

KES

Test Method of Brake Reserve Hoses

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1. Scope of Application

This standard shall be applied for performance test and material for reserve hose (Characteristic of hose from now on) in the brake system. It shall be also applied for the reserve hose in clutch system.

Remark : Reserve hose shall be the one(Straight or curved pipe) that links the fluid tank and cylinder.

2. Structure

The hose structure shall be the one whose rubber surface is coated with cotton thread.

For the reference, the size of outer braid and hose shall be as following.

(1) Outer Braid

Number of weight 24 or 32

Cotton thread 20#

Bias angle : $45 \pm 5^\circ$

(2) Hose Size and Tolerance (Unit : mm)

Inside diameter of hose		Thickness of hose		Outside diameter of nozzle
Standard dimension	Tolerance	Standard dimension	Tolerance	
6	±0,3	3,5	±0,5	8
9	±0,4	4		11
12	±0,5			14

Remark 1. Inside diameter of hose shall be applied for the straight pipe part.

2. Outside diameter of nozzle shall be applied for the straight pipe part except buldge or spur.

3. Thickness shall be the one with braid coat.

3. Characteristics

The material symbol shall be R-CE710-Y131, and it shall be proper to the regulations on table 4 and 5 about hose performance and physical performance of rubber material.

4. Performance

Do the test with the method of 7.1.1 ~ 7.1.7 for hose performance, and it shall be proper to the regulation on table 1.

Table 1

Testing Items (Test Conditions)		Standard Value	Testing Method
Resistance pressure	Water pressure (6 kg f / cm ² x 1 min)	There shall be no water leakage, partial swelling	7.1.1(1)
	Breakage kg f / cm ²	More than 15	7.1.1(2)
	Outside diameter change by negative pressure % (-300 mmHg x 1 min)	Less than -20	7.1.1(3)
Shape change rate (Inside / outside diameter, length) % [120 °C (Brake fluid BF 25) x 70 h]		Less than ±2	7.1.3
Bending character (Measure the crumpled amount of curved hose)		Table 3	
Aging character	<ul style="list-style-type: none">• After progressing at 120 ± 2 °C x 24 h• Curving 180 ° 120 ± 2 °C x 1 h	There shall not be any cracks and other problems.	7.1.4
Stress cracking resistance character	<ul style="list-style-type: none">• After progressing at 120 ± 2 °C x 24 h• 120 C (Brake fluid BF 25) x 5 h		7.1.5
Coldness resistance character (-40 ± 2 °C)			7.1.6
Ozone resistance character (50 ± 5 ppm x 40 ± 2 °C x 72 h)			7.1.7

5. Physical Performance

Do the test with the method of 7.2.1~7.2.11 for the physical performance of hose rubber material, and it shall be proper to the regulations on table 2.