

CALLBACK

From NASA's Aviation Safety Reporting System



Number 310

July 2005

The "E" Word



According to the FAA's Pilot/Controller Glossary, an Emergency is "a distress or an urgency condition." The Glossary defines distress as "a condition of being threatened by serious and/or imminent danger and requiring immediate assistance." Urgency is defined as "a condition of being concerned about safety and of requiring timely but not immediate assistance; a potential distress condition."

Since most would agree on what constitutes a distress condition (e.g. fire, mechanical failure, structural damage), the challenge appears to be for pilots and controllers to recognize when an "urgent" condition justifies declaring an emergency.

The Aeronautical Information Manual (AIM) states: "...Some are reluctant to report an urgency condition when they encounter situations which may not be immediately perilous, but are potentially catastrophic."

The following ASRS reports show that air traffic controllers may have another viewpoint regarding the need to use the "E" word.

Trust Me

This B757 crew learned that once an emergency has been declared, controllers can redirect traffic and take the steps necessary to prevent a bad situation from getting worse.

■ ...[Destination] went below minimums. We decided to divert. While on vectors to ZZZ1 Runway 31R, the weather went below minimums. We were switched to Runway 4. On final to Runway 4, ZZZ1 was closed to all traffic. ATC asked our intentions. We responded that we needed to divert to ZZZ2, which was still open, and declared "minimum fuel" (we had 8,300 pounds). Approach control gave us a vector for ZZZ2 and told us that they were declaring us a "fuel emergency." We responded that we were only stating, "minimum fuel." The controller said, "Trust me. Looking at the traffic in your area, you need to be an emergency." I trust that the controller was correct in declaring the emergency. We could not see the traffic that we would have been behind without the expedited handling.

"Roll the non-emergency equipment."

This airline Captain related how an aircraft system problem was handled in a professional manner and without declaring an emergency. Reporting on the same incident, the First Officer expressed concern that an emergency was not declared.

There was no report from ATC, but it would have been interesting to have the controller's perspective on the situation. Apparently, there was some confusion and we can assume that the controller would agree that if a situation warrants calling out the airport's emergency equipment then it warrants declaring an emergency.

■ Approximately 45 minutes into the flight, we got an ECAM (Electronic Centralized Aircraft Monitor) Hydraulic System Low Quantity indication followed by a Hydraulic System Low Pressure.... I did the ECAM actions then pulled out the flight handbook and reviewed the action items.... Crew, dispatch, and maintenance agreed that continuing to ZZZ was a safe course of action. I requested that dispatch coordinate with the ATC representative to get...at least a ten mile final to allow time to lower flaps and gear and to assure use of the longest runway due the winds and no nosewheel steering. I also asked for the emergency equipment as the checklist led us to believe that manual gear extension was not 100% assured.... We had a normal touchdown, stopped using brakes only, cleared the runway, and got towed to the gate... We did not declare an emergency during this event.

From the First Officer's report:

■ ...My biggest concern, looking back on the incident, was that we did not declare an emergency. We did ask for the fire trucks. The possibility of gear collapse was not specifically outlined in the flight manual. We only inferred it from some of the notes when we read ahead to the Partial Gear Irregular Checklist. By not declaring an emergency, but then asking for the equipment to be standing by, it seemed to cause some confusion for ATC.

Accommodating Controllers

Although the controllers made traffic adjustments to accommodate this returning MD-80, it would have been helpful for the crew to accommodate ATC with a little more information.

■ ...[Airline] Flight XXX advised the local controller that they needed to return for landing. Local control worked them into right traffic for Runway 28. The crew was asked if they were declaring an emergency or needed assistance. They replied, "No," but traffic was sent around and/or moved to another runway to accommodate them. After they landed, it was discovered that smoke in the cabin was the reason for the return. All of us in the tower would have felt more comfortable knowing this and having the crew declare an emergency or declaring it ourselves.

"MAYDAY"

The official ICAO (International Civil Aviation Organization) word used to signify an aircraft in distress is, "MAYDAY." A B757 crew found that the word "Emergency" may not get the desired results outside of U.S. airspace.

■ ...Diverted into ZZZ [South America] and declared an emergency, but the non-English speaking controller didn't recognize what that meant. So, no standard services such as priority handling, fire/rescue equipment, etc. were provided.... The root cause of the problem was that the crew was trained to use "Emergency" rather than "MAYDAY."

Additional information on Emergency terminology and procedures can be found in FAR Section 91.3 and AIM Chapter 6.

