

Code	Descriptions	Alarm LED	
		Operation	Auto PTI
FXXX	Fatal alarm. Unit stops running. Check detailed instructions in service manual.		
EXXX	Back-up alarm. Unit continues in back-up operation to keep temperature in-range. Check detailed instructions in service manual.		
HXXX	Information code (not an unit function alarm)		/
DXXX	Information code (not an unit function alarm)		/
JXXX	PTI alarm code	/	
PXXX	Information code (shows Pull down time)		/

 LED ON



E107> Discharge temperature too high (DCHS).
EEV opening is abnormal for 5 minutes.

Cause of failure:

- Shortage of refrigerant (EEV opening is too wide).
- Air mixed in refrigerant system (check discharge pressure).
- Blockage in the system (filter/strainer, filter drier, EEV or LSV).
- Discharge temperature sensor failure.
- Faulty EIS or EOS. A too big difference between those sensors will open the EV.

Inspections:

1. Check for leaks.
2. Check discharge pressure for possible air mixture in refrigerant.
3. Check the exact amount of refrigerant in the system.
NOTE: Do not simply add refrigerant as overcharging may cause further damage.
4. Check the pressures in the system using the 5 service ports (See attachment 1).
Check for system blockage on parts such as Filter drier, Filter /strainer, EEV or LSV.
The pressures at port 3,4 and 5 (High pressure side) should be roughly the same.
In case of a big pressure difference, possible blockage in this part of the system.
LSV and strainer is installed between port 5 and 3. Pressure must be the same.
5. Check Discharge Temperature Sensor reading and compare with external thermometer.
6. Check Readings of EOS and EIS in combination with SGS (EIS should be the lowest temp)

Repair suggestions:

1. Repair leaks or replace leaking components.
2. Remove refrigerant when the discharge pressure is abnormal high.
3. Remove refrigerant, vacuum system and charge correct amount (see attachment 1).
4. Replace the blocked part (for EEV repair, see attachment 2).
5. Replace Discharge Temperature Sensor when malfunction.
6. Replace or disconnect faulty sensor. (Daikin has automatic Backup sensor)

E109 > Low Pressure Transducer reading lower than -90kPa for 2 seconds

Cause if failure:

