



Value Recognition Report

Heavy Construction Company, Portland & S.W. Washington

Account History: This is a Heavy Construction company that specializes in Excavating, Road Building, Utility Work, Flood Repair, Wetland Mitigation, Commercial and Residential Site Work. Located in the Portland Metro and Southwest Washington region with more than 165 employees and 100 pieces of heavy equipment. Maintenance labor cost is \$30/Hr. Downtime costs range between \$75/Hr. and \$500/Hr. depending on the type of equipment and job requirements.

Certified Labs' Objective: Provide performance grade lubricants and value added services to increase equipment reliability and longevity, reduce overall cost of lubrication, and increase equipment resale value. Many of the savings listed resulted from process improvements initiated by Management.

Reduced Consumption & Process Improvements

- Reduced grease consumption by 40% over 5 years by using Premalube Grease.....\$3,856
- Reduced contract maintenance service replaced by performing routine maintenance in-house\$141,677
- Reduced motor oil consumption by 70% and extended change intervals with Strata Xtreme motor oil and Trilogy Off-line filters\$33,660
- Transmission/hydraulic oil replaced with Oil All and installed Trilogy off-line filters. **Savings To Be Determined**
- Reduced fuel consumption by approximately 5% using LubeMaster's Fuel Quality Assurance Program....\$99,025

Annual Savings - Parts Repair, and Replacement

- Prevented grease related pin & bearing repair and replacement with Premalube Grease N/A
- Reduced fuel system repairs and reduced fuel filter replacements by using LubeMaster's Fuel Quality Assurance Program..... N/A

Annual Savings - Lubricant Related Downtime

- Extended greasing intervals on heavy equipment by 50% to 75% by using Premalube grease. Premalube reduced labor costs using approximately 15%.....\$71,209
- Extended off-road equipment motor oil change intervals by 50% to 85% and on-road change intervals by 55% to 85% which reduced the time necessary to change oil by 403 Hrs.....N/A
- Eliminated fuel related downtime since 2004 with the Fuel Quality Assurance Program..... N/A

Savings Summary

Lubricant Consumption & Process Improvements	\$264,218
Parts Repair & Replacement	N/A
Lubricant Related Downtime	\$71,209
Waste & Pollution Prevention...	\$4,176
Total Savings	\$339,603





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Annual Savings - Waste & Pollution Prevention

- Extending motor oil change intervals over 70% generated 2,725 gallons less used motor waste.
- Extending motor oil change intervals and improving fuel quality generated about 50% less used fuel and motor oil filters.
- Extending radiator fluid 50% using Cool Plus\$3,772
- Reduced Radiator Fluid Waste Disposal by 50%\$ 404
- Using Diesel-Mate fuel improver to keep fuel injectors clean and increase Cetane Number -- this reduced black smoke and engine emissions by an average of:
 - 34% Black Smoke reduction
 - 27% Particulates reduction
 - 16.7% HC reduction
 - 1.7% NOx reduction
 - 19.8% CO reduction

Value Added Contributions

- Fuel Improver Proportioning Pump and Trilogy Filter Equipment\$4,300
- 1200 Oil Analysis Tests & 24 Fuel Laboratory Tests\$21,600
- 3 On-Site Lubrication Training Seminars \$1,500
- Oil Analysis Results Prevented 4 Major Equipment Repairs..... \$38,000

Additional Value

Oil & Fuel Analysis ...	\$21,600
Equipment	\$4,300
Training Seminars	\$1,500
Preventative Maint....	\$38,000
Total Value	\$65,400

Total Savings Over 5 Year Relationship \$339,603





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Cost Reduction Calculations:

Annual Lubricant Consumption Reduction & Process Improvement:

-Grease: Savings of \$3856.

Replaced Texaco Starplex Moly to Premalube and experienced a reduction in grease consumption of about 40%. Equipment Fleet Growth accounted for each year.

Estimated savings of \$320 in 2001 (2800Lbs x \$2.00Lb - 2000Lbs X \$2.64Lb)

Estimated savings of \$320 in 2002 (2800Lbs x \$2.00Lb - 2000Lbs X \$2.64Lb)

Estimated savings of \$384 in 2003 (3360Lbs x \$2.00Lb - 2400Lbs X \$2.64Lb)

Estimated savings of \$480 in 2004 (4480Lbs x \$2.05Lb - 3200Lbs X \$2.72Lb)

Estimated savings of \$932 in 2005 (6216Lbs x \$2.15Lb - 4440Lbs X \$2.80Lb)

Estimated savings of \$1420 in 2006 (8288Lbs x \$2.40Lb - 5920Lbs X \$3.12Lb)

-Reduced Contract Maintenance Service: Savings of \$141,677.

