

Regulators' Obligations for Compliance and Safety in an Era of Sanctions

Since February 2022, a growing number of countries, including European Community members and many other Western nations, have imposed sanctions against Belarus and Russia. What makes these sanctions different from past actions is that they have been imposed against a country, Russia, with sizeable aviation activity as well as aeronautical design, certification, and training competence. Since the sanctions were imposed, Russia has enacted national laws to facilitate the re-registration onto Russia's registry of hundreds of leased western-built aircraft, primarily Boeing and Airbus models. The re-registration and operation of these aircraft pose potential safety risks and raise questions about compliance with international regulations. Most concerning is that these re-registered aircraft have been operating in international airspace and into airports located outside of Russia and Belarus.

Purpose

The purpose of this white paper is to outline the international regulatory obligations of countries that are allowing Russian and Belarusian airlines under international sanctions into their airspace, and the oversight obligations of States that have carriers that continue to fly into Russia and Belarus. Countries that allow the Russian and Belarusian airlines to fly into their territory or through their airspace are required to perform effective oversight to ensure compliance with applicable International Civil Aviation Organization (ICAO) Standards and Recommended Practices (SARPs) and to take appropriate action, when necessary, to preserve safety. Equally important, countries that allow their operators to fly into Russia and Belarus must be aware of the limitations caused by sanctions and U.S. export controls that may impact the level of service and parts available to those operators' aircraft when on the ground in Russia or Belarus to ensure continuing airworthiness and operational safety are maintained.

Background

Not long after Russia's invasion of Ukraine and its violation of Ukraine's sovereign airspace, western States closed their airspace to Russian air operators, international airlines cut their commercial ties to Russian carriers, and aircraft manufacturers such as Boeing and Airbus, as well as engine manufacturers such as CFM International, stopped providing their Russian customers with technical support and spare parts. Sanctions also were imposed against Belarus for its role in the invasion of Ukraine and for its May 2021 violation of the Convention on International Civil Aviation, also known as the Chicago Convention, in which it committed an act of unlawful interference that deliberately endangered the safety and security of Ryanair Flight FR 4978 and the lives of those on board. The European Union, the United Kingdom, the United States, Canada and other states have banned flights by Russian air operators or 'persons associated with Russia.' Russia subsequently banned flights from entering Russian airspace by the countries that have banned Russian flights, affecting service to Russian destinations as well as overflights.

Before the levelling of international sanctions, Russian airlines were operating approximately 900 aircraft, of which approximately 850 were Western-built Boeing and Airbus aircraft and approximately 85 percent were owned by international leasing companies. More than 120 million passengers used the country's airlines in 2019 and more than half of them took international flights, which have now been canceled or suspended due to the sanctions. While international flight options available to Russian travelers are now limited, Russian airlines are still flying. There has been a drop of approximately 15 percent in Russian airline traffic in comparison with the previous year. However, domestic travel has significantly increased. With respect to foreign operators, although numerous international airlines have ceased service to Russian cities, there are still almost 3,500 flights per month arriving from international destinations. Approximately thirty overseas airlines still fly into Russia.

Events that have transpired since the issuance of international sanctions paint a worrisome picture that will only get worse as sanctions continue. Included in those events are the following:

- March 2, 2022 — Boeing suspends technical support services (including providing parts) to Russian carriers and halts all major operations in Russia, where it also has a technical research center that employs 1,000 engineers. The facility in Russia is Boeing's largest engineering center outside the United States <https://www.rte.ie/news/business/2022/0302/1283857-boeing-suspends-operations-in-russia/>
- March 10, 2022 – Russia looks for opportunities to source parts from countries including Turkey and India after a failed attempt to obtain them from China. <https://www.reuters.com/business/aerospace-defense/russia-says-china-refuses-supply-aircraft-parts-after-sanctions-2022-03-10/>
- March 14, 2022 — Russia passed a law allowing foreign-registered aircraft owned by non-Russian lessors to be placed on the Russian registry¹. The new law allows Russian airlines to register planes leased from foreign companies and provides for the issuance of local certificates of airworthiness. Essentially, this makes it possible for Russian airlines to keep their foreign leased aircraft, and harder for foreign companies to reclaim their aircraft without Russian government approval, increasing the likelihood that few aircraft owned by foreign lessors will be recovered.
- March 17, 2022 — Russia moves to seize hundreds of planes from foreign owners <https://www.cnn.com/2022/03/16/business/russia-aircraft-seizure/index.html>
- March 18, 2022 – U.S. Department of Commerce identifies commercial and private aircraft exported to Russia in apparent violation of U.S Export Controls. <https://go.usa.gov/xzyCd>
- March – May 2022 – ICAO issues a Significant Safety Concern to Russia for registering aircraft on its civil registry without ensuring that the aircraft have been de-registered from the previous State's registry, which is a breach of the Chicago Convention, and consequently affecting the validity of the certificates of airworthiness issued to these aircraft. <https://unitingaviation.com/news/safety/the-icao-council-reviews-dual-registration-of-commercial-aircraft-by-russian-federation/>
- April 2022 – The U.S. Federal Aviation Administration (FAA) downgrades Russia's safety rating to Category 2. This downgrade essentially restricts any expansion of service or partnerships since Rosaviatsiya does not comply with ICAO safety standards

