



## MAINTENANCE & SERVICE MANUAL

**IBIS AIRCRAFT S.A.**

**MAGIC GS-700**

### AIRCRAFT

**BRAND:** *IBIS*

**MODEL:** *MAGIC GS 700 / 2 - SEATS*



## CONTENTS

### INTRODUCTION

#### SECTION I

1. TECHNICAL PRODUCTS PACKAGE
2. FILE OF YOUR AIRCRAFT
3. DATA ON BOARD THE AIRCRAFT

*3.1 In view at all times*

#### SECTION II

1. PERIODIC INSPECTIONS PROGRAM
2. FIRST INSPECTION AFTER THE DELIVERY
3. INSPECTION PROGRAM STRUCTURE
4. REPAIRS OR MAJOR CHANGES
5. INSPECTION SHEET "A"
  - 5.1 Pivot points inspection
  - 5.2 *Check of the right tension in all control cables.*
  - 5.3 *Hoses check: fuel and oil*
  - 5.4 *Verification of the startup system cables*
  - 5.5 *Spark plugs cleaning*
6. INSPECTION SHEET "B"
  - 6.1 *Compression test*
  - 6.2 *Oil change*

- 6.3 *Verification of the stick / wheel pitch*
- 6.4 *Verification of the pitch of the ailerons of the wing*
- 6.5 *Verification of the pitch of the elevator*
- 6.6 *Verification of the pitch of the wheel*
- 6.7 *Check of the brakes*
- 6.8 *Check of the landing gear*

**7. INSPECTION SHEET "C"**

- 7.1 *Check of the rolling wheel control system*
- 7.2 *General check of all the rivets*
- 7.3 *Check of the fastening points of the upper and lower planes.*
- 7.4 *General checking of the security (torque) in all the bolts AN*
- 7.5 *Instruments checking*
  - 7.5.1 *Flight instruments verification*
  - 7.5.2 *Power plant instruments verification*
  - 7.5.3 *Communication and navigation instruments verification*
- 7.6 *Magnetos Verification*
- 7.7 *Checking of the exhaust manifolds (collectors)*
- 7.8 *Checking of the firewall*
- 7.9 *General engine torque checking*
- 7.10 *Checking of the torque of the propeller bolts*
- 7.11 *Cylinders compression test*
- 7.12 *Spark plugs change*

*7.13 Water radiator verification*

*7.14 Oil radiator verification*

### **SECTION III**

#### **1. SERVICE**

*1.1 Engine oil*

*1.2 Engine cooling system*

*1.3 Fuel specifications*

*1.4 Battery maintenance/service*

*1.5 Painted surfaces*

#### **2. FAILURES ANALYSIS**

### **ATTACHED DOCUMENTS**

**ULTRALIGHT AIRCRAFT MAINTENANCE AND SERVICE FORM**



## **INTRODUCTION**

In order that your *IBIS MAGIC GS-700* preserves its trustworthiness and flight performance, it is recommended that the procedures indicated in this manual be followed.

It is very important to include preventative maintenance and lubrication planned programs that are based on the weather conditions at your base and the kinds of flights the airplane is subjected to.

## **IMPORTANT INFORMATION**

All mail and data regarding your aircraft will include its series number.

The license plate of the aircraft is placed at the rear part of the fuselage, and it contains the following data:

- Type of aircraft
- Brand name
- Model
- Series number
- Date of manufacturing

## **LETTERS AND SERVICE BULLETINS**

They are published in order for you to always be informed about the innovations that might affect the maintenance and/or structure of your aircraft, as well as the improvements and new adaptations applicable to your aircraft.

For further information, please contact us:

## ***IBIS AIRCRAFT S.A.***

**Office Address:** Calle 13A # 100-35 Cali (Valle del Cauca)

**Telephone:** (57-2) 681 44 33 ext. 105 – Fax: ext.104

**Factory:** Vereda Paso de la Bolsa Km 2 Via la Ventura Jamundi (Valle del Cauca).

**Telephone:** (57-2) 550 42 80

*Colombia, South America*

[www.ibis-aircraft.com](http://www.ibis-aircraft.com)

## SECTION I

### 1. TECHNICAL PRODUCTS PACKAGE

At the moment the aircraft is taken out from the factory, the following documents will be delivered to the respective client:

- User Manual
- Maintenance and Service manual
- Engine Manual

The User Manual approved by **IBIS AIRCRAFT S.A.** takes into account the airworthiness limitations of the aircraft, the service life of components and parts, scheduled maintenance and service, failure analysis, and so forth, for good use of the aircraft.

If for some reason the *User Manual* or the *Maintenance & Service Manual* are lost or ruined, a new one may be obtained through your service center, and in doing so, you must indicate the model and series number of your aircraft.

### 2. FILE OF YOUR AIRCRAFT

In the file belonging to your aircraft, you will have to keep the following information, among other data demanded by the regulations in each country:

- Airworthiness Certificate
- License plate certificate
- Inscription in an Flying Club
- Purchase invoice
- Copy of the Private Pilot's License authorized for flying

Ultra light Aircrafts of up to 750 Kg., issued by the Air Control Civil Authority.

