ICE MACHINE REFRIGERATION COMPONENT DIAGNOSTIC CHART

This chart is used with a detailed outline of each of the Six Steps listed.
Failure to follow the details of each step in order will result in a misdiagnosis.

STEPS	HOT GAS VALVE LEAKING (not wide open)	TXV STARVING	TXV FLOODING	INEFFICIENT COMPRESSOR (suction valve)	ACTUAL FINDINGS
1. Visual Inspection	Visual inspection includes checking for proper installation, location, dirty condensers, etc., and talking to the ice machine user to identify the perceived problem(s).				
2. Ice Production	Normal ice production. ☐	1. Low ice ice production. 2. Not making ice. ☐	1. Low ice production. 2. Not making ice. ☐	1. Minimal ice production loss (almost normal). 2. Low ice production. ☐	
3. Ice Fill Pattern	Ice fill is normal. ☐	1. Ice fill will be thick on bottom portion of the evaporator and thin on top. 2. No ice. ☐	1. Ice fill will be thin on bottom portion of the evaporator and thick on top. 2. No ice. ☐	Ice fill is normal. ☐	
4. Water System	Water related problems can simulate a refrigeration component malfunction. Water related problems must be eliminated before proceeding to step 5.				
Refrigeration System 5A. Discharge Pressure	Discharge pressure must be normal before proceeding to step 5B.				
5B. Freeze Cycle Suction Pressure	Normal to 4 psig high at end of freeze cycle. ☐	Lower than normal throughout freeze cycle. ☐	Higher than normal throughout freeze cycle. ☐	Slightly higher throughout freeze cycle. Pressures normally do pull down although normally take a long time. ☐	
5C. Hot Gas Valve Inlet Feel Check	The inlet of hot gas valve is hot and the compressor discharge is hot. ☐	The inlet of hot gas valve is cool and the compressor discharge is hot. ☐	The inlet of hot gas valve is cool and the compressor discharge is cool. ☐	The inlet of hot gas valve is cool and the compressor discharge is hot. ☐	
5D. Suction Line Temperature at Compressor	40°F to 70°F. ☐	Above 50°F. ☐	Below 40°F. ☐	Above 40°F. ☐	
Miscellaneous	☐	☐	☐	☐	
6. Final Analysis (number of boxes checked)	A.	B.	C.	D.	