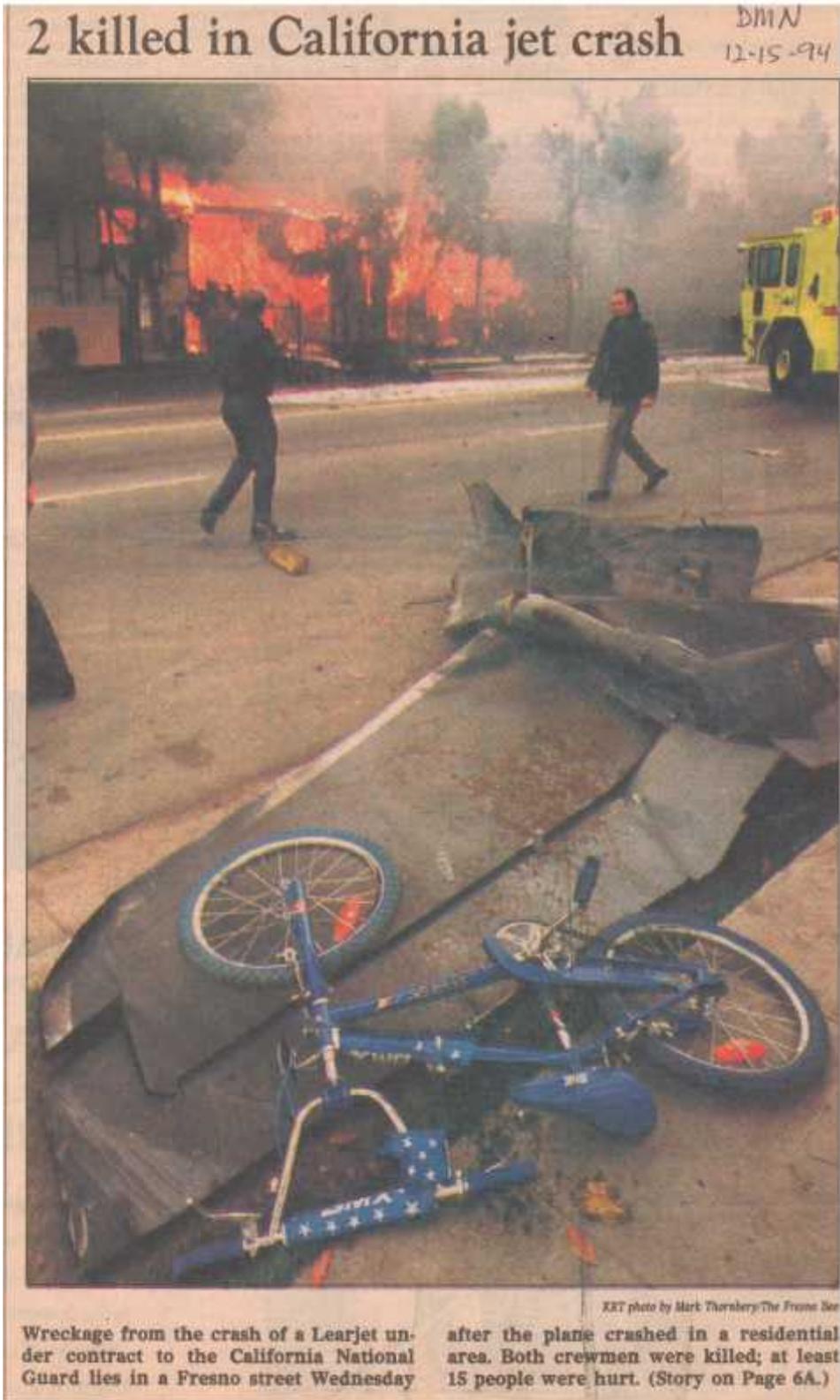


Chapter 7



**"Dart 21"** callsign – Learjet 35A – aft equipment bay fire – false engine fire (which was shut down)

## Background/History

“The inflight fire began with a short in the special-mission-equipment power supply...in an area unprotected by overload current protection”<sup>1</sup> (p. 146). The article says the pilot reported an engine fire while about eight miles from the airport, declared an emergency, and requested priority handling.<sup>2</sup> As they came over the field they were told by the tower they were trailing smoke. The crew, looking at an engine fire light, put two and two together, and shut down the engine when, in fact, the smoke was from a fire in the aft equipment area (the Learjet term is “Hell hole”<sup>3</sup>).

