

Summer HVAC Startup Checklist

Key Inspection Points & Best Practices for Peak Cooling Season

Purpose of This Checklist

Summer startup is not just “turning the unit on.” It is a structured process to ensure your HVAC equipment is prepared for peak load conditions before extreme temperatures arrive.

This checklist is designed to help facility managers:

-) Reduce mid-summer breakdowns
-) Improve system efficiency before peak demand
-) Identify performance issues early
-) Coordinate effectively with service vendors
-) Protect tenant comfort and operational continuity

This guide can be used internally or alongside your HVAC service provider.

SECTION 1 - Pre-Startup Planning

Before any equipment is energized, preparation matters.

Review Last Season’s Issues: Patterns from last summer often reappear if not addressed.

-) Were there repeat service calls?
-) Did any units struggle during peak heat?
-) Were there airflow or comfort complaints?

Confirm Preventive Maintenance Timing: Summer startup should follow a spring PM visit that includes coil cleaning, belt checks, and electrical inspection. Startup is not a substitute for maintenance - it verifies readiness.

Verify Thermostat & Control Schedules: Misaligned controls can mimic mechanical failure.

-) Ensure cooling schedules align with occupancy.
-) Confirm unoccupied setpoints are appropriate.
-) Remove any temporary overrides left from winter.

SECTION 2 - Equipment-Level Startup Inspection

Condenser Coil Condition: Startup is the final confirmation that coils are clear and airflow across the condenser is unobstructed. Condenser coils must be clean prior to peak cooling season. Dirty coils cause:

-) Elevated head pressure
-) Increased compressor stress
-) Reduced cooling efficiency

Evaporator Coil & Drain Inspection: Blocked drains cause water damage and shutdowns during heavy humidity periods.

-) Inspect coil surface for buildup.
-) Confirm drain pans and lines are clear.
-) Ensure no standing water is present.

Refrigerant Circuit Verification: Small refrigerant issues become major problems during extreme heat. During startup, technicians should confirm the following items.

-) Suction and discharge pressures are within expected range.
-) Temperature splits align with design expectations.
-) No signs of slow leaks or abnormal pressure fluctuations.

Electrical & Component Check: Electrical components often fail under high summer load - startup helps identify weak points before peak demand. Startup should confirm:

-) Proper amp draw on compressors and motors.
-) Capacitors test within acceptable tolerance.
-) Contactors show no excessive wear or pitting.
-) Voltage is stable and within specification.

Airflow & Blower Performance: Restricted airflow is one of the most common causes of summer cooling complaints.

-) Confirm belt tension and alignment.
-) Verify blower motor performance.
-) Check for abnormal vibration or noise.
-) Ensure filters are clean and properly installed.

SECTION 3 - Operational Verification Under Load

Startup should include observation of the unit while actively cooling. Performance under load tells you far more than idle inspection.

Key points:

-) Does the system cycle normally?
-) Does it maintain setpoint without extended runtime?
-) Are supply air temperatures consistent?
-) Is there short cycling?
-) Are there unusual sounds or vibration under load?

SECTION 4 - Multi-Site Coordination Tips

For facility managers overseeing multiple locations:

-) **Prioritize Older Equipment:** Units nearing end-of-life are more likely to struggle during peak season.
-) **Sequence High-Risk Locations First:** Stores with high occupancy, high solar load, or previous complaints should be evaluated first.
-) **Document Performance Baselines:** Capture startup readings and compare mid-season if issues arise.
-) **Confirm Vendor Communication Protocol:** Clarity prevents delay during peak season. Ensure clear communication channels for -
 - o Escalation procedures
 - o After-hours contact
 - o Emergency authorization limits

SECTION 5 - Common Summer Failure Points

Startup inspection should focus on identifying vulnerability in these areas. Understanding where failures typically occur helps focus inspection. Frequent summer issues include:

-) Failed capacitors
-) Condenser fan motor failure
-) Compressor overload trips
-) Dirty coils causing high head pressure
-) Low refrigerant conditions surfacing under extreme heat

SECTION 6 - Final Readiness Review

Preparation before extreme weather reduces reactive decision-making. Before declaring summer readiness, confirm:

-) All units are operational and maintaining setpoint.
-) No deferred issues remain unresolved.
-) Preventive maintenance documentation is complete.
-) Emergency contact protocols are clear.
-) Spare parts availability is confirmed for high-risk units.

Summary

Summer startup is not a checkbox. It is a strategic readiness process designed to:

-) Reduce emergency breakdowns
-) Improve cooling efficiency
-) Protect equipment under peak load
-) Stabilize operational performance
-) Preserve tenant comfort

Proactive startup reduces reactive crisis.