- Copy of the Civil Responsibility Insurance Certificate
- Antinarcotics Agency Certificate (Where applicable)

### 3. DATA ONBOARD THE AIRCRAFT

#### 3.1 IN VIEW AT ALL TIME

Airworthiness Certificate  
Radio Operator's License  
Registration  
Owner's Manual  
Weight and Balance

- Aircraft and engine log
- Full checklist duly laminated

## SECTION II

### 1 PERIODIC INSPECTION PROGRAM

In compliance with the **IBIS AIRCRAFT S.A.** requirements, the **IBIS MAGIC GS-700** has a periodic inspection program, in this case, based on the time in flight of the Ultra light Aircraft. The selected maintenance program, besides preventing degradation in the Airworthiness of the aircraft, divides the work load for maintaining it into small groups of inspection activities which are performed between short periods of flight.

The maintenance program developed here provides technical support to the owner and/or pilot, in order to fulfill the responsibility of preserving the aircraft in the best airworthiness condition, inspecting it periodically and ensuring that component and/or part changes are carried out at the recommended times based on the experience of the manufacturers, of both the aircraft and the power plant.

Timely inclusion of this program will allow you more availability of your airplane at truly lower prices.

### 2. FIRST INSPECTION AFTER THE DELIVERY

It is highly recommended that the first inspection be carried out at the manufacturing plant or at your authorized service center for **IBIS AIRCRAFT S.A.** Plan in advance to take your aircraft to the first inspection, allowing them to make any minor adjustments that might be necessary.

### 3. INSPECTION PROGRAM STRUCTURE (See program)

- Every Twenty-five (25) hours
- Every Fifty (50) hours
- Every One hundred (100) hours

## 4. REPAIRS OR MAJOR CHANGES

Before repairing or installing fittings or performing major changes of the ultra light aircraft it is necessary to ask for approval to *IBIS AIRCRAFT S.A.*; intending to comply with the regulations that assure that its airworthiness is preserved. These major maintenance practices will be performed solely by mechanical shops for this type of aircraft and authorized by the manufacturer, according to the Aeronautics Regulations Manual and the indications imparted by the manufacturer.

## 5. INSPECTION SHEET “A”

The inspection sheet “A” is to be executed once the first-25 hours of flight have been reached by the aircraft.

### 5.1 PIVOT POINTS INSPECTION

- a. Check the door hinges and rivets for abnormal play and/or loose or missing rivets, and look also for the security and condition of the bolts.
- b. Check the pivot point of the stick for security, abnormal play, and freedom of motion.
- c. Check the pedals mechanism for abnormal play and freedom of motion.
- d. Check the pivot points of the ailerons and flaps for abnormal play, loose or missing elements and two minimal ropes projected from the nut in each bolt, in its case.
- e. Check the pivot points of the rocker arms, pitching control of the elevator, looking for abnormal plays, loosen or missing elements and two minimal ropes projected from the nut of each bolt.
- f. Check each of the three wheels of the landing gear for abnormal plays in their pivots, security and turn freedom.
- g. Check the pivot points of the wheel for abnormal plays, loosen or missing elements, and also the two minimal ropes projected from the cable of each nut.

**NOTE:**

If it is abnormally play, the bolt or pin may be scratched.  
Change it.

Also, wear may be found in the hubs or supports. Change  
them.

Make sure that the nuts and pins/keys are correctly placed,  
as required, and that there are no ropes in the friction area.

## 5.2 CHECK FOR THE RIGHT TENSION IN ALL THE CONTROL CABLES

- a. Check control cables, looking for frayed threads by running a piece of cloth over doubtful sections.
- b. Check the pulleys, looking for friction marks in supports and grooves, and look also for turning freedom.
- c. Check the ends of the cables, plates, and angles, for their security and condition.

## 5.3 HOSES CHECK: FUEL AND OIL

- a. Check fuel lines and oil lines for leaks and for hoses which are loose, deteriorated, unprotected, split, worn and/or hardened.
- b. Check the supports of the fuel line and oil lines of the system for security, holes, and friction wear.
- c. Check the entire fuel system, and also the oil system, for rivets that might have possible leaks, even if they are tiny.
- d. Make sure that all fuel and oil system attachments are secured and tightened.

## 5.4 VERIFICATION OF THE STARTUP SYSTEM CABLES

- a. Make sure the high tension cables in the magnetos are well connected.
- b. Check the integrity of the insulation of the spark plug cables for deterioration due to: *solvents, rubbing, overheating, and energy surges (sparks) toward the engine*.
- c. Make sure the spark plug cables and their protectors are properly inserted in the spark plugs.
- d. Check the wiring of the magnets—start up unit—for its condition, security, and effectiveness.

### 5.5 SPARK PLUGS CLEANING

- a. Take all the spark plugs out.
- b. Determine their color to ensure their mixture.
- c. Clean them out with gasoline, brush, and air dry if necessary.
- d. If needed, recalibrate them, according to the spark plug type.
- e. Reinstall them, using ropes lubricant, avoiding excessive force and secure them up.

## 6. INSPECTION SHEET “B”

The inspection sheet “B” is to be executed once the first-50 hours of flight have been reached by the aircraft.

### 6.1 COMPRESSION TEST

- a. Perform a compression test of the cylinders; compression must not be lower than that recommended by the engine manufacturer in any of the cylinders.

### 6.2 OIL CHANGE

- a. Change the oil, observing the specifications of the installed motor.
- b. Change the oil filter.