This Learjet was modified to tow what is called a dart for the Air National Guard F-16s to shoot at in the air. The dart trailed behind the Learjet by 1,000 (or so) feet on a cable that was reeled in by an electric motor. The electrical installation to reel the dart in was not protected by a current limiter and when it heated up the batteries blew up causing a fire. The fire was also burning into the rudder cable assembly and when they erroneously shut down the engine the aircraft was not as responsive as it should have been when power was added with the other engine. This caused them to be limited in turn, turn bank, and turn radius causing them to over shoot the runway. They then decided to land on the Fresno street. This probably would have worked out but they caught a street pole or sign post with the leading edge of the right wing and that turned them into the housing area resulting in the crash, fire, death, and destruction.

Speculating, using Learjet community knowledge and experience, an aft equipment bay fire is not that rare but the indications will vary depending on what is on fire and what the fire burns into or destroys. Probably the indications will vary, be random, but sequenced to show problems pointing to the aft equipment bay area. For instance, a spike or fluctuation in the DC voltmeter, a Generator light (or both Generator lights), Battery overheat light, Current limiter light, or just the loss of half or all electrics will point to this area in the jet. Even an engine fire light could illuminate – like in Dart 21.

This goes back to the discussion a crew should have when faced with a light by asking the question “What is the problem?” Meaning, just because an engine fire light illuminates that does not necessarily mean you have an engine fire. A crew should not just go to the immediate action check list and start shutting down an engine. It is unfortunate this crew had a fire light and at about the same time the tower advising them they were trailing smoke.

What kind of training should be accomplished to cover this particular phenomena and this particular crash. Well, I am glad you asked that as some of my graduates have the answer(s).

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<sup>1</sup> Business & Commercial Aviation – September 1995.

<sup>2</sup> (I would argue “priority handling” when in an emergency situation is a poor term...you should get the whole airport – it belongs to you until you safely get the ship on the ground – but I am getting ahead: this means you need to think about being forceful and directive with your emergency requests).

<sup>3</sup> The Hell Hole compartment is in the aft fuselage behind the cargo bin in an unpressurized area between the two engines. Access is provided through a small sliding panel/door so a pilot or mechanic can stand up into the bay and observe/inspect/preflight or repair some of the electrical, hydraulic, and fuel equipment. Is called a Hell Hole because it can get pretty warm in there on a hot day.

## Hell hole fire training

In class this accident was covered by play acting. Then we went to the simulator to practice. If you have an aft equipment bay fire you need to get the ship on the ground. This keeps coming up in our training, for example, as Smoke and Fumes is very similar in procedures noting the only thing worse than smoke, fumes, and fire is a mid-air - that would probably ruin the rest of your day.

The class drill (ground speed zero) is to place two pilots in side by side chairs backed up against the east wall. They are in take off position with a few rules to go by. First, I hand them each a glass of water – full to the brim - to hold in one hand and ordered not let one drop spill out. This is to simulate the attention given to cross checking the instruments while we chair fly this take off. The copilot is told by me to NOT do anything except what the pilot calls for – he is a bucket of rocks, by design (for this drill). The pilot will make the call outs and commands as I feed him with what he is seeing and where he is in the flight.

Think about this. Two guys flying while the rest of the class is watching. They don't have a clue as to what is going to happen and the pressure is on the pilot – just like, I might add – as every takeoff every day. He must perform (he is almost solo as I am putting a brand new copilot with him for a little more challenge). The watchers will be tested on their observation, investigation, and grading skills.

Here we go. I tell them they are at Love Field taking off on runway 13R. The weather is CAVOK. The departure instructions are to take off and “when altitude and speed permit make a climbing right turn to and maintain 3,000 feet on a heading of 310 degrees. Expect higher later and expect direct to Cowboy.”

Assume take off power is set. Ready? Use normal call outs for both of you. Cleared for takeoff – release brakes!.

During takeoff and in the right climbing turn I feed in a L GEN light at GO, a R GEN light in the turn, a BATT light (160 degrees) and as they level off the left engine FIRE light illuminates – to be followed at the same time with the tower saying “[it appears<sup>4</sup>] you are trailing smoke!” The aircraft is abeam the field at about 2200 feet AGL. If they don't turn into land quickly it will be too late. If the pilot shuts off the left engine with the fire light then it won't be long before they hit the ground as the ship won't let them turn right because the burned/jammed rudder cable will not move the rudder to help them to the right. Added to this is the engine power from the number two engine will turn them to the left. So they need both engines. Without the left engine and no right rudder the turn to the right is marginal to say the least. This is as close as I can get to putting them in the mishap airplane.

Class, how did they do?

Discussion to follow with how it was set up, the red flags as they appeared, and the progression to either get back on the ground, or in the case above, sending the fire trucks to the accident site.

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<sup>4</sup> Typical FAA call. “It appears” is what they say. He is just trying to help but he is shackled to their f'ing manual...

