

At DOE's Idaho National Laboratory

Biobased Lubricants and Fuel Help Keep Large Bus Fleet Rolling

At the Department of Energy's (DOE) Idaho National Laboratory (INL) nearly 100 buses haul many of the 3,000 workers to and from work racking-up 2.7 million miles annually. INL covers nearly 1,000 square miles and the buses collect employees from an area 100 miles-by-100 miles in southeast Idaho. The buses are on the road 22 hours a day, stopping only between 2-4 a.m.

Transportation Service Technical Advisor John Kay is responsible not only for the buses but the shop and equipment that keep them rolling. "It's DOE policy that we do anything that we can to adopt measures that reduce fuel consumption and the nation's reliance on foreign oil and to protect the environment. Biobased products help us achieve both of those objectives," Kay declares. "We had already been using B20 (a blend of 20 percent biodiesel and 80 percent conventional diesel) for more than a year, when we heard about the pilot projects the United Soybean Board was sponsoring so we were eager to participate."

Together with the United Soybean Board (USB), Kay and his colleagues at INL decided to try several brands of penetrating lubricants, a metal cleaner and a glass cleaner. Testing began in September of 2005 and will be completed in September 2006.

"Our drivers take great pride in their buses and like to keep the polished aluminum wheels on their vehicles clean and shining," Kay says. "We were interested in trying a biobased metal cleaner because we did not have an approved product for this purpose. We found that the biobased metal cleaner keeps the wheels sparkling and it reduces significantly the amount of the harsher abrasive used to remove corrosion."

Beyond that, the drivers say the biobased cleaner does an excellent job on the hard rubber surfaces such as fender guards. The biobased glass cleaning product works well in cleaning the buses' lights and other glass surfaces too. According to Kay, "It works better and we use less, about half as much, to do the job."



Frank Beltran wants his bus to look as good as possible as he drives INL employees and visitors to, from and between the lab's many facilities spread over a 100 square miles. Here he uses a biobased glass cleaner to polish the windows, clean the headlamps and tail lights. In the photo at far left, Beltran uses a biobased product to keep bus wheels gleaming

photo credit: Michael Crane
for the DOE Idaho National Laboratory

“We’ve used several brands of biobased penetrating lubricants, and they all work as well or better than conventional products,” Kay says. “I have one mechanic who works on alternators, starters and small motors, and he says that on one tough job—removing frozen bearings—the biobased penetrating oil works in just a few hours while the conventional product takes overnight,” explains Kay. “But the best overall benefit is that these products are environmentally friendly.”

Although not part of the pilot project, Kay is an enthusiastic user of biodiesel, and biobased bar-and-chain oil.

INL’s Pollution Prevention Coordinator Anne Dustin is enthusiastic about participating in the USB pilot project and biobased products in general. “One of our policy drivers has the dual objective of minimizing waste and preventing pollution. Biobased products like the ones we’re testing help us achieve that goal and protect our workers at the same time.”

photo credit: Michael Crane for the DOE Idaho National Laboratory



Idaho National Laboratory Transportation Services Technical Advisor John Kay is a busy man keeping nearly 100 buses on the road, running well and looking good. He says the biobased products provided by USB in the pilot project have worked well.

FACT FILE

The following products are being used by INL in the pilot project:

From Gemtek www.gemtek.com

SAFE LUBE™ Bar Chain & General Penetrating Oil

SAFE CARE® Aircraft and Metal Cleaner

SAFE CARE® More Than Glass Cleaner

From Renewable Lubricants www.renewablelube.com

Bio-Penetrating Lubricant (BPL)™

From Terresolve Technologies www.terresolve.com

EnviroLogic31® Penetrating Lubricant

For more information about the INL pilot project, contact John Kay at John.Kay@inl.gov or Anne Dustin at DUSTAL@inl.gov.

America’s farms are just beginning to tap their potential as a source for natural, renewable biobased products that offer benefits to worker health, the environment, America’s economy and energy security. To learn more about the many biobased products made from soybeans, such as those used at Department of Energy facilities, go to www.soybiobased.org.

Because of the potential for biobased products to create new markets for soybeans, U.S. soybean farmers have invested millions of dollars to research, test and promote biobased products. Much of this work was done through the United Soybean Board (USB), which is composed of 64 U.S. soybean farmers appointed by the U.S. Secretary of Agriculture to invest soybean checkoff funds. As stipulated in the Soybean Promotion, Research and Consumer Information Act, USDA’s Agricultural Marketing Service has oversight responsibilities for the soybean checkoff.

16640 Chesterfield Grove Road, Suite 130 • Chesterfield, MO 63005-1429

1-800-989-USB1 • (1-800-989-8721) • FAX: 636-530-1560

E-mail: merker@smithbucklin.com

USB Publication Code: 6354/6406-072006-2000

References herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the U.S. Government, any agency thereof, or any company affiliated with the Idaho National Laboratory.

This profile is provided for information only. The United Soybean Board, the Idaho National Laboratory and U.S. Government do not endorse, promote or make any representations regarding any specific suppliers mentioned herein.

