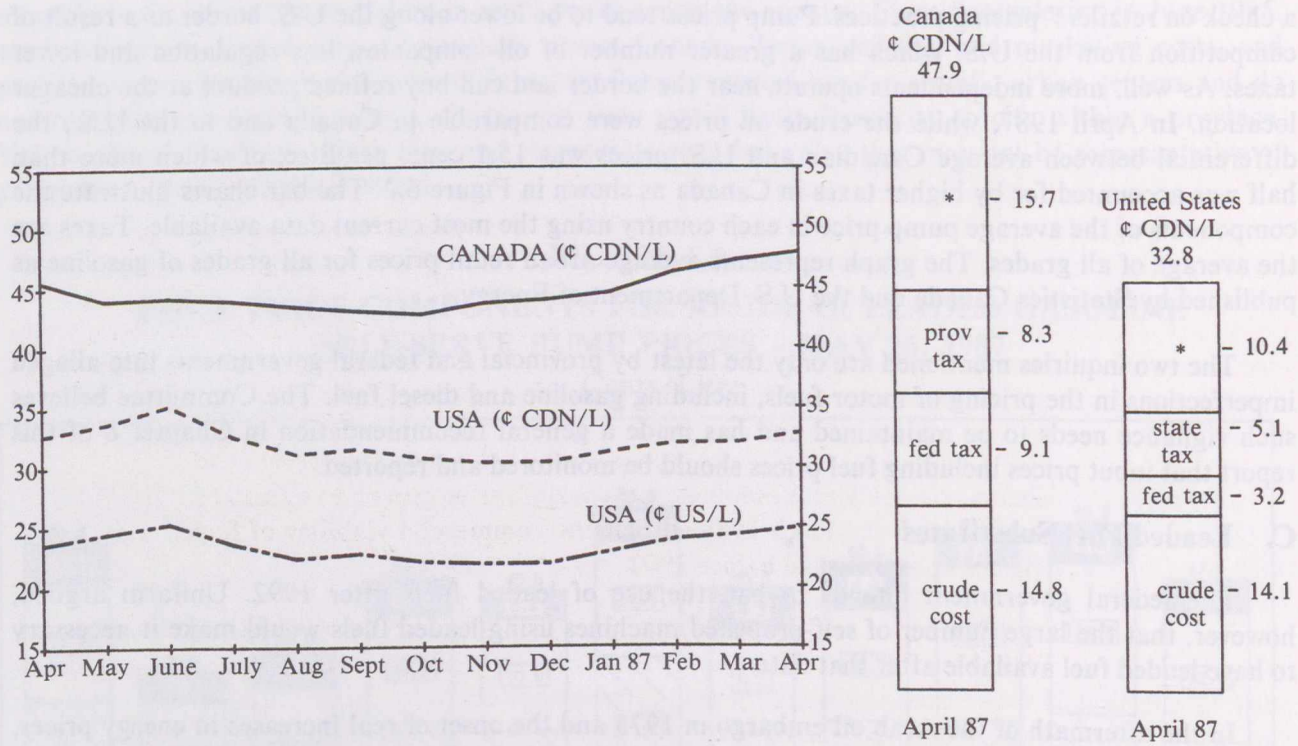
to switching. While it is not possible to use leaded fuel in unleaded gasoline engines, the reverse is not the case. Most engines built to use leaded gas will accept unleaded gas with minor engine adjustments. Lead serves as a lubricant and under intense usage, levels below 0.026 grams per litre can present a risk of valve seat recession. From the early 1970s most gas engines have been designed with hardened valve seats to allow them to burn unleaded gasoline.

FIGURE 6.2

CANADA vs U.S. — MOTOR GASOLINE AVERAGE RETAIL PRICE — ALL GRADES

Average Full-Serve and Self-Serve



* Refining and Marketing Costs and Profits.
Source: Oil Pricing and Market Analysis Division, EMR.

Lead is also used as an octane enhancer and so an appropriate gasoline additive must be found to meet the lead phasedown. Effective January 1, 1987 the permissible lead level was lowered to 0.29 grams per litre from 0.77 grams per litre. By the end of 1992, the use of lead will be effectively eliminated. The U.S. level is already at 0.026 grams per litre with elimination by January 1988. Both methanol and ethanol can serve very well as octane enhancers in replacing lead.

In a report on gasoline additives tabled in June 1986, the House of Commons Standing Committee on Energy, Mines and Resources found no serious technical or environmental problems arising from the use of these alcohols as blending agents. They are already being marketed in a number of countries for transportation use. The economics of their use may be the main question since, for instance, the popularity of ethanol in the U.S. for gasoline blending is the result of agricultural subsidies. Ethanol