



2141 ICON Way, Vacaville, CA 95688 - Tel: 707.564.4000 – www.iconaircraft.com

SERVICE BULLETIN

SB-090817 REV E

DATE ISSUED: 4/11/2018
DATE EFFECTIVE: 4/11/2018
SUPERSEDES NOTICE: SB-090817 Rev D
SUBJECT: Lower Roll Control cable wear at wing fold socket
AIRCRAFT AFFECTED: **MODEL:** ICON A5
S/N: All
REQUIRED ACTION: 1) Inspect lower roll control cable at the socket and the inboard rod end of the inboard aileron pushrod for indications of wear.
a. If there **is** evidence of wear continue inspecting every 10 hours of flight time to the limits described and replace if necessary. See attached Log Entry table.
b. If there is **no** evidence of wear, there is no further action required with reference to this notice.

TIME OF COMPLIANCE: Prior to next flight

PURPOSE:

ICON is committed to designing, manufacturing, delivering, and supporting a high quality Light Sport Aircraft, providing a level of safety well beyond expectations. During routine maintenance of the aircraft, it was discovered that the lower roll control cable and inboard rod end on the inboard aileron control pushrod showed signs of excessive wear. The contact location is shown in the figures 1 and 2. On three aircraft, this condition has resulted in wear of the roll control cable beyond acceptable limits (figures 3 and 4). This Service Bulletin provides details on an initial inspection and, if required, a progressive inspection schedule along with instructions for repair if needed for Continued Airworthiness.

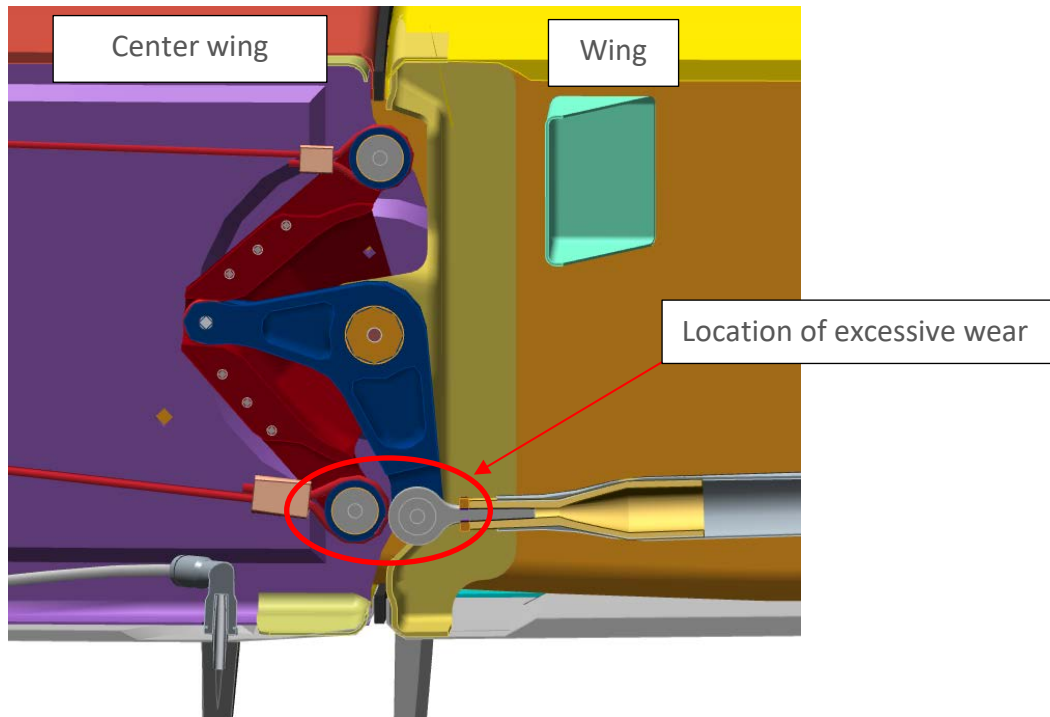
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Figure 1: Section view of the BL38 intersection at the roll socket to roll bell-crank interface.