¹ Government of the Russian Federation Decree No. 411, applicable 23 March 2022

- April 21, 2022 — The European Union includes 22 Russian airlines on the EU Air Safety List because of serious safety concerns. Annex A of the EU Air Safety List includes all airlines that are banned from operating in Europe. All 22 of the Russian airlines are listed in Annex A. [The EU Air Safety List \(europa.eu\)](#)
- May 13, 2022 — Russia overhauls its aviation law in regard to parts and aircraft certification². Under the revised law, signed by Russian Prime Minister Mikhail Mishustin on May 9, 2022, parts certified by aviation authorities of any country may be used. In addition, the airlines may use aircraft that have an airworthiness certificate, or an equivalent document issued by an aviation authority of any country. In addition, manufacturer documentation of the parts, updates for aircraft digital systems and latest navigational databases are no longer required. The changes apply to foreign-made aircraft operated by Russian airlines, as well as Russian-made aircraft that have foreign-made parts. <https://www.aerotime.aero/articles/31011-down-with-safety-russia-overhauls-aviation-law>
- May 16, 2022 — Russian airlines are expected to start cannibalizing Western aircraft for spare parts. Other possible routes for finding spare parts include sourcing them from countries that are not currently sanctioned, for example through vendors in Turkey and India. According to Reuters, China has already turned down Russian airlines' requests for parts, a move which we can probably be attributed to the fear of sanctions from the West. <https://simpleflying.com/russian-airlines-expected-to-start-cannibalizing-western-aircraft-for-spare-parts/>
- June 7, 2022 — Russian spares for Airbus and Boeing aircraft: Rosaviatsiya has issued developer certificates to five Russian companies authorizing them to perform modification, certification of minor changes, and issuance of technical documentation, including approval of repair documentation and changes. The five companies include the State Civil Aviation Research Institute, S7 Technics, the Ural Civil Aviation plant, Aviation Engineering Solutions, and the Navigator Institute of Aeronautical Instrumentation. This certification will enable them to manufacture Russian spares. However, those spares would not be recognized as airworthy outside of Russia. <https://airinsight.com/russian-spares-for-airbus-and-boeing-aircraft/>
- June 18, 2022 – China decides to supply Russia with spare parts for aircraft. <https://aviationsourcenews.com/news/ukraine-crisis-china-to-supply-russia-with-spare-parts-for-aircraft/>
- August 02, 2022 – U.S Department of Commerce identifies first foreign produced commercial aircraft exported to Russia in apparent violation of US. Export Controls. [Bureau of Industry and Security](#)
- October 17, 2022 – U.S Department of Commerce Issues Temporary Denial Order against Ural Airlines for operating in apparent violation of U.S Export Controls on Russia. https://www.bis.doc.gov/index.php/component/docman/?task=doc_download&gid=3173
- November. 30, 2022 – Aircraft leasing firms are suing insurance companies over the loss of hundreds of aircraft that are now dual-registered in Russia and claim the aircraft are covered by policies against war and theft. Factbox: [Aircraft lessors sue insurers for \\$8 billion over trapped Russian planes | Reuters](#)

² Government of the Russian Federation Decree No.837 dated 9 May 2022, on amendments to Appendix No.12 to Resolution No. 353 dated March 12 , 2022

- November 30, 2022 – Russia officially requests aircraft parts from India. <https://www.reuters.com/world/india/india-asked-by-sanctions-hit-russia-parts-key-sectors-sources-2022-11-29>
- December 22, 2022 – U.S Department of Commerce extends export bans to Russian carriers S7 and Pobeda. Both carriers operate Boeing, Airbus as well as Embraer aircraft on domestic and international routes. <https://simpleflying.com/us-extends-s7-pobeda-export-bans/>
- January 02, 2023 – Aeroflot purchases ten foreign leased Boeing 777s to fulfill its contractual obligations. <https://simpleflying.com/aeroflot-buys-10-leased-boeing-777s-wont-be-returned/>
- January 05 2023 - Aeroflot begins to transfer line stations, scheduled and unscheduled maintenance facilities and component manufacturing repair and overhaul to A-Technics after it obtained regulatory approval to design and authorize the structural repair of Western-built aircraft. <https://www.ainonline.com/aviation-news>

Actions taken by ICAO

During the 41st Triennial ICAO Assembly, Sept. 27–Oct. 7, 2022, ICAO member States acknowledged a violation of the Chicago Convention and adopted Resolution A41-1, condemning the actions of the government of the Republic of Belarus for an act of unlawful interference that deliberately endangered the safety and security of Ryanair Flight FR 4978 and the lives of those on board. Furthermore, the Assembly adopted Resolution A41-2 condemning Russia for violating Ukraine’s sovereign airspace in the context of Russia’s war of aggression, and the deliberate and continued violation of several safety requirements in an attempt by the Russian government to circumvent EU sanctions. These actions include illegally double-registering aircraft in Russia and permitting Russian airlines to operate these aircraft on international routes without a valid Certificate of Airworthiness.

