**MAINTENANCE PROGRAM**

Glider: Morelli M-100 S

Serial No.: 047

Year built: 1966

Manufacturer: CARMAM Moulins, France

Registration: I-ALEB

Owner: Bassalti Stefano

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Authorisations:

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|  | Name | Date | Signiture | Comment |
| Prepared by: | S. Bassalti | 2014.13.14 |  | Glider owner |
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Revision history:

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| --- | --- | --- | --- | --- |
| Rev | Status | Description | Date | Prepared by |
| A1 | For Approval | The document prepared for approval. | 2014.13.14 | S. Bassalti |

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# Inspection types

Type 1: small visual (optical) inspection of the part without derigging.

Type 2: ample visual (optical) etc.

Type 3: ample (major) if necessary with a magnifying-glass

# 20- hrs inspection

Ailerons:

1. control (inspect) the absence of cracks (tears) in the aileron mainspar near the pont (place) of the steering hinge (appr. in the middle of the spar), TM 69-62/M100s-5.

Comments:

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Inspection done by:

|  |  |
| --- | --- |
| Name |  |
| Date |  |
| Signature |  |
| AML (aircraft maintenance-license) |  |

# 25-hrs inspection

Wings:

1. visual (optical) inspection of damage of plywood and fabric (type 1)
2. control (inspect) the connection of the inspection valves (hatches) and the airbrakes
3. remove mud and other dirty (rubbish) if necessary
4. control (inspect) contingent cracks (tears) at rib 16 (aileron hinge), according TM 69-62/M100s
5. control (inspect) the water-holes (should be open and free of rubbish)

Fuselage:

1. visual inspection of contingent (possible) damage at the plywood covering (type 1)
2. control (inspect) the good (smoothless) operation of the canopy-lock
3. control (inspect) the good rigging of the coverplate between both wings.
4. control (inspect) carefully the absence of tears (cracks) in the plywood at (on) the innerside, special between the frames 7 and 8, 11 and 12, 12 and 13 and 13 and 14.

Horz. stabilizer/elevator and the Vert. stab./ (direction) rudder:

1. inspect visual the plywood and fabric (type 1)
2. control (inspect) carefully the locking pins (cotter keys) of the elevator and (direction)rudder
3. control the free movement of the elevator and (direction)rudder

Wheel:

1. control (inspect) the condition and the tension of the tyre (2.5 bar)

Function organs (parts of steer):

1. control the absence of too much free play and rubbing (friction)
2. control the good operation (working) of the airbrakes

Cockpit:

1. inspect the (good) condition of the safety-belts (type 1)
2. control and inspect the instruments, must be clean and good readable

# 50-hrs inspection

Wings:

1. visual (optical) inspection of damage of plywood and fabric (type 1)
2. control (inspect) the connection of the inspection valves (hatches) and the airbrakes
3. remove mud and other dirty (rubbish) if necessary
4. control (inspect) contingent cracks (tears) at rib 16 (aileron hinge), according TM 69-62/M100s
5. control (inspect) the water-holes (should be open and free of rubbish)

Fuselage:

1. visual inspection of contingent (possible) damage at the plywood covering (type 1)
2. control (inspect) the good (smoothless) operation of the canopy-lock
3. control (inspect) the good rigging of the coverplate between both wings.
4. control (inspect) carefully the absence of tears (cracks) in the plywood at (on) the innerside, special between the frames 7 and 8, 11 and 12, 12 and 13 and 13 and 14.

Horz. stabilizer/elevator and the Vert. stab./ (direction) rudder:

1. inspect visual the plywood and fabric (type 1)
2. control (inspect) carefully the locking pins (cotter keys) of the elevator and (direction)rudder
3. control the free movement of the elevator and (direction)rudder

Wheel:

1. control (inspect) the condition and the tension of the tyre (2.5 bar)

Function organs (parts of steer):

1. control the absence of too much free play and rubbing (friction)
2. control the good operation (working) of the airbrakes

Cockpit:

1. inspect the (good) condition of the safety-belts (type 1)
2. control and inspect the instruments, must be clean and good readable

# 100-hrs inspection

Wings:

