

RotorSport UK Ltd Service Bulletin (Permit)

Title: Calidus Control cable clamps		
SB-104 Iss1	Related documents Modification: MC-329 CCAR No.: None	Compliance Category: OPTIONAL or RECOMMENDED or MANDATORY
Applicability		
Aircraft type & model: Calidus	Aircraft serial Nos. affected: RSUK/CALS/any	
The maintenance manual to be referenced is this stated or subsequent issue.		RSUK0061 Iss6
<p>This form is the response from RotorSport UK Ltd either against a problem found in the product in service requiring a containment or rectification action, or as service information for aircraft modification incorporation. For help, contact RotorSport on 44(0)1588 505060, or email compliance@rotorsport.org.</p> <p>The technical content of this document is approved under the authority of the UK CAA Design Organisation Approval Ref: DAI/9917/06</p>		

Documentation (Service Bulletin Completion action)

- a) Entries within the aircraft logbooks, eg CAA BCAR A3-7 Authorised Person to certify that the work is completed by writing '*SB-104 Control cable clamps incorporated*' in the aircraft logbook white pages, and record the action in the pink pages entitled 'Aircraft Modifications'. Both entries must be signed by the CAA Authorised Person together with their CAA Authorisation number.
- b) Completion of an SB worksheet (attached). This must contain a PMR statement, and a final check item that no tools or equipment have been left within the aircraft.
- c) Type approval change application document is not required.
- d) Any other Permit Maintenance Release to Service form requirements.
- e) As a primary flying control has been disturbed dual-inspection of the installation is required.

Document approval signatures			
Engineering Manager	CVE (as required)	Chief Test Pilot (if flight performance or safety effect)	Head of Airworthiness
	Not required as MC-329 approved		

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Reason and overview of the Service Bulletin (cause of problem if known)

Under certain circumstances operating clearances in the push-pull control cables (used for pitch and roll control) can allow the transmission of rotor vibration to the control stick. Fitment of these clamps enables the clearance to be adjusted and the vibration reduced (See Fig 2).

The Calidus usually requires a clamp on the pitch cable only, and the text below reflects this

Manpower estimates

Accomplishment of this Service Bulletin requires the following personnel

- (i) A3-7 Authorised engineer
- (ii) Second A3-7 Authorised engineer or qualified gyroplane pilot (for duplicate inspection)

Estimated man-hours to complete the task as a stand-alone item are; 1 hour

Tooling required

Hand tools only

Weight and Balance Effects

Nominal weight increase 50g per clamp. Negligible effect on aircraft CG

Manuals affected

AMM RSUK0061 amended to recognise the purpose and adjustment of the clamps.

Previous Modifications that affect the SB

None

Accomplishment instructions (Action required to implement this bulletin):

Effective date of this SB is 01.12.15

There is no relevant MPD or other outside body documentation to be referenced.

Instructions

1. Ensure before fitment that the rotor head pitch and roll bolts are properly tightened for minimum free play and stick loads as per SB061.
2. Remove the rear seat cushion and the inspection cover in the rear seat base(Fig 1)
3. Pilot drill a hole through the seat base on the centre line approximately 80mm from the root of the rear bulkhead. Open-out to 12mm diameter to suit the blanking grommet.
4. Apply Loctite 243 to one screw and fit one clamp to the pitch control cable. (Use locking tweezers to hold the clamp in position so that the clamp is beneath the access hole and clear of contact with the body – see Figs 4 and 5)
5. Apply Loctite 243 to the second screw, attach to an allen key by means of a magnet and pass through the access hole into the clamp
6. Ensure clamps are fitted, and any cut cable ties replaced, such that the clamp components cannot rub or fret to the aircraft or other cables in the centre channel, or contact the aircraft body.
7. Tighten the screws equally to 1Nm.
8. By moving the control stick, establish that the free play in the cable has been reduced to a minimum consistent with free movement. Adjust the clamp screws as required
9. When operating movement is considered satisfactory attach a force gauge to the control stick just below the PTT-button and verify that the stick forces do not exceed the maximum allowable values:

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- In pitch moving aft 0.9kg, in pitch moving forward 2.1kg
 - In roll moving left or right 1.0kg
- Checking is easiest without the rotor fitted.
10. Replace the inspection cover and fit the blanking grommet
 11. Replace the seat cushion

