

# MAINTENANCE SCHEDULE

Edition 3 issued March 1<sup>st</sup>, 2001.

## CAP231EX & CAP232



**Aircraft serial number:** \_\_\_\_\_

**Registration:** \_\_\_\_\_

**Owner:** \_\_\_\_\_

(name and address) \_\_\_\_\_  
\_\_\_\_\_

**This document is a courtesy translation of its original French version. Whereas the original French version of the information and instructions is approved, this translation is not approved.**

This Maintenance Schedule has been recognized by the GSAC, on behalf of the Minister in charge of Civil Aviation, and meets the standards for the French users of the approved maintenance schedule requirements, as defined under Article 7.4 of the 24<sup>th</sup> July 1991 Order relating to the general conditions of usage of civil aircraft in general aviation:

**Letter n°010459/ GSAC.E dated April 25<sup>th</sup>, 2001.**

The French version of minor revision dated June 27<sup>th</sup>, 2001 of this Maintenance Schedule has been recognized by the CAP Aviation Airworthiness Office, and meets the standards for French users of the approved maintenance schedule requirements, as defined under Article 7.4 of the 24<sup>th</sup> July 1991 Order relating to the general conditions of usage of civil aircraft in general aviation.

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## REVISION LIST

ORIGINAL ISSUE

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**GSAC acceptance**

N°: \_\_\_\_\_

Date: \_\_\_\_\_

Name/signature: \_\_\_\_\_

## SECTION 1 - GENERAL INSTRUCTIONS

This maintenance schedule, property of \_\_\_\_\_, is established according to the Order dated July 24, 1991.

### 1.1 Commitments

I, the undersigned, \_\_\_\_\_ declare that this maintenance schedule:

- recapitulates all aircraft manufacturer maintenance directives concerning the type of plane mentioned on cover page ;
- recapitulates all manufacturers maintenance directives from manufacturers of sub-systems and equipments installed on the aircraft mentioned on cover page ;
- respects the French regulations requirements (Order dated July 24, 1991 ; 24/11/98 (LSA)).

I commit myself:

- To maintain the aircraft mentioned on the cover page in accordance with this maintenance schedule.
- To up-date this maintenance schedule according to modifications, issued from the makers/manufacturers or from regulations requirements, that would decrease major periodicity, initiate new operations or modify applicable instructions.

TITLE: \_\_\_\_\_

At: \_\_\_\_\_

On: \_\_\_\_\_

NAME/SIGNATURE \_\_\_\_\_

### 1.2 Definition of maintenance

Maintenance objective is to prevent failure of any component forming part of the airworthiness' state, and is made up of all operations which keep the airplane at an acceptable safety level.

It includes:

- Inspections, examinations at various levels, with the aim to objectively recognize a component condition.
- One-off actions, whether they are pre-determined or not, interventions in order to preserve, as well as corrective actions arising from these inspections.
- Replacements of components with a determined expiration.
- Particular operations whose purpose is to acknowledge maintenance of some operational functions, or consecutive to accidental events.

## 1.3 Terminology

### 1.3.1 Note:

Used to draw attention to special items not directly related to safety, but which are important or unusual.

### 1.3.2 Visual Examination (EV):

The goal of which is to visually, carefully make sure that a component is in a good condition "in situ". Example: Search for cracks or corrosion.

### 1.3.3 Detailed Examination (ED):

Consists of a thorough examination of a component, either visually after disassembly, or using a magnifying glass, or any other investigative means (Magnaflux, dye-penetrant inspection, etc.).

### 1.3.4 Verification (VE):

Operation to make sure of conformity, or condition, by measuring or using control instruments. For example: Flight control cables tension check.

### 1.3.5 Bench Test (PB):

Complete operating test following removal of the said equipment and assembly on a test bench, or on board, using a mobile installation.

### 1.3.6 Operational Test (EO):

Operation only necessary to make sure that a system or equipment is in good working condition. These tests do not require any special equipment or any special installation other than those required on the aircraft (power supply). They must be comparable to those carried out by the operation crew.

### 1.3.7 Operating Test (EF)

Necessary operation to make sure that a system or equipment functions in every way according to the minimal acceptable specification in relation to the original design of the system or the equipment. This test can require additional ground equipment and must be more detailed and precise than operational test. This test must include all means necessary to conduct these tests allowing the possibility of maintaining the reliability of systems or equipment at an acceptable level without the use of any other documentation.

## 1.4 Abbreviations meaning

ALI:	Airworthiness limitation items
SB:	Service Bulletin
CAL:	Rating, Calibration
CMR:	Certification Maintenance Requirements
CN:	Airworthiness Directives (Consignes de Navigabilité)
ED:	Detailed Examination
EF:	Performance test
EO:	Operational Test

EV:	Visual Examination
GV:	Major overhaul
MAG:	Magnetic particle inspection test (Magnaflux)
PB:	Bench Test
PH:	Propeller – time between overhaul
PM:	Engine - time between overhaul
RES:	Dye Check
RG:	Complete Overhaul
TL:	Time Limit
VA:	Annual Inspection
VE:	Verification Test
VJ:	Daily Inspection
VL:	Life limit
VP1:	50 Hours Inspection
VP2:	100 Hours Inspection

## 1.5 Inspection types

This document takes into consideration French Safety Standards dated July 24<sup>th</sup>, 1991.

