

pumping losses and spark timing, the magnitude of the gains decreasing in the order given.

The author thus offers as a personal speculation of what is practically realizable over the next decade the following fuel consumption gains in European gasoline-powered cars.

- (1) From engine design changes, 20%.
- (2) From gasoline design changes, 5–10% according to driving conditions.
- (3) From engine lubricant changes, about 3%.
- (4) From transmission design changes, 5–10%.
- (5) From transmission lubricant changes, about 3%.
- (6) From design changes of a given vehicle (weight, drag, tyres, accessories), approximately 10%.
- (7) From engine size and model mix changes, approximately 10%.
- (8) From vehicle maintenance procedures, approximately 5%.

Since these different effects are largely independent of one another, the surprisingly high total emerges of about 50% potential improvement, which makes a very good target for the industry to aim at. It is not the first time that such an optimistic forward look has been taken. No less a person than Charles Kettering^{2 5} when General Motors president in 1929 predicted '80 mile/gal by 1939'. Let us hope that, with the present depletion of oil reserves, the progress towards achieving the target will be faster in the coming decade than it was then.

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