

Summary Report for Boiler Efficiency Testing and Other Faults 2015
(Permit Ref 2.2.8 and Variation V003, Table S2)

Emission point A35 Factory No.1 Hydro setting oven lane 1 - Copy of report provided.
No faults identified and boiler efficiency satisfactory. **Complete.**

Emission point A36 Factory No.1 Hydro setting oven lane 2 - Copy of report provided.
No faults identified and boiler efficiency satisfactory. **Complete.**

Emission point A38 Factory No.2 Pellet Caster, Gas Burner Stack No.1 - Copy of report provided.
No faults identified and boiler efficiency satisfactory. **Complete.**

Emission point A39 Factory No.2 Pellet Caster, Gas Burner Stack No.2 - Copy of report provided.
No faults identified and boiler efficiency satisfactory. **Complete.**

Emission point A46 Factory No.1 Gas Drying Oven No.1 Burner - Copy of report provided.
No faults identified and boiler efficiency satisfactory. **Complete.**

Emission point A48 Factory No.1 Gas Drying Oven No.2 Burner - Copy of report provided.
No faults identified and boiler efficiency satisfactory. **Complete.**

Emission point A50 Factory No.1 Gas Drying Oven No.3 Burner - Copy of report provided.
Not in service, awaiting the fitting of a new combustion chamber.

Emission point A52 Factory No.1 Gas Drying Oven No.9 Burner - Copy of report provided.
No faults identified and boiler efficiency satisfactory. **Complete.**

Emission point A54 Factory No.1 Gas Drying Oven No.10 Burner - Copy of report provided.
No faults identified and boiler efficiency satisfactory. **Complete.**

Emission point A57 Factory No.3 South East, Combat Heater No.2 - Copy of report provided.
No faults identified and boiler efficiency satisfactory. **Complete.**

Emission point A58 Factory No.3 North East Combat Heater No.3 - Copy of Report provided.
Not in service, awaiting parts.

Emission point A62 Factory No.1 Hydro setting oven lanes 3 and 4 - Copy of Report provided.
No faults identified and boiler efficiency satisfactory. **Complete.**

Emission point A63 Factory No.2 Combat Heater No.5 - Copy of Report provided.
No faults identified and boiler efficiency satisfactory. **Complete.**

Note:

Due to the characteristics of the equipment listed below, conventional combustion analysers are not suited to the application.

Emission points A10 Factory No.1 Grid Casting Aging Oven No. 1.

Emission points A21 Factory No.1 Grid Casting Aging Oven No. 2.

Emission point A44 Factory No.1 Flash Drying Oven No.2.

Emission point A45 Factory No.1 Flash Drying Oven No.3.

Emission point A61 Factory No.1 Dross Recycling Burner.

The following have been decommissioned therefore are not subject to annual testing:-

Emission point A56 Factory No.3 South West, Combat Heater No.1, - Not in service. Decommissioned.

Emission point A59 Factory No.2 0.85MW_{th} Steam Boiler - No report provided. Not in service.

Emission point A60 Factory No.2 1.75MW_{th} Steam Boiler - No report provided. Not in service.

Emission point A64 Factory No.1 Previously Combat Heater No.5 – Unit transferred to emission point A63.

Installer Ref No:

063707

PLANT COMMISSIONING/SERVICING RECORD (NON-DOMESTIC)



To confirm the validity of the gas operative please contact Gas Safe Register on Tel: 0800 408 5500

Registered Business: TREMORCA LIMITED
Address: CYPRUS HOUSE PASCAL CLOSE
ST MELLONS CARDIFF
Postcode: CF3 0LW
Tel No: 029 20 330000

Registration No: 192725
Operative licence No: 3591258
Date: 17/11/15
Print Name: C JENKINS
Position held: CONTRACTS MANAGER

Job address:
Name: YUASA BATTERY
Address: UNIT 22 RAYSON IND. EST.
EBBW VALE
Postcode: NP23 5SD Tel No: 01495 354000
Received by (signature): _____

