



## OPERATING TEMPERATURE GUIDELINES FOR AIR CONDITIONING DUTY

The temperature ranges and guidelines shown below can be considered good for the following conditions:

1. R-22 Systems      2. Air Conditioning Duty (TXV)      3. SCT from 90° to 125° F.

Reading from other conditions will not fit into all the guidelines.

1. Suction Line Temperature: 15° - 20° above saturated suction temperature.
2. Motor barrel temperature near crankcase: 80° to 100° F.
  - a. Below 80° is a possible indication of flooding.
  - b. Above 100° is a possible indication of motor running too hot from:
    1. too high superheat
    2. not enough suction gas with acceptable superheat to cool motor on low load conditions.  
rotor drag - three temperatures at motor barrel are required to find hot spots due to stator drag on rotor if motor end bearing has been lost due to flooding.
    3. rotor drag - three temperatures at motor barrel are required to find hot spots due to rotor drag on stator if motor end bearing has been lost due to flooding.
3. Underside of Cylinder head: 85° to 115° F
  - a. Below 80° is a possible indication of flooding.
  - b. Above 115° is a possible indication of unloaded cylinder or blown gaskets or broken valves.
4. Crankcase Temperature: 105° to 125° F
  - a. Below 105° is a possible indication of flooding.
  - b. Above 125° is a possible indication that the compressor is running too hot - possibly caused by high oil levels.
5. Hot gas (discharge) temperature: 160° to 200° F.
  - a. Temperature below 160° after one minute run time is an indication of flooding.
  - b. Above 200° is an indication that the compressor is running too hot.
    1. Suction too low
    2. condensing too high (check for condenser problems)
    3. superheat too high
    4. motor overheating (check motor temperature)
    5. broken discharge valves/blown gaskets
    6. leaking pressure relief valve (06E - 06LH models only)
6. Liquid line temperature should be 8° to 15° below saturated condensing temperature.