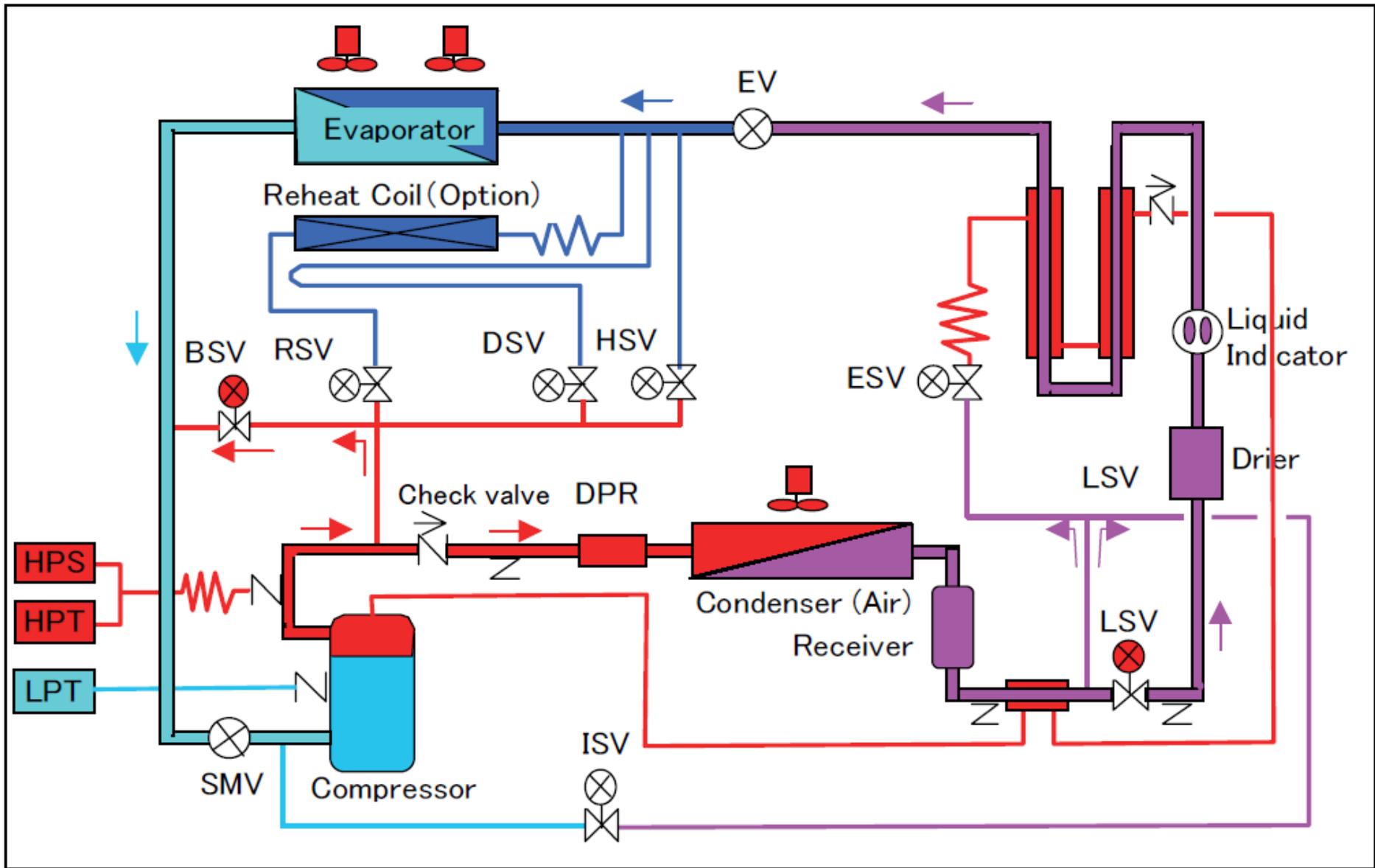
- Shortage of refrigerant.
- Malfunction Low Pressure Transducer.
- Blockage in the system (filter/strainer).
- EEV failure.

