

Safety Directive

Inspection of Quick Fasteners on Control System

MANDATORY

Symbols:

Please pay attention to the following symbols throughout this document emphasizing particular information.

- ▲ **WARNING:** Identifies an instruction, which if not followed, may cause serious injury or even death.
- **CAUTION:** Denotes an instruction which if not followed, may severely damage the aircraft or could lead to suspension of warranty.
- ◆ **NOTE:** Information useful for better handling.

1. General

<u>Issued by:</u>	Remos Aircraft GmbH Franzfelde 31 D-17309 Pasewalk Web: www.remos.com - Telephone: +49-3973-225519-0
<u>Release date:</u>	March 25 th , 2009
<u>Date of effect:</u>	immediately
<u>Compliance:</u>	Prior to next flight, if preceding SD-004 has not been implemented. If the aircraft complies with SD-004, implement this SD-005 at next scheduled maintenance.
<u>Release Number:</u>	SD-005-quick-fasteners
<u>Superseded notice:</u>	SD-004-quick-fasteners

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<u>Models affected:</u>	G-3, G-3/600, GX
<u>Affected S/N:</u>	all
<u>Reason:</u>	A fatal accident occurred with a REMOS GX. A possible reason for the accident is that one quick connector of the aileron control system was not re-connected after the wings had been unfolded prior to the fatal flight.
<u>Subject:</u>	<ol style="list-style-type: none">1. Inspection of quick connectors on aileron and elevator control system. Check for proper connection, interlocking and securing of connector.2. Update of Pilot Operating Handbook3. Addition of warning placards
<u>Time req'd. for compliance:</u>	Inspection, POH update and applying stickers ca. 5min. ea.

2. Material Information

<u>Tools needed:</u>	Standard Tools
<u>Parts needed:</u>	No specific parts needed; this document includes all required placards and POH supplements.

3. Compliance

<u>Level of maintenance:</u>	low
<u>Certification required:</u>	A&P Mechanic, LSA Repairman, pilot in command

▲ **WARNING:** If the quick-connectors are not properly connected and locked/secured, loss of control may occur. Safe operation and positive control of the aircraft is not ensured.

◆ **NOTE:** Please contact your Remos Service Center in case of doubt.

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1a. INSTRUCTIONS: When having rigged the wings after folding proceed through following instructions:

1. Identify the quick connector of the left aileron control system under the cabin roof of the aircraft on the port side, see figure 1a and 1b.
2. Push the securing pin and shift the red locking sleeve back, so that the connector hook is completely free. See figures 2a and 2b.
3. Hook the connecting devices into each other. See figure 3.
4. Shift the red locking sleeve over the connector hooks, so that the spring loaded securing pin locks into the red sleeve with a distinct click. See figure 4.
5. Ensure that the securing pin is fully engaged and in correct securing position. The spring loaded securing pin must not be left in any intermediate position as loss of control may occur, see figure 5a and 5b.
6. Identify the quick connector of the right aileron control system under the cabin roof of the aircraft on the starboard side, see figure 1. Proceed through the check routine described above
7. If elevator was removed and re-attached: Identify the quick-connector of the elevator control on the rear end of the fuselage, see figure 6. Proceed through the check routine described above. If no tow hook is installed, mount the tail cone.
8. Check aircraft according to pre-flight checklist in the POH.
9. Log the correct connection of the quick release in the aircraft's logbook with the following wording:
Aircraft rigged, all quick releases properly connected

▲ **WARNING:** This routine must be followed every time when rigging the aircraft after having folded the wings.

▲ **WARNING:** If the quick-connectors are not properly connected and locked a loss of control may occur. Safe operation and positive control of the aircraft is not ensured.

