Des Barker Report 2024

Airshow Incident and Accident Review

This report does not seek to pass judgement on airshow accidents other than reporting on information in the public domain in an effort to identify and alert the airshow community worldwide, to accident trends in airshow safety, and propose methods for enhancing excellence.

Introduction

The current report is a continuation of the legacy that Des Barker left to the international airshow community. All efforts will be taken to provide an annual accident and incident review of the previous display season in the same format as the one Des was working with, including comments provided in the final investigation reports, without any attempt to put blame, but rather to share lessons learned.

2024 Statistical Overview

Figure 1 provides yearly totals for airshow incidents and accidents, accompanied by a trendline that illuminates overarching patterns. The moderate rebound observed in 2024 remains beneath prior peak levels, yet it raises legitimate concerns of reverting to what is here proposed as the "***Airshow Accident Cycle***," describing a recurring pattern characterized by surges in accident frequency followed by relatively safe periods.

During the pandemic, fewer large-scale events took place, resulting in fewer reported incidents. However, with normal operations resuming, the data indicates a potential cyclical uptick, notable for the intervals from 2008–2014 and again from 2015–2020.

Despite strengthened safety regulations and progress in the international airshow safety culture, inherent challenges in sustaining uniform airshow safety performance over time maintain the persistent fluctuation of accident rates.

Taking a holistic perspective and examining potential correlations between airshow accidents and broader socio-economic conditions indicates that economic factors may exert a significant influence. Specifically, there appears to be a positive relationship between global GDP growth and the frequency of airshow incidents, suggesting that periods of economic prosperity often drive higher demand for airshows, leading to a greater number of events and, in turn, increased exposure to risk.

Looking ahead, preliminary forecasts for 2025 suggest a ***negative trajectory***, reinforcing the importance of ***continuous*** collaboration among event organizers, regulatory bodies, and air show performers to ensure this "***Airshow Accident Cycle***" does not become the norm.

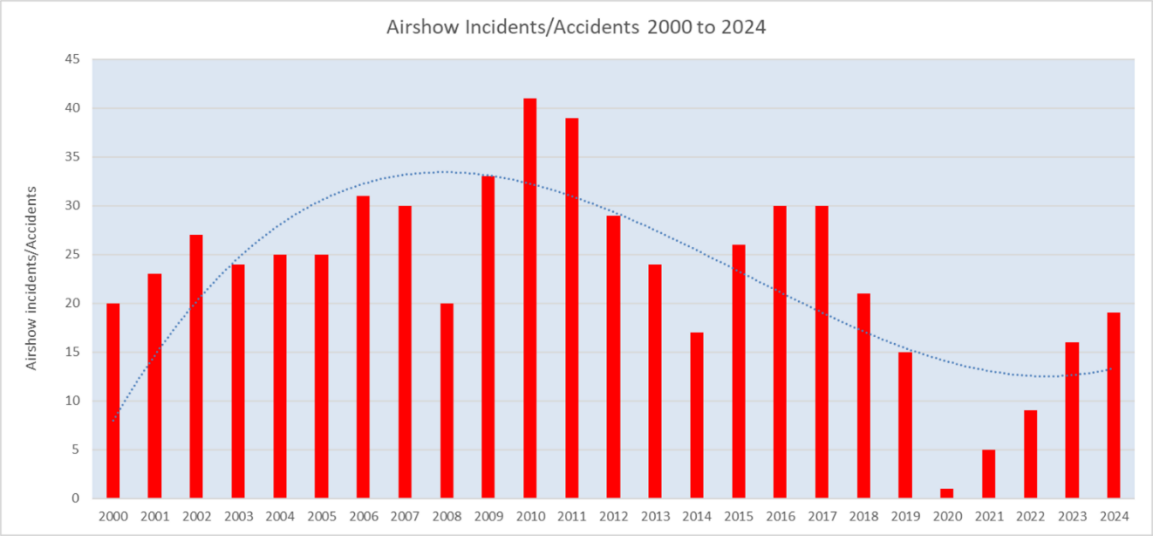
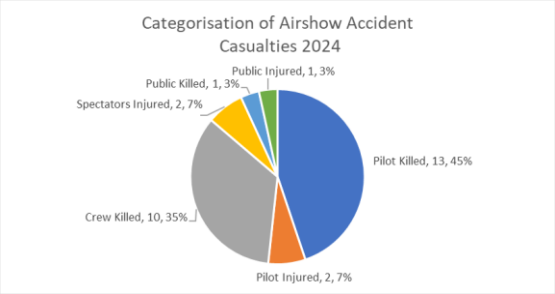


