



## **Eco Draw Synthetic Lubricants Produce Cost Savings and A Greener Environment**

*By Robert Boag*

A major Toronto manufacturer, producing automotive parts and assemblies, did an extensive review of available lubricant technologies in the marketplace, beginning in October 2006. Most of the parts they form are from high-strength steel. The high yield strength and surface hardness of these respective materials can create significant friction that generates heat in the tooling and wears tool coatings. Because of the part forms and steel grades and thicknesses, many problems such as burring and galling were ongoing.

This manufacturer required a robust forming lubricant. To meet all of their production requirements they were forced to use a straight petroleum lubricant to form parts. Excess oil was collected and mixed with floor washings and other miscellaneous plant wastes and hauled for disposal.

Four major suppliers of lubricant were trialed and evaluated by a team of individuals that included engineers, tooling personnel, and management. In February 2007, KSL was awarded the lubricant business when the team selected Eco Draw<sup>®</sup> HVRG4 as the only product that met their list of criterion.

The lubricant was quickly implemented from one press to another until finally the entire press shop was able to use just one product. Previously three products were used throughout the plant.

Eco Draw® HVRG4 was used at two dilution ratios; four parts water (1:4) and eight parts water (1:8) on lighter gauge parts. This provided superior protection for the tooling. Minor modifications to feed points were made to protect extreme pressure punches. The team calculated a use cost savings of 50%. Further tests indicated that the dilutions could be successfully increased; making use cost savings would be even greater.

Since the inception of Eco Draw® HVRG4, KSL engineers and technicians have assisted the manufacturer with their recycling initiatives. We have the capability of recycling the lubricant, gear oils and hydraulic oils. With some minor additional equipment we expect to reduce our client's offsite disposal to a fraction of the original amount.

Many more benefits/savings have been realized since implementing Eco Draw® HVRG4.

- With the dies operating at lower temperatures the tool room has monitored and reported less polishing and die coatings last longer.
- Chemical savings have been realized in floor cleaner and in the die wash area. Most dies are cleaned with just hot water now and floor cleaner soap concentration is 10% of what it originally was.
- Eco Draw® HVRG4 cleans very easily, thus parts being shipped out for E-Coat no longer require expensive pre-cleaning to be performed.
- Press operators report a cleaner and safer work area.

Eco Draw® HVRG4 coupled with improved application methods and recycling initiatives have resulted in a cleaner, safer, and greener manufacturing environment.