### 1.5.1 Routine Inspection

Operation consisting of a visual global examination or an operational test. Condition of the aircraft sub-assembly can be checked as long as dismantling is not necessary.

Routine inspections are those made during minor checks (see section 2, Time between inspections).

### 1.5.2 Detailed Inspections

Operation consisting of a complete sub-assembly examination, with all the necessary dismantling in order to detect any malfunction and to foresee those that could have catastrophic consequences.

Detailed inspections are carried out at the issued time limit indicated under Section 3 (Maintenance practices) or during major overhaul (GV) in accordance with synopsis given under Section 6 (Maintenance operations).

## 1.6 Maintenance practices

### 1.6.1 Maintenance with time limit (TL)

A component will have to be dismantled before reaching the time limit indicated under section 3:

- bloc time or operation
- calendar time

- number of cycles

This component will be submitted, after disassembly, to:

- either a complete overhaul
- a partial revision
- or definitely taken out of service (this case has been identified by the abbreviation VL, Life limit).

#### 1.6.2 Maintenance with Verification Test (VE)

Means that this component is subject to intervention to determine its condition. Maintenance work is undertaken on this component only after its condition has been determined during inspections.

### **1.7 Operating characteristics - breakdown of hours**

Annual operation volume for this type of aircraft, which is mainly used for high level aerobatics, is 100 to 150 flying hours, 200 to 300 landings.

Aerobatics / ferrying proportion is about 50%.

Total hours applicable to the service life and cycles is calculated in hours unit by unit.

Cycles and landings must be logged in the aircraft follow-up.

Aerobatics flights must be counted apart, in order to be able to apply the correction coefficient defined in the documentation issued by "GSAC".

### **1.8 Revision**

Service Bulletins applicable to this aircraft and its accessories are incorporated in the latest edition.

Further Service Bulletins may be inserted in the present issue until updated.

### **1.9 Related documents**

- Service Bulletins
- Registre individuel de Contrôle CAP232 or CAP231EX (Production travelers)
- Operators Manual Textron - Lycoming
- Operation and Installation Manual MT - Propeller
- Maintenance documentation from GSAC (French authority)

## SECTION 2 - TIME BETWEEN INSPECTIONS - WEIGHING

### 2.1 Time limits and tolerances

#### 2.1.1 Minor inspection

	Periodicity	Tolerance
VJ	Before first flight in a series of a maximum of 10 flights	2 flights
VP1	Every 50 hours (at least once every 6 months)	5 hours / 2 weeks *
VP2	Every 100 hours (at least once a year)	10 hours / 4 weeks *
VA	Annual inspection	2 months

#### 2.1.2 Major inspection

	Periodicity	Tolerance
GV	Every four (4) years	2 months *

#### \* Note

Tolerances do not apply to life limit: CN, CMR, ALI.

Daily inspection may be performed by a pilot authorized by the approved maintenance shop. This inspection must be logged in the aircraft log book. It will be logged in the airframe log book during the next maintenance shop operation.

Actual interval between 2 visits must never exceed the nominal interval plus tolerance.

**P** being nominal frequency (hours, flights or calendar time) and **p** tolerance for succession of **n** visits or operations at the same interval, total period covered will never be superior to:

$$(n \times P) + p$$

### 2.2 Weighing

Weighing with CG calculation must be carried out:

- After a modification, major repair affecting weight or CG position or main conversion of interior equipment.
- After each complete painting of the aircraft.
- At intervals not exceeding 5 years.

A weighing form with survey will have to be filled up.

## SECTION 3 - OUT OF PROTOCOL - SUB-SYSTEMS MAINTENANCE, USE AND STORAGE PRACTICES

### 3.1 Sub-systems maintenance, use and stockage practices

Designation	Make	Type	Maintenance		Stockage		Reference document
			Limit	Action	Limit	Action	
Engine	Lycoming	AEIO-540-L1B5D AEIO-540-L1B5	1400 h 12 years	RG see a)	180 days 60 days	see b) et c)	a) SI1009AQ dtd 12/01/01  b) SI1481 dtd 18/04/97  c) Operational and installation manual 05/83
Propeller	MT-Propeller	MTV-14-B-C/C190-17	1200 h 6 years	RG	18 months		a) SB 1W 08/04/99  Operation and installation manual E-124
		MTV-9-B-C/C200-15	1500 h 6 years	RG	18 months		a) SB 1W 08/04/99  Operation and installation manual E-124
governor	Woodward	C210988 A210988	PH	RG	18 months		Fasc. GSAC P-41-45 p. 2
Plunger	CAP Aviation	CAP230-70-32-01	10 years	VL	10 years	VL	
IRB		Inboard radio facility (IRB)	6 years 3 years	PB TG			Volume GSAC P-41-15
Magnetos			PM	RG			
Starter			PM	RG			
Alternator			PM	RG			
Hose	Lycoming	LW-12799-6S322	10 years	VL			
Hose	Lycoming	LW-12798-4S242	10 years	VL			
ELT battery	EBC	00-22-006-1	Depend on date	VL			

Designation	Make	Type	Maintenance		Stockage		Reference document
			Limit	Action	Limit	Action	
Filter	Lycoming	69510	25 h	Drain			

### 3.2 Out of protocol

1) Section 6 is totally based on the manufacturer's documentation. Maintenance operations, issued from:

- regulations requirements (Airworthiness Directives (CN)...),
- aircraft customization (personal or due to SB modification, repair, optional or particular equipment installation...),

are not necessarily included.