Figure 2, Airshow Accidents/ Incidents, Period 2000 to 2024 with Trendline

Casualties



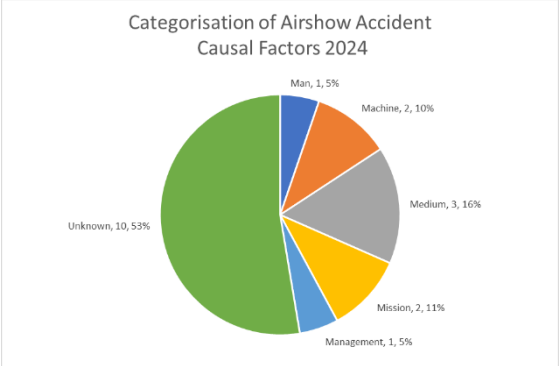
In 2024, pilot fatalities during airshows dropped back to the annual historical average of 13, yet they were 45% of the total casualties, as illustrated in the pie chart. Pilot injuries also accounted for a portion of the casualties, with 2 pilots injured, making up 7% of the total. Unfortunately, only one successful ejection took place in 2024, while other possible ejection opportunities were not utilized, resulting in the high rate of fast jet pilots killed.

The chart above also highlights the vulnerability of crews onboard during airshows. In 2024, 35% of the total casualties were crews on the aircraft during the airshow accidents.

However, the chart above mainly brings to attention the repercussions of airshow accidents on non-performers. Members of the public injured in these events constituted 13% of the casualties, numbering 4 individuals. In India, during the Koshi Airshow, poor spectator management led to 5 people dying and more than 100 being injured, in an unprecedented event for the international airshow community. This data reflects a pressing issue within the airshow industry: while pilot safety seems to be improving, the safety of the viewing public demands urgent attention to mitigate risks and prevent such tragedies.

As Des Barker stated in his 2019 report, "*Fatalities remain untenable, and if the airshow community is to continue to exist without regulatory and insurance interventions that would impose additional constraints on the ability to host air events, airshow accidents must decrease*." Sponsors and partners are not typically supportive of events in which fatalities occur, which could be damaging to their brand.

Causal Factors



In 2024, the categorization of airshow accidents based on causal factors is provided with the 5M model, related to the huM*an*, *Machine*, *Medium*, *Mission*, and *Management*. However, due to the lack of final accident reports for most of the accidents/incidents recorded in 2024, an additional *Unknown* factor has been added to avoid any inaccurate speculation.

Notably, *Medium* had the highest contribution to accidents in 2024, with 16%, while bird strikes and strong winds affected the 3 incidents/accidents reported. *Machine* and *Mission* equally contributed 10% each to the 2024 airshow accidents/incidents, with *huMan* and *Management* contributing 5% each.

Interestingly, the *Machine* factor, related to engine or structural failures, has significantly dropped compared to previous years, most likely due to more strict rules for vintage aircraft maintenance, insurance, and requirements for airshow participation. In the *Mission* factor, the complexity and originality of drone shows could have played their role in the increased percentage.

The *huMan* factor even though appears to be contributing only to one incident in 2024; however, part of the unknown contributory factor could be related to human error after the posting of the final accident report.

The *Unknown* factor could be related to several factors related not only to physiological issues but even psychological aspects of the air show performers' behavior, as the FAA suggested related to *anti-authority, impulsivity, invulnerability, macho, and resignation*, as well as some *concealed* ones such as *distracted, egocentric, unorganized, and deficient* personalities, which could lead to physiological effects of disorientation and even incapacitation.

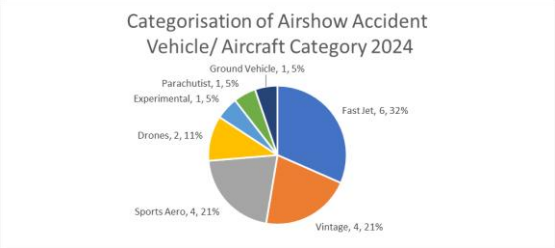
Event Categories

In 2024, airshows themselves were the scene for the majority of accidents, with 74% of incidents (14 in total) occurring during the main events. Practice sessions accounted for a quarter of the incidents at 26% (5 incidents), matching the historical average, where 76% of accidents happened during displays and 24% during practice.

It needs to be noted that the incidents/accidents reported in the current paper are only the ones available in the open domain, i.e., via social media and news. The author of this paper has no access to official safety reports filed by air show performers or any other air show stakeholder to the relevant aviation authorities. Moreover, during training or practice in a controlled area, without the presence of media coverage or spectators, any close call could not disclosed to the rest of the air show community, and to the author, for further lessons learned sharing and knowledge gaining. Therefore, the above percentage might be slightly different/ skewed to the actual numbers.

