

## APPENDIX B – Fuel Specifications (Off Road)

AVGAS			
Characteristics/ Property	Test Method	Avgas 100	Avgas 100LL
Colour		Green	Blue
Aviation Lean Rating (MON Equivalent)	ASTM D2699	108 Maximum	108 Maximum
Lead Content , gmPb/L	D5185 mod B	1.06 Max	.53 Max
Distillation % volume	ASTM D86		
10% Distillation, % at degree C		Max 75	Max 75
40% Distillation, % at degree C		Min 75	Min 75
50% Distillation, % at degree C		Max 105	Max 105
90% Distillation, % at degree C		Max 135	Max 135
Final Boiling Point, degree C		Max 170	Max 170
Sum of 10% and 50%, degree C		Min 135	Min 135
Residue, % volume		Max 1.5	Max 1.5
Vapour Pressure at 37.8 degree C	D323	38min/49max	38min/49max
Existent/Potential Gum, mg/100ml	D381	3 Max	3 Max
Sulphur, Wt %	D1266 or D2622	0.05% Max	0.05% Max
Lead Precipitate, mg/100ml		3 Max	3 Max
Oxygenates, Wt %	D4815	0.1% Max	0.1% Max
Aromatic Content, % volume	D5580 or D5443		
Benzene, Wt %	D5580 or D3606		

UNLEADED PETROL (GASOLINE) available from a public petrol (pump) station			
Characteristics/ Property	Test Method	Unleaded Pump Petrol (Gasoline)	
Research Octane Number (RON)	ASTM D2699	100 Maximum	
Motor Octane Number (MON)	ASTM D2700	92 Maximum	
Cetane Index			
% Volume Evaporated at 70 degree C (E70)	ASTM D86	22% Minimum	50% Maximum
% Volume Evaporated at 100 degree C	ASTM D86	45% Minimum	71% Maximum
% Volume Evaporated at 150 degree C	ASTM D86	75% Minimum	
End Point degree C	ASTM D86	210 degree C Maximum	
Benzene, % volume	D5580	1% Maximum	
Ethanol, % volume	D4815	10% Maximum	
Other Oxygenates, Wt %	D4815	0.1% Maximum	
Olefins, % volume	D1319	18% Maximum	
Manganese, mg/L	D5185 mod B	2.0 Maximum	
Phosphorus, mg/L	D3231	1.0 Maximum	

METHANOL			
Characteristics/ Property	Test Method	Methanol	
Colour		Water White	
Density, kg/L	D1298 or D4052	0.796-0.797	0.796-0.800 for 2 strokes
Distillation	ASTM D86		
Initial Boiling point, degree C		55.6-64.5	
40% Evaporated, degree C		64.5% Maximum	
50% Evaporated, degree C		64.5% Maximum	
90% Evaporated, degree C		64.5% Maximum	
Residue, % volume		1.5% Maximum	3.0% Maximum for 2 strokes