

Report No: Job Ref: 

4

Doc 72
Todd
ENGINEERING

SPRAYBOOTH COMMISSIONING REPORT

Company: **WATONS MERCEDES**Date of Commissioning: **18/5/2020**Address: Manufacturer: **TODD**Model: **HERCULES**Spraybooth ID: Postcode: Airflow Rating: **30,000** cfm/m³hr⁻¹Phone: Next Service Due: **18/5/2020**Contact: Engineer: **M HEWLIN**Extraction Type: ☐ Rear Extract ☒ Downdraft ☐ Side ExtractExtract Filter Type: **EU2 EU3**Extract Filter Size: **1000 X 8000**Qty: **4**Input Filter Size: **2700 x 1000**Qty: **6**Extract Fan(s) Type: **WOOD BIFURCATED AXIAL**Rating **4** kW Qty: **1**Input Fan(s) Type: **// //**Rating **4** kW Qty: **1**Inverter Settings (Spray): Extract: **46** Hz Input: **40** Hz(Bake): Extract: **15** Hz Input: **38** HzFuel Type: ☐ Natural Gas ☒ L.P.G. ☐ Oil Rated Output: **170** BTU'S/KWBurner Make: **NU-WAY** Burner Model: **SG 170** Qty: **1**Extract Damper Position: **—** %open Input Damper Position: **—** %open

Filter Face Velocities:	FV1.1	FV1.2	FV1.3	FV1.4	FV1.5	FV1.6
	FV2.1	FV2.2	FV2.3	FV2.4	FV2.5	FV2.6

Spraybooth Clearance Time: **1** min **20** sec Booth Spray Pressure: **- 15** PaBake Temp reached in: **6** min **30** sec Booth Spray Pressure: **+ 5** PaLighting Type: **LED** Size: **1310** Qty: **12**

Motor Load Tests:	Extract:	V1(A)	W1(A)	OVERLOAD (A)
Input:	U2(A)	V2(A)	W2(A)	OVERLOAD (A)

Work Complete Yes/No

Spraybooth Hours Run: **6**

Engineers Signature:

Date: **03/06/20**

Customer Signature:

Print Name: **Alexander Lohai**

Todd Engineering Ltd Head Office: Gregory Works, Armitage Road, Rugeley, Staffordshire, WS15 1PW, UK

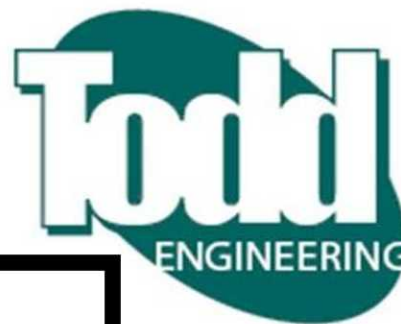
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CERTIFICATE OF CONFORMITY DEFRA PG6/34(11)

ISSUED BY: TODD ENGINEERING LTD

DATE OF ISSUE: 18/05/2020
VALID TO: 17/05/2021*

CERTIFICATE NO: EC0015



TODD ENGINEERING LTD
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Rugeley, Staffordshire, WS15 1PW
Tel: +44(0) 845 017 6465 Fax: +44(0) 845 017 6466
Email: service@toddengineering.co.uk

FOR: C. Walton Ltd
LOCATION: Wyton
Huntingdon
Cambs
PE28 2EA
CONTACT: N/A
SPRAYBOOTH ID: Hercules (4)-Todd
HRS RUN: 00006

APPROVED SIGNATORY

A handwritten signature in blue ink, appearing to read "A Turner".

A TURNER
Sales Manager

This is to certify that the spraybooth specified above has been designed, commissioned and tested, to meet the following requirements of DEFRA PG6/34(11).