### 6.3 VERIFICATION OF THE STICK / WHEEL PITCH

- a. Forward (free without obstacles)
- b. Backward (free without obstacles)
- c. Right and left side (free without obstacle)

### 6.4 VERIFICATION OF THE PITCH OF THE AILERONS OF THE WING

- a. Right lateral – after the neutral point 15° downwards and 20° upwards.
- b. Left lateral – after the neutral point 15° downwards and 20° upwards.

## 6.5 VERIFICATION OF THE PITCH OF THE ELEVATOR

- a. After the neutral point                      Up      $30^{\circ} \pm 2^{\circ}$
- b. After the neutral point                      Down  $25^{\circ} \pm 2^{\circ}$

## 6.6 VERIFICATION OF THE PITCH OF THE WHEEL

- a. After the neutral point                      Right lateral      $25^{\circ}$
- b. After the neutral point                      Left lateral        $25^{\circ}$

## 6.7 CHECK OF THE BRAKES

- a. Test the operation and efficiency of the breaks for stopping the Ultra light Aircraft.
- b. Check wear of the calipers.
- c. Check the discs and hydraulic pumps (MASTER CYLINDERS).
- d. Check the mechanism of each break for freedom of movement, security and proper operation; Check also the hoses, cables, and springs for state and security.
- e. Check the system to make sure there are no bubbles or is contaminated with another type of substance that it is not regular hydraulic oil. Purge the system.

**NOTE:** Readjust and/or change whatever is necessary to be changed in the system.

## 6.8 CHECK OF THE LANDING GEAR

- a. Check for damage or wear in the shock absorbers, looking at its rubber and springs.
- b. Check the security and condition of the entire nose leg.
- c. Take the nose tire out, wash it, and reapply grease to the bearing. Install it and tighten it up just enough so as to take off the axial play.

- d. Check the nose tire for right pressure, sides wear and flat surface wear.
- e. Repeat “c” and “d”, but on the main landing gear tires.
- f. Check the state and security of the dock plate (platina muelle) of the landing gear legs.
- g. Check the forks of the front nose tire for alignment, condition, and security.

## 7. INSPECTION SHEET “C”

The inspection sheet “C” is to be executed once the aircraft has reached the first 100-flight hours.

### 7.1 CHECK OF THE ROLLING WHEEL CONTROL SYSTEM

- a. Check the condition and security of the direction control bars.
- b. Verify that the tire is well centered, in conjunction with the pedals when they are aligned.
- c. Check the condition and security of the buffer limits.
- d. Check free functioning toward each side.

### 7.2 GENERAL CHECK OF ALL THE RIVETS

- a. Check the left wing skins and auxiliary surfaces for damaged, loose, or missing rivets.
- b. Check the windshield for damaged, loose, or missing rivets.
- c. Check the right wing skins and auxiliary surfaces for damaged, loose, or missing rivets.
- d. Check the front fuselage and cabin for damaged, loose, or missing rivets, in the upper and lower surfaces.
- e. Check the fuselage for damaged, loose or missing rivets, in the upper and lower skins.

- f. Check the empennage surface skins (*vertical stabilizer, drift and rudder, and elevator*) for damaged, loose, or missing rivets.

**7.3 CHECK OF THE FASTENING POINTS OF THE UPPER AND LOWER PLANES**

- a. Check with a flashlight, the fastening fittings of the fuselage wing root, upper of both struts of the wing (the fuselage anchorage to the main beam of the wing and fuselage anchorage to the canal in the leading edge of the wing) for fractures or tiny gaps, security, and/or damaged, loose, or missing rivets.
- b. Check for wear in the holes of the fittings, verify that there is no play when moving softly—up or down—the tips of the wings.
- c. Make sure that all the upper bolts of the wing are secure.
- d. Check the connectors and joints of the struts for condition and security.
- e. Check the assembly and fastening bolts of the struts. Tighten the cables while they are working.

**7.4 GENERAL CHECKING OF THE SECURITY (TORQUE) IN ALL THE BOLTS AN**

- a. Tighten bolts and nuts—while they are dry, not lubricated.

Bolts between the range: AN-3 to AN-6

Nuts AN365 (S.L.).

<b>Bolt</b>	<b>AN-3</b>	<b>AN-4</b>	<b>AN-5</b>	<b>AN-6</b>
<b>Torque (lb/inches) (Max)</b>	20	50	100	160

## 7.5 INSTRUMENTS CHECKING

Check the instruments for correct connections, security of the assembly, anti-vibration, defects, and scratches presence.

### 7.5.1 Flight Instruments *Verification*

Checking and calibration of basic flight instruments, as well as additional or extra instruments on the aircraft, must be taken into account, everything following the standards of the manufacturer.

- **AIRSPEED INDICATOR (0-140 MPH)**

Red line	130 mph
Amber Arch	100 – 120 mph
Green Arch	45 – 100 mph
White Arch	30 – 60 mph

- **ALTIMETER**

Check calibration

- **VARIOMETER**

Check calibration

- **TURN AND BANK COORDINATOR**

Check calibration

- **COMPASS**

Check calibration

### 7.5.2 Power plant Instruments *Verification*

Checking of the basic instruments of the power plant, as well as all the additional or extra instruments installed on the plane, must be taken into account, all checked according to the guidelines of the manufacturer. Range variation in the instruments depends on the engine chosen.

