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PROTOCOL OF INSPECTION

Yakovlev Model Yak- 52 Type of inspection: ...**100 Hours**.....

Serial number: **889009**

Registration: **F-WRUS**....

TSN: 932-33 hours

TSO: 145-43 hours







Date: *20/04/2013*

Ricardas Ramonas LT-TI-907
Rev

Before starting the inspection wash the airplane and the engine and make the complete engine test. During this test check and note down the defects, deviations according to the attached table for the engine test.





After the engine test check the oil and petrol tracks, signs of the leakages. (After finishing the revision repeat the engine test, check that all discrepancies, defects were eliminated.)

ENGINE TEST

	Before revision	After revision	Operator
1. Idle running 24-28%	25%	25%	
2. Warm up on 34% up to the oil temperature of 5-10°C Warm up on 48% up to the oil temperature of 30°C and up to the cylinder head temperature of 120°C . Oil pressure: 1-3 kp/cm ² Fuel pressure: 0,3-0,4 kp/cm ² (Operating temperature is on 70% and oil temperature is 40°C , cylinder head temperature is max. 180-210°C)	OK	OK	
3. Propeller governor and speed governor common functioning on 70%. With operating of the speed governor in wide angle direction the speed (rotation per min.) will reduce up to 51±1%, pushing back the control lever, the value comes back to 70%, initial value.	OK	OK	
4. Check the propeller balance loading it from 70%- to 64% and increasing – reducing the boost pressure with 30-50 Hgmm the speed control value should be 64 ± 2-4%	OK	OK	
5. Check the carburetor heating on 70%-on When the carburetor heating is operating, the speed (rpm) value has to be reduced and the temperature of the air which enters in the carburetor has to be increased.	OK	OK	
6. Ignition and magnet control on 70%. Switching to the single series the speed dropping in 15-25 sec can not more than 3%	OK	OK	

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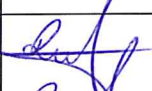










ENGINE TEST

7. Take off operation check on 96-101%. Boost pressure 885± 15 Hgmm Oil pressure 4-6 kp/cm ² Fuel pressure 0,4-0,5 kp/cm ² Entering oil temperature 40-75°C Cylinder head temperature 120-220° C	OK	OK	
8. Check the functioning of the generator: It should be switched off between 26-38% and switched on between 38-43%	OK	OK	
9. Check the idle running on 24% Oil pressure 2 kp/cm ² Fuel pressure 0,15 kp/cm ²	OK	OK	
10. Acceleration test Pushing the throttle lever in 2-3 sec from 24% to 96-101%, the engine has to accelerate without vibration, (temperature of cylinder head min. 120° C, oil temperature min. 40 °C, air temperature which enters the carburetor min. 10° C)	OK	OK	

Note: The checking of some systems of the airplane should be done with rotations speed of 40-60% avoiding the overload of the battery. Before stop the motor switch off the bigger consumers and cool the engine up to the cylinder head temperature of 140° C.


Attention!!! If the engine cooling is difficult it is allowed – an extreme case – to stop the engine at higher temperature of the cylinder head.

Note to the single phases of the engine test:

Nr.	FINDINGS	Signature	Date
1	Engine gills rod is loose on the cyl. No: 7		18/04/13
2	Inlet drain kit is loose		18/04/13
3.	Exhausts are loose on the cylinders No: 1, 4, 8		18/04/13
4	Air distributor pipe is loose on the cyl. No: 8		18/04/13
5	Free play in the right aileron		18/04/13
6	Free play in the left aileron		18/04/13
7.	Left aileron earth cable broken		18/04/13
8	2 cockpit flap selector handle loose		18/04/13
9	2 cockpit L/G selector handle loose		18/04/13
10.	Rudder earth cable broken		18/04/13
11.	Paint lines are missing wheel + tires		20/04/13

