

### 3. Aircraft with an Inoperative/Malfunctioning ADS-B Transmitter:

(a) ATC will inform the flight crew when the aircraft's ADS-B transmitter appears to be inoperative or malfunctioning:

**PHRASEOLOGY–**

*YOUR ADS-B TRANSMITTER APPEARS TO BE INOPERATIVE/MALFUNCTIONING. STOP ADS-B TRANSMISSIONS.*

(b) ATC will inform the flight crew if it becomes necessary to turn off the aircraft's ADS-B transmitter.

**PHRASEOLOGY–**

*STOP ADS-B TRANSMISSIONS.*

(c) Other malfunctions and considerations:

Loss of automatic altitude reporting capabilities (encoder failure) will result in loss of ATC altitude advisory services.

### 4. Procedures for Accommodation of Non-ADS-B Equipped Aircraft:

(a) Pilots of aircraft not equipped with ADS-B may only operate outside airspace designated as ADS-B airspace in 14 CFR §91.225. Pilots of unequipped aircraft wishing to fly any portion of a flight in ADS-B airspace may seek a deviation from the regulation to conduct operations without the required equipment. Direction for obtaining this deviation are available in Advisory Circular 90-114.

(b) While air traffic controllers can identify which aircraft are ADS-B equipped and which are not, there is no indication if a non-equipped pilot has obtained a preflight authorization to enter ADS-B airspace. Situations may occur when the pilot of a non-equipped aircraft, without an authorization to operate in ADS-B airspace receives an ATC-initiated in-flight clearance to fly a heading, route, or altitude that would penetrate ADS-B airspace. Such clearances may be for traffic, weather, or simply to shorten the aircraft's route of flight. When this occurs, the pilot should acknowledge and execute the clearance, but must advise the controller that they are not ADS-B equipped and have not received prior authorization to operate in ADS-B airspace. The controller, at their discretion, will either acknowledge and proceed with the new clearance, or modify the clearance to avoid ADS-B airspace. In either case,

the FAA will normally not take enforcement action for non-equipage in these circumstances.

**NOTE–**

*Pilots operating without ADS-B equipment must not request route or altitude changes that will result in an incursion into ADS-B airspace except for safety of flight; for example, weather avoidance. Unequipped aircraft that have not received a pre-flight deviation authorization will only be considered in compliance with regulation if the amendment to flight is initiated by ATC.*

**EXAMPLE–**

**1. ATC:** *“November Two Three Quebec, turn fifteen degrees left, proceed direct Bradford when able, rest of route unchanged.”*

**Aircraft:** *“November Two Three Quebec, turning fifteen degrees left, direct Bradford when able, rest of route unchanged. Be advised, we are negative ADS-B equipment and have not received authorization to operate in ADS-B airspace.”*

**ATC:** *“November Two Three Quebec, roger”*

*or*  
*“November Two Three Quebec, roger, turn twenty degrees right, rejoin Victor Ten, rest of route unchanged.”*

**2. ATC:** *“November Four Alpha Tango, climb and maintain one zero thousand for traffic.”*

**Aircraft:** *“November Four Alpha Tango, leaving eight thousand for one zero thousand. Be advised, we are negative ADS-B equipment and have not received authorization to operate in ADS-B airspace.”*

**ATC:** *“November Four Alpha Tango, roger”*

*or*

*“November Four Alpha Tango, roger, cancel climb clearance, maintain eight thousand.”*

**REFERENCE–**

*Federal Register Notice, Volume 84, Number 62, dated April 1, 2019*

#### **e. ADS-B Limitations.**

The ADS-B cockpit display of traffic is NOT intended to be used as a collision avoidance system and does not relieve the pilot's responsibility to “see and avoid” other aircraft. (See Paragraph 5-5-8, See and Avoid). ADS-B must not be used for avoidance maneuvers during IMC or other times when there is no visual contact with the intruder aircraft. ADS-B is intended only to assist in visual acquisition of other aircraft. No avoidance maneuvers are provided or authorized, as a direct result of an ADS-B target being displayed in the cockpit.

#### **f. Reports of ADS-B Malfunctions.**

Users of ADS-B can provide valuable assistance in the correction of malfunctions by reporting instances of undesirable system performance. Since ADS-B