1. visual (optical) inspection of damage of plywood and fabric (type 1)
2. control (inspect) the connection of the inspection valves (hatches) and the airbrakes
3. remove mud and other dirty (rubbish) if necessary
4. grease all the turning points of the airbrakes
5. control (inspect) contingent cracks (tears) at rib 16 (aileron hinge), according TM 69-62/M100s
6. control (inspect) the water-holes (should be open and free of rubbish)

Fuselage:

1. visual inspection of contingent (possible) damage at the plywood covering (type 1)
2. control (inspect) the good (smoothless) operation of the canopy-lock
3. control (inspect) the good rigging of the coverplate between both wings.
4. derig (disassemble) the glider and control (inspect), type 2 inspect., the connection and connection points (parts) of the fuselage/wing-construction. The same for the Horz. Stabilizer. If necessary: grease (lubricate) all the connction points.
5. control (inspect) the plywood at the inside between ribs (frames) 6 and 7
6. control (inspect) carefully (type 2 inspec.) the validity of the transit of the rudder-tube (I don’t know the exact word for it, but it means that the rudder-tube (bar, rod) must be free to move)
7. control (inspect) the wastage of the skid
8. control (inspect) the waterholes (drainholes)
9. control (inspect) carefully the absence of tears (cracks) in the plywood at (on) the innerside, special between the frames 7 and 8, 11 and 12, 12 and 13 and 13 and 14.

Horz. Stab/rudder and the Vert. stab./ (direction) rudder:

1. inspect visual the plywood and fabric (type 1)
2. control (inspect) carefully the locking pins (cotter keys) of the elevator and (direction)rudder
3. control the free movement of the elevator and (direction) rudder
4. control (inspect) the absence of free play in/on/at the connection and turningpoints

Wheel:

1. control (inspect) the condition and the tension of the tyre (2.5 bar)
2. control (inspect) the good action (working) of the (wheel)
3. grease (lubricate) the axle and check the locking of the nuts

Function organs:

1. control the absence of too much free play and rubbing (friction)
2. control the good operation (working) of the airbrakes
3. grease (lubricate) all the connections and turning points

Cockpit:

1. inspect the (good) condition of the safety-belts (type 1)
2. control and inspect the instruments, must be clean and good readable
3. control (inspect) the condition of the bottom

# 500 hrs. inspection

Wings:

1. visual (optical) inspection of damage of plywood and fabric (type 1)
2. control (inspect) the connection of the inspection valves (hatches) and (uncover) plates of the airbrakes
3. remove mud and other dirty (rubbish) if necessary
4. grease (lubricate) all the turning points of the airbrakes
5. control (inspect) contingent cracks (tears) at rib 16 (aileron hinge), according TM 69-62/M100s
6. control (inspect) the water-holes (should be open and free of rubbish)
7. open all the inspection valves (hatches)
8. inspect (type 2) the inside construction and plywood covering plates
9. grease (lubricate) the turning points of the ailerons
10. grease (lubricate) the locking of the nuts of all turning points
11. replace all the turning points and pins with too much free play of the ailerons

Fuselage:

1. visual inspection of contingent (possible) damage at the plywood covering (type 1)
2. control (inspect) the good (smoothless) operation of the canopy-lock
3. control (inspect) the good rigging of the coverplate between both wings.
4. derig (disassemble) the glider and control (inspect), type 2 inspect., the connection and connection points (parts) of the fuselage/wing-construction. The same for the Horz. Stabilizer. If necessary: grease (lubricate) all the connction points.
5. control (inspect) the plywood at the inside between ribs (frames) 6 and 7
6. control (inspect) carefully (type 2 inspec.) the validity of the transit of the rudder-tube (I don’t know the exact word for it, but it means that the rudder-tube (bar, rod) must be free to move)
7. control (inspect) the wastage of the skid
8. control (inspect) the waterholes (drainholes)
9. control (inspect) carefully the absence of tears (cracks) in the plywood at (on) the innerside, special between the frames 7 and 8, 11 and 12, 12 and 13 and 13 and 14.