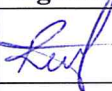







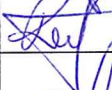
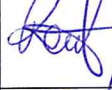

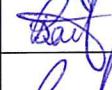
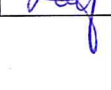

Additional works done:

1. Smoke system annual inspection
2. Main and emergency air bottles pressure test at 75 ATM
3. Uplock cylinders inspection
4. Elevator crank bell dye check
5. Flight controls internal inspection

R. Lamonis LT-TI-507 

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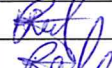



Les tâches grisées peuvent être exécutées par le pilote -propriétaire ayant les compétences

ENGINE AND AUXILIARY EQUIPMENT						
Nr.	Finished work	50 h	100 h	200 h	Signature	Date
1.	Open the engine compartment Clean it with engine cowling utilizing washing gasoline.	*	*	*		18/04/13
2.	Drain the oil at the main filter, at the oil tank, at the metallic detector indicator and oil cooler.	*	*	*		18/04/13
3.	Wash through the oil system with ethylene free gasoline.			*		18/04/13
4.	Clean the - air filter - oil main filter - filter of the oil pump - filter of the R-2 propeller controller - filter of the metallic detector indicator Check the internal electric net of the metallic detector indicator and after reinstalling it, check the external net, too.	*	*	*		18/04/13
5.	Close the shut-off valve	*	*	*		18/04/13
6.	Dismount and clean: - fuel system sediment pad - wash the fine filter pad or replace it if necessary	*	*	*		18/04/13
7.	Perform the maintenance of the carburetor.	*	*	*		18/04/13
8.	Open the shut-off valve and establish 0,5 – 1,0 bar pressure with the manual pump. Check the seal in system.		*	*		18/04/13
9.	Perform the maintenance of the ignition plugs.	*	*	*		18/04/13
10.	Check the cover of the ignition cables for damages. Check the ceramic cover for damages and cleaning, the spring for breakage.	*	*	*		18/04/13
11.	Perform the maintenance of the magnetos.	*	*	*		18/04/13
12.	Check and set the valves clearance.		*	*		18/04/13
13.	Check the booster coil.	*	*	*		18/04/13
14.	Check the exhaust system.	*	*	*		18/04/13








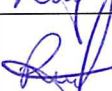
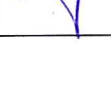
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ENGINE AND AUXILIARY EQUIPMENT						
15.	Check the suction tube system for damage, airless and fastening	*	*	*	<i>Ref</i>	12/04/13
16.	Perform the maintenance of the compressor.	*	*	*	<i>Ref</i>	12/04/13
17.	Check the engine support legs and frame for damages, the securing of the fastening elements, the rubber dumpers for damages	*	*	*	<i>Ref</i>	12/04/13
18.	Check the engine auxiliary equipment for fastening and locking.	*	*	*	<i>Ref</i>	12/04/13
19.	Clean the shutter wings, check the clearance, lubricate the mechanisms. The gap between the tube of the inner part of the engine cover and the ring of the shutter should be at least 3 mm.	*	*	*	<i>Ref</i>	12/04/13
20.	Check the controls for functioning end obstacle, the end cap of the Bowden's for fastening.	*	*	*	<i>Ref</i>	12/04/13
21.	Check the engine compartment tubes for fastening and locking.	*	*	*	<i>Ref</i>	12/04/13
22.	Lubricate the engine controls.	*	*	*	<i>Ref</i>	12/04/13
23.	Fill up the engine with oil (12 litres)	*	*	*	<i>Ref</i>	12/04/13


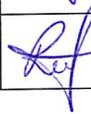
PROPELLER CONTROL












Nr.	Finished work	50 h	100 h	200 h	Signature	Date
1.	Remove the spinner	*	*	*		18/04/13
2.	Clean the propeller hub and the blades	*	*	*		18/04/13
3.	Check the blades for damage and repair according to the producer's technology	*	*	*		18/04/13
4.	Check the propeller hub for mechanical damage and oil leakage. Reinstall the propeller spinner.	*	*	*		18/04/13

