

KES

Glove Lock Assembly

KES D – C214

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1. Purpose

The purpose of this standard shall be to acquire appropriate quality by standardizing specifications.

Remark : This standard shall transmit requirements of our company with specification drawings.

2. Scope of Application

This shall regulate glove lock assembly for car (Hereinafter, this shall be “Lock”).

3. Evaluation Result Report

Submit quality evaluation results of each step from development to mass production to KIA according to the directions on the appended documents.

4. Terminology Meaning**(1) Handle**

The part for opening and closing lock assembly.

(2) Stopper

The part for stopping handle and key.

(3) Lock release condition

The condition that opening operation by handle is possible. (By the operation, hook shall move to opening direction.)

(4) Lock condition

The condition that opening operation by handle is impossible and hook cannot move to opening direction.

(5) Tension type

Type that handle is operated on the pivot.

(6) Sliding type

Type that handle is operated by repeating movement.

(7) A-type lock

Lock assembly having hook.

(8) B-type lock

Lock assembly not having hook.

(9) Hook

The part connecting striker.

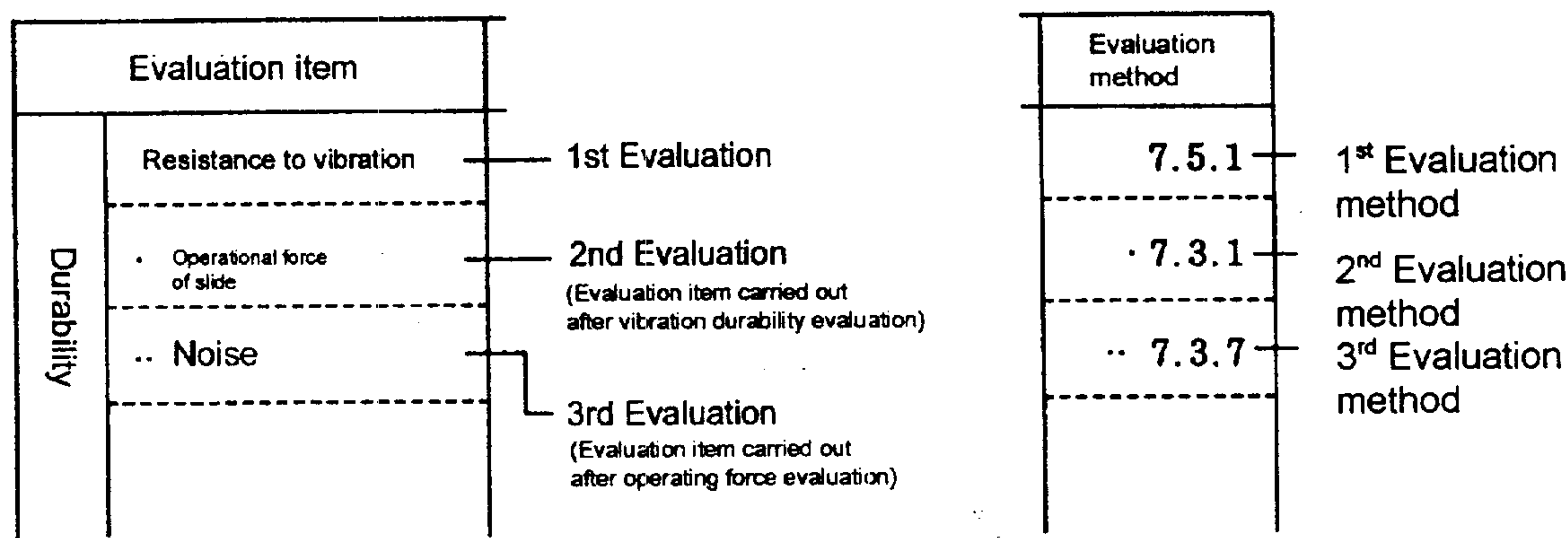
5. Item Directed on Specification Drawing

- (1) Long-term heat-resisting evaluation standard in anti-environment property.
- (2) Cold-resisting evaluation standard in anti-environment property.
- (3) Heat-shock evaluation standard in anti-environment property.
- (4) Paint color
- (5) Discoloring
- (6) Pattern type
- (7) Test sample fixing place and angle
- (8) Handle stroke length
- (9) Key type and composition number

6. Evaluation Standard

Follow table 1 for change lever evaluation standard.

Remark 1. Reading method of evaluation items and methods in table 1 shall be as follows.



Remark 2. Quality grade shall be indicated as A, AR, B, C.

For its definition, follow KES Q Q-A002
(Quality rank decision operation direction).