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1b. INSTRUCTIONS: Each time the aircraft is pre-flight-checked without having rigged the aircraft, proceed through following instruction:

1. Identify the quick connector of the left aileron control system under the roof of the aircraft on the port side, see figure 1.
2. Be sure the securing pin is fully engaged and in correct securing position. The spring loaded securing pin must not be left in any intermediate position as loss of control may occur, see figure 5a and 5b.
3. Identify the quick connector of the right aileron control system under the roof of the aircraft on the starboard side, see figure 1. Proceed through the check routine described above
4. Identify the quick-connector of the elevator control on the rear end of the fuselage, see figure 6. Proceed through the check routine described above.
5. Check aircraft according to pre-flight checklist in the POH.

▲ **WARNING:** This routine must be following every time the aircraft is pre-flight-checked

▲ **WARNING:** If the quick-connectors are not properly connected and locked a loss of control may occur. Safe operation and positive control of the aircraft is not ensured.

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2a. INSTRUCTIONS: If you are an owner of a REMOS GX, cut the following text from a color print-out of this AD and paste it into the POH using household paper glue.

REMOS GX

7 Normal Procedures

Rev. 01 Amdt. 1 – 01-30-2009

This section provides you with all the procedures for normal operation of the aircraft including preflight preparations.

7.1 Preflight Check

Before each flight the following checks have to be conducted:

Checks outside the aircraft

1. Before moving the aircraft drain possible water from the fuel tank, using the drain valve
2. Check engine oil level (between 1/2 and 1/4 of marking)*
3. Check level of engine coolant (between min. and max. marking)
4. Check proper condition of engine mounting
5. Check mounting and condition of the exhaust system
6. Check all water hoses and hose connections
7. Check that the cowling is closed and properly secured
8. Check propeller for damage and wear
9. Check gear and wheels/tires for damage, wear and correct air pressure
10. Check wings and control surfaces for damage
11. Check wing main bolts, struts and stabilizer for damage

12. Check all control surfaces and connections for proper operation
13. Check for free and full travel of all control surfaces
14. Check elevator quick-fastener for secure locking

Insecurely connection, improper operation of control surfaces or insecure locked fasteners will lead to loss of control of the aircraft!!

15. Check pitot tube, static ports and hoses for damage and dirt
16. Check fuel level and tank filler cap

* Please refer to the Rotax engine operators manual, latest issue, for detailed information!

Normal Procedures 7 - 2

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7 Normal Procedures

Rev. 01 Amdt. 1 – 01-30-2009

Checks inside the aircraft

1. Check aileron quick-fasteners for secure locking

Insecurely connection, improper operation of control surfaces or insecure locked fasteners will lead to loss of control of the aircraft!!

2. Check fuel level
3. Check mounting of rescue system
4. Check that both seats are properly secured in position
5. Close and lock both doors
6. Buckle up
7. Set parking brake
8. Check proper functioning of the flap drive and gauge
9. Set oil temperature regulator flap to take-off position (cooler)
10. Remove rescue system securing pin from emergency handle
11. Open fuel valve

7.2 Starting the Engine

NEVER start the engine without being in the cabin, at the controls with the doors closed and locked. Now switch on the master switch, the ACL and ensure that the propeller area is clear.

Starting a cold engine:

1. Pull the throttle lever back to the idle position
2. Pull out choke lever
3. Switch on electric fuel pump (if fitted)
4. Turn the key clockwise to the "Start" position and hold until the engine has started. Do not hold the key in that position for more than 10 seconds, in order to avoid overheating the starter.

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REMOS GX

8 Aircraft Ground Handling and Service

Rev. 01 Amdt. 1 – 01-30-2009

8.8 Connecting folded Wings to Fuselage

1. Withdraw the main wing securing bolt from the wing and place it nearby. Ensure that the bolt stays clean until remounted.
2. Remove the wing support aid bracket while a second person is supporting the wing at the wing tip.
3. Now the second person at the wing tip moves the wing slowly forward while securing that the wing does not spin around its axis. The weight of the wing is supported by its strut, therefore, the wing must never be lifted or pushed on top.
4. When the wing has reached its forward position, the person at the fuselage position has to rotate the wing to align both connection latches. Care has to be taken, that the surface of the wing is not damaged by the fuselage connecting latches.
5. When the connection latches between the fuselage and wing are aligned, the wing must be lifted by the person at the wing tip. The person at the fuselage must ensure that flap drive connection fits correctly into the bushing on the fuselage.
6. If all latches have engaged and the wing fits properly to the fuselage, the main bolt can be pushed into its support tube. To install the main bolt correctly, please use the special installation tool which comes with the aircraft. Now secure the bolt with the securing pin. The person at the wing tip can now release the pressure supporting the wing tip.

