

Customer Testimonial



Monolec Ultra[®] Engine Oil (8800)

Cox Wood Preserving Co. – Orangeburg, S.C.

Hyster Models H190HD, H190XL, H135XL & H80XL Lifts

- Doubled engine life – from 9,000 hours to 18,000+ hours
- Extended oil drain intervals from 200 hours to 800 hours
- Reduced oil consumption 50%

Customer Profile

Cox Wood Preserving Company is a family-run business specializing in the manufacture and distribution of pressure-treated wood products. They grew from a one-plant facility with four employees in 1954 to ten locations in five states, with more than 360 employees. They have been an LE customer since 1981.

Application

The Cox Wood Preserving Co. fleet consists of five Hyster Model H190HD, eight 1998 Hyster H190XL, five 1997 H135XL and two H80XL lifts at the Orangeburg facility. The fleet is upgraded with three newer models about every three years and then older units are sold off.

Challenge

While using a commercial grade oil, the forklifts were requiring an oil change every 200 hours, with oil consumption of approximately two quarts per 50 hours of operation. Engine life was around 9,000 hours between overhauls. Sheckie Summers, shop superintendent, noted that based on the operation hours per month, lifts and other support equipment would need an oil change to the tune of one unit per day, every day of the month.

LE Solution

Monolec Ultra[®] Engine Oil (8800) was recommended for extending oil drain intervals, reducing oil consumption and increasing engine life. Helmut von Schweinitz, LE lubrication consultant, felt that the drain intervals could be extended to 800 hours.

Results

The first units converted showed a 50 percent reduction in oil consumption; and oil analysis showed low wear even as the units



approached the first 800 hours. Based on the results of the first units converted, all units were converted to Monolec 8800 in the fall of 1987. In May of 1990, results were reviewed. The units were still averaging 45 hours per week and the average oil consumption of the fleet was less than one quart per 45 hours. In September of 2006, the results were updated.

These units have been sold off but their history still stands. Unit #28, purchased new in June of 1988, had 16,341 hours before a rebuild was required. Unit #29 had 15,866 hours before the piston ring cracked from fatigue, causing the engine to be rebuilt. The lower end showed very little wear and the engine was exceptionally clean. Unit #30, purchased new in January of 1990, has 19,870 hours to date. These units use only one quart of oil in 100 hours of operation.



The following is the status on the units as of September 2006. Unit #37, a H180H, went 15,193 before engine rebuild. Unit #38, with 28,993 hours had no overhaul. Unit #39, overhauled at 20,690 hours, current hours is 1,294. Unit #40 has 19,245 hours with no overhaul. Newer units added to the fleet are unit 49 with 4,436 hours, unit 50 with 4,206 hours, and unit #53 with 4,369 hours. To date these units have not been rebuilt.

One over-the-road 1993 Freightliner with a Cummins N14-430 was started on LE 8800 when it was new. To date, the unit has 560,430 miles and uses only one quart of oil every 5,000 miles. This unit makes short hauls for the company. Oil changes are set at 50,000 miles.

As shown in the chart, annual forklift fleet oil-related cost savings alone total \$17,572.81 using LE vs the previous commercial product. In fact, Cox's engine oil purchases for one year are far less than the savings generated by using Monolec 8800. This includes the cost of the engine oil used in other support equipment.

	Commercial Grade 15W-40	Monolec Ultra Engine Oil (8800)
Oil drain interval, hrs.	200	800
Engine oil capacity, quarts	16	16
Makeup oil between changes, quarts	8	8
Total oil used, quarts	24	24
Total cost of oil used – A	\$60.00	\$121.92
Number of filters used	1	1
Cost of filters – B	\$5.50	\$5.50
Cost of labor per oil change – C	\$50.00	\$50.00
Total cost per oil change = A+B+C	\$115.50	\$177.42
Total cost per 800 hours	\$462.00	\$177.42

\$284.58 savings per unit per 800 hours

Oil change savings per year $3.25 * \$284.58 \times 19 \text{ units} = \$17,572.81$

*Units operate 2,600 hours per year.

Cost to overhaul a Hyster Engine

Today a remanufactured engine is approximately \$7,000 with a returned core. There is also twelve hours to remove and install the new engine or an additional \$600. Before Monolec 8800, a forklift could experience two engine replacements in its life expectancy at Cox. Today there is only one. That is a savings of \$7,600 per unit.

The results are clear. Monolec 8800 increases drain intervals, keeps oil consumption low and delivers an increase in engine life. Based on the results, Shekie Summers believes that a forklift engine life of 15,000 to 16,000 hours is easily achievable. In fact, lift trucks #31, #33, #35, #38, #39 and #40 have all achieved in excess of 16,000 hours. Unit life is very important, as a replacement unit will cost \$68,000. Bill Cox, Jr., CEO, says, "Thanks to the efforts of Shekie Summers, our maintenance superintendent, and Lubrication Engineers, the productivity of our plant assets have increased substantially in the past 25 years."

Thank you to Tom Bishop, owner, and to Jeff Boyles, LE lubrication consultant, (pictured) for providing the information used in this report.



Monolec Ultra® is a registered trademark of Lubrication Engineers, Inc.

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