Client details if different:
Name: N/A
Address: _____
Postcode: _____ Tel No: _____

Appliance details	No. 1 <u>38</u>	No. 2 <u>39</u>	No. 3 <u>63</u>
Location:	<u>FACTORY 2</u>	<u>FACTORY 2</u>	<u>FACTORY 2 (No 2)</u>
Type:	<u>PELLET CASTLE 1</u>	<u>PELLET CASTLE 2</u>	<u>COMBAT HEATER</u>
Model:	<u>FMP 10</u>	<u>FBR</u>	<u>930</u>
Serial No:	<u>N/A</u>	<u>---</u>	<u>N/A</u>
Burner manufacturer (if different):	<u>NU-WAY</u>	<u>FBR</u>	<u>N/A</u>
Flue type:	<u>CONVENTIONAL</u>	<u>CONVENTIONAL</u>	<u>CONVENTIONAL</u>

Combustion checks

Appliance No.	No.1		No.2		No.3	
Firing mode	Low	High	Low	High	Low	High
Heat input rating (kW)						
Gas burner pressure (mbar)		<u>6.8</u>		<u>7.0</u>		<u>0.2</u>
Gas rate (m³/hr)						<u>(0.15)</u>
Air/gas ratio control setting						
Ambient (room) temperature (°C)						
Flue gas temperature (°C)						
Flue gas temperature net (°C)						
Flue draught pressure (mbar)						
Oxygen (O₂) %						
Carbon Monoxide (CO) ppm						
Carbon Dioxide (CO₂) %						
NO _x %						
Excess air %						
CO/CO₂ - Ratio						
Gross efficiency %						
CO flue dilution ppm						

General safety checks (Yes/No/NA)

Gas booster(s)/compressor(s) operating correctly?	<u>N/A</u>
Gas installation tightness test carried out (if Yes, see separate form)?	<u>N/A</u>
Gas installation pipework adequately supported?	<u>YES</u>
Gas installation pipework sleeved/labelled/painted as necessary?	<u>YES</u>
Chimney system installed in accordance with appropriate standards?	<u>N/A</u>
Chimney outlet termination(s) satisfactory?	<u>N/A</u>
Fan-flue interlock operating correctly?	<u>N/A</u>

Ventilation type - Natural (go to item 1.) Mechanical (go to item 2.)

1. Room/boiler room/enclosure	low-level free area (cm²)	<u>N/A</u>
	high-level free area (cm²)	<u>N/A</u>
Is ventilation satisfactory Yes/No? (if No, see Details of remedial work required)		<u>YES</u>
2. Mechanical ventilation flow rate	inlet (m³/s)	<u>N/A</u>
	extract (m³/s)	<u>N/A</u>
Mechanical ventilation interlock operating correctly?		<u>N/A</u>
Is ventilation satisfactory Yes/No? (if No, see Details of remedial work required)		<u>YES</u>

Details of work carried out

QUARTERLY SERVICE.
ANNUAL SERVICE (COMBAT HTG)

Additional checks (Yes/No/NA)	No.1	No.2	No.3
Flue flow test satisfactory?	<u>✓</u>	<u>✓</u>	<u>✓</u>
Spillage test satisfactory?	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Ventilation satisfactory (see also Ventilation type)?	<u>✓</u>	<u>✓</u>	<u>✓</u>
Air/gas pressure switch operating correctly?	<u>✓</u>	<u>✓</u>	<u>✓</u>
Flame proving/safety devices operating correctly?	<u>✓</u>	<u>✓</u>	<u>✓</u>
Burner lock-out time (seconds)	<u>>1</u>	<u>>1</u>	<u>>14</u>
Temperature and limit thermostats operating correctly?	<u>✓</u>	<u>✓</u>	<u>✓</u>
Appliance serviced?	<u>✓</u>	<u>✓</u>	<u>✓</u>

Safety Information (Yes/No)

Has a Warning/Advice Notice been raised?	<u>NO</u>
Have warning labels been attached?	
Has responsible person been advised?	