7. Inside the cabin, the pushrod quick fasteners **MUST** properly be connected and secured.

Insecurely connection, improper operation of control surfaces or insecure locked fasteners will lead to loss of control of the aircraft!! When in doubt contact your local REMOS dealer or service center.

8. Proceed in identical order with the second wing.

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2b. INSTRUCTIONS: If you are an owner of a REMOS G3/600, cut the following text from a color print-out of this AD and make an appendix to your POH of it.



Appendix – Preflight Check

02-25-2009

Checks outside the aircraft

1. Before moving the aircraft drain possible water from the fuel tank, using the drain valve
2. Check engine oil level (between 1/2 and 1/4 of marking)*
3. Check level of engine coolant (between min. and max. marking)
4. Check proper condition of engine mounting
5. Check mounting and condition of the exhaust system
6. Check all water hoses and hose connections
7. Check that the cowling is closed and properly secured
8. Check propeller for damage and wear
9. Check gear and wheels/tires for damage, wear and correct air pressure
10. Check wings and control surfaces for damage
11. Check wing main bolts, struts and stabilizer for damage

12. Check all control surfaces and connections for proper operation
13. Check for free and full travel of all control surfaces
14. Check elevator quick-fastener for secure locking

Insecure connection, improper operation of control surfaces or insecure locked fasteners will lead to loss of control of the aircraft!!

15. Check pitot tube, static ports and hoses for damage and dirt
16. Check fuel level and tank filler cap

* Please refer to the Rotax engine operators manual, latest issue, for detailed information!

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Appendix – Preflight Check

02-25-2009

Checks inside the aircraft

1. Check aileron quick-fasteners for secure locking

Insecure connection, improper operation of control surfaces or insecure locked fasteners will lead to loss of control of the aircraft!!

2. Check fuel level
3. Check mounting of rescue system
4. Check that both seats are properly secured in position
5. Close and lock both doors
6. Buckle up
7. Set parking brake
8. Check proper functioning of the flap drive and gauge
9. Set oil temperature regulator flap to take-off position (cooler)
10. Remove rescue system securing pin from emergency handle
11. Open fuel valve

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Appendix – Rigging

02-25-2009

Connecting folded Wings to Fuselage

1. Withdraw the main wing securing bolt from the wing and place it nearby. Ensure that the bolt stays clean until remounted.
2. Remove the wing support aid bracket while a second person is supporting the wing at the wing tip.
3. Now the second person at the wing tip moves the wing slowly forward while securing that the wing does not spin around its axis. The weight of the wing is supported by its strut, therefore, the wing must never be lifted or pushed on top.
4. When the wing has reached its forward position, the person at the fuselage position has to rotate the wing to align both connection latches. Care has to be taken, that the surface of the wing is not damaged by the fuselage connecting latches.
5. When the connection latches between the fuselage and wing are aligned, the wing must be lifted by the person at the wing tip. The person at the fuselage must ensure that flap drive connection fits correctly into the bushing on the fuselage.
6. If all latches have engaged and the wing fits properly to the fuselage, the main bolt can be pushed into its support tube. To install the main bolt correctly, please use the special installation tool which comes with the aircraft. Now secure the bolt with the securing pin. The person at the wing tip can now release the pressure supporting the wing tip.

7. Inside the cabin, the pushrod quick fasteners **MUST** properly be connected and secured.

Insecurely connection, improper operation of control surfaces or insecure locked fasteners will lead to loss of control of the aircraft!! When in doubt contact your local REMOS dealer or service center.