● **AIRSPEED INDICATOR**

Red line	Check maximum <b>rpm</b> , according to the engine.
Amber Arch (Superior)	Check high <b>rpm</b> , according to the engine.
Green Arch	Check <b>rpm</b> at medium power, according to the engine.
Amber Arch (Lower)	Check minimum <b>rpm</b> according to the engine.

● **WATER TEMPERATURE**

Red line	Check maximum temperature, according to the engine.
Green Arch	Check regular temperature, according to the engine.

● **OIL TEMPERATURE**

Red line	Check maximum temperature according to the engine..
Green Arch	Check regular temperature, according to the engine.
Red line (Lower)	Check minimum temperature, according to the engine.

● **OIL TEMPERATURE**

Red line (Superior)	Check maximum pressure, according to the engine..
Green Arch	Check regular pressure, according to the engine.
Red line (Lower)	Check minimum pressure, according to the engine.

● **EXHAUST GASES TEMPERATURE**

Red line	Check maximum temperature, according to the engine.
Amber Arch	Check high temperature, according to the engine.
Green Arch	Check regular temperature, according to the engine.

● **MANIFOLD (MAP)**

Check calibration, according to altitude
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## STROKE ROTAX ENGINE OPERATIONAL LIMITS

ENGINE	912 UL (80hp)	912 ULS (100hp)	914 UL (115hp)
<b>SPEED</b>			
Take - off	5800 rpm	5800 rpm	5800 rpm
Continuous Max.	5500 rpm	5500 rpm	5500 rpm
Neutral	1400 rpm	1400 rpm	1400 rpm
<b>OIL PRESSURE</b>			
Mínimum	22 PSI	22 PSI	22 PSI
Normal	29-73 PSI	29-73 PSI	29-73 PSI
Maximun	100 PSI COLD	100 PSI COLD	100 PSI COLD
<b>OIL TEMPERATURE</b>			
Mínimum	50° C (120°F)	50° C (120°F)	50° C (120°F)
Normal	90-110°C (190-230°F)	90-110°C (190-230°F)	90-110°C (190-230°F)
Maximun	140°C(285°F)	130°C(285°F)	130°C(285°F)
<b>CYLINDER HEAD TEMP. (CHT)</b>			
Maximun	150°C(285°F)	135°C(285°F)	135°C(285°F)
<b>CYLINDER WALL TEMP. (CWT)</b>			
Maximun	190°C(374°F)	190°C(374°F)	190°C(374°F)
<b>EXHAUST GASES TEMP. (EGT)</b>			
Take - off	880°C(1620°F)	880°C(1620°F)	880°C(1740°F)
Continuous Max.	880°C(1560°F)	880°C(1560°F)	880°C(1740°F)
Normal	880°C(1470°F)	880°C(1470°F)	880°C(1650°F)
<b>AIRBOX TEMP.</b>			
Maximun	N/A	N/A	72°C(162°F)
<b>FUEL TEMP.</b>			
Maximun	36°C(97°F)	36°C(97°F)	36°C(97°F)
<b>FUEL PRESSURE</b>			
Mínimum	2,2 PSI	2,2 PSI	AIRBOX PRES+2,18 PSI
Maximun	5,8 PSI	5,8 PSI	AIRBOX PRES+5,08 PSI
<b>COMPRESSION RELATIONSHIP</b>			
	9,0:1	10,5:1	9,0:1
<b>FUEL</b>			
Mínimum Octane	RON 90/MON 83	RON 95/MON 85	RON 95/MON 86
<b>US G/Hr CONSUMPTION</b>			
Take off at 5800 rpm	6,3	7,1	8,7
Continuous Max. 5500 rpm	5,6	6,6	7,2
75% 5000 rpm	5,1	5,3	5,7
<b>TORQUE</b>			
take off	5800 rpm/72,3 ftlb	5800 rpm/89,2 ftlb	5802 rpm/102,6ftlb
Cruise (Maximun Efficiency)	4800 rpm/75,9ftlb	5801 rpm/94,0ftlb	5802 rpm/106,0ftlb
<b>WATER TEMPERATURE</b>			
Normal	80-100°C(180-212°F)	80-100°C(180-212°F)	80-100°C(180-212°F)
Maximun	110°C(220°F)	110°C(220°F)	110°C(220°F)
<b>REDUCTING BOX RATIO</b>			
	2,27: Estándar	2,43:1	2,43:1
	2,43:1 Optional		

### 7.5.3 Communication *and navigation instruments verification*

Checking of the basic communication and navigation instruments, as well as all the additional or extra instruments installed on the aircraft, must be taken into account, all checked according to the guidelines of the manufacturer.

- **VHF RADIO**

Checking	Transmission
	Reception

### 7.6 MAGNETOS Verification

- Check that the magnetos are well secured.
- Make sure that the start up generator and mass cables are correctly connected to the startup coil.

### 7.7 CHECKING OF THE EXHAUST MANIFOLDS (Collectors)

- Check the flanges of the exhaust manifolds for leaks, gaps, fractures, and security.
- Take off the muffler, and check for gaps, fractures, and leaks that might transfer gases to the cockpit.
- Check the full exhaust system, making sure that it is tightly fastened; also check its condition, gliding gaskets, alignments, and leaks.

### 7.8 CHECKING OF THE FIREWALL

- Check the firewall, looking for open holes and gas leaks from the engine compartment.