Hor. Stab./rudder and Vert. stab./rudder

1. inspect visual the plywood and fabric (type 1)
2. control (inspect) carefully the locking pins (cotter keys) of the elevator and (direction)rudder
3. control the free movement of the elevator and (direction) rudder

Wheel:

1. control (inspect) the condition and the tension of the tyre (2.5 bar)
2. control (inspect) the good action (working) of the (wheel)
3. remove (take away) the too much free play of the axle
4. grease (lubricate) the axle and check the locking of the nuts

Function organs:

1. control the absence of too much free play and rubbing (friction)
2. control the good operation (working) of the airbrakes
3. grease (lubricate) all the connections and turning points
4. remove the pedal connection cables and control (inspect) carefully the absence of wastage (type 3 inspection)

Cockpit:

1. inspect the (good) condition of the safety-belts (type 1)
2. control and inspect the instruments, must be clean and good readable
3. control (inspect) the condition of the bottom
4. control (inspect) the condition of the instrument panel of the shock absorbers and replace them in case of damage

# D - (year) inspection

Univeral:

1. control and rectify if necessary temporal provisions and repairs
2. investigate the tempory provision
3. check the temporal provisions and repairs which are done (made, fixed). This are small repairs for a short time so You can fly again.

Measure rudder outcomes (results):

Rudder

Ruddertrim

Direction rudder

Ailerons

Airbrakes

Electric installation:

1. check all parts at/on good working and condition
2. control (check) the condition of the wires

Sailplane data:

1. measure symmetry

# Special inspection

Rough/hard landing:

Wings:

1. visual (optical) inspection of damage of plywood and fabric (type 1)
2. control (check) carefully the connection (pins and bolts) of the wing construction
3. remove mud if necessary
4. control (inspect) contingent cracks (tears) at rib 16 (aileron hinge), according TM 69-62/M100s

Fuselage:

1. visual (optical) inspection of the plywood plates at/on the in- and outside, special around the wheel, the center of gravity, the hook, the tail and the cockpit
2. remove mud if necessary from the wheel house
3. control (check) carefully the connection (pins and bolts) of the fuselage construction
4. control (check) carefully the connection of the fuselage horz. Stabilizer

Horz. Stabilizer:

1. check carefully the absence of damage at the plywood, the fabric and the pins and bolts of the Vert. stab. and rudder-fuselage construction

Operations:

1. after operations, which have an effect at/on the place of the centre of gravity, the center of gravity has to be refixed by weighing

# Weighting procedure

Glider to be weighed on the following occasions:

1. After modification action, when required in the relevant modification leaflet.
2. After major repair, recovering or refinishing.
3. Every 8 years.

Requimnents:

1. Weighing should be carried out in a closed hangar to prevent the generation of wing lift forces.
2. Calibration of scales has been checked over the desired range of use within the last 12 months and the calibration chart is available.
3. Instruments,batteries, oxygen systems, seat cushions, fixed ballast are included in the „basic“ empty weight.
4. Parachutes, barograph and removable ballas are not included in the „basic“ empty weight.
5. All dimensions are to be taken as positive.
6. All measurements and calculations need to be recorded into glider weighing record sheet (see next page).

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| --- |
| GLIDER WEIGHING RECORD |
| Weighed by: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Place: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Scales used: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

WEIGHING MODEL



MEASUREMENTS

Moment arms:

a: \_\_\_\_\_\_\_\_\_\_\_\_\_ mm

b: \_\_\_\_\_\_\_\_\_\_\_\_\_ mm

Lifting Parts: Non-Lifting Parts:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Left wing | Right wing | Main pin/s | Total - WingsStructure weight |  | Fuselage |
| \_\_\_\_\_\_\_ kg | \_\_\_\_\_\_\_ kg | \_\_\_\_\_\_\_ kg | \_\_\_\_\_\_\_\_\_\_\_\_ kg |  | \_\_\_\_\_\_\_ kg |

G1: \_\_\_\_\_\_\_\_\_\_\_\_\_ kg

G2: \_\_\_\_\_\_\_\_\_\_\_\_\_ kg

CALCULATIONS

|  |  |
| --- | --- |
| Empty weight: \_\_\_\_\_\_\_\_\_\_\_\_\_ kgMax allowed weight: \_\_\_\_\_\_\_\_\_\_\_\_\_ kgMax allowed load: \_\_\_\_\_\_\_\_\_\_\_\_\_ kg | $X=\frac{G\_{2}∙b }{G}+a=$ \_\_\_\_\_\_\_\_\_\_\_ mm |

SIGNITURE

Signiture: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_