

Nestlé Waters Hollis Maine: 2010 Forklift Fleet Extended Drain and Equipment Life Program

NWNA Poland Springs Bottling Plant, Hollis, Maine conducted an evaluation of Hydrotex lubricants in their forklift fleet. Using oil analysis; the plant was able to extend drain cycles and maintain productivity levels while reducing overall costs, filter consumption and waste oil. Transportation Manager, Chris McKenna and Fleet Shop Supervisor, Dave Sprague confirmed the following information.

NWNA Hollis operates 32 Yale GLC 50 and 70 models fueled by propane. Previous engine oil changes were completed at 250 hours, hydraulic fluid at 2000 hours and transmissions ATF oils at 2000 hours. Average operating hours of each unit is 5,200 per year. The evaluation using Hydrotex® lubricants noted the following extended drain intervals; engine oils are completed at 500 hours, hydraulic fluid at 5000 hours and transmission oils at 3000 hours.

Summary:

NWNA Yale forklift fleet units operate approximately 100 hours per week and engine oil changes were being completed every 250 hours or every two and a half weeks. Oil consumption and waste oil was recorded at 3,328 gallons and 665 oil filters during 2011.

The operation also experienced hydraulic lines becoming brittle and drying which resulted in fluid leaks causing excessive downtime and increased material and labor costs for repairs. Since changing to Hydrotex lubricants and repairing lines, fluid leaks were significantly reduced. Oil leaks were also noted as a potential safety issue. However, seal leaks were reduced by using Hydrotex Oil.

Solution:

Hydrotex recommended each unit in the evaluation to be flushed with Essentialube® blending agent. Each unit had 25% of the old oil drained and 25% Essentialube added and the engine operated for 30 minutes. Maintenance drained the crankcase and replaced the filter and filled the engine using Hydrotex HyFilm® Supreme 10W 40. After 300 hours a new sample was obtained and reviewed. After a period of oil sample testing, the new extended drain period was scheduled at 500 hours.

In the hydraulic systems, oil analysis sampling was used to determine the need for flushing. The units were drained and filled with Hydrotex 6Kp ISO 46 hydraulic fluid to meet OEM specification and provide adequate hydraulic pressure for the load conditions. The transmissions were also evaluated, flushed as needed and changed to Hydrotex HyTorque® extended drain transmission fluids.

The following forklift component cost comparisons and waste oil reduction evaluations outline the success of this program. The **overall cost reduction** is estimated at **\$20,418.88**. Waste oil was reduced by **952.36 gallons** annually and filter use was reduced by approximately **431 filters** per year.

NWNA Zephyrhills and NWNA Hawkins locations have completed extended drain evaluations and noted similar results. Actual results may vary depending on production levels and scheduled maintenance requirements.

Nestlé Waters Fork Lift Fleet Cost & Waste Oil Reduction Evaluation / Comparison

ENGINE OIL EXAMPLE

Notes:	Cost of Oil Change Labor & Overhead	\$25.00	Preparation Date	2/15/12
	Oil Filter Cost	\$6.00	Prepared by:	Division Partner
	Average Operational Hours per year	5,200	Company Name	NWNA Forklift Fleet
	Quarts of Oil Used With Change	5	Prepared for:	Customer
	Cost of Waste Oil Disposal / Gallon	\$3.11	Location	NE United States
	Pieces of Equipment of This Type	32	Customer Phone	

Annual Unit Cost Overview	Current Engine Oil NAPA 10W 30	Hydrotex Engine Oil HyFilm® Supreme 10W 40
Total Base Number	N/A	14 (minimum)
Cost Per Gallon	\$12.00	\$20.72*
Cost of Oil Analysis	\$0.00	\$14.00**
Oil Drain Interval in Hours	250	500
Approximate Number of Intervals	20.8	10.4
Annual Cost of Labor	\$520.00	\$260.00
Annual Cost of Filters	\$124.80	\$62.40
Annual Cost of Engine Oil	\$312.00	\$269.36
Annual Cost of Waste Oil	\$80.86	\$40.43
Annual Waste Oil in Gallons	26	13
Annual Cost Per Unit	\$1,037.66	\$632.19
Average Operating Cost per Hour	\$0.20	\$0.121
Annual Fleet Engine Oil Cost	\$33,205.12	\$20,230.08
Estimated Annual Engine Oil Cost Reduction	-	\$12,975.04
Fleet Annual Waste Oil in Gallons	832	416

Other Information:

Sustainability Program

Annual Waste Oil Reduction: **416 gallons**
Annual Filter Disposal Reduction: 352 (estimated)

Proactive Maintenance Program - Hydrotex Lubrication Management Process

Hydrotex recommends use of Oil Analysis Testing to determine extended drain intervals, identify wear elements, coolant leaks, and equipment issues, reduce downtime and operating costs

Estimated annual engine oil analysis testing cost per unit: \$ 75.00 / fleet cost \$2,400.00.