Discussion

State Oversight Obligations

The Chicago Convention and its annexes provide a clear legal and operational framework upon which contracting States can build a global civil aviation safety system based on mutual trust and recognition. This requires that all States fulfil their obligations in implementing the SARPs as far as practicable, and adequately perform safety oversight.

States have an obligation to carry out effective oversight over foreign operators — in this case, air operators from Belarus and Russia — flying in their territory, to ensure that they do so in compliance with applicable SARPs, and to take appropriate action when necessary to preserve safety (Resolution A36-6, clauses 1 and 2). Articles 11, 16 and 29 of the Chicago Convention, as well as Annex 6, are key in this regard.

The Implication for Regulators Allowing Aircraft from Sanctioned States to Operate in their Airspace

Since February 2022, there has been an increase in sanctions imposed on Russia and Belarus, targeting the aviation sector. Those sanctions include export controls imposed by the U.S. Department of Commerce. The impact of such measures, especially from a State of design — the United States for Boeing aircraft, the European Union (EU) and France for Airbus aircraft, Canada for Bombardier aircraft and Brazil for Embraer aircraft — can significantly limit Russia and Belarus as State of register or State of the operator and impact the continuing airworthiness and operations of aircraft registered in those States.

Because of the sanctions and their impact, Russia and Belarus may be limited in their ability to effectively oversee their air operators. Similarly, air operators from Russia and Belarus may find it difficult to access an adequate supply of spare and replacement parts, provide the necessary training to flight crew and maintenance personnel, and to access instructions for continuing airworthiness. Maintenance organizations in those two countries would no longer have access to legitimate tooling and might then have to resort to making their own.

Additional measures, such as Export Controls imposed by the United States, forbid any aircraft manufactured in the United States, such as Boeing, or that is manufactured in a foreign country but includes more than 25 percent by value of U.S.-origin controlled content (such as some Airbus aircraft) from being delivered or supported if destined for Belarus or Russia. — This interdiction includes assisting the air operators in Belarus and Russia with fueling services, maintenance, repair, or spare parts or providing any other services related to the aircraft registered in those states.

The array of controls, sanctions and restrictions imposed may have the following impacts:

- a) Russia and Belarus no longer have access to approved airworthiness and operational data from the aircraft and engine type certificate holders of their Western-built fleets that are required for the continuing safe operation of aircraft. The operational and airworthiness data are in place to avoid very real safety of flight considerations resulting from lack of adherence to instructions from the type certificate holder approved by the State of design.
- b) The type certificate (TC) holders, such as Boeing, Airbus, Bombardier, Embraer and ATR, including engine manufactures such as CFM International, other equipment manufacturers and suppliers, and regulators, such as the FAA, the French DGAC, and the European Union Aviation Safety Agency (EASA), from the sanctioning states are prohibited from providing any technical assistance or other services to Belarus and Russia.
- c) Any technical support related to repairs, modification, testing, maintenance, or any other technical service that may take forms such as instruction, advice, training, transmission of working knowledge or skills or consulting services, including verbal forms of assistance, would be halted.
- d) TC holders would not be permitted to provide any support in the form of responses to questions received from Russia's Federal Agency for Air Transport (Rosaviatsiya), or the Belarus civil aviation authority (CAA) or their customer operators registered in either of those States on any ongoing validations of modifications or repairs.
- e) TC holders, and approved parts distributors are forbidden from releasing engines, propellers, parts or appliances to a customer, broker, vendor, natural or legal person, entity or body known to be located in Belarus or Russia.
- f) Neither TC holders or any manufacturer of components or parts found on an aircraft affected by the sanctions or export controls can share service bulletins with operators registered in Belarus or Russia. Service bulletins often cover component/system enhancements intended to improve reliability and can be the precursor issuance of airworthiness directives.
- g) TC holders and regulators from the State of Design that has imposed sanctions cannot share with any of the air operators from Russia or Belarus any emergency airworthiness directives (ADs). An AD contains safety critical information and is issued when an unsafe condition exists that requires immediate action by an aircraft owner or operator.
- h) Regulators and TC holders cannot provide technical support to an operator registered in Belarus and Russia regarding any potential damage to an aircraft. This poses particular concern when the

damage and repair that may be needed exceed the limits found in approved structural repair manuals and the operator requires approval from its regulator.

