STANDARD OPERATING PROCEDURE

HVAC Preventive Maintenance SOP

Document no.	SOP-FSV-002
Revision	1.0
Owner	Service Operations Manager
Effective date	September 15, 2026
Review cycle	Every 12 months

1. Purpose

To make sure every scheduled HVAC preventive maintenance visit is performed to a consistent standard, catching problems before they cause a breakdown and keeping an accurate service history for each unit.

2. Scope

Applies to preventive maintenance visits on commercial and residential HVAC systems under a maintenance contract. Emergency repair calls and new equipment installation are covered by separate procedures.

Definitions

PM visit	A scheduled preventive maintenance visit performed on a set interval, as opposed to a repair call triggered by a reported fault.
Refrigerant charge	The amount of refrigerant in a system, checked against the manufacturer's specification for correct cooling performance.
Superheat and subcooling	Temperature readings technicians use to verify a system's refrigerant charge is correct.
PM checklist	The standardized task list and record used to document what was inspected, cleaned or adjusted during a visit.

3. Responsibilities

HVAC Technician	Performs the scheduled inspection, cleaning and testing tasks on the unit and documents findings on the PM checklist.
Service Coordinator	Schedules PM visits against the maintenance contract, confirms site access, and tracks completion against the annual plan.
Service Manager	Reviews flagged repair recommendations, approves parts orders, and handles contract-level issues.
Facility Contact	Grants access to mechanical rooms and rooftop units, and reviews the visit summary and recommendations.

RACI matrix

Activity	HVAC Technician	Service Coordinator	Service Manager	Facility Contact
Schedule the PM visit	I	R/A	I	C
Perform the PM checklist onsite	R/A	I	I	I

Activity	HVAC Technician	Service Coordinator	Service Manager	Facility Contact
Recommend and approve follow-up repairs	R	I	A	C
Update equipment history and next due date	R	R/A	I	-

R = Responsible, A = Accountable, C = Consulted, I = Informed

4. Materials and PPE

Materials, tools and systems

- PM checklist for the equipment type
- Refrigerant gauges and digital thermometer
- Multimeter and amp clamp
- Replacement filters, belts and coil cleaning chemical
- Fin comb and coil brush
- Equipment service history in the field service system

Personal protective equipment

- Safety glasses
- Cut-resistant gloves for coil work
- Hearing protection near rooftop units
- Fall protection for rooftop access where required

5. Procedure

Step	Task	Owner	Done
5.1	**Review the PM schedule and unit history** Technician checks the day's route in the field service system and reviews each unit's service history and any open recommendations from the last visit before heading out.	HVAC Technician	☐
5.2	**Check in and confirm scope with facility contact** Technician checks in with the facility contact on arrival, confirms which units are included in today's visit, and gets access to mechanical rooms or the roof.	HVAC Technician	☐
5.3	**Inspect the unit before power-down** Technician visually inspects the unit for leaks, corrosion, unusual noise or vibration while it is still running, and notes the readings on the thermostat or controller.	HVAC Technician	☐
5.4	**Isolate power and check electrical connections** Technician shuts off power at the disconnect, then inspects and tightens electrical connections, contactors and capacitors, checking for signs of overheating. **Warning:** Confirm the disconnect is off and verify zero voltage before touching any electrical component.	HVAC Technician	☐
5.5	**Clean the condenser and evaporator coils** Technician straightens bent fins with a fin comb and cleans the condenser and evaporator coils with the approved coil cleaner, rinsing thoroughly afterward.	HVAC Technician	☐

Step	Task	Owner	Done
5.6	**Replace filters and inspect belts** Technician replaces air filters per the schedule, and inspects belts and pulleys for wear, cracking or misalignment, replacing them if needed.	HVAC Technician	☐
5.7	**Restore power and check refrigerant charge** Technician restores power, lets the system run, and checks superheat and subcooling readings against the manufacturer's specification to confirm the refrigerant charge is correct. **Checkpoint:** Superheat and subcooling readings are within the manufacturer's specified range before the visit is closed.	HVAC Technician	☐
5.8	**Test controls and safety devices** Technician cycles the thermostat or building automation controls through heating and cooling modes and tests safety switches, such as high-pressure and low-pressure cutouts, for correct operation.	HVAC Technician	☐
5.9	**Inspect ductwork and condensate drainage** Technician checks accessible ductwork for leaks or disconnected sections, and confirms the condensate drain line and pan are clear and draining properly.	HVAC Technician	☐
5.10	**Record readings on the PM checklist** Technician records all readings, tasks completed and any components replaced on the PM checklist in the field service system.	HVAC Technician	☐
5.11	**Flag follow-up repairs with the customer** Technician explains any findings that need follow-up repair, such as a failing capacitor or worn bearing, to the facility contact and submits a repair recommendation for the service manager to quote.	HVAC Technician	☐
5.12	**Update equipment history and next due date** Service coordinator updates the unit's equipment history with the completed PM and schedules the next visit based on the contract interval.	Service Coordinator	☐

6. Quality checks

- Every PM checklist item has a recorded reading or a checked-off status, with no blank fields.
- Refrigerant charge readings are within the manufacturer's specified range on every completed visit.
- Follow-up repair recommendations are quoted to the customer within the agreed turnaround time.
- A sample of completed PM visits is spot-checked by the service manager each month.

7. Records

- Completed PM checklist per unit and visit
- Equipment service history log
- Repair recommendation and quote log
- Annual PM contract schedule

8. KPIs

- Percentage of scheduled PM visits completed on time
- Follow-up repairs identified per PM visit
- Emergency breakdown calls on units under a PM contract
- Customer contract renewal rate

9. Common mistakes

- Skipping the electrical connection check because the unit sounds fine.
- Cleaning coils without checking fin condition and airflow afterward.
- Not recording refrigerant readings, so drift over time goes unnoticed.
- Leaving a failing part unreported because it is still working today.
- Forgetting to restore all panels and guards before leaving the site.

10. Revision history

Revision	Date	Description	Reviewed by
1.0	September 15, 2026	Initial release	Ilia Pirozhenko

Approval

Prepared by	Approved by	Date

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