

Dynamic Behavior of military console in truck loaded environment for vibration test

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1. Design Criteria for various sizes of fixtures

5lb	1) 1,000Hz 2) 1,000hz Wr 가	Wr 가 3 5
10in (15lb)	1) 1,000hz 2) 1,000hz Wr 가	Wr 가 4 5
3ft³ 10 ~ 50lb	1) 800hz 2) 800 ~ 1500hz 3) 1,500 ~ 2,000hz Wr	Wr 4 3 8
20ft³(609.6cm) 50~500lb (22.7~226.8kg)	1) 500hz 2) 500 ~ 1000hz 3) 1,000 ~ 2,000hz Wr	Wr 2 3 8
24in 500lb (226.8kg)가	1) 150hz 2) 150 ~ 300hz 3) 300 ~ 1,000hz Wr 가 4) 1,000 ~ 2,000hz Wr 가	Wr 1 3 3 5 10 10

Wr : (Resonance Frequency)

2.

2.1

2.1.1

1.

2.

3. : 400Kg

가 2

1.

(Transmissibility)

2.1.2 Normal Mode Analysis

1 Normal Mode
, 150Hz 가



1. 1 (154Hz), 2 (171Hz)

† ; LIG NEX1

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· LIG NEX1

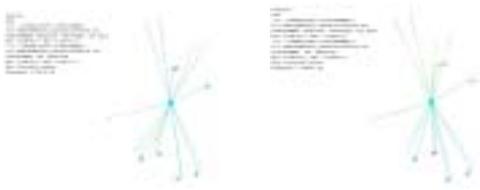
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1-4-1

2.2

2.2.1 Normal Mode Analysis

Normal mode



1. 1 (9.33Hz), 2 (12.8Hz)

2.2.2 Random Response

MIL-STD-810F

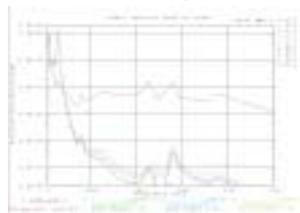
Table 514.5C-3.

Composite wheeled vehicle vibration exposure.

Random Response

: 5~500Hz

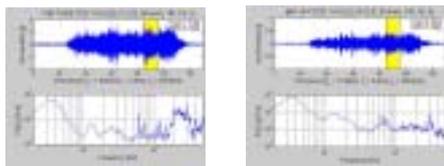
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3. 가

2.3

2.3.1



5. 가

2.3.2

가

가

2.

(G rms)	1.7g	2.1g

3.

1.

2.

Analysis

3. MIL-STD-810F

Random Response Analysis

4. 2.

가

- (1) B.J.Klee, David V.Kimball, and Wayne Tustin, "Vibration and shock test fixture design"
- (2) MIL-STD-810F, "Environmental engineering consideration and laboratory test"