

CARS - TESTED AND INSTALLED FOR SUPERTECH	
A. Car Mark-TOYOTA HARRIER	
	
Manufactured year	2000
Imported date to Mongolia	2009
Engine type	Gasoline
Engine capacity	2140 cc
Fuel type	AI92 (unleaded)
Total running, km	169091
Plate number	54-22 YHY
Measurement methodology:	<ul style="list-style-type: none"> <li>• “0” point is taken as reference point when measured the gas emission through exhaust before the installation of Supertech in the fuel tank and measurements were taken at every 20 km-interval.</li> <li>• Total of 30 measurements were taken during the test run including 5 measurements on each neutral and high rpm.</li> </ul>

# Car Model -TOYOTA HARREIR

Table 24

No.	Before the installation of Supertech in the fuel tank								40 km							
	Minimum rpm (on neutral)				Increased rpm (2500 rpm/min)				Minimum rpm (on neutral)				Increased rpm (2500 rpm/min)			
	CO2 content, %	CO content, %	CH content, ppm	NO content, ppm	CO2 content, %	CO content, %	CH content, ppm	NO content, ppm	CO2 content, %	CO content, %	CH content, ppm	NO content, ppm	CO2 content, %	CO content, %	CH content, ppm	NO content, ppm
1	14.6	0.4	80		14.03	1.24	410		15.02	0.25	60		8.72	0.65	20	
2	14.8	0.43	430		11.89	0.62	40		8.4	0.09	30		9.29	0.23	20	
3	14.31	0.44	80		13.7	0.54	40		7.44	0.13	38		9.2	0.19	10	
4	14.3	0.42	78		9.99	0.2	20		8.72	0.35	60		9.5	0.21	10	
5	14.32	0.44	79		12.32	0.25	50		8.61	0.33	50		9.57	0.2	10	
Average value	14.466	0.426	149.4		12.39	0.57	112		9.638	0.23	47.6		9.256	0.296	14	

No.	60 km								80 km							
	Minimum rpm (on neutral)				Increased rpm (2500 rpm/min)				Minimum rpm (on neutral)				Increased rpm (2500 rpm/min)			
	CO2 content, %	CO content, %	CH content, ppm	NO content, ppm	CO2 content, %	CO content, %	CH content, ppm	NO content, ppm	CO2 content, %	CO content, %	CH content, ppm	NO content, ppm	CO2 content, %	CO content, %	CH content, ppm	NO content, ppm
1	13.79	0.22	10		6.42	0.62	20		11.7	0	20		12.63	0.4	10	
2	14.62	0.03	10		10.31	0.21	10		9.76	0	10		13.25	0.25	10	
3	13.3	0.01	10		13.35	0.21	10		12.83	0	10		13.78	0.33	10	
4	13.41	0	10		9.08	0.13	20		6.83	0	10		13.25	0.23	10	
5	5.58	0	10		12.8	0.16	20		11.53	0	10		13.55	0.16	10	
Average value	12.14	0.052	10		10.39	0.266	16		10.53	0	12		13.292	0.274	10	

No.	100 km								120 km							
	Minimum rpm (on neutral)				Increased rpm (2500 rpm/min)				Minimum rpm (on neutral)				Increased rpm (2500 rpm/min)			

	CO2 content, %	CO content, %	CH content, ppm	NO content, ppm	CO2 content, %	CO content, %	CH content, ppm	NO content, ppm	CO2 content, %	CO content, %	CH content, ppm	NO content, ppm	CO2 content, %	CO content, %	CH content, ppm	NO content, ppm
1	13.74	0	10		13.03	0.59	20		10.5	0	10		13.01	0.32	20	
2	13.26	0	10		11.04	0.2	10		12.84	0	10		13.66	0.38	20	
3	13.46	0	10		13.36	0.3	20		13.31	0	10		13.42	0.3	30	
4	13.66	0	10		13.7	0.23	20		13.36	0	20		13.69	0.24	10	
5	12.8	0	10		13.54	0.32	20		13.41	0	10		13.36	0.3	20	
<b>Average value</b>	<b>13.384</b>	<b>0</b>	<b>10</b>		<b>12.934</b>	<b>0.328</b>	<b>18</b>		<b>12.684</b>	<b>0</b>	<b>12</b>		<b>13.428</b>	<b>0.308</b>	<b>20</b>	

