



The 737 Max Reactions and the Threat to Article 33 of the Chicago Convention

By Irene E. Howie

*If you can keep your head when all about you
Are losing theirs . . .*

—Rudyard Kipling¹

The world was still at war and the establishment of the United Nations a year in the future when President Franklin Roosevelt invited national representatives to Chicago in 1944 to focus on future peace by laying the framework for postwar civil aviation.² The ambitious conference did not meet all of its goals, but it did succeed impressively in standardizing technical operational practices in what became known as the Convention on International Civil Aviation (Chicago Convention) and its annexes, including affirming the obligation of mutual recognition of airworthiness certificates.

Since then, this foundational principle has stood strong against seismic changes in world politics, aviation technology, and aircraft manufacturing competition. Have the various national reactions to the 737 Max accidents without reference to this obligation cracked that foundation?³

A Global Presumptive Trust: The History of Mutual Recognition of Airworthiness Certificates

Paris Convention of 1919

The concept of mutual recognition of airworthiness certificates—one nation's trust in another's aircraft safety evaluation—followed closely in the wake of international flight. Only 16 years after the Wright brothers' first flight and eight years before Charles Lindbergh crossed the Atlantic, the Paris Convention of 1919 affirmed that each nation has absolute sovereignty over its airspace and provided the blueprint for peaceful collaboration in international civil aviation after the First World War.⁴ The treaty, which the United States did not ratify, included technical standards annexes and established a permanent international commission for air navigation with the responsibility to amend those annexes. Essential to its technical construct and operational principles, and ultimately to be included in the Chicago Convention, was mutual recognition of airworthiness certificates:

Certificates of airworthiness and of competency and licenses issued or rendered valid by the State whose nationality the aircraft possesses, in accordance with the regulations established by Annex B and Annex E and hereafter by the

International Commission for Air Navigation, shall be recognized as valid by the other States.⁵

This concept of mutual recognition was a presumptive trust in the efficacy of the international regulations to be shepherded by the countries participating in the International Commission and in the commitment of signatory nations to follow them. Without it, there would be burdensome technical regulatory frontiers in the air.

Havana Convention of 1928

Compare this approach with the Havana Convention of 1928, developed by the United States and Latin American countries and intended to address civil aviation operations in the Western Hemisphere.⁶ Unlike the Paris Convention, the Havana Convention, which the United States signed and ratified, did not provide for annexes or a permanent international administrative body but required cooperation in the interests of uniformity among its signatories' national standards. It did not require mutual recognition of airworthiness certificates and thereby gives us a glimpse of what the future of aviation might have looked like without that now-vital part of the global aviation construct. The Havana Convention created an airworthiness rule far less dependent on trust.

Every aircraft engaged in international navigation . . . shall be provided with a certificate of airworthiness issued by the state whose nationality it possesses.

This document shall certify to the state in which the aircraft is to operate, that, *according to the opinion of the authority that issues it, such aircraft complies with the airworthiness requirements of each of the states named in said certificate.*

The aircraft commander shall at all times hold the certificate in his custody and shall deliver it for inspection and verification to the authorized representatives of the state which said aircraft visits.

Each contracting state shall communicate to the other states . . . its regulations governing the rating of its aircraft as to airworthiness and shall similarly communicate any changes made therein.

While the states affirm the principle that the

aircraft of each contracting state shall have the liberty of engaging in air commerce with the other contracting states without being subjected to the licensing system of any state with which such commerce is carried on, *each and every contracting state mentioned in the certificate of airworthiness reserves the right to refuse to recognize as valid the certificate of airworthiness of any foreign aircraft where inspection by a duly authorized commission of such state shows that the aircraft is not, at the time of inspection, reasonably airworthy in accordance with the normal requirements of the laws and regulations of such state concerning the public safety.*

In such cases said state may refuse to permit further transit by the aircraft through its air space until such time as it, with due regard to the public safety, is satisfied as to the airworthiness of the aircraft, and shall immediately notify the state whose nationality the aircraft possesses . . . of the action taken.⁷

The obligation here is dependent not on a mutually recognized international standard of airworthiness but on a complex set of evaluations by the country of aircraft registry as to the standards of airworthiness of possibly multiple countries of transit. This dependency placed an extraordinary burden on national aviation authorities to certify according to multiple aviation codes—although there was a commitment to attempt to achieve consistency among codes—and built in the acceptability of the country of transit second-guessing a foreign-registered aircraft’s airworthiness.