All in all, a need ***to train as you display, and display as you train*** is of high importance for air show performers and FDDs. Realistic training means that all the potential external stressors, possibly created by the presence of the public and media in aerial events, should also be included in training, even in *table-top scenarios*.

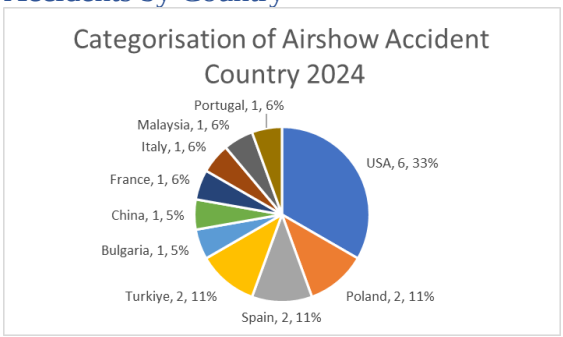
Aircraft Categories



In 2024, the categorization of airshow accidents by aircraft type remained diversified yet showed a slightly different distribution from the previous year. Fast jets and vintage aircraft each were involved in 54% of accidents, a slight increase from their combined 48% involvement in 2023. Light utility and sports aerobatic aircraft together accounted for 21%.

Markedly, a new category is included in this year's report: drones. The constant expansion of drone displays, especially light shows, at a worldwide level is the new addition to the aircraft commonly utilized in the air show industry. There have already been some accidents that remained unrecorded in the previous years, especially in China which is the main area of development and growth of such technology, but in 2024 we've seen that such incidents expanded even in the USA with a spectator injured, resulting in an overall contribution of 11% for drones in the airshow accidents/incidents in 2024.

Accidents by Country



In 2024, the landscape of airshow accidents demonstrated not only the geographical diversity of such events but also their interconnected impact on the global stage. The United States led with 6 accidents, amounting to 33% of the total, while Poland, Spain, and Turkiye followed with 2 incidents each at 11%. Similarly to 2023, 2024 saw incidents spread across a wider array of countries, including Bulgaria, China, France, Italy, Malaysia, Portugal, and the UK, each reporting one accident.

At a regional level, Europe had the highest number of accidents/incidents, followed by America and then Asia.

Airshow Safety Performance Indicators (ASPIs)

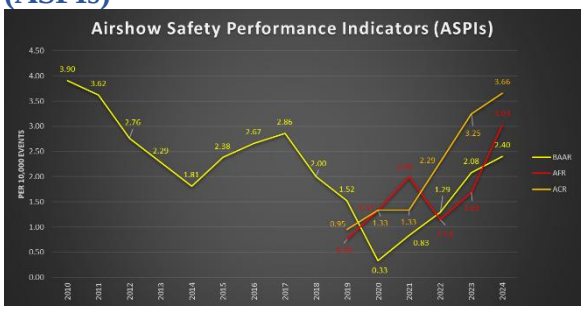


Figure 3, BAAR, AFR, and ACR

Barker Airshow Accident Rate (BAAR)

Figure 3 shows that in 2024, the BAAR was reported at ***2.4*** accidents per 10,000 aerial events, a significant increase from 2023's BAAR of ***2.08*** accidents per 10,000 aerial events. What is more concerning, though, is the continuous rise of the rate during the post-pandemic period.

Airshow Fatality Rate (AFR) and Airshow Casualty Rate (ACR)

In 2024, the Airshow Fatality Rate (AFR), a measurement of the number of deaths relative to the number of airshow events, almost doubled from 2023 to ***3.03*** fatalities per 10,000 events (see *Figure 3*). This suggests that there has been a continuous upward trend in the rate of fatalities at airshows, raising concerns over potential safety issues within the industry.

Similarly, the Airshow Casualty Rate (ACR), which includes both fatalities and non-fatal injuries, continued the uptrend recorded in 2023 and noted an increase in 2024 to ***3.66*** casualties per 10,000 events.

The rise in both the AFR and ACR in 2024 compared to 2023 suggests that despite ongoing safety efforts, the international airshow community may be facing challenges in maintaining the safety standards in protecting the lives of pilots, crew, spectators, and the public.

International ASPIs: A Regional Comparison

The bar graph above presents a regional comparison of airshow SPIs in 2024, displaying the Barker Airshow Accident Rate (BAAR), Airshow Fatality Rate (AFR), and Airshow Casualty Rate (ACR) for three regions: North America, Europe, and the rest of the World.