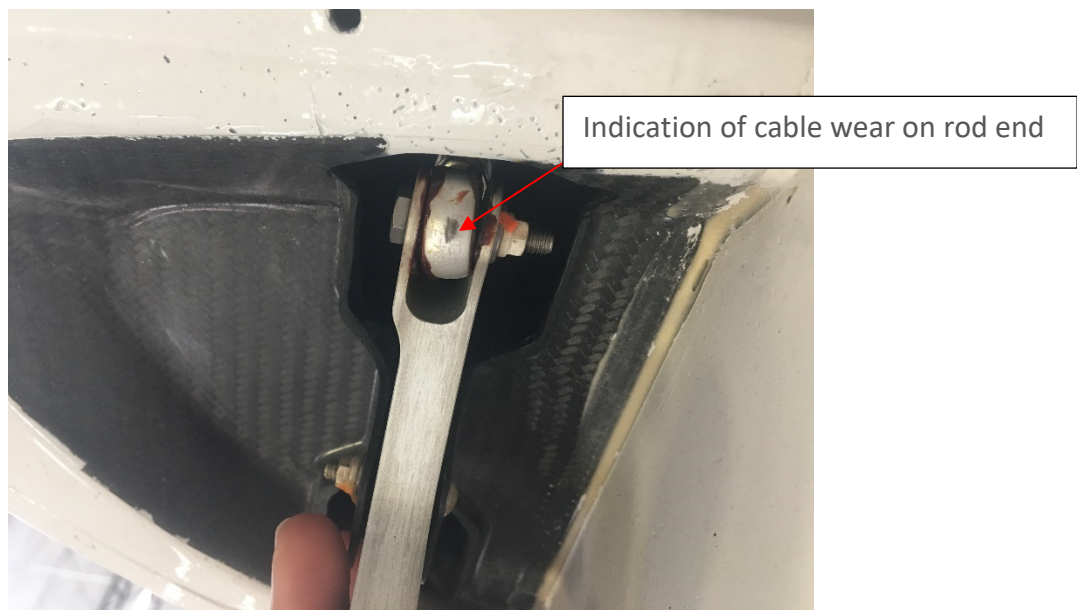


Figure 2: Indication of wear between the control cable and the inboard rod end of the inboard pushrod (wing side).

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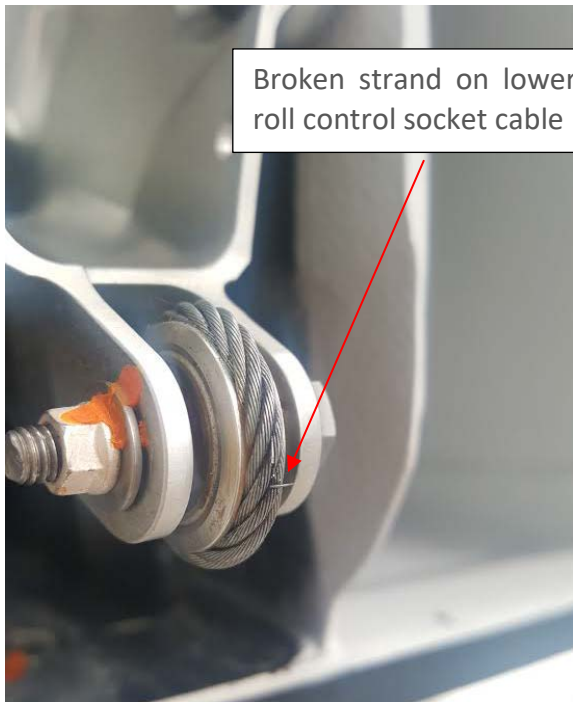