8. Proceed in identical order with the second wing.

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3. Instructions:

Pick the placards from the attached placard-sheet and stick them onto the aircraft on locations described further on. Before applying the placards clean the surface of the aircraft with a mild, solvent-free cleaner.

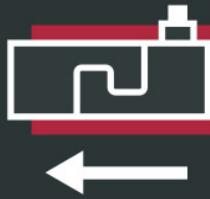
Nr. 46

Aerobatics, IMC-Flights, Spins - PROHIBITED!

above flight instruments

Nr. 76

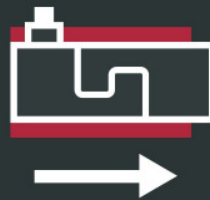
**Connect & Secure
Quick Fastener**



inside the cabin, right of the opening in the fuselage for carry through of the aileron quick fastener of the left aileron pushrod

Nr. 77

**Connect & Secure
Quick Fastener**



inside the cabin, left of the opening in the fuselage for carry through of the aileron quick fastener of the right aileron pushrod

Nr. 78

CHECK: Flight System Control & Three Quick Fasteners

instead of original placard stating „aerobatics, IMC-flights, spins – prohibited!“

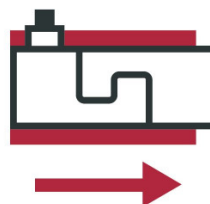
Nr. 79

← Check Three ↑ Quick Fasteners →

in the middle of the aileron pushrod underneath the cabin roof

Nr. 80

**Connect & Secure
Quick Fastener**



outside the fuselage left of opening in the fuselage for carry through of the aileron quick fastener of the left aileron pushrod, accessible when having the wings folded

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Nr. 81



outside the fuselage right of opening in the fuselage for carry through of the aileron quick fastener of the right aileron pushrod, accessible when having the wings folded

Nr. 82



on the top surface in the middle of the fixed part of the stabilizer, in the region of the quick connector underneath the tail cone

Nr. 85



on the top surface in the middle of the moving part of the stabilizer

REMOS wishes you safe and fun flights!

Always check your aircraft before you fly!

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Figure 1a – port aileron quick-fastener, not connected and secured

