

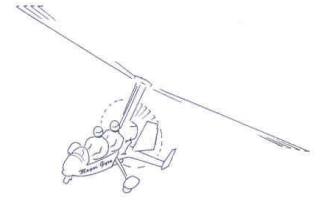
SERVICE BULLETIN – RECOMMENDED SB 014

Model:	M24C				
A/C Reg:	G-CGPB	G-CGYH	G-CGRY	G-CGRZ	G-CGVF
	G-YROR	G-YRAX	G-PLOP	G-CGTK	G-ORDW
A/C SN:	24105964	24116644	24106134	24106004	24116284
	24106034	24116194	24116204	24116214	24116274

Amendment Record					
Issue	Summary of Changes				Date
1	(Original issue)				27/10/11
Author	Date	Approved	Date	Approved	Date
Rob Littlewood		Dave Lunn		Rob Littlewood	

<p>SB TITLE – DOOR WARNING SYSTEM</p> <p>REASON (for Mod/Action/Inspection) In order to improve the status of the door locking on the M24C gyroplanes Magni have introduced a new warning system. The system has a dual method of indicating to the pilot if a door has been incorrectly closed and locked. A new red warning light has been introduced onto the right hand end of the existing warning light cluster. The light bezel is marked 'DOOR' to clarify the significance of illumination to the pilot. In addition the warning system inactivates the rotor tachometer until the doors have been correctly latched and locked. This system therefore denies the pilot a primary instrument used prior to take-off roll, and hence aims to ensure that all doors are correctly latched and locked prior to the gyroplane becoming airborne.</p> <p>COMPLIANCE (Include Date of Effectivity and Timescales for embodiment) This service bulletin is effective from 28/10/2011. The service bulletin has been classified as mandatory by the CAA and must be embodied before further flight. Compliance is mandatory and must be embodied by an A3-7 approved engineer.</p>
--

Prepared: R.S. Littlewood	Date: 27/10/11	Revised	Date:	Title: M24C Door Warning System	Service Bulletin No. SB 014
Checked: D.Lunn	28/10/11				
					Page 1 of 8
Magni Gyro UK Ltd, Rufforth Gyroport, Rufforth Airfield, Rufforth. North Yorks. YO23 3QA Phone 01904 705570					



SERVICE BULLETIN – RECOMMENDED SB 014

REFERENCE DOCUMENTS

Magni Gyro Ltd Drawing 726-20-24 – Door Warning System Electrical Schematic

OTHER PUBLICATIONS

None

TOOLING

- 20mm dia hole saw
- 7mm ratchet / spanners
- Loctite 222 threadlocker
- Screwdriver (Phillips head Size 00)
- 2.5mm hexagon Allen Key
- 20mm file

MATERIALS AVAILABILITY

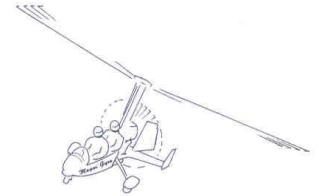
The following parts are immediately available from Magni UK.

- 2 Off Switch Brackets 720-08-24
- 2 Off Switch Lever Brackets 722-08-24
- 4 Off Switches 724-08-24
- 1 Off Red Warning Light 215-20-24
- Bulb 222-20-24
- Rotor Tachometer 723-20-24
- Wiring Loom 725-20-24
- 4 Off M4 x 12 Screws
- Tie-Wraps
- Tie-Wrap Bases

MAN HOURS

3

Prepared: R.S. Littlewood	Date: 27/10/11	Revised	Date:	Title: M24C Door Warning System	Service Bulletin No. SB 014
Checked: D.Lunn	Date: 28/10/11				
Magni Gyro UK Ltd, Rufforth Gyroport, Rufforth Airfield, Rufforth. North Yorks. YO23 3QA					
Phone 01904 705570					



SERVICE BULLETIN – RECOMMENDED SB 014

WEIGHT & BALANCE

No Change

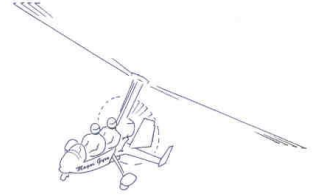
ELECTRICAL LOAD

0.26 amps

AUTHORISED PERSONNEL

The modification can only be embodied by Magni Gyro (CAA) A3-7 authorised engineers.

