# Case Study

## Ace Service Center, Inc.

*Jim Miller, fleet operations director of Ace Service Center, Inc., a division of School House Companies, recommends a good oil analysis program and modern maintenance software to save time and money.*

About 20 years ago, School House Companies started as a swimming pool company in what was originally a one-room schoolhouse. When the tankers that were brought in to fill pools experienced slow periods during the off-season, the team decided to use them to haul freight. This approach proved to be more than just a lucrative side job, but led to the creation of Ace Service Center, Inc., one of seven divisions of School House Companies. Fleet Operations Director Jim Miller attributes this success to the fact that his team can manage any heavy-duty maintenance need from bulldozers and tractor-trailers to golf carts while saving time and money. He said he accomplishes this by addressing the maintenance requirements of his fleet before they result in major problems; he calls this approach "predictive maintenance."

**CRYSTAL BALL?**

It isn't exactly a crystal ball, but Miller explains that his strategy of predictive maintenance can identify potential problems before they start, allowing him to replace necessary parts before they actually break, which reduces downtime and additional repairs that can prove very costly.

"We use predictive maintenance in addition to routine preventive maintenance in order to be proactive," said Miller. "That way, rather than having equipment breakdown that results in expensive repair time, we can do a quick part replacement or adjustment and keep the equipment functioning." Using his predictive maintenance program, Miller says he is able to analyze trends in particular models, makes and years of equipment. He explains that if several like vehicles seem to be suffering similar problems, he can determine what the faulty part is and replace it in other vehicles, executing some serious damage control.

"We can order the parts in advance because we have a good idea of when they will need to be replaced," he said. "We can also schedule repair cycles based on the trends we identified, which maximizes efficiency and cost effectiveness."

**OIL SAMPLING AND ANALYSIS**

Miller said another way he is able to foretell the future of necessary maintenance is through scheduled oil sampling. Consistent sampling can identify problems in everything from transmissions to engines. Once the samples are gathered, Miller can analyze the results to determine if a problem is the effect of a one-time cross contamination or if a repair is actually necessary. He also can track trends in sampling history, which allows him to identify the source of the contamination.

“In addition to sampling, an oil analysis system allows us to detect engine trouble,” said Miller. “I recommend a comprehensive system like the one we use, Kendall Lubricant Analysis System (KLAS), in combination with Kendall’s high performance fleet products beginning with Super-D®3 Engine Oil.”

Miller said Ace has been using the KLAS system since his Kendall Motor Oil Marketer, Chris Farrell, owner of Farrell Oil, recommended it to efficiently monitor his customers’ truck engines every 15,000 miles. The system can identify the right time to change oil, which may lead to an extended engine life. A thorough system also detects component wear and contamination in transmission, hydraulics, differential and final drives and schedule drain intervals.

“KLAS breaks the truck into system components,” he said. “It makes identifying a problem very easy, which saves time because you aren’t forced to look through pages of reports in order to troubleshoot. It can also save you money because it helps to lower maintenance costs and unnecessary time and effort.”

In 2002, Miller purchased a used 1997 Ottawa Switch Tractor, which was making 40 to 60 moves per day. The unit had a re-man engine and ran well at first. The first oil sample detected trace amounts of sodium and potassium. Miller re-sampled at 500 hours and the readings were climbing. He decided to pull the unit from service and sent it to the engine shop. The engine technician stated that there were no internal leaks after pressurizing the cooling system with the oil pan removed.

After reviewing the oil samples, Miller decided to remove the cylinder head and have it pressure tested. The cylinder head had four cracks near the injector sleeves.

“Scheduled repair reduced the tractor’s downtime by four to five days as well as saving towing expenses,” said Miller. “And through our oil analysis, we were able to save $1,000 per day. We always use the highest quality products as well, as that will save additional dollars in the long run.”

**MODERN TECHNOLOGY**

“The perfect partner to an effective oil analysis program is a user-friendly maintenance software program that offers the user options to computerize all records, compile data to evaluate efficiencies, track maintenance history, send reminders on scheduled maintenance, and much more,” said Miller. Information analyzed by the KLAS program can be easily exported to an Excel spreadsheet from the software; hence, simplifying the organization of information.

“With this technology, we can recognize trends within very specific vehicles allowing us to easily target individual problems, which ultimately saves money for the customer,” explained Miller. “This makes things like re-ordering parts or pulling up vehicle histories simple, and it creates the ideal combination of cost savings and time maintenance.”

Printed in the U.S.A. Form BD-KEN-685.