Table 1

Evaluation items				Evaluation standard				Quality rank	Evaluation method		
Performance	Handle operational force	A-type	Initial	0.2	+0.2 - 0.1	Kgf {1.96	+1.96 - 0.98	N}	B	7.2.1	
			Stroke	0.5 ± 0.1 kgf {4.9 ± 0.98 N}							
		B-type	Initial	0.2	+0.2 - 0.1	Kgf {1.96	+1.96 - 0.98	N}			
			Stroke	Maximum 0.4kgf {3.92 N}							
	Key operational force	Withdrawal		Maximum 1.3kgf {12.74 N}						B	7.2.2
		Insertion		Maximum 1.0kgf {9.8 N}							
		Rotation		Maximum 1.0kgf · cm {0.098 N · m}							
		Operation feeling		Smooth operation (Follow minimum limit sample)							(Naked eye)
	Flow degree			There should be no flow (Follow minimum limit sample)						B	(Naked eye)
	Allophone			Maximum 20 dB						B	7.2.3
Strength	Handle	Tension type		There should be no fracture less than 25kgf{245N}.						B	7.3.1
		Sliding type		There should be no fracture less than 10kgf{98N}.						B	
	Cylinder			There should be no fracture less than 25kgf.cm {0.098N.m}.						B	7.3.2
Durability	Handle operation durability			① No crack, part falling, surface bending or handle function obstacle. ② Painting and scar and strip of hot-stamping should be less that limit sample.						B	7.4.1
	•Handle operational force	A-type	Initial	0.2	+0.2 - 0.1	Kgf {1.96	+1.96 - 0.98	N}	B	7.2.1	
			Stroke	0.5 ± 0.1 kgf {4.9 ± 0.98 N}							
		B-type	Initial	0.2	+0.2 - 0.1	Kgf {1.96	+1.96 - 0.98	N}			
			Stroke	Maximum 0.4kgf {3.92 N}							
	•Flow degree			There should be no flow						B	•(Naked eye)
•Allophone			Maximum 20 dB						B	•7.2.3	

Table 1(Continue)

Evaluation items			Evaluation standard		Quality rank	Evaluation method	
Durability	Key operation durability		① No crack, part falling, surface bending or key function obstacle. ② Painting and scar and strip of hot-stamping should be less that limit sample.		B	7.4.2	
	•Key operational force	Withdrawal	Maximum 1.3kgf {12.74 N}		B	•7.2.2	
		Insertion	Maximum 1.0kgf {9.8 N}				
		Rotation	Maximum 1.0kgf · cm {0.098 N · m}				
		Operation feeling	Smooth operation (Follow minimum limit sample)			•(Naked eye)	
	•Flow degree		There should be no flow		B	•(Naked eye)	
	•Allophone		Maximum 20 dB		B	•7.2.3	
	Stopper durability		No crack, part falling, surface bending or key function obstacle.		B	7.4.3	
Anti-vibration property	Anti-vibration property		① No crack, part falling, surface bending or handle function obstacle. ② Painting and scar and strip of hot-stamping should be less that limit sample.		B	7.4.1	
	•Handle operation force	A-type	Initial	0.2 +0.2 -0.1 Kgf {1.96 +1.96 -0.98 N}	B	•7.2.1	
			Stroke	0.5 ± 0.1 kgf {4.9 ± 0.98 N}			
		B-type	Initial	0.2 +0.2 -0.1 Kgf {1.96 +1.96 -0.98 N}			
			Stroke	Maximum 0.4kgf {3.92 N}			
	•Key operational force	Withdrawal		Maximum 1.3kgf {12.74 N}		B	•7.2.2
		Insertion		Maximum 1.0kgf {9.8 N}			
		Rotation		Maximum 1.0kgf · cm {0.098 N · m}			
		Operation feeling		Smooth operation (Follow minimum limit sample)			•(Naked eye)
	•Flow degree		There should be no flow		B	•(Naked eye)	
•Allophone		Maximum 20 dB		B	•7.2.3		

Table 1(Continue)