Prepared: R.S. Littlewood	Date: 27/10/11	Revised	Date:	Title: M24C Door Warning System	Service Bulletin No. SB 014
Checked: D.Lunn	28/10/11				Page 3 of 8
Magni Gyro UK Ltd, Rufforth Gyroport, Rufforth Airfield, Rufforth. North Yorks. Y023 3QA Phone 01904 705570					

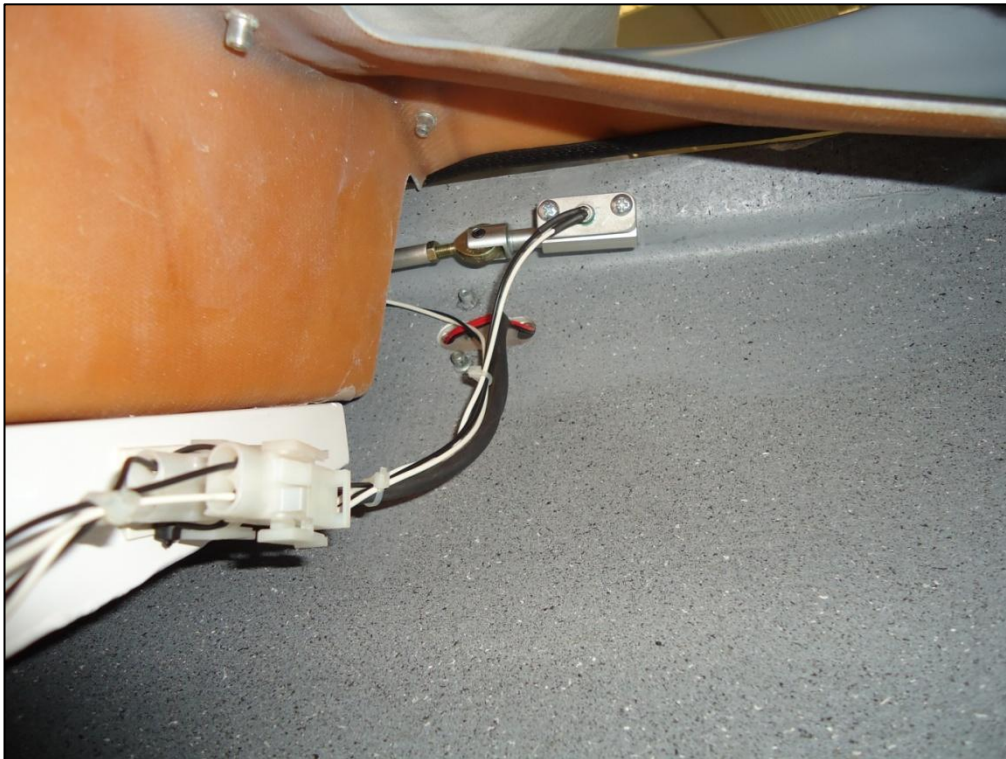


SERVICE BULLETIN – RECOMMENDED SB 014

ACCOMPLISHMENT INSTRUCTIONS

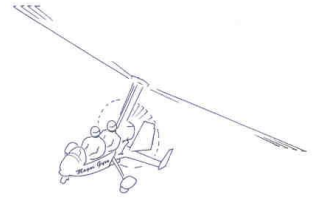
Attachment of Aft Door Pin Detection Switch

- 1) Remove seat from aircraft to gain access to aft door latching blocks.
- 2) Apply Loctite 222 to thread of switch and screw switch into support bracket (720-08-24) until switch shoulder face is flush against block face.
- 3) Screw support bracket to face of the existing latch block using supplied M4 x 12 screws. (Loctite should be used on the two screws prior to tightening)
- 4) Repeat steps 2 & 3 for second aft latch block.
- 5) Connect indicated wiring loom connections to aft switches and run loom laterally along the aft seat support members. Use tie-wrap bases to secure new loom to the lateral seat support members.
- 6) Run new loom forward along existing loom routing. Tie-wrap new loom to existing wiring loom every 6 inches and ensure wiring remains clear of control movements.