Chicago Convention

The Chicago Convention superseded the Paris and Havana Conventions and adopted the framework developed by the former, including technical standards annexes. Article 33 includes almost verbatim the Paris Convention’s principle of mutual recognition of airworthiness certificates.

Certificates of airworthiness and certificates of competency and licenses issued or rendered valid by the contracting State in which the aircraft is registered, shall be recognized as valid by the other contracting States, provided that the requirements under which such certificates or licenses were issued or rendered valid are equal to or above the minimum standards which may be established from time to time pursuant to this Convention.⁸

Irene E. Howie (irene.bowie@gmail.com) is an attorney in private practice specializing in domestic and international aviation regulatory matters. She served for several years as Assistant Chief Counsel for International Affairs and Legal Policy at the Federal Aviation Administration and was a partner at Hogan & Hartson, LLP, now Hogan Lovells.

The aircraft airworthiness standards upon which this obligation depends are included in what is now Annex 8 to the Chicago Convention, “Airworthiness of Aircraft.” The Chicago Convention created the International Civil Aviation Organization (ICAO), whose mandate is to develop and maintain the standards in the annexes.

The United States was highly influential in the development of the new treaty’s technical standards during the Chicago conference. The head of the U.S. delegation summarized this aspect of the conference’s work in a letter sent at the end of the conference to President Roosevelt:

[A] huge amount of work had been going on also in the field of standardizing technical practices, services, and requirements. This is being separately reported on by the Civil Aeronautics Board, and no better testimony to the tremendous scope of the work can be found than in the very large number of agreed documents in ten separate technical fields which appear as annexes to the main Convention and the interim agreements. Technicians generally agree that this is a major advance in handling technical arrangements so that planes can fly safely throughout the world, which has yet been taken. I cannot pay too high tribute to the corps of United States experts who worked up the material in advance of the Conference, and were able to convince the foreign delegations that they were both practicable and wise. In general, it may be said that the United States technicians gave a base for the handling of technical air practices throughout the world, and that the world, having examined them, was glad to accept the base they proposed. . . .

Finally, a substantial beginning has been made towards opening the air to commerce. It is not too much to say that we entered the Conference in the law and atmosphere of the 17th century; and we came out with a fair prospect of obtaining 20th century conditions.⁹

And it is sobering, in the context of aviation leadership at this moment, to read Roosevelt’s reassuring words to Winston Churchill in an effort to arrive at compromise and avoid the conference’s collapse over British efforts to bolster its weakened competitive position:

I know the handicaps under which your aviation industry has laboured during the war. We have found ways to help you before and I am confident that we can find ways to help you in overcoming this. We are prepared to make transport aircraft freely available to you on the same terms as our own people can get them. Our only stipulation is that aviation must be permitted to develop, subject only to reasonable safeguards, as far and as fast as human ingenuity and enterprise can take it.¹⁰

The Chicago Convention does not authorize international scheduled commercial air services. Those are governed by the International Air Services Transit Agreement (IASTA), also adopted at the Chicago conference, and the various bilateral air services agreements. These agreements also incorporate the mutual recognition obligation of Article 33, subject only to compliance with ICAO standards.

The IASTA grants the privilege of flights without landing and flights with stops for nontraffic purposes for those countries that have ratified it. The IASTA's privileges are in accordance with the provisions of the Chicago Convention, including Article 33.¹¹

Otherwise, the bilateral air services agreements govern and include a specific provision governing airworthiness certificates recognition. The U.S.-EU Air Transport Agreement, for example, includes language that tracks Article 33 almost verbatim. It also requires consultations between the parties if there is a concern about the safety standards administered and maintained by the other.