To maintain the airworthy condition of an aircraft, operators and maintenance organizations depend on relevant technical information developed by the aircraft design organizations such as Boeing and Airbus under the State of design's regulatory system. Russia and Belarus also rely on that information to effectively oversee the airworthiness condition of the aircraft operating under their regulatory systems.

Regulators from sanctioned States may attempt to provide approvals to their operators without receiving the engineering approvals from the type certificate holder, possibly resulting in an unsafe condition for the travelling public and for people on the ground. This may be the case for the Belarus regulator which does not have the engineering competence to provide modification and repair approvals and would normally rely heavily on the TC holder such as Boeing and Airbus for technical support. Russia, on the other hand, where Rosaviatsiya is the regulator, has the staff and engineering competence to oversee, regulate, certify and approve its aviation industry, but would nonetheless need its industry to receive adequate support and engineering approvals from the type certificate holder.

Rosaviatsiya facilitated the development of laws and rules to work around the sanctions and to support their industry by allowing aircraft to be initially dual-registered, issuing flight authorities based on previously issued flight authorities, expanding the scope of approvals of their maintenance repair and overhaul facilities, facilitating the approvals for the manufacturing of parts, etc.

Parts Control

Russian carriers may be taking advantage of the reduced number of international flights to cannibalize parked aircraft for parts after exhausting inventories. The aircraft equipped with cannibalized parts are being used to maintain service amid high demand for domestic travel.

Rosaviatsiya is working to put in place new laws to support its aviation industry during the sanctioned period, even if it means not being aligned with the international convention and international practices. Laws have been created or revised to be fine-tuned and adapted to the new operational environment, including laws allowing for civil aircraft to be dual-registered, allowing Russian operators to use parts certified by other States, and allowing for the manufacturing and approval of Russian-made parts to keep its air transport sector in operation.

Rosaviatsiya and the Russian aviation industry have the engineering and technical competence to make engineering approvals for repairs and modifications. However, the approvals are based on revised rules that do not necessarily meet international safety standards. Some Russian maintenance repair and overhaul (MRO) facilities have Russian approvals for maintenance of both Western- and Russian-made aircraft, including the authority to produce several components for all aircraft types as well as to conduct heavy maintenance checks for Boeing and Airbus products.

While the sanctions have meant that foreign approvals recognizing the capabilities of some Russian MRO facilities have been canceled, these MRO facilities are continuing to perform their activities based on the Russian approvals, and in fact have expanded their scope of approval and capabilities, this having been facilitated by the revised laws designed to accommodate to the new norm of operating under sanctions.

The Perfect Storm

The effects of ongoing sanctions imposed by States will be further exacerbated with the passage of time, if sanctions and export controls are maintained. Russia is working to lessen the impact of the sanctions on its aviation sector by making or revising laws and regulations that facilitate the dual registration of aircraft onto their civil registry and negate the effects of canceled flight authorities from other States through the automatic issuance of its own certificates. Furthermore, the laws revised by Russia make it easier for Russian operators to use parts certified by other States and they no longer require software updates for their aircraft to remain airworthy. This is particularly concerning as most newer aircraft rely heavily on manufacturer software updates.

The disrupted supply of components may result in affected air operators from Russia and Belarus stripping parts from parked planes or being tempted to explore alternative unapproved sources or parts in order to continue flying. Parts may even be swapped out and find their way to the MRO facilities, possibly being accepted by regulators with weak oversight or those that lack the engineering competence to further scrutinize the paperwork.

As time passes, the airworthiness condition of aircraft that are dual-registered and are operating under the revised laws and regulations in Russia becomes unknown and the traceability of the conformity of critical components, including rotatable parts, is permanently lost and those parts may eventually show up on the global market, if they haven't already.

Call to Action

With the large number of prolonged sanctions, as well as U.S. Export Controls currently in place on Belarus and Russia, state regulators worldwide need to be fully aware of the current international sanctions in effect and their implications on aviation safety and in particular:

- State regulators have an obligation to carry out effective oversight over foreign operators flying in their territory, with closer scrutiny on aircraft registered in sanctioned States. States unable to adequately ensure safety and provide adequate safety oversight - particularly of aircraft registered in sanctioned states - should not allow these flights into their airspace.
- State regulators that have issued an Air Operator Certificate to an operator in their State have an obligation to ensure that their operators flying into any foreign territory continue to operate safely, and that the aircraft registered in their State remain airworthy at all times, taking into consideration the sanctions in place at various destinations.
- State regulators, air operators, maintenance repair and overhaul facilities (MRO's) have to carefully scrutinize aircraft documentation, looking out for the possibility of unapproved modifications, repairs, as well as parts coming from unapproved sources.