This section must list all these operations.

Subject	Operation	Origin	Periodicity	Tolerance	Reference document
Tab	Trim tab control axis replacement.	SB 980901 dtd 30/09/98 rev. 1 dtd 05/03/01	200 h	N/A	SB 980901 rev.1
Engine mount	Engine mount inspection procedures.	BS CAP231EX/CAP 232 71-001 (n°1)	Every ten aerobatic flights		BS n°1 Ed. 0 dtd 22/10/91 Rev. 3 dtd 15/09/2000

2) CN management mode has to be specified ; Airworthiness Directives (CN) can be either:

- included in the maintenance schedule ;
- or
- listed in a particular Airworthiness Directives status document.

## SECTION 4 - SPECIAL INSPECTIONS

### 4.1 General points

Keeping an aircraft in operating condition is dependant on special inspections, conducted in accordance with the programs contained in this section, and are to take place immediately after any of the following cases:

- 25 hours after first flight
- Hard or overweight landing
- Overstepping of the airframe limitations (CF Flight Manual)
- Overstepping of the propeller or engine limitations
- Lightning strike
- Accidental opening of the canopy
- Change in climatic conditions

### 4.2 25 hours after first flight

A first inspection (warranty inspection) must be carried out 25 hours after the first flight. This inspection must cover all items defined in section 6 of this document concerning Annual Inspection (VA) and 100 hours inspection (VP2).

### 4.3 Hard or overweight landing

This inspection is undertaken following a declaration from the pilot or ground witnesses, or following a workshop inspection for another inspection.

#### ***07-00-00 Lifting and shoring***

Remove the engine cowling

Lift the aircraft with the appropriate tool

#### ***32-10-00 Main landing gear***

Removal of the leading edge wing fairing

Removal of the belly fairing

Visual examination of the landing gear legs, make sure there is no delaminating, examine attachment on support.

Visual examination of landing legs aluminum support, make sure there are no cracks or buckling

### **32-20-00 Wheels**

Removal of wheel fairings

Visual examination of wheels and tires, search for fine cracks on sides, make sure of the free rotation of each wheel.

Visual examination of the gear axle.

Visual examination of the gear axle support.

### **32-40-00 Tailwheel**

Detailed inspection of the tail wheel strut, measuring height from top of rudder to ground with a short measuring tape. Below 7.1 in. (180 mm) indicates that the wheel edge is showing signs of collapse.

Make sure there is no play in or damage to the vertical pivot.

### **53-00-00 Fuselage structure**

Visual examination of the main frame supporting wing attachments.

Visual examination of the wing rear attachment area.

### **54-00-00 Tail fin**

Detailed inspection of attachments and structure

Make sure that the tail wheel has not damaged the rudder bottom.

### **57-10-00 Wing**

Detailed outside inspection of skins.

Make sure integral tanks have no leakage.

Make sure that excessive bending of the landing gear struts has not damaged the skin.

### **71-10-00 Engine cowls**

Check engine cowls alignment in closed position

Remove engine cowls

### **71-20-00 Engine mount**

Make sure there are no cracks

#### **4.4 Overstepping of the airframe limitations**

This inspection is initiated as a result of a pilot or ground witnesses declaration, or after workshop investigations during another inspection.

If limitations overstepping are confirmed, the incident must be reported on the aircraft's documentation and the manufacturer must be informed immediately.

The manufacturer must be given a copy of the report of the inspection done in accordance with this program. Statement of Airworthiness will only be delivered after manufacturer's advice.

##### ***53-00-00 Fuselage structure***

Visual examination of main frame supporting wing attachments. Make sure there are no cracks or damage to the frame laminate.

Visual examination of rear wing attachments. Make sure there are no cracks on rear frame and spar.

##### ***54-00-00 Tail assembly***

Detailed inspection of fittings and structure.

##### ***57-10-00 Wing***

Detailed outside inspection of skins. Search for possible delaminating marks using a "tape test".

Make sure that integral tanks are not leaking. A wing excessive flexion might have occurred.

Examine inspection panels, looking for indications of a likely excessive warping.

Examine spar at point of fuselage-wing attachments.

##### ***57-60-00 Ailerons***

Skins external inspection.

Hinges visual examination.

Levers and spades support-arm visual examination.

##### ***71-10-00 Engine cowls***

Removal of engine cowls.

##### ***71-20-00 Engine mounts***

Make sure there are no cracks

## 4.5 Overstepping of the propeller or engine limitations

### ***Overspeed between 2700 and 2830 rpm (5%)***

Look for and correct cause of overspeed.

Carry out a 100 hours inspection on the propeller.

### ***Overspeed between 2830 and 2970 rpm (10%)***

Look for and correct cause of overspeed.

Carry out a 100 hours inspection on the propeller.

Drain the engine oil.

Remove strainer and oil filter and look for traces of oil contamination by metal particles.

Measure static leak rate of cylinders (SI 1191).