The responsible authorities of a Party may request consultations with other responsible authorities concerning the safety standards maintained by those authorities relating to aeronautical facilities, aircrews, aircraft, and operation of the airlines overseen by those authorities. Such consultations shall take place within 45 days of the request unless otherwise agreed. If following such consultations, the requesting responsible authorities find that those authorities do not effectively maintain and administer safety standards and requirements in these areas that at least equal the minimum standards that may be established pursuant to the Convention, the requesting responsible authorities shall notify those authorities of such findings and the steps considered necessary to conform with these minimum standards, and those authorities shall take appropriate corrective action. The requesting responsible authorities reserve the right to withhold, revoke or limit the operating authorization or technical permission of an airline or airlines for which those authorities provide safety oversight in the event those authorities do not take such appropriate corrective action within a reasonable time and to take immediate action as to such airline or airlines if essential to prevent further noncompliance with the duty to maintain and administer the aforementioned standards and requirements resulting in an immediate threat to flight safety.¹²

The Grounding of the 737 Max

Two crashes of Boeing 737 Max aircraft five months apart resulted in a cascading global grounding of the aircraft, with the United States, the aircraft's state of type

design approval and manufacture, coming in last. The national orders collectively resulted in the grounding of 387 aircraft operated by 59 airlines in 35 countries.¹³ Each of those nations, of course, had the right under international law to ground any aircraft on its registry, but several of those orders went beyond this to prohibit operations of any 737 Max aircraft in their airspace.

It remains stunning to recall the sequence of events.

- On October 29, 2018, a 737 Max operated by Indonesian airline Lion Air crashed 13 minutes after takeoff in Indonesia, killing all on board.
- On November 7, 2018, the Federal Aviation Administration (FAA) issued Emergency Airworthiness Directive (AD) 2018-23-51, which required "revising certificate limitations and operating procedures of the AFM [aircraft flight manual] to provide the flight crew with runaway horizontal stabilizer trim procedures to follow under certain conditions" related to the angle of attack (AOA) sensor failure. The emergency AD was prompted by a Boeing analysis that if an erroneously high single AOA sensor input is received by the flight control system, there is a potential for repeated nose-down trim commands of the horizontal stabilizer.¹⁴ On December 6, 2018, the FAA finalized this AD.¹⁵
- On March 10, 2019, a 737 Max operated by Ethiopian Airlines crashed six minutes after takeoff, killing all on board. Ethiopia grounded its 737 Max fleet that day.¹⁶
- At 9 a.m. on March 11, 2019, the Civil Aviation Administration of China (CAAC) ordered Chinese airlines to ground the aircraft.¹⁷ The deputy head of the CAAC was reported to have said, "They have had difficulty making a decision, so we took the lead," referring to the FAA.¹⁸ The Chinese decision did not apply to non-Chinese registered 737 Max aircraft operating in China.
- On March 11, 2019, the FAA issued a notice to the world's civil aviation authorities stating that the agency had not been provided data to draw any conclusions or take any actions with respect to the 737 Max.¹⁹
- Nonetheless, China's decision set off a chain response, and other countries and airlines followed its lead. Indonesia grounded all of its Max planes that day. Several airlines voluntarily suspended operations of the aircraft: Cayman Airways, South Africa's Comair, Brazil's GOL, MIAT Mongolian, Morocco's Royal Air Maroc, and Aeroméxico.
- That same day, the governments of Singapore and Australia issued orders prohibiting operations of the 737 Max in their countries regardless of the nationality of the aircraft.²⁰
- On March 12, 2019, European Union (EU) Aviation Safety Agency (EASA) prohibited the operation

of all 737 Max aircraft in the EU, regardless of aircraft nationality,²¹ and India did the same.²² The EU directive cited as its basis the possibility of similar causes for both accidents; it noted the FAA's progress on developing mitigating actions but concluded, based on unspecified "all available information," that immediate action was necessary.

- In response that evening, the FAA acting administrator issued an official statement that the FAA's continuing review thus far

shows no systemic performance issues and provides no basis to order grounding the aircraft. Nor have civil aviation authorities provided data to us that would warrant action.