DECLARATION OF GAS SAFETY - I confirm that all of the above work described on this form has been satisfactorily completed in accordance with the current Gas Safety (Installation and Use) Regulations, standards and procedures.

Gas operative's signature _____

K455 V 1.85B
 TREMORFA Ltd.
 02920 330000
 SERIAL NO. 182813104
 DATE 18/11/15
 TIME 08:47:08

COMBUSTION
 FUEL NAT GAS
 O2 % 10.7
 CO2 % 5.8
 CO PPM 22
 FLUE °C 425.0
 INLET °C 17.1
 NETT °C 407.9
 EFF (C) 72.6
 LOSSES 27.4
 XAIR % 104.9
 Cal. due on 20/07/16
 CO/CO2 0.0003
 PRS mbar 0.00

YUNSA BATTERY
 Customer
 Appliance
 VALLET CASTER N°1
 Ref.
 A38

K455 V 1.85B
 TREMORFA Ltd.
 02920 330000
 SERIAL NO. 182813104
 DATE 18/11/15
 TIME 08:43:19

COMBUSTION
 FUEL NAT GAS
 O2 % 8.3
 CO2 % 7.1
 CO PPM 17
 FLUE °C 384.2
 INLET °C 17.1
 NETT °C 367.1
 EFF (C) 80.0
 LOSSES 20.0
 XAIR % 65.8
 Cal. due on 20/07/16
 CO/CO2 0.0002
 PRS mbar 0.00

YUNSA BATTERY
 Customer
 Appliance
 VALLET CASTER N°2
 Ref.
 A39

K455 V 1.85B
 TREMORFA Ltd.
 02920 330000
 SERIAL NO. 182813104
 DATE 18/11/15
 TIME 08:44:25

COMBUSTION
 FUEL NAT GAS
 O2 % 8.6
 CO2 % 7.0
 CO PPM 20
 FLUE °C 402.5
 INLET °C 17.1
 NETT °C 385.4
 EFF (C) 78.5
 LOSSES 21.5
 XAIR % 69.9
 Cal. due on 20/07/16
 CO/CO2 0.0002
 PRS mbar 0.00

YUNSA BATTERY
 Customer
 Appliance
 COMBAX HTL N°2
 Ref.
 A63

Installer Ref No:

063707

PLANT COMMISSIONING/SERVICING RECORD (NON-DOMESTIC)



To confirm the validity of the gas operative please contact Gas Safe Register on Tel: 0800 408 5500

Registered Business: TREMORFA LIMITED

Address: CYPRESS HOUSE

PASCAL CLOSE CARDIFF

Postcode: CF3 0LW

Tel No: 029 20 3300 00

Registration No: 192725

Operative licence No: 3591258

Date: 17/11/15

Print Name: C JENKINS

Position held: CONTRACTS MANAGER

Job address:

Name: YUASA BATTERY

Address: UNIT 22 RABBIT IND. EST.

ERBBY VALE

Postcode: NP23 5SD Tel No: 01495 354000

Received by (signature):

Client details if different:

Name: N/A

Address:

Postcode: Tel No:

Appliance details	No. 1 <u>46</u>	No. 2 <u>48</u>	No. 3 <u>50</u>
Location:	<u>FACTORY ONE</u>	<u>FACTORY ONE</u>	<u>FACTORY ONE</u>
Type:	<u>CURING OVEN No 1</u>	<u>CURING OVEN No 2</u>	<u>CURING OVEN No 3</u>
Model:	<u>TC WILLIAMS</u>	<u>TC WILLIAMS</u>	<u>TC WILLIAMS</u>
Serial No:	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Burner manufacturer (if different):	<u>WHIRLWIND 5</u>	<u>WHIRLWIND 5</u>	<u>WHIRLWIND 5</u>
Flue type:	<u>CONVENTIONAL</u>	<u>CONVENTIONAL</u>	<u>CONVENTIONAL</u>

