

**Evolution Aircraft, Inc.
39440 South Ave.
Zephyrhills, Fl. 33542**

SAFETY ALERT

REPLACEMENT of RIVETS ON WHEEL PANT RUDDERS/TRIM TABS

SD-1016 RELEASED Sept 15TH 2015

STATUS: MANDATORY

BACKGROUND:

On earlier model REVOs with roll trim, the “rudders” did not have metal backing inside, and the rivets holding the piano hinge to both the wheel pant and the rudder were secured to the composite itself. Some of the REVO models included in this SD have a lighter gauge piano hinge as well which must be replaced with the heavier duty piano hinge at the same time. Some of the REVOs with this set up have reported loose hinges. As a result, effected REVOs must replace their hinges and the rivets with metal backing inside both the rudder and wheel pant. When we receive your rudders we will reattach either your existing piano hinge or a new piano hinge and return it to you with new rivets and backing washers to be able to reinstall them to the wheel spats.

SCOPE:

THE FOLLOWING SERIAL NUMBERS OF REVO WEIGHT SHIFT CONTROL THAT ARE AFFECTED BY THIS SAFETY DIRECTIVE: 000605, 000609, 000610-000611

AUTHORIZED PERSONS:

Owner can remove the rudders and send in. owner can reinstall the rudders.

TOOLS:

Drill

Pneumatic rivet gun

1/8" 5/32" 3/16" drill bit

7/16" wrench

3/32" allen wrench

Small pliers

5/32" allen wrench

hot glue gun

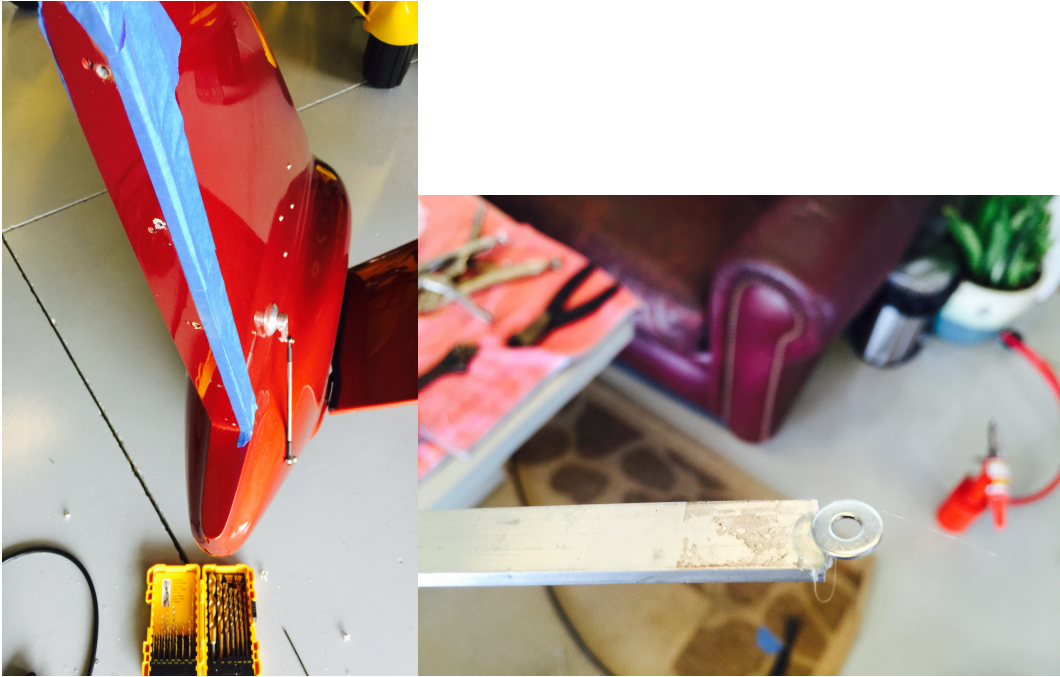
COMPLIANCE:

Compliance is **mandatory** to replace the rivets within the next 20 flight hours IF the rudders appear to be completely tight and special attention should be given on each preflight to the security of the rudders.

How to comply with this directive:

- 1) With the wheel pants still installed, use masking tape to protect the paint.
- 2) Disconnect the push rod from both ends.
- 3) Extend the rudder out as far as it will go to expose the rivets. Drill the heads on the rivets that attach the rivets to the wheel spat using a new sharp drill bit.
- 4) Remove "rudder" trim tabs and push any rivet remains through so that the holes are cleared and no debris is left to fall off the aircraft.
- 5) Pack and ship the rudders to Evolution Aircraft Inc. 39440 South AV. Zephyrhills, fl. 33542 We will install metal backing inside the rudders and secure the heavy duty piano hinge to the rudder. (your aircraft

- 6) MAY be flown without the small trim tabs “rudders” while the rudder trim tab pieces are out to be modified. **The REVO MUST ALWAYS BE FLOWN WITH THE WHEEL PANTS/SPATS)**
- 7) Once the rudders are returned the owner or mechanic needs to rivet it back on which may include drilling new holes in the back of the wheel spat if the piano hinge needed to be upgraded.
- 8) With the piano hinge properly placed insert SS rivets into all holes and use backing washers inside the wheel spat before “popping” the rivets.
- 9) The top rivet does NOT get a backing washer but the bottom ones all do. The very bottom rivets will be simple to get to in order to hold the washer up to make a sandwich for the rivet to secure to. The upper rivets will need the washer to be hot glued to the end of a stick to reach and hold up into place while the rivet is “popped” , then the stick is simply pulled out breaking the hot glue joint.
- 10) Reinstall push rod to rudder and turnbuckle arm.



LOGBOOK ENTRY:

Aircraft logbook should be marked with the following entry and dated and signed with mechanic's license number (if applicable):__“Safety Directive 1016 from the manufacturer satisfied as per instructions. Compliance with ASTM standards maintained.”