In the course of our urgent review of data on the Ethiopian Airlines Flight 302 crash, if any issues affecting the continued airworthiness of the aircraft are identified, the FAA will take immediate and appropriate action.²³

- By midday March 13, 2019, Canada joined the global movement, issuing a safety notice prohibiting the operation of any 737 Max aircraft in Canadian airspace regardless of the nationality of the aircraft.²⁴
- About two hours later, President Trump held a press conference announcing that "we would be issuing" an emergency order prohibiting all 737 Max aircraft from operations in the United States.²⁵ The FAA later that day issued an "Emergency Order of Prohibition," prohibiting the operation of the 737 Max by any U.S.-certificated operator and the operation of any 737 Max in U.S. territory regardless of nationality. The unusual order was based on "new evidence" suggesting similarities between the two accidents, but the order did not provide specifics regarding the airworthiness of the aircraft and did not suspend its type certificate.²⁶

The national orders prohibiting operations of foreign-registered 737 Max aircraft did not assert that the aircraft failed to meet ICAO airworthiness standards. The orders did not invoke Article 33 or its comparable bilateral air services agreements provisions. The orders did not state that the countries of registry of the 737 Max failed to maintain ICAO minimum standards and that the airworthiness certificates therefore are not entitled to recognition and the attendant operational rights under international law. There was no prior consultation with the states of registry or type design certification with facts to support this conclusion. By all accounts, the flurry of national reactions happened as if there was no international framework governing the matter.²⁷

A Precedent for Airworthiness Uncertainty: The 1979 DC-10 Grounding

The uncertainty as to the precise cause of the accidents and corrective actions required for the 737 Max's return to service by the United States perhaps explains why none of these national orders to date has been challenged for overreach or even officially remarked upon. And yet there is precedent for that kind of challenge.

On May 25, 1979, an American Airlines DC-10 crashed in Chicago after one of its engines and pylon separated from the aircraft, killing all 271 people aboard and two on the ground. It remains the deadliest commercial aircraft accident in U.S. history.²⁸ The accident aircraft was type certificated in 1971 and so was not a new-model aircraft. The FAA-mandated inspections of other DC-10 pylons following the accident resulted in the identification of additional cracks that *appeared* to have materialized within days of previous inspection.²⁹ This led the FAA to believe that the source of the problem was in the aircraft's design.

On June 6, 1979, whipsawed by a court action to ground the aircraft, congressional pressure, and continued uncertainty as to the reason for the pylon failure, the FAA took action.³⁰ Citing the possibility that the DC-10 "may not meet the requirements of Section 603(a) of the Federal Aviation Act for a Type Certificate,"³¹ FAA Administrator Bond revoked the DC-10 type certificate for 37 days while the investigation proceeded. That action effectively grounded all U.S.-registered DC-10 aircraft. At the same time, the FAA issued a special federal aviation regulation prohibiting the operation of any DC-10 aircraft in the United States (SFAR 40).³²

The FAA did not specifically state that it believed the DC-10 aircraft did not meet ICAO airworthiness standards, the basis under Article 33 of the Chicago Convention for challenging a foreign-registered aircraft's airworthiness. Thus, the agency did not articulate what it later argued was a key aspect of its reasoning: Because the United States is the state of type design approval and because other civil aviation authorities relied upon that approval in issuing their own airworthiness certificates, the FAA's revocation of the type certificate undermined the validity of all airworthiness certificates issued for that model aircraft.

Following the FAA's lead, a number of foreign civil aviation authorities provisionally suspended individual airworthiness certificates for DC-10 aircraft on their registries. European carriers grounded their DC-10s immediately after the FAA suspended the DC-10 type certificate.

But on June 18, 1979, about two weeks after SFAR 40 was issued, the European aviation authorities approved a new inspection and maintenance program and decided not to wait for an FAA decision to return their DC-10s to service. Their provisional suspension of the airworthiness certificates was removed.³³ Here, the issue of mutual recognition of airworthiness certificates was joined. European nations decided the aircraft was safe to fly, and their air carriers wanted to

resume DC-10 operations to the United States.