Average measurement values are shown on following figures:

Figure 20. Change of CO<sub>2</sub> content after the installation of Supertech in the fuel tank (on neutral)

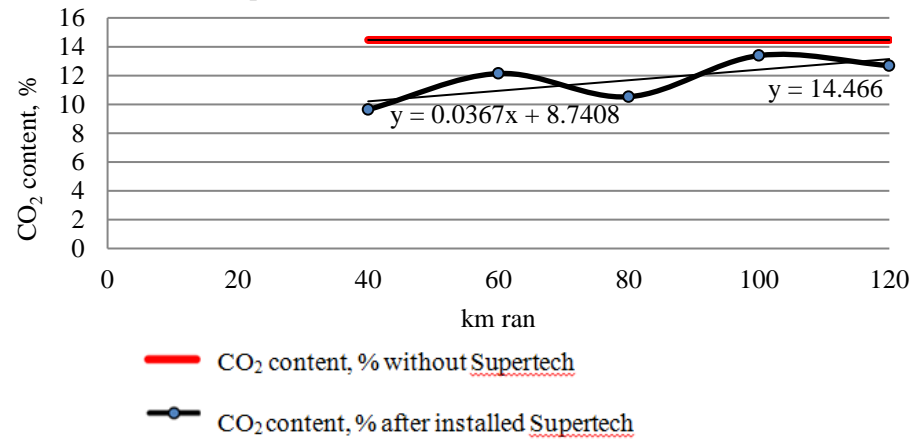


Figure 21. Change of CO<sub>2</sub> content after the installation of Supertech in the fuel tank (2500 rpm)

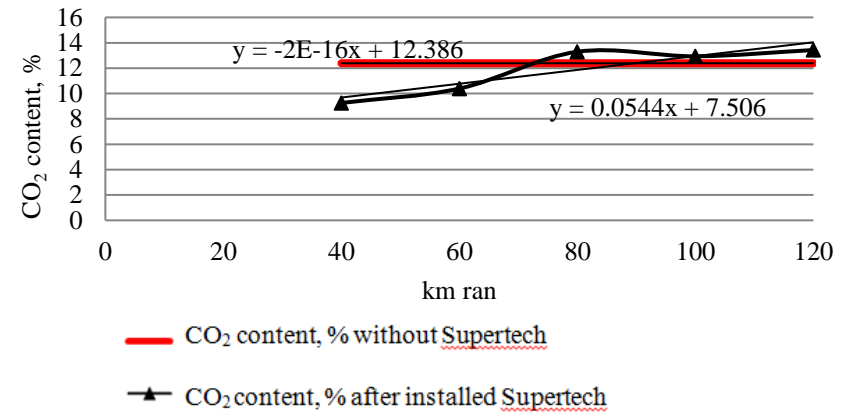


Figure 22. Change of CO content after the installation of Supertech in the fuel tank (on neutral)

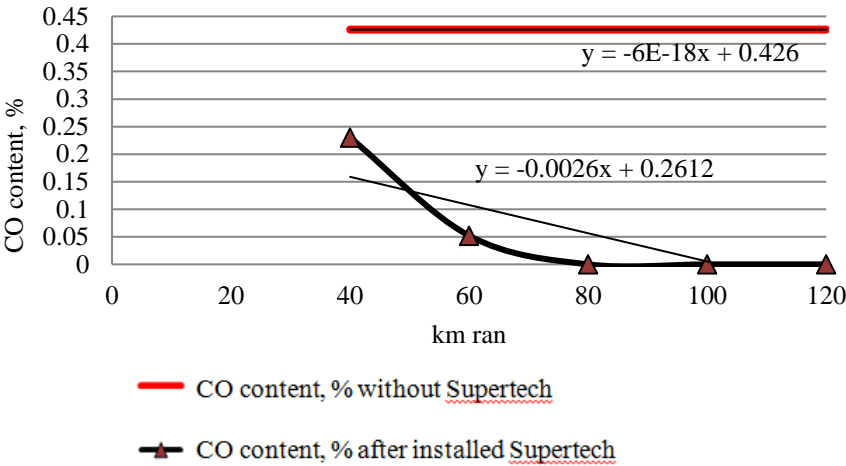


Figure 23. Change of CO content after the installation of Supertech in the fuel tank (2500 rpm/min)