From the graph, it is apparent that:

- The *BAAR* is highest for Europe, followed by the Rest of the World, with North America having the lowest rate. This suggests that Europe had more accidents per number of airshow events compared to the other regions, which is very concerning for the most regulated in aviation region.
- Regarding the *AFR*, the Rest of the World showing the highest rate, indicating more fatalities in relation to airshow events in that region. Europe's AFR is lower than the Rest of the World but higher than North America, which again has the lowest rate among the regions.
- The *ACR* follows the same pattern as the AFR, with the Rest of the World showing the highest rate. The ACR for Europe and North America are lower, with North America again having the lowest rate, suggesting fewer overall casualties at airshows.

The graph indicates a similar observation to 2023, that while North America leads in safety according to these metrics, Europe and the Rest of the World have higher rates of accidents, fatalities, and casualties. These differences may reflect varying safety standards, safety culture, operational practices, and regulatory environments across the regions. The data highlights, once again, the importance of sharing best practices, working towards global safety improvements, and commonly accepted safety standards in the airshow industry.

Airshow Excellence Rate (AER)

AER: Promoting Excellence

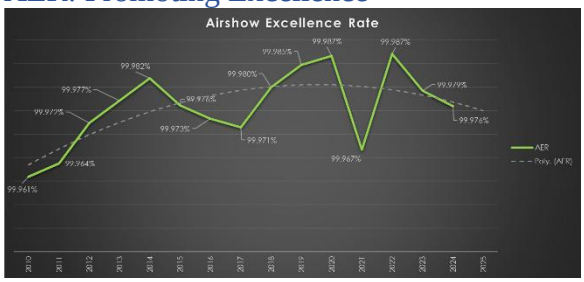
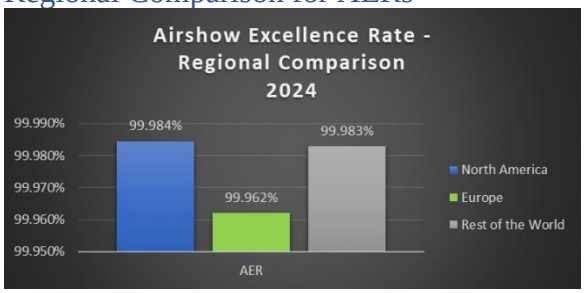


Figure 4, AER

The Airshow Excellence Rate (AER), as presented in the graph (see *Figure 3*), remained almost unchanged from 2023 at *99.976%* in 2024.

The overall high, near-impeccable AER across the last 15 years does suggest that airshows generally maintain a significantly high level of safety standards.

Regional Comparison for AERs



The above bar chart provides a regional comparison of the Airshow Excellence Rate (AER) for the year 2024. The data shows:

- North America: The AER for North America stands at *99.984%*, which is the highest among the regions compared. This suggests that airshows in North America are performing exceptionally well, with a near-perfect rate of excellence.
- Rest of the World: The Rest of the World's AER is almost equal at 99.983% but still very high, indicating that international airshows maintain a very high standard of quality and safety.
- Europe: The AER for Europe is 99.926%, which, while lower than North America and the Rest of the World, still represents a high level of excellence.

The regional comparison shows that the airshow industry maintains a high standard of excellence across the board, with very small margins differentiating the regions. The differences might be attributed to various factors such as regional cultural differences, training quality of performers, investment in airshow infrastructure, and possibly the frequency and types of airshows conducted.

How Excellent Were Airshows in 2024? Strong Excellence Threatened.

In the last 15 years, the excellence rate in the air show industry has reached levels of more than 99.95%, an extremely high level of strong performance across the world. This level of near-perfect performance demonstrates a well-standardized industry with high quality standards, rigid safety protocols, and a commitment to entertaining crowds with captivating aerial events. This excellence that the air show ultimately represents the mature level of safety that the aviation industry holds while inspiring, especially the new generations, to reach high levels of achievement.

Interestingly, 2024 showed a second-year consecutive drop or stagnation in the AER of the international air show community, raising a yellow flag to our industry that excellence could be threatened by several factors that ultimately affect the safety of the public and the performers.

This level of excellence should not allow us any margin to relax or renounce our focus on safety. Accidents that result from potential overconfidence or egotistical air show performers should be avoided; likewise, display directors should not allow any margins for error in their planning and execution of any aerial event. Lastly, aviation authorities should continue to support, even if they trust 100% the FDDs, EOs, and display pilots, and provide constructive criticism to planning, execution, and existing regulations, with the ultimate goal of achieving an *AER* of 99.99%, *AFR* of zero, and a *BAAR* below 1.