On June 25, European aviation authorities met with the FAA and requested rescission of SFAR 40. The FAA was not yet ready and expressed regret that the European decision had come before completion of the FAA's investigation.³⁴ The FAA did not rescind SFAR 40 until July 13, 1979, after the FAA was confident that the cause of the accident was faulty maintenance practices by certain air carriers, not a flaw in the type design of the aircraft.³⁵ The schism reportedly resulted in a loss of trust.

"The European authorities are not so likely to automatically follow the FAA in the future," Armin Baltensweiler, Swissair president, said. "They received a heavy impact from the FAA grounding action and they are likely to do something so as not to be so helpless in the future. There is a large group of airlines that are very satisfied with the DC-10," he added.³⁶

On June 27, 1979, British Caledonian Airways, subsequently joined by others, sued the FAA in the U.S. Court of Appeals for the District of Columbia Circuit for failing to abide by the obligations of Article 33 and the applicable bilateral air transport agreements.

On September 2, 1981, the court ruled in favor of the plaintiffs, concluding that the FAA "Administrator's action *in issuing* SFAR 40 violated various multilateral and bilateral civil aviation agreements," most particularly Article 33.³⁷ The court placed heavy emphasis on the FAA's contemporaneous failure to justify SFAR 40 in the context of U.S. international obligations. The court stated:

Yet, under Article 33 and the pertinent bilateral agreements, failure to observe the minimum safety standards in issuing airworthiness certificates is the only ground on which one country may question the airworthiness judgment of the country of registry. If the Administrator had questioned the foreign government's compliance with minimum airworthiness standards, other provisions of the bilateral agreements would have required him to consult with each of the contracting parties before suspending or revoking operating authorizations. . . .

If doubts about airworthiness exist, one country may refuse to recognize another country's certificate of airworthiness, but only if the certifying nation has not observed the minimum standards of airworthiness established in Annex 8 pursuant to Articles 33 and 37 of the Chicago Convention. As we have emphasized, the Administrator at no time questioned the foreign governments' compliance with the minimum standards of airworthiness.³⁸

Further, in the context of the bilateral air transport

agreements, the court found:

We agree that this provision allows the United States to take immediate action, without consultations, if such action is necessary to prevent further non-compliance with U.S. laws and regulations (subparagraph (1)(b)) or with the applicable airworthiness standards (subparagraph (1)(c)). However this provision cannot help the Administrator here, for the reason that none of these alleged justifications for revoking, suspending or limiting operating authorizations was identified or relied on by the Administrator *when he issued* SFAR 40 or when he refused to recognize the foreign airlines' revalidated certificates of airworthiness. We recognize the diplomatic sensitivity of an allegation that a foreign nation has been derelict in complying with law or relevant standards; but if the government wishes to rely on the dereliction it must grasp that nettle.³⁹

The DC-10 grounding resolved itself in a little over a month, with the underlying safety problem found, resolved, and at odds with the FAA's assumption of faulty design in suspending the type certificate and issuing SFAR 40. The court, of course, had the benefit of this knowledge.

The court, which decided the case long after SFAR 40 was rescinded, refused to consider the case moot. It stated that the situation could present itself again, the next time that the cause of an accident was not immediately known:

Although we recognize that air disasters of the magnitude of the DC-10 crash are, fortunately, rare it is not so unusual for the aviation authorities to be at first uncertain as to the precise cause of a crash. As long as the FAA Administrator asserts that he has the legal authority, under such circumstances, to disregard valid airworthiness certificates issued by nations with whom the United States has entered into binding aviation agreements, these nations reasonably can expect to be subjected to the same action at some time in the future.⁴⁰

Staying the Course When Global Trust is Shaken

At the time of this writing and over one year after the FAA issued its prohibition order, the 737 Max is still grounded. The manufacturer, the FAA, and civil aviation authorities around the world are engaged in an ongoing dialogue in an effort to prevent further splintering of safety judgments. No country has remanded its prohibition order, and no operator has sought to fly the aircraft to a country that has prohibited the operation of any 737 Max in its airspace. Interests have not yet diverged; the reciprocal recognition issue has not yet been joined. Until that happens (or if it never happens), does any of this matter? It does—lest

we further wander away from the international foundation that has permitted aviation to flourish.

