RotorSport UK Ltd

Service Bulletin

This form is the response from RotorSport UK Ltd against a problem found in the product either in service or test, which requires an immediate action.
Upon completion of the action, the person responsible must enter details into the aircraft logbook/worksheet with the SB and/or CAA MPD (Mandatory Permit Directive) number and sign as normal.
If any problems with carrying out the work authorised, contact RSUK immediately on 44(0)1588 650769, or email info@rotorsport.org.

SB No.: 018 issue 1	CCAR No.: None	Classification: **OPTIONAL** or ~~**RECOMMENDED or MANDATORY**~~
Aircraft type & model (applicability) RotorSport UK MT-03and MTOsport series	Aircraft serial Nos. effected RSUK/MT-03/all RSUK/MTOsport all	

Problem description & cause of problem if known

The MTseries gyroplane pedal position is adjustable, by removing and refitting the pedal support tube and linkages. This SB defines how.

Effective date: 08.04.10

Problem solution:

The MT-03 has three optional pedal positions (short, medium, long) and the MTOsport four (short, medium, long, extra-long) Change of pedal position requires a matched set of

- Keel extension tube
- Front push-pull rod (2)
- Placard (to describe which pedal position is presently fitted)

Additionally on MTOsport aircraft, which are fitted with a nose locker as standard, it is necessary to relocate the locker's bulkhead forward some 50mm if the "long" or "extra-long" selection is made. As the bulkhead is accurately shaped to the inside profile of the enclosure a replacement bulkhead and bonding material will be required.

All parts are available from RSUK as complete kits. Note that MT-03 and MTOsport nose-gear systems are different, so component parts are not necessarily interchangeable. The kits are:

MT-03 short	RSD7182
MT-03 medium	RSD7183
MT-03 long	RSD7184
MTOsport short	RSD7185
MTOsport medium	RSD7186
MTOsport long	RSD7187
MTOsport extra-long	RSD7188

Note also that the replacement push-pull rods may be of a different construction (aluminium rod) to earlier rods (stainless-steel tube)

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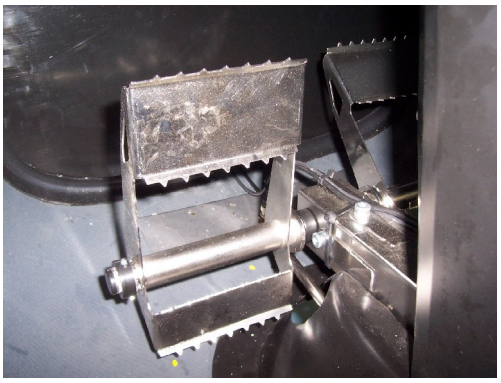
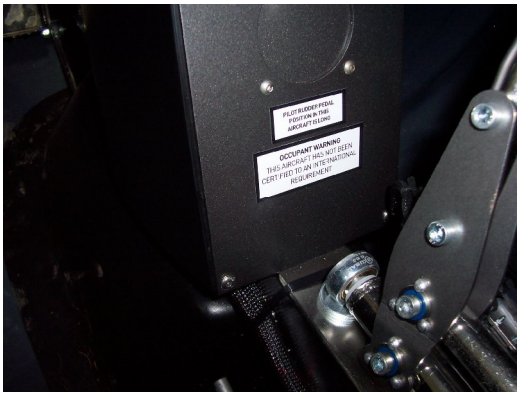


"Short" installation on an MTOS

"Long" installation on an MTOS



Placard on instrument panel (MTOS)

Placard on keel (MT-03)

Action required to implement this bulletin:
Aircraft:
To remove the existing installation:

1. Make the aircraft safe by removing the Master key and setting both mag switches to "off".
2. Working under the aircraft disconnect the forward push-pull rods from the nose-gear.
3. Working inside the aircraft disconnect the forward push-pull rods from the rudder pedals.
4. Remove the vertical bolt/nyloc from the keel extension tube.
5. Remove the horizontal bolt/nyloc from the keel extension tube.
6. Cut any Ty-raps retaining VHF antenna or transponder antenna cables to the keel tube.
7. With a plastic mallet gently tap the keel extension tube forwards until it can be removed.
8. Working on the bench remove the circlip retaining each rudder pedal to its pivot tubes and remove the pedals.
9. If a replacement bulkhead is to be fitted, using a scalpel cut the flexible sealant so that the bulkhead may be removed. Clean-up the interior of the enclosure with a suitable scraper and a low-odour solvent such as Amberklene LO30.