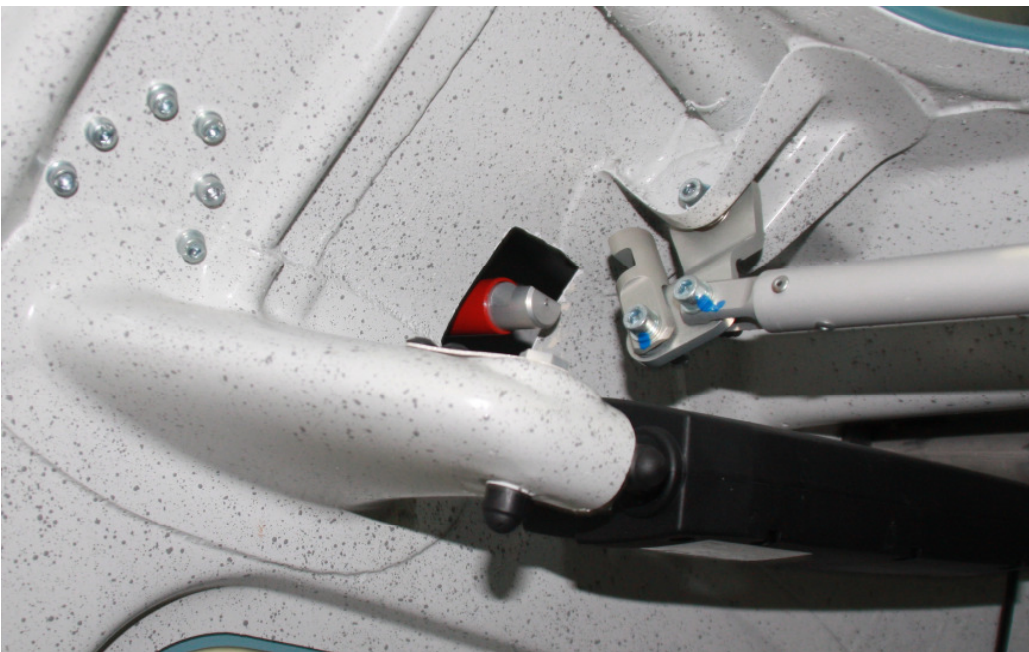


Figure 1b – starboard aileron quick-fastener, not connected and secured

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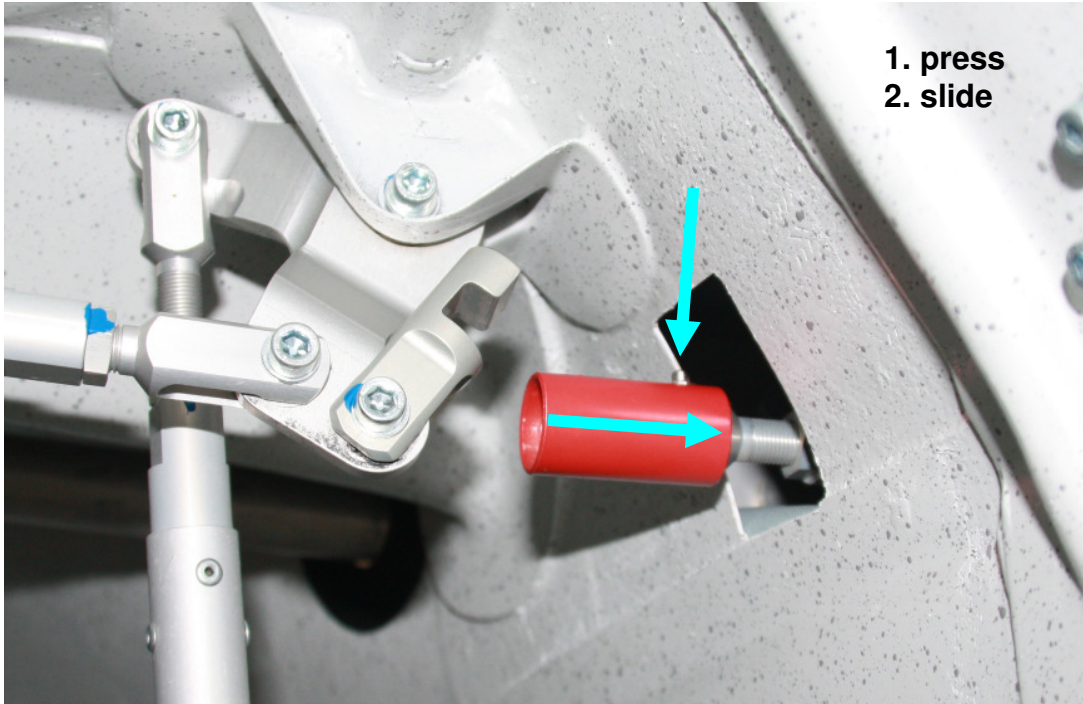