ASRS Alerts Issued in June 2005	
Subject of Alert	No. of Alerts
Aircraft or aircraft equipment	10
Airport facility or procedure	5
ATC procedure or equipment	3
Chart, Publication, or Nav Database	2
Maintenance procedure	4
Total	24

A Monthly Safety Bulletin from

The Office of the NASA Aviation Safety Reporting System,
P.O. Box 189,
Moffett Field, CA
94035-0189

<http://asrs.arc.nasa.gov/>

June 2005 Report Intake	
Air Carrier / Air Taxi Pilots	2509
General Aviation Pilots	768
Controllers	59
Cabin/Mechanics/Military/Other	166
TOTAL	3502

The "H" Word



Help is another word that has difficulty getting past the lips of aviation professionals. It is clear from the following ASRS reports that there are times when a little assistance is appropriate. Getting professional help can do wonders for lowering stress levels (to say nothing of the accident rate).

The maintenance technician, pilots, and controller who submitted these reports all had a **brush** with misfortune that could have led to serious consequences. The lesson common to each of their experiences is to ask for help when it is needed. Don't **brush** it off. Never be too **busy**, **reluctant**, **unwilling**, **self-conscious**, or **hesitant** to ask for help.

Busy

■ *An aircraft arrived with the #2 electrical hydraulic pump inoperative. We replaced the pump and it tested OK. The head pressure had been bled off and resulted in a "Reservoir Pressurization" light being on. As I was correcting the paperwork, I had a technician from another airline, three of my own maintenance crew, and the flight crew all providing me with information. While this was going on, I entered the wrong information and code to clear the hydraulic pump. I inadvertently re-deferred the pump and listed the reservoir light as a continuing problem. In effect, I dispatched an illegal aircraft.... I was too busy to do what I should have done; sought the help of a senior mechanic to help with lead duties as I made the computer input.*

Reluctant

■ *I received taxi clearance to Runway 17... As I taxied onto the parallel taxiway, I noticed that there was construction ahead.... At the end of the ramp, I taxied toward the approach end of the runway... The controller advised me that I was past the hold line and to contact the tower as soon as possible.... I feel that the tower could have given more information on the end of the taxiway/holding area, but I am at fault for not asking for help when I knew I needed it. Next time I will be more aware of the signs on the airport and I will not be reluctant to ask for help.*

Unwilling

■ *... As I approached ZZZ, I did not believe the VOR's were malfunctioning. I thought I knew where I was, but...as I descended into a cloud layer, I became disoriented and concerned that the localizer wasn't*

functioning properly. Instead of asking for help, I saw the ground through holes in the clouds and continued on toward where I knew the airport to be. I was nowhere close to being on the approach and as a result, interfered with the approach of another aircraft. [A] contributing factor was... my unwillingness to ask for help when I realized I was disoriented. At any point, I could have asked ATC for help, but I did not.

Self-conscious

■ *I departed...on a really hazy day...with a Special VFR clearance. On the second leg of a multi-leg cross-country flight, I found myself in a situation where I was not completely sure of my location. I mistakenly identified the airport and approach asked me to switch to the CTAF frequency. When I realized that I could not see the airport, I decided to continue on the next leg to ZZZ. At this point I should have reestablished contact with approach control and requested assistance... but, truthfully, I was too self-conscious about admitting that I couldn't find the airport and opted to continue on my own.... I had been to ZZZ several times, but today with my rising personal frustration level, I was completely unable to locate the airport.... I was becoming more and more disoriented and...wasn't really sure if I was going the right direction.... Now I knew...that I was completely lost.... While I wasn't in imminent danger of running out of fuel, I became quite concerned about how I was going to get home.... I was flying in VMC, but the haze layer below made it difficult to ascertain surface details. I returned to the last frequency I had for approach. They asked me to squawk 7700.... The haze layer was still quite dense, but with vectors from ATC, the return trip was uneventful....*

I realize that I should have admitted my mistake to approach control.... I know they will do everything they can- if one simply asks for help.

Hesitant

■ *I was controlling numerous aircraft on several frequencies. There was considerable congestion and many blocked transmissions. There were other controllers available, but a decision was made to use a coordinator rather than splitting the sector. There was too much to keep track of.... [Two aircraft] came within one mile and 100 feet separation. The conflict alert brought my attention to the problem. Had the alert not been operational, the result might have been catastrophic. I issued traffic alerts to [both aircraft].*

There was too much traffic for one controller to safely handle. I should not have hesitated to ask for help....

As announced in Callback # 307 (April 2005), NASA/ASRS is conducting a General Aviation Weather Encounters Study. To support FAA and industry efforts to improve awareness, knowledge, training, and procedures related to aviation weather, ASRS strongly encourages general aviation pilots who experience adverse weather encounters to report these incidents to ASRS and to participate in the Weather Encounters Study.