



## Metro Transit

Doug Daniels, Supervisor of Vehicle Maintenance, King County Metro Transit, champions the use of re-refined oil as both an economical and environmentally conscious decision.

### Season of Change

Metro Transit runs a demanding operation with 1,320 coaches, including diesels and trolleys. In the fall of 1999, an environmental push by the local government led Metro Transit to begin using products that were environmentally sound. After working with Bob Ness of Nelson Petroleum and others to make the switch from virgin oil to re-refined oil, nearly four years and millions of miles later the change in regimen has proven to be a cost efficient and effective maintenance decision.

Re-refined oil is created by a process in which used oil is returned to the refinery, refined again and cleaned of contaminants like dirt, fuel and water; then performance additives are re-added in order to make it usable again. Products made from re-refined oils are eligible for the American Petroleum Institute's (API) and ILSAC's certification marks ("Donut" & "Starburst"), which demonstrate the same quality and performance as the virgin oils we are used to. Oil can be recycled, re-refined, and re-additized over and over again, because it is simply dirty, not worn out, so the quality is never compromised. By recycling and re-refining oil, a valuable resource is saved.

### Proof is in the Pudding

When the proposal to move to re-refined oil was made, many at Metro Transit were skeptical of the idea.

"Most of the initial doubt stemmed from a misunderstanding regarding the difference between re-refined and reclaimed oil," Doug Daniels, supervisor of Vehicle Maintenance, explained. "During our trial phases, the fleet experienced a minor problem; the low oil light was appearing when the units were traveling downhill and the throttle was released and depressed again. The mechanics were quick to point a finger at the new oil as the cause of the problem, denouncing its ability to perform as well as our tried and true oil."

Before long the problem was identified as a flaw in the design of the engine and not the oil. The incident eased the apprehensions of the mechanics, and a new era began for the Metro Transit team with re-refined oils waving the flag.

A recent engine teardown gave Daniels even more confidence in their decision. Once the engine, which had 318,000 miles logged on it, was revealed during the teardown, it was in virtually new condition. Daniels credits quality lubricants such as 76 Lubricants Firebird 15W-40 as "one of the driving forces" behind the incomparable engine wear. Daniels noted little wear, including limited bearing wear, no visible sign of cylinder wear and no sludge build-up on the inside. Once again, the re-refined oil had proven itself to the technicians at Metro Transit that it could perform as well as, or better than, their previous stock.

### Going Green

The use of re-refined oil boasts benefits beyond the engine. Metro Transit uses approximately 80,000 gallons of oil per year, and as Daniels explained, they are getting back what they put in. Instead of pulling new oil from the ground, they are recycling their oil supply into new re-refined product that they can use

again and again. Since they have also experienced such tremendous results in engine wear and fleet capability, what all began as a governmental and public pressure to be more sensitive to environmental concerns, has become a sound business decision of quality and product ability.

"With a fleet of varying ages, we had some concerns as to how a re-refined oil would be able to keep the higher levels of soot suspended in the newer models," Daniels stated. "However, that fear was eliminated when after reviewing the oil analysis reports we noted that models of all years were running and responding equally well to the new oil and that no additional maintenance check-ups were necessary for the newer models."

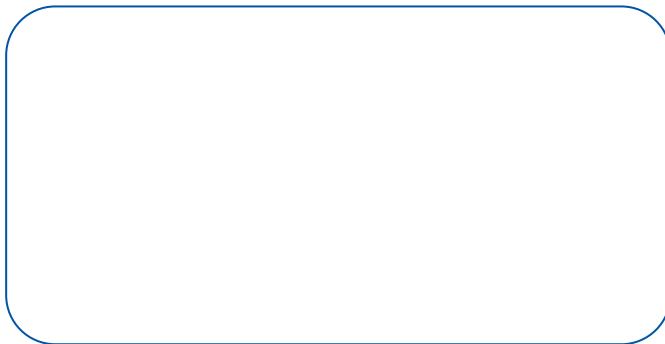
To complement their maintenance regimen, Metro Transit also employs a strict oil analysis program. Sampling engine oil every 6,000 miles was very beneficial in helping to monitor the performance of the oil during their initial start up. They have also experienced excellent fuel mileage/economy using the re-refined oil.

### Re-refined and Future Fleets

What began as an ill-received political push to help the environment, has turned into a remarkable change for the better in an entire municipal fleet. Daniels said they are currently in the process of purchasing new 60 foot articulated buses that will use the new Hybrid Electric technology. They are also looking at Caterpillar's new C-9 engine as a possible power source. Although he was apprehensive to discuss Metro Transit's desire to use re-refined oil with CAT, he was pleased to see that the CAT representatives did not even flinch at the idea of using re-refined oil that met their specifications. This helped Metro to continue to be able to use the desired re-refined oil in their maintenance program, confirming their decision to utilize products like the 76 Firebird line all the more.

In the end, a good service life for the product and competitive cost are the dominating factors in any maintenance decision. With 76 Firebird HD 15W-40, Metro Transit was able to achieve both of these, while at the same time "helping to preserve a rapidly depleting natural resource," Daniels commented. Saving the environment, time and money all with one oil, now that's a true maintenance marvel.

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