## Return to the field

If the pilot chose to return to the field from down wind landing north may have been possible. Maybe a descending turn to the right to land on the takeoff runway or 13R – or maybe even 13L. The push here is not to dilly-dally on downwind because it just keeps getting worse as the fire is degrading controlled flight.

I ask “Suppose all these lights coming on about the time you passed the end of the runway on takeoff. You need an immediate 180 degree return to land RIGHT NOW, how would you do it?”

1. Agreeing you must tell the tower to clear the runway (31L now, but is the opposite direction you took off) you are on fire and landing.
2. How do you make this “whifferdill” to return and land? Strong lesson to follow by employing the Socratic method of guiding the discussion. What we will do is one piece at a time go through the turn-around to land. The guidance is seeking input from the students on airspeed, altitude, power settings, turn radius, weather, and time in seconds to RTB (actually RRTB for “Really, return to base NOW!”). The turn should be made with as much G as you can hold, in as steep a turn as you can make, and crank it on around to keep the speed up and drive it as fast as possible to land...note: a slight jig away for 20 or so degrees will help the line up with the runway after the 180 turn. With finesse a shallow climb in the turn to slow down will make a shorter radius – and quicker return.
3. We will practice this whifferdill in the sim.



18 April 1942

"I had thought to coast the rest of the way" (Gann, *Fate is the hunter*, New York: Simon-Schuster, p. 68).

68 • FATE IS THE HUNTER

to me. This is a mild shock, for it is his leg and therefore the instrument approach which the Newark weather demands should be his. I had thought to coast the rest of the way.

"We will now learn what it's like to make a real approach without an artificial horizon—" he points at the offending instrument which swims uselessly behind its glass face—"and a few other things which may someday be worth our knowing."

I cannot understand Ross. He is obliged to give nothing away—much less an instrument approach which could be difficult. He is not paid to be a mentor and can, in the doing, only risk his peace of mind.

"Now concentrate. Forget I'm here."

Forgetting Ross is like a slave forgetting the galley master even when he tips back his head, closes his eyes, and seems to be napping. Yet in no other way can he appear to set me on my own.

A radio range is simply a broadcasting station which transmits a monotonous though valuable program. The signals form four spokes, each narrowing and intersecting at the hub, like an ancient wheel. The spoke selected depends, of course, upon the direction from which the plane approaches the station. I pick up and begin to bracket the north spoke of the Newark range.

Basking in Ross's confidence, I move the controls gently. I am only too aware that his closed eyes are a sham. He is also listening and, like a temporarily relaxed conductor, waiting for a sour note.

When I have at length settled down to a steady course, Ross opens his eyes and presses a button on the instrument panel three times. In a moment the stewardess appears in the shadows behind us. He asks her about the passengers and how they fared through the storm.

"One man was sick. But they're laughing about it now."

Without turning from my work, I ask about the baby. I don't really care, but somehow I must know if it bawled.

"No. It slept all the way through. Anyone you know?"

"No. I was just curious."

But I brood on this for several minutes and can not decide why it seems so wonderful.

"...and a few other things which may someday be worth our knowing."

"Now concentrate. Forget I'm here...it seems so wonderful."

“What the hell are you doing?”

A CAPTAIN • 69

We pass over the cone of silence at Newark with very little meandering, once I have pinned down the leg. The initial descent is pleasing too—steady and nicely timed—and I can reasonably hope the rest of the performance will go as smoothly.

Then as we start the turn for the final descent, which is always the most complicated and demanding in accuracy, Ross takes a box of matches from his pocket and lights them one after another just under my nose. I gasp a protest. I am heavily engaged in trying to hold course and altitude exactly according to the book. This is the real thing. It counts.

“What the hell are you doing?”

I am bewildered. If I were not so extremely busy I would brush the flame away. It is difficult to see the instruments beyond the flame, and Ross holds it just close enough to make breathing difficult.

I blow out the match. Ross at once lights another. I am fifty feet too low, the compass is swinging in a direction it should not, and my speed is falling off.

“Steady . . .”

Ross’s voice is calm and without malice or mischief. Then what in God’s name is he up to? The performance, on which I was just about to congratulate myself, is rapidly going to pieces.

I fight to keep things in order, not because we are in the slightest danger at this altitude, but only because Ross has deliberately ruined what might have been a technically perfect approach. For this I cannot forgive him.

As one match after another flares before my eyes I become infuriated with Ross. He is a sadist, sick with weird complexities. He is afraid I *will* do a good job. To hell with him! I will keep everything as it should be regardless of his jealous interference.

Sweating profusely, inwardly cursing Ross’s twisted sense of humor, I resolve to fly this ship safely and surely to earth in spite of any harassment. I force myself to ignore Ross’s match, to see beyond it to the instruments.