Inspect inside of cylinders using an endoscope (borescope)

Remove, inspect and reinstall magnetos.

Carry out a 100h inspection, in accordance with Service Bulletins 301B and 388B.

### ***Overspeed of more than 2970 rpm (+ than 10%)***

Look for and correct cause of overspeed.

Remove propeller, send it to an approved repair shop for a complete overhaul.

Remove engine, send it to an approved repair shop for a complete overhaul.

## 4.6 Inspection following lightning strike

Normally effects of lightning have two characteristics:

### ***Thermic***

May cause certain elements to melt and even cut them off, or may raise the temperature of a limited area for a short while, long enough to damage component thermal process.

### ***Electric and magnetic***

May cause a surge in some electrical circuits and radios, thus magnetizing the various components.

### **Check**

Inspect exterior of airframe to look for abnormalities, such as those described below, or for any evidence of an electric arc with small black micro-melted craters that can either be clustered or dispersed on a relatively large surface area. Attention must be paid to:

- The condition of bonding straps to ground flight controls
- The control surface articulations
- The front area of the fuselage
- The leading edge and the end tips of the wings
- The trailing edge and the wing ailerons
- The condition of the bonding straps to ground the ailerons
- The tip of the rudder
- The leading tail plane edge
- The trailing tail plane edge
- The main and auxiliary undercarriages
- The spinner and engine fairings
- The propeller is very vulnerable. This has been shown by MT-Propeller, where the lightning may tear off part of the shielding from the leading edge. When lightning strikes the propeller, the propeller must be removed and a bench test must be carried out
- The aerals and supports
- Carrying out a complete operational test of electrical equipment and radio
- Checking compass calibration

### **4.7 Accidental canopy opening**

This inspection is initiated as a result of pilot or ground witnesses declaration, or after workshop investigations during another inspection.

#### ***Several cases have already been reported :***

Canopy is not secured before take-off, or has been left locked on intermediate notch.

Pilot opens canopy while aircraft is still taxiing at high speed: canopy fully opens accidentally.

While working inside cockpit, the safety wire is accidentally released and canopy fully opens, hitting the right side of fuselage.

#### ***Actions to be taken :***

Examine Plexiglas condition. Cracks can propagate starting from screws. Cracks must be stopped and repaired. If cracks extend to more than 50 mm, the Plexiglas of the canopy must be replaced.

Examine metal frame condition. Hinges must be perfectly aligned so that locking and jettison systems work correctly.

Make sure that the ejection system works correctly. If it doesn't, remove Plexiglas and readjust metal frame with hinges. Then, reinstall Plexiglas.

## 4.8 Change in climatic conditions

Climatic conditions, i.e. temperature and humidity greatly influence the tightening of parts when they are attached on wooden structures.

This inspection applies to any part attached to the fuselage, for which tightening must be verified when a climatic change is stated. This problem is more noticeable when the aircraft is new.

Every item for which a torque value is given in section 6 of this manual is concerned by this inspection. In Europe, this inspection should be carried out at the end of Spring and at the end of Autumn.

## SECTION 5 - CONTROL FLIGHTS

Obligatory control flights definition.

(Details relating to control flights, GSAC documentation)

### Full control flight

A full control flight consists of :

- Checking aircraft general performance as laid out in Flight Manual (taking-off, climbing, bearing) and the correct operation of various systems
- Carrying out procedures which do not usually apply to flight operations (especially emergency procedures)

A full control flight, with a performance survey, shall be carried out after :

- Each Major Overhaul
- Major repairs following an accident

### Reduced control flight

A reduced control flight only consists of checking some aircraft system functions that are directly or indirectly related to the work carried out.

A reduced control flight is carried out:

- When a ground test is not enough to detect the origin of a malfunction, or to confirm that a system is operating correctly
- After a wing or flight surface change
- After an engine or a propeller change
- After radio-communication has been installed, especially after new aerial installation.

## SECTION 6 - MAINTENANCE OPERATIONS

Maintenance operations table

- + operations to be carried out
- operations not to be carried out

AIRCRAFT SYSTEM	VJ	VP 1	VP 2	VA	GV	REMARKS
<b>11-00-00 Placards and markings</b>						
Check markings compliance and that placards are in good condition. Replace if necessary.	-	-	-	+	+	
<b>12-20-00 Runway inspection</b>						
Complete cleaning of the aircraft if necessary.	+	-	-	+	+	
Inflate tires, lubrication if necessary.	+	-	-	+	+	2,8 bar – 40,6 psi
<b>23-00-00 VHF Communication</b>						
Operational test.	+	-	-	-	-	
Global test.	-	-	-	-	+	Bench test every 6 years
<b>24-10-00 Alternator belt</b>						
Check general condition and tightness.	+	+	+	-	-	
<b>24-32-00 Alternator</b>						
Check tightness and electrical connectors.	-	+	+	-	-	
<b>24-32-10 Alternator brushes</b>						
Check condition, replace if necessary.	-	-	+	-	-	Prestolite only
<b>24-33-00 Battery</b>						
Check condition, clean terminals, recharge or replace battery.	-	-	-	+	+	
<b>24-34-00 Aircraft wiring</b>						
Visually check electrical wiring from battery and alternator to main bus (CEEP plug).	-	-	-	+	+	
<b>24-60-00 Instrument panel wiring</b>						
Visually check wiring and junctions on main electrical bus, from CEEP plug to accessories.	-	-	-	+	+	
<b>25-00-00 Installations</b>						
Visually check pilot's seat.	+	-	-	-	-	
Visually check harness.	+	-	-	-	-	
Removal of pilot's seat.	-	-	-	+	+	

