



**Bell Performance, Inc.** tel 407-831-5021  
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## **Japanese Dee-Zol Fleet Testing – Meito Transport**

Bell Performance's multi-purpose additive for diesel fuel, Dee-Zol (DZL), has been manufactured since 1954 and used by tens of thousands of consumers. The additive contains ingredients to improve combustion of fuel, detergency, lubricity (especially important for ultra low sulfur diesel fuels), fuel stability and water control. All of these ingredients are combined in a completely ashless formula which is concentrated to provide exceptional benefits at a treat rate in excess of 1 ounce to 10 gallons of fuel.

The primary question in the mind of many customers when presented with an additive-related opportunity is "will it work for me?" Sometimes it will take a test of the product to show how well the product works for that particular customer. Bell Performance does not guarantee specific results for every consumer because it is well-known that every customer and every truck fleet is different, with different factors of variable controllability (mechanical parameters, environmental parameters, operating parameters) combining to affect emissions and fuel consumption.

Through its Japanese agent, Bell Performance conducted testing of Dee-Zol at multiple depots in the country of Japan. In 2007, Meito Transport agreed to a test period for a subgroup of its buses. The purpose of the test was to document the effects of Dee-Zol treatment on its bus fuel consumption. The company agreed to test six of its buses for a period of three months.

### **Testing Details:**

**Customer:** Meito Transportation Company – Gunma Depot

**Test Period:** April to June 2007

**Vehicle Manufacturers:** Hino, Isuzu, and Mitsubishi

**Vehicle Years:** 1998-2003

**Vehicles Tested:** Six

### **Testing Protocol:**

Meito, as per normal business practice, kept detailed records of driving distances and fuel usage for all of their buses. For the test period, the Dee-Zol additive was added at the recommended treat ratio to each depot's fuel storage tank, at each addition of new fuel to the tank, to ensure both proper mixing of the fuel and additive and to ensure proper dosage of additive for each vehicle (instead of individual drivers being required to add the additive themselves). All trucks at each depot utilized the fuel tanks on-site, instead of relying on roadside commercial establishment and ensuring the validity of the test. In keeping with company standards, the same regular maintenance regiments were followed for each vehicle, including oil changes at regular intervals, proper tire pressure and all recommended preventive maintenance and upkeep followed. Test data was compiled for three months, starting in April 2007 and concluding at the end of June 2007. Fuel usage was compared to baseline testing data compiled for the same months from the previous year.



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### Testing Results

Gunma Depot				Apr-06			Apr-07				
Car No.	Year	Load	Maker	Km	Fuel(L)	□□mileage	Km	Fuel(L)	□Mileage	□□□	□Improve
1	15	□□	Isuzu	5,971	766	7.80	6,024	698	8.63	0.83	10.6
2	13	□□	Isuzu	3,578	537	6.66	7,166	1,015	7.06	0.40	6.0
3	11	□□	Hino	4,656	1,532	3.04	4,464	1,389	3.21	0.17	5.6
4	11	□□□	Mitxsubishi	7,889	2,416	3.27	7,973	2,226	3.58	0.31	9.5
5	10	□□□	Mitxsubishi	6,956	2,028	3.43	7,068	1,476	4.79	1.36	40.0
6	15	□□□	Hino	15,654	4,581	3.42	6,144	1,854	3.31	-0.11	-3.2
<b>April total</b>				<b>44,704</b>	<b>11,860</b>	<b>3.77</b>	<b>38,839</b>	<b>8,658</b>	<b>4.49</b>	<b>0.72</b>	<b>19.10%</b>
Gunma Depot				May-06			May-07				
Car No.	Year	Load	Maker	Km	Fuel(L)	mileage	Km	Fuel(L)	mileage	07less'06	Improve
1	15	□□	Isuzu	6,179	857	7.21	5,478	724	7.57	0.36	5.0
2	13	□□	Isuzu	2,424	392	6.18	7,198	1,042	6.91	0.73	11.8
3	11	□□	Hino	4,748	1,523	3.12	4,227	1,218	3.47	0.35	11.2
4	11	□□□	Mitxsubishi	8,187	2,505	3.27	7,416	2,244	3.30	0.03	0.9
5	10	□□□	Mitxsubishi	5,049	1,618	3.12	7,030	2,262	3.11	-0.01	-0.3
6	15	□□□	Hino	16,227	4,744	3.42	6,380	1,966	3.25	-0.17	-5.0
<b>May total</b>				<b>42,814</b>	<b>11,639</b>	<b>3.68</b>	<b>37,729</b>	<b>9,456</b>	<b>3.99</b>	<b>0.31</b>	<b>8.40%</b>
Gunma Depot				Jun-06			Jun-07				
Car No.	Year	Load	Maker	Km	Fuel(L)	mileage	Km	Fuel(L)	mileage	07less'06	Improve
1	15	□□	Isuzu	5,775	827	6.98	5,328	726	7.34	0.36	5.2
2	13	□□	Isuzu	2,744	412	6.66	7,536	1,196	6.3	-0.36	-5.4
3	11	□□	Hino	4,495	1,472	3.05	4,551	1,533	2.97	-0.08	-2.6
4	11	□□□	Mitxsubishi	7,976	2,698	2.96	7,909	2,453	3.22	0.26	8.8
5	10	□□□	Mitxsubishi	6,946	2,304	3.01	7,981	2,435	3.28	0.27	9.0
6	15	□□□	Hino	15,627	4,543	3.44	7,152	2,345	3.05	-0.39	-11.3
<b>June total</b>				<b>43,563</b>	<b>12,256</b>	<b>3.55</b>	<b>40,457</b>	<b>10,688</b>	<b>3.79</b>	<b>0.24</b>	<b>6.80%</b>
<b>Apr.-June</b>				<b>131,081</b>	<b>35,755</b>	<b>3.67</b>	<b>117,025</b>	<b>28,802</b>	<b>4.06</b>	<b>0.39</b>	<b>10.60%</b>
<b>May-June</b>				<b>86,377</b>	<b>23,895</b>	<b>3.61</b>	<b>78,186</b>	<b>20,144</b>	<b>3.88</b>	<b>0.27</b>	<b>7.50%</b>



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As with most tests utilizing a pool of multiple vehicles, there was some variance in results. One bus experienced a 40% increase in mileage over a one-month period. Six other times a negative mileage increase was documented during a single month. 55% of the monthly mileage increases fell between 5% and 11.8% increase, which is consistent with what you would expect in similar additive trials.

Overall mileage increases were 19.1%, 8.4% and 6.8% for the three months. Removing the two outlying values (+40.0% increase and -11.3% decrease) yielded a total increase over the entire April-June test period of **10.4%**.

### **Conclusion**

The three month trial demonstrated that Dee-Zol provided substantial fuel mileage savings over a large sample size. With fuel prices for diesel fuel over \$4.50 per gallon in the United States (as of mid-2008), a 10% increase in fuel mileage would provide savings for transportation companies that would quickly run into the tens of thousands of dollars.