



10 June, 2006

Tadger Fuel Saver / Emission Reducer Test Report

Client : Windex Industrial Equio. & Eng. Co. Ltd.

Product : Tadger Fuel Saver / Emission Reducer

Testing Objective :-

1. To measure the fuel save after installed Tadger Fuel Saver / Emission Reducer to the engine.
2. To measure the exhaust emission improvement of the engine after installed Tadger Fuel Saver/ Emission Reducer to the engine.

Equipment used :

1. Details of Diesel Vehicle (LE 5311) :-
Engine Manufacturer : Toyota (Japan) / 2003
Engine Capacity : 2986 c.c.
Chassis No. : JT721LHH2061184
Engine No. : 5L-9814521
Mileage accumulate : 93438km
2. Details of Equipment provided by Emission Test Centre Hong Kong SAR Limited
 - (a) Chassis Dynamometer.
 - (b) HC, CO, CO₂, O₂, PM, Analyser.
 - (c) Emission System Controller.
 - (d) Smoke Tester (Made in UK)
DA / ATT (Serial No. HR172 / 000843)
3. SHIMADZU Electronic Balance
Make : Japan,
Model no : BX22KH
Serial no. : D442000263



Testing Procedure :

1. To conduct the vehicle (LE 5311) test on the chassis dynamometer with driving cycle (98/69/EC) before installed Tadger Fuel Saver / Emission Reducer to the vehicle on 23 May 2006. (see appendix 1, Photo 1)
2. To complete the driving cycle (98/69/EC) test with 20 minutes. (see appendix 3)
3. To measure the fuel consumption and emissions during the driving cycle test without Tadger Fuel Saver / Emission Reducer. (see appendix 1, Photo 2)
4. To measure the smoke by free acceleration method after left the chassis dynamometer. (see appendix 2, Photo 3)
5. All data were obtained for the vehicle without install Tadger Fuel Saver / Emission Reducer.
6. After complete the above test, to install Tadger Fuel Saver / Emission Reducer in the vehicle (LE 5311).
7. To repeat the above procedure to conduct the vehicle test on the chassis dynamometer after the vehicle travelled about 1465 km on 6 June 2006.
8. Therefore all data can be determined before and after installed Tadger Fuel Saver / Emission Reducer after completed driving cycle (98/69/EC).



Testing Period :

From 23 / 5 / 2006 to 6 / 6 / 2006

The engine performance test was carried out in **Emission Testing Centre Hong Kong SAR Limited.**

Emission Test conducted on Chassis Dynamometer with driving cycle (98/69/EC), the results were obtained on 23 May, 2006 and 6 June 2006 as follows.

Exhaust Emission Test

Description	CO g / km	Nox g / km	HC g / km	PM g / km	Smoke HSU
23 / 5 / 2006 Without Tadger Fuel Saver	1.04009	0.41329	0.04010	0.04267	12.1
6 / 6 / 2006 With Tadger Fuel Saver	0.62220	0.32851	0.01948	0.03265	8.0
% reduction	40.18	20.51	51.41	23.49	33.88

Fuel Consumption Measurement

Description	Before use Tadger Fuel Saver	After use Tadger Fuel Saver	Fuel Save (%)
Driving Cycle Test (13.8 km)	0.9893 litre	0.9666 litre	2.35



Conclusion :-

1. According to the test results, after the vehicle traveled for about 1465 km with Tager Fuel Saver / Emission Reducer. The smoke reduce 33.88 %, CO reduce 40.18 %, HC reduce 51.41 %, Nox reduce 20.51 %, PM reduce 23.49 % and fuel save 2.35 %.
2. The Tager Fuel Saver / Emission Reducer can reduce Smoke and Particulate emission for diesel engine vehicle.
3. The Tager Fuel Saver / Emission Reducer able to reduce air pollution.

Comment :

1. The Tager Fuel Saver / Emission Reducer is good for environment protection.
2. The poor condition engine may not obtain the similar result after installed Tager Fuel Saver / Emission Reducer.




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Photo 1. (Urban Cruise Simulation Test on Chassis Dynamometer)



Photo 2. (Measure Fuel Consumption)



Photo 3. (Smoke Test)



Driving Cycle (98/69/EC)