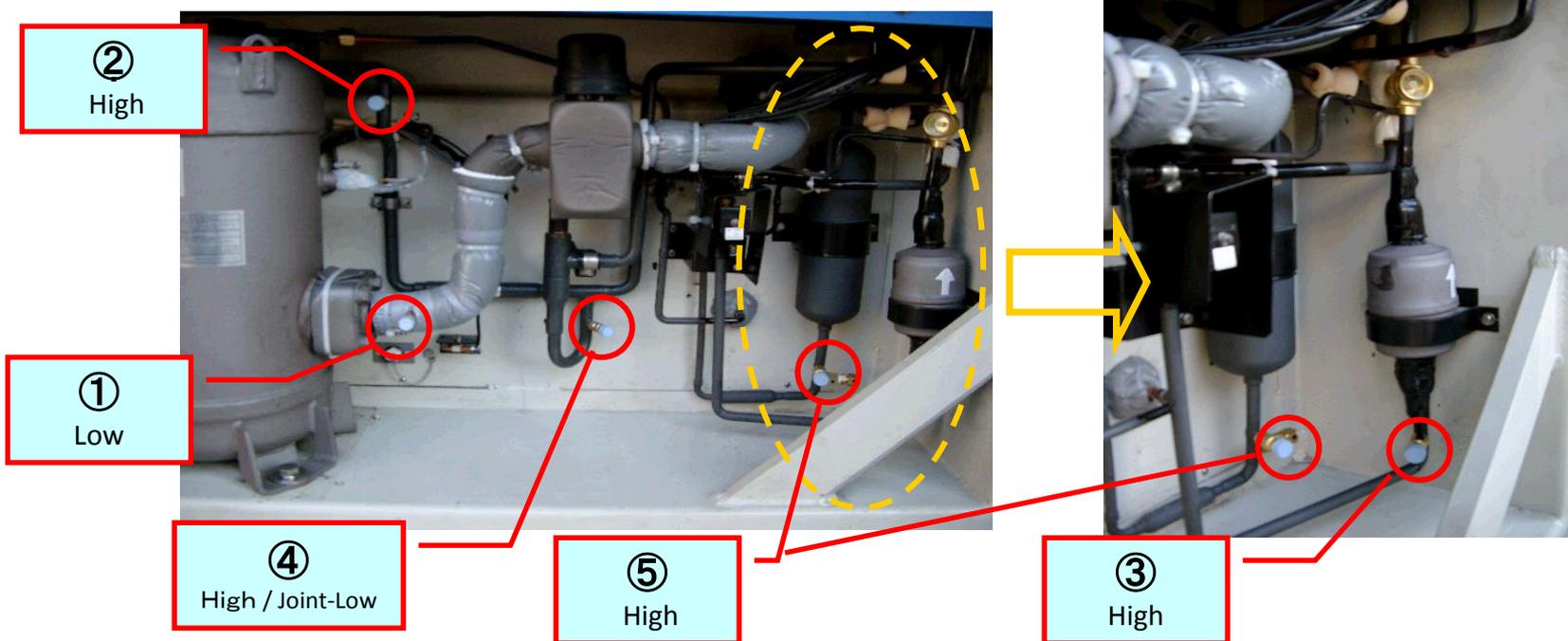
Inspections:

1. Check for leaks.
2. Check the exact amount of refrigerant in the system.
NOTE: Do not simply add refrigerant as overcharging may cause further damage.
3. Check Low Pressure Transducer accuracy reading from display by comparing with manifold.
4. Check the pressures in the system using the 5 service ports (see attachment 1).
To see if there is a possible system blockage, like filter drier, filter/strainers or any valve.
5. Check Expansion Valve functioning (see attachment 2).

Repair suggestions:

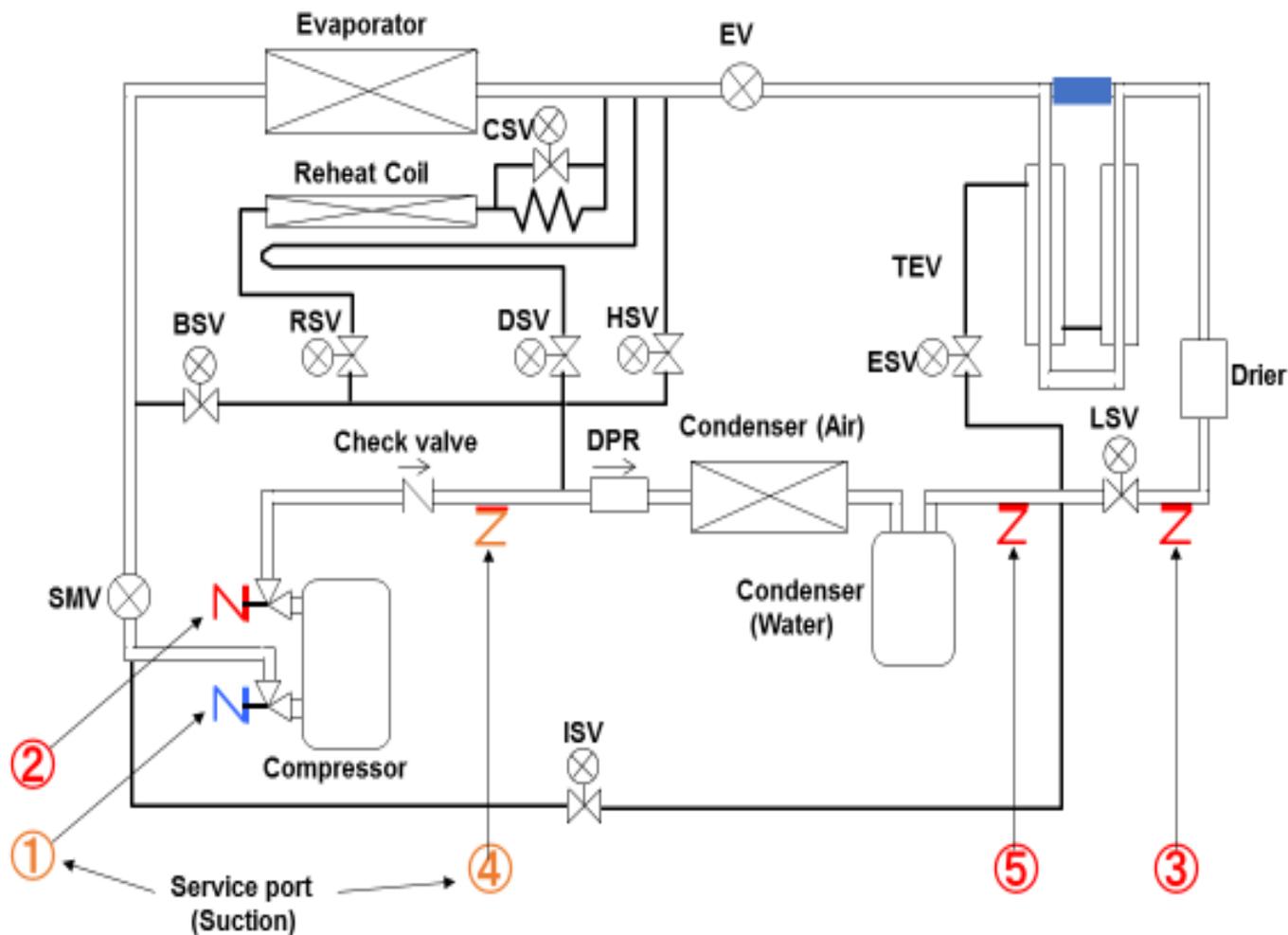
1. Repair leaks or replace leaking components.
2. Remove refrigerant, vacuum system and charge correct amount (see attachment 1).
3. Replace the Low Pressure Transducer when malfunction.
4. Replace the blocked part.
5. Clean EEV or replace the coil and/or body when malfunction (see attachment 2).





Service work		Service port	Remarks
Pressure check	High press.	②	Take care that the high pressure at the port ④ & ⑤ will be keeping a while after the unit stops.
	Low press.	①	
Refrigerant charge	1.Refrigerant recovery	④ & ⑤	Recover refrigerant from ④ & ⑤ after operating automatic pump-down first
	2.Vacuum & Dehydration	④ & ⑤	After recovering, vacuum from port ④ & ⑤.
	3.Liquid charging	⑤→③	After vacuuming, charge liquid refrigerant from ⑤ first and the from ③.
③		If not reached to the specified amount, go to next below. 1.Operate automatic pump-down first and stop it using ON/OFF switch when the compressor stops during the auto pump-down operation. 2.Charge liquid refrigerant from port ③.	
Daikin Service	Rdam 001		

Service ports in Piping Diagram



Phenomenon:

E109 > Low pressure failure > Compressor running in deep vacuum at the suction side.

F101 > High pressure failure > Reefer shutdown because of high discharge pressure.

Other possible alarm codes can be **E107** or **E203**.

