



## King County Environmental Purchasing Program

### Motor Oil, Re-Refined

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#### Introduction

King County is proud to have purchased re-refined motor oil since 1992. This helps the environment by reducing the impacts of refining and also conserves a non-renewable resource.

Engine Lubricating oil does not "wear out." Producers can re-refine oil to remove contaminants introduced during its use and replace the "additive packages" that confer its specific properties, such as viscosity. Current technologies allow used oil to be re-refined into a high quality base-stock and several oil companies now market products that have been certified by the [American Petroleum Institute \(API\)](#). API Certification is the basis for warranty requirements of motor vehicle manufacturers and thus is used in specifications of motor oil buyers.

Other technologies, such as simple filtration, have also been used to recycle used motor oil. Though not suitable for the production of high-grade lubricating oil, these technologies are often sufficient to make used oil useful as a substitute for virgin oil in fuel applications. Economics will determine the best way to recover used lubricating oil in any given locality, but the highest-value product is obtained by re-refining it for the manufacture of new lubricating oil.

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#### Usage History and Experience

Motor oil made with re-refined base-stock has been used in County vehicles operated by the Renton Maintenance Facility, and Solid Waste Operations since 1992. These agencies purchased over 11,000 gallons of oil at a cost of almost \$30,000 in the past year.

The Transit Division recently began evaluating re-refined oil. In the second quarter of 1999 they purchased over 4,000 gallons at a cost of over \$8,500. The re-refined 15W40 oil is being tested in a small sample of buses and early results are promising. Some of the data suggest that re-refined will perform better and last longer than the customary oil, allowing buses to run longer between oil changes. If these trials continue to show good results, the Division plans to expand the use of re-refined motor oil to the entire fleet, making Metro Transit the largest municipal transit fleet in the country to have done so.

Since 1998, fifteen emergency vehicles operated by the Medic-One unit of the Department of Public Health have obtained warranty-maintenance service from a Ford dealership using re-refined oil.

Combined County purchases totaled over 15,000 gallons or almost \$38,000 in 1999.

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