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Subject: **NADA/F: A History of Promoting Fuel Tank Inerting to Prevent Center Wing Fuel Tank Explosions**

Inerting is the lowering of the oxygen content with nitrogen to prevent fuel tank explosions similar to TWA 800. The following is a timeline of inerting, and NADA/F's ten years of leadership, organizing, participation and actions, to promote implementation of inerting, a known technology to prevent fuel tank explosions.

The November 23, 2005 Notice of Proposed Rulemaking (NPRM) stated that an inerting system will place a blanket of non-flammable nitrogen gas over the fuel for added protection.

The FAA list of 27 fuel tank explosions includes military and commercial flights, although there are believed to be more than 27 fuel tank explosions. That FAA list is on Page 12 of the NADA/F Dissent, filed March 13, 2002 (at www.PlaneSafe.org – go to Safety, Inerting). The Federal Register November 23, 2005 states 17 fuel tank (commercial flight) explosions since the 1960's. Military has been using foam to inert for years.

Airbus modified planes years ago to increase ventilation and circulation to prevent explosions. The pressure is on Boeing to implement inerting on their newly manufactured aircraft and existing commercial planes.

In **1980**, (Reported October 31, 1999) Boeing studied fuel-tank problems in one of its jumbo jets -- **25+ years ago** and **16 years before a similar explosion of TWA 800**. Boeing did not give the 1980 report to the NTSB until June 1999.

1998 – First FAA ARAC FTIHWG (Federal Aviation Administration, Aviation Rulemaking Advisory Committee, Fuel Tank Inerting Harmonization Working Group, FTIHWG). They met for about six months and concluded inerting was “too expensive.”

“**SFAR 88**” - Through the years the FAA recommended a number of ways to reduce the flammability, but admitted that inerting was the only way to 100% prevent a center wing fuel tank explosion. Recommendations included more rigorous maintenance, pipe in outside air, hold more fuel, various ways to attempt to reduce temperature, inspect fuel pumps, improve wiring, and more.

July, 2000 - FAA approved **NADA/F** as a member corporation/organization to participate in the FAA ARAC (Aviation Rule-Making Advisory Committees). **NADA/F** also received a seat on the FAA ARAC Executive Committee (ExComm). **NADA/F** participation has been renewed and today we are one of **66** corporations/organizations of FAA ARAC.

September 2000 – FAA ARAC formed a second FTIHWG (inerting working group). **NADA/F** was able to appoint **three members to the Working Group, including Jim Hurd**. The Working Group **Final Report** was issued **June 2001** and submitted to the FAA ARAC ExComm in **August 2001**, and requested **clarifications by March 2002**. The FTIHWG report concluded that inerting was “too expensive.”

March 13, 2002 – NADA/F was the only member of the ExComm and FTIHWG to vote **No**, and file an extensive **DISSENT**, that inerting was not “too expensive.” The Dissent, a significant document prepared by **NADA/F**, presented a technical and common sense proposal that inerting was affordable, and aviation safety deserved nothing less. The Boeing representative at this ARAC ExComm meeting publicly stated that inerting was the only technology to 100% prevent fuel tank explosions, and stated that TWA 800 was caused by an explosion in the center wing fuel tank.

May 2002 – The FAA recognized and accepted the **NADA/F DISSENT**, and the technical center in New Jersey openly shared with the aviation industry that the technology had been developed for a simplified, light weight, affordable system of inerting to eliminate possible fuel tank explosions on commercial aircraft.

December 2003 – FAA recommended for comment a system for “inerting” i.e. flammable reduction.

December 2003 - NADA/F met personally with Marion Blakey, FAA Administrator, and asked her to issue a NPRM (Notice of Proposed Rulemaking) to move inerting technology forward. Blakey said that the FAA did not need to issue formal rulemaking because Boeing had agreed to implement the technology.

May 2004 and 2005 – NADA/F attended the Boeing Annual Shareholder Meeting in Chicago as stockholders and confronted the Board and Executives as to when inerting would be on their aircraft. We were told planes with inerting would not be off the assembly line until 2009, and retrofits on existing aircraft much later if at all.