As we turn in for the final descent I shove the propeller controls

“Steady . . .”

“The matches. Why would he light the matches?”

70 • FATE IS THE HUNTER

to full low pitch. We are exactly at required altitude, the speed is right, and also the course.

Ross shakes out his match and sits back in his seat. I glance at him, my resentment doubling when I discover him smiling. We will have this out on the ground!

In less than a minute, at six hundred feet, the faint glow in the clouds becomes an iridescent bloom. I hold the descent. Tatters appear in the cloud base, then the runway lights, and finally the guiding ladder of red neon tubes dead over the nose. I call for full flaps, chop off the power, and we swoop down through light rain until the wheels brush the cinders. I believe that even McCabe would class the landing as better than a bare “arrival,” although so short a time ago I strained his back on almost the identical spot.

As for Ross, he can take his comic-opera cap and fly in other directions. I intend to ask for a transfer.

When the engines are stopped I complete the logbook in wounded silence. Ross leaves his seat and puts on his coat. It is raining harder outside. Maybe his ridiculous cap will shrink to the size of his brain.

I snap the logbook shut and am about to stand up when I feel his heavy hand on my shoulder. My grip on the metal logbook tightens. If he tries one of his playful swings—

But his voice is surprisingly tired and so is his smile. “Anyone can do the job when things are going right. In this business we play for keeps.”

When he has left the cockpit I remain in my seat listening to the rain peckle on the aluminum above my head. The matches. Why would he light matches? He could more easily have created other distractions if that had been his only intent.

I walk slowly through the rain to the operations office, not really caring if my uniform is further soaked. I decide against asking for a transfer. Ross, in his peculiar way, is making a line pilot of me. And I suppose it is a good way.

Nearly four years would pass before I would again see Ross’s matches flaming before me. Then, even though distracted by the drumming of my heart, I would know their incalculable worth.

“Nearly four years would pass...I would know their incalculable worth.”

## SMOKE & FUMES QUICK REFERENCE

SMOKE/FUMES IN AIRCRAFT - OXYGEN-ON 100% (ALL)

IF SMOKE IS NOT CONSIDERED ELECTRICAL

1. STAB HEAT - OFF
2. BLEED AIR - 1 EMER / 1 OFF
3. PRESSURIZATION - MANUAL
4. CHERRY PICKER - UP

IF SMOKE CONTINUES - SWAP POSITION OF BLEED AIR SWITCHES

IF SMOKE IS CONSIDERED ELECTRICAL

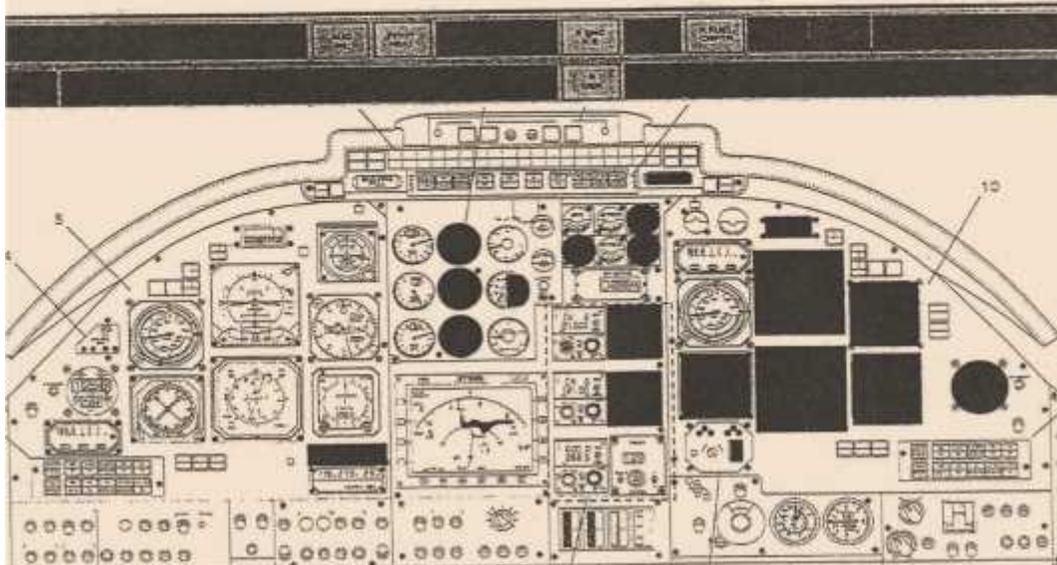
CO PILOT SIDE - FROM TOP DOWN - 2-4-2-2 + 1 (R STALL) (7 from back)