Accidents and Incidents Overview 2024

1. 14 March 2024, NF-5 (Konya, Türkiye)

A Canadair NF-5A jet, operated by the Turkish Stars (Türk Yıldızları) display team crashed at a construction site near the runway at Konya 3rd Main Jet Base. The pilot ejected before the crash. One worker at the construction site died.

No details on the causal factors of the accident are disclosed yet, yet a ***timely ejection*** saved the pilot's life.

Figure 5, Flight into terrain, Turkiye (Credit: @TAHSAVUNMA)

2. 23 April 2024, AS-555SN & AW139 (Lumut, Malaysia)

A Royal Malaysian Navy Eurocopter AS 555SN Fennec, operated by 502 Skuadron, and a Royal Malaysian AgustaWestland AW139 M503-3, operated by 503 Skuadron, were practicing for next week's Navy Day and experienced a mid-air collision over Lumut NAS (WMLH), Lumut, Perak, and crashed near a swimming pool. The three occupants of the Fennec and the seven occupants of the AW139 perished, and both helicopters were destroyed.

A ***"blind" pull*** of the AS555 into the AW139 could have been the main causal factor, in addition to a potential lack of thorough planning, coordination, rehearsal, comm standards, and detailed briefing of IAW demonstration teams' principles.

Figure 6, Mid-air collision, Malaysia (Credit: @NST Online)

3. 5 May 2024, Extra 300 (Near Alcázar de San Juan, Ciudad Real, Spain)

Figure 7, Bird Strike, Spain (Credit: @murciaplaza)

One of the most tragic accidents happened on May 5th, when the Extra EA-330SC, after completing a performance at the Festival Aéreo Internacional de San Javier, during the return to Matilla De Los Caños Airport (LETC), Valladolid, Castile and Leon, a vulture collided with the aircraft canopy and it crashed near Alcázar de San Juan, Ciudad Real.

Unfortunately, the pilot, the Spanish 2023 unlimited aerobatic champion, perished, and the aircraft was destroyed by fire, highlighting that vigilance for bird activities should not be limited in the show box but in the transit route as well.

4. 12 May 2024, L-39 (Fort Lauderdale, USA)

Figure 8, Mid Air Collision, USA (Credit: @froglifanning)

Two L-39s of the Polaris Jet Team clipped wings while performing at the Air Dot Show Fort Lauderdale. The performance was terminated, and all four aircraft landed safely at Fort Lauderdale Executive Airport (FXE/KFXE) in Fort Lauderdale, Florida, without any further issues.

5. 25 May 2024, Spitfire (Coningsby, UK)

Figure 9, Engine Failure, UK (Credit: @Jake Zuckerman/BBC)

A Supermarine Spitfire LF.IXe experienced an engine failure and crashed in a field off Langrick Road, Coningsby, Lincolnshire, shortly after takeoff from RAF Coningsby (QCY/EGXC) during the Battle of Britain airshow event at RAF Coningsby. The pilot perished, and the aircraft flipped over and was destroyed.

6. 25 May 2024, Ground Vehicle (Parchi di Preturo airport, L'Aquila, Italy)

Figure 10, Apron Accident, Italy (Credit: @unionescarda.it)

A tragedy happened on the first day of the Air Show at Parchi di Preturo airport, L'Aquila, when a man, co-pilot of the 118 helicopter rescue service in L'Aquila, died after being hit by a heavy vehicle during a maneuver.

According to an initial reconstruction, he was hit by a tanker maneuvering for routine aircraft refueling operations on the airport runway. He was probably in a blind spot where visibility from the mirrors was minimal.

The air show was suspended.

7. 2 June 2024, Yak-52 (Beja Airport, Portugal)

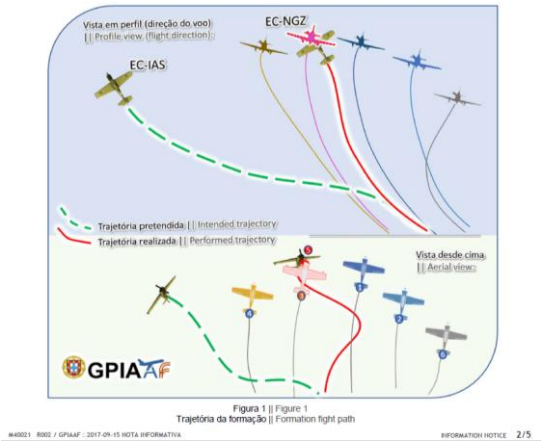


Figure 11, Mid Air Collision, Portugal (Credit: @GPIAA)

Two Yakovlev Yak-52 aircraft of the Spanish-Portuguese Yakstars formation team collided during the Beja Air Show, Portugal, as a result of a ***blind pull*** of #4 into the formation.

