

**BRP-Powertrain**  
MAINTENANCE MANUAL

## 5) Check List/Maintenance Schedule

Identification	
<b>AIRCRAFT</b>	
Registration number	
Aircraft make	
Aircraft model and S/N	
Time since new	
Propeller brand	
Propeller model and S/N	
<b>ENGINE</b>	
Engine type	
Engine S/N	
TSN (time since new)	
TSO (time since overhaul)	
Used operating fluids:	
coolant	
- mixture ratio	
fuel	
oil	
<b>AIRCRAFT OPERATOR</b>	
Name	
Contact	
Address	
Telephone/Fax/E-mail	

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**BRP-Powertrain**  
MAINTENANCE MANUAL

<b>Identification</b>					
<b>MAINTENANCE FACILITY</b>					
Maintenance workshop					
Address					
Telephone/Fax/E-mail					
Certificate					
This check is applicable (circle on)	25 hr.	50 hr.	100 hr.	200 hr.	600 hr.
<b>Next check due at:</b>	_____ hr. (TS_____ ) (engine hr.)				

# BRP-Powertrain

## MAINTENANCE MANUAL

### 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 of the checklist are fulfilled then continue with the maintenance schedule.  
If one of the points 1-3 is not fulfilled then 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.		
<b>1.) Visual inspection of the engine</b>				
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. 11.1)	
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. 11.1)	
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. 11.5)	

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**BRP-Powertrain**  
MAINTENANCE MANUAL

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, 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. 16.1)																
Inspect the exhaust system for crack formation and uncharacteristic gunpowder burns (leaks).		X																	
<b>2.) Magnetic plug</b>																			
Check the magnetic plug at every oil change.		X	12-20-00 sec. 14)																
<b>3.) Compression check</b>																			
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" style="text-align: center;">Pressure drop (% or fraction)</th> </tr> <tr> <th style="width: 10%;">Cyl #</th> <th style="width: 10%;">1</th> <th style="width: 10%;">2</th> <th style="width: 10%;">3</th> <th style="width: 10%;">4</th> </tr> </thead> <tbody> <tr> <td>bar/psi</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>					Pressure drop (% or fraction)					Cyl #	1	2	3	4	bar/psi				
Pressure drop (% or fraction)																			
Cyl #	1	2	3	4															
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<b>4.) Checking the engine suspension</b>																			
Inspect engine suspension and fasteners for secure fit, including damage from heat, deformation, cracks.		X	12-20-00 sec. 3.1)																
<b>5.) Engine external parts</b>																			
Inspect screws and nuts of all external parts for tight fit. Inspect safety wiring, replace as necessary.		X																	
<b>6.) Engine cleaning</b>																			
Engine cleaning		X	12-20-00 sec. 1)																
<b>7.) Checking the air filter</b>																			
Checking the air filter.		X	12-20-00 sec. 2)																

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**BRP-Powertrain**  
MAINTENANCE MANUAL

Points of Inspection	Interval Operating hours		Chapter Reference	Signature
	as indicated	100 hr.		
<b>8.) Checking the carburetor</b>				
Checking the idle speed.		X	12-20-00 sec. 12.3.1)	
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.	every 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. 12.6)	
Removal/assembly of the two carburetors and carburetor inspection.	every 200 hr.		Heavy MM 73-00-00 sec. 3)	
Check carburetor synchronization. Mechanical or pneumatic synchronization.		X	12-20-00 sec. 12.1)	
Inspect the float weight	every 200 h (and/or annual inspection)		12-20-00 sec. 12.4.1)	
<b>9.) Inspecting carburetor sockets and drip tray</b>				
Inspect the carburetor sockets for damage and abnormalities, checking for cracks, wear and good condition. Take note of changes caused by temperature influence.  ( <sup>1</sup> See SB-914-019 - latest edition.	every 200 hr. ( <sup>1</sup> )		Heavy MM 73-00-00 sec. 3.4.3)	
<b>10.) Spark plug connectors</b>				
Check that resistance spark plug connectors fit tightly on the spark plugs. Minimum pull-off force is 30 N (7 lb).	every 200 hr.			
<b>11.) Spark plugs</b>				
Remove all spark plugs, check the heat range designation, clean, check electrode gap and adjust if necessary. Check electrode gap and adjust as necessary. Replace as required.		X	12-20-00 sec. 16.2)	
Replace spark plugs.	every 200 h	X( <sup>1</sup> )	12-20-00 sec. 16.2)	
( <sup>1</sup> use of leaded fuel more than 30% of operation.				

