



19. Fire - Extinguishing Equipment - Smoke Vents & AOVs Full Service & Test

Category:	Fire
Subcategory:	Extinguishing Equipment
Frequency:	Yearly
Status:	Statutory
Type:	Approved Contractor
Priority:	Core
Commonality:	Occasional

Note: This document provides guidance to support compliance but is not a substitute for professional advice.

Why This Task Matters

Your dedication to maintaining smoke vents and automatic opening vents ensures that escape routes remain clear and breathable during fire emergencies. By ensuring these critical systems function correctly in multi-storey schools and colleges, you protect pupils and staff from smoke inhalation as they evacuate. Your expertise in overseeing these life-preserving systems demonstrates your essential role in maintaining clear escape pathways.

Task Summary

Statutory: Smoke vents and automatic opening vents (AOVs) must be serviced annually by an approved contractor to confirm reliable operation. This comprehensive maintenance involves testing automatic and manual controls, inspecting structural integrity, verifying control systems, and ensuring compliance with performance standards. The service includes functional testing of actuators, checking electrical systems, inspection of vent mechanisms, and testing control integration with fire alarms. These systems keep escape routes clear of smoke, which is vital in multi-storey schools and colleges where staircases serve large pupil groups. The inspection includes checking for corrosion, obstructions, and weather damage. Evidence produced includes the contractor's service certificate confirming system compliance and functionality, commissioning test sheets documenting all

measurements and performance data, and any recommendations for maintenance or system upgrades.

Relevant Legislation & Guidance

- **Regulatory Reform (Fire Safety) Order 2005:** Requires smoke control systems to be maintained in good working order
- **Fire Safety: Approved Document B (Buildings other than dwellinghouses):** Provides guidance on smoke vent maintenance
- **British Standard BS 7346: Components for smoke and heat control systems:** Specifies requirements for smoke vent maintenance and testing
- **British Standard BS 9999: Fire safety in the design, management and use of buildings - Code of practice:** Includes guidance on smoke control system maintenance
- **Building Regulations 2010:** Require smoke control systems in certain building types

Typical Frequency

Smoke vents and AOVs must be serviced and tested annually where fitted, with this comprehensive maintenance typically scheduled during school holidays. In educational settings with these systems, annual servicing is essential for ensuring reliable operation. The frequency cannot be reduced as it is a statutory requirement for maintaining smoke control systems.

Applicability

This task applies to educational establishments that have smoke vents or AOVs installed, which is occasional as these systems are typically found in multi-storey or atrium buildings. It is a core statutory task where these systems are present, essential for maintaining clear escape routes. The task applies to schools and colleges with smoke control systems in stairwells, corridors, or large spaces.

Responsible Persons

- **Task Type:** Approved Contractor
- **Contractor Requirements:** This task should be carried out by a competent smoke control system maintenance company with specialist knowledge of vent mechanisms and controls. Contractors should hold appropriate accreditations for smoke control systems. Typical cost range: £300-£600 per system depending on size and complexity.
- **Permit to Work:** May require access to roof areas and coordination with building users.
- **Delivery Model:** Normally contractor-delivered due to the specialist testing equipment and technical knowledge required.

Key Considerations

- **Timing considerations:** Schedule during school holidays to allow for testing and any repairs
- **Cost implications:** Budget £300-£600 annually for professional servicing and testing
- **Resource requirements:** Allow access to roof areas, control systems, and vent locations
- **Potential disruption:** May require temporary access restrictions during testing
- **Risk assessment requirements:** Service findings should inform the fire risk assessment

Key Considerations

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Task Instructions

Prerequisites & Safety

- Ensure the contractor has expertise in smoke control systems
- Provide access to system documentation and control equipment
- Confirm safe access to roof areas and vent locations
- Arrange for safe testing conditions and area isolation if needed

Tools & Materials

- System documentation and control manuals
- Testing equipment for actuators and controls
- Replacement components and lubricants
- Access equipment for roof areas
- Safety equipment for working at height

Method (Step-by-Step)

Phase A: Pre-Service Assessment

1. Review system documentation and previous service records

2. Identify all smoke vents and AOVs requiring service
3. Check control system integration with fire alarms
4. Prepare testing schedule and safety procedures

Phase B: Visual Inspection

1. Inspect vent mechanisms for damage, corrosion, or obstructions
2. Check actuators, motors, and control systems
3. Examine electrical connections and wiring
4. Verify roof access and mounting integrity
5. Assess weather protection and drainage

Phase C: Functional Testing

1. Test automatic activation from fire alarm signals
2. Verify manual control operation and override functions
3. Check vent opening and closing mechanisms
4. Test control system status indicators
5. Confirm integration with building management systems