The Companies Equipment Manager evaluated their planned maintenance agreement with their heavy equipment dealership and developed a cost savings plan to perform routine maintenance

in-house. The CFO approved the plan and on average, they were able to reduce their annual 1000 & 2000 hour routine service cost per piece of heavy equipment by over 70% (see chart below).

The result is annual savings of \$141,677 (\$195,163 - \$53,486 for a fleet of 73 pieces of heavy equipment. For example, the annual cost to have the heavy equipment dealership provide routine maintenance service on a fleet of 13 Backhoes was \$29,016 and the cost now is \$4836.

Equipment Type	# of Units	Previous Service Cost Per Unit / Per Yr.	Current Service Cost Per Unit / Per Yr.
Backhoes	13	\$2232	\$372
Loaders	8	\$2721	\$670
Excavators	23	\$3083	\$930
Mini Excavators	5	\$2400	\$300
Dozers	15	\$2818	\$800
Scrapers/Motor Graders	3	\$3200	\$1200
Rollers	6	\$1600	\$800



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Cost Reduction Calculations:

Annual Lubricant Consumption Reduction & Process Improvement:

-Motor Oil: Estimated Savings of \$33,659.58

In an effort to improve engine performance and extend oil change intervals, they began replacing Chevron Delo 400 motor oil @ \$7.00 Gal. with Strata Xtreme Synthetic Blend motor oil @ \$16.05 Gal. 56 Trilogy™ 1 micron Off-line filters were also installed to maximize oil performance and drain intervals. All results are monitored with an independent oil analysis lab.

69 Pieces of Off-Road Equipment –

Their 69 pieces of off-road equipment operate an average of 1700 hours per year each. Motor oil was changed every 250 hours and required an average of 10 gallons oil @ \$7.00 per gallon, \$30 of filters, and 1 hour of labor @ \$30 for a total cost of \$130. This equates to an average annual cost of \$884 per year per piece of equipment (6.8 changes per year x \$130).

Total annual cost for fleet was \$60,996.

After installing Strata Xtreme Synthetic Blend motor oil and Trilogy Off-line filters the average oil change is now 750 hours at a cost of \$220.50 per change, 2.3 changes per year. (\$16.05 x 10 gallons, \$30 filters, \$30 labor). This equate to \$507.15 per year per vehicle.

Total annual cost for fleet is now \$34,993.35.

Annual Savings for Off-Road Fleet = \$26,002.65

12 Semi/Tractor Trucks –

Their fleet of 15 on-road trucks travel an average of 45,000 miles per year. Motor oil was changed every 7,500 miles and required an average of 11 gallons oil @ \$7.00 per gallon, \$30 of filters, and \$30 labor. This equates to an average cost of \$1,178.20 per year per vehicle. (8.6 changes per year X \$137)

Total annual cost for 12 on-road trucks was \$14,138.40

7 Mack Trucks with CH613 Engines: After installing Strata Xtreme Synthetic Blend motor oil and Trilogy Off-line filters the oil change intervals has been extended from 7,500 miles to an average of 37,000 miles at a cost of \$236.55 per change (\$16.05 X 11 gallons, \$30 filters, \$30 labor). This equates to an average cost of \$283.55 per year per vehicle. (1.2 changes per year X \$236.55).
Total annual cost for these 7 Mack CH613 Trucks is now \$1,987.02

5 Mack Trucks with CV713 (EGR) Engines: After installing Strata Xtreme Synthetic Blend motor oil and Trilogy Off-line filters the oil change intervals has been extended from 7,500 miles to an average of 12,000 miles at a cost of \$236.55 per change (\$16.05 X 11 gallons, \$30 filters, \$30 labor). This equates to an average cost of \$898.89 per year per vehicle. (3.8 changes per year X \$236.55)
Total annual cost for these 5 Mack CV713 Trucks is now \$4,494.45

3 Miscellaneous Trucks: Motor oil and change intervals have not been adjusted on this fleet.

Annual Savings for On-road Truck Fleet = \$7,656.93



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Cost Reduction Calculations:

-Transmission/Hydraulic Fluid: Savings To Be Determined

Began replacing commodity transmission/hydraulic oil @ \$7.50 gallon with Oil All Universal Hydraulic Fluid @ \$14.56 gallon in 2005 and began installing Trilogy Off-Line Filters to reduce wear caused by excessive contamination and to reduce oil consumption. The goal is to extend the average change interval on this oil from every 2,000 hours to 6,000 to 8,000 hours.

They were using independent oil analysis to determine the best change intervals beyond 2000 hours.

