

BRP-Powertrain
MAINTENANCE MANUAL

Points of Inspection	Interval Operating hours	Chapter Reference	Signature
	as indicated	100 hr.	
Return to service At the identified engine (as per sec. 5), on (Date) <u>4/25/14</u> the _____ hr. Check at <u>1608</u> hr. (TSN____, TSO____) was carried out according to recommendations of the engine manufacturer and was recorded in the Engine Log book. Location, Date <u>SMLA 4/25/14</u> Inspector _____ Aircraft mechanic <u>A/O</u> _____ Certificate No. _____			

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5) Check List/Maintenance Schedule

Identification	
AIRCRAFT	
Registration number	N 106 SF
Aircraft make	Flight Design
Aircraft model and S/N	CTLS
Time since new	1608
Propeller	
Propeller brand	
Propeller model and S/N	
Governor brand	
Governor model and S/N	
ENGINE	
Engine type	912ALS
Engine S/N	50111 6775304
TSN (time since new)	
TSO (time since overhaul)	
Used operating fluids:	
coolant	
- mixture ratio	
fuel	
oil	
- type	
- viscosity	
AIRCRAFT OPERATOR	
Name	
Contact	
Address	
Telephone/Fax/E-mail	

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Identification													
MAINTENANCE FACILITY													
Maintenance workshop	South MS Light Aircraft												
Address	[REDACTED]												
	Lucedale MS, 39452												
Telephone/Fax/E-mail	[REDACTED]												
Certificate													
<table border="1"> <tr> <td>This check is applicable (circle on)</td> <td>25 hr.</td> <td>50 hr.⁽¹⁾</td> <td>100 hr.</td> <td>200 hr.</td> <td>600 hr.</td> <td>1000 hr.</td> </tr> </table>							This check is applicable (circle on)	25 hr.	50 hr. ⁽¹⁾	100 hr.	200 hr.	600 hr.	1000 hr.
This check is applicable (circle on)	25 hr.	50 hr. ⁽¹⁾	100 hr.	200 hr.	600 hr.	1000 hr.							
⁽¹⁾ leaded fuel more than 30% of operation													
Next check due at:						hr.							
	(TS _____) (engine hr.)												

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5.1) Maintenance Schedule

General note Perform the following maintenance tasks at the intervals shown in the maintenance check list. See [chapter 05-20-00](#) 25 hr. check.

Legend: X = do the task
blank = no task required

NOTES: If the points 1-3 in order to continue with the maintenance schedule.
If one of the points 1-3 not OK, the engine must be checked and repaired in accordance with the BRP-Powertrain instructions for continued airworthiness.

Points of Inspection	Interval Operating hours		Chapter Reference	Signature
	as indicated	100 hr.		
1.) Visual inspection of the engine				
General visual inspection of the engine for damage or abnormalities. Check cooling air duct and cooling fins of the cylinders for obstruction, cracks, wear and good condition. Take note of changes caused by temperature influence.	recommended 50 hr.	X 	12-20-00 sec. 3)	
Visual inspection of the temperature sensor and the oil pressure sensor. Inspect for tight fit and good condition.		X 		
Inspect all coolant hoses for damage, including leakage, hardening from heat, porosity, loose connections and secure attachment. Verify routing is free of kinks and restrictions.		X 	12-20-00 sec. 9.1)	
Carry out visual inspection of leakage bore at the base of the water pump for signs of leakage.		X 	12-20-00 sec. 4)	
Inspect the expansion tank for damage and abnormalities. Check coolant level, replenish as necessary. Inspect radiator cap. Inspect protection rubber on expansion tank base for correct fit.		X	12-20-00 sec. 9.1,9.4) 12-10-00 sec. 3.1)	
Inspect the overflow bottle for damage and abnormalities. Verify coolant level, replenish as necessary. Inspect line from expansion tank to overflow bottle for damage, leakage and clear passage. Inspect venting bore in cap of overflow bottle for clear passage.		X 	12-20-00 sec. 9.5) 12-10-00 sec. 3.1)	

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Points of Inspection	Interval Operating hours	Chapter Reference	Signature															
	as indicated	100 hr.																
Inspect all oil lines for damage, leakage, hardening from heat, porosity, security of connections and attachments. Verify routing is free of kinks and restrictions.	X ✓	12-20-00 sec. 4)																
Inspect all fuel lines for damage, leakage, hardening from heat, porosity, security connections and attachments. Verify routing is free of kinks and restrictions. In the case of steel fuel lines (912 F, 912 S and/or optional), also check for any cracks and/or scuffing marks.	X ✓	12-20-00 sec. 4)																
Inspect the wiring and its connections for secure fit, damage and signs of wear.	X ✓	12-20-00 sec. 13.1)																
2.) Magnetic plug																		
Check the magnetic plug.	X ✓	12-20-00 sec. 12)																
3.) Compression check																		
Check the compression by the differential pressure method. Test pressure _____ hPa (psi)	every 200 hr.	12-20-00 sec. 5)																
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="5">Pressure drop (% or fraction)</th></tr> <tr> <th>Cyl #</th><th>1</th><th>2</th><th>3</th><th>4</th></tr> </thead> <tbody> <tr> <td>bar/psi</td><td>82/87</td><td>83/87</td><td>79/87</td><td>84/87</td></tr> </tbody> </table>				Pressure drop (% or fraction)					Cyl #	1	2	3	4	bar/psi	82/87	83/87	79/87	84/87
Pressure drop (% or fraction)																		
Cyl #	1	2	3	4														
bar/psi	82/87	83/87	79/87	84/87														
4.) Checking the engine suspension																		
Inspect engine suspension and fasteners for secure fit, including damage from heat, deformation, cracks.	X ✓	12-20-00 sec. 3.1)																
5.) Checking the air intake system																		
Inspect suspension and fasteners for secure fit, including damage from heat, deformation, cracks.	X ✓																	

