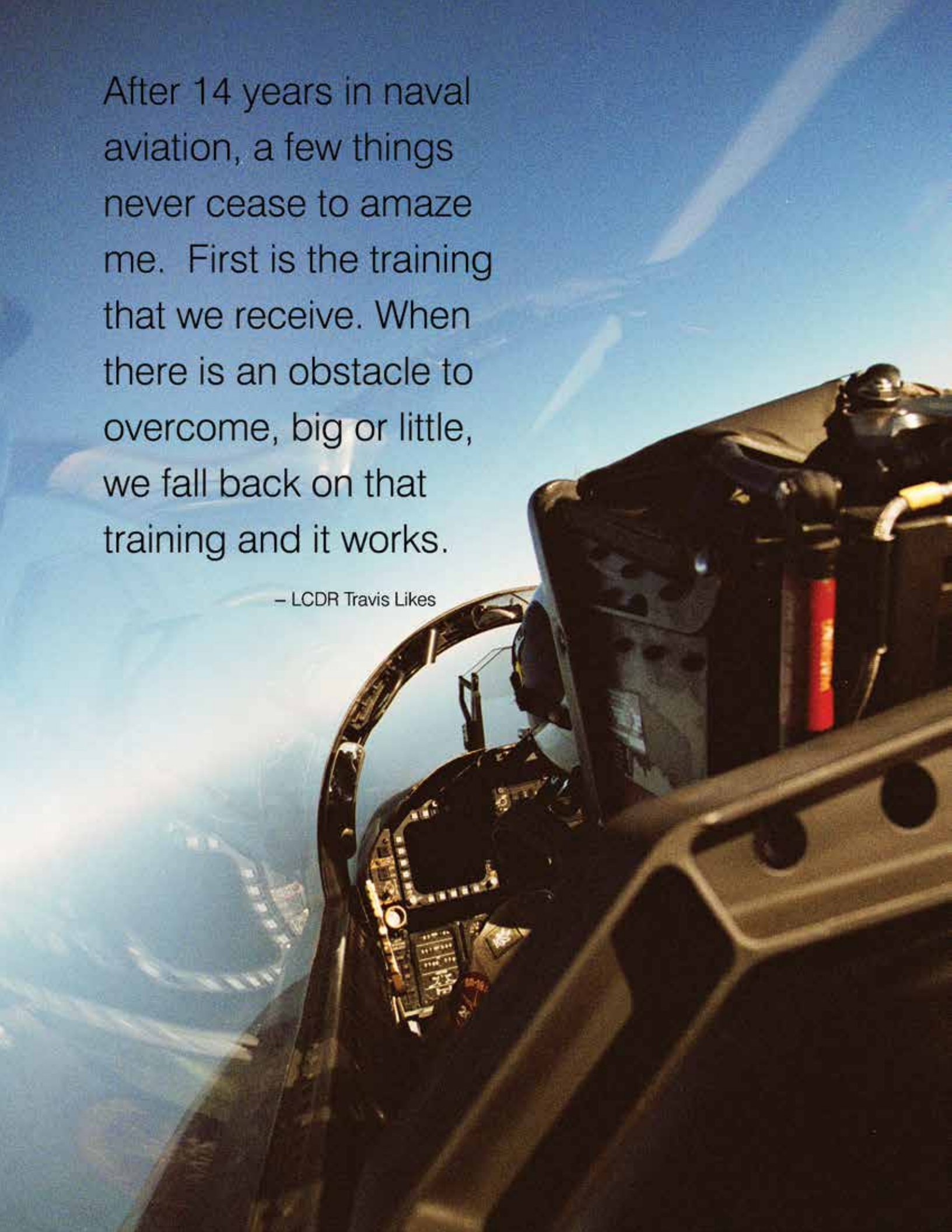
The next step was LSAP. We conferred as a crew and told our squadron rep that we were in a safe flying configuration, but that we would prefer to land with the next recovery (a day recovery). We would have to land last because we wouldn't be able to fold our wings after recovery. The aircraft commander had concluded that landing during the day would be a safer option. Maintenance personnel could look at the flap condition while it was still daylight to confirm the flaps were in a correct position prior to folding the wings.

As we were talking with our rep, we learned that even though NATOPS says it is the PIC's decision when to effect a safe landing, the boat was telling us to continue flying and recover at our scheduled time for a night trap. It was then back in the PIC's hands as to whether extended flight would be possible. Our options would then be to land at our divert airfield, NAS Jacksonville, or continue and recover back aboard the ship.

Two facts weighed heavily on our minds as we pondered the extension of the flight: the flaps were part of the hydraulic system, and that the aircraft had recently been flown for a new aileron actuator. We marked our hydraulic reservoir in the forward equipment compartment, a preventive measure so that we'd be able to notice a hydraulic leak. Then, as a crew, we decided to continue to control the HCA. We proceeded to marshal and recovered at our originally scheduled time. We taxied out of the landing area to a spot on elevator 1 with wings spread, a disadvantageous predicament for the aircraft handling officer and flight deck crew, thanks to the Hawkeye's massive, 81-foot wingspan. With maximum maintenance effort, the flaps were moved to two-thirds position and the wings folded.

While debriefing, my thoughts kept returning to the phrase "land as soon as practicable." When looking through your emergency procedures as a student pilot, nugget, or experienced fleet aviator, try to take into account unintended variables. Think about how extended flight could affect your current situation. If you decide is to land as soon as you can, communicate that to the carrier, approach control or tower. Leave yourself a couple options and consider the safest route for yourself, crew and aircraft.

LT STRONG FLIES WITH VAW-124.



After 14 years in naval aviation, a few things never cease to amaze me. First is the training that we receive. When there is an obstacle to overcome, big or little, we fall back on that training and it works.

– LCDR Travis Likes