BEFORE LANDING

1. EMER BATT - EMERGENCY (FOR GEAR & FLAP EXT)
2. FLAPS 20 APPROACH (NO AIL AUG OR FLAP POS INDICATION)
  - A. FINAL APPROACH CONFIG - GR-DOWN, FLAPS-UP/8/20
  - B. FINAL APPROACH SPEED - VREF + 30/20/10
  - C. LANDING DISTANCE - MULTIPLY BY 1.35/1.3/1.2
  - D. YAW DAMPER - OFF PRIOR TO LANDING
3. ANTI SKID - INOP
4. SPOILERS - INOP
5. FUEL COMPUTER INOP LANDING AND GO-AROUND

CONSIDERATIONS

1. APPROACHES AVAILABLE
  - A. VISUAL/ILS/VOR/TACAN/NDB/GPS/PAR/ASR
2. FUEL QUANTITY - INOP
3. FUEL DUMP - IF REQUIRED
  - A. R ESS B BUS CB - IN
  - B. FUEL JETTISON SWITCH - ON
  - C. R ESS B BUS CB - PULL WHEN BOTH JETTISON LIGHTS ILLUMINATE
4. NO SPOILERS UPON LANDING
5. RIGHT ENGINE FIRE PROTECTION - INOP



This is the right side suspected of smoke and shut down - good guidance on what is available and procedure for opening the right tip tank jettison valve - for example.

WHAT DOES THIS PAGE LOOK LIKE IF THE LEFT SIDE IS SHUT DOWN? - I know, more homework...

## The Saturday Sim

We (you and I) have mentioned going to the simulator on Saturday for about an hour with each crew. The learning task is to put together a couple of training items we talk about from class, get some hands on in the sim, and then have a couple of days to apply both to the sim sessions the next week. This algorithm adds to the law of primacy of doing it right the first time. Sometime, in the five day class, most everything is covered in academics. The student knows what is going to happen. Will say again the student's success in the class will be determined how well he keeps ahead of the jet – 16 miles will work. Will say again if you are out that far ahead I CANNOT touch you. You are golden. ***If you dilly, I'll get you.***

The Saturday simulator – I will already have 'set the sim up' or 'laid my traps' before you all walk down the stairs and get into your seats. As you crawl in and get seated I ask "Lieutenant, please check to see how much fuel is left in the fuselage tank?" Well, the operational question is not a bad one but those who snap the battery switches on, flip the gauge to see, will get "What else did you turn on because you didn't check your switches before you turned on the batts?"

- ) You are dumping gas from both tip tanks.
- ) The gear switch is in the UP position.
- ) The start switches are both in START.
- ) The engine FIRE PULL handles are pulled.
- ) The flap handle is FULL DN.

And then I say "Well, the score is G. Heart - 5, Studs – zero. Now the fun starts...so, we are going to keep score? No, not really. Just want to move in the most direct line toward how to stay 16 miles ahead of the jet. I sit down in my seat and give a little lecture starting with: "TRUST NO ONE!" If you do trust someone VERIFY FIRST. My job back here is to throw some sand (or a crowbar) into your gears up front. Give me the room, give me the chance, and I will run you off the runway, let you land gear up, and a host of other 'GOT CHAI' items. Don't let me get into your shit. That is your job. Where else can you get this superb training and not bleed? Tell me!

Blind fold cockpit check – We used to do this all the time in my Air Force especially before night flying as a pilot needs to know where all the switches are in case you lose electricity - or for Smoke and Fumes – all jets have a flashlight stashed somewhere to help. Then there are some very important switches: EMER PWR, EMERG GEAR EXT, EMER STOW, BAT 1, BAT 2, Bus Tie Breakers (BTBs).

The game is played with one pilot calling for the equipment/switch/gauge and the other who has his eyes closed to reach out and point it or activate it. This does not take long asking 4-5 items and pressing on but gives them an idea of how much they know or don't know.

Sometimes I have them see how fast they can get a jet in the air simulating "Getting out of Dodge" when they start shooting RPGs or the bad guys are inside the wire. Of course no one is going to use a checklist during this drill so it will pay off to really know your jet- and the practice won't hurt.

Take off – Normally take off on 28R for a number of reasons but this Saturday flight is the same load, weight, and same weather they will have next week. We can use the same TOLD cards to make it easier. During the takeoff roll but just before GO, I select ENG FIRE on one of the engines calling for a **REJECTED takeoff**. I do prompt for using MAX brakes (this is what stops the jet) and they must practice the MAX part until sure they really slow down and stop. I ask them to turn the jet around and head east without

using a lot of runway. We then visit about the distance we used in the rejected run. Of course, it equals balanced field length or the distance to stop or continue the take off if an engine is lost and have 35 feet of altitude at the departure end. So, they are looking at about 4300 feet and I say "Tell me what is next?" looking for and getting most of the time "A V1 cut!" Then we go through a takeoff, with the pilot not flying pulling an engine to idle at GO, simulating an engine failure and then every step we have been talking about in class. Sometimes the engine is shut off rather than idle - depends on the following task.

