

**National Freight Carrier  
Cool-X Oil Test Program Results**

Current Vendor: Shell Rotella 15W/40 Mineral Base  
 Competitor A: Royal Purple 15W/40 Synthetic  
 Competitor B: Cool-X 15W/40 Mineral Base (Safe-T-Kleen)  
 Engines: DD: Detroit Diesel C: Caterpillar MB: Mercedes Benz E400 V: Volvo

Tractor ID	Engine	Product	Beginning	Miles	MPG	MPG	% Incr.	Oil Filter Changes	Oil Changes	Mean miles
			Miles	Driven	(start)	(finish)				Between Oil Changes
261024	DD	RP	142	32,990	5.93	5.91	-0.34%	1	1	32990
171159	MB	RP	30,457	68,334	6.33	6.73	6.32%	3	2	34167
271299	DD	RP	42,898	127,601	5.8	5.88	1.38%	3	2	63801
251072	DD	RP	30,670	78,277	5.92	5.94	0.34%	3	0	78277
271176	DD	RP	29,422	78,915	5.78	5.88	1.73%	2	0	78915
251019	DD	RP	34,992	79,228	5.82	5.88	1.03%	4	2	39614
251054	DD	RP	29,788	86,112	5.81	5.82	0.17%	2	1	86112
261068	V	RP	30,896	87,203	5.76	5.91	2.60%	3	2	43602
271285	DD	RP	18,445	88,997	5.48	5.56	1.46%	2	0	88997
251036	C	RP	32,455	89,336	5.89	6.05	2.72%	3	3	29779
251044	MB	RP	31,359	90,746	5.79	5.91	2.07%	2	0	90746
271109	C	RP	14,785	95,339	6.03	6.19	2.65%	3	1	95339
261026	MB	RP	31,674	100,452	5.78	5.89	1.90%	3	1	100452
251013	MB	RP	31,005	101,002	5.54	5.58	0.72%	5	3	33667
151076	DD	RP	34,892	103,000	5.88	5.91	0.51%	3	1	103000
151192	C	RP	29,333	127,334	5.79	5.84	0.86%	3	0	127334
271298	MB	Cool-X	119	17,925	6.94	7.02	1.15%	0	0	17925
271300	MB	Cool-X	126	33,145	7.07	7.25	2.55%	1	0	33145
251017	DD	Cool-X	35,238	43,211	5.85	5.92	1.20%	2	1	43211
251015	DD	Cool-X	30,104	68,638	5.79	5.98	3.28%	2	0	68638
271281	DD	Cool-X	30,563	80,445	5.71	6.12	7.18%	3	0	80445
251011	DD	Cool-X	31,563	89,022	5.91	6.18	4.57%	2	0	89022
271283	DD	Cool-X	19,442	90,349	5.87	6.2	5.62%	3	0	90349
251014	MB	Cool-X	30,560	94,553	5.67	5.84	3.00%	2	0	94553
271299	DD	Cool-X*	170,499	103,254	5.8	6.13	5.69%	4	0	103254
271282	DD	Cool-X	21,489	105,220	5.61	6.1	8.73%	3	1	105220
251012	DD	Cool-X	36,422	107,279	5.89	6.17	4.75%	3	1	107279

**Vehicles**

11	Cool-X	833,041	75731	6.01	6.26	4.24%	25	3	85237
16	RP	1,434,866	89679	5.83	5.93	1.66%	45	19	59305

<b>RP Average % Increase in Fuel Economy</b>	<b>1.63%</b>
<b>Cool-X Average % Increase in Fuel Economy</b>	<b>4.34%</b>
<b>Cool-X Average (trucks driven &lt;50K miles)</b>	<b>1.63%</b>
<b>Cool-X Average (trucks driven &gt;50K miles)</b>	<b>5.35%</b>

