



GREEN PURCHASING CASE STUDIES: EXTENDED-LIFE ANTIFREEZE LASTS LONGER, PREVENTS WASTE

CITY OF PORTLAND, BUREAU OF PURCHASES
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CityFleet uses extended-life antifreeze in its vehicles, which lasts about three times as long as conventional antifreeze.

PURCHASING GREEN

Since 1997, CityFleet has used extended-life antifreeze (ethylene glycol) in both gasoline and heavy-duty diesel vehicles. Extended-life antifreeze designed for gasoline vehicles lasts five years or 150,000 miles (compared to two to three years for conventional) while

extended-life antifreeze designed for diesel vehicles lasts three years or 600,000 miles (compared to one year for conventional). CityFleet also sends its used antifreeze to a recycler to be reformulated and buys back recycled extended-life antifreeze. The city recycles about 1,500 gallons of antifreeze every year.

BENEFITS

Because extended-life antifreeze lasts longer and doesn't need to be replaced as often, it generates less waste than conventional antifreeze. By recycling antifreeze rather than disposing of it, CityFleet prevents even more waste. Extended-life antifreeze can be recycled an unlimited number of times.

Antifreeze is toxic to humans and animals. Used antifreeze, which is contaminated with heavy metals such as lead, cadmium, and chromium, is even more toxic. Reducing the amount of antifreeze that needs disposal lessens the risk of harming human health and the environment.

COST

Although extended-life antifreeze costs slightly more than regular antifreeze, CityFleet saves money because it doesn't have to purchase new antifreeze as often. Additionally, labor and disposal costs are reduced because vehicles require fewer antifreeze changes.

AT A GLANCE

WHO

CityFleet

WHAT

Extended-life antifreeze

COST

💰 Reduces amount of product that needs to be purchased

💰 Reduces labor and disposal costs

BENEFITS

- ✓ Long product life
- ✓ Prevents waste
- ✓ Can be recycled an unlimited number of times

PERFORMANCE

CityFleet reports that extended-life antifreeze performs just as well as virgin antifreeze. Silicates and phosphates, common in regular antifreeze, can be abrasive to water pump seals. Extended-life antifreeze does not contain these substances. Plus, it retains over 95 percent of its corrosion inhibitors after five years or 150,000 miles. The quality of extended-life antifreeze is so well-established that many manufacturers fill their new vehicles with this product.

“Extended-life antifreeze saves the city money by not having to change the antifreeze as often. When the extended-life antifreeze is required to be changed, it is recycled and reformulated for reuse.”

Don Taylor
Assistant Manager, CityFleet

Tests conducted by the American Society for Testing Materials (ASTM) and the Society of Automotive Engineers have shown that recycled antifreeze meets or exceeds the ASTM’s nationally recognized performance criteria. In fact, the U.S. Environmental Protection Agency maintains that recycled antifreeze might be purer than virgin antifreeze because the recycling process reduces the amount of chloride in the product.

LESSONS LEARNED

Although mixing conventional and extended-life antifreeze won’t harm vehicles, it is not advisable. Mixing the two negates the extended-life abilities of extended-life antifreeze. Before replacing conventional antifreeze with extended-life antifreeze, CityFleet recommends flushing the coolant system to maximize performance.

ABOUT CITYFLEET

CityFleet’s six repair facilities maintain Portland’s 2,850 vehicles and equipment. This includes parking patrol vehicles, sedans, pick-ups, vans, police sedans, dump trucks, back hoes, and heavy construction equipment. They perform oil, lube, and filter changes; emission inspections; and engine, transmission, drive train, electrical, suspension, heating, cooling, and air conditioning diagnoses and repairs. CityFleet garages are also certified [Eco-Biz Automotive Shops](#), a designation that recognizes their commitment to minimizing their environmental impacts.

FOR MORE INFORMATION

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