



“WHEN THE LIGHT COMES ON

The master caution light illuminated the cockpit with an orange glow. I could see the reflection in the window as I gazed at Midwestern farms slowly passing under our wing. I turned to look at the forward engine display and saw the low oil pressure indication. I started pulling out the QRH (Quick Reference Handbook) as my Captain asked for it. I turned to the appropriate page and verified he was ready for me to initiate the checklist. I had performed this checklist before, however it was in a simulator. This was the real deal. This is what we trained for, the light had come on.

“ENGINE LOW OIL PRESSURE Checklist.” I started reading the summary on page 7.28 out loud, and then the specific condition to our flight, **“Engine oil pressure is at or below the redline:**

>>Go to the Engine Failure or Shutdown checklist on Page 7.19”

As I turned to Page 7.19 the Captain notified ATC that we were shutting down an engine and declaring an emergency. Souls onboard and fuel remaining were given seconds later, before the controller had even asked.

We proceeded to “run” the Engine Failure or Shutdown checklist. Our flight was 180 miles from Chicago O’Hare Int’l airport as



Welcome

I apologize for the late publishing of this issue. The middle of May was consumed with recurrent training at my airline’s Flight Academy.

This issue will discuss handling emergencies and how to better train for them.

Expect the unexpected and stay vigilant in the cockpit.

Safe Flying

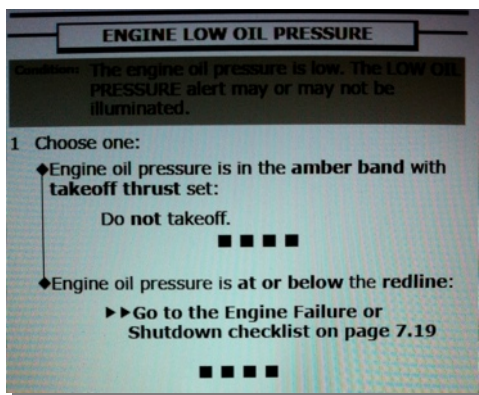
Ruben Alconero

INSTRUCTOR'S WING

we started our descent, with one engine. We decided a diversion to O'Hare was our best alternative. It was close and had many long runways, it was also a major hub and a maintenance facility for our airline.

Passengers could be reaccommodated, maintenance could inspect the aircraft, and we as a crew could potentially "pick up" another jet or be "dead headed" back to our crew base.

There are a series of duties and responsibilities to be accomplished by the Pilot Flying and Pilot Monitoring (the pilot not flying that specific leg). ATC had been notified and now our dispatch needed to be contacted. Last but certainly not least the flight attendants and passengers needed to be briefed.



While we have a series of checklists to complete, it was important to have the flight attendants briefed as they had their own checklists in preparing the passengers and cabin that required time to accomplish.

We were given priority handling into O'Hare's congested airspace. New landing data was computed for a flaps 15 landing. At that flap setting our final approach speed would be higher than a normal approach speed with 30 degrees of flaps.

We requested alternate missed approach instructions in the event we needed to go missed approach. The missed approach procedures on the runway we selected involved a series of turns. With no terrain as a factor we requested runway heading. If we went missed approach our hands would be full performing this maneuver single engine. Having simple alternate missed approach procedures would be one less thing to worry about.

We had requested that ARFF (aircraft rescue and firefighting) be standing by on landing. As we turned onto final approach we could see them towards the middle of runway. The approach and landing were uneventful. In fact landing single engine had been the best landing the Captain had made in our month flying together. We joked about that later.

After being inspected by the ARFF and having no signs of fire or any other visible damage our flight continued to the gate. Our passengers deplaned, with many thanks of a job well done. Maintenance arrived a short time

later, the Captain and myself were able to give a detailed breakdown of the events that had transpired.

In operations both of us completed more paperwork pertaining to the events of the flight, and debriefed the local Chicago Chief Pilot.

The remainder of our trip was cancelled and each of us allowed to travel home.

