

## 다양한 운전조건에 따른 하이브리드 자동차의 연비 특성 연구

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### The study for fuel economy characteristics of hybrid electric vehicle (HEV) according to the driving condition

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The fuel economy estimates essentially serve two purposes : to provide consumers with a basis on which to compare the fuel economy of different vehicles, and to provide consumers with a reasonable estimate of the range of fuel economy they can expect to achieve. The current fuel economy label values utilize measured fuel economy over city driving cycles. However, this test driving mode can not be evaluated the variety factor of the real-world. These factors include differences between the way vehicles are driven on the road and over the test cycles, air conditioning use, widely varying ambient temperature and humidity, widely varying trip lengths, wind, precipitation, rough road conditions, hills, etc.

The purpose of this paper is to account for three of these factors on the fuel economy : 1) on-road driving patterns (i.e. higher speeds and more aggressive driving (higher acceleration rates)), 2) air conditioning, and 3) colder temperatures. The new test methods will bring into the fuel economy estimates the test results from the five emissions tests in place today : CVS-75, HWFET, US06, SC03 and Cold CVS-75.

Based on these new test methods, this paper discusses the characteristics of driving condition on Hybrid electric vehicle (HEV). And this paper assesses the fuel economy label of HEV.

**Key words** : Hybrid electric vehicle(HEV, 하이브리드 자동차), Fuel economy test(연비시험), CVS-75 mode( 시내주행 모드), HWFET mode(고속도로주행 모드), US06 mode(급가감속, 고속주행 모드), SC03 mode(에어컨 가동 모드), Cold CVS-75 mode(저온주행 모드), SOC(State of Charge, 충전율)

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