<u>Para 5.6</u>	Introduction of pressure gauge/audible alarm equipment shutdown facility.
<u>Para 5.14</u>	Extract vent height raised to Local Authority requirements, <u>Without cap, Actual height 3m</u>
<u>Para 5.17</u>	<i>Booth Extract</i> <i>Duct 1:</i> Discharge vent diameter..... 800 mm diameter Efflux velocity..... 15.00m/sec
<u>Para 5.7</u>	To reduce particulate matter discharge below 10mg/Nm ³
<u>Extract Filtration</u> <u>Emission Abatement</u>	Stage 1: Paint Stop 220g/m ² Glass Fibre 50mm (EU2) Stage 2: Blue Synthetic Fibre Filter G3 FL200 20mm (EU3) Combined Total Arrestance (clean)...98.74%
<u>Extract Air Velocity</u>	15.75 m³ second (Actual)

*CERTIFICATE VALID TO DATE SHOWN UNLESS 1000HRS OPERATION IS REACHED BEFORE EXPIRATION DATE



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**IMPORTANT DOCUMENTATION!
MUST BE RETAINED FOR A PERIOD OF
AT LEAST 5 YEARS**

Data No: LEV0011

Local Exhaust Ventilating Plant—CoSHH Reg 9

REPORT ON INITIAL THOROUGH EXAMINATION AND TEST

1. Client Details

1a.	Company Name	C. Walton Ltd
1b.	Address	Wyton Huntingdon Cambs PE28 2EA
1c.	Contact in charge of LEV	Mark Hewkin

2. Final Assessment on Level of Control:

2a.	Satisfactory	X	2b.	Is the system used properly?	YES / NO
	Unsatisfactory		2c.	Is the system in good repair?	YES / NO
	Uncertain*		2d.	Is the system clean?	YES / NO

*Uncertain: have air sampling and personal exposure monitoring.

3. Summary Action Plan

Item in LEV system	Action Required	Priority	Person to take action	Target Date	Date Completed
Item:					
Examiner Name Adam Turner	Signature 		Client representatives name	Signature	
	Date		I Accept this Report YES / NO	Date	

*Priority—e.g. 1=high, 2=normal, 3=routine

Examiner: Pink Boxes—Employer: Yellow Boxes

4. System Information

4a.	System ID	Hercules (4)
4b.	Location	Workshop
4c.	Process	Paint Spraying
4d.	Hazardous Substance	Isocyanates/Paint Vapours/Fumes
4e.	Interval Between Routine Examinations	1 / 6 / 12 months
4f.	Date of Last Examination and Test	
4g.	Date of Installation	
4h.	Have there been any changes to the system or the process since the last thorough examination and test?	YES / NO

5. System/Process Changes

If answered YES to 4h. Complete section 5

5a.	Have the materials processed changed?	
5b.	Have the work procedures changed?	
5c.	Has the layout of the system changed in any way?	

6. Visual Examination Report

	Item	Condition
6a.	Capture hood/Receptor hood/Enclosure	SATISFACTORY
6b.	Ducting	SATISFACTORY
6c.	Air mover (Fans)	SATISFACTORY
6d.	Discharge	SATISFACTORY
6e.	Filters/Air cleaning devices	SATISFACTORY
6f.	Monitoring Instruments	SATISFACTORY

6g.	Dampers	SATISFACTORY	Data No: LEV0011
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7. Hoods/Enclosures

7a.	Hood(s) Type/Description	Fully Enclosed Booth
7b.	No. Of Hoods on System	1
7c.	Max No. Of Hoods to be used at any time	1

7d.