Combustion checks

Appliance No.	No.1		No.2		No.3	
Firing mode	Low	High	Low	High	Low	High
Heat input rating (kW)						
Gas burner pressure (mbar)	<u>4.1</u>		<u>4.8</u>		<u>5.2</u>	
Gas rate (m³/hr)						
Air/gas ratio control setting						
Ambient (room) temperature (°C)						
Flue gas temperature (°C)						
Flue gas temperature net (°C)						
Flue draught pressure (mbar)						
Oxygen (O₂) %						
Carbon Monoxide (CO) ppm						
Carbon Dioxide (CO₂) %						
NO _x %						
Excess air %						
CO/CO₂ - Ratio						
Gross efficiency %						
CO flue dilution ppm						

Additional checks (Yes/No/NA)

	No.1	No.2	No.3
Flue flow test satisfactory?	<u>✓</u>	<u>✓</u>	<u>✓</u>
Spillage test satisfactory?	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Ventilation satisfactory (see also Ventilation type)?	<u>✓</u>	<u>✓</u>	<u>✓</u>
Air/gas pressure switch operating correctly?	<u>✓</u>	<u>✓</u>	<u>✓</u>
Flame proving/safety devices operating correctly?	<u>✓</u>	<u>✓</u>	<u>✓</u>
Burner lock-out time (seconds)	<u>> 1</u>	<u>> 1</u>	<u>> 1</u>
Temperature and limit thermostats operating correctly?	<u>✓</u>	<u>✓</u>	<u>✓</u>
Appliance serviced?	<u>✓</u>	<u>✓</u>	<u>✓</u>

Safety Information (Yes/No)

Has a Warning/Advice Notice been raised?	<u>NO</u>
Have warning labels been attached?	
Has responsible person been advised?	

General safety checks (Yes/No/NA)

Gas booster(s)/compressor(s) operating correctly?	<u>N/A</u>
Gas installation tightness test carried out (if Yes, see separate form)?	<u>N/A</u>
Gas installation pipework adequately supported?	<u>YES</u>
Gas installation pipework sleeved/labelled/painted as necessary?	<u>YES</u>
Chimney system installed in accordance with appropriate standards?	<u>N/A</u>
Chimney outlet termination(s) satisfactory?	<u>N/A</u>
Fan-flue interlock operating correctly?	<u>N/A</u>

Ventilation type - Natural (go to item 1.) Mechanical (go to item 2.)

1. Room/boiler room/enclosure	low-level free area (cm²)	<u>N/A</u>
	high-level free area (cm²)	<u>N/A</u>
Is ventilation satisfactory Yes/No? (if No, see Details of remedial work required)		<u>YES</u>
2. Mechanical ventilation flow rate	inlet (m³/s)	<u>N/A</u>
	extract (m³/s)	<u>N/A</u>
Mechanical ventilation interlock operating correctly?		<u>N/A</u>
Is ventilation satisfactory Yes/No? (if No, see Details of remedial work required)		<u>YES</u>

Details of work carried out

<u>QUARTERLY SERVICE</u>

Details of remedial work required

<u>OVEN No 3 REQUIRE ATTENTION</u>
<u>COMBUSTION CHAMBER BURNT OUT.</u>

DECLARATION OF GAS SAFETY - I confirm that all of the above work described on this form has been satisfactorily completed in accordance with the current Gas Safety (Installation and Use) Regulations, standards and procedures.