AIRFRAME

Nr.	Finished work	50 h	100 h	200 h	Signature	Date
1.	Remove the covers of access holes, the cover plate between wing and fuselage, and plates of the horizontal stabilizer.	*	*	*		18/04/13
2.	Check the coverage for damages, the screw and rivet bonding, the corrosion marks, the canvas coverage and painting for damages.	*	*	*		18/04/13
3.	Check the condition of the actuating elements (stems, pulleys, wirings, hinges). Corrosion, damages, deformation, mechanical attritions are not allowed.	*	*	*		18/04/13
4.	Check integrity of the barriers in the rear fuselage. Check for loose articles.	*	*	*		18/04/13
5.	Check the elevator and rudder.		*	*		18/04/13
6.	Check elevator actuation control pulley for cracks using dye penetrant techniques	*	*	*		19/04/13
7.	Check the horizontal and vertical (fin) stabilizer's fastening to the airframe.	*	*	*		18/04/13
8.	Check wings, ailerons, flaps control.	*	*	*		18/04/13
9.	Remove the cover sheet of the wing's tank, check the tank's fastening, their possible attrition and sealing.	*	*	*		18/04/13

AIRPLANE COCKPIT						
Nr.	Finished work	50 h	100 h	200 h	Signature	Date
1.	Check the cockpit equipments: - The fastening of the instrument panel, the instruments for damages - Check the G-meter, the three dials engine instrument, air bottles pressure gauge, fuel gauges, engine vacuum gauge (PA), RPM gauge, CHT gauge, carburetor temp gauge, voltammeter gauge. - The labels for damages, for readability - The windows and canopies for damages	*	*	*		18/04/13
2.	Check the seats and harness.	*	*	*		18/04/13
3.	Check the cabin heating and ventilation system - Clean it and check for functioning	*	*	*		18/04/13

AIRPLANE CONTROLS						
Nr.	Finished work	50 h	100 h	200 h	Signature	Date
1.	Checking of control stick, pedals, moving elements of the flaps and trims. Check the control elements for free moving. Check the deflector's values of the controls.	*	*	*		18/04/13
2.	Check the flap's cylinders for fastening and locking. The time of release and pull-in.	*	*	*		18/04/13

LANDING GEAR						
Nr.	Finished work	50 h	100 h	200 h	Signature	Date
1.	Check the condition of the tyres and the possible slip respect of the signs.	*	*	*		18/04/13
2.	Check the impression of the landing gear spring legs.	*	*	*		18/04/13
3.	Put the airplane on the ground jack.	*	*	*		18/04/13
4.	Check the fastening and total stroke of the spring legs	*	*	*		18/04/13
5.	Check the condition, fastening and replenishment of the nose gear wheel damper.	*	*	*		18/04/13
6.	Check the nitrogen pressure of the spring legs.	*	*	*		18/04/13
7.	Checking the condition, lockers and fastening of the landing gear working cylinders. Fill up the working cylinders with oil type 132-25 or with silicone oil.	*	*	*		18/04/13
8.	Perform the maintenance of the landing gear wheels and perform the following works.		*	*		18/04/13
9.	Dismount the tyres and remove the air tube. Check for wrinkles, for attrition and for defects near the valve tube. Check the inside surface of the tyres.			*		
10.	Check condition of wheel bearings. Lubricate.			*		
11.	Dismount the nose and main landing gear spring legs together with the hinge mechanisms, check the sleeves and clearance. Replace if necessary. Mount them back.			*		
12.	Remount the wheels.		*	*		18/04/13
13.	Inspect the up-lock piston assemblies for internal corrosion. Inspect the seals and replace if necessary.			*		
14.	Effect the movements of the landing gear system more times for testing. Make operate the landing gear system. During this test check the operating time, asynchrony, functioning of the locks, position indicators and airless. Check the emergency opening system of the landing gear.	*	*	*		18/04/13
15.	Check the global backlash clearance of the landing gears in longitudinal and transversal direction.		*	*		18/04/13

