

TECHNISCHE MITTEILUNG VTM 869-24 SERVICE BULLETIN NO. MSB 869-24

I. TECHNISCHE DETAILS / TECHNICAL DETAILS

1.1 Kategorie / Category:

Vorgeschrieben / Mandatory

1.2 Betroffene Flugzeuge / Aircraft affected:

TWIN III SL alle Werk-Nr. / all S/N

1.3 Dringlichkeit / Time of Compliance:

Punkt / Item 1.8.1: Nach Erhalt der Technischen Mitteilung
After receipt of this Service Bulletin

1.4 Gegenstand / Subject:

ATA - Code: Nicht zutreffend / N/A
Information über Revisionsstand von Flughandbuch und Wartungshandbuch
Information about revision status of Flight Manual and Maintenance Manual

1.5 Vorgang / Reason:

Diese Technische Mitteilung informiert über den gegenwärtigen Revisionstand von Flug- und Wartungshandbuch TWIN III SL (Musterzulassungsschein 869). Zukünftige Handbuchänderungen werden unter der TM-Nummer 869-24 mit einer fortlaufenden /-Nr. veröffentlicht.

This Service Bulletin informs about the current revision status of the Flight Manual / Maintenance Manual of the TWIN III SL (Type Certification Data Sheet TCDS 869). Future documentation changes will be published under this SB 869-24, followed by /sequence number.

1.6 Mitgeltende Unterlagen / Concurrent documents:

ROTAX SB 505-010, neueste Ausgabe / latest issue <http://www.rotax-aircraft-engines.com>

TWIN III SL

1.7 Genehmigungsvermerk / Approval Note:

Die technischen Informationen, die in diesem Dokument enthalten sind, wurden im Rahmen der Befugnisse durch die EASA Part 21J - Genehmigung als Entwicklungsbetrieb Nr. EASA.21J.030. genehmigt

The technical information contained in this document has been approved under the authority of EASA Part 21J Design Organization Approval No. EASA.21J.030.

1.8 Maßnahmen/Anweisungen / Accomplishment/Instructions

1.8.1 Überprüfung des Flug- und Wartungshandbuches auf korrekten Ausgabe- und Revisionsstand nach Maßgabe der folgenden Übersicht:

Check aircraft documentation for correct issue and revision status in accordance with the list below:

TWIN III SL	Deutsche Ausgabe	English Issue
Flughandbuch Flight Manual	Ausgabe 1, Rev. 5, 15. Dezember 2006	Issue 1, Rev. 5, 15. December 2006
Wartungshandbuch Maintenance Manual	Ausgabe 1, Rev. 10, 15. Dezember 2006	Issue 1, Rev. 10, 15. December 2006

Tab. 1

1.9 Wiederkehrende Maßnahmen / Repetitive Actions

Keine / N/A

1.10 Masse und Schwerpunktlage / Mass (Weight) and CG:

nicht betroffen / N/A

II. PLANUNGSINFORMATION / PLANNING INFORMATION

2.1 Material & Verfügbarkeit / Material & Availability:

Die betroffenen Austauschseiten für die letzte Revision liegen der Technischen Mitteilung bei.

The exchange pages for the last revision are attached to the Service Bulletin.

TWIN III SL

Grob Aerospace GmbH; Lettenbachstrasse 9; 86874 Tussenhausen-Mattsies

2.2 Sonderwerkzeug / Special Tools:

Nicht betroffen / N/A

2.3 Arbeitsaufwand / Labour costs:

Ca. 0,1 Stunden / approx. 0,1 hour

2.4 Referenzunterlagen / Reference documents:

Siehe Tabelle 1 / see table 1

2.5 Vergütung / Credit:

Nicht betroffen / N/A

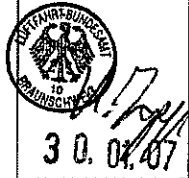
III.HINWEISE / REMARKS

- 3.1** Der notwendige Austausch von Handbuchseiten ist auf der Seite "Berichtigungsstand" einzutragen.
The necessary change of manual pages shall be logged on the "Record of Revisions" page.
- 3.2** Sollten Sie Ihr Flugzeug in der Zwischenzeit verkauft haben, bitten wir Sie, uns Namen und Anschrift des neuen Besitzers, sowie Werknummer des Flugzeugs mitzuteilen.
In case you have sold your aircraft in the meantime, please kindly pass this information on to the new owner and forward his address and aircraft S/N to us.
- 3.3** Bei weiteren Fragen wenden Sie sich bitte an:
For questions and assistance please contact:

Michael Reinhold	Customer Service,
Phone:	+49 (08268) 998 105
fax:	+49 (08268) 998 200
e-mail:	productsupport@grob-aerospace.de

TWIN III SL

Record of Revisions:

Rev. No.	Section	Pages	Date of Issue	Approval	Date of Approval	Incorporated	Signature
4	0 9	0.2A 0.3 0.6 9.1 9.2 9.3	22.02.93	TM 869-14	10.03.93		
5	0 4	0.2A 0.3 0.4 4.9 4.10	15.12.06	ROTAX SB-505-010			

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(7) R/H Wing

- See item (3)

(8) Flight Controls Check

The flight controls check is undertaken by two people as follows:

One person operates the controls from the front seat while the second holds the corresponding control surface to prevent it from moving. This must be done carefully and without the use of force. Only check the controls for undue play in the control linkage. After releasing the control surfaces, check for freedom of movement up to full deflection.

(9) Instrument Functional Check

The instrument functional check is undertaken by two people as follows:

One person carefully blows into the associated ports of the probes while the second checks the instruments.

- Pitot tube (near nose hook): Air speed indicators must indicate positive values
- TEK-probe: Vertical speed indicators must indicate a climb

(10) Checks on the half-extended engine

- In addition to any inspection listed in this section, also consult engine manual ROTAX 505A and ROTAX Service Bulletin 505-010 (latest issue) for additional information.
- Check all screw connections and their safety devices. In particular the connections between engine, engine support frame, extension spindle and fuselage. Screws which are secured with LOCTITE or spring washers are marked with red locking lacquer. In case the locking lacquer is damaged, the screw joint may have slackened and must be secured again. Check any safety wire.
- By pushing onto the propeller shaft from the front, check the rubber engine mounts for cracks in the rubber material.
- Check arrestor cables and attachments to engine support frame.
- Check muffler attachment. The spring connections can be checked by shaking the muffler.
- Check muffler and engine support frame (with all their associated parts) for secure attachment and cracks.
- Check routing of Bowden cables, cables and fuel lines (no kinks); check pipes (particularly fuel lines) and other components for chafing.
- Check condition of the toothed belt.
- Check ignition cables, spark plug connectors and engine cover plates for secure attachment.
- Check for foreign objects in the engine compartment.

Propeller Check

- Operate the propeller to the TAKE-OFF and CRUISE settings (only for variable pitch propellers)
- Check play at propeller tips: max. 9 mm for variable pitch propellers
max. 8 mm for fixed pitch propellers

Fuel Tank System

- Fuselage tank:
The tank drain valve is located on the L/H lower side of the fuselage below the wing leading edge. Press the drain valve to drain any condensation water.
The tank vent is located on the L/H side of the vertical stabilizer, above the tail wheel. Check tank vent for obstructions.
- Wing tank (standard only for variable pitch propellers):
The drain valve is located on the lower surface of the L/H wing. Press the drain valve with drain glass to drain any condensation water.
The tank vent is located on the lower surface of the wing, approximately 1.5m (5 ft) from the wing root. Check tank vent for obstructions.
- Refuelling:
Refuelling is preferably done from canisters, containing a pre-mixed fuel-oil mixture.
The common grounding connection for fuselage tank and wing tank (see above) is located on the LH pylon of the engine support frame.

4.4 Preflight Inspection

- Wing and horizontal stabilizer connections secured?
- Weight and balance checked?
- Parachutes correctly fitted?
- Safety harnesses on and fastened correctly?
- Pedals adjusted and/or locked?
- Airbrakes locked after functional check?
- Full and free movement of controls checked?
- Flight controls checked with the help of a second person?
- Trim adjusted to the green mark?
- Radio equipment set to local frequency?
- Altimeter set?
- Canopies closed and locked?


For a Tow Launch:

- Correct weak link in the towing cable?
- Cable attached to correct hook?
- Caution: - Cross wind!
 - Cable break!