Figure 3: Broken strand of lower roll control cable

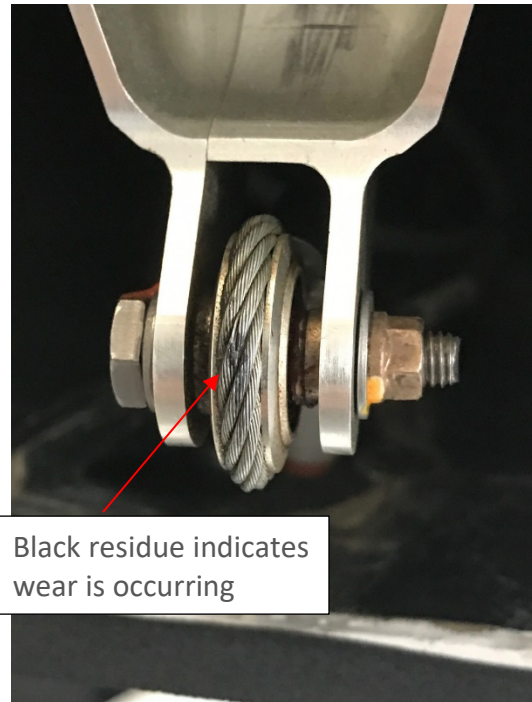


Figure 4: Black residue indicating wear

WARRANTY:

ICON Certified Service Providers: Please submit an invoice for warranty reimbursement of labor hours on completion. Please reference service bulletin number SB-090817.

1. Initial Inspection – 0.3-hour labor
2. Removal, replacement and rigging of lower roll control cable – 7.0-hour labor

PARTS LIST:

Order only parts that are required

Table 1: Parts List

Part Number	Description	QTY
ICA008437	CONTROL CABLE, ROLL, FUSELAGE	2
MS21256-1	CLIP, LOCKING, TURNBUCKLE	2
ICA012104	CLIP, LOCKING, TURNBUCKLE .042	2
MS25665-151	PIN, COTTER, CRES, .063X.500	12



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Inspection:

1. Fold each wing and visually inspect both the inboard rod end of the inboard pushrod on the wing and the lower roll control cable terminal at the bottom of the roll socket at the wing fold joint.
 - a. If there **is** evidence of wear on the rod end as shown in figure 3 or the roll control cable as shown in figure 4 carefully inspect the end of the roll control cable for any broken strands as shown in figure 3.
 - i. If there are any broken strands – Replace the cable following the instructions below.
 - ii. If there is wear but no broken strands – Continue to inspect the roll control cable for broken strands every 10 hours.
 - b. If there is **no** evidence of wear on the rod end or roll control cable – no further action with respect to this bulletin is required.

Roll cable Replacement instructions:

Special Tools:

1. Flight control cable tension meter
2. 3 x .1875" rig pins
3. 1 x .250" rig pin

Disassembly Instructions:

1. Disassemble the aircraft as required to permit accessibility, inspection, adjustment, maintenance, and repair in accordance with the latest release of the Aircraft Maintenance Manual, ICA000833.
 - a. This will require removal of:
 - i. Baggage floors,
 - ii. Both seat backs and seat bases
 - iii. Cockpit interior side panels
 - iv. Baggage side panels, and headliner
2. De-tension the affected lower flight control cable by removing safety wire or turnbuckle clips and loosen the turnbuckle located at the torque tube entrance shown in figure 5 below.