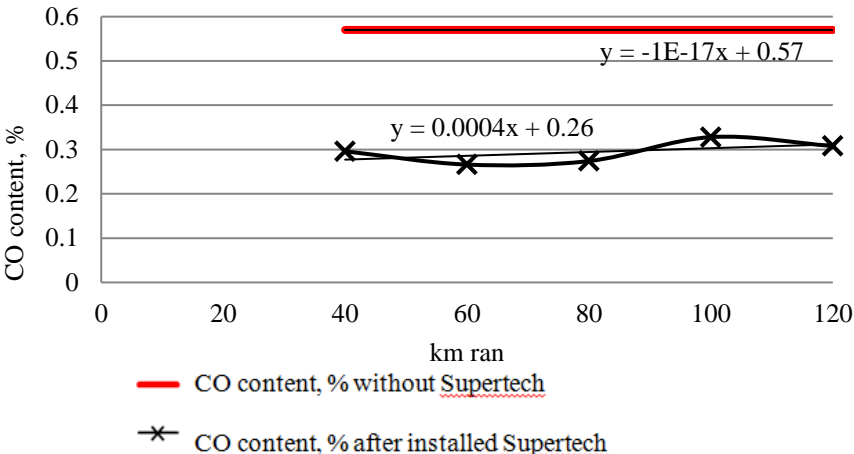


Figure 24. Change of CH content after the installation of Supertech in the fuel tank (on neutral)

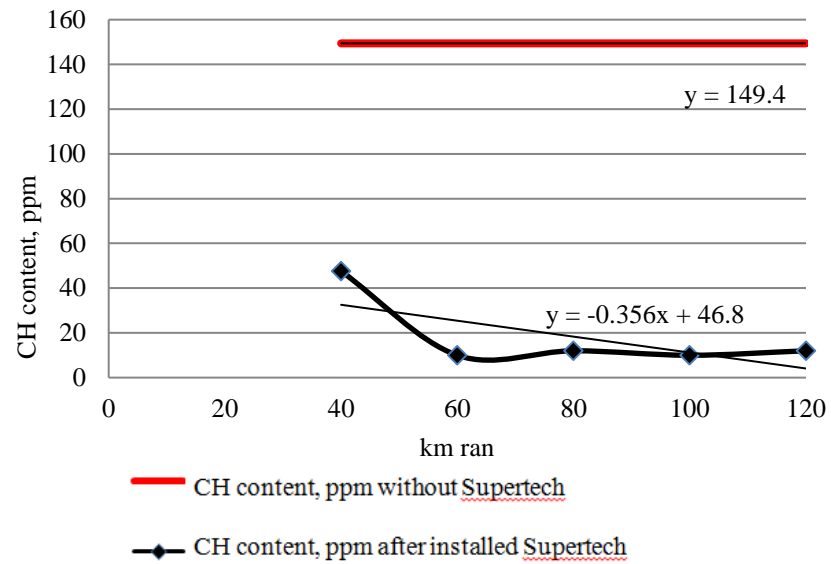
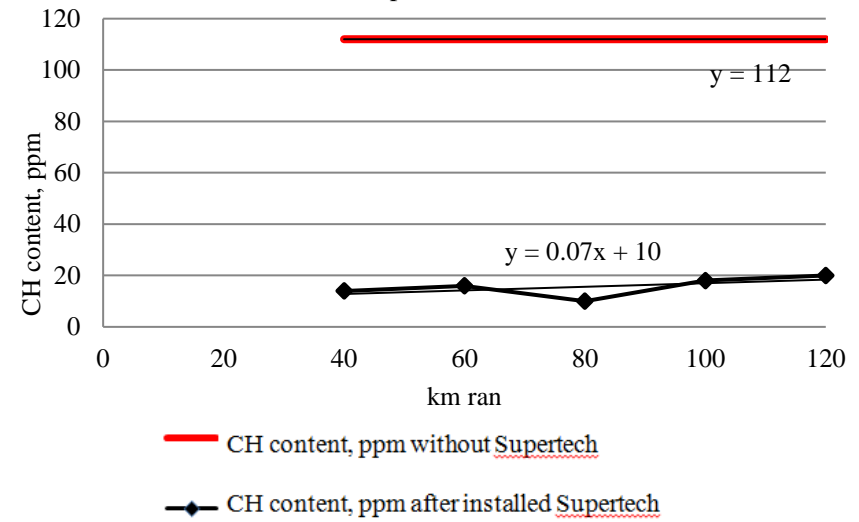