AIRCRAFT SYSTEM	VJ	VP 1	VP 2	VA	GV	REMARKS
Removal of harnesses to perform a detailed check and to clean up.	-	-	-	+	+	
<b>27-10-00 Ailerons</b>						
Functional check, movement (direction), check that ailerons are not stiff or do not have too much play. Check condition and attachment of spades.	+	-	-	+	+	
After removal of inspection panels, visually check controls from control stick to ailerons. Check the condition of ball joints, the tightness of lock nuts, the electrical bonding. Lubricate ball joints. Check condition of rods, particularly make sure there is no buckling.	-	-	-	+	+	
Check deflection of ailerons.	-	-	-	-	+	± 30°
<b>27-20-00 Rudder</b>						
Functional check, check movement, check that they are not stiff or do not have too much play.	+	-	-	+	+	
Rudder pedals. Check tracks condition, pedals and belts, eliminate play.	+	-	-	-	-	
Detailed inspection, disassemble rudder system.	-	-	-	+	+	
Rudder pedal cables. Lubricate and check the end fitting, check tightness of rods in the control system, check control system condition. Check cable condition on friction plates and pulley .	-	-	-	+	+	
Check pulleys condition and fuselage mounts tightness. Check side panel plates wear where cables pass through.	-	-	-	+	+	0.15 m.daN - 1.1 ft/lbs
Visually check rudder bell crank.	+	-	-	+	+	
Check rudder deflection.	-	-	-	+	+	± 30°
<b>27-30-00 Elevator &amp; tab</b>						
Functional check for elevator deflection, make sure that they are not stiff or do not have too much play	+	-	-	+	+	
Make sure that trim-tab is working properly and servo-motor is working softly. Make sure there is no play and that system is not reversible.	+	-	-	+	+	The trim-tab control is non-reversible. Excessive play might indicate that some parts are worn out or not tightened enough

AIRCRAFT SYSTEM	VJ	VP 1	VP 2	VA	GV	REMARKS
After removal of inspection panels, visually check control system from the control stick to the elevator. Check ball joints condition, the tightness of lock nuts, and the electrical bonding. Lubricate ball joints.	-	-	-	+	+	
Check rods, particularly make sure there is no buckling.						
Check the condition of battery mount and elevator bell crank. Make sure that general condition of plywood and bonding is good.	-	-	-	+	+	
Removal of elevator control system, control stick, forward rod, central rod, rear rod. Detailed check in case the ball joints require replacement.	-	-	-	-	+	
Removal of the rear and intermediate elevator bell cranks for detailed inspection and replacement of bearings if required.	-	-	-	-	+	
<b>28-10-01 Main tank</b>						
Visually inspect tank cap, seal condition, remove inspection panel, check tightness and sealing on the extension filler neck.	-	-	-	+	-	
Visually inspect tank, check for possible leaks on soldered areas, check the seal on the exit connections, check the seal on the inverted pick-up tube base plate.	-	-	-	+	-	Remove instrument panel
Remove main tank, carry out a detailed inspection testing seals, look for cracks on the soldered areas, take out the inverted pick-up tube, check manifold condition, carry out life-limit inspection (10 years). Clean tank.	-	-	-	-	+	
Carry out a detailed inspection of attachment straps.	-	-	-	-	+	
Calibrate gauge. Make sure of fixation and gauge sealing.	-	-	-	+	+	
<b>28-10-00 Auxiliary tanks</b>						
Visually inspect tank caps, check seals condition, check that safety chains are in place, check that air vents are operating correctly.	+	-	-	+	+	
Using a lamp, visually check for openings in caps, check the strainer condition, make sure that there is no dirt.	-	-	-	+	+	

AIRCRAFT SYSTEM	VJ	VP 1	VP 2	VA	GV	REMARKS
After removal of the leading edge fairings, make sure that there are no leaks on tank hatches or on gauge base plates.	-	-	-	+	+	
Calibrate and test gauges.	-	-	-	+	+	
<b>28-20-00 Distribution</b>						
Check that fuel selector works correctly, check seal on joints.	-	-	-	+	+	
Visually inspect air vent system, check seals on joints.	-	-	-	+	+	
Visually inspect the air vent exit, make sure it is clean.	+	-	-	+	+	
Carry out a detailed inspection of distribution system tubing, check that there is no wear due to rubbing, check joints condition.	-	-	-	-	+	
Removal, visual inspection and cleaning of fuel filter.	-	+	+	-	-	
Functional test of electric pump, make sure that the drain has no leak, check mount attachments, check seals on the joints.	-	+	+	-	-	
<b>31-10-00 Instruments</b>						
Visually inspect instrument panel, general condition of the instruments, make sure that calibration placard is in correct place.	+	-	-	+	+	
Removal of instrument panel, detailed inspection of supports.	-	-	-	+	+	
<b>32-10-00 Main landing gear</b>						
Visually inspect landing gear struts, check that there is no delamination or damage.	+	-	-	+	+	
Detailed inspection of undercarriage mount, make sure there are no cracks or permanent damage.	-	-	-	+	+	Struts : 3 m.daN, 22 ft/lbs. Mount : 5 m.daN, 36 ft/lbs
<b>32-40-00 Wheels and brakes</b>						
Removal, cleaning, condition checking of wheel fairings.	-	-	-	+	+	
Check parking brakes valve, make sure there is no connector leak.	-	-	-	+	+	

