
Industrial HVAC Roof Top Unit (RTU) Filter Replacement

1.0 Maintenance Objective & Frequency

The objective of this procedure is to replace the air filters on an industrial rooftop HVAC unit (RTU) to ensure proper airflow, maintain system efficiency, and prevent contaminants from entering the conditioned space. Clogged filters increase static pressure, reduce cooling/heating capacity, and can lead to compressor or fan motor failure. This PM is to be performed monthly or more frequently if the unit operates in a dusty environment.

2.0 Lockout/Tagout (LOTO) & Safety

- **Electrical Isolation:** Disconnect the RTU at the dedicated disconnect switch located on or near the unit. Apply a personal lock and tag.
- **Fall Protection:** If accessing the roof via ladder, ensure the ladder is secured and use a fall arrest system if required by site safety policy.
- **PPE:** Wear safety glasses, cut-resistant gloves, and a dust mask or respirator to avoid inhaling accumulated debris.
- **Hot Surfaces:** Allow the unit to cool for 10 minutes after shutdown before opening access panels.

3.0 Required Tools, Parts & Lubricants

- Replacement filters (correct size and MERV rating per OEM specifications)
- 7mm or 8mm nut driver or socket (for access panel screws)
- Flathead screwdriver (for latch-type panels)
- Flashlight or headlamp
- Dustpan and brush or shop vacuum
- Disposable gloves and dust mask
- Permanent marker or label (to date the new filter)

4.0 Step-by-Step Maintenance Procedure

1. Perform LOTO: Locate the RTU disconnect switch, turn it to the OFF position, and apply your personal lock and tag. Verify zero voltage with a multimeter if required.
2. Allow the unit to cool for 10 minutes to avoid contact with hot surfaces.
3. Remove the filter access panel(s) using the appropriate nut driver or screwdriver. Set the panel aside in a safe location.
4. Carefully slide out the old filter(s). Note the direction of airflow arrows on the filter frame for correct reinstallation.
5. Inspect the filter rack and surrounding area for debris, mold, or pest nests. Vacuum or brush out any accumulated dirt.
6. Insert the new filter(s) with the airflow arrows pointing toward the blower (typically into the unit). Ensure a snug fit with no gaps around the edges.
7. Write the installation date and your initials on the filter frame using a permanent marker for tracking.

8. Reinstall the filter access panel(s) and tighten all screws or latches securely.
9. Remove your LOTO device and restore power to the unit by turning the disconnect switch to the ON position.

5.0 Verification & Return to Service

1. Verify the unit starts and runs without unusual noises or vibrations. Listen for smooth fan operation.
2. Check the static pressure differential across the new filter using a manometer if available. Record the reading for baseline comparison.
3. Confirm that the supply air temperature is within normal operating range after 5 minutes of runtime.
4. Sign off on the PM work order in ServiceGrid, noting the filter size, MERV rating, and installation date.

Regulatory Disclaimer: This document is a generic maintenance template provided for educational and informational purposes only. It does not constitute professional engineering or reliability advice. The end-user assumes all liability for validating all step sequences, torque specs, and LOTO protocols against specific machinery OEM manuals before deployment to a live production floor.