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16-02 Ductwork System - General

Date: 20 Jan 2020 Version: 3 Unit of Measure: Metre

Summary				
Frequencies	Tasks			
12M (Months) 1 mins	1 2 3 4 5 6 7			
0U (Unspecified)	8			
Annual Timing	1 mins			

Introduction

This document specifies the requirements for the periodic maintenance of ventilation ductwork. It should be read in conjunction with all current statutory requirements and regulations. All maintenance should be in accordance with the manufacturer's or supplier's recommendations. Any accompanying method statements and risk assessments should be read and understood before starting work.

The internal cleanliness of ventilation ductwork systems is considered important for human comfort and health, energy consumption, system service life and for cleanliness of operations or processes carried out in the ventilated area.

To comply with current legislation, ductwork systems must be inspected, tested and cleaned regularly. A variety of specifically hazardous contaminants may be found in ductwork systems, especially in industrial or laboratory local exhaust ventilation (LEV) which is subject to health and safety legislation. Refer to current regulations and the SFG series 64 for more information on LEV.

Airborne infections can also potentially be transmitted through ventilation ductwork from contaminated plant rooms and air entry points, particularly in areas vulnerable to bird infestation. Refer to (SFG 87-33) for more information on preventing this hazard.

Please refer to the overarching introduction (SFG 00-01) to make sure you are of the correct skill level as indicated within the task schedule to carry out the described works. Ensure you have read and understood the manufacturer's recommendations, carried out risk assessment(s) on each item of plant to identify the correct frequency of maintenance, identified all safety procedures that need to be applied and recorded in order to carry out the work in a safe and reliable manner.

Notes:

Special requirements are necessary in the food and process industries, clean room applications and kitchens. For tasks specific to kitchen extract ductwork, please refer to (SFG 17-02) Kitchen Grease Extract System.

Display Order	Tasks								
	Access doors								
	Criticality:	Amber	Frequency:	12M	Skill Set:	Mechanical			
1	Action: Inspect for any loose panels and secure. Check all access doors for air tightness. Ensure that doors are not distorted and that door edge seals are secure and undamaged.								
	Notes:								
	Flexible connections								
	Criticality:	Amber	Frequency:	12M	Skill Set:	Mechanical			
2	Action:	Check for condition, leaks and secure fittings.							
	Notes:	Where provisions are made for access.							
3	Insulation								

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3	Criticality:	Amber	Frequency:	12M	Skill Set:	Mechanical			
	Action:	Inspect for any	damage or deterioration.						
continued	Notes:	Report to client if remedial work required.							
	Anti-vibratio	Anti-vibration mounts							
	Criticality:	Amber	Frequency:	12M	Skill Set:	Mechanical			
4	Action:	Inspect for perm	nanent set (in springs).						
	Notes:	If renewal required, report to client. If replaced ensure that the correct type is used.							
	General	· ·	· · ·	·					
	Criticality:	Amber	Frequency:	12M	Skill Set:	Mechanical			
5	Action:	ction: Ensure that flange bolts are tight. Ensure that loads are not imposed on the plant/equipment.							
		Check damper blade locking quadrants to manual control dampers.							
		Inspect ductwor	k for damage.						
	Notes:								
	Ductwork support								
C	Criticality:	Amber	Frequency:	12M	Skill Set:	Mechanical			
Ö	Action:	ction: Check all ductwork supports and hangers to ensure they are not slack, distorted or corroded.							
	Notes:	s: Report to client if remedial work required.							
	Hit hazards								
	Criticality:	Amber	Frequency:	12M	Skill Set:	Mechanical			
7	Action: Inspect duct run where it runs across or parallel to a personnel access route. Highlight any low points with								
-	the appropriate hazard tape or paint.								
	Notes:								
	Internal clea	anliness							
	Criticality:	Red	Frequency:	0U	Skill Set:	Mechanical			
8	Action:	Check internal condition through sampling points (test points) where fitted. Refer to (SFG 17-01) for full details of ductwork inspection, monitoring and cleaning. The frequency for inspection and monitoring depends on the system quality class (SQC) of the installation. In addition, the amount of contaminant identified during inspection may alter the actual required cleaning frequency.							
	Notes:	For information on ductwork cleanliness classes, refer to BESA document TR19 [®] Guide to Good Practice - Internal Cleanliness of Ventilation Systems.							
		For information on kitchen extract systems, refer to (SFG 17-02) Kitchen Grease Extract System and BESA document TR19 [®] Grease Specification for Fire Risk Management of Grease Accumulation within Kitchen Extraction Systems.							
		Report to client	if remedial work required	d.					
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Legislation, Regulations and Guidance