The presumptive trust underpinning Article 33's mutual recognition obligation has suffered a serious blow and, by the unilateral actions of several nations, so has the obligation itself. Deference to the superior knowledge of the United States as the state of the manufacturer and type design certification eroded quickly after the occurrence of the second accident and the FAA's evident uncertainty about immediate appropriate action. Facts subsequently revealed about what was known and not known during the type certification process help to explain that uncertainty. It was the clear prerogative of each nation to ground its own fleet of the aircraft in the face of that uncertainty.

Yet state action to prohibit the civil aircraft of another ICAO member state from entering its airspace is another matter. It is a rare, drastic step, with a cautionary legal track record. A nation must articulate a specific reason, based on ICAO's airworthiness standards, to prohibit the aircraft of another member state from entering its airspace. None of the 737 Max prohibition orders applicable to external aircraft did this. Fear was in the air; each country issuing these orders appeared to be reacting to the prior action of another, not on consensus-based international standards. It can be argued that each of those orders was issued with insufficient data to support it at the time.

The orders themselves turned out to be an unnecessary overreach. Each nation with operators of the 737 Max grounded the aircraft. A national order to go further and prohibit third-country operations of the 737 Max would have better respected the proven international construct if the issuing nation had awaited further facts; consulted with affected states, including the United States as the state of type design approval; and, if foreign-registered aircraft were deemed unsafe, articulated a basis in Annex 8. This could have been done on a fast track, with the flying public kept informed. There was the safety space and time to do so.

Instead, and for the first time, a widespread precedent has been set at odds with Article 33. What will happen should there be a next time, with a different aircraft model, when the reason for an accident is not immediately evident?

Conclusion

The founders of the Chicago Convention recognized the vital role of civil aviation to the future of the world. They understood that it could only "grow as far and as fast as human ingenuity and enterprise can take it" if the nations of the world acted in coordination, not based on what individually best suited them.

Regulatory action based on facts and not fear or politics is the hallmark and purpose of the technical operating standards and obligations of the Chicago Convention and the bilateral air services agreements. These obligations

and standards are what have allowed for innovation and helped to insulate aviation safety from trade agendas, national political disputes, and the popularity of national leaders for over a century of international aviation.⁴¹

By contrast, and although well-meaning, the orders prohibiting foreign-registered 737 Max operations were an unstructured, nationalistic response, contrary to the unifying purpose of ICAO. They failed to ground themselves in Article 33, the common basis of international aircraft safety standards, and a bilateral or multilateral consultative process.

As evidenced by the various national reactions to the 737 Max accidents, aviation regulatory authorities around the world are exercising greater individual assertiveness. However, especially when trust is shaken, it is important not to kick out the foundation carefully placed and maintained decade after decade because it will be needed to support the rebuilding of trust among national authorities and, perhaps more importantly, the rebuilding of the public's trust in them.

