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2002 06 26
10 - 0326437
2002 02 18

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10 - 1994 - 0034891
1994 12 19

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(43)

1995 - 0018387
1995 07 22

(30)

93 - 345046

1993 12 20

(JP)

(73)

가 가

2 5 5

(72)

가 50 - 22

(74)

:

(54)

1. . , , , .

2. . +36.07 n - , .

3. . 1,1,1,2 - 0.1 % n - 7.3 % , n - 1,1,1,2 - .

4. .

가 n - .

1

1 .

2 .

3 R - 134a n - .

4 .

5 .

6 .

7 2 .

*

1 2,15 3

4 5 6

7 8 9

10 11 12

13 14 2

16

2 1.1 - (R - 152a) R - 500 (R - 12) R - 1
 , R - 500 - 33.45 , R - 12 - 29.65
 가 , R - 12

(cl)
 (R - 32) . (R - 125) 1,1,1,2 -
 (R - 134a)
 R - 32 - 51.7 , R - 125 - 48.5 , R - 134a - 26.0
 R - 32, R - 125 R - 134a

가

n -

+36.07 n -

n - , 가

, n -

+36.07 n -

1 , , , 1,1,1,2 - n -

2 , n - 1,1,1,2 -
 n - 0.1 % 14 %

3 , 1,1,1,2 - n - 14 %

1,1,1,2 - 4 , 1,1,1,2 - n - , n -
0.1 % 7.3 %

, 5 , ,

6 1,1,1,2 - 6 % n -

, 7 , 가 .

8 ,

n -
가 .

가 , R - 32 R - 125 n - R - 134a
R - 32 R - 125 R - 32 R - 125 n -
n - 14 % , R - 32 R - 125

R - 134a 0.1 % 7.3 % ,
가 , 2 ,
가 ,

, ,
n - ,

n -

()

1

2

(1) (3) (2) (4) (3)
 (8) (3), (4) (2)
 (5), (6) (7)가

2 R - 32, R - 125, R - 134a n - R - 32가 20
 % 30 % , 25 %, R - 125가 10 % 20 % , 15 %, R - 134a
 가 40 % 60 % 50 %, n - 0.1 % 14 % , 10 %

R - 32 20 % , (cop)가 , 30 %
 R - 125 10 % (2)
 가 , 20 % 가 (GWP) 가
 R - 134a 40 % , 60 %
 가

n - R - 134a , R - 32 R - 125 n - R - 13
 4a 14 % R - 32 R - 125 14 % n -
 (7) 가 , 가 14 %
 n - R - 134a R - 32 R - 125
 14 %

, n - R - 32 R - 125 , R - 134a
 , R - 134a

n - 10 % ,
 2 R - 134a 0.1 % 7.3 %

3 가 1 , 가 2
 3

4 (3), (4) (8)

n - 1,1,1,2 - 0.1 % 7.3 %
 (3), (8)

n - 1,1,1,2 -

n - 0.1 % 7.3 %, 0.2 % 7.3

, ,

n - 0.1 % , 2 . n - 7.3 %

.

5 (9) , (11) , (10)
(10)

6 (9) , (11) , (10)
(10)

1 7 (16)
(12) (13) 2 (14) , 2 ()
16) (15)

, 1,1,1,2 - n -
가, n - 1,1,1,2 -

n - 1,1,1,2 -
n - 0.1 % 14 % ,
가 n -

, n - 1,1,1,2 - , 가 n -

(57)

1.

20 % 30 % , 10 % 20 % , 40 % 60 % 1,1,1,2 -
0.1 % 14 % n -

2.

n - 1,1,1,2 -
n - 0.1 % 14 %

3.

2 ,

1,1,1,2 -

n -

14 %

.

4.

1 3 ,

,

,

.

5.

4 ,

1,1,1,2 -

6 %

n -

.

6.

4 ,

가

.

7.

5 ,

가

.

8.

7 ,

,

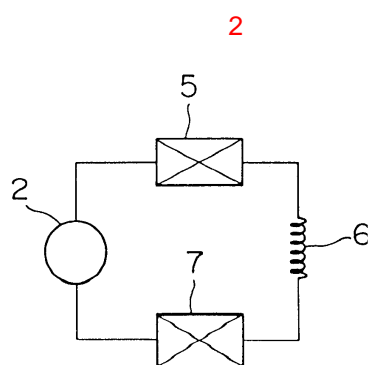
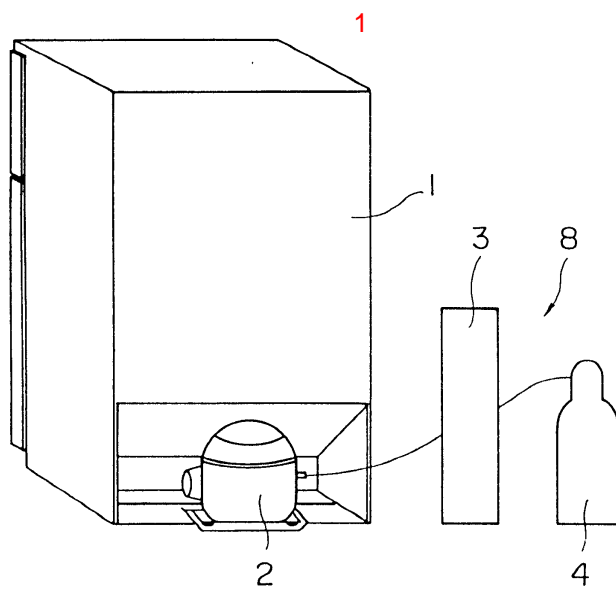
.