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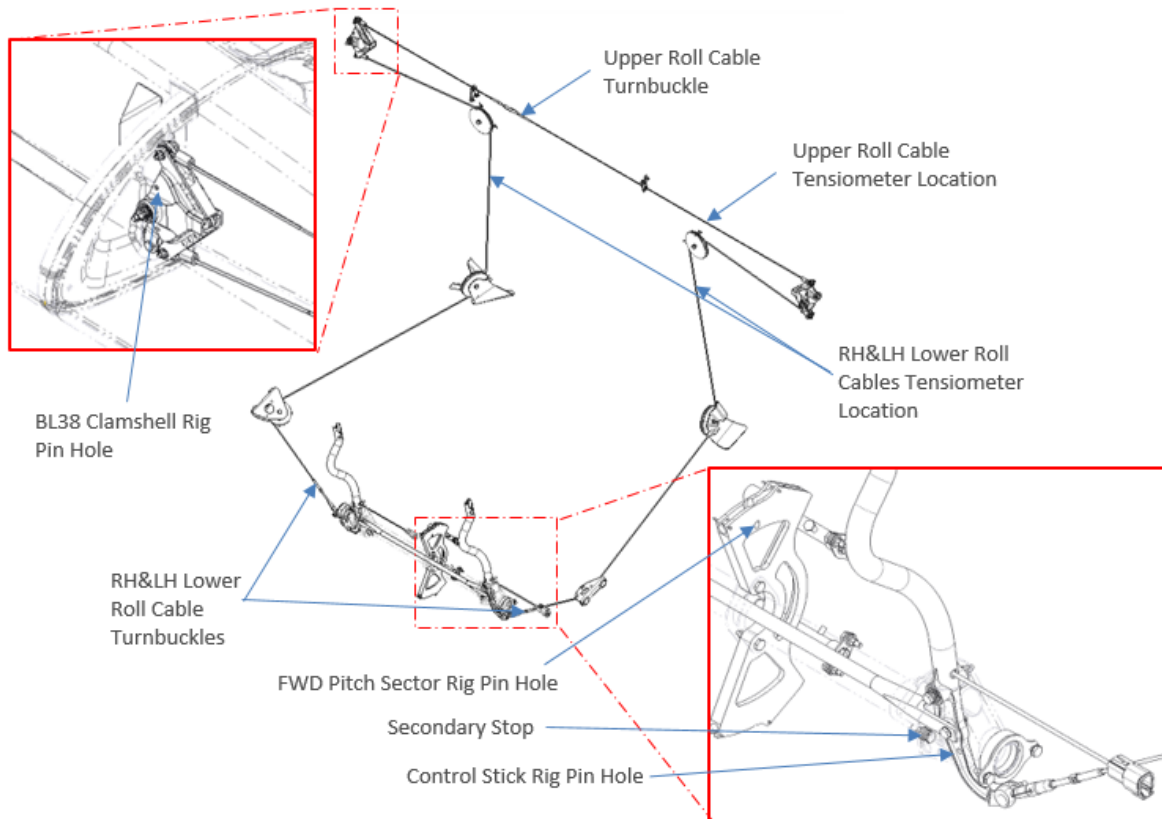


Figure 5: Roll control system overview

3. Disconnect the lower roll cable at the roll socket and at the turnbuckle at the stick. Ensure that cable is held while disconnecting the turnbuckle.

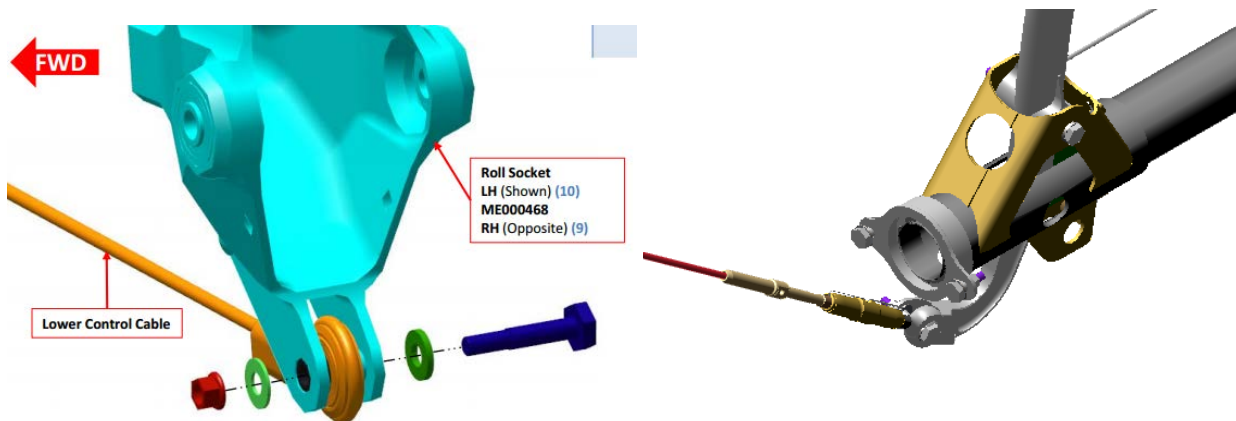


Figure 6: Roll Socket and torque tube connection points.

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4. There are two methods to remove the cable from the aircraft, either are acceptable:
 - a. Remove the three pulley pivot bolts, or;
 - b. Remove the two safety pins on each pulley bracket.
5. Remove the old lower roll cable from the aircraft.

Installation and Rigging Instructions:

1. Starting from the center wing loosely route new lower roll cable from the roll socket to the torque tube bearing. Use figure 5 for routing path.
2. If the roll pulleys were removed, reinstall the bolts as shown and torque to 48 in-lb., if the safety pins were removed re-install with a new MS25665-151 cotter pins.

