



PILOT HIGHLIGHTS

of LDT™ Optimization Pilot Programs

NOTE: Our LDT Duty Cycle Optimization Pilot Programs are conducted by our Master Diesel Mechanics on-site at our client's location. The optimization program includes diagnostic testing using LDT software technology which does <u>not</u> void engine warranties. It employs predictive maintenance technology and eliminates unnecessary manual regens. <u>Our pilot programs come complete with 100% money back guarantee.</u> If we cannot prove a significant savings through our optimization technology and services, we'll refund 100% of the cost to participate in the program back to our clients. We haven't had to yet. The following results are a consolidated sample of our findings.











Below is a sample of the results achieved after conducting our LDT™ optimization on client engines during the LDT pilot program.

Case 1 | Company: Caltrans | Vehicle: Ford F650 Cargo Body #6328

2012 Cummins ISB6.7260

LDT Optimization effect on newer vehicle

LDT Optimization effect on a vehicle with variable duty cycle

Highlights:

- Improved DPF Efficiency by 35%
- Improved Regen Effectiveness
- Improved highway driving fuel economy by 21.81%
- Gained 2.27 mpg in drive use that makes up 85% of total engine miles
 - AFTER LDT: 500,000 miles/12.68 mpg=39,432gal x \$2.42/gal=\$95,426
 - BEFORE LDT: 500,000 miles/10.41 mpg=48,031gal x \$2.42/gal=\$116,234
 - \$20,808 fuel savings!
- Expected carbon footprint reduction of 33,377 lbs (16.5 tons) CO2 per 100,000 miles
 - Equivalent to removing a standard passenger car from the road for 3.5 years
 - Equivalent to planting 82 trees

Case 2 | Company: Caltrans | Vehicle: Vactor Catch Basin/Sewer Clean #3749

2007 Cummins ISM350V

2008 International 4700

LDT Optimization effect on a vehicle with an existing plugged DPF

Highlights:

- LDT Initial Inspection identified regen and DPF issues that did not have any fault code indicators
- Improved Regen Effectiveness by 250%
- Increased Top Gear fuel economy by 0.24 mpg
- Decreased Idle Fuel Rate by 0.15 gph

Case 3 | Company: Caltrans | Vehicle: Vactor Catch Basin/Sewer Clean #3757

2008 Cummins ISM425V

LDT Optimization effect on a vehicle after recommending to clean DPF

Highlights:

- LDT Initial Inspection identified regen and DPF issues that did not have any fault code indicators
- Decreased PTO Fuel Rate by 0.39 gph
- Decreased Idle Fuel Rate by 0.34 gph
- Decreased Overall Fuel Rate average by 1.14 gph
- Increased average time between regen from 53 hours to 80 hours and counting

Case 4 | Company: Caltrans | Vehicle: Sweeper Conv #4598

2008 Cummins ISB280 - Allianz

Highlights:

Increased Drive Average Fuel Economy by 0.73 mpg

- BEFORE LDT: 5.06 mpg - AFTER LDT: 5.79 mpg

Improved Low Gear Fuel Economy by 0.96 mpg

- BEFORE LDT: 4.33 mpg - AFTER LDT: 5.29 mpg

- Improved Top Gear Fuel Economy from 8.66 mpg to 8.75 mpg
- Decreased Idle Fuel Rate













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Case 5 | Company: TKMS | Vehicle: Heavy Haul Dump Truck #218

13' Cummins ISX15 CM2250

Highlights:

- Improved average fuel rate by 17.78%
- Improved idle fuel rate by 7%
- Improved top gear fuel economy by 104%
- Improved regen effectiveness by 150%
 - Regen effectiveness keeps the DPF cleaner for longer. It drastically reduces premature failure of Aftertreatment and the costly downtime associated with failure. It improves performance and reliability.
- Provided a real world savings of \$2,325 in average fuel rate improvements during the 966 hour test period (based on fuel price of \$2.25/gallon)

Case 6 | Company: TKMS | Vehicle: Heavy Haul Dump Truck #252

16' Cummins ISX15 CM2350

Highlights:

- Improved average fuel rate by 25.04%
- Improved idle fuel rate by 15.10%
- Decreased unnecessary "fan-on" time by 46.94%
- Provided a real world savings of \$3,570 in average fuel rate improvements during the 998 hour test period (based on fuel price of \$2.25/gallon)

Case 7 | Company: TKMS | Vehicle: Heavy Haul Dump Truck #608

14' Cummins ISX15 CM2350

Highlights:

- Improved average fuel rate by 21.08%
- Improved idle fuel rate by 10.79%
- Provided a real world savings of \$2,839 in average fuel rate improvements during the 986 hour test period (based on fuel price of \$2.25/gallon)

Case 8 | Company: Dan's Excavating | Vehicle: Peterbilt Dump Truck #157

16' Cummins ISX15 CM2350

Highlights:

- Improved drive average fuel economy by 2%
- Improved average fuel economy by 1.57%
- Reduced unnecessary "fan-on" time by 81.43%
- Identified fault codes that were previously unaddressed

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Below is a sample of the results achieved after conducting our LDT™ optimization on client engines during the LDT pilot program.

