M.I.C.M. - C.N.I.A.R.
INTREPRINDEREA DE CONSTRUCTII AERONAUTICE
2200 B R A S O V
Căsuţa poştală nr.118

MANDATORY SERVICE BULLETIN

IS-28M2/EO-3

APPROVED BY : DEPARTMENT OF CIVIL AVIATION
with No. 1864 / 02.02.1979

PRODUCT : IS-28M2 motor glider.

OBJECT : To introduce label for landing gear retraction and Flight and Maintenance Manual amendment.

COMPLIANCE : Modification no.198.

DATE: 25.01.1979

I. PLANNING INFORMATION

A. Applicability

This bulletin is applied to serial motor gliders.

B. Reason

To increase the reliability.

C. Description

Gluing a warning placard on instrument panel to check the landing gear lock. (28M2.F14.154 - Romanian ; 28.M2.F14.155 - English).

Completing the flight manual with additional servicing indications.

D. Compliance

Modification No.198.

E. Accomplishment

To motor gliders under servicing this bulletin is applied by the users not later than 15th March 1979. To non-delivered motor gliders, as well as those under manufacturing, it is applied by the manufacturing plant.

F. Material-Cost and Availability

Materials necessary to apply this bulletin are listed in chapter 3A and are delivered by the manufacturing plant together with this service bulletin.

G. Tooling

None.

H. Weight and Balance

None.

I. References

See the drawing page 5/5.

J. Documents affected

Amendment of pages 0.2, 0.5, 2.1, 2.9, 2.10, 3.12, 4.7 and 4.8 from the Flight and Maintenance Manual 2nd issue, November 1977.

II. ACCOMPLISHMENT INDICATIONS

A. Preparation

None.

B. Application

The warning placard is glued with an adequate adhesive on instrument panel, according to the drawing page 5/5.

C. Using instructions

None.

III. MATERIAL INFORMATION

A. Material list

Warning placard.

B. Tooling list

None.

C. Supply indications

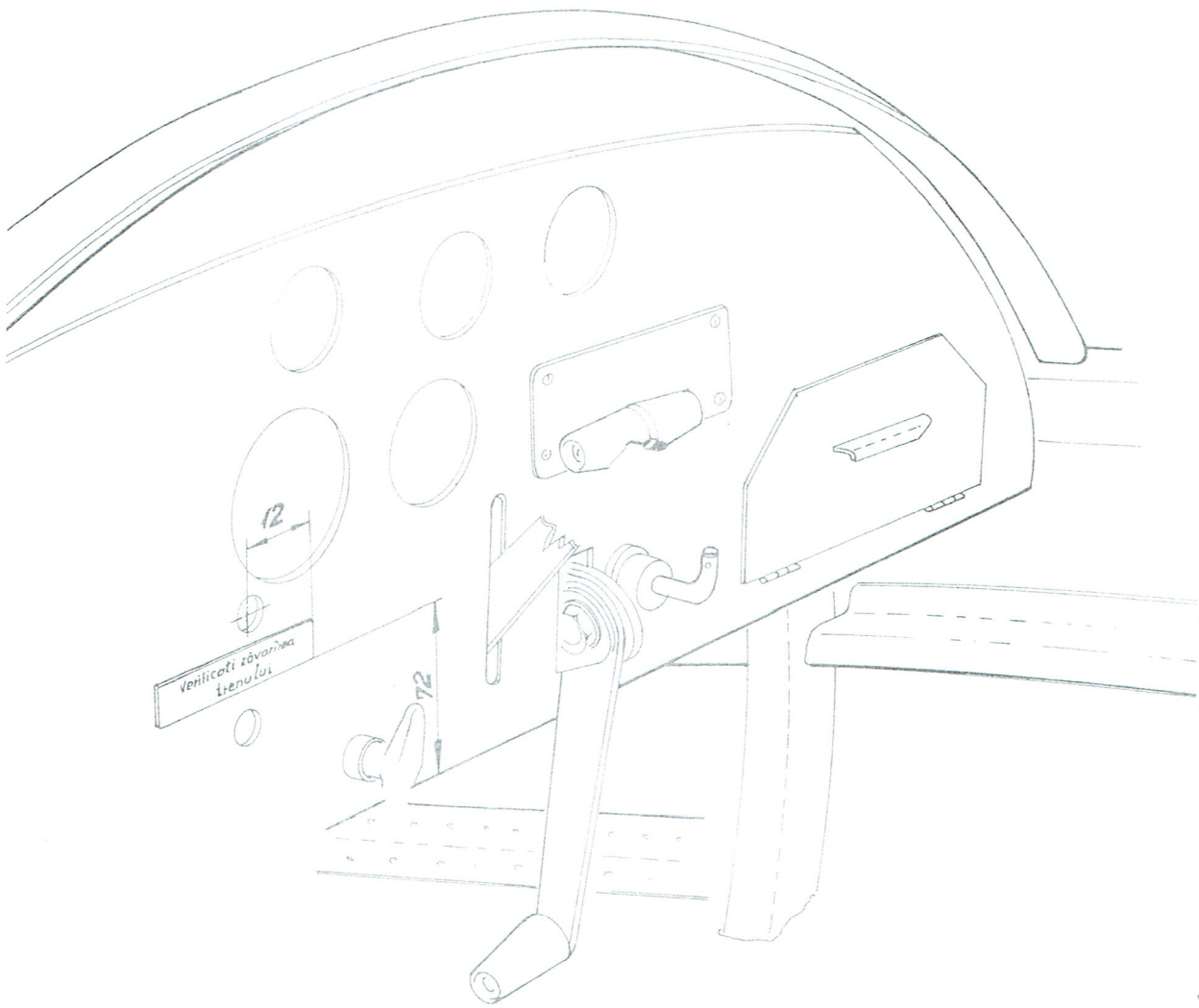
The placard is delivered together with this service bulletin by the manufacturing plant.