Endnotes

1. Rudyard Kipling, *If*, in REWARDS AND FAIRIES (Doubleday, Page & Co. 1910).
2. National representatives not invited included those from enemy and former enemy governments, as well as the government of Argentina, which the United States did not recognize at the time. II FOREIGN RELATIONS OF THE UNITED STATES: DIPLOMATIC PAPERS, 1944, GENERAL: ECONOMIC AND SOCIAL MATTERS 599 (E. Ralph Perkins et al. eds., 1967).
3. As discussed in this article, 737 Max refers to either the Boeing 737 Max 8 or the Boeing 737 Max 9 aircraft, or both.
4. Convention for the Regulation of Aerial Navigation, Oct. 13, 1919 [hereinafter Paris Convention] (signed at Paris).
5. *Id.* art. 13.
6. Convention on Commercial Aviation (Inter-American), Feb. 20, 1928, 47 Stat. 1901, Treaty Series 840 [hereinafter Havana Convention] (signed at Havana).
7. *Id.* art. 12 (emphasis added).
8. Convention on International Civil Aviation art. 33, Dec. 7, 1944.
9. Letter from Adolf A. Berle Jr., Assistant Sec'y of State, to Franklin D. Roosevelt, President of the United States (Dec. 7, 1944), in FOREIGN RELATIONS OF THE UNITED STATES, *supra* note 2, at 610, 612; see Jeffrey Shane, *Diplomacy and Drama: The Making of the Chicago Convention*, 32(4) AIR & SPACE LAW (2019) (presenting a general history of the Chicago conference).
10. Telegram from Franklin D. Roosevelt, President of the United States, to Winston Churchill, British Prime Minister (Nov. 30, 1944, 1:20 AM), in FOREIGN RELATIONS OF THE UNITED STATES, *supra* note 2, at 594.
11. International Air Services Transit Agreement art. 2, Dec. 7, 1944.
12. U.S.-EU Air Transport Agreement art. 8(2), Apr. 30, 2007.
13. *The Grounded 737 Max Fleet*, REUTERS, Mar. 14, 2019.
14. FED. AVIATION ADMIN., EMERGENCY AIRWORTHINESS DIRECTIVE

2018-23-51 (Nov. 7, 2018), [https://rgl.faa.gov/Regulatory_and_Guidance_Library/rgad.nsf/0/83ec7f95f3e5bfbfd8625833e0070a070/\\$FILE/2018-23-51_Emergency.pdf](https://rgl.faa.gov/Regulatory_and_Guidance_Library/rgad.nsf/0/83ec7f95f3e5bfbfd8625833e0070a070/$FILE/2018-23-51_Emergency.pdf).

15. Airworthiness Directives; The Boeing Company Airplanes, 83 Fed. Reg. 62,697 (Dec. 6, 2018).

16. *Ethiopian Airlines Grounds Its Boeing 737 MAX 8 Fleet*, REUTERS, Mar. 11, 2018.

17. Keith Bradsher, *China and Indonesia Order Grounding of Boeing 737 Max 8 Aircraft*, N.Y. TIMES (Mar. 10, 2019), <https://www.nytimes.com/2019/03/10/business/boeing-737-max-8-aircraft-crash-china.html>.

18. Gerry Shih, *China's Ban on the Boeing 737 Max Inspires Others, Ramps Up Pressure on U.S. Regulator*, WASH. POST (Mar. 12, 2019, 5:31 PM EDT), https://www.washingtonpost.com/world/asia_pacific/chinas-ban-on-the-boeing-737-max-inspires-others-and-ramps-up-pressure-on-the-faa/2019/03/12/4d4bf2b0-44a3-11e9-90f0-0ccfeec87a61_story.html.

19. Notice from Fed. Aviation Admin. to Civil Aviation Authorities, Continued Airworthiness Notification to the International Community (Mar. 11, 2019), https://www.faa.gov/news/updates/media/CAN_2019_03.pdf.

20. *Singapore and Australia Both Ground Boeing's 737 MAX Aircraft*, REUTERS, Mar. 12, 2019, 5:22 AM ET.

21. Press Release, EU Aviation Safety Agency, EASA Suspends All Boeing 737 Max Operations in Europe (Mar. 12, 2019), <https://www.easa.europa.eu/newsroom-and-events/press-releases/easa-suspends-all-boeing-737-max-operations-europe>.

22. Tanvi Mehta, *India Bans Boeing 737 MAX Planes from Its Airspace*, REUTERS (Mar. 12, 2019) <https://www.reuters.com/article/us-ethiopia-airplane-india/india-bans-boeing-737-max-planes-from-its-airspace-idUSKBN1QT2KZ>.

23. Daniel K. Elwell, *Statement from Acting FAA Administrator Daniel K. Elwell*, TWITTER (Mar. 12, 2019, 6:12 PM).

24. Minister Garneau Statement Regarding Restricting Airspace to Boeing 737 MAX 8 and 9 Aircraft, CANADA.CA (Mar. 13, 2019), <https://www.canada.ca/en/transport-canada/news/2019/03/minister-garneau-statement-regarding-restricting-airspace-to-boeing-737-max-8-and-9-aircraft.html>; *Canada Grounds Boeing 737 MAX 8 and 9 Jets, Citing Safety Concerns*, REUTERS, Mar. 13, 2019.