- b. Check the seals
- c. Check the elements of the firewall for condition and security.

### **7.9 GENERAL ENGINE TORQUE CHECKING**

- a. See the User Manual of the engine manufacturer to see specifications as to the torque of the engine.

### **7.10 CHECKING OF THE TORQUE OF THE PROPELLER BOLTS**

- a. See the User Manual of the propeller manufacturer to see the technical specifications regarding the propeller torque.

### **7.11 CYLINDERS COMPRESION TEST**

- a. See the User Manual of the engine manufacturer to determine the effective compression relationship and verify the maximum efficiency.

### **7.12 SPARK PLUGS CHANGE**

- a. Install the new spark plugs according to the specifications of the User Manual of the engine and secure them according to the type of spark plug being used.

### **7.13 WATER RADIATOR VERIFICATION** *(When the engine is water cooled)*

- a. Hoses
- b. Clamps
- c. Couplers

### **7.14 OIL RADIATOR VERIFICATION**

- d. Hoses
- e. Clamp
- f. Coupler

## SECTION III

### 1. SERVICE

For fast and at-hand consultation, given below are materials, amounts, and specifications which are going to be included in the service of your Ultra light Aircraft.

The recommended intervals to perform this maintenance are also indicated in this part.

#### 1.1 ENGINE OIL

- a. To have better knowledge of the type of oils for the engine and the time spans in which it must be changed, see the User Manual of the manufacturer.

#### 1.2 ENGINE COOLING SYSTEM

- a. For more detailed information about the engine cooling system, see the User Manual of the manufacturer, in regard to water or air cooling. When the system is air-cooled, check that the air inlets are free and that the air circulates through the points where it must come in to refrigerate, according to the User Manual of the engine manufacturer.
- b. When the system is cooled by some substance, the type of substances indicated by the manufacturer must be taken into account, since it may be water, antifreeze mixture or a cooling mixture, and the like. Before every operation, check the liquid level and recharge, if necessary. Before taking the lid from the tank, place a piece of cloth on it and give a turn—so that it opens partially—letting the pressure to vent out. To avoid burns, avoid taking off the lid when the engine is hot.
- c. There are water and air settings as well. For further information, see the User Manual of the Engine Manufacturer.

### 1.3 FUEL SPECIFICATIONS

- a. Under no circumstances should a different fuel be used or one with a higher or lower octane than that specified within the type and range established by the engine manufacturer.
- b. The capacity of each tank in the wings of the aircraft IBIS MAGIC GS-700 is 9 US gal (33.3 lt.), per 2 tanks, plus 1 for reserve in the fuselage of 2 US gal (7.4lt.).
- c. In order to confirm that the tanks are full—since they are interconnected, and the system works by gravitational force—, after the first fill-up, move the aircraft by the wing tips and re-fill until they are completely full.
- d. Another indication of the amount of fuel is found in the visual gauges inside the cockpit at the root of each wing of the plane.

### 1.4 BATTERY MAINTENANCE/SERVICE

- a. Make sure that the connections are always clean and tight.
- b. Check that the voltage and amperage are always correct according to the type of battery being used.
- c. Since leaving the battery in places with conductivity makes it discharge faster, it is preferable to leave it in a place covered by isolating materials.
- d. If the battery does not have an adequate charge, charge it according to the specifications of the battery manufacturer.

**NOTE:** Try not to charge it very rapidly.

### 1.5 PAINTED SURFACES

Usually, the painted surfaces may be kept brilliant by washing with water and neutral soap, followed by rinsing with water, and drying with a dry cloth. Take oil or grease off with a soft cloth dampened with a mild solvent.

It is not necessary to wax painted surfaces in order to keep them brilliant. Nevertheless, if you wish, use a fine car wax.

In some parts, such as the leading edges of the planes, the front part of the engine lids, and the propeller cone, it is advisable to apply several layers of wax (two or three), in order to prevent the abrasion produced in these areas.

## **2. FAILURES ANALYSIS**

Remember, failure analysis is analytic work which requires a methodological sequence. This process tries to make a comparative analysis between the regular working and the abnormal condition.

**IN CASE OF ANY FAILURE, SEE THE USER MANUAL OF THE ENGINE.**

## ULTRALIGHT AIRCRAFTS MAINTENANCE AND SERVICE FORM

<b>MAINTENANCE &amp; SERVICE FORM OF 50 AND 100 HOURS</b>			<b>DATE</b>		<b>dd/mm/yyyy</b>	
AIRCRAFT/TYPE:		SERIES:		<b>LICENSE PLATE</b>		
AIRCRAFT TOTAL HOURS:				<b>AIRCRAFT DURG HOURS</b>		
ENGINE/TYPE:		SERIES:		<b>POWER:</b>		
TOTAL ENGINE HOURS				<b>ENGINE DURG HOURS</b>		
<b>ITEM</b>	<b>WORK LIST</b>	<b>50</b>	<b>100</b>	<b>TECH- NICIAN</b>	<b>INSPECTOR</b>	
<b>PROPELLER</b>						
1	SPINNER FOR CONDITION AND SECURITY	X	X			
2	CLEAN AND LUBRICATE THE ACTUATOR AXIS	X	X			
3	CHECK THE CONDITION AND ANGLE OF THE BLADES	X	X			
4	ADHESIVE TAPES CONDITION AND SECURITY	X	X			
5	CLEAN AND WAX THE BLADES	X	X			
6	VERIFY THE CONDITION AND SECURITY OF THE ENGINE ALTERNATOR BRUSHES	X	X			
7	CHECK THE TORQUE OF THE FASTENING NUTS OF THE PROPELLER (Torque according to the manufacturer)		X			
<b>ITEM</b>	<b>WORK LIST</b>	<b>50</b>	<b>100</b>	<b>TECH-</b>	<b>INSPECTOR</b>	