## Cool-X Nanofluid Oil Fleet Testing

Royal Purple 15W-40 Full Synthetic

FC-Oil Filter Change

Vehicle ID 271299 Detroit Diesel Motor

OC-Oil Change

	Date	Mileage	Miles Driven	Gallons of Fuel Used	MPG	% Incr.
Start-Date	11-Jul-07	43,267.40	0.00	0.0	5.80	0
	9-Aug-07	48,535.10	5,267.70	905.5	5.82	0.36
	22-Aug-07	54,428.60	5,893.50	1010.5	5.83	0.62
	4-Sep-07	60,122.40	5,693.80	970.3	5.87	1.23
<b>FC</b>	17-Sep-07	67,021.90	6,899.50	1174.3	5.88	1.36
	21-Sep-07	72,455.20	5,433.30	926.7	5.86	1.15
	15-Oct-07	82,786.23	10,331.03	1762.6	5.86	1.12
	30-Oct-07	86,453.54	3,667.31	624.8	5.87	1.26
<b>FC</b>	12-Nov-07	90,783.48	4,329.94	735.7	5.89	1.53
	20-Nov-07	93799.66	3,016.18	514.5	5.86	1.13
	7-Dec-07	96,784.41	2,984.75	507.1	5.89	1.55
	14-Dec-07	99,456.18	2,671.77	455.1	5.87	1.27
<b>FC</b>	22-Dec-07	105,677.82	6,221.64	1059.8	5.87	1.28
	5-Jan-08	108,643.03	2,965.21	505.0	5.87	1.29
	15-Jan-08	111,648.04	3,005.01	512.7	5.86	1.11
<b>OC/FC</b>	24-Jan-08	115,755.21	3,689.55	629.1	5.86	1.17
	10-Feb-08	119,444.76	4,411.17	752.7	5.86	1.10
	22-Feb-08	123,855.93	4,729.80	807.1	5.86	1.10
	15-Mar-08	128,585.73	7,170.02	1221.7	5.87	1.25
	26-Mar-08	135,755.75	6,229.01	1061.6	5.87	1.23
<b>OC/FC</b>	9-Apr-08	141,984.76	5,780.69	983.1	5.88	1.44
	21-Apr-08	147,765.45	6,445.93	1095.1	5.89	1.55
	2-May-08	154,211.38	2,427.62	413.5	5.87	1.28
	25-May-08	156,639.00	3,588.64	610.7	5.88	1.38
	7-Jun-08	160,227.64	5,771.38	981.4	5.88	1.45
	19-Jun-08	165,999.02	4,500.19	765.2	5.88	1.46
<b>OC/FC</b>	30-Jun-08	170,499.21	5,245.76	892.3	5.88	1.43
<b>Royal Purple Avg:</b>			128370.40	21878.19	5.87	1.22%

## Cool-X Nanofluid Oil Fleet Testing

Cool-X Test in Vehicle 271299 AFTER Royal Purple  
Safe-T-Kleen 15W-40 w Cool-X

Oil Change= OC  
Filter Change= FC

<u>Vehicle ID</u>	<u>271299</u>	<u>Detroit Diesel Motor</u>				
	Date	Mileage	Miles Driven	Gallons of Fuel Used	MPG	% Incr.
Start-Date	30-Jun-08	170,499.21	5,239.65	891.10	5.88	0.00
	16-Jul-10	175,738.86	3,771.75	640.37	5.89	0.17
	24-Aug-08	179,510.61	3,771.75	642.55	5.87	-0.17
<b>FC</b>	9-Sep-08	183,282.36	4,599.67	780.93	5.89	0.17
	15-Sep-08	187,882.03	5,341.96	902.36	5.92	0.68
	22-Sep-08	193,223.99	3,671.10	619.07	5.93	0.85
	14-Oct-08	196,895.09	4,789.06	808.96	5.92	0.68
<b>FC</b>	21-Oct-08	201,684.15	4,385.22	737.01	5.95	1.19
	12-Nov-08	206,069.37	4,892.46	812.70	6.02	2.38
	21-Nov-08	210,961.83	2,964.24	485.15	6.11	3.91
	6-Dec-08	213,926.07	3,678.90	604.09	6.09	3.57
	17-Dec-08	217,604.97	3,675.34	599.57	6.13	4.25
<b>FC</b>	20-Dec-08	221,280.31	3,689.55	600.90	6.14	4.42
	3-Jan-09	224,969.86	4,999.89	815.64	6.13	4.25
	15-Jan-09	229,969.75	5,388.74	879.08	6.13	4.25
	27-Jan-09	235,358.49	3,788.86	619.09	6.12	4.08
	8-Feb-09	239,147.35	3,891.23	633.75	6.14	4.42
	15-Feb-09	243,038.58	2,873.11	469.46	6.12	4.08
<b>FC</b>	28-Feb-09	245,911.69	2,741.58	447.97	6.12	4.08
	16-Mar-09	248,653.27	4,943.21	806.40	6.13	4.25
	27-Mar-08	253,596.48	2,641.79	432.37	6.11	3.91
	15-Apr-09	258,596.37	3,962.68	647.50	6.12	4.08
	1-May-09	263,985.11	4,567.03	745.03	6.13	4.25
	17-May-09	267,773.97	2,694.60	440.29	6.12	4.08
	29-May-09	270,468.57	3,284.42	534.92	6.14	4.42
<b>OC/FC</b>	10-Jun-09	273,752.99	2,781.99	453.83	6.13	4.25
<b>Vehicle Totals (Avg):</b>			<b>103,029.78</b>	<b>17050</b>	<b>6.04</b>	<b>2.77</b>