Couple of options here as they go through the steps for loss of an engine and to get them turned around to make the single-engine approach and dead-stick landing, so I have them turn to catch the 8 or 10 NM ARC or make a procedure turn and fly in ILS. When they get close enough I will flame out the engine they are using to get back to the field.

They will be carrying a little extra speed to make the landing knowing they have to be ahead of the jet or they will/maybe land short. They may need to raise the gear, or the flaps, or just keep her coming – depends on where power is lost. We have discussed these issues; however, this is the Saturday sim so we are warming up getting out of the classroom for an hour and getting ready for the sim next week.

After the landing, very quick discussion, I snapshot them back to the rejected spot where they just took off from and give the other pilot the same practice with a V1 cut. After they get it cleaned up I will stop the jet, let them have the engine back, place them where just about a 180 degree turn will get them over the marker inbound and then say: "We are going to go through a smoke and fumes procedure and take a few minutes to do it while we are parked out here 7 or 8 miles."

So, one side is electrically shut down, they have both looked at each step taken to stop the smoke and then I turn them loose to head back to the field for a full stop – of course, they will also land without engines.

Pause – for example if I have four lieutenants, I can now send these two guys back to debrief, take notes, and run the other two through TWO MORE DIFFERENT SCENARIOS. Meaning after the second crew has flown two legs they too can debrief and take notes. Reason? In those two hours, four students, four different events, they will have covered most of what they will be getting next week in the sim. This is the time for each one to debrief and brief the other crew of what he did so they all can hear and understand what is going to show up next week. A wonderful time for them to practice their briefings, ask questions, take notes, and comma have at least three days to get ready for the 'real thing' on the first sim. Remember:

Law of intensity: "A student will learn more from the real thing" – chair to sim,

Law of Primacy: "What is taught must be right the first time."

Law of Recency: "The things most recently learned are best remembered."

**"Unteaching is more difficult than teaching."**

[See the latest copy of *Aviation Instructor's Handbook* – AC 60-14. You must have this to work on your FAA Certified Flight Instructor (CFI).]

Tell me how good this is...one crew will have flown Cheung Chau, one will have gone through smoke and fumes, one through part of Mike Fox, and one a high altitude flame out of both engines and a landing –

maybe one got a quick return to land scenario. The Saturday sim to me worked very well for all the reasons listed and, of course, set up excellent preparation for excellent flying next week.

Want to mention during the dead stick glide we practiced getting into ground effect practicing over the concrete just to see how far the jet would go. Later on this paid off by being able to make the field by using the effect over water and making it back while landing to the east. It can be said we 'stretched' the landing roll with the mantra "Never ever give up!" or "Fly the biggest piece to the ground!"

### First Simulator after Academics

Let's see how the first crew does. They are cleared for takeoff, simulated V1 cut – "CLEARED FOR TAKEOFF"

(Remember the rules and remember the training: Stay 16 miles ahead of the jet and I can't touch you and we have been talking about this flight for a week – even got an hour of practice on Saturday. Fly the Jet!)

Right before GO an engine fire light illuminates and they shut it down utilizing MAX brakes. Good. "Turn the jet around and take off at the balanced field length on 10 Left. The pilot not flying will bring one to idle at GO – Have a good trip!"

At GO the throttle on the right engine is brought to idle. Pilot flying nails it – good rotation, ball is in the center, they are up and away. Positive Rate of Climb, GEAR UP! At this exact same moment I fail the engine in idle. With an engine at idle then failed the GEAR HORN sounds and the three red lights for the gear illuminate (all normal – but they have not yet lost an engine like this). With all the lights, horn, and me announcing "the f'ing gear didn't come up!" adds to the planned distraction.

What is happening is the engine oil light, generator light, and the hydraulic light all come on but NOT noticed; hence, they are still flying up to 1500 feet to level off and continue with the 'simulated engine failure.' When they get to 1500' I say "Hey guys, I've got to go to the bathroom. Let me take us OFF MOTION and we'll take a short brake – sorry 'bout that.

As we get to the top of the stairs I kinda herd them into the briefing room and say "I have something to show you." As they sit down I turn on the video player, dim the lights, and close the door. I say "Here is a crew I want you to critique. Tell me what you see them doing." Well, they see a takeoff, hear the GO call, see the engine brought to idle, the call for the gear up, hear the horn, and the call "the gear didn't come up!"

Some see it and some don't. Course, this is what instructors are for "What do you see? What are they doing? What do all those lights mean?"

