



SANYO Commercial Solutions

HVAC Solutions Group
1165 Allgood Rd., N.E., Suite 22
Marietta, GA 30062
Tel: 770.977.8510
www.sanyohvac.com

Technical Service Bulletin

2007.08.11

Category: Procedure Only - No Specific Fault

Topic: Method to force compressor to Minimum, Intermediate and Maximum speed for "testing" purposes only.

Applicable Product: All Sanyo "71 and 72 Series R-410a Air Conditioners and Heat Pumps of 9,000 to 24,000 BTU Capacities" including:

KS0971,	KHS0971,
KS1271,	KHS1271,
KS1872,	KHS1872,
KS2472,	KHS2472,
KMS0772,	KMHS0772,
KMS0972,	KMHS0972,
KMS1272,	KMHS1272,
KMS1872,	KMHS1872,
KMS2472	KMHS2472

The following procedure can be used to "force" a compressor to run at its minimum, intermediate or maximum speed. This function should be used only as a reference test to verify that a system is changing speeds or generally functioning properly. It should not be used as a primary method to conduct refrigerant charging based upon operating pressures and temperatures. Refrigerant charging is best served using the "weighted" method.

To force a compressor to minimum, intermediate or maximum speeds follow these steps:

1. Install the system including power wiring, refrigerant piping and indoor unit remote controller.
2. Using the indoor units wireless remote controller simultaneously press the “1HR” and “TEMP Decrease” buttons and then press and release the “ACL” reset button while still holding down the “1HR” and “TEMP Decrease” buttons. Release the “1HR” and “TEMP Decrease” buttons. Note: The “ACL” button is located under the flip down cover near the bottom of the remote controller.
 - The display on the remote controller should then show: **“oP-1”**
3. Once “oP-1” is displayed press the “1HR” button 5 times to change the display from “oP-1” to **“oP-6”**
4. Press the “MODE” button to select either Cooling or Heating operation (as you desire).
5. Press the “FLAP” button to adjust the Flap position. For all ARI test conditions the flap should be set at the number 4 position as shown in Figure 1 below (in approximately a 45 degree angle).

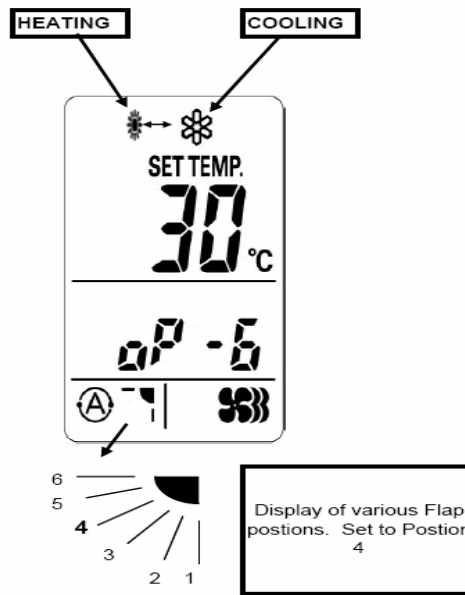


Figure 1

6. Press the “TEMP” Button on the remote controller up or down to select a temperature setting from Table 1 or Table 2 as shown below. This setting will force the compressor to run at a particular speed. Table 1 indicates the appropriate Set Temperature to force operation to Maximum, Intermediate or Minimum speed for COOLING TESTS and Table 2 is for HEATING TESTS.

Setting for Cooling Performance/Seasonal Energy Efficiency Ratio (SEER) Test - Sanyo Variable Speed Compressor							
TEST	Ambient				Desired Compressor Speed	Remote Controller	
	INDOOR UNIT		OUTDOOR UNIT			SET TEMP. °F	Flap Position
	Dry-Bulb	Wet-Bulb	Dry-Bulb	Wet-Bulb			
"A" Cooling Steady State	80F/26.7C	67F/19.4C	95F/35.0C	75F/23.9C	MAX	86	4
"B-2" Cooling Steady State	80F/26.7C	67F/19.4C	82F/27.8C	65F/18.3C	MAX	86	4
"B-1" Cooling Steady State	80F/26.7C	67F/19.4C	82F/27.8C	65F/18.3C	MIN	82	4
Low Ambient Cooling Steady State	80F/26.7C	67F/19.4C	67F/19.4C	53.5F/11.9C	MIN	82	4
Intermediate Cooling Steady State	80F/26.7C	67F/19.4C	87F/30.6C	69F/20.6C	Intermediate	84	4

Table 1

Setting for Heating Performance/Heating Seasonal Performance Factor (HSPF) Test - Sanyo Variable Speed Compressor							
TEST	Ambient				Desired Compressor Speed	Remote controller	
	INDOOR UNIT		OUTDOOR UNIT			SET TEMP. °F	Flap
	Dry-Bulb	Wet-Bulb	Dry-Bulb	Wet-Bulb			
High Temperature Heating	70F/21.1C	60F/15.6C	47F/8.3C	43F/6.1C	max	61	4
Low Temperature Heating	70F/21.1C	60F/15.6C	17F/-8.3C	15F/-9.4C	max	61	4
Max Temperature Heating	70F/21.1C	60F/15.6C	62F/16.7C	56.5F/13.6C	MIN	64	4
High Temperature Heating	70F/21.1C	60F/15.6C	47F/8.3C	43F/6.1C	MIN	64	4
Frost Accumulation	70F/21.1C	60F/15.6C	35F/1.7C	33F/0.6C	MAX	61	4
Frost Accumulation	70F/21.1C	60F/15.6C	35F/1.7C	33F/0.6C	Intermediate	62	4
Standard Rating-Heating	70F/21.1C	60F/15.6C	47F/8.3C	43F/6.1C	Nominal	68	4

Table 2

7. Once the remote controller is set to the above condition, point the wireless remote controller toward the “Infrared Receiver” of the indoor unit and press the “ON/OFF”. This transmits the settings to the indoor unit. Operation will begin. Allow at least 15 minutes (or more) for the system to stabilize.

8. Once all testing or forced compressor operation is complete, be certain to set the system back to normal operation. To accomplish this, simply press the “ACL” button once more. Then point the remote toward the indoor unit and press the “ON/OFF” button to transmit the signal.

For additional details please access our technical literature using our website at www.sanyohvac.com or contact our technical service department at 800-851-1235.