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November 2, 2018

Ms. Lirio Liu
Executive Director, Office of Rulemaking
U.S. Department of Transportation
Docket Operations, M-30
1200 New Jersey Avenue SE
West Building Ground Floor, Room W12-140
Washington, DC 20590-0001

Re: AOPA Petition for Exemption and Ongoing ADS-B Privacy Concerns

Dear Ms. Liu,

The Aircraft Owners and Pilots Association (AOPA), the world's largest aviation membership association, respectfully submits the attached Petition for Exemption from a portion of 14 CFR § 91.227(d)(8) and (11) to allow operators of aircraft equipped with 978 MHz Universal Access Transceiver (UAT) ADS-B systems (TSO-C154c compliant) to operate utilizing anonymous mode when: (1) the pilot has filed a VFR flight plan; (2) the pilot has not requested ATC services; and (3) the operation is outside of "rule airspace" as provided in 14 CFR §91.225.

We request the FAA act expeditiously and favorably on this Petition for Exemption that supports a pilot's right to search and rescue services and, simultaneously, privacy. This petition is an important step to facilitating anonymity for pilots who equip with ADS-B but it is by no means the complete solution. AOPA encourages the FAA to expedite their efforts to provide robust privacy solutions for aircraft equipped with ADS-B systems.

Notably, the *FAA Reauthorization Act of 2018* detailed a pilot's right to privacy when using the air traffic control system:

"Notwithstanding any other provision of law, the Administrator shall, upon request of a private aircraft owner or operator, block the registration number of the aircraft of the owner or operator from any public dissemination or display, except in data made available to a Government agency, for the noncommercial flights of the owner or operator."

The information transfer function of ADS-B lets the data bypass an existing privacy-protection program available to General Aviation and charter operators—the Block Aircraft Registration Request (BARR) program—rendering it obsolete for aircraft with an ADS-B system. We believe it is important that any solution must enable privacy to originate at the aircraft given the prevalence of privately operated receivers. For the FAA to meet Congress's intent of this reauthorization language, a complete privacy solution is needed.

As you are aware, ADS-B is a satellite-based surveillance technology that is an integral component of the next-generation air traffic control system that promises an increase in efficiency, capacity, and safety. Privacy, on the other hand, stands to suffer unless a means is developed to withhold aircraft identifiable

information that owners do not want to be visible to anyone with a non-FAA receiver who otherwise can capture that information.

AOPA has been actively engaged in collaborative conversations with the FAA, the National Business Aviation Association (NBAA), and our other industry partners to find a solution that would enable anonymity for those civil operators using 1090 MHz ADS-B systems and for those utilizing air traffic services. ADS-B broadcasts an aircraft's unique International Civil Aviation Organization (ICAO) code and call sign, which can be captured by anyone with a suitable receiver. This information can then be used to determine who owns and operates the aircraft, and even track their movements globally. The proliferation of privately-owned receivers tied to large networks and flight tracking websites has dramatically changed the aviation privacy landscape.

Pilots who fly solely in the U.S. and outside of Class A airspace do have an option of equipping with ADS-B using the 978 MHz UAT, which will randomize or not emit the aircraft's unique ICAO code or call sign when used in the anonymous mode. However, AOPA's data indicates about 85% of General Aviation pilots are equipping with 1090 MHz ADS-B systems as this is the international standard and allows access to more airspace. Unfortunately, this system does not include an anonymous mode capability. The clear preference for 1090 MHz systems highlights the importance of finding a solution for these operators.

The FAA's concept of "rolling ICAO codes" is a promising approach to increasing anonymity for General Aviation operators. Rolling ICAO codes refers to the concept of the aircraft emitting randomly assigned ICAO codes that will be changed periodically. In combination with an anonymous callsign, the aircraft would be harder to track. This is a feasible solution for some operators of 1090 MHz ADS-B systems. We encourage the FAA to conduct a demonstration project of this capability.

Most importantly, work must be expedited on the long-term solution: encryption of ADS-B data. It is understood that to facilitate privacy, anonymity must be initiated at the source—the aircraft—as the many privately-operated ground receiver networks do not rely on an FAA data stream to feed their tracking websites. Encryption at the source will allow an automated solution that will reduce the workload for operators and the agency, and this solution could become a global standard. The cost associated with investment in software and hardware upgrades will need to be part of the conversation to determine the practicality and benefit of pursuing an option that may include changing the Minimum Operational Performance Standards. Although encryption may facilitate privacy from non-government receivers, we understand it is not a near-term solution and it will require further conversation.

In conclusion, thank you for reviewing our Petition for Exemption and we encourage the FAA to prioritize the important issue of ADS-B privacy. Please feel free to contact me at 202-509-9515 if you have any questions.

Sincerely,



Rune Duke
Senior Director, Airspace and Air Traffic