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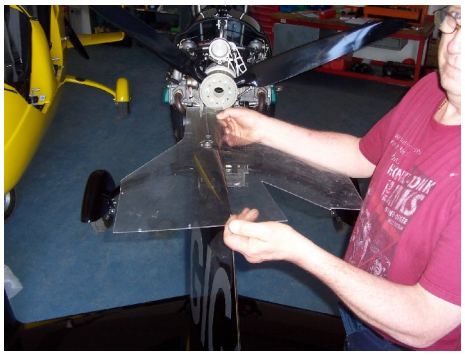
To fit the replacement installation

1. If a replacement bulkhead is to be fitted, offer this into place and gently push forward until it is square and trapped by the shape of the enclosure. If necessary use temporary wooden packing to hold the bulkhead in place. Using a low-odour solvent such as Amberklene LO30 thoroughly degrease the interface between the mating parts. When dry, use a mastic gun fitted with a cartridge of Sikaflex EBV to run a 6-8mm bead of mastic each side of the bulkhead.
2. Offer-up the rudder pedals to the pivot tubes of the new keel extension with the inner and outer plastic sleeves in place. Spot through the 3.2mm hole in the outer sleeve then remove and cross-drill the tubes and deburr.
3. Refit the rudder pedals with a smear of LM grease and fit new 3.2mm x 40 split-pins RSD6054 through the outer sleeves.
4. Fit the keel extension tube to the keel then fit the horizontal bolt/new nyloc and the vertical retaining bolt/new nyloc
5. Fit the new forward push-pull rods to the rudder pedals. Use new nyloc nuts and Loctite 243 on threads.
6. Connect the new forward push-pull rods to the nosegear. Use new nyloc nuts and Loctite 243 on threads.
7. Clamp a suitable metal plate/bar or substantial piece of wood across the rear rudder pedals when these are set in-line. Using a large protractor or template confirm that the resulting rudder offset is 7º to the right (MT-03) or 10º to the right (MTOS)

The rear rudder pedals clamped



Protractor to confirm rudder angle

8. Without disturbing the rear-seat pedals adjust the length of the forward push-pull rods so that the pedals are in-line and at an angle to the keel of 48º (MT-03) or 52º (MTOS) - both +/-3º. Use an inclinometer to measure these angles and ensure that its zero datum is set when in place on the keel, as shown below.
9. When satisfactory tighten securely the rod end locknuts and paintmark them. Note that there should be no more than 10mm of thread showing on the rod end beyond the locknut.
10. Position the antenna cable(s) in a strain-free situation clear of any moving parts and Ty-rap to the keel
11. Remove the clamps from the rear pedals and check for full-and free movement of the rudder/nosewheel system
12. Either amend the existing placard (using an indelible pen) or fit new placard to the instrument panel (MTOS) or keel (MT-03) to state the new pedal position

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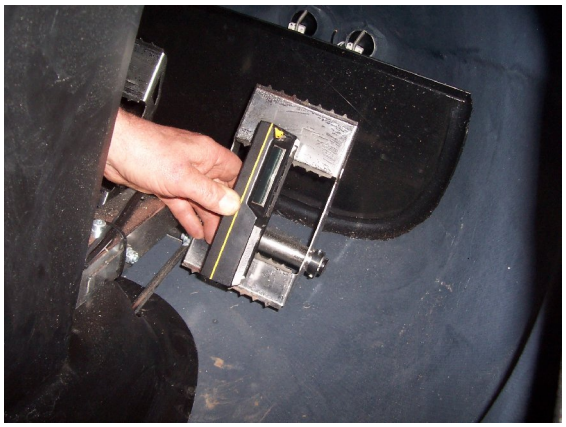
Setting the inclinometer zero



Measuring the rudder pedal angle

Effect on Pilots Handbook or Maintenance Manual?
No, other than to be noted in the next issue of the maintenance manual

Quality Inspection requirements after action:
Duplicate inspection required - Ensure all fastenings are secure. Ensure full-and-free control movement available and correct sense. Verify rudder offset angle.
Issue Permit Maintenance Release Certificate (use attached worksheet, which also records the check actions taken).
CAA BCAR A3-7 Authorised Person to certify that the work is completed by writing 'SB-018 front pedal position alteration incorporated as short/medium/long/extra-long (as required)' 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.

SB authorised by: (name, signature, and date of signature)

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Document completion date:	Engineering Manager	Chief Test Pilot (if flight performance or safety effect)	Structures (where required)
	16/4/2010	16/4/2010	15/04/2010

Issued to:	When	Issuer name	Signature
Internal			
CAA			

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Service Bulletin

Aircraft serial no. Registration G-	**Service Bulletin implementation Worksheet**	Date raised: Raised by:
Purpose – record service bulletin implementation actions taken to update aircraft and return to service.		Document reference: **SB-018**
Maintenance manual referred to and issue level/date (if applicable):		
Note; attach SB sheets to this document		

Task	Notes	Eng'r check/date	Inspector check/date
Note front pedal angle fitted			
Confirm rod end locknuts tight and note colour of paint mark used			
Note rudder angle after job completion, pedals straight			
Confirm action taken on placard (amended or replaced)			
Confirm 2 x spilt pins in place			
Confirm any other nuts/bolts loosened are retightened securely			
Confirm pedals do not foul with the locker bulkhead on extremes of travel			

Customer acceptance: Name: Signature/date:	Aircraft hobbs meter reading Confirm logbooks annotated:
Permit Maintenance Release: The work recorded above has been completed to my satisfaction and in that respect the aircraft is considered fit for flight.	
Engineer/Inspector signature Name: CAA Authorisation code :	Date of work Location where work completed