** Oil Analysis Not Included in Cost Overview.

* 2010 National Pricing Level

Nestlé Waters Fork Lift Fleet Cost & Waste Oil Reduction Evaluation / Comparison

HYDRAULIC FLUID EXAMPLE

Notes:	Cost of Oil Change Labor & Overhead	\$25.00	Preparation Date	2/15/12
	Oil Filter Cost	\$23.00	Prepared by:	Division Partner
	Average Operational Hours per year	5,200	Company Name	NWNA Forklift Fleet
	Quarts of Oil Used With Change	40	Prepared for:	Customer
	Cost of Waste Oil Disposal / Gallon	\$3.11	Location	NE United States
	Pieces of Equipment of This Type	32	Customer Phone	

Annual Unit Cost Overview	Current Hydraulic Fluid Conventional Oil - AW ISO 32	Hydrotex Hydraulic Fluid Synthetic - 6Kp ISO 32
Cost Per Gallon	\$10.60	\$20.72*
Fluid Drain Interval in Hours	2,000	5,200
Approximate Number of Intervals	2.6	1
Annual Cost of Labor	\$65.00	\$25.00
Annual Cost of Filters	\$59.80	\$23.00
Annual Cost of Hydraulic Fluid	\$275.60	\$207.20
Annual Cost of Waste Fluid	\$80.86	\$31.10
Annual Cost Per Unit	\$481.26	\$286.30
Average Lubrication Cost per Hour	\$0.093	\$0.06
Annual Fleet Hydraulic Fluid Cost	\$15,400.32	\$9,161.60
Estimated Annual Hydraulic Fluid Cost Reduction	-	\$6,238.72
Fleet Annual Waste Fluid in Gallons	832	320

Other Information:

Sustainability Program

Annual Waste Fluid Reduction: **512 gallons**

Annual Filter Disposal Reduction: 51 (estimated)

Proactive Maintenance Program - Hydrotex Lubrication Management Process

Hydrotex recommends use of Oil Analysis Testing to determine extended drain intervals, identify wear elements, coolant leaks, and equipment issues, reduce downtime and operating costs

Estimated annual hydraulic fluid analysis testing cost per unit: \$58.44 / fleet cost \$1,870.08

* 2010 National Pricing Level

Nestlé Waters Fork Lift Fleet Cost & Waste Oil Reduction Evaluation / Comparison

ATF OIL EXAMPLE

Notes:	Cost of Oil Change Labor & Overhead	\$25.00	Preparation Date	2/15/12
	Oil Filter Cost	\$19.50	Prepared by:	Division Partner
	Average Operational Hours per year	5,200	Company Name	NWNA Forklift Fleet
	Quarts of Oil Used With Change	3.5	Prepared for:	Customer
	Cost of Waste Oil Disposal / Gallon	\$3.11	Location	NE United States
	Pieces of Equipment of This Type	32	Customer Phone	

Annual Unit Cost Overview	Current Oil Valvoline VV113 ATF	Hydrotex ATF Oil Synthetic - HyTorque
Cost Per Gallon	\$18.80	\$30.51*
Oil Drain Interval in Hours	2,000	3,000
Approximate Number of Intervals	2.6	1.73
Annual Cost of Labor	\$65.00	\$43.25
Annual Cost of Filters	\$50.70	\$33.74
Annual Cost of ATF Oil	\$42.77	\$46.18
Annual Cost of Waste Oil	\$7.07	\$4.71
Annual Cost Per Unit	\$165.55	\$127.89
Average Operating Cost per Hour	\$0.032	\$0.025
Annual Fleet ATF Oil Cost	\$5,297.60	\$4,092.48
Estimated Annual ATF Oil Cost Reduction	-	\$1,205.12
Fleet Annual Waste Oil in Gallons	72.8	48.44

Other Information:

Sustainability Program

Annual Waste Oil Reduction: **24.36 gallons**
Annual Filter Disposal Reduction: 28 (estimated)

Proactive Maintenance Program - Hydrotex Lubrication Management Process

Hydrotex recommends use of Oil Analysis Testing to determine extended drain intervals, identify wear elements, coolant leaks, and equipment issues, reduce downtime and operating costs

Estimated annual ATF oil analysis testing cost per unit: \$15.00 / fleet cost \$480.00

* 2010 National Pricing Level

Hydrotex Extended Drain Programs:

Hydrotex works with our customers to develop Oil Analysis Programs designed to maximize lubrication life cycles by identifying extended drain opportunities. Oil Analysis is used as a diagnostic tool to determine component condition, wear potential, contamination levels, and recommend corrective proactive maintenance actions.

Hydrotex utilizes an independent laboratory, Polaris Labs, for oil sampling testing and provides oil sample kits at cost to customers. The cost of an oil analysis program depends on the number of tests conducted, drain cycles, information and re-testing to correct issues.

Nestle Waters North America utilizes both propane and electric operated lift units. Through the use of Hydrotex synthetic lubricants in conjunction with a good oil analysis program engine, hydraulic and transmission life cycles can be extended and overall operating and maintenance costs reduced.

Contact your local Hydrotex Representative or call 800.527.9439 for assistance in developing and implementing a Lubrication Management program.