Figure 24. Change of CH content after the installation of Supertech in the fuel tank (on neutral) (2500 rpm/min)



## CONCLUSION

1. If compare the values of “0” point measurement or when the Supertech was not installed, with the values of measurement after running 120 km:

Table 25

Indicators	Fuel tank without Supertech		After installation and 120km running		Notes
	Minimum rpm (on neutral)	Increased rpm (2500 rpm/min)	Minimum rpm (on neutral)	Increased rpm (2500 rpm/min)	
CO <sub>2</sub> content, %	14.466	12.39	12.684	13.428	Reduced by 7.17% on neutral, increased by 8.37% on increased rpm
CO content, %	0.426	0.57	0	0.308	Reduced by 100% on neutral, reduced by 27.7% on increased rpm.
CH content, ppm	149.4	112	12	20	Reduced by 91.9% on neutral, reduced by 82.1% on increased rpm.

1. The gas emission contents showed considerable reduction as result of the Supertech influence and the testing team agreed to carry out a second test believing that the product needs “**adjustment period**” and speedometer indicators were written down.

## SECOND MEASUREMENT

On 9<sup>th</sup> May, 2013, we have carried out the second measurement after the **TOYOTO HARRIER** 54-22 YHY with installed Supertech ran 800 km since the first test (total: prior 120+800=920 km). The results are shown in Table 26.

Table 26

	On neutral			Increased rpm		
	CO <sub>2</sub> content, %	CO content, %	CH content, ppm	CO <sub>2</sub> content, %	CO content, %	CH content, ppm
	13.5	0	10	11.98	0.32	20
	12.74	0	10	12.49	0.35	10
	11.66	0	10	12.5	0.22	10
	12.86	0	10	12.58	0.27	10

	12.87	0	10	12.3	0.33	10
<b>Average value</b>	<b>12.726</b>	<b>0</b>	<b>10</b>	<b>12.37</b>	<b>0.298</b>	<b>12</b>

The table below indicates the comparison of repeated measurement result and previous specifications:

Table 27

Indicators	Fuel tank without Supertech		After the installation and 920km running		Notes
	Minimum rpm (on neutral)	Increased rpm (2500 rpm/min)	Minimum rpm (on neutral)	Increased rpm (2500 rpm/min)	
CO2-content, %	14.466	12.39	12.726	12.37	<ul style="list-style-type: none"> <li><u><b>Change observed after 120 km running:</b></u>  Reduced by 7.17% on neutral, increased by 8.37% on increased rpm.</li> <li><u><b>Change observed after 920 km running:</b></u>  Reduced by 12% on neutral, reduced by 0.16% on increased rpm.</li> </ul>
CO- content, %	0.426	0.57	0	0.298	<ul style="list-style-type: none"> <li><u><b>Change observed after 120 km running:</b></u>  Reduced by 100% on neutral, reduced by 27.7% on increased rpm.</li> <li><u><b>Change observed after 920 km running:</b></u>  Reduced by 100% on neutral, reduced by</li> </ul>



					47.7% on increased rpm.
CH- content, ppm	149.4	112	10	12	<ul style="list-style-type: none"> <li>• <u><i>Change observed after 120 km running:</i></u></li> <li>Reduced by 91.9% on neutral, reduced by 82.1% on increased rpm.</li> <li>• <u><i>Change observed after 920 km running:</i></u></li> <li>Reduced by 93.3% on neutral, reduced by 89.2% on increased rpm.</li> </ul>

The second measurement indicated that the Supertech impact is relatively stable.

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