Hood ID	Hood Open Area (m ²)	Sash/ Opening height (m)	Face Velocity		Capture Distance		Hood Static Pressure (Pa)	Volume Flow Rate (m ³ /h ⁻¹)
			Actual (m/s)	Min (m/s)	Measured (m)	Required (m)		
H1	8	-	FV1 [1.2] FV2 [1.0] FV3 [1.1] FV4 [1.0] FV5 [1.1] FV6 [1.1] FV7 [1.2] FV8 [1.2] FV9 [1.2] FV10 [1.1] FV11 [1.1] FV12 [1.0] FV13 [1.2] FV14 [1.0] FV15 [1.0] FV16 [1.1] FV17 [1.0] FV18 [1.0] FV19 [1.0] FV20 [1.2] FV21 [1.0] FV22 [1.1] FV23 [1.1] FV24 [1.1] FV25 [1.0] FV26 [1.0] FV27 [1.0] FV28 [1.0] FV29 [1.0] FV30 [1.1] FV31 [1.1] FV32 [1.0]	1.0	8.00	8.00	-265	32760

7e.	System Total Volume (m ³ /h ⁻¹)	32760
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.....Con/t

7. Hoods/Enclosures

7f.	Process Conditions at Time of Test	Process Stopped at time of test
7g.	Instruments Used & Serial No.	Rotating Vane Anemometer Serial: 0250563
7h.	Hood Static Pressure Gauges Fitted?	YES / NO
7i.	Hood Pass/Fail Stickers Fitted?	YES / NO

8. Ducting

8a.	Type/Description	Spiral/800mm diameter
8b.	Air Temp in Ducts	21°C
8c.	Barometric Pressure	1013mb
8d.	Stack Height and Termination Type	3000mm/Accelerator cone
8e.	Damper Settings	60% Open

8f.

Test Point ID	Diameter/ Dimension (mm)	Duct Area (m ²)	Static Pressure (Pa)	Velocity Pressure (Pa)	Duct Velocity		Duct Volume Flow (m ³ /h ⁻¹)
					Actual (m/s)	Minimum Transport Velocity (m/s)	
Vp1	800	0.502	561	201.2	18.3	15	33071
Sp1	800	0.502	602	318.4	18.2	15	32891
Tp1	800	0.502	600	349	18.9	15	34156

8g.	Instruments Used & Serial No.	Pitot Tube Digital Manometer Fluke S No: 11870027
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9. Input Fan Data

9a.	Make/Model	Wood Bifurcated Axial
9b.	Serial No.	REM 13-0630-4W-23-C
9c.	Type	Aerofoil Backwards Bladed Centrifugal
9d.	Volume Flow (m ³ /s)	8.8
9e.	Static Pressure (Pa)	561
9f.	Motor Make/Model	AC Motoren/7.5kW
9g.	Motor Rating/Current	7.5kW/14.5A
9h.	Motor Speed	1455
9i.	Transmission	Direct Drive
9j.	Fan Speed	1465
9k.	Rotational Direction	Clockwise
9l.	Check Rotational Direction	SATISFACTORY

10. Extract Fan Data

10a.	Make/Model	Wood Bifurcated Axial
10b.	Serial No.	REM 13-0630-4W-23-C
10c.	Type	Aerofoil Backwards Bladed Centrifugal
10d.	Volume Flow (m ³ /s)	8.8
10e.	Static Pressure (Pa)	560
10f.	Motor Make/Model	AC Motoren/7.5kW
10g.	Motor Rating/Current	7.5kW/14.5A
10h.	Motor Speed	1455
10i.	Transmission	Direct Drive
10j.	Fan Speed	1465
10k.	Rotational Direction	Anti Clockwise
10l.	Check Rotational Direction	SATISFACTORY

11. Filter/Air Cleaning Devices

11a.	Make/Model	Todd Engineering
11b.	Type	Paintstop EU2/EU3 Pre-Fibre glass filter media
11c.	Static Pressure (Inlet)	-90 Pa
11d.	Static Pressure (Outlet)	-190 Pa
11e.	Pressure Drop (differential)	100
11f.	Filter Media	Fitted
11g.	Filter Cleaning Function Check	N/A
11h.	Monitoring Gauges Operational Check	SATISFACTORY
11i.	Recirculation of Filtered Air?	NO

If YES to 11h. Complete section 12.

