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## **‘Green’ grease keeps fleet rust-free**

Garage supervisor Dana Lynn Cox found that switching to a biobased penetrating oil to keep the fleet of 500 vehicles and the heavy equipment at Oak Ridge National Laboratory in tiptop, rust-free shape ran as smoothly as a well-tuned truck.

“I haven’t noticed any downside,” says Cox, who supervises 18 mechanics at ORNL, the Department of Energy’s largest science and technology laboratory in eastern Tennessee. “We use it on items that have rusted shut and it works as well as anything. We’re very pleased with it.”

Cox and his crew converted to a biobased lubricant derived from vegetable oil about two years ago. Renewable Lubricants of Hartville, Ohio, manufactures this oil, marketed as bio-penetrating lubricant, and a host of other biobased alternatives to petroleum-based products.



***Mechanic Steve Bolden uses biobased penetrating oil to lubricate ORNL vehicles so they run smoothly.***

The biobased penetrating lubricant costs about a dollar or two more per unit when compared to its conventional counterpart, according to Jacquelyn Garmier, president of Renewable Lubricants. “It’s a minimal added cost with much bigger benefits for the environment,” she notes.

The ORNL garage goes through an estimated five spray bottles a year, making the difference a pittance in terms of the Lab’s budget of approximately \$1 billion. (The behemoth budget and matching motor pool are needed for 4,200 staff and 3,000 guest researchers located in 20 facilities throughout the campus.)

The Department of Energy’s “push for us to be as green as possible in all we do” motivated Cox to search the Internet for an environmentally friendly solution for those stuck engine parts. He has an ongoing interest in other biobased products, particularly auto paint that doesn’t contain the chemical isocyanate, which can cause respiratory problems. “We’ve searched and searched for that,” he says with frustration. “We haven’t found anything with the right formula.”

In the meantime, the 20-year DOE veteran does what he can to be environmentally friendly, including trying not to use aerosol cans, and shares information with other DOE Labs about biobased options. But the ultimate test of a product lies in its acceptance by the people who use it—and this green grease passed with flying colors.

“The mechanics haven’t complained and as long as they’re not complaining, it’s good,” Cox concludes with a chuckle.

For more information, contact Dana Lynn Cox at [coxdl2@ornl.gov](mailto:coxdl2@ornl.gov) or see Renewable Lubricant’s web site at [www.renewablelube.com](http://www.renewablelube.com).

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