IV. IDENTIFICATION

The application of the present service bulletin will be mentioned in the motor glider logbook.

V. APPENDICES

- Warning placard according to Mandatory Service Bulletin IS-28M2/EO-3, chapter 3.A.
- Pages 0.2D, 0.5, 2.1A, 2.9B, 2.10B, 2.11.A, 3.12.A, 4.7.A and 4.8.A, issue January 1979.



Lipire etichetă avertizare tren
Landing gear warning placard aluing

Data: 25.01.1979

I.S. 28M2/E0-3
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RECORD OF REVISION

All the ammendments inserted in the text are indicated by a marginal line, corresponding to the reference number in the tabel below:

Ref. No.	Revised page	Description of Revision	DATE of Approval	DATE of Insertion in the Manual	Signature
1.	2.6.A 0.2A	Max.cylinder head temperature	29.03.1978		
2.	4.23.A;4.24A 0.4A	Instruments switch	29.03.1978		
3.	4.12A;4.28A; 0.4B	Introduction Trim TAB control limiters	29.03.1978		
4.	2.10.A 0.2.B	Standard equipments	29.03.1978		
5.	5.14-5.24 0.4C	Radio installation (optional)	10.05.1978		
6.	0.2C;2.9A 4.2A;4.3A 4.16A;04D; 4.29A.	Constructive improvements Fire extinquisher support.(optional)	19.08.1978		
7.	0.4E 5.26-5.37	DITTEL FSG-40S Radio installation (optional)	18.11.1978		
8.	0.2D; 2.1A; 2.9B; 2.10B; 2.11A;3.12A; 4.7A; 4.8A;	Servicing indications	02.02.1979.		