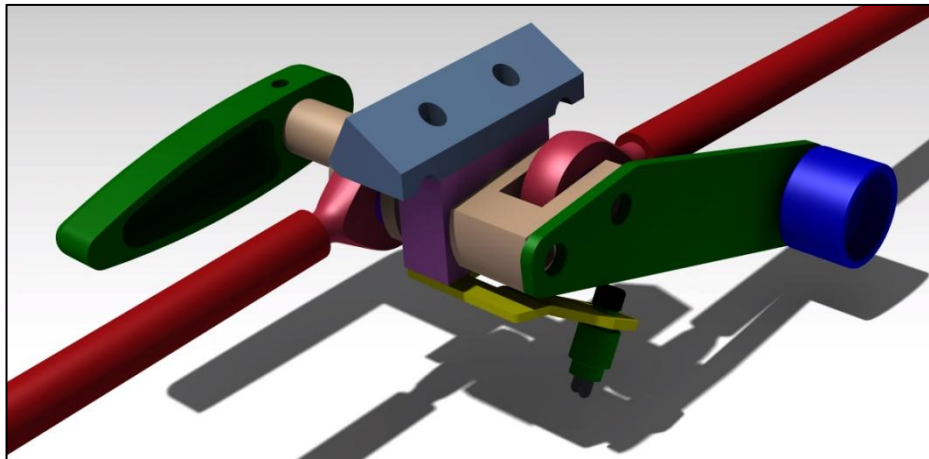
Attachment of Locking Handle Detection Switch

Prepared: R.S. Littlewood	Date: 27/10/11	Revised	Date:	Title: M24C Door Warning System	Service Bulletin No. SB 014
Checked: D.Lunn	Date: 28/10/11				
				Page 4 of 8	
Magni Gyro UK Ltd, Rufforth Gyroport, Rufforth Airfield, Rufforth. North Yorks. Y023 3QA					
Phone 01904 705570					

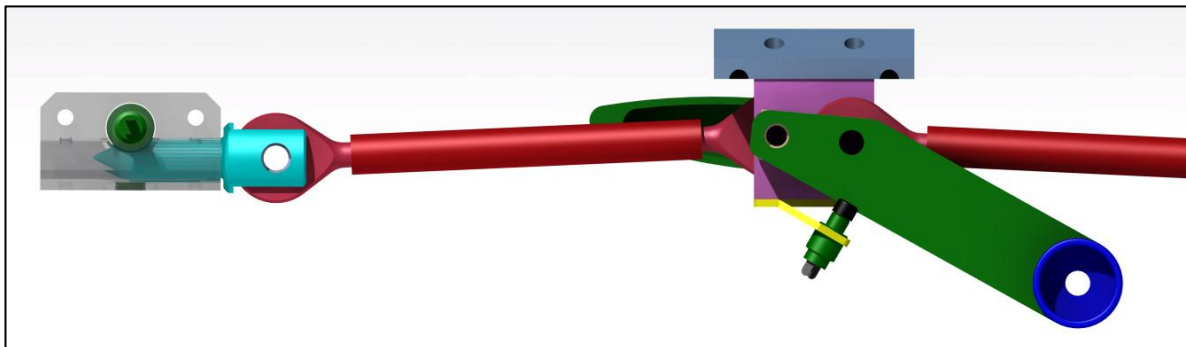


SERVICE BULLETIN – RECOMMENDED SB 014

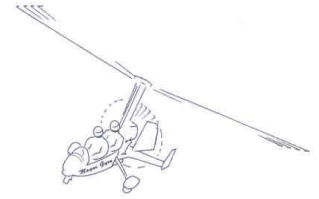
- 1) Secure switch to lever bracket (722-08-24) using manufacturer supplied collar nut. Use Loctite 222 to secure nut against movement.
- 2) Remove screws attaching the two PVC support blocks to permit same screws to attach lever bracket to bottom face of the lower PVC block.



- 3) Repeat steps 1 & 2 above for second handle detection switch.
- 4) Connect wiring leads from previously routed loom. Secure wires to fuselage using tie-wrap bases. Ensure all cables are secured away from control mechanisms.
- 5) Confirm switch is fully depressed when handle is placed in over-centre 'locked' position.



Prepared: R.S. Littlewood	Date: 27/10/11	Revised	Date:	Title: M24C Door Warning System	Service Bulletin No. SB 014
Checked: D.Lunn	28/10/11				
Magni Gyro UK Ltd, Rufforth Gyroport, Rufforth Airfield, Rufforth. North Yorks. Y023 3QA					
Phone 01904 705570					



SERVICE BULLETIN – RECOMMENDED SB 014



Figure 1 - Correctly Located Detection Switch

- 6) Route remaining loom forward along existing wiring loom to aft of instrument panel. Tie-wrap to existing loom every six inches.

