



Cooling Module

KES N-N001

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1. The Scope of Application

This standard is defined for cooling module assembly.

2. Purpose

This purpose of standard is to get quality approval by standardization of specification

3. Evaluation Result Report.

Vendor submits the quality evaluation result report of each development steps from development to mass production stage according to indication of additional rule to KIA Motors.

4. Definition.

Nothing special on that

5. Indicated Specification

- (1) Painting Status
- (2) Radiating Status
- (3) Air Conditioning Resistance
- (4) Amount of Wind
- (5) Path Resistance
- (6) Consumption Watt
- (7) Noise (Strange Noise)
- (8) Vehicle Attached Status
- (9) The Visual Ability of Module When Vehicle Assembling.

6. Evaluation Standard

The evaluation of module is referred to <Table 1>

Remark 1) The reading method of <Table 1> is below as example.

- Anti Vibration ----- 1st Evaluation
- Slide Operating Power ----- 2nd Evaluation (After 1st Evaluation)
- Noise ----- 3rd Evaluation (After 2nd Evaluation)

Remark 2) The quality is classified A, AR, B and C

The definition of quality rank is KMS Q410001

< Table 1 >

Evaluation Item		Evaluation Standard	Quality Rank	Evaluation Method
Appearance	Painting	Indicated on drawing	C	Eye
	Dent of pin	Pressed mark is under 5 point at one side and 20 point on totally	C	Eye
	Scratch, Rust, etc	Scratch, rust, etc are not seen	C	Eye
	Manufacturing Mark	One of the serial No., Lot No., or manufacturing date is marked	C	Eye
Performance	Radiating Function	Indicated on drawing	B	7.2.1
	Air Conditioning Resistance	Indicated on drawing	C	7.2.2
	Amount of wind	Indicated on drawing	B	7.2.3
	Consumption watt	Indicated on drawing	B	7.2.4.
	Noise	Indicated on drawing	B	7.2.5
Strength	Air tightness (COND)	No gas leakage	B	7.3.1
	Pressure ability (COND)	No brake, deformation at any part of COND.	A	7.3.2.
	Air tightness	No leakage	B	7.3.1
	Shower test (RAD)	No water leakage	B	7.3.3.
Durability	Vibration ability	No deformation, brake, clearance of each part	B	7.4.1
	Air tightness	No gas leakage	B	7.3.1.
	Pressure ability	No deformation, damage at any part of COND	A	7.3.2.
	Shower test	No water leakage	B	7.3.3.
	Continuous durability In room temperature	Basic performance shall be within $\pm 10\%$ compare with initial status	B	7.4.2
Environment Ability	Heat resistance test	No clearance, deformation, brake thermal aging which are affect function	C	7.5.1
	Air tightness	No gas leakage	B	7.3.1.
	Shower test	No water leakage	B	7.3.3
	Cool resistance test	No clearance, deformation, brake thermal aging which are affect function	B	7.5.2.
	Air tightness	No gas leakage	B	7.3.1.
	Shower test	No water leakage	B	7.3.3
	Salt spray test	No separation between rust and surface. The separation at corner, welding area, rubber attaching area shall be within 2 mm	C	7.5.3.