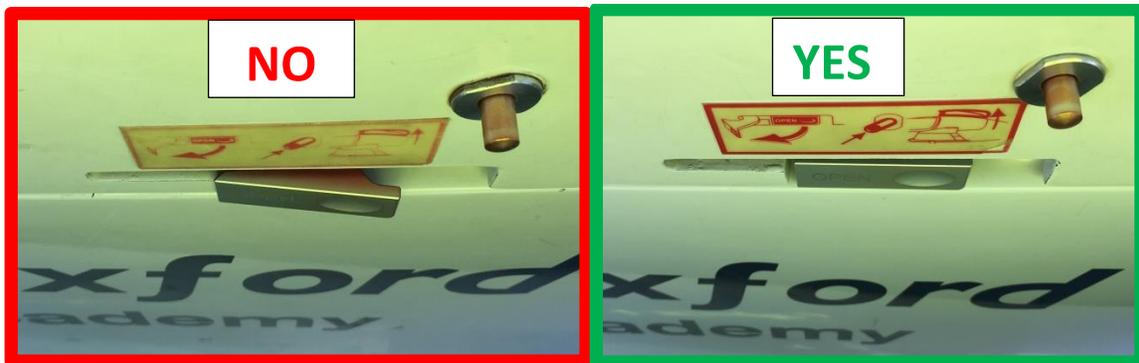


DA40/DA42 Rear Door Latch

Attention Students and Instructors:

Recently, a DA40 lost a rear door in flight. The rear door was recovered, and the Safety Office conducted a thorough investigation to determine root cause. It was discovered that the rear door main latch moved very easily from closed to open. The design of the rear door latch mechanism contains a gas spring which is designed to hold the rear door latch in the latched position during flight. The Safety Office then discovered that there were no inspection criteria from Diamond to aid mechanics in checking the gas spring for proper operation. Similarly, there was no guidance to determine how far the latching pins should extend on either side of the door to adequately hold the door in place. Further, the guidance for operation of the DOOR OPEN annunciation was misleading. All of these factors combined mean that a rear door could potentially open in flight, because there is no guidance to check them for proper operation. Safety has alerted Diamond to these issues and they are in the process of coming up with the necessary solutions. In the meantime, we have developed our own inspection criteria based on guidance from Diamond Engineers and our own testing. Our Fleet Manager and Maintenance personnel have been hard at work replacing rear door latch gas springs to ensure we don't have a repeat event. To ensure your Safety, please follow the guidance below regarding the rear door latch:

1. Make sure there is no object obstructing the rear door seal or mechanism.
2. Ensure the rear door main latch handle is flush with the door frame (see photos below):



3. Attempt to pull on the rear door from the exterior and ensure it is latched properly.
4. If the door opens in flight – DO NOT ATTEMPT TO CLOSE IT IN FLIGHT. Land the airplane at the nearest suitable airport and close the door. Any attempt to touch the safety latch may jettison the door.
5. Please note that the canopy and the rear door share the same annunciation on the panel. This can lead crews to believe that the main canopy (in the vent position) is what is causing the annunciation. When in fact, the rear door is not properly shut. Therefore, it is especially important to check that there is NO "DOOR OPEN" annunciation prior to calling ready for takeoff.

Note: Pushing on the rear door aft locking pin to determine if the door is safe for flight is **NOT** a valid check of the rear door latch mechanism.

Fly Safe,

Brent Crow
Flight Safety Manager
CAE OAA Phoenix