"Oh crap. The engine really failed."

"Oh shit. That was us."

"G. Heart, you sumbitch!"

"Roger that. Now let's get back in the jet and see if you guys can do steep turns at 200 feet."

**Back in the Box** – as we say in the trade...

Another place in the book I talk about being over the field - well, near the field – at 7 or 8,000 feet, poor visibility (maybe 10 miles – you have to “look” to see) and I flame out both engines. I try to talk them into landing up north of the PDX but most figure out where the airport is and head toward it.

That is the first rule - actually the second, as you first must zoom for any altitude (if needed) and then head toward the field. Rule three is set up best glide speed (use 180 KIAS – you will be golden). Four, is to set up a pattern: High key at 10,000, base key at 5,000, and use the last 90 degrees of turn to:

(a) Aim for a point half way down the runway – maintain 180,

(b) When you can make the half way point down the runway put the gear down – maintain 180,

(c) Move your point to one-third down the runway – hold 180 till you land at that spot – flaps as desired – maintain 180 to touchdown...THAT’S IT! Make sure to put the airport out your window so you can make your own turns and not have to rely on someone else who may be less experienced.

### Dead Stick Landing

Pilots who have flown gliders (sail planes) do best in making dead stick landings; of course, this statement is intuitive to even the most disinterested student of aviation but the ears perk up in class when I announce “All landings in my sim will be made dead stick.” For sure this is not as bad as it sounds and most students have heard about this part of the training. All takeoffs will have a V1 cut and all landings will be without the engines running. Why?

One of my unpublished corollaries is my students will have more confidence flying the jet when they leave than they had when they got here. I will say the instructors at your training base (Keesler, Scott, where ever) will not be able to give you anything you can’t handle after my sims – most crews get at least one to 12 hours of sim training with me but everyone lands with no engines. Why?

Most teaching is done without something working (something not working) in the jet like loss of hydraulics, loss of electricity, loss of pressurization, loss of something, but very seldom loss of fuel – meaning ALL of it. We have discussion in the class with “What can you learn about the jet (and you) when have no engines and have to glide the ship down to a landing?” (Why? Why in the blank are we doing this?)

Answer: There are no surprises.

From: *“Point the nose, level the wings, - get some smash”*

to

*“Pitch for best L/D, aim for the field, - hold 180.”*

to

*“Max power, Rotate, Hold V2, Jettison gas, Climb to 1500 feet.”*

(What else do you have in YOUR notes?)

SWO – Still Water Oklahoma (Searcy Field) - Oklahoma A&M College 1957.

One learns real quick with the Flying Aggies to have a field picked to land in while climbing to 400 feet after takeoff. If the throttle gets pulled out of your hand with “Forced Landing!” shouted from the back seat, your field to land in, while lowering the nose, should have been already picked out. On downwind, and abeam midfield, if you turn for the golf course instead of the runway you will have erred. Normally, without a bunch of other ships in the traffic pattern, when you turn base to final you will not need any power to make the landing on concrete – except the clearing of the engine on base.

Then you will notice while doing some high air work near the field the instructor says “I’ve got it.” Then he closes the throttle, turns the mag off, raises the nose till the prop stops spinning, and says “You’ve got it.” The same rules apply: Turn for the field, establish best L/D, set up your pattern aiming for the center of the runway. This will work not only for Aeronca 7AC “Champs” but for even the four engine aeroplanes.

What?

Let me tell you two stories.

Did a gig at Travis AFB back in late “ought 7” and got to fly the all-electric C-17 simulator. After experiencing my inability to refuel (“You are flying this like a fighter pilot”) and being impressed with the short field take off and landings at this “forward operating location”, I was asked by my young captain instructor if there is anything I would like to do? “Yes!” I said “Put us at 10,000 feet over the field and I will demonstrate a four-engine inop landing for you.” [I hear Keating whispering and encouraging me to ‘Seize the day’ – Boyd is betting me a beer I can’t make it.]

My young captain turned to the civilian GS-xx, who was our engineer for the day, and said to put us at 10,000 feet. Then there was a discussion about not shutting the engines down and then extending the gear as the tech would have to go back and manually lower the trucks, so we were popped to 10, lowered the gear, and then shut ‘em off. I was so proud of myself...I said “I will make a right gliding 360 degree turn, be at the base leg at five, and call for the flaps to move my landing point from the center of the field to closer to a third of the way down the runway.” I am looking at bright DC emergency lights, an attitude indicator, altimeter, and airspeed indicator – piece of cake.

As the motion came on and with all the proud bragging Oklahoman I could muster up I smoothly established my 30 banked turn to right and said “Watch this!” The nice GS-xx civilian engineer politely leaned into the cockpit space between me and the young captain and casually announced “You can have the ailerons, or the flaps, but you can’t have both.”