Case 9 | Company: Dan's Excavating | Vehicle: Peterbilt Dump Truck #158

16' Cummins ISX15 CM2350

Highlights:

- Improved regen effectiveness by 43%
 - Regen effectiveness keeps the DPF cleaner for longer. It drastically reduces premature failure of Aftertreatment and the costly downtime associated with failure. It improves performance and reliability.
- Improved average fuel economy by 3%
- Improved drive average fuel economy by over 4%
- Reduced average fuel rate by over 6%
- Provided a real world savings of \$456.75 in fuel expense during the 500 hour test period (based on fuel price of \$2.25/gallon)

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Aftertreatment History Data Summary

Attertreat	Aftertreatment History	ĭ										
	Interval Hours			Intake Temp		Outlet Temp		"Good" Regen	egen		inHg	
	Before	After		Before	After	Before	After	Before	After		Before	After
1 (newest)	103	102	1 (newest)	1060.3	1064.6	1079.4	1067.3	7/10	10/10	1 (newest)	1.5	1.3
2	104	102	2	1070.2	1029.7	1085.5	1058.3			2	1.4	1.4
ω	102	Ŕ	ψ.	1061	1067.3	1082.8	1070.2			ω	1.4	1,4
4	102	102	4	1063.4	1048.3	1082.5	1058.2			4	1.4	1.4
5	102	Ŕ	5	1069.7	1055.1	1083.2	1069.5			S.	1.4	.i.
6	103	103	o	1058.9	1060.3	1089.1	1079.4			6	1.4	1.5
7	103	104	7	1046.6	1070.2	1081.7	1085.5			7	1.4	1.4
00	104	102	00	1063.4	1061	1091.5	1082.8			00	1.4	1.4
9	104	Ŕ	9	1095,1	1063,4	1085,9	1082.5			9	1.4	1.4
10	×	×	10	1116.7	1069.7	1068.8	1083.2			10	1.3	1.4
AVG:	103.00	102.33	AVG:	1,070.53	1,058.96	1,083.04	1,073.69			AVG:	1.40	1.39
				ideal range:	ideal range: 1040 (+/- 50)	ideal range: 1040 (+/- 50)	1040 (+/- 50)				acceptable range: 0.75-2.50	0.75-2.50
			"Good" temp:	8/10	10/10	9/10	10/10					
Fuel History	ğ											
	Duty Cycle			Fuel Use								
	Before	After		Before	After							
MILES												
engine distance	41110.8	11242.5	fuel used	11539.3	3061							
top gear distance	24230.6	7131.1	drive fuel used	10915.6	2859							
top gear %	58.94%	63.43%	drive fuel %	94.59%	93.40%							
gear down distan	8109.5	2018.7	top gear fuel used	5084.4	1463							
gear down %	19.73%	17.96%	top gear %	44.06%	47.79%							
TIME			gear down fuel	1982	477							
engine run time	1793	507	gear down %	17.18%	15.58%							
drive time	1123	296	idle fuel used	503.2	190							
drive %	62.63%	58.38%	idle fuel %	4.36%	6.21%							
top gear time	392	118	PTO fuel used	84.7	2.9							
top gear % (of d	34.91%	39.86%	PTO fuel %	0.73%	0.09%	Percent Change						
gear down time	179	44	avg fuel economy	3.56	3.67	3.09%						
gear down % (of	15.94%	14.86%	avg fuel rate	6.44	6.04	-6.19%						
idle time	555	198	drive avg economy	3.77	3.93	4.41%						
idle %	30.95%	39.05%	top gear economy	4.77	4.87	2.28%						
total PTO time	76	2	idle fuel rate	0.91	0.96	5.84%						
PTO%	4.24%	0.39%										
fan on time	59	ယ										

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About InTu Mobility

We're a mobility consulting firm that specializes in developing end-to-end mobile solutions for small, mid-sized, and enterprise businesses. Our goal is to help you save money and time; while building a solution designed to make your company's operation, fleet and workforce in the field more productive and efficient.

Our company was founded by enterprise mobility authority Tony Horling, who has built a reputation over 15 years for helping companies morph into the business they aspire to become. We work with companies that share a mutual interest in leveraging mobile technology that will help improve and expand their operations both inside the four walls and out. Our client list includes: Coca-Cola, Miller Coors, United Rentals, Anheuser Busch, Enterprise Rent-A-Car and many more. If you're looking to optimize productivity in your enterprise, please contact us today: Email: info@intumobility.com or call: 888.442.INTU.