Having spoken with other pilots that have dealt with emergencies there is a common theme. When the adrenaline kicks in, so does the training.

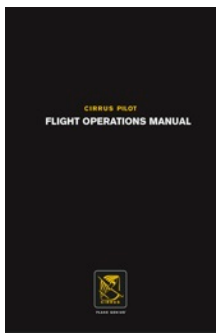
Training that has been reinforced in ground school, and in the simulators, even in the way we operate routinely, "flying the line". Training that involves the ability of the pilot to perceive, think, and act to the best of his/her ability without the hindering effects of anger, worry or anxiety.

Another part of the equation in handling emergencies lies in the airlines' or aircrafts' SOPs (standard operating procedures). These SOPs include layers of opportunity to check, verify, and in most cases ensure accurate procedures are applied, normal or abnormal.

The training airline pilots receive on average is bar none, leaving them ready to handle just about any emergency that can be thrown their way.

INSTRUCTOR'S WING

While many of the general aviation pilots do not have access to multi-million dollar simulators and training programs, abnormal and emergency training can still be accomplished with excellent results.



The key to successful training at the general aviation level is to reinforce positive and realistic training scenarios.

Utilize the SOPS that are available in your aircraft's FOM (Flight Operations Manual). Know "memory items" cold, in the event you lose an engine on take-off there should be no hesitation in accomplishing "memory item" quickly and accurately.

Create training scenarios or LOFT (Line oriented flight training) flights to realistically introduce and/or practice abnormal/emergency procedures.



Engineered Materials Arresting System

EMAS is a bed of engineered materials built at the end of a runway designed to stop aircraft overrun. These high energy absorbing concrete blocks cost roughly \$1000 per block.

The system acts like a runaway truck ramp made of gravel or sand. As the aircraft departs the runway it is slowed by the loss of energy required to crush the EMAS materials.

In use at many major metropolitan airports around the country this system has already saved aircraft and lives.

Pilot Controller Glossary



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http://www.faa.gov/air_traffic/publications/atpubs/PCG/pcg.pdf

While accomplishing these procedures in training have the student follow through with all items on the checklist real time.

I recently demonstrated a cabin fire scenario; I wanted to see the student actually take the fire extinguisher out of the bracket. Does the student understand how to use it? When the checklist called for the door to be cracked open, I wanted the door cracked open. Be as realistic as you can be in your training while remaining safe.

Practice as much of the checklists and procedures as possible so when the light really comes on your student will be prepared.

Train Like A Professional, Fly Like a Professional.....

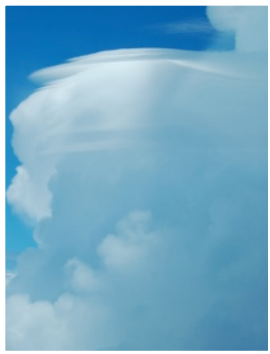
INSTRUCTOR'S WING

How High?

Almost all thunderstorms grow to heights above 20,000 feet with the average being around 35,000 feet.

Stronger storms with more energy will grow to the top of the tropopause, called the troposphere. Here they will flatten out and form the very recognizable anvil

shape we are accustomed to seeing.



With the troposphere controlling the height of the thunderstorms, the farther south towards the equator you fly the higher the thunderstorms can grow.

The most powerful storms called "Trop Busters" will penetrate the troposphere building into the stratosphere. These monster storms can have internal updrafting winds in excess of 100 mph and grow to heights of 65,000+ feet.



Ask the Instructor-

Do you have a question you would like answered in the next issue?

Please contact:

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Photo Courtesy of Fabricio Jimenez



Next Issue: Transition Training

Whether you transition to a Boeing 767 or Cirrus SR 20 there are time proven techniques that will guarantee a successful checkride.

Come along with us as we review transition training at a global airline, and apply the same techniques at the Generation aviation level.

Till next time,

Tailwinds and Blue Skies