AIRCRAFT SYSTEM	VJ	VP 1	VP 2	VA	GV	REMARKS
Visually inspect wheels and tires, axles and supports, check brake pads and tire wear.	+	-	-	+	+	The tyre pressure is 2.8 bars / 40.61 Psi. Caution : in case of pads replacement, control brake fluid level
Removal of wheels to carry out a detailed inspection, check bearings condition, check the coatings on the rims and make sure that there is no damage, check the tire wear, carry out a detailed inspection of axles and supports.	-	-	-	-	+	
Check main brake cylinders condition before taking off rudder pedal base plate. Check that there are no leaks, check brake fluid level.	+	-	-	-	+	
Functional test of brake system, test parking brake.	+	-	-	+	+	
<b>32-70-00 Auxiliary landing gear</b>						
Make sure that there is no play in rear wheel vertical pivot, lubricate if required. Check tire wear, make sure that the wheel has not permanently yielded, measure height of rudder from ground, which should be more than 180 mm.	+	-	-	-	-	
Removal of wheel fairing, removal of wheel assembly for a detailed inspection, check bearings and tire wear, check strut condition. Replacement of shock absorbers, check mounting bolts condition.	-	-	-	+	+	
<b>34-10-00 Air speed indicator</b>						
Removal of control panel to carry out a detailed inspection of the air speed indicator circuit.	-	-	-	+	+	
Visually inspect the pitot tube and static system, make sure that both are clean.	+	-	-	+	-	
Removal of anemometer and altimeter to carry out a bench test.	-	-	-	-	+	
Detailed inspection of pitot tube and static system in the fuselage, clean using pressurized air and then test for tightness.	-	-	-	-	+	
<b>34-20-00 Compass</b>						
Visually inspect and make sure that compass calibration curve is in place.	+	-	-	+	-	
Removal for bench test and calibration on aircraft.	-	-	-	-	+	

AIRCRAFT SYSTEM	VJ	VP 1	VP 2	VA	GV	REMARKS
<b>52-40-00 Inspection panels</b>						
Removal of inspection panel assemblies, check hardware condition.	-	-	-	-	+	
<b>53-00-00 Fuselage</b>						
Visually inspect plywood coating and paintwork.	+	-	-	+	+	
Visually inspect plywood and bonding inside the fuselage, through inspection panels, using suitable lighting.	-	-	-	+	+	
Visually inspect wing-fuselage framework attachment.	-	-	-	+	+	
Visually inspect drain eyelet.	-	-	-	+	+	
After removal of pilot's seat and control stick cover, detailed inspection of fuselage structure in main area.	-	-	-	+	+	
Visually inspect rudder pedal support blocks.	-	-	-	+	+	
Visually inspect attachment fittings on the rear spar, check tightness of bolts.	-	-	-	+	+	1.5 m.daN - 11 ft/lbs.
Check tightness of main spar bolts.	-	-	-	+	+	5 m.daN - 36 ft/lbs.
Visually inspect and check tightness of the attachment fittings on the engine mount.	-	-	-	+	+	1.5 m.daN - 11 ft/lbs (Internal nuts)
	-	-	-	+	+	3 m.daN - 22 ft/lbs (external nuts)
Check attachments of all aerials on the fuselage.	-	-	-	+	+	
Visually inspect and check tightness of canopy attachments.	-	-	-	+	+	
<b>55-10-00 Horizontal stabilizer</b>						
Carry out visual inspection, check that there is no damage to the leading edge, repaint if required.	+	-	-	+	+	
Removal of fairings, check tightness of bolts.	-	-	-	+	+	0.5 m.daN - 3.6 ft/lbs.
Removal of stabilizer, detailed inspection of support and attachments to fuselage, repair areas which have impacts, and paint if required.	-	-	-	-	+	0.5 m.daN - 3.6 ft/lbs.
Check support hinges condition, adjust tightness.	-	-	-	-	+	0.15 m.daN - 1.1 ft/lbs.
<b>55-20-00 Elevator &amp; tab</b>						
Visual inspection, check that static weights in leading edge slat do not move. Check and lubricate hinges if required.	+	-	-	+	-	