				<b>NICIAN</b>	
<b>ENGINE</b>					
1	TAKE THE COWLINGS OFF, WASH THEM, AND CHECK FOR GAPS AND WASTE.	X	X		
2	CHECK THE SECURITY AND OF THE FASTENING SYSTEM AND ADJUST DE COWLINGS.	X	X		
3	CHECK LEAKS IN THE AXIS RETAINER SEAL OF THE CRANKSHAFT.	X	X		
4	CHECK OIL LEAKS AND SECURITY IN THE ROCKER ARMS LIDS	X	X		
5	CHECK THE ADMISSION AND FUEL SUPPLY HOSES FOR LEAKS AND SECURITY.	X	X		
6	CHECK THE FLANGES OF THE EXHAUST MANIFOLDS FOR LEAKS, GAPS, AND THE SECURITY OF THE ASSEMBLING.		X		
7	TAKE THE MUFFLER OFF, AND CHECK IT FOR CORROSION		X		
8	CHECK FULLY THE EXHAUST SYSTEM FOR SECURE FASTENING AND STATE. CHECK ITS GLIDING GASKETS FOR ALIGNMENT AND LEAKS.		X		
9	CHECK ADJUSTMENT SPRINGS OF THE CHAMBER FOR CONDITION AND SECURITY.		X		
10	CHECK THE E.G.T. CLAMP FOR CONDITION AND SECURITY.		X		
ITEM		50	100	TECH-	INSPECTOR

	WORK LIST			NICIAN	
11	TAKE THE SPARK PLUGS OUT; DETERMINE THE COLOR TO VERIFY THE RIGHT MIXTURE.	X	X		
12	CLEAN AND CALIBRATE (According to the type of spark plug).	X	X		
13	INSTALL THE SPARK PLUGS; USE THREAD LUBRICANT; AND ADJUST (According to the type of spark plug).	X			
14	MEASURE CYLINDER COMPRESSION (According to the type of engine).	X	X		
15	COMPRESSION RELATIONSHIP (Determine according to the type of engine, seeing the User Manual of the Manufacturer).		X		
16	CHANGE ENGINE OIL (Recommended to be used, according to the manufacturer).	X	X		
17	CHANGE OIL FILTER (Recommended to be used, according to the manufacturer).	X	X		
18	CHECK THE OIL RADIATOR FOR LEAKS, ASSEMBLY SECURITY, AND CLEANING OF THE HIVE.	X	X		
19	CHECK THE WATER RADIATOR FOR LEAKES, ASSEMBY SECURITY (According to engine, when required)	X	X		
20	MAKE SURE THE HIGH TENSION CABLES ARE CONNECTED SECURELY TO THE MAGNETS AND SPARK PLUGS.	X	X		
ITEM		50	100	TECH- NICIAN	INSPECTOR

	WORK LIST				
21	MAKE SURE OF THE GOOD CONDITION OF THE HIGH TENSION CABLES FOR BRUSHING; WARE OVERHEATING, GAPS, SPARK JUMPS OR DAMAGES.	X	X		
22	CHECK THE WIRING OF THE MAGNETS FOR LEAKS, GAPS, AND ASSEMBLY SECURITY.	X	X		
23	MAKE SURE THE CABLES OF THE START UP GENERATOR AND MASS CABLES ARE CORRECTLY CONNECTED TO THE STARTUP COIL. <i>NOTE:</i> TO KEEP CUT OFF THE STARTUP OF THE TWO SHORT CABLES, THEY HAVE TO BE JOINED AND/OR GROUND THEM.	X	X		
24	REMOVE AIR FILTERS FROM THE CARBURATORS; BLOW THEM WITH DRY AIR AND REINSTALL THEM.	X	X		
25	REMEMBER THE RESERVOIRS OF THE CARBURATORS, CLEAN AND REINSTALL THEM.	X	X		
26	CHECK THE COOLING FLUID HOSES FOR CONDITION, SECURITY, GAPS, AND LEAKS.		X		
27	CHECK THE LID OF THE RECOVERY TANK OF THE COOLING LIQUID FOR CONDITION AND SECURITY.		X		
28	CHECK THE FIREWALL FOR OPEN HOLES AND GAS PASS/CIRCULATION FROM THE ENGINE AREA TO THE COCKPIT.		X		
29	CHECK CONDITION AND SECURITY OF THE SEALS AND ELEMENTS OF THE FIREWALL.		X		
ITEM		50	100	TECH-	INSPECTOR