One aircraft crashed (EC-IAS, Yakstar 4), killing the Spanish pilot. The other aircraft involved in the collision (EC-NGZ, Yakstar 3)

managed to land, ending upside down with the Portuguese pilot injured.

At the time of the accident, the formation was preparing for the final sequence, which consisted of the separation of one of the six aircraft for a solo demonstration flight.

This aircraft, Yakstar 4, EC-IAS, descended from the six-ship formation and made a steep climb in front of the Vic-formation of the remaining five aircraft. During this maneuver the aircraft struck the propeller of the aircraft in the left wing position (Yakstar 3, EC-NGZ). Yakstar 4 suffered severe damage to the tail, lost control, and crashed.

Yakstar 3 lost its propeller, left landing gear, and a significant portion of the left wing leading edge.

Feeling the lack of thrust and with difficulties in controlling the aircraft over the longitudinal axis, the pilot immediately initiated a nosedive toward the runway and ended up making a landing at about ~90º with the runway 01L threshold in an easterly direction.

Despite the final inverted position of the aircraft, the pilot left the aircraft by himself without injury.

8. 15 June 2024, Lockheed 12A Electra Junior (Chino Airport, USA)

Figure 1: Screen capture of witness provided video of the accident airplane with the flaps extended during the takeoff climb.

Figure 12, Out of Control, USA (Credit: @NTSB)

On June 15, 2024, at about 12.36' Pacific daylight time, a Lockheed 12A, N93R, was substantially damaged when it was involved in an accident near Chino, California. The pilot and co-pilot were fatally injured. The airplane was operated as a Title 14 Code of Federal Regulations Part 91 personal flight.

According to the operator, the museum was hosting a Father's Day event. The intent of the accident flight was to prepare the airplane for a three-airplane formation flight later that day. Earlier that morning, they conducted a briefing with the pilots of the formation flight, at which time the pilot and co-pilot were assigned to the accident airplane.

According to the operator's representative, he thought the co-pilot lowered the flaps as part of the functional test during the preflight inspection. During the engine start, the ground crew warned the flight crew with hand and arm signals that the flaps were extended. From the ground crews experience and observations with the accident airplane, they felt that the flaps were fully extended during taxi and the takeoff on runway 26R.

Witnesses located at the airport reported that they observed the accident airplane taxi to the runway and takeoff with the flaps extended. Video of the accident flight also captured the flaps extended during the initial climb. According to witnesses and video, as the airplane reached the departure end of the runway, about 200 – 300 ft above ground level, the airplane pitched up, turned to the left, and entered a nose-low attitude as it descended into terrain, where a post-crash fire ensued.

9. 29 June 2024, F-18 (Michigan, USA)

Figure 13, Bird Strike, USA (Credit: @UpNorthLive)

Blue Angel No. 5's engine was damaged after a bird strike at the National Cherry Festival in Traverse City on June 29.

The damaged jet was repaired, and the rest of the team joined the team at the end of their Traverse City performance on June 30, according to the local media.

10. 12 July 2024, M-346 (Gdynia-Babie Doly, Poland)

Figure 14, CFIT, Poland (Source: @asn.flightsafety)

A Polish Air Force Alenia Aermacchi M-346 Bielik, operated by 41.BLSz, crashed during a training flight for an airshow at Gdynia-Babie Doly Airport (QYD/EPOK). The maneuver leading to the accident was a descending turn (slice back) into the show line.

Unfortunately, no ejection attempt was evidenced, the pilot perished, and the aircraft was destroyed.

11. 16 August 2024, Fouga Magister (Le Lavandou, France)

Figure 15, CFIT, France (Credit: @Maxime Govare)

A Fouga CM170R Magister crashed in the sea off Lavandou while flying a display during an airshow. The pilot perished and the aircraft was destroyed.

Similar to the accident in Poland, the maneuver leading to the accident was a descending turn into the show line. Possibility for disorientation, distraction, and A-LOC/G-LOC could have contributed to the tragic loss of the pilot.

12. 13 September 2024, L-39ZA (Graf Ignatievo Air Base, Bulgaria)

Figure 16, CFIT, Bulgaria (Source: asn.flightsafety)

A Bulgarian AF Aero Vodochody L-39ZA Albatros crashed during display training near Graf Ignatievo Air Base (LBPG). Unfortunately, no ejection attempt was evidenced; both pilots perished, and the aircraft was destroyed, leading to the cancellation of the airshow.

The maneuver leading to the accident was a sequence of loops.

