	Cummins Inc. Power Generation Business Unit 35A/1/2, Erandwane, Pune EXHAUST EMISSIONS DATA SHEET	Basic Engine Model: S3.8-G8	Curve Number: FR : N/A	G-DRIVE S3.8 1
		Engine Critical Parts List: CPL : N/A	Date: 02 Apr 13	
Displacement : 3.8 litre (232 in³)		Bore : 97 mm (3.82 in.) Stroke : 128 mm (5 in.)		
No. of Cylinders : 4		Aspiration : Turbocharged		
Emission Certification : Non Emissionised				

Engine Speed	Standby Power		Prime Power		Continuous Power	
RPM	kWm	hp	kWm	hp	kWm	hp
1800	48.5	65	44	59	36.5	49

Exhaust Emission Data @ 1800 RPM

Component	Standby Power		Prime Power	
	g/BHP-h	g/kW-h	g/BHP-h	g/kW-h
HC (Total Unburned Hydrocarbons)	1.02	1.37	1.14	1.54
NOx (Oxides of Nitrogen as NO ₂)	10.18	13.66	10.25	13.75
CO (Carbon Monoxide)	0.58	0.79	0.61	0.83
PM (Particulate Matter)	0.102	0.137	0.099	0.133

Note:

All Data is based on the Engine operating with the fuel system, Water pump, Alternator & Oil Pump, 10inch of water (250 mm). Inlet Air restriction (15 inch of H₂O) & with (2 inch of hg) Exhaust restriction. Optional Eqpt. like Fan & Driven components not included.


INDIA EMISSIONS NORMS (1500 & 1800 RPM ONLY)

This engine, tested in accordance with 40 CFR 89, is in compliance with the US EPA Non Road Tier 2 regulations.

It is certified that the above mentioned engine model complies with the emission limits applicable for Genset diesel engines upto (upto 800kW), as prescribed under the following rules, notified by ministry of Environment & Forest, Govt. of India:

- a) Rule 95 of Environment (Protection) Rules, 1986 of GSR 371(E),dt.17.05.2002.
- b) Rule 95 of Environment (Protection) Amendment Rules, 2003 of GSR 520 (E) dt.01.07.2003.

Test conducted as Published by CPCB. For NO_x, HC, CO & PM measurement as per D2 mode cycle & ISO8178 (Part 1). Measurement of exhaust smoke is as per ISO8178 (Part3). Test fuel used as per the specification given in annexure-1 of CPCB procedure.

	Cummins Inc. Power Generation Business Unit 35A/1/2, Erandwane, Pune EXHAUST EMISSIONS DATA SHEET	Basic Engine Model: S3.8-G8	Curve Number: FR : N/A	G-DRIVE S3.8 1
		Engine Critical Parts List: CPL : N/A	Date: 02 Apr 13	
Displacement : 3.8 litre (232 in³)		Bore : 97 mm (3.82 in.) Stroke : 128 mm (5 in.)		
No. of Cylinders : 4		Aspiration : Turbocharged		
Emission Certification : Non Emissionised				

Engine Speed	Standby Power		Prime Power		Continuous Power	
RPM	kWm	hp	kWm	hp	kWm	hp
1800	48.5	65	44	59	36.5	49

Exhaust Emission Data @ 1800 RPM

Component	Standby Power		Prime Power	
	g/BHP-h	g/kW-h	g/BHP-h	g/kW-h
HC (Total Unburned Hydrocarbons)	1.02	1.37	1.14	1.54
NOx (Oxides of Nitrogen as NO ₂)	10.18	13.66	10.25	13.75
CO (Carbon Monoxide)	0.58	0.79	0.61	0.83
PM (Particulate Matter)	0.102	0.137	0.099	0.133

Note:

All Data is based on the Engine operating with the fuel system, Water pump, Alternator & Oil Pump, 10inch of water (250 mm). Inlet Air restriction (15 inch of H₂O) & with (2 inch of hg) Exhaust restriction. Optional Eqpt. like Fan & Driven components not included.


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Test conducted as Published by CPCB. For NO_x, HC, CO & PM measurement as per D2 mode cycle & ISO8178 (Part 1). Measurement of exhaust smoke is as per ISO8178 (Part3). Test fuel used as per the specification given in annexure-1 of CPCB procedure.