AIRCRAFT SYSTEM	VJ	VP 1	VP 2	VA	GV	REMARKS
Check tab condition, and make sure that there is no play, check control rod attachments, check control rod fittings, lubricate hinges if needed.	+	-	-	+	-	
Removal of elevator, carry out detailed inspection of surface, check static weights, check condition of bearing adapters, replace if needed, check the condition and the attachment of the rudder bell crank.	-	-	-	-	+	
Check tab hinges condition, lubrication, check tightness of control lever. Lubricate hinges before reassembly.	-	-	-	-	+	
Check deflection.	-	-	-	-	+	Tab $\pm 10^\circ$ Elevator + $20^\circ$ / - $23^\circ$
<b>55-30-00 Vertical stabilizer</b>						
Check that there is no damage to leading edge, paintwork touch up if needed.	+	-	-	+	+	
Visually inspect hinge fittings, paying particular attention to lower fitting on which stops are joined to, make sure that there are no cracks.	+	-	-	+	-	
After removing rudder, take off hinge supports to carry out a detailed check.	-	-	-	-	+	0.15 m.daN - 1.1 ft/lbs
<b>55-40-00 Rudder</b>						
Visual inspection and functional check to make sure that there are no friction points, lubricate the ball bearing fitting if needed, make sure that there is no damage on rudder, (projections, rear wheel).	+	-	-	+	-	
Take off rudder, check wear on rear wheel fittings, replace if required, check that general condition is good, make sure that there is no damage under the rudder, repaint if necessary. Lubricate fittings when assembling.	-	-	-	-	+	
Check deflections.	-	-	-	-	+	$\pm 30^\circ$
<b>56-10-00 Canopy (windscreen) Plexiglas</b>						
Cleaning, make sure that there is no cracking, use Altupol to remove any streaks, functionally check closing system, make sure that there is a security rope and that it is safely attached.	+	-	-	+	+	
Functional check of jettisoning system, removal of windscreen to carry out a detailed inspection, check condition of the joint, check latching and ejection systems, lubricate hinges.	-	-	-	+	+	

AIRCRAFT SYSTEM	VJ	VP 1	VP 2	VA	GV	REMARKS
<b>56-40-00 Belly windows</b>						
Clean macrolon using a soft cloth, check condition of bonding, make sure that there are no cracks.	+	-	-	+	+	Never use fuel. Surgical spirit authorized.
<b>57-10-00 Wing</b>						
Visually inspect upper and lower surfaces, check general condition, make sure that there is no damage to the leading edge, that there are no signs of delamination. Check attachment of sighting device.	+	-	-	+	+	
After removing inspection panels, carry out an inspection of internal structure along control lever attachment, check fittings condition.	-	-	-	+	+	
After removing ailerons, check condition of bearings on brackets.	-	-	-	-	+	
<b>57-60-00 Ailerons</b>						
Visually inspect surfaces, check condition of the adhesive tapes near hinges, check attachment and condition of the compensation spade, check condition of the spade support lever and the control fitting, check axle locks, lubricate axles if needed.	+	-	-	+	+	
Remove ailerons, carry out a detailed check of supports and axle attachments.	-	-	-	-	+	Sup. 0.15 m.daN-1.1 ft/lb. Axle 1.5 m.daN - 11 ft/lbs.
Check deflection.	-	-	-	-	+	± 30° ± 2°.
<b>61-10-00 Propeller &amp; spinner</b>						
Check condition and attachment of spinner, check blade condition, blade shake is allowed up to 1/8" and a radial play of 2° is acceptable.	+	+	+	-	-	
Removal of spinner, check hub condition, make sure that there are no cracks, check tightness of attachment bolt. Make sure that all safetying are intact, check spinner mounting plate.	-	-	+	-	-	8.7 to 9.2 m.daN 63 to 66 ft/lbs.
Make sure there are no grease or oil leaks, check position and attachments of the counterweights.	-	-	+	-	-	MT-Prop. Man E-124
Check condition of the leading edge of propeller, traces of normal erosion are acceptable, deep impacts must be repaired, make sure there are no cracks on the blade erosion sheet or between blade erosion sheet and fiberglass, cracks may appear on the fiber, but should not inflate due to moisture. Replace the adhesive protection if needed.	-	+	+	-	-	Inspection of blades : MT-Prop. Man E-124.

AIRCRAFT SYSTEM	VJ	VP 1	VP 2	VA	GV	REMARKS
<b>61-20-00 Propeller control</b>						
Check condition, attachments, make sure there are no leaks.	+	+	+	-	-	
Check regulator control condition, lubricate ball joint, check control attachment on engine, make sure that the control in cockpit works correctly, if necessary repaint control handle in blue color.	-	+	+	-	-	
<b>71-10-00 Engine cowling</b>						
Removal of engine cowling, check condition of attachments, check condition of gelcoat and paintwork, paintwork touch up when necessary. Check condition of attaching hardware, check condition of cowling supports attachments and their tightness on firewall.	-	+	+	-	-	
<b>71-20-00 Engine mount</b>						
Detailed check of engine mount, look for cracks.	X	+	+	-	-	BS CAP231 71-001 (n°1) every ten aerobatics flights.
Check shock mounts condition. When aircraft is used a lot for freestyle aerobatics, shock absorbers life may be reduced to 100h. While replacing the shock absorbers, check condition of attachment bolts, and engine supports, check tightness of supports on engine.	-	+	+	-	-	Bolts : 5.2 to 5.7 m.daN, 37.5 to 41.5 ft/lbs. Supports : 4.15 m.daN, 30 ft/lbs.
<b>71-30-00 Firewall</b>						
Check condition of firewall metal sheet, check control passage seals and piping to the cockpit, check condition of thermic shields on mechanical pump and fuel filter, check accessory attachments on the wall.	-	+	+	-	-	
<b>71-60-00 Air vents</b>						
Check the air filter condition, remove, clean, replace if needed.	-	+	+	-	-	
Check baffles on cylinders, air inlets, make sure there are no cracks, replace if needed.	-	+	+	-	-	
<b>71-70-00 Drains</b>						
Check condition of the drain under servo-injector (copper tubing) This part is vulnerable when removing and replacing cowlings.	-	+	+	-	-	

