

8800 MONOLEC ULTRA® ENGINE OIL

COX WOOD PRESERVING CO., Orangeburg, SC

Hyster Model H190HD, H190XL, H135XL, and H80XL Lifts
SIC 2491 Wood Preserving

- ⇒ *25 Years on Lubrication Engineers 8800, 15W-40 Engine Oil*
- ⇒ *Doubled engine life - from 9,000 hours to 18,000 plus 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 over 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.

AREA OF CONCERN

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

LE's 8800 MONOLEC ULTRA® Engine Oil was recommended for extending oil drain intervals, reducing oil consumption and increasing engine life. LE Lubrication Consultant, Helmut von Schweinitz, felt that the drain intervals could be extended to 800 hours.

CUSTOMER COST SAVINGS

The first units converted showed a 50% 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 LE's 8800 MONOLEC ULTRA® Engine Oil 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

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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 \$12,948.98 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 LE's 8800 MONOLEC ULTRA Engine Oil. This includes the cost of the engine oil used in other support equipment.

Oil Cost Comparison

	Commercial Grade 15W-40	LE's 8800 MONOLEC® ULTRA Engine Oil
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
Cost Per Quart	\$1.50	\$4.20
Total Cost of Oil Used – A	\$36.00	\$100.80
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	\$91.50	156.30
Total Cost Per 800 Hours	\$366.00	\$156.30

\$209.70 Savings Per Unit Per 800 Hours
Oil Change Savings Per Year 3.25* x \$209.70 x 19 Units = \$12,948.98

*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 LE's 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. LE's 8800 MONOLEC ULTRA Engine Oil increases drain intervals, keeps oil consumption low and delivers an increase in engine life. Based on the results, Sheckie 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 Sheckie Summers, our Maintenance Superintendent, and Lubrication Engineers, the productivity of our plant assets have increased substantially in the past 25 years."

We wish to thank Michael Johnson, CEO; Sheckie Summers, Maintenance Superintendent; Brandon Robinson, Shop Mechanic and LE Lubrication Consultant Helmut von Schweinitz (pictured) for the information provided to prepare this report.



Based on actual user experience. Individual results may vary. Product used not intended to supersede manufacturer's specifications.