12. Return of Exhaust Air to Workroom

	Applicable	X	Not Applicable
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12a.	Filter Efficiency		Measurement Technique
12b.	Static Pressure at Inlet		
12c.	Estimate of Concentration in Returned Air		
12d.	Comments		
12e.	Recommendations and Priority		

13. Make-Up Air

13a.	Adequate Quantity	YES / NO	Measurement Technique
13b.	Induced Draughts	N/A	
13c.	Comments	NONE	
13d.	Recommendations	NONE	

14. Make-Up Air Filters

14a.	Make/Model	Todd Engineering
14b.	Type	EU5-EN779/F5
14c.	Static Pressure (Inlet)	120 Pa
14d.	Static Pressure (Outlet)	50 Pa
14e.	Pressure Drop (Differential)	70 Pa
14f.	Filter Media	FITTED
14g.	Monitoring Gauges Operational Check	SATISFACTORY

15. Alarms

15a.	Hood/Enclosure	SATISFACTORY
15b.	Duct	N/A
15c.	Air Cleaner	N/A
15d.	Air Mover	SATISFACTORY
15e.	Returned Air	N/A
15f.	Comments	NONE
15g.	Recommendations	NONE

16. Qualitative Tests

16a. Method Used			
X	Smoke Release		Tyndall Beam

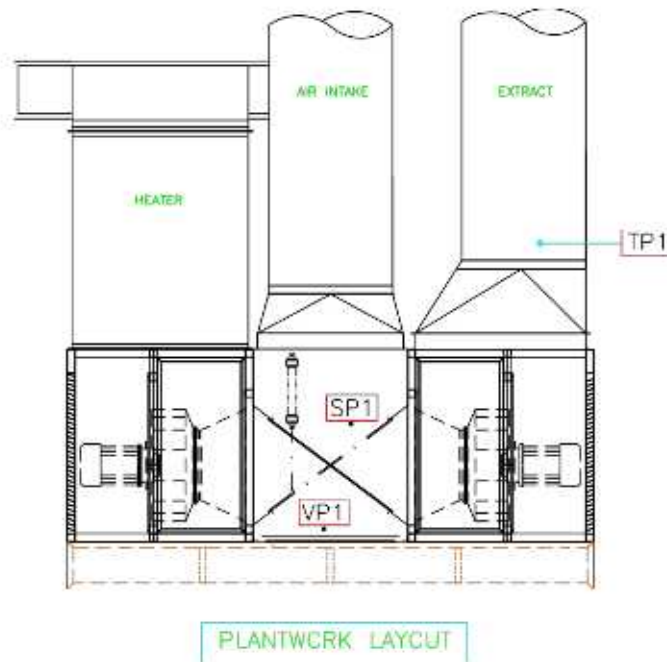
16b.	Qualitative Containment Test Report:	Smoke test confirmed that no contaminants were released into the workshop and were contained by the LEV system. Smoke test evacuation time recorded as 1 minutes 20 seconds, certification to be supplied by Todd Engineering.	
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17. Statement of System Performance Specification

The LEV system performed within the specifications and met the minimum requirements for face velocities and duct transport velocities as stated in HSG258. The qualitative tests confirmed visually that the system was containing the contaminants.

Date Next Test Due	17/05/2021
Test Company	Todd Engineering Ltd
Examiner Name	Adam Turner
Examiner Signature	
Date	22/06/2020

Plantwork Layout



Exhaust Filter Velocity Grid





CAUTION

Smoke Test Clearance Time

Spraybooth ID: Todd/Hercules (4)
Certificate Number: ST0015
Test Date: 18th May 2020
Test Due: 17th May 2021
Tested By: M. Hewkin
Location: C. Waltons Ltd
PE28 2EA

Until Clearance Time has elapsed

1. Do not enter booth without wearing RPE.
2. Do not remove any RPE when in the booth.
3. Be aware of the hidden risk of inhaling Isocyanate.

Complies with guidelines as issued by Health & Safety Executive and Fire & Environmental Department.

1 Minute(s) 20 Seconds

APPROVED SIGNATORY



A. TURNER
Service Manager



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