	WORK LIST			NICIAN	
30	CHECK CONDITION AND SECURITY OF THE ENGINE BED	X	X		
31	CHECKING OF THE GENERAL FASTENING (SECURITY) OF THE ENGINE (See the user manual of the engine manufacturer)		X		
<b>LANDING GEAR</b>					
1	CHECK THE LEG OF THE LANDING GEAR NOSE FOR CONDITION, SECURITY, AND DAMAGES	X	X		
2	TAKE OFF THE NOSE TIRE, CLEAN IT, GREASE THE BEARINGS, INSTALL, AND ADJUST AS NECESSARY, TO AVOID AXIAL PLAY.	X	X		
3	CHECK THE NOSE TIRE FOR CONDITION, LATERAL WEAR, AND PRESSURE.	X	X		
4	CHECK THE ALIGNMENT AND SECURITY OF THE FRONT FORKS	X	X		
5	TAKE OFF THE RIGHT TIRE, WASH IT, AND GREASE AGAIN THE BEARINGS. ADJUST AS NECESSARY TO ELIMINATE THE AXIAL PLAY.	X	X		
6	CHECK THE TIRE, FOR SIDE AND FLOOR WEAR AND PRESSURE.	X	X		
7	CHECK THE ALIGNMENT AND SECURITY OF THE FORK	X	X		
ITEM	WORK LIST	50	100	TECH- NICIAN	INSPECTOR

8	TAKE OFF THE LEFT TIRE, WASH IT, GREASE AGAIN THE BEARINGS. ADJUST AS NECESSARY TO ELIMINATE THE AXIAL PLAY.	X	X		
9	CHECK THE TIRE, LOOKING FOR SIDE AND FLOOR WEARING. CHECK THE PRESSURE.	X	X		
10	CHECK THE CONDITION AND SECURITY OF THE DOCK PLATE OF THE MAIN LANDING GEAR LEGS.	X	X		
11	CHECK THE OPERATION AND EFFICIENCY OF THE BRAKES FOR STOPPING THE AIRCRAFT.	X	X		
12	CHECK THE WEARING OF THE SHOES	X	X		
13	CHECK THE MECHANISM OF EVERY BREAK FOR FREEDOM OF MOTION AND GOOD OPERATION. CHECK ITS HOSES, CABLES, AND SPRINGS CONDITION AND SECURITY.	X	X		
14	READJUST AND MAKE NECESSARY CHANGES BECAUSE OF ITS BAD CONDITION. MAKE SURE THE OPERATION.	X	X		
<b>FUEL SYSTEM</b>					
1	CHECK FOR LEAKS AND SECURITY OF THE ASSEMBLING IN THE PLANES AND FUSELAGE FUEL TANKS	X	X		
2	CHECK THE FUEL PUMP OPERATION, CLEANLINESS OF THE FILTER AND STOPPAGE OF THE LID.		X		
ITEM	WORK LIST	50	100	TECH- NICIAN	INSPECTOR

3	DISMOUNT, WASH, BLOW, AND REINSTALL THE FUEL FILTER (IF NECESSARY CHANGE IT).	X	X		
4	CHECK THE OPERATION, LEAKS, FUEL LEAKS, CONDITION, AND SECURITY OF THE DRAINAGE VALVE.	X	X		
<b>INSTRUMENTS</b>					
1	CHECK THAT THE FLIGHT INSTRUMENTS HAVE THE RIGHT CONNECTIONS, SECURITY, ASSEMBLING, ANTIVIBRATION, OPERATION, AND SCRATCHES PRESENCE.		X		
2	CHECK THAT THE MOTOR PLANT INSTRUMENTS FOR RIGHT CONNECTIONS, SECURITY, ASSEMBLING SECURITY, ANTIVIBRATION, OPERATION, AND BRANDS AVAILAVILITY, SCRATCHES PRESENCE.		X		
3	CHECK THAT THE NAVIGATIONS INSTRUMENT FOR RIGHT CONNECTIONS, SECURITY, ANTIVIBRATION ASSEMBLY SECURITY, OPERATION AND BRANDS AVAILAVILITY, SCRATCHES PRESENCE.				
<b>FUSELAGE, WINGS, AND CONTROL SURFACES</b>					

	ITEM	WORK LIST	50	100	TECH- NICIAN	INSPECTOR	
	1	CHECK DOOR HINGES AND RIVETS FOR ABNORMAL LOOSENING AND DEFECTS. LOOK ALSO FOR LOOSEN, ABNORMAL, AND/OR MISSING RIVETS, AND CHECK THE SECURITY AND CONDITION OF THE BOLTS.	X	X			
	2	CHECK THE PIVOTING POINT OF THE STICK/CONTROL WHEEL FOR SECURITY, ABNORMAL PLAY, AND FREEDOM OF MOTION.	X	X			
	3	CHECK THE MECHANISM OF THE PEDALS FOR SECURITY, LOOSENING, AND FREEDOM OF MOTION.	X	X			
	4	CHECK THE PIVOTING POINTS OF THE AILERONS AND FINS OF THE FLAPS (FLAPS AND AILERONES) FOR ABNORMAL PLAY AND FREE MOTION.	X	X			
	5	CHECK THE PIVOTING POINTS OF THE FLAP MIXER FOR ABNORMAL PLAY AND FREE MOTION.	X	X			
	6	CHECK THE PIVOTING POINTS OF THE ROCKER ARMS OF THE YAWING/PITCHING CONTROL FOR ABNORMAL PLAYS, LOOSEN OR MISSING PARTS.	X	X			
	7	CHECK THE PIVOTING POINTS OF THE WHEEL FOR ABNORMAL/IRREGULAR, PLAY, AND LOOSEN OR MISSING PARTS.	X	X			
	ITEM	WORK LIST	50	100	TECH- NICIAN	INSPECTOR	