AIRCRAFT SYSTEM	VJ	VP 1	VP 2	VA	GV	REMARKS
<b>72-00-00 Engine</b>						TBO 1400 hours
Visually check front bearing, make sure there are no leaks on the crankshaft oil shield.	-	+	+	-	-	
Visually inspect the housing, make sure there are no leaks on the horizontal and vertical seals, check tightness of the lower housing.	-	+	+	-	-	
Visually inspect the rear housing, make sure there are no leaks on seals.	-	+	+	-	-	
Remove the rocker box covers, inspect valve springs, valve tappets and rods, replace seals on the rocker box covers.	-	-	+	-	-	400 h SB-301B.
Test for wear on the exhaust valves.	-	-	+	-	-	400 h SB-388B.
Measure cylinder leakage ratio.	-	-	+	-	-	SI-1191
Visually inspect cylinders, cylinder fins, and rocker box covers, make sure there are no cracks.	-	+	+	-	-	
<b>73-10-00 Distribution</b>						
Remove filter, clean filter.	-	-	+	-	-	
Visually inspect fittings, tubing, mechanical and electrical pumps, make sure there are no leaks, drain circuits.	-	+	+	-	-	
Check expiry date of the piping on servo-injector pump.	-	+	+	-	-	VL 10 years.
<b>73-20-00 Controlling</b>						
Visually inspect fuel-injector, check condition of gas and mixture control levers, lubricate ball joints.	-	+	+	-	-	
Make sure fuel and mixture controls operate correctly, make sure there are no friction points, check condition of red paint on mixture control handle.	-	+	+	-	-	
Check condition, and attachments on the injection and distribution piping.	-	-	+	-	-	SB-342A
<b>73-30-00 Indicating</b>						
Check condition of the piping from distributor to fuel flow.	-	-	+	-	-	
Removal of fuel flow for bench test.	-	-	-	-	+	
<b>74-10-00 Magnetos</b>						
Visually inspect the magnetos, make sure there are no cracks, examine earth wiring connections, make sure there is no oil inside magneto.	-	+	+	-	-	
Inspect magneto breaker point clearance.	-	-	+	-	-	SB-183A

AIRCRAFT SYSTEM	VJ	VP 1	VP 2	VA	GV	REMARKS
Check the alignment of engine timing marks and timing of magneto to engine.	-	-	+	-	-	SI-1437
<b>74-20-00 Distribution</b>						
Check distribution blocks, make sure there are no cracks, corrosion, burning, check condition of the contact springs.	-	+	+	-	-	
Visually inspect ignition harness.	-	+	+	-	-	
Bench test of ignition harness.	-	-	+	-	-	
Clean and check plugs.	-	-	+	-	-	
Bench test of plugs.	-	-	+	-	-	
<b>74-30-00 Switching</b>						
Bendix ignition switch, check condition of spring, ground-run shut-off test.	-	+	+	-	-	
<b>78-00-00 Exhaust</b>						
Visually inspect, make sure there are no cracks on cylinders or the 6 to 1 piping.	-	+	-	-	-	
Removal of exhaust, detailed inspection, look for possible cracks, replace joints.	-	-	+	-	-	
<b>79-10-00 Storage</b>						
Drain oil level.	-	+	+	-	-	For engine unit with a small capacity screen every 25 hours. 10 hours after the first fly. SB-480C
Remove and replace filter cartridge. Removal and detailed inspection of strainer and filter cartridge screen to detect any metal particles.	-	-	+	-	-	
Check oil level.	+	+	+	-	-	
<b>79-20-00 Distribution</b>						
Visually inspect oil radiator and Christen system, make sure it is clean, there are no leaks, and check the fittings.	-	+	+	-	-	
Check condition and path of the oil tubing, make sure there are no leaks.	-	+	+	-	-	
Visually inspect the oil breather circuit, the duct on firewall, the tubing in fuselage.	+	+	+	-	-	

AIRCRAFT SYSTEM	VJ	VP 1	VP 2	VA	GV	REMARKS
Removal of oil cooler and Christen system to be fuel rinsed, rinse the associated pipes.	-	-	-	-	+	
<b>79-30-00 Indicating</b>						
Visually inspect the oil pressure and temperature gauges, make sure they are working correctly.	-	+	+	-	-	
Visually inspect the instrument panel indicators, make sure they are working correctly when carrying out a ground run.	-	+	+	-	-	
<b>80-00-00 Starting</b>						
Visually inspect starter, and fittings, check the shifting gear, make sure there is no damage to the teeth.	+	+	+	-	-	
Visually inspect the starter ring gear, make sure that there is no damage to the teeth.	+	+	+	-	-	
Check the wiring condition, from starter to relay on the firewall. Check connections condition.	-	-	+	-	-	
<b>GENERALITES.</b>						
Do a ground run check.	-	+	+	-	-	