13. 5 October 2024, F-16 (Adana, Türkiye)

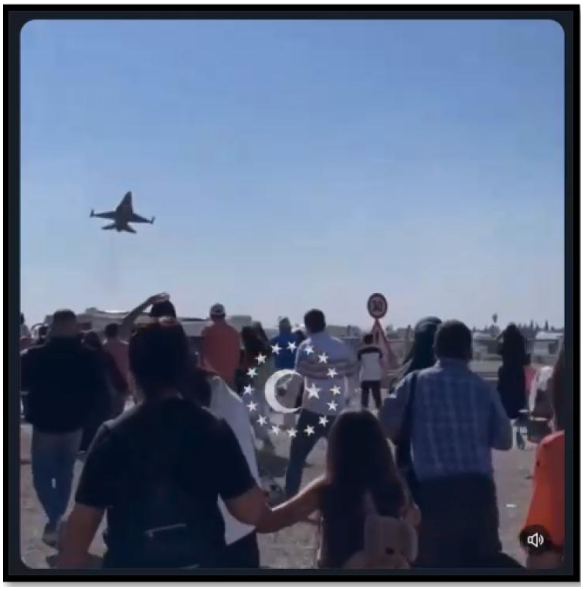


Figure 17, A-FIT, Türkiye (Source: @asn.flightsafety)

During Teknofest, an F-16 from the Turkish Air Force, piloted by "*Solotürk*," performed a flight demonstration. Videos circulating on social media suggest that the pilot momentarily lost control of the aircraft, bringing it dangerously close to crashing. At the last moment, and seemingly near the audience, the pilot managed to regain control and recover the jet.

14. 5 October 2024, Fokker D.VIII replica (Old Rhinebeck Airport, NY, USA)

Figure 18, Engine Fire, USA (Credit: @Dariusz Jezewski)

An experimental Fokker D.VIII replica, amateur-built, crashed into a wooded area and burst into flames at the south end of the runway at Old Rhinebeck Airport (NY94), Red Hook, New York.

The sole pilot perished, and the aircraft was destroyed. An eyewitness stated that the aircraft experienced an engine malfunction and burst into flames prior to hitting the ground.

15. 14 October 2024, Parachutist (San Francisco, USA)

Figure 19, Parachutist, USA (Credit: @MONETROCKS)

During the Fleet Week air show, Sunday afternoon at Marina Green in San Francisco, a woman, and a child were taken to the hospital after a parachutist from the US Navy's Leap Frog team missed the landing zone and came down in the crowd.

Strong on-crowd winds were blowing during the incident while the parachutist was carrying a large-sized Unit flag underneath him.

16. 20 October 2024, Extra 300 (Las Cruces, USA)

Figure 20, CFIT, USA (Source: @KFOX TV)

A tragic accident occurred on 20 October when an Extra EA 300/L was destroyed when it impacted terrain while performing aerobatics during the Las Cruces Air & Space Expo west of the Las Cruces International Airport (LRU/KLRU), New Mexico, USA.

The pilot onboard, an air show veteran, sustained fatal injuries

17. 14 December 2024, Drones (Orlando, USA)

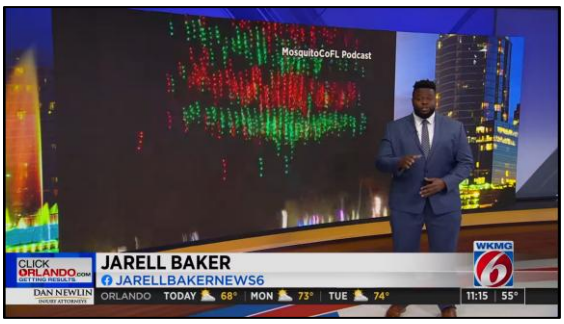


Figure 21, Drones OOC, USA (Source: @WKMO 6)

An incident unfolded during the third annual holiday drone show at Lake Eola Park in Orlando. Several drones collided mid-air and

plummeted into the crowd below, seriously injuring a seven-year-old boy.

The young victim was struck in the chest by a falling drone, requiring emergency heart surgery. The incident prompted the cancellation of the second scheduled drone show later that evening.

Videos of the accident shared online show drones colliding and falling to the ground, sparking immediate concerns about the safety measures in place for such events.