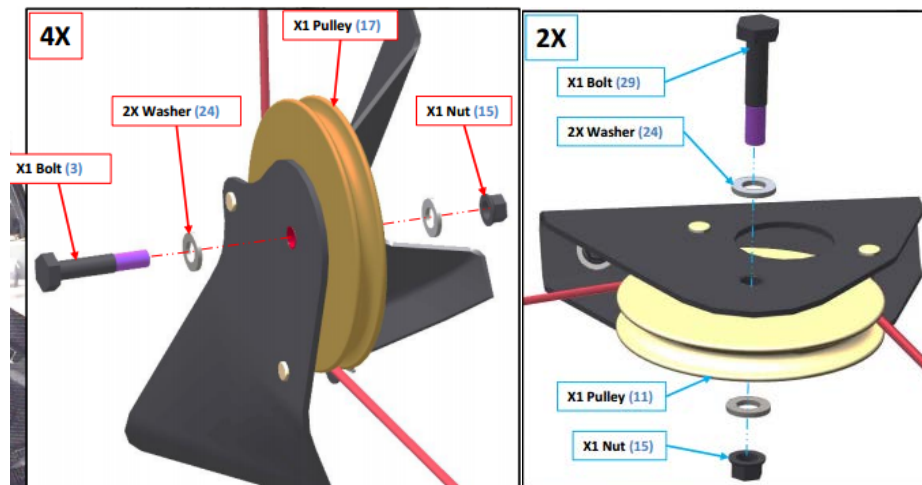


Figure 7: Roll pulley exploded views

3. Connect the lower roll cable to the lower roll socket attachment point as shown in figure 6 above. Torque hardware to 20 in-lb.
4. Connect the roll cable to the rod end still attached to the cockpit control stick at the same time as connecting to the roll cable such that the threads are balanced. Ensure that when tightening the turnbuckle that the cable is held as to not wind the cable. Do not fully tension the cable system during this step.
5. Install .1875" rig pins at both roll sockets, left side control stick base, and .250" rig pin in the center section pitch sector as shown in figure 5 above.
6. Slowly rotate the lower roll control cable turnbuckle (ensuring that the cable not wound up during the tension process) on the replaced cable until the cable tension is set at 25-30 lb. as measured in the locations shown in figure 5. Measure all three locations and adjust the other cables if they are not 25-30 lb. tension.
7. Once tensions are set, clip the wire to turnbuckle using MS21256-1 locking clip.



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8. Then clip rod end to turnbuckle using a ICA012104 locking clip or .041 safety wire to lock the turnbuckle in place.
9. Remove all four rig pins.
10. Unfold the wings and verify that the aileron rigging is within the specification in Table 2. If it doesn't meet the tolerances, contact ICON Aircraft for further instruction.
11. Reassemble the aircraft in accordance with the latest A5 maintenance manual.

Table 2: Aileron deflection angle specification

Aileron	
Nominal Position	Definition/Tolerance
0	In line with flap trailing edge $\pm .02''$ with flaps in the full up position
Trailing Edge Down	$15 \pm 2^\circ$ relative to 0 position
Trailing Edge Up	$25 \pm 2^\circ$ relative to 0 position

Task Specific Training:

The inspection task can be performed by the aircraft operator. Any disassembly and parts replacement are to be performed by an ICON Aircraft, Inc. trained mechanic with an A&P Certificate.

MAKE THE FOLLOWING LOGBOOK ENTRY:

“Service Bulletin (insert subject bulletin number) has been complied with and reported to ICON Aircraft Owner Support”.

If you need assistance relocating your A5 to your home base or temporary storage arrangements, please contact ICON Aircraft and ask for Customer Service and Support.

If you are no longer in possession of this aircraft, please forward this information to the present owner/operator and notify ICON Aircraft, Owners Center at:

ICON Aircraft
 2141 ICON Way
 Vacaville, CA 95688
 (855) FLY-ICON or (707) 564-4000
support@iconaircraft.com

Please include the aircraft registration number, serial number, your name, and if known the contact information of the new owner/operator.



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SERVICE BULLETIN APPROVAL

Bret Davenport

Flight Sciences Manager

4/11/2018

NAME	TITLE	DATE