“BIG JUICY”

RK Smithley battles the Los Angeles Wildfires in a DC-10 fire bomber

BY JAN TEGLER

“When you’re in a holding pattern flying over a thousand houses that are now just foundations, it kind of slaps you in the mouth,” Capt. RK Smithley says, describing his emotions and the view from the cockpit of the DC-10-30 as he was flying for 10 Tanker Air Carrier just above the fires that devastated Los Angeles in January.

Need caption. (photo by Austin Beede)

“But when it’s your turn to go in and drop, it’s all business for the three of us flight crew,” Smithley adds. “We’re putting retardant right where they want it to try to save a hundred or a thousand houses. And you’re down low in Mandeville Canyon with big high-tension power lines off the right wing and terrain off to the left, so all three of us crew are focused. And oh by the way, there are 10 helicopters right past a ridge in front of us.”

Albuquerque, New Mexico-based 10 Tanker’s four DC-10s are the world’s largest fire bombers. Converted to carry 84,600 pounds/9,400 gallons of bright red fire retardant known as “Phos-Check” instead of passengers, the aircraft carry the load in three adjacent external belly tanks that can be loaded simultaneously on the ground and drop all or portions of their load via a variable drop rate system.

Known as “Big Juicy” in the airborne firefighting industry and frequently using the “Big Juicy” call-sign, the tankers and their crews dropped more than 7.1 million gallons of fire retardant across the globe in 2024 and flew upwards of 767 firefighting sorties. Seven captains and 25 flight crew members make up the company’s three-person flight crews, including co-pilots and flight engineers that operate the its Douglas-designed DC-10s.

10 Tanker’s fire bombers are among the last DC-10s in operation worldwide. Introduced into passenger service in August 1971 by American Airlines, just 10 to 11 of the aircraft are currently flying. They’re the survivors of a production run that began in 1970 with 446 DC-10 variants including airliners and the U.S. Air Force’s recently retired KC-10 aerial refueling versions.

The firm’s DC-10s are a mix of ex-Omni Air International, Northwest Airlines, and Continental Airlines aircraft with conversion work carried out by Omni and fellow air cargo carrier Kalitta Air.

Smithley has been flying for 10 Tanker for a decade. That’s after a career at World Airways as a DC-10 captain, the company’s chief pilot and director of operations, and pilot hiring for the charter/cargo carrier. With just short of 17,000 hours in his logbook, much of it in the DC-10, he knows the airplane as well as any pilot.

But the way 10 Tanker’s aircraft are flown to combat wildfires is a world apart from the charter and cargo flying he did with World Airways.

“Mr. Douglas would never dream of what his airplane would be doing today,” Smithley quips.

It’s an apt observation when one sees the hulking ex-airliners dropping thousands of gallons of retardant at low altitude above varying, sometimes very confining terrain.

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Need caption. (photo by Greg Doyle)

“The airplane is a lot more maneuverable than people understand,” he says. “We fly it kind of like a fighter. We come down the sides of mountains with 12 to 15 degrees nose-down pitch angles—angles the airlines call ‘emergency descent’—routinely. I’m using a lot of nose-down trim and elevator which is moving the whole tail group.

“If you’re not trimming the stabilizer during a drop, you can be climbing like a helicopter when the load is released,” Smithley attests. Unlike contemporary airline crews, Smithey and his fellow 10 Tanker pilots hand-fly their big jets 90 percent of the time.

“The only time we’re using the autopilot is the brief periods when we’re in cruise to take a little bit of a mental break,” he says. “Once you get into the fire-traffic area the autopilot is off.”

Fighting the Eaton and Palisades fires

The fires that ravaged communities around Los Angeles broke out on January 7, 2025. Ignition sources haven’t been conclusively identified, but the blazes spread amazingly quickly, fueled by severe drought conditions and strong Santa Ana winds.