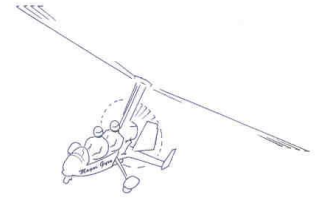
Replace Existing Rotor Tachometer

- 1) Remove existing rotor rpm gauge from instrument panel
- 2) Pass new loom connection lead up to hole in instrument panel.
- 3) Connect appropriate lead to back of new rotor tachometer (723-20-24)
- 4) Secure new tachometer to instrument panel

Install New Warning Light

- 1) Remove Fire Warning Light from instrument panel to prevent damage.
- 2) Cut hole on end of the existing cluster set and dress square (20mm)
- 3) Reinstall the fire warning light
- 4) Pass final connection from new loom through hole and connect to new door warning light
- 5) Install light into instrument panel (ensure word 'DOORS' is in correct orientation)

Prepared: R.S. Littlewood	Date: 27/10/11	Revised	Date:	Title: M24C Door Warning System	Service Bulletin No. SB 014
Checked: D.Lunn	28/10/11				
				Page 6 of 8	
Magni Gyro UK Ltd, Rufforth Gyroport, Rufforth Airfield, Rufforth. North Yorks. Y023 3QA Phone 01904 705570					



SERVICE BULLETIN – RECOMMENDED SB 014



Figure 2 - Central Instrument Panel with New Warning Light Installed

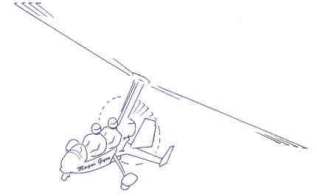
Perform functional tests, in the exact sequence, defined below.

Once correct functioning has been confirmed of the system the seat may be re-installed. Care must be taken not to damage the wiring looms.

Full and free movements of the control system should then be performed.

After reinstallation of the seat the functional tests should be repeated to verify that the system has not been disturbed.

Prepared: R.S. Littlewood	Date: 27/10/11	Revised	Date:	Title: M24C Door Warning System	Service Bulletin No. SB 014
Checked: D.Lunn	28/10/11				
					Page 7 of 8
Magni Gyro UK Ltd, Rufforth Gyroport, Rufforth Airfield, Rufforth. North Yorks. YO23 3QA Phone 01904 705570					



SERVICE BULLETIN – RECOMMENDED SB 014

FUNCTIONAL CHECKS

The functioning of the door locking system should be confirmed by the following tests.

- With both doors in the 'OPEN' position and the MASTER switch 'ON' close the pilot's door and then move the pilots handle to the locked position. Then move the co-pilot's handle to the locked position. The warning light should remain illuminated and the rotor rpm gauge should remain inactive because the co-pilots door is open.
- Move the co-pilot's handle to the open position; move the pilot's handle to the open position and open the pilot's door. Close the co-pilot's door and move the co-pilot's handle to the locked position; then move the pilot's handle to the locked position. Again the warning light should remain illuminated and the rotor rpm gauge should remain inactive because the pilot's door is open.
- Move the pilot's handle to the open position; close the pilot's door and move the pilot's handle into the locked position. The warning light should extinguish and the rotor rpm gauge becomes active as all doors and handles are now closed and locked. **Open the co-pilot's handle to confirm that the light becomes illuminated once more and the rotor rpm gauge de-activates.**

CONTINUED AIRWORTHINESS

The actions in this service bulletin must be completed by a CAA A3-7 approved engineer Update the aircraft logbook to reflect the work carried out, including reference to the Service Bulletin number. The person undertaking the modifications must sign the aircraft logbook and include their CAA authorisation number.

INFORMATION / INSTRUCTIONS PREPARED BY SUB-CONTRACTORS / VENDORS

None

CHANGES TO PUBLICATIONS

Introduction of the door warning system is covered in Magni Gyro UK M24C Flight Manual 025-00-24C - Issue F and M24C Maintenance Manual 26-00-24C – Issue D

Prepared: R.S. Littlewood	Date: 27/10/11	Revised	Date:	Title: M24C Door Warning System	Service Bulletin No. SB 014
Checked: D.Lunn	28/10/11				Page 8 of 8
Magni Gyro UK Ltd, Rufforth Gyroport, Rufforth Airfield, Rufforth. North Yorks. Y023 3QA Phone 01904 705570					