

Pass-by noise 인자 연구-차량효과

Study of pass-by noise factor – Vehicle effect

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1. ISO13325 Tire Pass-by noise
 가

60km
 가

80%

가

가
 Tire Pass-by noise

Tire Pass-by Noise

Tire Pass-by Noise

2.

2.1 Tire Pass-by Noise

Tire Pass-by Noise
 2005 10 OE
 2009 10 REP

(1)
 Tire Pass-by Noise

RR, Wet grip

1

1 Tire Pass-by Noise

Tire pass-by noise

Tire Pass-by Noise

Wet grip RR

Tire Pass-by noise

(Trade – off), Tire Pass-by Noise

(ISO10844)
 5dB(A) 가

가가

Tire

Pass-by Noise 가

	ISO10844 , 1
	: 5 ~ 40° C, : 5 ~ 50° C
	5m/s ²
	LI 75%, LI
	70~90%
	1) : C1 3.5m, C2
	5.0m
	2) 가
	3) 가
	4)
	5) 가
	6)

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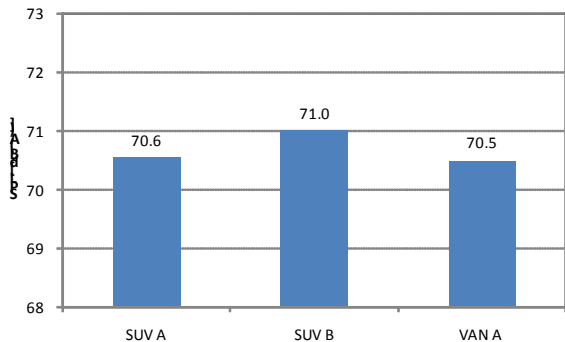
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(2)
 Pass-by Noise Vehicle Pass-by
 Noise Tire Pass-by Noise
 . Vehicle Pass-by Noise
 가 full 가
 가
 . Tire Pass-by Noise
 off
 가 90%
 Tire Pass-by Noise 가

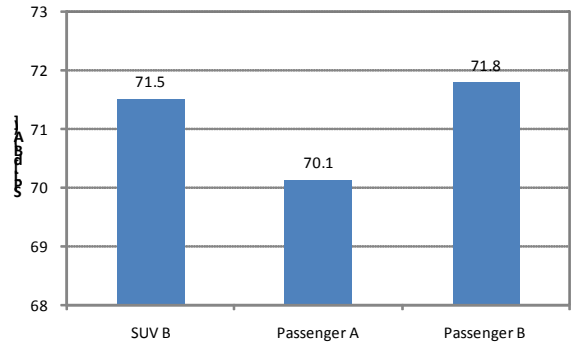
2.2 Tire Pass-by Noise

(1)

Tire Pass-by Noise
 Tire 2 (235/55R18, 235/50R18)
 5 (2 , SUV 2 , Van 1)
 . ISO13325
 3.5m
 가
 Tire Pass-by Noise
 . 1 Tire A
 , 2 Tire B Tire Pass-by
 Noise
 Tire A SUV,
 VAN max 0.5dB(A)
 , Tire B A, B
 max 1.7dB(A)
 1dB(A)
 tread compound
 가
 major tuning
 가



1. Tire Pass-by Noise (Tire A)



2. Tire Pass-by Noise (Tire B)

2.3 effect

(1) Wheel Alignment

Tire Pass-by Noise

70~90%
 severe
 suspension spring
 가 2
 B Alignment
 가
 footprint
 . 3 B
 footprint .

	B Alignment		Toe (mm)	
	Camber ()			
FL	-0.14	0.02	2.2	-1.2
FR	-0.37	-0.07	-3.1	-0.7
RL	-0.5	-2.41	-3.7	6.7
RR	-1.19	-2.29	1	6.1

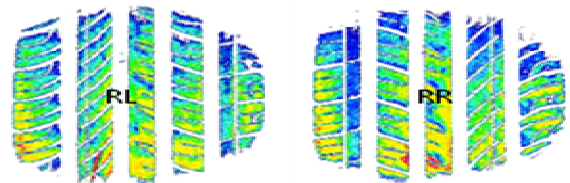


그림 3. 승용차 B 후륜에서 측정 footprint

3.

본 연구를 통해 Tire Pass-by Noise 측정에 차량의 중요성을 강조하였다. 차량의 따라 최대 1dB(A) 이상 차이가 발생할 수 있으므로 적절한 차량 선정이 중요하며, 향후 정확한 측정을 위해 차량에 대한 정의 수정이 필요할 것으로 판단된다.