8	CHECK THE PITCH MOVEMENT OF THE CONTROL WHEEL TO THE RIGHT, TO THE BACK, AND TO THE RIGHT AND LEFT.	X	X		
9	CHECK MOVEMENT OF THE FLAPS/AILERONES AND FLAPS TO THE RIGHT AND LEFT.	X	X		
10	CHECK THE MOVEMENT OF THE ELEVATOR FORWARD, NEUTRAL, AND BACK.	X	X		
11	CHECK OPERATION OF THE TRIM ACTUATOR.	X	X		
12	CHECK THE STICK/CONTROL WHEEL FOR RIGHT LATERAL, NEUTRAL, AND LEFT LATERAL MOVEMENTS.	X	X		
13	CHECK THE CONDITION AND SECURITY OF THE DIRECTION CONTROL BARS.	X	X		
14	CHECK SECURITY CONDITION OF THE LIMIT BUFFERS.		X		
15	CHECK FREE OPERATION TOWARD EACH SIDE.		X		
16	CHECK THE SKINS OF THE LEFT WING AND AUXILIARY SURFACES FOR LOOSEN, DEFECTIVE OR MISSING RIVETS.		X		
17	CHECK THE SKINS OF THE RIGHT WING AND AUXILIARY SURFACES FOR LOOSEN, DEFECTIVE OR MISSING RIVETS.		X		
<b>ITEM</b>	<b>WORK LIST</b>	<b>50</b>	<b>100</b>	<b>TECH- NICIAN</b>	<b>INSPECTOR</b>

18	CHECK THE WINDSHIELDS FOR LOOSEN, DEFECTIVE OR MISSING RIVETS.		X		
19	CHECK THE FRONT FUSELAGE FOR LOOSEN, DEFECTIVE, OR MISSING RIVETS.		X		
20	CHECK THE FRONT AND REAR FUSELAGE AND SKINS FOR LOOSEN, DEFECTIVE OR MISSING RIVETS.		X		
21	CHECK THE EMPENNAGE (DRIFT RUDDER, ELEVATOR, AND STABILIZER) FOR LOOSEN, DEFECTIVE OR MISSING RIVETS.		X		
22	CHECK WITH A FLASHLIGHT/LAMP THE FASTENING FITTINGS OF THE ROOT OF THE WING TO THE FUSELAGE AND SUPERIOR OF BOTH WING STRUTS FOR HOLES, SECURITY, AND/OR LOOSEN, WEAK, DEFECTIVE OR MISSING RIVETS.		X		
23	CHECK THE WEARING IN THE HOLES OF THE FITTINGS, VERIFYING THAT THERE IS NOT LOOSENING WHEN MOVING SOFTLY UP AND DOWN THE TIPS OF THE WINGS.		X		
24	CHECK ALL UPPER BOLTS OF THE WING FOR CORRECT ADJUSTMENT AND TORQUE.		X		
25	CHECK THAT THE CONECTORS AND ATTACHMENTS OF THE STRUTS ARE CORRECTLY INSTALLED, ADJUSTED, AND TORQUED.		X		
ITEM	WORK LIST	50	100	TECH- NICIAN	INSPECTOR

26	CHECK ASSEMBLING AND FASTENING BOLTS OF THE STRUTS FOR CORRECT INSTALATION, ADJUSTMENT, AND TORQUE.		X		
27	CHECK THE TORQUE OF ALL THE BOLTS. CHECK THE TORQUE OF THE BOLTS AND DRY, NON-LUBRICATED NUTS.  BOLTS AN3 TO AN6; BOLTS AN365		X		
<b>ELECTRIC SYSTEM</b>					
1	CHECK THE REGULATING BOX IS CORRECTLY INSTALLED, ADJUSTED, AND ISOLATED.	X	X		
2	CHECK THE START UP RELAY IS CORRECTLY INSTALLED AND ISOLATED.	X	X		
3	CHECK THE GENERAL CONDITION AND SECURITY OF THE CABLES OF THE BATTERY.	X	X		
4	MAKE SURE THERE ARE NEITHER LEAKS NOR RUSTING ON THE BATTERY TERMINALS.	X	X		
5	CHECK THE BATTERY FOR CONDITION, SECURITY, VOLTAGE, AND AMPERAGE. RECHARGE IF NECESSARY.	X	X		
6	CHECK THAT NAVIGATION LIGHTS AND STROBES ARE WELL INSTALLED AND OPERATING CORRECTLY.	X	X		
7	CHECK THE LANDING LIGHT IS CORRECTLY INSTALLED AND OPERATING.	X	X		
<b>ITEM</b>	<b>WORK LIST</b>	<b>50</b>	<b>100</b>	<b>TECH- NICIAN</b>	<b>INSPECTOR</b>



**FINAL INSPECTION**

1	PERFORM ENGINE FUNCTIONAL TESTS, AND MAKE SURE IT IS OPERATING CORRECTLY.	X	X		
2	CHECK THE AIRCRAFT IS CLEAN ALL OVER.	X	X		
3	MAKE SURE THE MAINTENANCE AND SERVICE FORM IS DULY SIGNED.	X	X		
4	MAKE SURE THE FLIGH LOG IS UPDATED AND SIGNED.	X	X		

**NOTES AND REMARKS:**

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