

# 가 RCV

† \* \* \* \*  
 Lee, Jong Kyu Kim, Jae Heon Kang, Sang Kyu Kang, Koo Tae

## 1.

(Quality Function Deployment)

가 , 가  
 가  
 (overshoot)가  
 (unstable)  
 ” “ 가  
 , RCV 10cm  
 , Snorkel 10cm  
 RCV  
 Fig.1 RCV  
 (Recirculation Valve)

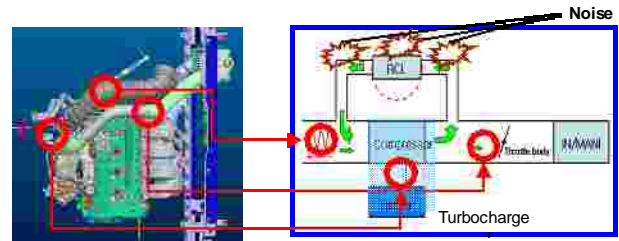


Fig.1 RCV

(Tip-out )  
 Tip-out  
 RCV ( )

NVH

## 2.2

## 2.

Pugh Matrix  
 RCV 가  
 가  
 RCV  
 ( RCV)

### 2.1

(Voice of Customer)  
 가

가

† ;  
 E-mail : jongkyu@hyundai.com  
 Tel : (031) 368-8392, Fax : (031) 368-6081

RCV

(Failure Mode Effective Analysis)

Fig.2

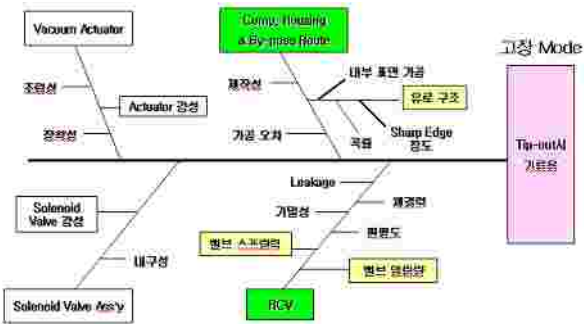


Fig.2

3.

3.1

RCV

Tip-out

가

( ),

Table.1

	제어인자 (설계인자)	level 1	level 2	level 3
A	RCL 밸브 Housing 두께	a cm	(a+0.5)cm	
B	RCL 밸브 Lm 중대량	b cm	(b+0.8) cm	(b+1) cm
C	Comp. Inlet Hose 길이	c cm	(c+4) cm	(c+2) cm
D	RCV Inlet 입구 면적	d m <sup>2</sup>	(d-0.4) m <sup>2</sup>	(d+0.4) m <sup>2</sup>
E	RCV Outlet 유로 곡률의 높이	e cm	(e-0.4) cm	(e-0.8) cm
F	RCV Outlet 내부 높이	f cm	(f-0.2) cm	(f-0.4) cm
G	Comp. Inlet 입구 면적	g m <sup>2</sup>	0.75g m <sup>2</sup>	0.5g m <sup>2</sup>
H	Comp. Inlet 내부 높이	h cm	(h-0.3) cm	(h-0.6) cm

3.2

$$L_{18}(2^1 \times 3^7)$$

Tip-out

Table.2 L18

RCV

Table.2

	제어인자 (설계인자)	level 1	level 2	level 3
A	RCL 밸브 Housing 두께	a cm	(a+0.5)cm	
B	RCL 밸브 Lm 중대량	b cm	(b+0.8) cm	(b+1) cm
C	Comp. Inlet Hose 길이	c cm	(c+4) cm	(c+2) cm
D	RCV Inlet 입구 면적	d m <sup>2</sup>	(d-0.4) m <sup>2</sup>	(d+0.4) m <sup>2</sup>
E	RCV Outlet 유로 곡률의 높이	e cm	(e-0.4) cm	(e-0.8) cm
F	RCV Outlet 내부 높이	f cm	(f-0.2) cm	(f-0.4) cm
G	Comp. Inlet 입구 면적	g m <sup>2</sup>	0.75g m <sup>2</sup>	0.5g m <sup>2</sup>
H	Comp. Inlet 내부 높이	h cm	(h-0.3) cm	(h-0.6) cm

3.3

0.2dB

8dB S/N      8dB  
8dB S/N      가      60%

3.4

Fig.3

Tip-out

Tip-out

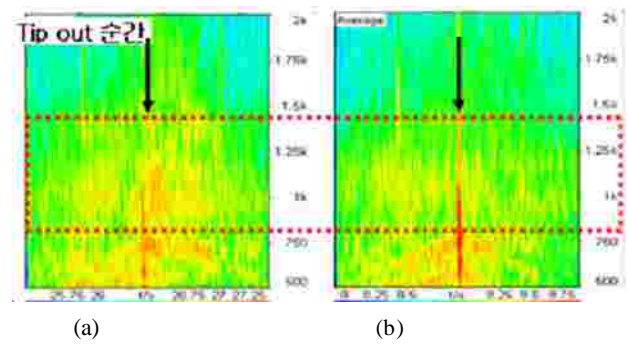


Fig.3

4.

1)

RCV

Tip-out

8dB

NVH

2)

RCV

3)

Tip-out

가

가