Evaluation items				Evaluation standard				Quality rank	Evaluation method	
Anti-environment	Short-term heat resisting property			Follow indication on drawing.				B	KES D-G008	
	•Handle operation force	A-type	Initial	0.2	+0.2 - 0.1	Kgf {1.96	+1.96 - 0.98	N}	B	•7.2.1
			Stroke	0.5 ± 0.1 kgf {4.9 ± 0.98 N}						
		B-type	Initial	0.2	+0.2 - 0.1	Kgf {1.96	+1.96 - 0.98	N}		
			Stroke	Maximum 0.4kgf {3.92 N}						
	•Key operational force	Withdrawal		Maximum 1.3kgf {12.74 N}				B	•7.2.2	
		Insertion		Maximum 1.0kgf {9.8 N}						
		Rotation		Maximum 1.0kgf · cm {0.098 N · m}						
		Operation feeling		Smooth operation (Follow minimum limit sample)					•(Naked eye)	
	•Flow degree			There should be no flow				B	•(Naked eye)	
	•Allophone			Maximum 20 dB				B	•7.2.3	
	Long-term heat resisting property			Follow indication on drawing.				B	KES D-G008	
	•Handle operation force	A-type	Initial	0.2	+0.2 - 0.1	Kgf {1.96	+1.96 - 0.98	N}	B	•7.2.1
			Stroke	0.5 ± 0.1 kgf {4.9 ± 0.98 N}						
		B-type	Initial	0.2	+0.2 - 0.1	Kgf {1.96	+1.96 - 0.98	N}		
			Stroke	Maximum 0.4kgf {3.92 N}						
	•Key operational force	Withdrawal		Maximum 1.3kgf {12.74 N}				B	•7.2.2	
		Insertion		Maximum 1.0kgf {9.8 N}						
		Rotation		Maximum 1.0kgf · cm {0.098 N · m}						
		Operation feeling		Smooth operation (Follow minimum limit sample)					•(Naked eye)	
	•Flow degree			There should be no flow				B	•(Naked eye)	
	•Allophone			Maximum 20 dB				B	•7.2.3	

Table 1(Continue)

Evaluation items				Evaluation standard				Quality rank	Evaluation method
Anti-environment	Cold			Follow indication on drawing.				B	KES D-G008
	•Handle operation force	A-type	Initial	0.2	+0.2 - 0.1	Kgf {1.96	+1.96 - 0.98	B	•7.2.1
			Stroke	0.5 ± 0.1 kgf {4.9 ± 0.98 N}					
		B-type	Initial	0.2	+0.2 - 0.1	Kgf {1.96	+1.96 - 0.98		
			Stroke	Maximum 0.4kgf {3.92 N}					
	•Key operational force	Withdrawal		Maximum 1.3kgf {12.74 N}				B	•7.2.2
		Insertion		Maximum 1.0kgf {9.8 N}					
		Rotation		Maximum 1.0kgf · cm {0.098 N · m}					
		Operation feeling		Smooth operation (Follow minimum limit sample)					•(Naked eye)
	•Flow degree			There should be no flow				B	•(Naked eye)
	•Allophone			Maximum 20 dB				B	•7.2.3
	Heat-shock resisting property			Follow indication on drawing				B	KES D-G008
	Anti-drug property			Appearance, color and surface property should be satisfied by test drug indicated on Cr-1,0.				B	KES D-G008
	Anti-light property			Appearance, color and surface property should be satisfied by test drug indicated on Li-1,C.				AR	KES D-G008
	Flame delay property			KES T-L022 should be satisfied.				B	KES D-G008
Appearance	Steel sharp point			Maximum 0.1mm				B	7.6.1
	Contraction			Follow minimum limit sample				B	•(Naked eye)
	Surface bending								
	Weldmark, flash			Follow minimum limit sample				B	•(Naked eye)
	Flowmark								

Table 1(Continue)

Evaluation items		Evaluation standard	Quality rank	Evaluation method
Appearance	Paint color	Paint color indicated on drawing should be satisfied. Follow standard color, pattern supplied by KIA.	B	Naked eye (KS A 0065)
	Paint	KES B-R001, TA2 should be satisfied.	B	KES T-M010
	Material discoloring	Color indicated on drawing should be satisfied. follow standard color, pattern supplied by KIA.	B	Naked eye (KS A 0065)
	Pattern	Pattern type, span, depth indicated on drawing should be satisfied. follow standard color, pattern supplied by KIA.	B	Naked eye (KS A 0065)
	Fitting line gap	Maximum 0.1mm	B	7.6.1

7. Evaluation Method

7.1 Normal evaluation method

7.1.1 Standard condition of test place

Without special designation, the standard condition shall be 20 °C of KS A 0006 (Standard condition of test place), 5th (20 ± 5 °C), humidity condition 65 % and 20th (65 ± 20 %).

7.1.2 Test sample set-up

For test sample fixing position to the front, rear, left, right direction, follow the direction on drawing. Without special designation, Set up test sample to test plate and fixing plate on the condition of car.

7.1.3 Test sample condition

After assembling test sample, leave it for at least 24 hours. In addition, leave test sample at the standard condition shown in 7.1/1 for at least 1 hour.

7.2 Performance

7.2.1 handle operational force

(1) Tension type

- ① Release lock and set up push-pull gauge as shown figure 1.
- ② Pull push-pull gauge to the operational direction at the speed of 2 ± 0.5 mm/s.
- ③ Repeat operation of ② to the stroke length 1 ± 0.5 mm shown in drawing.
- ④ After operation of ③, evaluate the maximum value of push-pull gauge.
- ⑤ After repeating operation of ① ~ ④ 3 times, calculate the maximum value.