Two areas, Pacific Palisades in northwestern LA near Santa Monica and Eaton on the north side of the city near Pasadena, comprising about 45 square miles of densely populated Los Angeles County, burned furiously for most of January, leading to 29 fatalities and a combined 37,000 acres/20,000 structures burned or destroyed.

At this writing in early February, both fires have been contained thanks in large measure to the heroic efforts of ground-based firefighting crews and a multitude of aerial firefighting assets including aircraft deployed by the U.S. Forest Service, CalFire, the California Air National Guard, Nevada Air National Guard, Wyoming Air National Guard and the province of Quebec.

RK Smithley and 10 Tanker swung into action almost immediately in response to U.S. Forest Service requests for support. The company’s chief pilot texted captains and other crew members, including Smithley, asking who might be available to man the two DC-10s, tankers 910 and 912, that were

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fortuitously located at Victorville, about 40 miles north of LA undergoing Forest Service–required tank calibrations.

“We’re not supposed to be working in January unless it’s international and international programs we know about way beforehand,” Smithley says, explaining that fire season in the U.S. normally ends in November and doesn’t begin again until springtime.

“So it was a phone call or a text from our chief scrambling to get crews together. They ask us, ‘Can you go to work? Yes? Ok we’ve got three guys—two pilots and a flight engineer—book your flights and try to get to Ontario [California] around the same time, get in a rental car and go to Victorville and get an airplane. Then get to San Bernadino.’”

With that, Smithley abruptly departed his east Tennessee home and headed for California. Upon landing at the aerial firefighting base in San Bernadino on January 9 with Tanker 912, Smithley and his crew were asked if they could launch again immediately and head to the Palisades fire.

Sister-ship 914 and its flight crew were already in action, dropping retardant on both the Palisades and Eaton fires.

“‘Yep, load the retardant and let’s go,’” Smithley answered.

“That’s kind of how that all works. That’s the can-do attitude that you’ve got to have working fire. I came from eastern Tennessee. My right-seater came from Kansas City and my flight engineer lives in Sacramento.”

By the time Smithley and Tanker 912 reached San Bernadino, sunset was nearing. CalFire flight crews in fixed-wing aircraft and helicopters had been in action at night using night-vision goggles to carry out water and retardant drops, but their capability is unique.

“We’re a daylight-only operation,” Smithley notes. “We don’t use night vision goggles.”

But by 7:00 am on January 10 Tanker 912 was ready to launch.

“We sit loaded [with gas] whether we’re on a fire or not,” he says. “We got there before 7:00 and did a quick preflight. The switches in the aircraft sit ready every day. Our aviation maintenance technicians are there an hour before we are and they have everything ready from tire pressures to fluid quantities and all that.”

With their payload of retardant loaded, Smithley and his crew coordinated with air traffic control and took off, immediately communicating with the fire traffic area (FTA) controllers that guide them to drop zones.

Lifting off from San Bernadino, it took Tanker 912 just minutes to get to the FTAs with the Eaton fire 42 miles away and the Palisades blaze only 68 miles distant. But with the urgency of containing the fires with lines of Phos-Check that can be dropped for up to a mile continuously from the DC-10, Smithley says 912 climbed above 10,000 feet to get to the Palisades fire as quickly as possible.

“We’d go high, believe it or not, to Palisades—above 10,000 feet so we could go 290 knots indicated to get there because houses are burning. Time was of the essence. We’re still required by the FAA to adhere to 250 knots or less below 10,000. We were going out there at 10,500 to go fast and 11,500 feet coming back fast.”

Coordination, traffic and timing

Twelve miles out from the FTA Smithley and his crew checked in with the Palisades fire’s air attack officer, the quarterback who orchestrates retardant and water drops, coordinating all aircraft in the airspace above a wildland fire.

Twin-engine Turbo Commander 690s contracted by Forest Service along with CalFire-owned OV-10 Broncos served as the air attack platforms circling above the FTAs. Lead Aircraft, primarily Beech King Air 200s, worked directly with Tanker 912 and other fixed-wing fire bombers, flying in front of them to guide them to drop points where lines of retardant were needed to halt the progress of the fires.

