

SERVICE BULLETIN

SB016-0031

Subject: Improper Installation of 90° Fitting on the Actuators

Date: 12/7/2016

Pages: 2

Background:

We have identified a potential situation where the gear actuators may have been improperly installed during the build process and over time the inner sleeve of the actuator can rotate. If this inner sleeve rotates, it is possible that the sleeve will block the 90-degree fitting thus locking the actuator in the up position. Since there is no way to determine when this sleeve might move or the process that builders might have used during installation, we would like you to inspect all three actuators and verify that the installation of the 90-degree fitting has been done properly. Even if you have flown your Evolution for many hours this could still be an issue. If the fittings were improperly installed on your actuators, and the internal sleeve rotated, the emergency gear drop procedures may not work.

During the installation process, the 90-degree fitting on the up side of the actuators may have been removed or altered from their original assembly to make the lines fit. These fittings were designed to have only one thread of play and it is very important that the fittings have been properly installed on your aircraft.



Fitting backed off 1 thread.



The metal sleeve shown has slid out of position.

Action:

First the aircraft will need to be lifted on jacks, and then the hydraulic line removed from the up side of the actuator. Temporarily remove the 90-degree fitting and make sure the metal sleeve is positioned such that the slot in the sleeve is placed over the fitting hole, this can be done using a small flat head screw driver. Replace the fitting and screw it in until it bottoms out. When reattaching the hydraulic line, if needed, only back the fitting **out no more than 1 thread** (approximately $\frac{3}{4}$ turn), then tighten down the nut (snug plus $\frac{1}{4}$ turn). This will need to be completed on all three actuators. **Note: This Service Bulletin does pertain to ALL Evolution actuators.**

If you experience the actuator locking in the up position while flying, pull the hydraulic pump breaker, then put the gear switch in the down position and open the emergency dump valve. You will need to fly around for approximately 30 minutes while the gear comes down and locks. Once you see 3 green indicator lights, close the dump valve and reactivate the hydraulic system.