SAFETY CORNER

CORPORATE AIR NEWSLETTER

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NEXTGEN AVIATION SAFETY - STRATEGIES AND SOLUTIONS OF A SAFETY MANAGEMENT SYSTEM

THE SAFEST YEAR IN HISTORY

It has been reported that 2015 was the safest year in the history of aviation, but it was also reported to be more deliberate accidents than prior years. This safety trend is positive, but there is still one enormous task to manage human behavior in a total safety management system. Aviation safety is more than metal fatigue, mechanical failure, engineering errors, or projecting blame on pilots. Aviation safety is a complete safety system without beginning or end and without limitations. Aviation safety is ongoing in planning, evaluation and action of every aspect of travelling as experienced by the traveler.

UNEXPECTED OCCURRENCES ARE UNDEFINED SYSTEMS

Historically aviation accidents are contributed to human or pilot error and defined as failures. It was pilot error when pilots retracted the landing gear believing that it was the flaps. The root cause was defined as failure to recognize position of the flaps lever. As time went on, this failure happened over and over again until it eventually was recognized as design error. The flaps lever designed was changed to look like a wing, and the gear handle to look like a wheel. The outcome of selecting gear up and not flaps were placed into an operational safety management system.

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- On a foggy morning, size and complexity might not be obvious.
- A simple distraction of the process is a fork in the road.
- A successful SMS system does not dwell on the past.

"Friends, losing everything is not what you think it is, it's what you cannot imagine."

Hazard, Incident, Accident, Issue Reporting Form

FAILURE TO PLAN IS PLANNING TO FAIL

Several years ago an intercontinental flight ran out of fuel due to longer distance travel by thunderstorm diversions and the accident was contributed to pilot error and failure to plan the trip. However, when similar situations continued to happen it was recognized that failure to plan trips were due to pilot-fatigue, or organizational management since pilots worked without sleep for 24-36 hours in one stretch. Regulatory restrictions of flight and duty time were implemented to give pilots an opportunity to be rested before work.

INTERLOCKED SYSTEMS WORK TOGETHER

The outcome of failure to plan was placed into an operational safety management system with organizational accountability. These two scenarios are examples of a humble beginning of Safety Management System in aviation when systems and established processes came under review and short term fault findings were replaced with long term system changes.

SMS IS TO IDENTIFY PROCESS BREAKDOWNS

From the point of view of a traveling passenger, families or friends of the traveler, the outcome of the flight is what matters. It becomes a task for the total aviation-system industry to find out where there are breakdowns which could allow for deliberate-systems to infiltrate the safety management system. Just as the flap and gear handle, and flight and duty time restrictions changed the view of root cause analysis, the future holds new and similar challenges from unfamiliar accident-systems that will change how safety is managed.

THE OUTCOME OF THE FLIGHT IS WHAT MATTERS

The outcome of any flight must be viewed from the traveler's point of view to ensure that inconsolable experiences do not happen within a safety management system.

THIS MONTH IN HISTORY

United Airlines Flight 859, a Douglas DC-8 crashed during landing at Stapleton International Airport, Denver, Colorado on July 11, 1961.

The airplane suffered multiple hydraulic failures enroute from Omaha, Nebraska. On landing at Denver, the airplane departed the right side of the runway upon application of reverse thrust on the inboard engines. All tires were blown on the right main landing gear, and all but one tire on the left main gear was blown. The airplane came to rest between the runway and a taxiway. Engines 1, 2, and 4 were separated from the airplane, and, though its mounting hardware had failed, engine number 3 remained with the airplane. Sixteen passengers were fatally injured a result of carbon monoxide poisoning when the aircraft burned, and one passenger was fatally injured during the evacuation.

Sometimes when the fork in the road is missed, aviation safety takes an unexpected road.

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