-Fuel Consumption: Savings \$99,025

The customer was having severe problems with Microbial Growth in their fuel that was clogging filters and fuel lines and resulted in lengthy equipment downtime. They began using the LubeMaster Fuel Quality Assurance Program and eliminated fuel related equipment shutdowns and excessive fuel filter replacements. In addition, they increased their fuel economy by an average 5%. The Fuel Quality Assurance Program sterilizes fuel storage systems by killing bacteria and fungus, improves diesel fuel performance with Diesel-Mate, and provides quarterly fuel lab analysis to monitor results.

2004 savings of \$16,750 (\$31,250 - \$14,500)

(Increased Fuel Economy 5% X 500,000 Gallons Used X \$1.25 Fuel Price – Cost of Fuel Program)

2005 savings of \$32,175 (\$48,125 - \$15,950)

(Increased Fuel Economy 5% X 550,000 Gallons Used X \$1.75 Fuel Price – Cost of Fuel Program)

2006 savings of \$50,100 (\$67,500 - \$17,400)

(Increased Fuel Economy 5% X 600,000 Gallons Used X \$2.25 Fuel Price – Cost of Fuel Program)

Annual Parts Repair and Replacement Cost Reduction: Savings Not Available

-Reduced Bearing Replacement Costs with Premalube Grease = Savings Not Available

Since using Premalube there have been no grease related bearing or pin failures.

-Reduced Engine Repairs = Savings To Be Determined

Too early to identify lower repair costs since adding Trilogy Filters & using Strata Extreme motor oil.

-Reduced Universal Hydraulic System Repairs = Savings To Be Determined

Too early to identify lower repair costs since adding Trilogy Filters & using Oil.

-Reduced Fuel System Repairs & Replacements= Savings Not Available

Eliminated microbial growth in the fuel which reduced the cost of fuel filter replacements and substantial downtime.



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Cost Reduction Calculations

Annual Lubricant Related Downtime Reduction

-Greased Bearings, Pins & Labor Savings- \$71,209

After switching to Premalube, the excavator & loader Operators were safely able to reduce grease intervals from 2 times per day to 1 time per day or every other day. They have experienced no grease related equipment downtime since beginning use of Premalube in 2000. Estimated costs based on 15% of the fleet working in severe conditions daily. Average piece of equipment takes 10 mins less or 2 times the amount to grease when using Premalube.

Before $2 \text{ (amount)} \times 10\text{mins} \times 70 \text{ vehicles} = 1400\text{mins}$. Now $1\text{(amount)} \times 10\text{mins} \times 70 \text{ vehicles} = 700\text{mins}/60\text{mins} = 11.66 \text{ hrs.} \times 260 \text{ work-days} = 3033.33 \text{ hrs} \times \$30.00 = \$90,999.90$ labor saved $\times 15\%$ of fleet = \$13,649 for 2006. 10% growth per year, 2005 = \$12,285, 2004 = \$11,056, 2003 = \$9,950, 2002 = \$8,955, 2001 = \$8,060, 2000 = \$7,254.

-Motor Oil - Eliminated About 403 Hours Spent Changing Oil

Extended motor oil change intervals from an average of 6.8 changes per year to an average of 2 changes per year. At 1 hour per oil change this reduced 4.8 hours of maintenance labor/downtime per piece of equipment = 403 Hours. Savings not available

-Fuel Related Downtime - Not Available

They experienced tremendous downtime caused by fuel infected with microbial growth. Since using Certified's Fuel Quality Assurance Program the customer has not experienced any fuel related downtime. Savings not available.

Annual Waste & Pollution Prevention:

-Motor Oil – Waste Oil Reduced By 2,725 Gallons.

Annual motor oil use reduced from 3714 gallons to 990 gallons since installing Strata Xtreme Synthetic Blend motor oil. Waste oil reduced by 73% or 2,725 gallons.

-Extended Radiator Fluid Life By 2 years Saving \$3,772

Equipment Mgr. extended fleet radiator life from one to two years with Cool Plus Radiator Additive. Annual radiator fluid on 92 vehicles with avg. sump capacity of 8 gals = 736gal $\times \$4.75\text{gal} = \$3,496 - \$1,104\text{(Cool Plus)} + \$1,380 \text{ (labor per year)} = \$3,772$.

-Reduced Radiator Fluid By 736 gallons every 2 years \$404.80

Waste Disposal Cost is $\$0.55 \text{ per gallon} \times 736 \text{ gallons} = \404.80



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Cost Reduction Calculations

-Diesel Fuel -

- By treating their diesel fuel with Diesel-Mate the customer used approximately 30,000 gallons less diesel fuel than they would have.

