

Energy-efficient engine

An auto engine which could be up to 50 per cent more fuel-efficient than conventional models may be on the market within five years, according to Jeff Owen, general manager of K-Cycle Engines.

K-Cycle Engines are developers of the extended power stroke model after which the company is named, reports the *Canadian Press*.

"We've developed a new configuration in which to develop the extended power stroke and we end up with an engine that is smaller, lighter in weight and potentially quite a bit quieter than a conventional engine," said Owen.

The engine was developed in the early 1970s by Hoken Kristiansen, a former aeronautical engineer and now the company's president. He formed the company in 1974 and it now employs 28 people.

"The extended power stroke extracts some of the energy that normally goes into the exhaust of a conventional engine and turns it into useful energy," said Owen.

A car that gets about 11 kilometres a litre of gasoline using a conventional engine would get almost 16 kilometres a litre with the K-Cycle engine.

International interest

Major manufacturers in Italy and Japan have shown interest in the K-Cycle and General Motors, Ford and Chrysler in the U.S. have contacted Owen about the economical motor.

K-Cycle Engines received a \$300,000 grant from the Manitoba government last year to build a new test lab, while the National Research Council (NRC) has allocated \$340,000 in grants to the enterprise over the last three years.

"We're into the program about five years now," he said. "The first engine ran in 1977. We still believe we're three to five years away from full development and limited commercialization of the engine. It's a long-haul process," said Owen.

Industrial uses

Owen said the K-Cycle is not limited to use in automobiles and could also be applied to agriculture and industrial machinery such as compressors, generators, tractors or front-end loaders.

In addition to its fuel efficiency, the K-Cycle will have substantially fewer parts

because there are no valve trains, no cam lifters, rocker arms, and valves in the engine. This should produce a less expensive engine with a 25 per cent savings in the manufacturing cost.

Owen said it should also mean that once the engine has been proved reliable, servicing will also be less expensive.

Students get fisheries jobs

The Department of Fisheries and Oceans will provide 729 students with career-oriented jobs this summer.

Pay scales range from \$4.69 an hour for a first-year technical institute student to a high of \$8.28 for a limited number of eighth-year university post-graduate students. The undergraduate maximum is \$6.27. Jobs are for a maximum of 18 weeks and a minimum of six weeks.

Fisheries Minister Romeo LeBlanc said he was placing importance on the program as one means of meeting fisheries and oceans' long-range professional and technical recruiting objectives. There will be on-going orientation for each student and a monitoring, evaluation and critique program.

Science students, especially biologists and chemists, and engineering and survey students will get more than half of the available jobs.

Computer weather forecasts

The federal government is working on a system that will provide accurate weather forecasts a month or even an entire season in advance.

A new computer system, planned for use within the next five years by the federal Atmospheric Environment Service (AES) in Montreal, will have the capacity to take in global weather observations, analyze a number of variables and make long-range predictions, James Bruce, assistant deputy minister of the AES, told 100 provincial and federal environment officials at a climate change seminar held recently in Regina, Saskatchewan.

The computer, known as a vector processor, is similar to computer programs used by engineers to measure stress on bridges. New generations of computers have much larger data capacity than previous machines, making it possible to analyze readings and the direction weather is taking in both the northern

and southern hemispheres.

Knowing how weather moves on a global basis will provide a picture of what weather Canada will experience.

The climate officials met to endorse provincial participation in AES's climate program, a long-range project aimed at improving the study of climate and climate change. The federal and provincial governments plan to co-ordinate their efforts with existing programs in the United States and Europe to create models of how future climate trends may affect farming, industry and social problems.

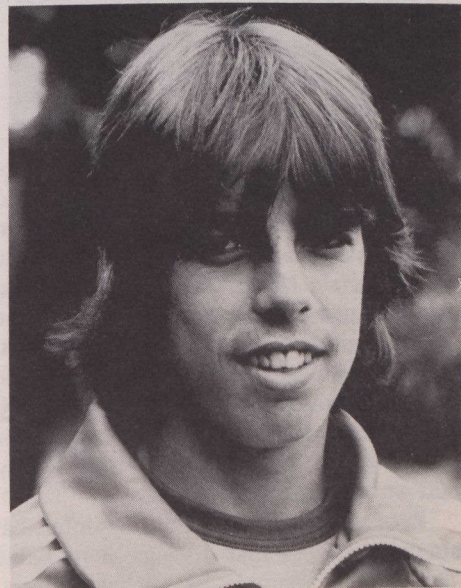
Successful season for Bulau

Canada's Horst Bulau placed third overall on the World Cup ski jumping circuit — the most successful international tour ever by a North American jumper.

The 18-year-old from Ottawa completed the season with 179 points, 22 points behind second-place finisher Roger Ruud of Norway and 26 points behind winner Armin Kogler of Austria.

During the season, Bulau won two World Cup competitions; the first was on New Year's Day in Garmisch-Partenkirchen, West Germany and the second on March 17 in Oslo, Norway.

Steve Collins of Thunder Bay, Ontario completed the season in fifteenth place overall with 59 points. His performance along with that of Bulau, lifted Canada to fourth place in the over-all team standings — the nation's best team finish ever.



Horst Bulau