

Multi-Temp Component Names / Definition Worksheet:

Read the component definition. On the numbered flow chart found in the diagram section of the student binder, write the number and name of the component in the blanks.

	Description	Name	#
A	Stops refrigerant flow from the receiver tank to the condenser during heat/defrost.		
B	Moves refrigerant and increases refrigerant vapor temperature and pressure.		
C	Used for isolating and servicing the discharge side of the compressor.		
D	Normally closed solenoid, energized open allowing high pressure liquid refrigerant flow to the expansion valve.		
E	Allows liquid refrigerant to "reverse flow" to the other zones for cooling when that zone is in the heat mode.		
F	Permits visual inspection of the unit's refrigerant level.		
G	Equally distributes refrigerant to several passes through the evaporator coil.		
H	Carries refrigerant from the compressor to the HGS and CIS.		
i	Reduces vibration transfer and allows for a flexible suction line.		
J	Reduces vibration transfer and allows for a flexible discharge line.		
K	Normally closed solenoid, energized open during heat or defrost mode allowing the flow of high pressure vapor refrigerant to the drain pan heater and directly to the evaporator coils.		
L	Regulates vapor refrigerant pressure entering the compressor.		
M	Prevents refrigerant flow out of the condenser back to the CIS during heat/defrost mode.		
N	Accumulates liquid and promotes vaporization of refrigerant before it enters the compressor.		
O	Allows refrigerant to change state by transferring heat to ambient air flowing across its fins and coils.		
P	Collects refrigerant that has condensed and is used to store refrigerant during low side repair.		
Q	Cycles On/Off based on discharge pressure to allow trapped refrigerant in the receiver tank to be cycled into the refrigerant flow, resulting in enhanced heating performance.		
R	Allows refrigerant to flow from the receiver tank and is used for servicing the low side.		
S	Acts as a filter and absorbs moisture from the refrigerant.		

T	Used to isolate the receiver tank pressure solenoid when testing for internal leaks.		
U	Transfers heat energy from the high-temperature liquid line to the low-temperature suction vapor.		
V	Meters liquid refrigerant to the evaporator in the cool mode.		
W	Senses temperature at the evaporator outlet and assists in controlling refrigerant flow.		
X	Heats defrost water to prevent freezing when the evaporator is in a frozen compartment.		
Y	Senses the pressure at the evaporator outlet and assists in controlling refrigerant flow.		
Z	Transfers heat between refrigerated compartment air and refrigerant moving through its coils.		
AA	Normally open solenoid, energized closed when its compartment is operating in heat mode as long as one other zone is operating in cool mode.		
BB	When the SLS is energized closed, this component prevents the reverse flow of suction vapor from a high pressure zone to a low pressure zone.		
CC	Used for isolating and servicing the suction side of the compressor.		
DD	Prevents high pressure suction vapor from opening the purge valve.		
EE	Carries refrigerant from the receiver tank towards the evaporator.		
FF	Directs the flow of high pressure liquid refrigerant to the remote zone(s).		
GG	Cycles On/Off based on discharge pressure to allow trapped refrigerant in the condenser to be cycled into the refrigerant flow, resulting in enhanced heating performance.		
HH	Normally open solenoid during the cool mode allowing the flow of high pressure vapor refrigerant to the condenser. Energized closed during the heat or defrost mode.		
ii	Directs the flow of high pressure vapor refrigerant to the remote zone(s).		

Multi-Temp Solenoid & Valve Operation:

Using section 8 of the SR-2 SPECTRUM Green book,
fill in columns (2, 3 & 4) as follows:

- Column #2 - write name of component abbreviation from column #1,
- Column #3 - write if component from column #1 is Normally Closed or Normally Open,
- Column #4 - write when the component from Column #1 is energized.

Component Abbreviation Column #1	Component Name Column #2	NC or NO Column #3	When Is It Energized Column #4
CIS			
LLS			
SLS			
HGS			
PV			
RTPS			

Section 8 – SR-2 Trailer Multi-Temp Refrigeration Operation

OPERATION OF SPECTRUM SR UNIT SOLENOIDS AND VALVES

Item and ID	Smart FET	Solenoid Type	Null	Running Null	Cool	Heat and Defrost	Reverse Cycle Heat and Defrost	Reduced Reverse Cycle Heat and Defrost	Single Zone Heat (Note 3)
Condenser Inlet Solenoid (CIS) (Note 1)	Yes	NO				Energized (closed)	Energized (closed)	Note 1	Energized (closed)
Receiver Tank Pressure Sol (RTPS) (Note 1)	Yes	NC				Energized (open)	Energized (open)	Note 1	
Purge Valve (PV) (Note 1)	Yes	NC				Energized (open)	Energized (open)	Note 1	
Zone Liquid Line Solenoid (LLS) Note 1	Yes	NC			Energized (open)	Energized (open)	Energized (open)	Energized (open)	Energized (open)
Zone Hot Gas Solenoid (HGS)	Yes	NC				Energized (open)	Energized (open)	Energized (open)	Energized (open)
Zone Suction Line Solenoid (SLS)	Yes	NO					Energized (closed)	Energized (closed)	
Evaporator Fans	Yes	N/A	Off	On	On	On (Off for defrost)	On (Off for defrost)	On	On