



REPORT: **SSC - NEDC TEST CYCLE**





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Better fuel,
better performance.
Better combustion,
better emissions.
XBEE: naturally better.

Context

The SSC is accredited by the SINAL (Sistema Nazionale per l'Accreditamento di Laboratori, the Italian laboratory accreditation body) for a large series of test methods on fuel (EN 45001 standard).

Located in Milan, the Stazione Sperimentale per i Combustibili (SSC) has been recognized since 1940 in all sectors of the economy dealing with fossil fuels and their by-products. The Institute is indeed funded by the leading Italian fuel importers (gas, oil, coal).

In March 2005, Italian company Fleet Consult asked the SSC to develop a program to monitor diesel vehicle emissions and fuel consumption.

The said vehicle was a light car, a Fiat Marea 1.9 JTD SW Euro 3, equipped with common rail. It drove 6,500 km using XBEE Diesel.

The program analyzed the following parameters:

- Regulated polluting emissions: CO, HC, NO_x;
- Particles and CO₂; and
- Diesel consumption.

Measures have been performed in compliance with a regulatory test under the New European Driving Cycle (NEDC, directive 98/69CE) _ implementing sampling procedure ECE 15 as specified in directive 91/441/CEE.

The cycle itself is subdivided into two cycles, the Urban Driving Cycle (UDC) and the Extra-urban Driving Cycle (EUDC).

Data

Emissions		UDC Cycle			EUDC Cycle			NEDC Cycle		
		Standard diesel	XBEE Diesel	Difference (%)	Standard diesel	XBEE Diesel	Difference (%)	Standard diesel	XBEE Diesel	Difference (%)
CO	g/km	1.74	1.66	-4.6	0.12	0.11	-5.9	0.72	0.68	-4.8
CO₂	g/km	200	195	-2.4	115	112	-2.3	146	143	-2.4
THC	g/km	0.23	0.22	-2.6	0.046	0.044	-5.5	0.114	0.110	-3.3
NO_x	g/km	0.64	0.64	-0.8	0.41	0.46	14.1	0.49	0.53	6.9
PM	mg/km	32	36	12.7	26	22	-13.3	28	27	-2.4

Consumption										
Calculated		7.7	7.5	-2.4	4.4	4.3	-2.3	5.6	5.5	-2.4
Measured		7.8	7.9	1.0	4.4	4.4	-0.2	5.7	5.7	0.4



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