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1.6L 디젤엔진 EU-6d Step2 배기규제 대응을 위한 LP-EGR System 연구

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Research of LP-EGR system for EU-6d Step2 on 1.6L diesel engine

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Abstract : In the EU-6d Step2 emission regulation, NOx conformity factor of RDE will be enhanced, so engine-out NOx level should be decreased. In order to do so, it is necessary to increase the EGR rate in overall engine operation area. But increase of EGR rate by current HP-EGR system cause high smoke and CO2 level. To improve both of NOx and CO2, new technology on EGR system should be considered. In this research, HP-EGR and LP-EGR system are configured in parallel with 1.6L diesel engine to estimate the NOx and CO2 emissions of each system under the condition of EU-6d Step2 emission regulation. And evaluation was conducted to establish the EMS calibration optimization strategy.

Key words : WLTC(Worldwide harmonized Light vehicles Test Cycle), RDE(Real Driving Emission), EGR(Exhaust Gas Regulation) BSFC(출력당연료소비율), EU6d Regulation(디젤 EU6d 배기규제), CF(Conformity factor),