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Effectivity: 914 Series  
Edition 2 / Rev. 2

**05-20-00**

page 15  
February 01/2015

**BRP-Powertrain**  
MAINTENANCE MANUAL

Points of Inspection	Interval Operating hours		Chapter Reference	Signature
	as indicated	100 hr.		
<b>12.) Flushing the cooling system</b>				
Flushing the cooling system where conventional coolants are used.	when replacing the coolant		12-20-00 sec. 11.3)	
<b>13.) Checking the wastegate flap</b>				
Check the wastegate flap for free running and correct position.		X	12-20-00 sec. 8)	
Check the wastegate bowden cable for free movement and damage.		X	12-20-00 sec. 8)	
Lubricate the axle (wastegate flap).		X	12-20-00 sec. 8)	
<b>14.) Fuel filter (on airframe side)</b>				
Check the fuel filter.		X	12-20-00 sec. 9)	
<b>15.) Checking the propeller gear box</b>				
Check the friction torque in free rotation on gearboxes with overload clutch. Actual friction torque _____ Nm (in.lbs)		X	12-20-00 sec. 17.1)	
Gearboxes (with overload clutch). Inspect overload clutch.	every 600 hr. <sup>(1)</sup>		05-50-00 sec. 2) SB-914-020	
Check the propeller gearbox (with overload clutch).	every 1000 hr.		12-20-00 sec. 17.2)	
Check the propeller gearbox (without overload clutch).	every 600 hr.		12-20-00 sec. 17.2)	
<b>16.) Oil change</b>				
Remove old oil filter from engine and install new oil filter.	50 hr. <sup>(1)</sup>	X	12-20-00 sec. 13.3), 13.4))	
Cut old oil filter without producing any metal chips and inspect following components for wear and/or missing material  Filter mat Findings: _____  Filter cover Findings: _____  Sealing lip (wear, cracks, missing material) Findings: _____ _____	50 hr. <sup>(1)</sup>	X	12-20-00 sec. 13.5)	

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# BRP-Powertrain

## MAINTENANCE MANUAL

Points of Inspection	Interval Operating hours		Chapter Reference	Signature
	as indicated	100 hr.		
Spring of bypass valve (small) Findings: _____ Positioning spring (large) Findings: _____ _____				
Check oil tank. Refill oil tank with approx. 3 litres of oil. For oil quality, see Operators Manual and SI-914-019, latest edition.	50 hr. <sup>(1)</sup>	X	12-20-00 sec. 13.2), 13.6)	
<sup>(1)</sup> In the case more than 30% of operation with leaded fuel e.g.: AVGAS 100 LL			12-20-00 sec. 13.2) SI-914-019	
<b>17.) Checking the V-belt tension</b>				
On configurations with auxiliary generator, check the attachment and the V-belt tension.		X	12-20-00 sec. 6)	
<b>18.) Electric fuel pumps</b>				
Check the electric fuel pumps.	every 1000 hr.		MM II (Heavy) 73-00-00 sec. 3.4.6)	
Replace the main fuel pump.	every 1000 hr.		IM sec. 14.4)	
<b>19.) Engine test run</b>				
Observe the safety instructions!				
Start the engine and run to operating temperature. Limits see Operators Manual 914 series. Ignition check at _____ rpm engine speed. Speed drop without ignition circuit: A (Off) _____ rpm B (Off) _____ rpm A/B (difference) _____ rpm After engine test run, re-tighten the oil filter by hand (only at cold engine). Checks for leaks.		X	12-20-00 sec. 8)	
<b>General note</b>				
All Service Bulletins are complied with.		X		

d06134.fm

Effectivity: 914 Series  
Edition 2 / Rev. 2

05-20-00

page 17  
February 01/2015

# BRP-Powertrain

## MAINTENANCE MANUAL

Points of Inspection	Interval Operating hours		Chapter Reference	Signature
	as indicated	100 hr.		
<p><b>Returning engine to service</b></p> <p>On the engine identified as per point 5, on the _____ the _____ hr.            Check at _____ hr. (TSN____, TSO____) was carried out according to recommendations of the engine manufacturer and was recorded in the Engine Log book.</p> <p>Location, Date _____</p> <p>Inspector _____</p> <p>Aircraft mechanic _____</p> <p>Certificate No. _____</p>				