ISO 21755-1:2019 (E)

Motorcycles — Measurement method for evaporative emissions — Part 1: SHED test procedure

Contents

Foreword

Introduction

1 Scope

2 Normative references

3 Terms and definitions

4 Evaporative emissions, SHED test

4.1 Description of SHED test
4.2 Test motorcycles and test fuel
4.2.1 Test motorcycles
4.2.2 Test fuel
4.3 Test equipment
4.3.1 Chassis dynamometer
4.3.2 Evaporative emission measurement enclosure (SHED)
4.3.3 Analytical systems
4.3.3.1 Hydrocarbon analyser
4.3.3.2 Hydrocarbon analyser data recording system.
4.3.4 Fuel tank heating
4.3.5 Temperature recording
4.3.6 Fans
4.3.7 Gases
4.3.8 Additional equipment
4.4 Test procedure
4.4.1 Test preparation
4.4.2 Conditioning phase
4.4.3 Test phases
4.4.3.1 Tank diurnal breathing evaporative emission test
4.4.3.2 Test cycle
4.4.3.3 Hot soak loss test
4.5 Calculation of results

5 Calibration of equipment for evaporative emission testing

5.1 Calibration frequency and methods
5.2 Calibration of the enclosure
5.2.1 Initial determination of enclosure internal volume
5.2.2 Determination of enclosure background emissions
5.2.3 Calibration and hydrocarbon retention test of the enclosure
5.2.4 Calculations
5.3 Checking of hydrocarbon analyser
5.3.1 Detector response optimization
5.3.2 Calibration of the hydrocarbon analyser
5.3.3 Oxygen interference check and recommended limits
5.4 Calibration of the hydrocarbon analyser

6 Presentation of results

6.1 The evaporative emission
6.2 Test report

Annex A (informative) Running loss test procedure

A.1 General
A.2 Sampling and system
A.2.1 Schematic drawing
A.2.2 Collection equipment
A.2.3 Weighing equipment
A.2.4 Assembly and use of the activated carbon vapour collection system

Annex B (normative) Running-in test procedure for evaporative emission control devices

B.1 Test methods for running-in of evaporative emission control devices
B.2 Carbon canister running-in
B.2.1 Canister running-in test procedure
B.2.1.1 General
B.2.1.2 Canister loading part of the test cycle
B.2.1.3 Dwell time
B.2.1.4 Canister purging part of the test cycle
B.2.1.5 Number of test cycles of charging and purging the test canister

Annex C (normative) Presentation of results for evaporative emissions

C.1 Test motorcycle
C.2 Test cycle
C.3 Test fuel
C.4 Chassis dynamometer
C.5 Test enclosure and analysing systems
C.6 Test results
C.6.1 Measured results of tank diurnal breathing loss test
C.6.2 Measured results of hot soak loss test
C.6.3 Measured results of running loss test (Optional)
C.6.4 Overall result of SHED tests
C.7 Schematic drawings of collecting losses arrangements for running loss test

Page count: 24