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LANDING GEAR						
16.	Check with thickness gauge the gap of the central hinges of the outrigger.		*	*	<i>Ref</i>	15/04/13
17.	Remove the airplane from the ground jacks.	*	*	*	<i>Ref</i>	18/04/13

AIR SYSTEM						
Nr.	Finished work	50 h	100 h	200 h	Signature	Date
1.	Check the airless of tubes, fittings and aggregates.	*	*	*	<i>Ref</i>	15/04/13
2.	Dismounting, cleaning and remounting the one way filter.			*		
3.	Waste water draining.	*	*	*	<i>Ref</i>	15/04/13
4.	Blow off the pipelines with 50 bar compressed air.			*		
5.	Remove the reservoirs				<i>Ref</i>	15/04/13
6.	Main and emergency air system airless control.	*	*	*	<i>Ref</i>	15/04/13
7.	Function control of the brakes from both system.	*	*	*	<i>Ref</i>	15/04/13
8.	Automatic pressure system control. Popening=50 bars.	*	*	*	<i>Ref</i>	15/04/13

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ELECTRICAL POWER, INSTRUMENTS AND RADIO EQUIPMENT						
Nr.	Finished work	50 h	100 h	200 h	Signature	Date
1.	Check the Pitot tube for damages and fastening. Check and drain – if it is necessary –the sediment's tanks.	*	*	*	Ref	20/04/13
2.	Check the stall indicator for damages and free movement.	*	*	*	Ref	20/04/13
3.	Check the battery's area for corrosion.	*	*	*	Ref	20/04/13
4.	Check the battery's fastening, the connecting elements for condition, the functioning of the battery.	*	*	*	Ref	20/04/13
5.	Check the electrical wires for external condition and fastening. Check the tightening and locking of the SR connectors. Check the earthing for condition.	*	*	*	Ref	20/04/13
6.	Check the fastening and reliability of the connections of the instruments.	*	*	*	Ref	20/04/13
7.	Check the generator GSZR-3000M for condition, wirings, fastening.	*	*	*	Ref	20/04/13
8.	Check the voltage regulator and the AZP-A2 overvoltage protection.	*	*	*	Ref	20/04/13
9.	Check the converters for external condition and fastening.	*	*	*	Ref	20/04/13
10.	Check the equipment on the electric switchboard. Check the electrical equipment of the airplane for fastening and damages.	*	*	*	Ref	20/04/13
11.	Check the airplane electrical equipments in operating condition. Connect the ground electric supply source and - check the instrument panel, indicator lamps, instrument lights for functioning. - check the navigation lights, the external position indicator of the landing gear, the flashing indicator of the airplane, the landing and taxi lights.	*	*	*	Ref	20/04/13
12.	Check the Pitot heating for functioning	*	*	*	Ref	20/04/13

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ELECTRICAL POWER, INSTRUMENTS AND RADIO EQUIPMENT						
13.	Check the radio, the radionavigation instruments, the artificial horizon for functioning.	*	*	*	Ref	20/04/13
14.	Check the output voltage of the different converters mounted on the board taking into consideration the given value for the given equipment.		*		Ref	20/04/13

FINAL CONTROL						
Nr.	Finished work	50 h	100 h	200 h	Signature	Date
1.	Check the labels, writings. Renew them if necessary.	*	*	*	Ref	20/04/13
2.	Make the engine and system tests.	*	*	*	Ref	20/04/13
3.	Make test flight if necessary		*	*		
4.	Fill the airplane log books, register the work performed.	*	*	*	Ref	20/04/13
5.	Check the filled up quantity of the lubricant and fuel, refill if necessary according to the operations to be done.	*	*	*	Ref	20/04/13

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