By god, I made the runway – landing (hitting) halfway down; then smartly went smoking off the end of the concrete at about 140 knots...

The instructor mentioned earlier during the set up the Dash-One did not have a procedure for a four-engine inoperative landing. Was told sometime later “they do now.”

Next, is a story hard to believe – Heard this from someone who was there (on the base). A computer nerd copilot (I just happen to know this dumb ass) was upgrading locally at a PACAF island airbase in a KC-135. On a 1500 foot downwind the IP rang the fire bell simulating an engine fire on one of the

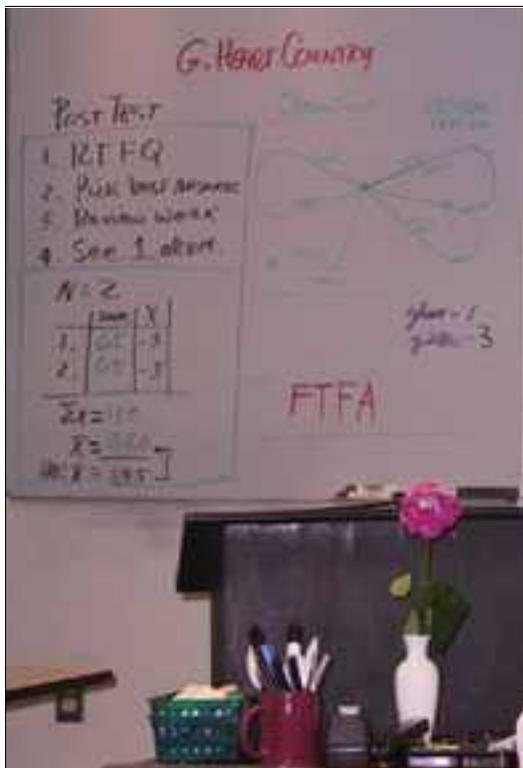
motors. The nerd reached over and shut all four off engines OFF. The IP reacted quickly and systematically getting enough engines restarted to keep flying.

(What is the gliding time from 1500 feet to splash down in the Boeing? And how many engines do you need to get running to stay airborne? Can you start more than one at a time? Which one(s) do you start? The real question is how this nerd stayed on active duty – and still had wings!)

One more – this one is short. Have you read of any Boeing 747s being involved in volcanic ash and losing all engines? Yes. Did they get them started again? Yes. My guess is the procedures for all three of these airplanes are about the same for loss of all engines. Note again the issue(s) for flocking birds hitting engines and causing ‘loss of power’<sup>5</sup>

The (my) lieutenants going through the class never complained to me about having engines failed during their training or even an argument “Why in the ^%\$# are we doing this?” and to me this is attributed to the class of pilots showing up to be instructors. They were, and are, a cut above the average.

By the way, I would have given the 135 nerd a pass if the instructor he just put to the test by shutting all four OFF had yelled “You son of a bitch, I haven’t seen this since G. Heart Country!”



You know when a red rose is placed near the speech box that there are probably some women in the class...I was lucky with these two ladies. “His golden ponytail girls.” But you see the score 3 to 1 their favor – it was that way for the whole f’ing week!

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<sup>5</sup> See my report on “Sully – the movie: Three Words” – in Chapter 6.

### Connecting the Dots

First thing the students of class #207, or whatever, did upon entering GHeart Country was listen to GHeart try to lecture the students for an hour or so on andragogy and the related and often confused pedagogy. Soon after this, the students proceeded to stand in front of the class and provide a briefing which would answer the question: "Who are you"? A summary sheet on the podium provided a guide for the impromptu speech; however, if a person is unable to answer this particular question without a guide, then they must not know much at all.

The ceiling played audience for about 2 or 3 minutes as I tried to explain my 26-year life story. A couple of days later, I got up and spoke slightly more confidently in twice that time on one small piece of the flight control system on the C-21. I still didn't feel like I explained anything about it to an IP level. I tried to fit 26-years of my life into half the time of the C-21 Spoiler DC-Hydraulic interrelationship.

Fully two hours after my butcher shop closed, the mighty students of class #207, or whatever, were asked to tell the class about their hero. We briefed one person or influence, while recognizing our precarious shelled position atop the fencepost.

Ask me again. Who am I? I am ~~Paul Tracy~~, I am a level-headed instructor of all things of which I am knowledgeable. I make a point in life to pick the virgin rosebuds. I will smash through the surly bonds confidently, but always within my bounds. I will use CRM when available, but never let my airmanship suffer. I am student ~~#33~~ and my hero is Gheart, for making me realize: when it comes to students, DFWI does not apply.