http://shop.bsigroup.com/ProductDetail/?pid=000000000030239699

BS EN 15780:2011 Ventilation for buildings. Ductwork. Cleanliness of ventilation systems

http://www.legislation.gov.uk/nisr/2003/34/contents/made

Control of Substances Hazardous to Health Regulations (Northern Ireland) 2003

http://www.legislation.gov.uk/all?title=Control%20of%20Substances%20Hazardous%20to%20Health%20Regulations Control of Substances Hazardous to Health Regulations 2002 (COSHH) and 2003 and 2004 amendments

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http://www.hse.gov.uk/pubns/books/l24.htm

L24 Workplace health, safety and welfare. Workplace (Health, Safety and Welfare) Regulations 1992. Approved Code of Practice and guidance

http://www.thebesa.com/knowledge/shop/products/tr-19-guide-to-good-practice-internal-cleanliness-of-ventilation-systems-updated/ TR19® (BESA): Guide to Good Practice - Internal Cleanliness of Ventilation Systems

http://www.thebesa.com/knowledge/shop/products/tr19-grease-specification-for-fire-risk-management-of-grease-accumulation-withinkitchen-extraction-systems/

TR19® (BESA): Grease Specification for Fire Risk Management of Grease Accumulation within Kitchen Extraction Systems

http://www.legislation.gov.uk/nisr/1993/37/contents/made

Workplace (Health, Safety and Welfare) Regulations (Northern Ireland) 1993

http://www.legislation.gov.uk/uksi/1992/3004/contents/made

Workplace (Health, Safety and Welfare) Regulations 1992 (WHSWR)

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16-03 Ducting - Volume Control Dampers (VCDs)

Date: 08 Jul 2020 Version: 8 Unit of Measure: Nr

Summary				
Frequencies	Tasks			
12M (Months) 15 mins	1			
Annual Timing	15 mins			

Introduction

This document specifies the requirements for the periodic maintenance of volume control dampers (VCDs) that are used to control the flow of air within ventilation and air conditioning systems. It should be read in conjunction with all current statutory requirements and regulations. All maintenance should be in accordance with the manufacturer's or supplier's recommendations. Any accompanying method statements and risk assessments should be read and understood before starting work.

Caution

All volume control dampers are set up during commissioning and should not normally be adjusted unless modifications are made to the ductwork distribution system. If the damper is moved during maintenance it should be returned to the position it was in when commissioned. In the event of a ductwork modification, the system should then be re-commissioned.

Please refer to the overarching introduction (SFG 00-01) to make sure you are of the correct skill level as indicated within the task schedule to carry out the described works. Ensure you have read and understood the manufacturer's recommendations, carried out risk assessment(s) on each item of plant to identify the correct frequency of maintenance, identified all safety procedures that need to be applied and recorded in order to carry out the work in a safe and reliable manner.

Notes:

For information on motorised volume control dampers, smoke dampers, fire dampers, and combined fire/smoke dampers, refer to SFG20 series 16 for Ducting.

Display Order	Tasks							
	Inspection and servicing							
	Criticality:	Amber	Frequency:	12M	Skill Set:	Mechanical		
	Action:	Action:1 Check that the commissioning position is marked on the VCD.2 Visually inspect the interior of the VCD.3 Ensure it is clean and free from any contamination.						
	 4 Check for obstructions, dust, debris or corrosion. 5 Clean the components as required using a non-abrasive cloth and mild detergent. 6 Ensure that the blades, inner casings, spindles, bushes and gear linkage mechanisms are clean rotate freely. 							
	7 Do not lubricate the internal components of the VCD with oil or grease. This will attract dust and ma future cleaning more difficult. 8 Check that the blades are secure.							
	9 Check the locking devices for ease of movement and security.							
	10 Check that the seals are undamaged.							
	11 Test the VCD to confirm that it operates smoothly, and that it opens and closes to the desired positions.							
	12 Reset the VCD to the commissioning position.							
	Notes:	This may need	o be done more frequer	ntly if the VC	D is installed in a dusty or	dirty environment.		