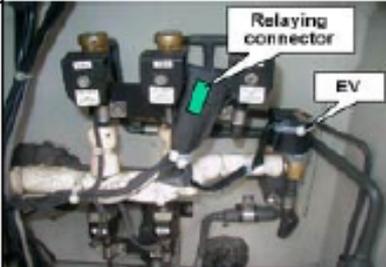
Purpose:

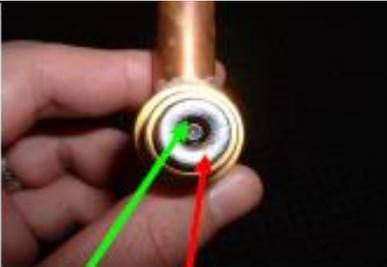
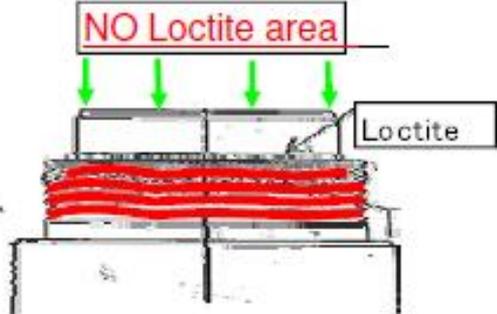
Avoid water penetration into EV body.

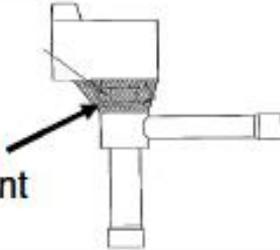
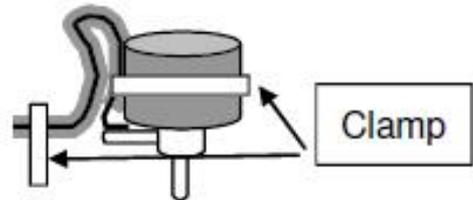
- Please follow the instruction below.

Please note circuit breaker must turn off or no power supply during all this work to be correct initialization of EV

Expansion valve coil replacement

Step	Photo	Procedure	Note
1		<p>On the picture you see where the EV is located.</p>	<p>Please note circuit breaker must turn off during all this work to be correct initialization of EV coil.</p>
2		<p>Remove all the silicon seal underneath the EV coil, where you can find the lock-nut of EV coil.</p>	<p style="text-align: right;">Daikin Service Rdam 001</p>

<p>3</p>		<p>Remove the EV coil by unscrewing the lock-nut (No refrigerant leak).</p> <p>In case of refrigerant leakage, the body must be replaced</p>	
		<p>Clean EEV body & coil. Remove old loctite from body and coil carefully</p> <p>Check pin of EEV coil if not sticking out too much</p>	
<p>4</p>		<p>Blow out all moisture inside EV valve body with compressed air or Nitrogen. Dry the body very carefully with a hair dryer. Check if the body is clean inside with a mirror.</p>	<p>Blow off this part. Do not use flame because solder of valve body may melt which cause refrigerant leakage.</p>
<p>6</p>			<p>Apply the loctite on the seal surface. Don't apply too much lock-tite. Check the behind condition with a mirror.</p>

7		<p>Re-installed the EV coil. New coil in case:</p> <ul style="list-style-type: none"> * If the pin of the coil sticks out too much * existing coil is damaged * Water entered the coil 	
8		<p>Seal the lock-nut with silicon sealant carefully.</p> 	<p>Clean around lock-nut. Bring silicon sealant <u>around</u> the lock-nut. <u>Check the behind condition with a mirror.</u></p>
9		<p>The cable shall be clamped at two positions.</p>	

Filter/strainers are installed at each inlet of each valve as protection in case of system contamination. The filter/strainer before the check-valve, EEV or LSV might be blocked at first. In case of filter/strainer is clogged, pressures in the system could be abnormal.

- * E101 > blockage of filter/strainer at check-valve,
- * E107 or E109 > blockage of filter/strainer at LSV or EEV

To judge clogged filter/strainer, check piping temperature before & after filter/strainer for big temperature differences or measure pressures drops over the service ports.

In case of blockage remove and clean/replace the filter/strainer.