- Independent engine tests document that using Diesel-Mate reduces the following emissions

and black smoke by the following average amounts:

34% Reduction in Black Smoke

27% Reduction in Particulates

16.7% Reduction in HC

1.7% Reduction in NOx

19.8% Reduction in CO

-Filters -

- By treating their diesel fuel with Diesel-Mate and extending their motor oil change intervals by over 70%, they generated about 50% fewer fuel and motor oil filters.



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Cost Reduction Calculations

Value Added Contributions - \$77,000

- Provided Dosmatic Fuel Treatment Proportioning Equipment at no charge **\$1,900 Value**
- Managed the Ordering and Installation of Fuel Treatment Tank and Pump. **Value Undetermined**
- Provided Two Trilogy Filter Systems for Testing at no charge **\$1,200 Value**
- Provided Special Pressure Reducing Fittings for Trilogy Filters at no charge **\$1,200 Value**
- Provided 1200 x \$15 Ea. Oil Analysis Tests at no charge **\$18,000 Value**
- Provided 24 X \$150 Ea. Fuel Lab Tests at no charge **\$3,600 Value**
- Provided 3 Lubricant Training Seminars for Nutter Employees at no charge **\$1,500 Value**
- 60 Monthly Certified Representative Visits Over 5 Years. **Value Undetermined.**
- Oil Analysis Helped Prevent Costly Repairs:
 - Oil analysis indicated high sodium level in Loader engine oil. Head gasket was replaced and prevented a \$10,000 engine re-build. **\$16,000 Value**
 - Oil Analysis indicated severe level of silicone (dirt) in D-25 Haul Wagon Engine. Prevented a \$15,000 repair. **\$15,000 Value**
 - Oil Analysis indicated severe level of silicone (dirt) in Mini-Excavator Engine. Prevented a \$7,000 repair. **\$7,000 Value**
- Fuel Quality Assurance program reduced black and white smoke emissions by over 20%. **Value Undetermined**
- Single Source for All Lubricant Products and Service. **Value Undetermined**
- Helped establish extensive oil analysis program to establish best oil change intervals and prevent costly downtime with preventative maintenance. **Value Undetermined**
- Helped establish a lubrication program that is projected to extend the useful life of equipment from 7500 Hours in 2000 to 10,000 to 12,000 Hours today. **Value Undetermined**
- Helped establish equipment oil analysis program service documentation that is expected to increase the resale value of used equipment by 20% to 50%. **Value Undetermined**
- Helped reduce equipment downtime which prevented the cost for Replacement Rental Equipment. **Value Undetermined**



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Major Accomplishments:

Safely Extended Engine Oil Change Intervals

Installed Trilogy Filters, Provided Strata Xtreme Motor Oil and Established a Comprehensive Oil Analysis Program to Extend Change Intervals. Off-Road Equipment Change Intervals Have Safely Been Extended From 500 Hours to 2000 Hours. On-Road Equipment Change Intervals Have Safely Been Extended From 7,500 Miles to 36,000 Miles.





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Major Accomplishments:

Safely Extended Hydraulic/Transmission Oil Change Intervals

Installed Trilogy Filters, Oil All Hydraulic/Transmission Oil and Established a Comprehensive Oil Analysis Program to Monitor Oil Condition and Safely Extend Change Intervals. The customer is Still In the Process of Setting New Change Intervals.





2000 - 2006 Value Recognition Report Nutter Corporation, Portland & S.W. Washington

Major Accomplishments:

Performing All Routine Maintenance In-House

Customer Contracted Out Most of Their Routine Equipment Maintenance to the Local John Deere Dealer. Equipment Mgr Purchased 2 Lubrication Service Trucks and Established Their Own Preventative Maintenance Program and Have Realized Substantial Savings.





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Major Accomplishments:

Installed Fuel Quality Assurance Program

Customer Experienced Severe Fuel Related Downtime. To Prevent Future Problems, they Began Using LubeMaster's 3-Step Diesel Fuel Maintenance Program Designed to Provide High Quality Fuel with Every Load. They Installed an Automated System to Consistently Improve Their Fuel and Prevent Unnecessary Downtime.





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Goals:

- **Continue lubricant education for employees.**
- **Install remaining engine and hydraulic filter systems.**
- **Continue improving oil analysis database and sampling procedures.**
- **Maintain 750hr baseline engine oil change interval on all heavy equipment.**
- **Establish engine oil change interval for CV713 EGR Truck Engines.**
- **Monitor hydraulic oil performance and continue extending lubricant life.**
- **Assist and support B20 Bio-Diesel Program with our Fuel Quality Assurance Program and quarterly diesel fuel sampling.**
- **Maintain, improve, and support maintenance/ lubrication program in all ways possible.**