

**Emissions Testing of City Vehicles with MPG-CAPS  
Wichita, Kansas                      Nov. 17, 2006 - March 1, 2007**

In Wichita, Kansas, the City organization responsible for servicing and maintaining over 200 City-owned buildings is Building Services. A fleet of service vehicles is assigned to its staff. This fleet ranges from new vehicles to others that are several years old with considerable mileage, and a few that are up to 15 years old and in bad shape, but they are still in use.

On November 17, 2006, a number of Building Services' vehicles were selected at random to undergo emission testing prior to using MPG-CAPS and again later after using the product in several tanks of gasoline. Drivers were told nothing except to put the tablets in their tank when they fill up. The rationale was simple. If the tests show a significant reduction in carbon monoxide and unburned hydrocarbons after using the MPG-CAPS, it will be obvious that the engine is running better and burning fuel more efficiently. If positive results are achieved, computer records of fill-ups and odometer readings will be researched to determine fuel mileage improvements.

Following the initial emissions testing, 9 "healthy" vehicles were selected for the MPG-CAPS test. In addition, 1 "marginal condition" vehicle and 1 "junker" were included. Follow-up emission testing was done on March 1, 2007. The results are shown below.

NOTE: CO = Carbon Monoxide measured as a percent of total exhaust (%)  
           Measured CO must be below 1.5% to pass an emission test  
       HC = Unburned Hydrocarbons measured in parts per million (ppm)  
           Measured HC must be below 220 ppm to pass an emission test

**Vehicle #000740 2005 Chevrolet C2500 3/4 ton pickup truck**

**Miles 3/1/07: 17,222**

Test @ idle	11/17/06	3/01/07	% reduct.
CO	0.07%	0.00%	100%
HC	45 ppm	3 ppm	93%

Test @ 2500 rpm.	11/17/06	3/01/07	% reduct.
CO	0.09%	0.02%	78%
HC	12 ppm	3 ppm	75%

**Vehicle #000741 2005 Chevrolet C2500 3/4 ton pickup truck**

**Miles 3/1/07: 5,287**

Test @ idle	11/17/06	3/01/07	% reduct.
CO	0.08%	0.001%	99%
HC	28 ppm	3 ppm	89%

Test @ 2500 rpm.	11/17/06	3/01/07	% reduct.
CO	0.02%	0.002%	90%
HC	12 ppm	2 ppm	83%

**Vehicle #4-0498 2003 Chevrolet G2500 3/4 ton van**

**Miles 3/1/07: 31,522**

Test @ idle	11/17/06	3/01/07	% reduct.
CO	0.00%	0.00%	N/A
HC	7 ppm	1 ppm	86%

Test @ 2500 rpm.	11/17/06	3/01/07	% reduct.
CO	0.00%	0.00%	N/A
HC	7 ppm	1 ppm	86%

**Vehicle #001174 2006 Ford F350 4x4 crew cab flatbed truck****Miles 3/1/07: 6,823**

Test @ idle	11/17/06	3/01/07	% reduct.
CO	0.00%	0.00%	N/A
HC	11 ppm	2 ppm	82%

Test @ 2500 rpm.	11/17/06	3/01/07	% reduct.
CO	0.00%	0.00%	N/A
HC	11 ppm	3 ppm	73%

**Vehicle #4-0393 2002 Chevrolet C2500 3/4 ton pickup truck****Miles 3/1/07: 48,058**

Test @ idle	11/17/06	3/01/07	% reduct.
CO	0.00%	0.00%	N/A
HC	16 ppm	4 ppm	75%

Test @ 2500 rpm.	11/17/06	3/01/07	% reduct.
CO	0.08%	0.008%	90%
HC	16 ppm	5 ppm	67%

**Vehicle #4-0003 1999 Ford E250 3/4 ton van****Miles 3/1/07: 49,848**

Test @ idle	11/17/06	3/01/07	% reduct.
CO	0.07%	0.006%	91%
HC	40 ppm	16 ppm	60%

Test @ 2500 rpm.	11/17/06	3/01/07	% reduct.
CO	0.24%	0.00%	100%
HC	27 ppm	12 ppm	56%

**Vehicle #4-0499 2003 Chevrolet G2500 3/4 ton van****Miles 3/1/07: 42,280**

Test @ idle	11/17/06	3/01/07	% reduct.
CO	0.05%	0.00%	100%
HC	16 ppm	7 ppm	56%

Test @ 2500 rpm.	11/17/06	3/01/07	% reduct.
CO	0.09%	0.00%	100%
HC	10 ppm	5 ppm	50%

**Vehicle #000736 2005 Chevrolet Cobalt sedan****Miles 3/1/07: 8,403**

Test @ idle	11/17/06	3/01/07	% reduct.
CO	0.00%	0.00%	N/A
HC	8 ppm	7 ppm	13%

Test @ 2500 rpm.	11/17/06	3/01/07	% reduct.
CO	0.00%	0.00%	N/A
HC	8 ppm	7 ppm	13%

**Vehicle #5-2889 1994 Ford E250 3/4 ton cargo van****Miles 3/1/07: 93,212**

This high mileage vehicle had HC levels in the 11/17/06 test considerably higher than the other "healthy" vehicles. However, the MPG-CAPS returned it to very acceptable emission levels in the 3/01/07 test.

Test @ idle	11/17/06	3/01/07	% reduct.
CO	0.13%	0.010%	92%
HC	103 ppm	16 ppm	84%

Test @ 2500 rpm.	11/17/06	3/01/07	% reduct.
CO	0.21%	0.00%	100%
HC	42 ppm	10 ppm	76%

**Vehicle #4-2815 1993 Chevrolet C2500 3/4 ton pickup truck**

**Miles 3/1/07: 94,084**

This was considered a "marginal condition" vehicle because of its high emissions levels in the 11/17/06 test and is suspected of having mechanical problems of some sort. It will be sent to the shop for service.

Test @ idle	11/17/06	3/01/07	% reduct.
CO	0.38%	0.247%	35%
HC	180 ppm	161 ppm	11%

Test @ 2500 rpm	11/17/06	3/01/07	% reduct.
CO	0.44%	0.411%	7%
HC	69 ppm	57 ppm	17%

**Vehicle #8-2718 1991 Chevrolet Astro mini van**

**Miles 3/1/07: 162,319**

This was a "junker" that had been retired and designated for the auction but was brought back into service to fill an unexpected need. Its emissions levels when tested on 11/17/06 were so bad that it fouled the emissions test equipment and considerable effort was required to clean the equipment and make it operational once again. This vehicle was included in the test just to see what would happen. The results were amazing. However, the vehicle is still out of compliance at idle, and it has been retired from service once again.

Test @ idle	11/17/06	3/01/07	% reduct.
CO	12.4%	0.315%	97%
HC	2270 ppm	430 ppm	81%

Test @ 2500 rpm	11/17/06	3/01/07	% reduct.
CO	8.84%	0.63%	93%
HC	9280 ppm	117 ppm	99%

**TEST SUMMARY:**

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Average reduction in 9 "healthy" vehicles

CO @ idle = 96.4%      CO @ 2500 rpm = 93.0%  
 HC @ idle = 70.9%      HC @ 2500 rpm = 64.3%

Average reduction for all 11 vehicles

CO @ idle = 87.7%      CO @ 2500 rpm = 82.3%  
 HC @ idle = 66.4%      HC @ 2500 rpm = 63.2%