25. *Trump Announces Grounding of Boeing 737 Max 8 and 9 Planes*, ABC NEWS (Mar. 13, 2019), <https://abcnews.go.com/Politics/video/trump-announces-grounding-boeing-737-max-planes-61660989>.

26. FED. AVIATION ADMIN., EMERGENCY ORDER OF PROHIBITION (Mar. 13, 2019), https://www.faa.gov/news/updates/media/Emergency_Order.pdf.

27. After the national prohibition orders had been issued, even ICAO reportedly released a vaguely worded statement that did not call them to account. *ICAO Recognizes Right of Countries to Limit Flights of Boeing 737 MAX*, NEWS.AM (Mar. 13, 2019), <https://news.am/eng/news/500956.html>.

28. See, e.g., Stephan Benzkofer, *Worst Plane Crash in U.S. History*, CHI. TRIB., May 25, 2014; see also Nat'l Transp. Safety Bd., *Accidents Involving Passenger Fatalities: U.S. Airlines (Part*

121) 1982–Present, NTSB.GOV, <https://www.nts.gov/investigations/data/Pages/paxfatal.aspx> (last visited Apr. 18, 2020).

29. Upon subsequent review, the FAA learned that the cracks that were found after second inspection were missed in the first inspection, not newly propagated between inspections.

30. On June 5, 1979, U.S. District Court Judge Aubrey Robinson, in response to a petition by the Airline Passengers Association, ordered the FAA to ground DC-10 aircraft, then stayed his order pending further input from FAA. The FAA hours later grounded the aircraft. See, e.g., R. Within, *U.S. Judge Bids F.A.A. Ground DC-10 Airliners*, N.Y. TIMES, June 6, 1979.

31. FED. AVIATION ADMIN., EMERGENCY ORDER OF SUSPENSION (June 6, 1979), <https://lessonslearned.faa.gov/American191/tc%20suspension%20order.pdf>.

32. 44 Fed. Reg. 33,389 (June 8, 1979). As justification, the FAA stated, “In view of the serious safety problems currently involving operation of that airplane, the Administrator finds that a safety emergency exists which justifies adoption of a special regulation prohibiting operation in the United States of all Model DC-10 airplanes, including those on foreign registries.” *Id.*

33. *DC-10's Are Cleared by Europe Airlines*, N.Y. TIMES, June 20, 1979; David Brown, *Europe Resumes DC-10 Service*, AVIATION WK. & SPACE TECH., June 25, 1979.

34. *Europeans Challenge DC-10 Grounding Legality*, AVIATION WK. & SPACE TECH., July 2, 1979.

35. 44 Fed. Reg. 42,170 (July 19, 1979).

36. Brown, *supra* note 32, at 35.

37. *British Caledonian Airways Ltd. v. Bond*, 665 F.2d 1153, 1168 (D.C. Cir. 1981) (emphasis added).

38. *Id.* at 1163, 1164.

39. *Id.* at 1164 (emphasis added).

40. *Id.* at 1158.

41. Analyses in the aftermath of the 737 Max groundings raise issues of increasing aircraft automation and pilot interface. New hazards resulting from this innovation may require additional consideration in ICAO standards. See, e.g., JOINT AUTHORITIES TECHNICAL REVIEW BOEING 737 MAX FLIGHT CONTROL SYSTEM (submitted Oct. 11, 2019, to the FAA associate administrator for aviation safety) (identifying a need for greater involvement of human factors and human system integration experts during aircraft certification). Also, the leadership of the U.S. House Transportation and Infrastructure Committee has requested the Office of Inspector General, U.S. Department of Transportation, to review domestic and international pilot training standards, including the use of automation, based on concerns raised by the 737 Max accidents. The launch of the review was announced on February 10, 2020.