Figure 2a – release quick- fastener



Figure 2b – opened quick- fastener

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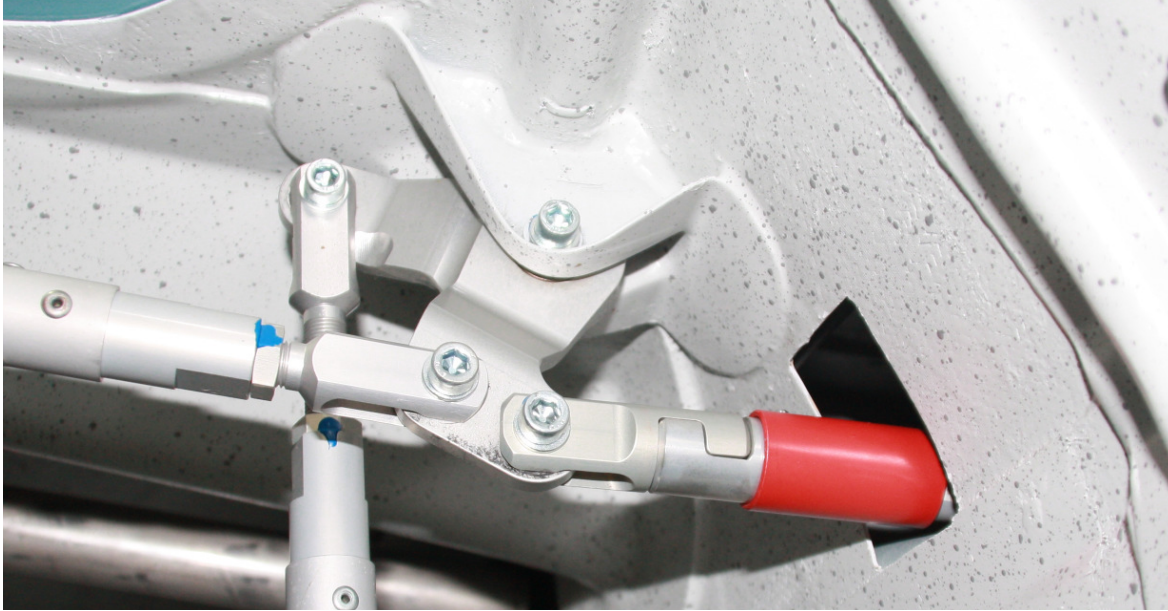


Figure 3 – hooking together of connecting devices

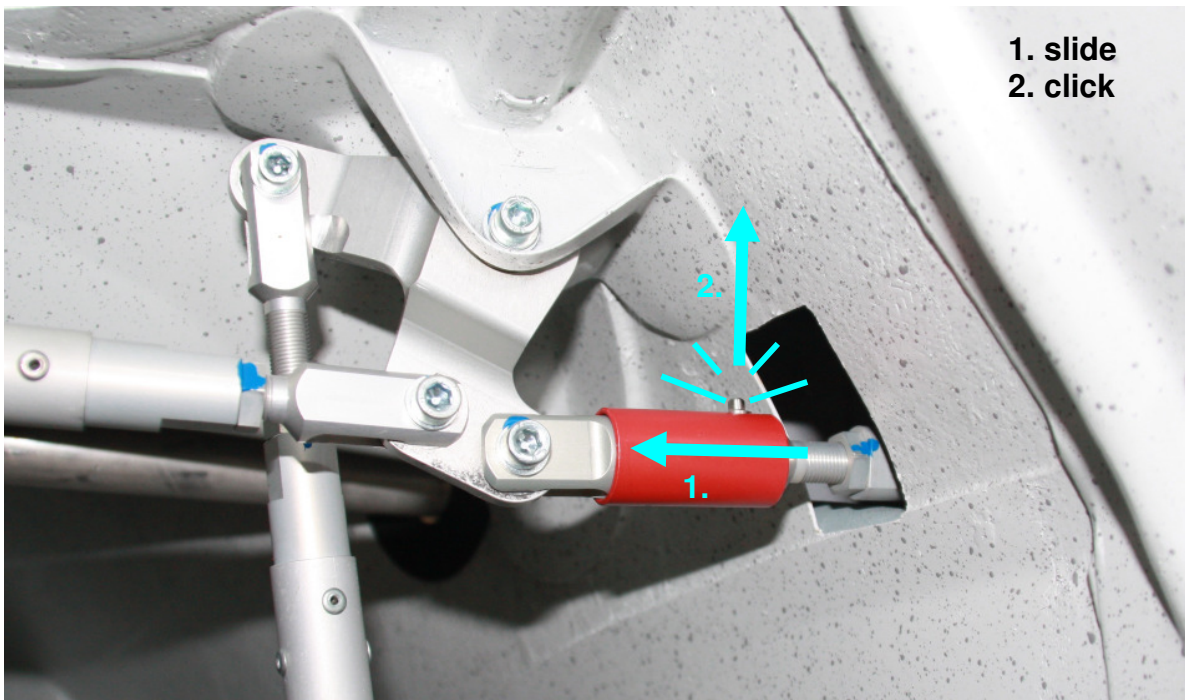


Figure 4 – locking of quick-fastener

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Figure 5a – secured quick-fastener, correct position of securing pin



