

## **National Transportation Safety Board (NTSB) Safety Recommendation (SR) A-21-020 Added to Pilot's Handbook of Aeronautical Knowledge in 2023**

### **Training Operations**

Operators of pilot training programs are urged to adopt the following practices:

- Pilots undergoing flight instruction at all levels should be requested to verbalize clearing procedures (call out "clear" left, right, above, or below to instill and sustain the habit of vigilance during maneuvering.
- High-wing airplane. Momentarily raise the wing in the direction of the intended turn and look.
- Low-wing airplane. Momentarily lower the wing in the direction of the intended turn and look.
- Appropriate clearing procedures should precede the execution of all turns including chandelles, lazy eights, stalls, slow flight, climbs, straight and level, spins, and other combination maneuvers.

### **Scanning Techniques for Traffic Avoidance**

- Pilots must be aware of the limitations inherent in the visual scanning process. These limitations may include:
- Reduced scan frequency due to concentration on flight instruments or tablets and distraction with passengers.
- Blind spots related to high-wing and low-wing aircraft in addition to windshield posts and sun visors.
- Prevailing weather conditions including reduced visibility and the position of the sun.
- The attitude of the aircraft will create additional blind spots.
- The physical limitations of the human eye. including the time required to (re)focus on near and far objects, from the instruments to the horizon for example; empty field myopia, narrow field of vision and atmospheric lighting all affect our ability to detect another aircraft.

### **Best practices to see and avoid:**

- ADS-B In is an effective system to help pilots see and avoid other aircraft. If your aircraft is equipped with ADS-B In, it is important to understand its features and how to use it properly. Many units provide visual and/or audio alerts to supplement the system's traffic display. Pilots should incorporate the traffic display in their normal traffic scan to provide awareness of nearby aircraft. Prior to taxiing onto an airport movement area, ADS-B In can provide advance indication of arriving aircraft and aircraft in the traffic pattern. Systems that incorporate a traffic-alerting feature can help minimize the pilot's inclination to fixate on the display. Refer to 4-5-7e, ADS-B Limitations.
- Understand the limitations of ADS-B In. In certain airspace, not all aircraft will be equipped with ADS-B Out or transponders and will not be visible on your ADS-B In display.
- Limit the amount of time that you focus on flight instruments or tablets.
- Develop a strategic approach to scanning for traffic. Scan the entire sky and try not to focus straight ahead.