9.

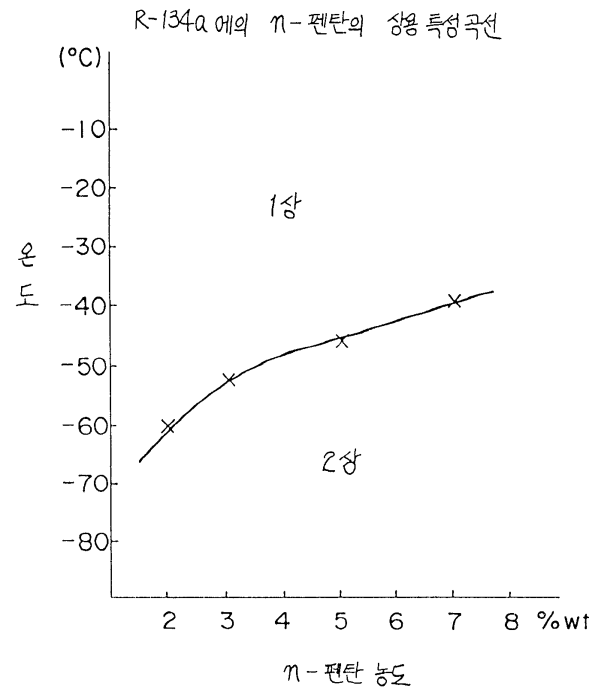
8 ,

,

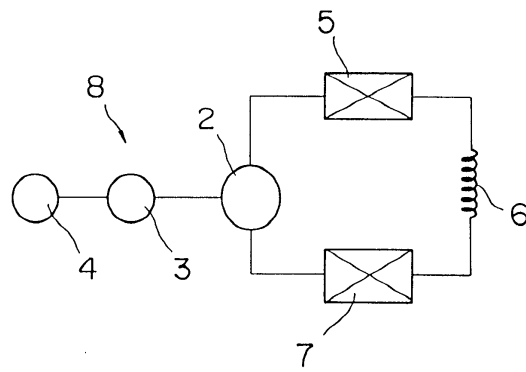
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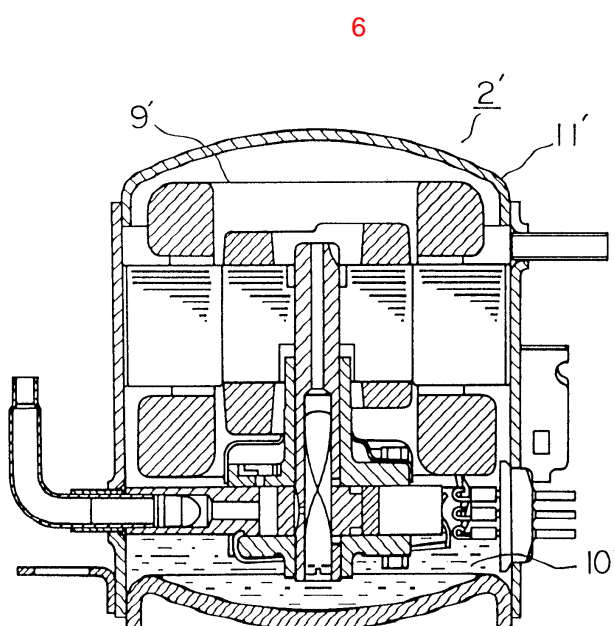
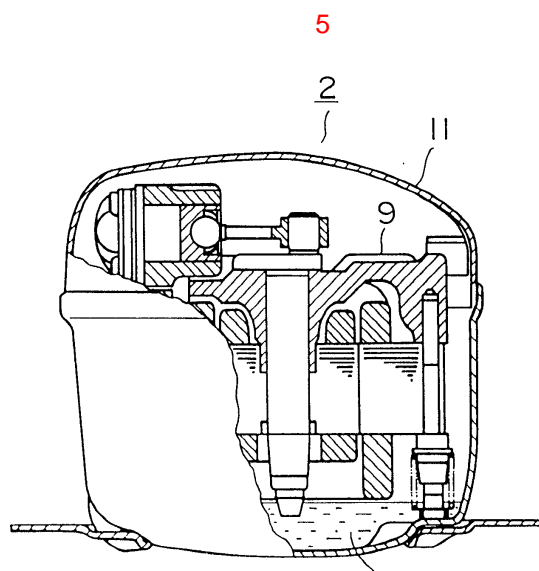


3



4





7

