



Required Standard for Chassis Dynamometer for Exhaust Test

KES G – B805

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1. Scope of Application

This standard shall be applicable to chassis dynamometer for exhaust test.

2. Purpose

This standard shall define the standard for chassis dynamometer used for exhaust test.

3. Principle of Preparing Instrument Specification

- (1) Attached content specified by this standard shall be based.
- (2) Clarify the utility of instrument in the future and identify if specification specified by this standard conforms to the purpose.
- (3) Comparing (1), (2), describe the required function up to small instrument clearly and revise the existing specification.
- (4) Upon completing of the above process of specification revision, transfer it to instrument manufacturer or manufacturer capable to produce instrument and receive specification from manufacturer.
- (5) Based on data received from manufacturer and the above data, repeat the process of (3), (4) until getting satisfied result.

4. Basic Item for Chassis Dynamo System

- (1) General Regulation
- (2) Roller Set
- (3) PAU
- (4) Fly Wheel Set
- (5) Control and Display System
- (6) Cooling Fan
- (7) Special Article

Additional Rules

This standard shall be effective from Dec. 13, 1988

KIA Spec

5. Spec.

5.1 General Specification

5.1.1 Electrical

(1) All A.C. circuits shall use Korean power(system concept and its distribution scheme).

(2) All A.C. power, which will be used by all analyzers, recorder and controllers, etc., shall be filtered and refined by their own system and protected for unexpected occasions by as followings.

(a) AVR

(b) Individual circuit breaker

(c) Fuses

(d) Interlock functions.

(3) All benches and consoles shall have one instrument grade and one utility grade power outlet.

(4) All signal an power interconnection cable to be supplied.

(5) For all motors, motor starter be supplied.

(6) All electronic circuit boards and associated mounting racks be with gold plated edge connectors.

(7) To suppress spikes all DC inductive load (including solenoid valves and long cable runs) be with sufficient protecting system and specify.

5.1.2 Mechanical

- (1) All fittings be swagelok fittings.
- (2) Pumps be shock mounted to isolate pump vibration from analytic components.
- (3) Provide performance curves in the operating conditions from the pumps used.
- (4) For all analyzer and gas bypass streams, use uniform flow meter and clarify the whole specifications.
- (5) All tubing necessary to connect each analyzers, flow conditioners etc. be supplied and deburred and blown out with clean, filtered, dry air. All documentation of system cleanliness be supplied to KIA Motors.
- (6) All exhaust tubing and ports be without any traps where liquid water can gather.
- (7) All sample line volumes be minimized.
- (8) No flow restrictions, which may cause water condensation be placed downstream of the sampling pump.
- (9) All flow systems be with means to forward flush and back flush.
- (10) All filter which will be used just upstream of every analyzers be uniform type and dimension.
- (11) All filters be located and mounted to give easy access during maintenance.
- (12) All analyzer benches, consoles and rack be above floor level, cleanly labeled and easily accessible.

1. General

A. All control computer and communication equipment is needed to be IBM compatible and capable of communication with IBM.

B. Operation Temperature : 0-40 C,

Humidity : 85% RH.

C. Vehicle wheel dia. : 500-700mm

D. Object speed : LDV, LDT

E. Vehicle speed : 0-180 KPH

F. Power absorption unit : DC motor

G. Inertia simulation : Mechanical/Electrical

H. Warm-up : within 30 min. with easy operation

I. Specify maker for every system and part, use for whole system

J. Lubrication : Automatic preferable

2. Roller Set

A. Roll type : twin roll

B. Roll dia. : 219.7mm(appr.) or US EPA approved

C. Roll surface : Max tractive force is needed but without change of the friction coefficient

- specify the type ore surface treatment

D. Connection of front and rear roll : remotely declitchable