	Cummins Inc. Power Generation Business Unit 35A/1/2, Erandwane, Pune EXHAUST EMISSIONS DATA SHEET	Basic Engine Model: S3.8-G8	Curve Number: FR : N/A	G-DRIVE S3.8 1
		Engine Critical Parts List: CPL : N/A	Date: 02 Apr 13	
Displacement : 3.8 litre (232 in³)		Bore : 97 mm (3.82 in.) Stroke : 128 mm (5 in.)		
No. of Cylinders : 4		Aspiration : Turbocharged		
Emission Certification : Non Emissionised				

Engine Speed	Standby Power		Prime Power		Continuous Power	
RPM	kWm	hp	kWm	hp	kWm	hp
1800	48.5	65	44	59	36.5	49

Exhaust Emission Data @ 1800 RPM

Component	Standby Power		Prime Power	
	g/BHP-h	g/kW-h	g/BHP-h	g/kW-h
HC (Total Unburned Hydrocarbons)	1.02	1.37	1.14	1.54
NOx (Oxides of Nitrogen as NO ₂)	10.18	13.66	10.25	13.75
CO (Carbon Monoxide)	0.58	0.79	0.61	0.83
PM (Particulate Matter)	0.102	0.137	0.099	0.133

Note:

All Data is based on the Engine operating with the fuel system, Water pump, Alternator & Oil Pump, 10inch of water (250 mm). Inlet Air restriction (15 inch of H₂O) & with (2 inch of hg) Exhaust restriction. Optional Eqpt. like Fan & Driven components not included.


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	Cummins Inc. Power Generation Business Unit 35A/1/2, Erandwane, Pune EXHAUST EMISSIONS DATA SHEET	Basic Engine Model: S3.8-G8	Curve Number: FR : N/A	G-DRIVE S3.8 1
		Engine Critical Parts List: CPL : N/A	Date: 02 Apr 13	
Displacement : 3.8 litre (232 in³)		Bore : 97 mm (3.82 in.) Stroke : 128 mm (5 in.)		
No. of Cylinders : 4		Aspiration : Turbocharged		
Emission Certification : Non Emissionised				

Engine Speed	Standby Power		Prime Power		Continuous Power	
RPM	kWm	hp	kWm	hp	kWm	hp
1800	48.5	65	44	59	36.5	49

Exhaust Emission Data @ 1800 RPM

Component	Standby Power		Prime Power	
	g/BHP-h	g/kW-h	g/BHP-h	g/kW-h
HC (Total Unburned Hydrocarbons)	1.02	1.37	1.14	1.54
NOx (Oxides of Nitrogen as NO ₂)	10.18	13.66	10.25	13.75
CO (Carbon Monoxide)	0.58	0.79	0.61	0.83
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	Cummins Inc. Power Generation Business Unit 35A/1/2, Erandwane, Pune EXHAUST EMISSIONS DATA SHEET	Basic Engine Model: S3.8-G8	Curve Number: FR : N/A	<i>G-DRIVE</i> S3.8 1
		Engine Critical Parts List: CPL : N/A	Date: 02 Apr 13	
Displacement : 3.8 litre (232 in³)		Bore : 97 mm (3.82 in.) Stroke : 128 mm (5 in.)		
No. of Cylinders : 4		Aspiration : Turbocharged		
Emission Certification : Non Emissionised				

Engine Speed	Standby Power		Prime Power		Continuous Power	
RPM	kWm	hp	kWm	hp	kWm	hp
1800	48.5	65	44	59	36.5	49

Exhaust Emission Data @ 1800 RPM

Component	Standby Power		Prime Power	
	g/BHP-h	g/kW-h	g/BHP-h	g/kW-h
HC (Total Unburned Hydrocarbons)	1.02	1.37	1.14	1.54
NOx (Oxides of Nitrogen as NO ₂)	10.18	13.66	10.25	13.75
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	Cummins Inc. Power Generation Business Unit 35A/1/2, Erandwane, Pune EXHAUST EMISSIONS DATA SHEET	Basic Engine Model: S3.8-G8	Curve Number: FR : N/A	G-DRIVE S3.8 1
		Engine Critical Parts List: CPL : N/A	Date: 02 Apr 13	
Displacement : 3.8 litre (232 in³)		Bore : 97 mm (3.82 in.) Stroke : 128 mm (5 in.)		
No. of Cylinders : 4		Aspiration : Turbocharged		
Emission Certification : Non Emissionised				

Engine Speed	Standby Power		Prime Power		Continuous Power	
RPM	kWm	hp	kWm	hp	kWm	hp
1800	48.5	65	44	59	36.5	49

Exhaust Emission Data @ 1800 RPM

Component	Standby Power		Prime Power	
	g/BHP-h	g/kW-h	g/BHP-h	g/kW-h
HC (Total Unburned Hydrocarbons)	1.02	1.37	1.14	1.54
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