

Landscape Concepts Unit 166 - 2003 Ford F-150
4.6 Liter V8 Gasoline Engine – 300,740 Miles

Landscape Concepts (LC), located in Grayslake, Illinois operates a diverse fleet of landscape equipment that includes approximately 500 units. These units include pickup trucks, wheel loaders and commercial lawnmowers. Landscape Concepts was initially intrigued with Hydrotex® products and the concept of extended service intervals; the cost analysis indicated that the Hydrotex Lubrication Management Process could substantially reduce operating costs and streamline the preventive maintenance (PM) program. LC began using Hydrotex Hydrosynthetic® Engine oil in 2002. Prior to this, LC was operating with a PM program designed around utilizing conventional engine oil and conducting 3,500 mile service intervals.

In 2003, Landscape Concepts purchased several new Ford F-150's. These light duty trucks were designated as supervisor vehicles and were equipped with a bed-mounted toolbox and a bed-mounted fuel tank and were also equipped for trailer towing. The 4.6-liter V8 gasoline engines were initially operated with the factory fill, OEM engine oil. When Hydrotex introduced the Hydrosynthetic HyFilm® LEO 5W-40-engine oil, API CJ-4/SM, LC immediately began usage because of the improved fuel efficiency and lower pour point, which contributes to easier cold weather starts. Based on an oil analysis program, the average service interval was extended three to four times the historical average for the entire fleet. Hydrotex oil was used throughout the eight-year lifespan of Unit 166. Over this time period, Unit 166 did not require engine work, consume an excessive volume of make-up oil or leak oil. Unit 166 was retired with 300,740-miles due to a ticking noise suspected to be from the timing chain. Several additional vehicles in the fleet are approaching 300,000 miles; these units also have Hydrotex engine oil and operate under the same PM program. The engines in the other high mileage units are Ford's 4.6-liter and 5.4-liter engines.

Conventional engine oil and 3,500 mile service intervals would require 86 engine oil services and 129 gallons of oil during the lifespan of a vehicle. The total for conventional engine oil is \$1,785.36. Hydrotex engine oil at 10,000 mile service intervals required only 30 engine oil services and 45 gallons of engine oil over this same time period. The total for the Hydrotex engine oil is \$1,336.20. During the lifespan of this unit, the Hydrotex Lubrication Management Process saved \$448.86 and reduced the oil cost by 25%. An analysis taking into account all of the expenses associated with engine oil services, such as the cost of the engine oil, filters, labor, cleaning supplies and oil analysis, shows the Hydrotex process reduced the engine oil service cost by 41%, saving \$1,679.66 during the lifespan of one vehicle. See page two for details.

Furthermore, when Unit 166 was taken out of service, it was still operating with the original automatic transmission after 300,740 miles. The unit was operating with Hydrotex HyTorque® Z, automatic transmission fluid. The transmission service interval had been originally targeted at 50,000 miles. Removing the transmission pan, replacing the filters and topping it off with fresh HyTorque Z was the standard transmission service. The transmission did experience a problem that was diagnosed by a local transmission repair shop as a bad solenoid. The solenoid was replaced and the unit was returned to service; the repair technician was very surprised to learn that the high mileage truck was still operating with its original transmission.



Conventional Engine Oil		
Service Expense	Quantity	Cost
Conventional Engine Oil – \$13.84 per gallon - \$3.46 per quart 129 gallons of oil (\$1,785.36) are required during the lifespan of this vehicle	6 Quarts	\$20.76
Oil Filters – Wix 51372 - \$4.53 each 86 filters (\$389.58) are required during the lifespan of this vehicle	1 Filter	\$4.53
Labor - Preventative Maintenance - Internal Shop Rate \$65.00 hour 25.8 hours of labor (\$1,863.33) are required during the lifespan of this vehicle	.3-hour – 20-minutes	\$21.66
Waste Oil Disposal 129 Gallons of waste oil produced during the vehicle lifespan	6 Quarts	\$0.00
Cleaning Supplies – Shop Rags, Paper Towels, Soaps, Nitrile Gloves, Oil Dri, Etc. 86 used contaminated cleaning supplies (\$86.00)	1 service	\$1.00
Cost of One 3,500 Mile Service Interval Approximately 1 service per month	1 service	\$47.95
Cost of 86 services – eight year lifespan of the vehicle 300,740 miles	86 Services	\$4,123.70



Hydrotex® Hydrosynthetic® Engine Oil Program		
Service Expense	Quantity	Cost
Hydrotex® HyFilm® LEO 5W-40 Engine Oil – \$29.70 per gallon - \$7.42 per quart¹ 45 gallons of oil (\$1,335.60) are required during the lifespan of this vehicle The Hydrotex Program Reduced Oil Consumption by 65%	6 Quarts	\$44.54
Oil Filters – Wix 51372 - \$4.53 each 30 filters (\$135.90) are required during the lifespan of this vehicle The Hydrotex Program Reduced Contaminated Filters by 65%	1 Filter	\$4.53
Labor - Preventative Maintenance - Internal Shop Rate \$65.00 hour 9 hours of labor (\$649.99) are required during the lifespan of this vehicle The Hydrotex Program Reduced Maintenance Intervals by 65%	.3-hour – 20-minutes	\$21.66
Waste Oil Disposal 45 Gallons of waste oil produced during the vehicle lifespan The Hydrotex Program Reduced Waste Oil by 65%	6 Quarts	\$0.00
Cleaning Supplies – Shop Rags, Paper Towels, Soaps, Nitrile Gloves, Oil Dri, Etc. 30 used contaminated cleaning supplies (\$30.00) The Hydrotex Program Reduced Supply Usage by 65%	1 service	\$1.00
Cost of One Oil Analysis Approximately 2 oil analysis during 1 year - \$16.23 per oil analysis	Pro Rated Oil Analysis	\$9.74
Cost of One 10,000 Mile Service Interval² Approximately 1 service every 3 months	1 service	\$81.47
Cost of 30 services – eight year lifespan of the vehicle 300,740 miles The Hydrotex Program Reduced Service Cost by 41%	30 Services	\$2,444.10

¹ Price represents a 20% volume discount

² HyFilm® LEO has been documented to deliver over 60,000 mile change intervals in OTR Long Haul Diesel Vehicles. This 10,000 mile change interval is for a gasoline engine, which has different profiles for temperature, filtration, size of oil reservoir and duty cycle.

The Hydrotex Lubrication Management Process contributed to a much **GREENER and SUSTAINABLE** preventive maintenance program. The volume of used contaminated drain oil, used contaminated oil filters and used contaminated cleaning supplies was reduced by 65%.