WLTP-08-44e

Status of Fuel Economy Policy in Korea

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KATRI, The Republic of KOREA
(Korea Automobile testing & research Institute)

Contents

1. Introduction

- Fuel economy management system in Korea

  - Vehicle Manufacturers certified fuel economy by themselves prior to sale (report the results to the government and mark labels on the vehicle)
  - Korea government conducts verification & compliance test of the manufacturers reports
    - ✓ Verification test for passenger vehicle
      - → **Ministry of Trade, Industry and Energy (MOTIE)**
    - ✓ Compliance test based on “Vehicle Self Certificate System”
      - → **Ministry of Land, Infrastructure and Transportation (MOLIT)**

Increasing demand for the integration of the redundant regulatory

2. Draft Fuel Economy Regulation in Korea

MOLIT Ministry of Land, Infrastructure and Transport

KATRI Korea Automobile testing & research Institute

- MOLIT designated as a responsible executive governmental agency for fuel economy post-verification
  - ➢ Purchase of test vehicles : Governmental Budget
  - ➢ Test agency : KATRI(Korea Automobile Testing & Research Institute)

Proving ground

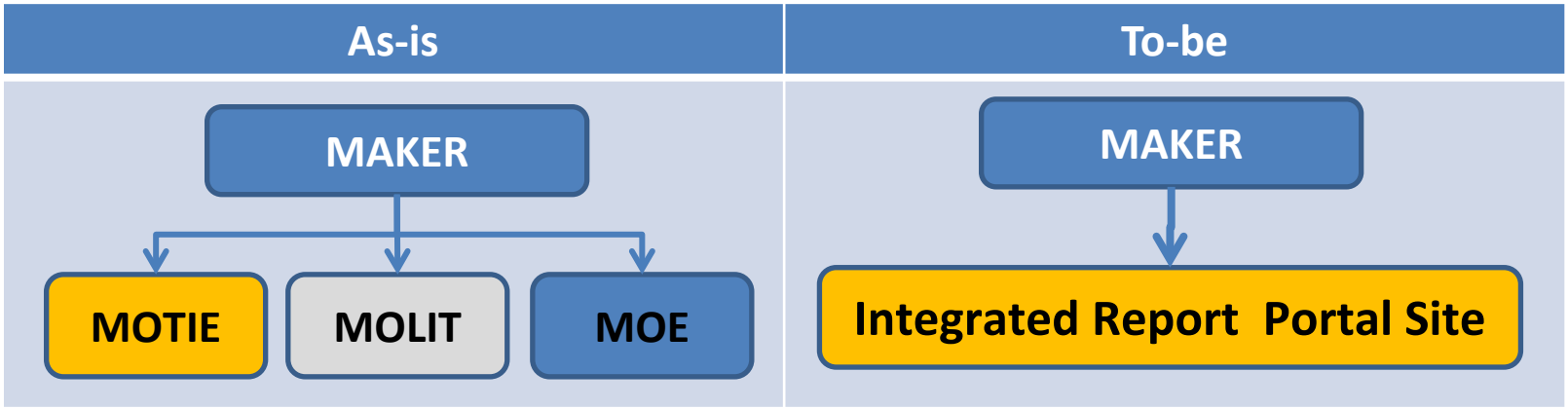
Labs

- ➢ Hasn't been verified officially for the manufacturer's coast-down value until 2014

2. Draft Fuel Economy Regulation in Korea

- Notification of draft rule making for improving Fuel Economy(GHGs) Management System

  - Improve measurement and calculation methods
    - ✓ Vehicle : all light duty vehicles (passenger, commercial)
    - ✓ Measurement
      - Pre accumulate mileage : 3,000 ~ 16,000km (recommended 6,500km)
      - New test method for mileage accumulation (no mandatory)
    - ✓ Tolerance : -5% (for both City & Highway mode)
  - Improvement of manufacturer's reporting system



2. Draft Fuel Economy Regulation in Korea

- Mandatory verification of Road Load coefficients by government
  - ✓ Verification methods
    - Compare the energy difference considering the fuel economy test cycle between Manufacture's RL value and Government's RL value

    * detailed verification methods will be complemented through fuel economy R&D study
  - ✓ Tolerance : -15%
    - If within 15%, the manufacture road load coefficient acknowledged, and proceed to the next test step(dynamo test)
    - If 15% exceeded, the government coefficient will be used for the dynamo test

2. Draft Fuel Economy Regulation in Korea

- Test agencies
  - ✓ 6 agencies which have fuel economy test labs
  - ✓ Correlation test with agencies annually

    * The current issue is how to ensure the correlation between agencies

- Penalty(fines) for non-compliance
  - ✓ Up to USD 1M paid to the Korean gov.

    * There is an opinion that compensations paid to customers should be legally imposed as well

- Investigated vehicles
  - ✓ Compliance test 20~30 models annually (bestsellers)
  - ✓ Test vehicle : purchase (or lease) from 1 to max 3 vehicles (for post test)
    purchase (or lease) 3 vehicles (for non-compliance)

Conclusion

- Fuel Economy is one of major determinant of safety and performance of vehicle
- By building an integrated fuel economy management system
  - Improve the reliability of Road load coefficients and Fuel economy
  - Induce production of safer and economical vehicle
  - Be realized for consumer protection
- Fuel economy regulations will be complemented through additional R&D study
  - Standard vehicle accumulation break-in test mode
  - Tolerance(-15%) evaluation method of Road load coefficient
  - Correlation evaluation method between agencies

- Some comments about Round-robin Test

  - Considerations for main factors affecting the fuel economy
    - ✓ Test measurement devices accuracy
    - ✓ Vehicle preparation & initial test conditions (tire pressure, SOC(%) etc.)
    - ✓ Coast-down procedures on the CHDY (vehicle setting etc.)
    - ✓ Pre-conditioning in the vehicle test cell
    - ✓ Drive quality evaluation for CHDY testing
  - Is there any plan to perform the Round-robin Test of Road load???

Thank you very much ! !