18. 15 December 2024, Drones (Guangzhou, China)

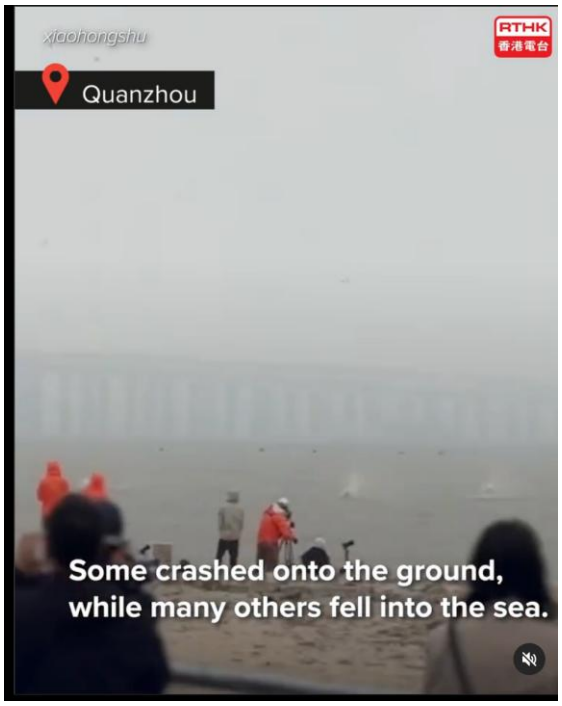


Figure 22, Drones OOC, China (Source: @RTHK)

A major drone and fireworks show had to be suspended in the city of Quanzhou, China, after a major malfunction sent thousands of drones falling out of the sky, resulting in the cancelation of the "*Red Sail*" show.

No one was injured in the incident, and officials said they're still investigating the root causes.

19. 20 December 2024, Decathlon (Malaga, Spain)

Figure 23, CFIT, Spain (Source: @axarquilaplus)

A small plane suffered a serious accident during an exhibition at the Leoni Benabu Aerodrome, Spain. Although the emergency services did everything possible to try to revive the 49-year-old pilot, they could not save his life.

According to witnesses, the plane hit the runway during a slow roll maneuver.

Event Organizer (EO)-related Incidents

Two high-impact incidents occurred in 2024 that were not directly related to the flying display but had a significant impact on the air show industry due to the loss of lives and property.

More specifically:

1. 7 September 2024, South Africa

Figure 24, EO, South Africa (Source: @central news)

A fire broke out at Bethlehem Airshow in South Africa. According to initial reports, the fire is believed to have started due to hot coals from a braai (barbecue) area being blown into the dry grass by the wind. This unfortunate accident led to the rapid spread of the fire, fuelled by the dry conditions at the venue. Eyewitnesses have stated that the fire spread quickly, causing extensive damage to several cars parked nearby.

2. 7 October 2024, Chennai, India

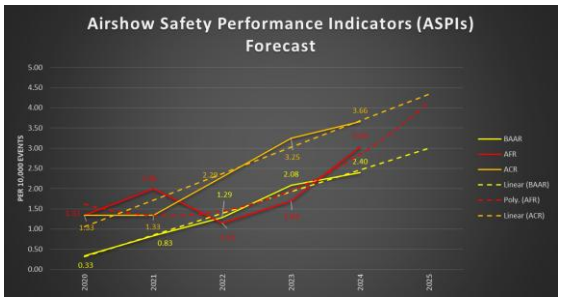
Figure 25, EO, India (Source: @firstpost)

An air show to commemorate the Indian Air Force's 92 anniversary at Chennai's Marina Beach turned into a disaster when five people died, and nearly 100 were hospitalized.

Soaring temperatures and a crowd of over 100,000 people at the venue led to a stampede-like situation after the show, leading to this tragedy that was unrepresented in international air show history.

Conclusion: Excellence First, Safety Always

2024 is the year that we all need to be concerned about the safety levels of the international air show industry. ASPIs suggest an uptrend that needs to be proactively *intercepted* in the new display season 2025.



Several reasons could be causing such an effect, which are beyond the scope of the current report.

The consecutive continuous increase during the post-pandemic era in the Barker Airshow Accident Rate (BAAR), Airshow Fatality Rate (AFR), and Airshow Casualty Rate (ACR), accompanied by a flattening in the Airshow Excellence Rate (AER), signals an *urgent call to action.*

A comprehensive, industry-wide review—encompassing everything from training programs and operational planning to safety protocols—is imperative. Performers, organizers, regulators, and Flight Display Directors (FDDs) must unite in recognizing their *shared responsibility*.

By recommitting to these higher standards, the airshow community can move closer to realizing a future of ***zero fatalities and casualties***, maintaining a ***BAAR below 1*** and an ***AER of 99.99%.*** In doing so, the community reinforces both its own commitment to safety and excellence and upholds the broader aviation industry's reputation—all while striving to embody the guiding principle: "***Excellence First, Safety Always***."

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