Illustrations

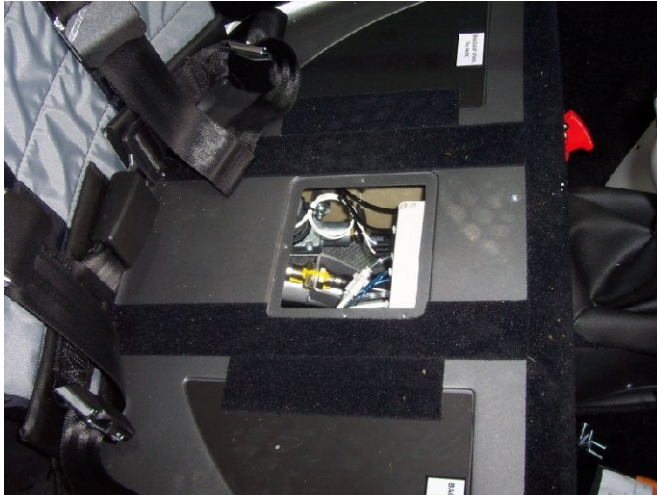


Fig 1 Inspection cover



Fig 2 Control cable clamp



Fig 3 Pitch control cable in centre tunnel



Fig 4 Positioning the pitch clamp



Fig 5 View aft showing clamp fitted underneath grommet

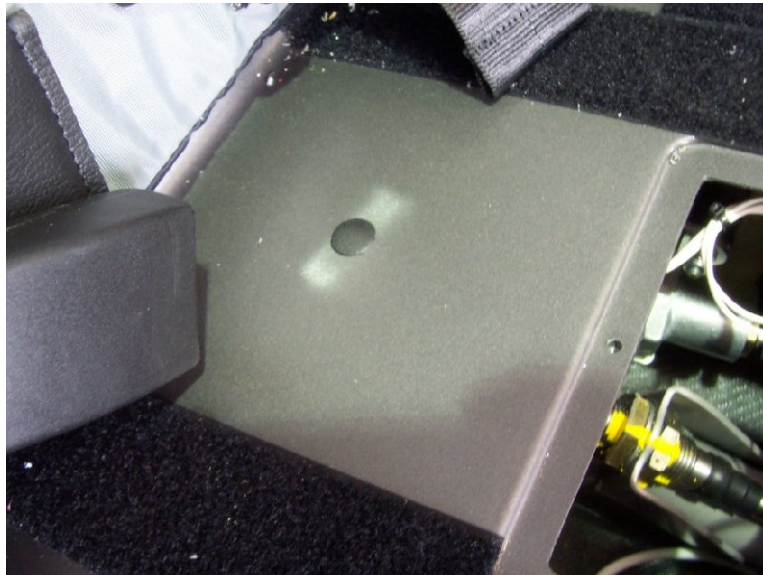


Fig 6 Access hole and blanking grommet

Material information (Parts required to be made to implement this service bulletin):

No parts are required to be made during embodiment

List of components (with purchasable part nos)

RSD7246 Clamp assembly
RSD5135 Blanking grommet

Interchangeability

Components are interchangeable if required

Parts disposition

- a) Disposal requirements – Not applicable
- b) Environmental hazards of parts containing hazardous materials – Not applicable
- c) Scrap requirements (e.g. mutilate scrapped items beyond use) – Not applicable

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Service Bulletin implementation Worksheet			
Aircraft type: Calidus	Serial no:	G-	
Worksheet completed by:		Document ref: SB-104 Iss 1	
Worksheet cross-checked by (if applicable):			
Purpose – record service bulletin implementation actions taken to inspect aircraft and return to service.			
Maintenance manual referred-to and issue level:			
Note: attach SB sheets to this document			
Task	Notes	Eng'r check/date	Inspector check/date
Remove inspection cover. Mark-out and drill access hole.			
Fit and adjust pitch clamp, ensure no contact with body or cover			
Verify stick forces within limits	Duplicate inspection required		
Ensure clamp is fitted, and any cut cable ties replaced, such that the clamp components cannot rub or fret to the aircraft or other cables in the centre channel.			
Replace cover, fit blanking grommet			
Replace seat cushion			

Customer acceptance:	
Name:	Aircraft hobbs meter reading:
Signature/date:	Confirm logbooks annotated:
Permit Maintenance Release:	
<i>'The work recorded above has been completed to my satisfaction and in that respect the aircraft is considered fit for flight. I confirm that no tools, equipment or debris have been left in the aircraft'</i>	
Engineer signature and date:	Location where work completed
CAA PMR Authorisation ref :	