“The lead aircraft may be 20 miles into the FTA if it’s big, but in this case it wasn’t because these were small fires, relatively,” Smithley explains. “We have to get clearance to enter the area at a certain altitude and altimeter setting and they’ll tell us what the hazards are.

“I’ve got to be at my altitude at seven miles from the fire-traffic area, which is basically an airport pin around where they’re operating. We see that on TCAS [traffic collision avoidance system] and on our ForeFlight [airspace traffic display software]. Our situational awareness gets pretty good with ForeFlight. We can see where these guys [fixed-wing tankers and helicopters] are operating and their call signs. That’s really, really helpful.

“Air Attack clears me in at 6,000 feet. He is at 7,000 or 7,500 orbiting the stack. We don’t want to conflict with him so there’s orchestration going on with the lead and the air attack basically as air traffic controllers clearing us into these fires and giving the parameters so that everybody knows what everyone else is doing. There’s a real symphony going on.”

Once cleared into the FTA, Smithley, his copilot and flight engineer began looking for the lead aircraft. “The lead is saying ‘I’m at your 11 o’clock position, three miles, for example,’” Smithley says.

The crew turns off the audible warnings from its TCAS, GPS and ground proximity warning systems with a single switch engineered to disable the noisy and distracting alerts and advisories.

“That’s on a checklist that we execute at least 20 miles out typically. We’re solely focused on what the lead is telling us.”

All the while, the crew are alert to other air traffic and dangers in the FTA, from helicopters cueing to drop water to high power tension lines and more hazards pointed out by the lead aircraft.

“The lead aircraft will pop smoke from his wing canisters to help us spot him,” Smithley says. “The engineer or the right-seater or me might see him maybe going right to left at 11 o’clock. We call that we’ve got him in sight and fall in behind him. He’s usually at an altitude slightly below us. What happens now if we have time is what we call a ‘show me’ run.”

A “show me” run involves the lead aircraft dropping down to simulate the retardant run the lead wants a fire bomber to make. Smithley and Tanker 912 remain 1,000 to 1,500 feet above the lead aircraft following about a quarter mile in-trail.

“I position the airplane as captain so that we can all see the run which is challenging

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sometimes with fire smoke and the traffic patterns around Van Nuys or Santa Monica or a Southwest arrival into Burbank. That Los Angeles airspace is extremely busy."

The 10 Tanker DC-10s usually drop their retardant at between 200 and 300 feet AGL, often maneuvering in eye-popping fashion. The sight of the 181-foot long fire bombers with operating weights between 390,000 to 420,000 pounds swooping low over mountainsides and dipping into canyons with pitch and bank angles that look wild for widebody airliners grabs the attention of casual observers and seasoned aviators alike.

"What we like to hear in Forest Service or air tanker parlance is 'cleared to maneuver,'" Smithley says.

"That means I'm good to maneuver and I no longer have to worry about my altitude. I know that that air attack is at 7,000 feet. We're now down to 4,000, well under him. The other tankers orbiting waiting to come in after us are at 6,000 feet we know because everybody's cleared in at the same altitude.

"We're maneuvering behind the King Air at whatever altitude he's at and my job as the captain is to descend with him and not get below him. We generally tuck in a quarter mile or so behind the lead, snuggled up pretty good particularly when it's smoky so I can keep good visual contact with him. The lead may pop his wing smoke [to mark the drop point] and if there's a lot of crosswind blowing I may not be starting where his smoke came out, but I'm going to get there.

"I'm fairly tight on him, that's really where you want to be. He might say, 'See this bulldozer road here that we're perpendicular to? I want you to start dropping there, run the load out or stop at this point.'"

The DC-10 fire bombers' variable rate drop systems allow the flight crew to drop a full 9,400 gallon load at once or drop smaller portions of the load to pinpoint areas that need retardant deposited. Smithley says he's made five to six drops over the course of a sortie, expending the aircraft's load at intervals.