For a Self Launch:

- Check engine in accordance with manual ROTAX 505A, also consult ROTAX Service Bulletin 505-010 (latest issue) for additional information.
- Check fuel quantity
- Check magnetos; magnetos „BOTH“!
- Ground run up: for variable pitch prop: 6200 bis 6400 RPM
 for fixed pitch prop: 6000 bis 6300 RPM
- Propeller set to „TAKE-OFF“ (only variable pitch prop)

Record of Revisions:

Rev.No.	Page	Reference	Date	Signature
5	0 1A, 0.2, 0.3, 0.4, 0 5, 2.7, 4.1, 4.2, 4 3, 5 1, 5.3, 6.11, 6.12, 7.7, 9.2, A1.3	TM 869-15	27.07.93	
6	0 1A, 0.2, 0.3, 0.4, 4 2, 4.3, 6.7, 6.8, 6 12, 6.13, 6.14, 9.1, 11.3, 12.1	TM 869-18	07.03.96	
7	0 1A, 0.2, 0.3, 0.4, 4 2, 4 3, 6.12, 11.3	TM 869-18/2	08.07.96	
8	0 1A, 0.4, 11.3	TM 869-19	20.11.97	
9	0 1A, 0.2, 0.3, 4.2, 4.3, 6.12	MSB 869-18/3	24.05.02	
10	0 1A, 0.2, 0.3, 4.2, 6.6	ROTAX SB 505-010	15.12.06	

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	2.5	01.10.02	TM 869-7
	2.6	27.07.93	TM 869-7
	2.7	20.05.92	TM 869-15
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	6.8	07.03.96	TM 869-18
	6.9	20.05.92	ÄM 869-1
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	6.12	24.05.02	SB 869-18/3
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	6.14	07.03.96	TM 869-18

4.2 Power Plant Inspections

In addition to any inspection listed in this section, also consult engine manual ROTAX 505A and ROTAX Service Bulletin 505-010 (latest issue).

4.2.1 Daily / Pre-Flight Inspection

Refer to POH Sec. 4.3 and 4.4

4.2.2 Every 25 Flying Hours, at least Annually

- Check air filter for contamination
- Change spark plugs
- Change fuel filter
- Check fuel lines for general condition and leaks
- Check engine screws for tightness
- Check Bowden cables and mechanisms for smooth operation
- Lubricate control gear for propeller actuating lever
- Lubricate control gear for power plant retraction system
- Check electrical wiring and connections
- Check ignition timing
- Clean carburetor cover
- Check engine idling speed and adjust if necessary
- Clean the engine
- Torque cylinder head nuts (only at first 25 h inspection)
- Check and lubricate starter gear ring
- Check play of the bearing of the upper belt drive pulley
- With propeller and toothed belt removed, no notable play may be detected by shaking on the upper belt drive pulley
- Check grooved nut at the upper pulley wheel for a tight fit (torque: **35-50Nm (25,8-36,9 lb.ft)** for procedure refer to page 6.12) and securing plate for proper condition
- Note: After loosening the grooved nut, a single check is mandatory after 5 engine hours !
- Power Lever Adjustment
- Inspect the power lever friction screw for correct function. Noticeable resistance to power lever movement must be felt in all positions.

4.2.3 300 Hour Inspection

The engine must be returned to the manufacturer's for general overhaul. When the TBO is reached, GROB is to be contacted without delay. The engine will be stripped at Mattsies and forwarded to ROTAX for general overhaul.

6.6 Removal and Installation of the Power Plant

- Removal

Before removing the engine, read and observe the notes in section 8.4 "Engine Preservation and Storage" in the manual for the ROTAX engine Type 505 A. In addition to the aforementioned, also consult ROTAX Service Bulletin 505-010 (latest issue).

In addition it is recommended that the propeller be removed (see section 6.7) before removing the engine.

- Remove the LH and RH engine cover plates.
- Remove the exhaust system.

Caution: Take extreme care when disconnecting or removing electrical wiring and Bowden cables. Electrical wiring must never be cut through.

- Electrical wiring:

- Disconnect the plug-in connectors (red and Black) on the connecting wire for the motor of the variable pitch propeller. Then remove the wiring holder from the bracket. (only for variable pitch propeller)
- Remove the ground wire from the cylinder head.
- Carefully cut open the heat-shrink sleeve on the plug-in connectors of the wiring for the cylinder head temperature sensor and for the generator. Then disconnect the plug-in connectors.
- Disconnect the wiring from the starter motor.
- Disconnect the wire from the limit switch of the detent for the variable pitch propeller. (only for variable pitch propeller)

The following illustration of the engine assembly will provide better understanding and assistance.