

Low Emission Bus Scheme Certificate

Customer:	Wrightbus Limited				
Customer Address:	Galgorm Ind. Estate, Fenaghy Road, Ballymena, Co. Antrim N.I, BT42 1PY				
Test Purpose:	LEB Testing		DYNAMOMETER SETTINGS		
Vehicle Manufacturer:	Wrightbus	Unladen weight (kg)	8640.0	Test Weight	10109 kg
Vehicle Type & Number:	StreetLite DF HEV, AH025	Gross Weight (kg)	13408.0	F°	76.85 N
Engine:	Daimler Euro VI	Seated Capacity	41	F¹	15.1900 N/kmh
Transmission:	Voith Diwa Automatic	Passenger Capacity	69	F²	-0.20900 N/kmh²
Euro VI certificate Y/N	Manufacturer Certified	GVW Check	OK	F³	0.003720 N/kmh³

Declared fuel, properties and source plus carbon conversion factors

Net Heating Value: Diesel	36.00	MJ / Litre	Fuel Provider	UK market standard
Well-to-Tank Factor: Diesel	15.42	g CO2e / MJ	WTT evidence	UK GHG reporting factors 2016
Well-to-Tank Factor: Electricity	143.50	g CO2e / MJ	Fuel Type	UK Pump Diesel, UK Grid Electricity

Emissions and Energy consumption results from approved test facility - Average 3 tests

Test Phase	HC (g/km)	CO (g/km)	NOx (g/km)	PM (g/km)	CO ₂ (g/km)	CH ₄ (g/km)*	N ₂ O (g/km)*	Fuel Consumption (l/100 km)	Fuel used over cycle (litres)
Rural	0.010	0.011	0.170	N/A	544.3	0.000	0.040	20.55	1.520
Outer London	0.015	0.024	0.207	N/A	580.2	0.000	0.051	21.91	1.409
Inner London	0.028	0.034	0.434	N/A	856.7	0.000	0.065	32.35	0.804
MLTB Average	0.018	0.027	0.270	N/A	657.2	0.000	0.055	24.82	2.212
LUB Average	0.015	0.020	0.225	0.0036	606.0	0.000	0.048	22.88	3.733

Zero Emissions (Z.E.) Range: Energy consumption and charging efficiency

Total measured energy consumed on vehicle (kWh)	N/A	Distance in Z.E. mode (km)	N/A	Usable Battery Capacity (kWh)	N/A
Measured grid energy during charging (kWh)*	N/A	Charging efficiency (%)	N/A	Max Theoretical Z.E. Range (km)	N/A

Total Tank-to-Wheel GHG CO₂ equivalent

Test Phase	CO ₂ (g/km)	CH ₄ (g/km x 25)*	N ₂ O (g/km x 298)*	Fuel TTW** GHG (CO ₂ Equivalent g/km)
Rural	544.3	0.000	11.858	556.2
Outer London	580.2	0.000	15.196	595.4
Inner London	856.7	0.000	19.406	876.1
MLTB Average	657.2	0.000	16.368	673.6
LUB Average	606.0	0.000	14.322	620.3

Calculated total Well-to-Wheel GHG CO₂ equivalent emissions over test

Test Phase	Fuel Energy (MJ / km)	Fuel WTT*GHG Emissions (g CO ₂ e / km)	Electrical Energy (MJ / km)	Electricity WTT* GHG Emissions (g CO ₂ e / km)	Measured Fuel TTW** GHG Emissions (g CO ₂ e / km)	Total WTW*** GHG Emissions (g CO ₂ e / km)
Rural	7.40	114.1	N/A	N/A	556.2	670.3
Outer London	7.89	121.6	N/A	N/A	595.4	717.0
Inner London	11.65	179.6	N/A	N/A	876.1	1055.6
MLTB Average	8.93	137.8	N/A	N/A	673.6	811.3
LUB Average	8.24	127.0	N/A	N/A	620.3	747.3

Data Generated by (On behalf of Test facility):		Date: 10.10.2017	Data Approved by:		Date: 10.10.17
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Low Emission Bus Certificate Summary

GHG Well-to-Wheel	747.3	g CO ₂ e / km
Euro V Average Diesel Equivalent	1130.0	g CO ₂ e / km
WTW GHG saving (compared with Euro V diesel equivalent)	382.6	g CO ₂ e / km
% WTW GHG saving (compared with Euro V diesel equivalent)	34%	g CO ₂ e / km
Zero Emission operating range (km)	N/A	km
WTW CO ₂ per passenger km (@ Max Pass Capacity)	10.8	g CO ₂ e/pass km
Approved as Low Emission Bus? (15% saving or more)	YES	

* WTT : Well-to-Tank ** TTW : Tank-to-Wheel *** WTW : Well-to Wheel

COMMENTS:
Emission results marked in red are below detection levels.
CO₂, N₂O & Fuel Used adjusted for average NEC of 2.23%

Test Numbers: ML02017415 (09 October 2017), ML02017416 (09 October 2017), ML02017418 (09 October 2017).

Certificate approved by: On behalf of Bus manufacturer		Certificate Approved by: On behalf of LowCVP/DfT
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