"I call the drop and the stop if it's a start-stop. Or the engineer will hold his finger on the drop button. My command is 'standby' as we're approaching the drop. Then I call 'drop'. He holds his finger on the button until I call 'stop' or we're empty.

"We were running at pretty high coverage levels on the LA fires because they wanted good, thick lines [of retardant] for the ground guys to work with particularly protecting structures. The coverage level just means how wide those [tank bay] doors are open until the quantity requested is gone. The engineer knows and it tells him right on the controller. 'We're going to drop 923 gallons per second.' That's the way the system's built."

Whether rolling into the groove for a drop or exiting after a drop is complete, Smithley says he tries to limit the fire bomber's bank angle to 30 degrees so as not to load its wings too much and get "into the stick-shaker or stall margins that no one wants to be at."

Drop speed for the big DC-10 tankers is typically around 140 knots, specifically 147 knots indicated at a 390,000-pound gross weight.

Even with a standard 60,000 pounds of fuel for 2.5 hours of endurance and over 84,000 pounds of retardant in its tanks plus the aircraft's own weight, Smithley says the DC-10 has plenty of excess power from its three General Electric CF6-50 turbofan engines producing 51,800 pounds of thrust apiece.

"The King Airs flying lead have a lot of power but they don't have near the power I've got in my DC-10. Especially when we're flying at 160,000 pounds below max gross weight, we have all kinds of power to weight ratio that none of the other tankers have."

Describing the busy action exiting a run over the Palisades fire, Smithley says, "Lead tells us, 'When you come off this drop I want you to make an aggressive left turn just below that white water tower, see it? 'Yeah I see it', I say. 'There are six helicopters working in that area. Do not go in there!'

"We're coming off the drop heading towards Santa Monica [airport], so I've got to go north to get out of their way and then I've got watch for Burbank arrivals and departures which is just a few more miles up the road. We have three radios going listening to ATC and our heads are on a swivel looking for drones that shouldn't be in the fire area. There were a lot of dynamics. It's nonstop and you're trying to paint houses so they don't burn!"

Television & buying ice cream for the base

Over the course of Saturday January 10 alone, Tankers 912 and 914 dropped more than 100,000 pounds of retardant with Smithley's crew releasing six loads on its own. Returning to the fire on successive loads he and the crew were gratified to see the difference they were making.

"Everything on the right [of the fire retardant line] was black and everything on the left was green. The fire retardant held the fire back. It's neat to see houses on the left of a line and everything's still there while to the right of the line it's black and the houses are gone."

"The fixed-wing retardant-dropping aircraft just pummeled that area," Brent Willis, Los Angeles Fire Department's battalion chief for air operations said. "It was absolutely necessary, and it was probably what was the turning point, saving the rest of that area."

The sheer size and colorful liveries of the 10 Tanker DC-10s make them stand out, particularly at low altitude over a big city like Los Angeles. Smithley and the 912 Tanker crew were extensively filmed by local TV news stations as well as private citizens who posted eye-catching videos of their drops on social media.

Smithley's glad to receive the attention but wishes news coverage would focus more on the whole air-ground team that works to contain the fires.

"We tend to get the press because we're the largest tool in the Forest Service arsenal since the 747 went away three years ago, but it's a total team effort," he says. "I wish they'd cover the BAE-146s at Neptune and AeroFlight, Erickson's MD-87 and Coulson's 737 that carries 4,000 gallons. And the helicopters, the single engine air tankers, the CalFire S-2s, there's so many components to this working for a common cause."

A tradition in the aerial firefighting industry is that when any aircraft/flight crew are featured on TV, they buy ice cream for the entire firefighting base they're operating from. "When you get on TV that's what we have to do," Smithley explained. "It's an unwritten tanker rule: You get on TV, you have to buy ice cream for the base. I filled their freezer at San Bernadino when we left with $100 of ice cream!" ✈

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