February 17, 2004 – NTSB continued to push for inerting. The FAA Press Release said the FAA was considering a proposal to mandate new systems to reduce fuel tank flammability on new and existing large passenger jets.

The FAA press release also stated that the FAA had issued more than 60 directives (SFAR 88) to “eliminate” fuel tank ignition sources, but those proposals only “reduced” ignition sources.

November 23, 2005 – DOT FAA published a NPRM “Reduction of Fuel Tank Flammability in Transport Category Airplanes; Proposed Rule.

May 8, 2006 – Closing date for comment re: FAA Rulemaking Notice – Reduction of Fuel Tank Flammability in Transport Category Airplanes. Former Boeing employee John Hickey, now with FAA, said it would take him 18 months to read the comments. *NADA/F* recommended that the FAA immediately replace Hickey with someone who could read faster and understood that inerting was long overdue.

July 17, 2006 – The 10th Memorial for TWA 800, and we remember 230 souls lost on that day. The following *NADA/F* **statement** honored those who died by continuing to press for aviation safety so that others do not suffer a similar disaster.

“When you board a commercial flight today, over ten years since TWA 800, there is no inerting system on Boeing planes. The technology is there, it is affordable and lightweight, and long overdue for Boeing to put inerting on their aircraft. An airline may not survive another TWA800-type explosion. The traveling public deserves the highest standards of aviation safety and security. Flying is public transportation.”

April 30, 2007 (and April 28, 2008) – NADA/F requested at the Boeing Annual Shareholder Meeting for meetings with the Executive decision-makers at Boeing to discuss the status of inerting technology on newly manufactured aircraft and retrofit of existing aircraft. The new Boeing President James W McNerney Jr. was more receptive and we welcome the improved dialogue with Boeing high-level safety executives and *NADA/F*.

June 6, 2007 – NADA/F Testimony to the U.S. House Transportation Committee about NTSB “Most Wanted” Aviation Safety Recommendation. *NADA/F* stated the NTSB Most Wanted represented 150 years of recommendations and we need Congress to legislate aviation safety. Specific mention was made of 25 years of documents stating the need to prevent fuel tank explosions, and the fact that the technology is affordable today--we only need the FAA to act.

June 2007 – Language is in the House version of the FAA Re-authorization Bill to mandate that the FAA complete the rule-making for inerting. Bill passed in the House September 2007, and delayed in the Senate for over a year.

April 2008 – Matt Ziemkiewicz, NADA/F President, Jim Hurd, and TWA 800 family members met directly with the OMB (White House Office of Management and Budget) to push for inerting rulemaking approval. Since a September 2001 Executive Order, aviation rulemaking has been routed and delayed through the OMB to prevent what they call “regulations that lead to an enormous burden of the economy.” We know that another explosion would be a greater disaster economically and personally, and possibly put an airline out of business. The OMB actions have delayed and denied aviation safety measures since January 2001.

July 17, 2008 – Great news. Federal agencies approved the rulemaking to require fuel-tank inerting to prevent explosions in newly manufactured aircraft, and upgrades to more than 3,000 commercial aircraft in service today. The announcement Press Conference included Mary Peters, Secretary of Transportation, Mark Rosenker, Chairman of the NTSB, Robert Sturgell, FAA Acting Administrator, and Matt Ziemkiewicz, *NADA/F* President.

NADA/F on-going discussions directly with Boeing have been helpful toward moving inerting forward. Boeing stated to NADA/F that they are planning inerting for all new aircraft coming off the assembly line. The 737’s with inerting will be coming off the assembly line summer 2009 including 747’s and the new 787 Dreamliner,

We have new leadership in the Congressional Transportation and Aviation Sub-Committees, and their staff, and more Members of Congress are supportive of our work. NADA/F needs to stay vigilant to avoid FAA delays in compliance with the inerting rules. We will continue to work with Boeing, the press, family members and every elected official possible.