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Points of Inspection	Interval Operating hours		Chapter Reference	Signature
	as indicated	100 hr.		
6.) Engine external parts				
Inspect screws and nuts of all external parts for tight fit. Inspect safety wiring, replace as necessary.		X ✓		
7.) Engine cleaning				
Engine cleaning		X ✓	12-20-00 sec. 1)	
8.) Checking the air filter				
Checking the air filter.		X ✓	12-20-00 sec. 2)	
9.) Checking the carburetors				
Checking the idle speed.		X ✓	12-20-00 sec. 10.3.1)	
Checking the ventilation of the float chambers. Any trouble with the float chamber ventilation impairs engine and carburetor function and must therefore be avoided. Check that the passage of the ventilation lines is free and that no kinks can arise.	200 hr.	✓		
Check for free movement of the carburetor actuation (throttle lever and starting carburetor). Check that the bowden cable allows the full travel of the throttle lever from stop to stop.		X ✓	12-20-00 sec. 10.6)	
Removal/assembly of the two carburetors for carburetor inspection.	every 200 hr.		Heavy MM 73-00-00 sec. 3)	
Check carburetor synchronization. Mechanical and pneumatic synchronization.		X ✓	12-20-00 sec. 10.1) 10.2) 10.3)	
Inspect the float chamber assy. for contamination and corrosion. See SI-912-021 - latest edition.	every 200 hr.		12-20-00 sec. 10.4)	
10.) Inspecting carburetor sockets and drip tray				
Inspect the carburetor sockets for damage and abnormalities, checking for cracks, wear and good condition. Take note of changes caused by temperature influence. (¹ See SB-912-030 - latest edition.	every 200 hr. (¹)	✓	Heavy MM 73-00-00 sec. 3.4.3)	
11.) Spark plug connectors				
Check that resistance spark plug connectors fit tightly on the spark plugs. Minimum pull-off force is 30 N (7 lb).	every 200 hr.			

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Points of Inspection	Interval Operating hours	Chapter Reference	Signature
	as indicated	100 hr.	
12.) Spark plugs			
Remove all spark plugs, check the heat range designation, clean, check electrode gap and adjust if necessary. Replace as required.		X ✓ 12-20-00 sec. 13.2)	
Replacing spark plugs.	every 200 hr.	X ⁽¹⁾ 12-20-00 sec. 13.2)	
⁽¹⁾ use of leaded fuel more than 30% of operation.			
13.) Flushing the cooling system			
Flushing the cooling system where conventional coolants are used.	when replacing the coolant	12-20-00 sec. 9.3)	
14.) Checking the propeller gear box			
Check the friction torque in free rotation on gearboxes with overload clutch. Actual friction torque <u>26</u> Nm (in.lbs)		X ✓ 12-20-00 sec. 14.1)	<u>26</u>
Gearboxes with overload clutch ⁽¹⁾ use of leaded fuel more than 30% of operation. Inspect overload clutch.	every 600 hr. ⁽¹⁾	05-50-00 sec. 2) SB-912-033	
Checking the propeller gearbox with overload clutch. ⁽²⁾ only for engine type 912 S/ULS/ULSFR	every 1000 hr. ⁽²⁾	12-20-00 sec. 14.2)	
Checking the propeller gearbox without overload clutch. ⁽³⁾ only for engine type 912 UL/ULS/ULSFR	every 600 hr. ⁽³⁾	12-20-00 sec. 14.2)	
15.) Oil change			
Drain oil from oil tank.	every 50 hr. ⁽¹⁾	X ✓ 12-20-00 sec. 11.2)	
Check the oil tank and clean the oil tank if contaminated. ⁽¹⁾ use of leaded fuel more than 30% of operation.	every 200 hr.	X ⁽¹⁾ 12-20-00 11.5)	
Remove old oil filter from engine and install new oil filter.	every 50 hr. ⁽¹⁾	X ✓ 12-20-00 sec. 11.3)	
Cut old oil filter without producing any metal chips and inspect filter mat. Findings: <u>OK</u>	every 50 hr. ⁽¹⁾	X ✓ 12-20-00 sec. 11.4)	

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