

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 Limited	Unladen weight (kg)	11000.0	Test Weight	13217 kg
Vehicle Type & Number:	StreetDeck HEV, AH351	Gross Weight (kg)	18000.0	F°	372.53 N
Engine:	Daimler Euro VI	Seated Capacity	66	F¹	-14.6124 N/kmh
Transmission:	Voith Diwa Automatic	Passenger Capacity	95	F²	0.52418 N/kmh²
Euro VI certificate Y/N	Manufacturer Certified	GVW Check	OK	F³	-0.002792 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 (l/km)
Rural	0.003	0.012	0.036	N/A	652.5	0.000	0.054	24.63	0.246
Outer London	0.011	0.026	0.032	N/A	710.7	0.000	0.076	26.84	0.268
Inner London	0.024	0.037	0.070	N/A	998.5	0.000	0.075	37.70	0.377
MLTB Average	0.015	0.029	0.042	N/A	791.7	0.000	0.076	29.89	0.299
LUB Average	0.009	0.021	0.039	0.0025	726.9	0.000	0.066	27.45	0.274

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


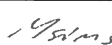
Total measured energy consumed on vehicle (kWh)	N/A	Distance in Z.E. mode (km)	N/A	Usable Battery Capacity (kWh)	N/A
Measured grid energy during charging (kWh)*	N/A	Charging efficiency (%)	N/A	Max Theoretical Z.E. Range (km)	N/A

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 Emissions (g CO2e / km)
Rural	652.5	0.000	16.214	668.7
Outer London	710.7	0.000	22.641	733.4
Inner London	998.5	0.000	22.343	1020.8
MLTB Average	791.7	0.000	22.618	814.3
LUB Average	726.9	0.000	19.660	746.6

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	8.87	136.8	N/A	N/A	668.7	805.4
Outer London	9.66	149.0	N/A	N/A	733.4	882.3
Inner London	13.57	209.3	N/A	N/A	1020.8	1230.1
MLTB Average	10.76	165.9	N/A	N/A	814.3	980.2
LUB Average	9.88	152.4	N/A	N/A	746.6	899.0

Data Generated by (On behalf of Test facility):		Date: 29.09.2017	Data Approved by:		Date: 06/10/17
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Low Emission Bus Certificate Summary

GHG Well-to-Wheel	899.0	g CO2e / km
Euro V Average Diesel Equivalent	1374.9	g CO2e / km
WTW GHG saving (compared with Euro V diesel equivalent)	475.9	g CO2e / km
% WTW GHG saving (compared with Euro V diesel equivalent)	35%	g CO2e / km
Zero Emission operating range (km)	N/A	km
WTW CO ₂ per passenger km (@ Max Pass Capacity)	9.5	g CO2e/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 3.31%

Test Numbers: ML02017362 (27 September 2017), ML02017364 (27 September 2017), ML02017365 (27 September 2017).

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