2.- OPERATING LIMITATIONS

2.1.- Weights and Balance

8

- Maximum gross weight on take-off — 745 kgf (1642.5 lb)
- weight empty (with oil in crankcase) — 560 $^{+15}_{-10}$ Kgf 234.6 lb)
- payload — 180 $^{+10}_{-15}$ kgf 407.8 lb)

The payload consists of aircraft crew, fuel

Center of Gravity

Accepted balancing limits — 21.4 - 35 % CMA

See the balance sheet (2.2)

2.9.- Placards and Markings

The motorglider is provided with the following placards and markings:

2.9.1.- Speed limitations (red coloured)

IS-28M2 LIMITS		
Vmax V_{LG}		113.31kt
	Vmax	64.75kt
	nmax	+4g
V_S		40.47kt
V_A V_B		91.73kt
n		+5 -2.65
Gmax		1642.44lb
ACCELEROMETER IMPOSED		

2.9.2.- Weight placard (red coloured)

IS-28-M2 MOTOR GLIDER Serial no.....

Weight .....lb Empty C.G.....% SMC

Min.Cockpit Load .....lb

Max.Cockpit Load .....lb

2.9.3.- Engine Limitations (red coloured)

MAX. PERMISSIBLE REVS.	3600 R.P.M.
MAX. CONTINUOUS REVS.	3200 R.P.M.
IDLING	700 R.P.M.

8

2.9.4.- Inverted Flight Prohibition (red coloured)

PROHIBITED INVERTED FLIGHT WITH ENGINE RUNNING

2.9.5.- COCKPIT OPENING (red coloured)

DO NOT OPEN THE CANOPY AT SPEEDS
GREATER THAN 80 Kts.

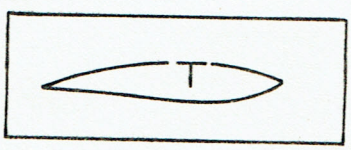
2.9.6.- PROHIBITION OF BAGGAGE OVER THE FUEL TANK (red coloured)

BAGGAGE PROHIBITED

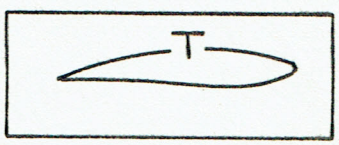
2.9.7.- Placards for landing gear lock check (red coloured)

CHECK THE LANDING GEAR LOCK

2.9.8.- Air Brake Control Identification Placard (blue coloured)



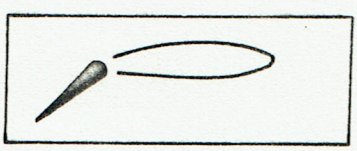
Retracted air brake



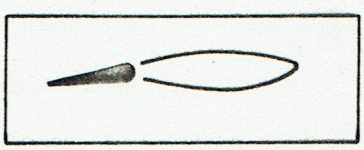
Extended air brake

2.9.9.- Flap Control Identification Placard (black coloured)

8.

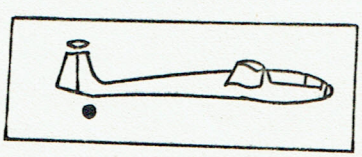


Deflected flap
(positive)

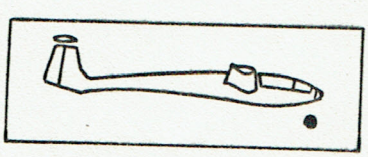


Flap at zero
(neutral setting)

2.9.10.- Trim Tab Control Identification Placard (green coloured)

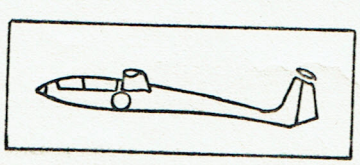


Trim Tab in Nose Lift Position

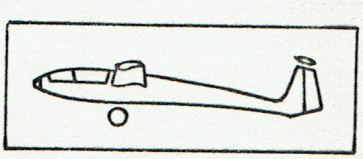


Trim Tab in Diving position

2.9.11.- Identification Placard for Landing Gear Retracting Control (black coloured)



Retracted landing gear



Extended landing gear

2.9.12.- Other Markings

- Compass trim diagram
- C.O. = on the supply plug
- leveling points on wing and tails
- jacking points

4 2.10.- Standard Equipment of Motorglider

The manufacturing plant offers the following standard equipment of motorglider:

	CERTIFICATE	Equivalent values		
		Range	Tolerances	TSO
Airspeed Indicator	PZL.PR.250.S	0-250 km/h	±90 m;20°C; 7000-10000 m	C.10.b
Altimeter	PZL.W10.S(W12S)	0-10000 m	±5 km/h;20°C	C. 2.b
Variometer	PZL.WR$_s$5D	± 5 m/s	± 7,5 %	-
Variometer	PZL.WR$_s$30C	± 30 m/s	± 4 %	-
Turn and Bank Indicator	PZL.EZS2	-	-	-
Compass	PZL.KI.13	-	± 1,7°	-
Oil Temperature Indicator	VD$_o$310.274.023.001	-	-	-
Oil Pressure Indicator	VD$_o$350.271.019.001	-	-	-
Tahometer	VD$_o$154.0601	-	-	-
Cylinder Head Temperature Indicator	254.20T	-	-	-

Pilots Belts:

a) Landing with engine running

- Start the supplementary fuel pump (the yellow bulb above the switch lights)
- Extend the landing-gear;
- Inspect the locking in "down" position by unlocking the air brake (in this case the acoustic warning shall not be heard and the red bulb shall not light). 8
- Set the propeller on small pitch.
- Reduce the speed at 95 - 100 km/h (51 - 54 knots)
- Extend and lock the flaps in the desired landing position (the shortest landing is performed in +3 flap setting).
- A descent in straight line on the approach slope shall be performed at an aprox. speed of 90 - 100 km/h (48.5 - 54 knots).
- In the end, stop the gas and perform all the air intake adjustments actuating the air brakes.

b) Landing with engine off

- Approach and landing are performed as in the glider case.
- Extend the landing-gear at an altitude higher than 150 m (492 ft) and check if locking is properly performed in this position. The landing-gear warning system operates even if the general contact is switched off.
- Then proceed as for point (a) (landing with engine running)

CAUTION: Note that the landing gear extension accentuates the approach slope by increasing the drag.

3.1.15.- Landing

- Perform the recovery gently waiting for a gradual reduction of speed.
- Touch down is carried out by means of wheels and tail skid, actuated simultaneously.
- After landing completely open the air brakes and keep the stick pulled till the motor glider stops.
- During taxiing, the rudder is maintained by moving the rudder bar gently.

- if both air flaps of the carburettor are closed and opened gradually and no jammings occur;
- if there is enough damping oil in the carburettor.

Remove the upper filling plug and, if required, refill the tank. The plug shall be screwed and tightened.

Propeller

The check shall be performed after 50 hours in accordance with the HO-V-62R/L160T Propeller Manual (APPENDIX 2)

Landing-gear

Inspect it when the motor glider is empty (on ground or on jacks). Inspect:

- the landing-gear mechanism and the wheel housing cleaning
- the proper passing over the landing-gear main arms dead point (landing-gear locking in open position).
- check visually and by actuating the air brakes the correct locking of landing-gear driving handle in rear holder (extended landing-gear). When unlocking the air brakes the bulb on the instrument panel shall not light and the acoustiv warning shall not be heard, in case of correct landing-gear locking. 8
- the acoustic and light warning system of the landing-gear, with gear in "up" and "down" position and extended air brake. By pressing on the"test" button on the instrument panel, the acoustic warning shall be heard and the bulb shall light.
- the absence of cracks, bbows, clearances etc. in landing-gear and retraction control components; locks condition.
- pressure lubricating of landing-gear and cockpit control shaft greasers
- the automatic lock of landing-gear handle in "down" and locked position of landing-gear 8
- landing-gear rubber shock-absorbers (rubber and metallic disks condition).

CAUTION: Surfaces between the rubber disks shall be dry and without grease residues. For a proper operation the rubber sides shall not slip on the metallic disks.

- tyre condition main landing-gear wheels (2.6 atm) and the tail skid pressur (2.5 atm). Ground check on empty aircraft.