SUN FROST TROUBLESHOOTING GUIDE

STARTING DELAYS

The compressor may not start for several minutes if it has been running, is turned off, and then turned on immediately. This second delay is caused by a pressure difference in the cooling system. After several minutes, the system pressure equalizes and the compressor will start again.

TESTING PROCEDURES

For DC refrigerators:

1. **Check the polarity:** When in operation, the compressor, via the electronic control unit, must always be connected to a battery. Make sure the positive and negative terminals are not reversed.

2. **Check the wire size:** Sufficiently thick wire should be used to connect the battery to the compressor. The greater the distance between the battery and refrigerator, the thicker the wiring needs to be.

3. **Check the voltage:** If the compressor shakes when attempting to start or emits a high frequency squeak, the voltage may be low. For a 12V compressor, the voltage should be between 15.5 volts and 11 volts, double this for a 24 volt system. An LED (Light Emitting Diode) connected to the electronic unit on top of the refrigerator indicates low voltage. The red light blinks if the system voltage is low; if it is on steadily, the system voltage is sufficiently high. If the LED is not lit, there is no power getting to the refrigerator.

If the batteries are weak or there is resistance in the connecting wires, the voltage may be sufficiently high when the refrigerator is not running, however, the voltage could drop when the starting current is drawn so that the refrigerator will not be able to start. If possible, it is therefore preferrable to measure the voltage when the refrigerator is running. Excessive resistance may also be due to a poor connection.

4. **Check the connections:** Be sure all of the connections to the battery are clean and solid.

5. **Check the fuse(s):** The most common cause of a blown fuse is reversed polarity (reversing the postive and negative terminals) on the compressor. The fuse to the electronic controll unit (E.C.U.) is located on the side of the E.C.U., underneath a small square grey plastic cover. The fuse to the light is in an "in-line" fuse holder also on top of the refrigerator.

6. **Check the electronic unit: (See Item #7 and check the thermostat first).** If a high frequency squeak is heard coming from the electronic controll unit, or if the compressor shakes when it is attempting to start, and your voltage is okay, the electronic unit is defective.