Phase D: Maintenance and Servicing

1. Lubricate moving parts and mechanisms
2. Clean vents and remove debris or obstructions
3. Replace faulty actuators or control components
4. Adjust system settings and alignments

Phase E: Documentation and Certification

1. Document all test results and system performance
2. Prepare commissioning test sheets with measurements
3. Issue service certificate confirming compliance
4. Recommend maintenance schedule and any upgrades

Measurements & Acceptance Criteria

- Opening time must meet design specifications (typically <60 seconds)
- Full opening must be achieved without obstructions
- Control systems must respond correctly to activation signals
- Electrical systems must be free from faults

If Results Fail

Follow instructions on the Compliance Pod task completion form to record remedial/follow up actions and generate Reactive Task Tickets as required. Immediately implement alternative smoke control measures. Escalate significant issues to facilities management and arrange urgent repairs. Monitor affected areas closely until systems are restored.

Reinstatement & Housekeeping

Restore systems to normal operation and remove any temporary barriers. Ensure control systems are reset and indicators show normal status.

Completion Checks

Verify that all systems have been inspected and tested. Confirm that commissioning test sheets document all measurements. Ensure the service certificate confirms system compliance.

Client Oversight Checklist (Before the Visit)

- Confirm contractor's expertise in smoke control systems
- Provide system documentation and control details
- Arrange safe access to roof areas and vents
- Schedule during period when testing disruption is minimised

Client Oversight Checklist (During the Visit)

- Observe inspection of vent mechanisms and controls
- Ensure functional testing covers all operation modes
- Verify that faulty components are identified and replaced
- Confirm comprehensive documentation of test results

Deliverables & Acceptance Criteria (After the Visit)

- Receive service certificate confirming system compliance
- Review commissioning test sheets with performance measurements
- Ensure recommendations for maintenance are specific and prioritised
- Confirm that all documentation is complete and accurate

Defects & Follow-up

Follow instructions on the Compliance Pod task completion form to record remedial/follow up actions and generate Reactive Task Tickets as required. Prioritise repairs to critical smoke control systems. Agree timescales for component replacement. Schedule re-testing after major repairs.

Reinstatement & Sign-off

Confirm systems are operational and control indicators show normal status. Complete final sign-off once all documentation is received.

Record-Keeping & Evidence

- **Upload Process:** Upload any required statutory or supporting evidence to the corresponding task form in Compliance Pod.
- **Statutory Evidence:** Contractor's service certificate and commissioning test sheets must be retained for at least 3 years.
- **Supporting/Good Practice Evidence:** Performance measurements and maintenance recommendations support audit readiness.

Common Pitfalls & Best Practice Tips

- **Common mistakes to avoid:** Not testing all operation modes, missing control system faults, or failing to check roof access
- **Best practices for efficient completion:** Maintain detailed system records, conduct pre-service visual checks, and coordinate with roof maintenance
- **Pro tips for educational settings:** Use servicing visits to train staff on system operation, check vent accessibility for maintenance, and consider modern alternatives if systems are problematic
- **Warning signs that indicate problems:** Slow opening times, incomplete operation, or frequent control faults

Quick Reference Checklist

- System documentation and previous records reviewed
- All smoke vents and AOVs identified
- Visual inspection of mechanisms and controls completed
- Functional testing of opening and closing conducted
- Control systems and integration verified
- Maintenance and lubrication completed
- Service certificate and test sheets received
- Evidence uploaded to Compliance Pod

Grouped Tasks

Grouping is feasible; align with related tasks of the same frequency and contractor visit.

Related Tasks

- Fire - Extinguishing Equipment - Portable Fire Extinguishers Full Service & Inspection
- Fire - Extinguishing Equipment - Fire Hose Reels Full Service & Inspection
- Fire - Extinguishing Equipment - Fire Shutters & Curtains Full Service & Inspection
- Fire - Extinguishing Equipment - Sprinkler Systems Full Service & Test
- Fire - Extinguishing Equipment - Fire Suppression Systems Full Service & Test
- Fire - Extinguishing Equipment - Fire Hydrants Full Service & Inspection
- Fire - Extinguishing Equipment - Dry & Wet Risers Full Service & Inspection

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Users must ensure that all tasks are carried out in line with current legislation, manufacturer instructions, site-specific risk assessments, and organisational policies. Where necessary, professional advice should be sought from competent and accredited specialists — for example, fire risk assessors, water hygiene consultants, electrical engineers, gas safety contractors, or health and safety advisors.