Figure 5b – insecure quick-fastener, wrong position of securing pin

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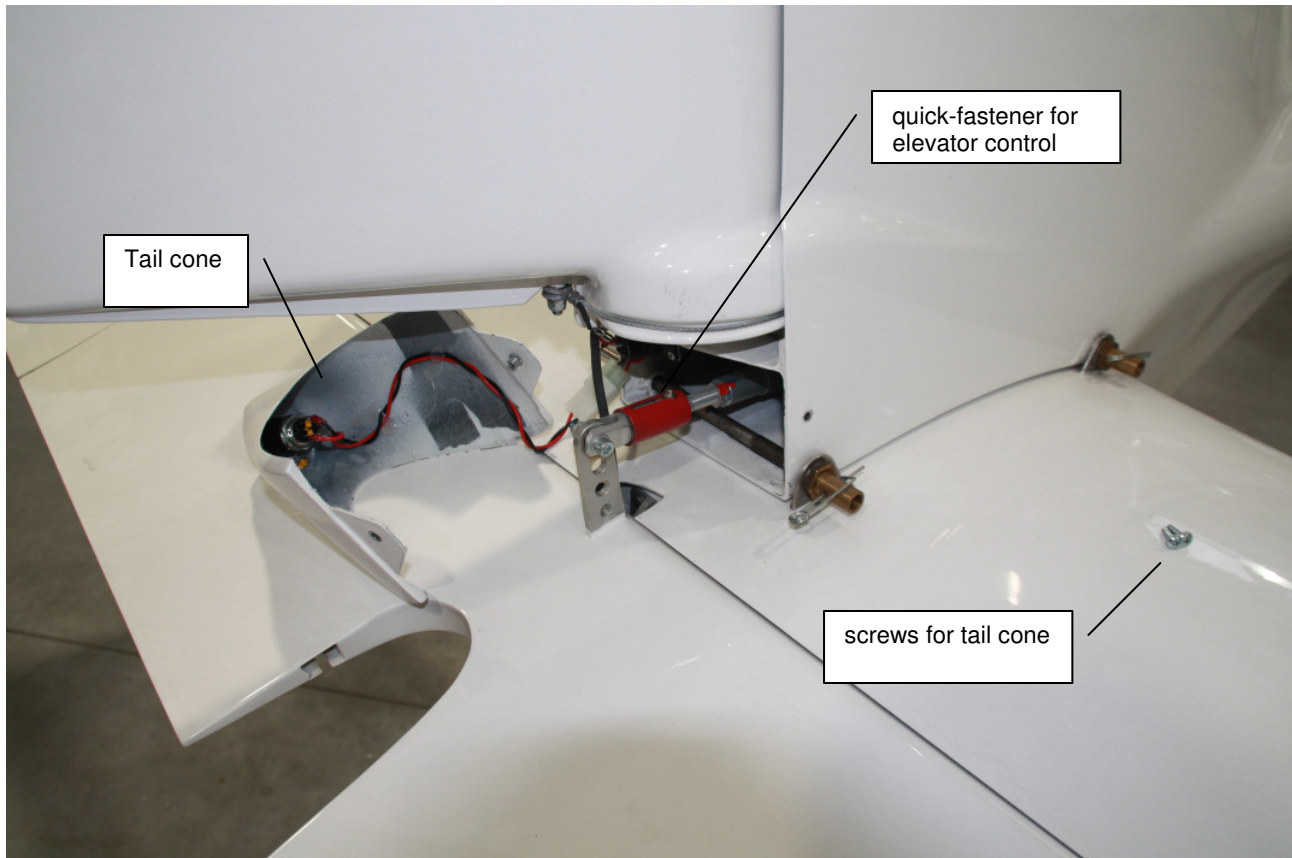


Figure 6 – elevator quick-fastener