Gas operative's signature

[Signature]

K455 V 1.85B

TREMORFA Ltd.
02920 330000

SERIAL NO. 182813104

DATE 08/11/15
TIME 11:30:21

COMBUSTION

FUEL	NAT	GAS
O2 %	7.1	
CO2 %	7.9	
CO ppm	26	
FLUE °C	215.2	
INLET °C	16.4	
NETT °C	198.8	
EFF (C)	90.1	
LOSSES	9.9	
XAIR %	51.4	
Cal. due on 20/07/16		
CO/CO2	0.0003	
PRS mbar	0.00	

YUNSA BATTERY
Customer
OVEN N° 1
Appliance
A46

K455 V 1.85B

TREMORFA Ltd.
02920 330000

SERIAL NO. 182813104

DATE 08/11/15
TIME 10:04:47

COMBUSTION

FUEL	NAT	GAS
O2 %	7.1	
CO2 %	7.8	
CO ppm	25	
FLUE °C	240.1	
INLET °C	18.2	
NETT °C	221.9	
EFF (C)	89.0	
LOSSES	11.0	
XAIR %	51.4	
Cal. due on 20/07/16		
CO/CO2	0.0003	
PRS mbar	-0.00	

YUNSA BATTERY
Customer
OVEN N° 2
Appliance
A48

K455 V 1.85B

TREMORFA Ltd.
02920 330000

SERIAL NO. 182813104

DATE 07/11/15
TIME 12:06:46

COMBUSTION

FUEL	NAT	GAS
O2 %	5.9	
CO2 %	8.5	
CO ppm	10	
FLUE °C	240.0	
INLET °C	21.2	
NETT °C	218.8	
EFF (C)	90.0	
LOSSES	10.0	
XAIR %	39.3	
Cal. due on 20/07/16		
CO/CO2	0.0001	
PRS mbar	-0.00	

YUNSA BATTERY
Customer
OVEN N° 3
Appliance
A50

Installer Ref No:

003707

PLANT COMMISSIONING/SERVICING RECORD (NON-DOMESTIC)



To confirm the validity of the gas operative please contact Gas Safe Register on Tel: 0800 408 5500

Registered Business: TREMORA LIMITED

Address: CYPRESS HOUSE

PASCAL CLOSE CARDIFF

Postcode: CF3 9LW

Tel No: 029 20 330000

Registration No: 192725

Operative licence No: 3591258

Date: 17/11/15

Print Name: C JENKINS

Position held: CONTRACTS MANAGER

Job address:

Name: YASA BATTERY

Address: UNIT 22 RASAU IND. EST.

ERBBW VALE

Postcode: NP23 5SD

Tel No: 01495 354000

Received by (signature):

Client details if different:

Name: N/A

Address:

Postcode:

Tel No:

Appliance details

	No. 1 52	No. 2 54	No. 3
Location:	FACTORY ONE	FACTORY ONE	
Type:	CURING OVEN NO 9	CURING OVEN NO 10	
Model:	TC WILLIAMS	TC WILLIAMS	
Serial No:	N/A	N/A	
Burner manufacturer (if different):	WHIRLWIND 5	WHIRLWIND 5	
Flue type:	CONVENTIONAL	CONVENTIONAL	

Combustion checks

Appliance No.	No.1		No.2		No.3	
Firing mode	Low	High	Low	High	Low	High
Heat input rating (kW)						
Gas burner pressure (mbar)		5.6		4.9		
Gas rate (m³/hr)						
Air/gas ratio control setting				SEE		
Ambient (room) temperature (°C)				REACHED COMBUSTION		
Flue gas temperature (°C)				ANALYSIS		
Flue gas temperature net (°C)						
Flue draught pressure (mbar)						
Oxygen (O₂) %						
Carbon Monoxide (CO) ppm						
Carbon Dioxide (CO₂) %						
NO _x %						
Excess air %						
CO/CO₂ - Ratio						
Gross efficiency %						
CO flue dilution ppm						

Additional checks (Yes/No/NA)

	No.1	No.2	No.3
Flue flow test satisfactory?	✓	✓	
Spillage test satisfactory?	NA	NA	
Ventilation satisfactory (see also Ventilation type)?	✓	✓	
Air/gas pressure switch operating correctly?	✓	✓	
Flame proving/safety devices operating correctly?	✓	✓	
Burner lock-out time (seconds)	>1	>15	
Temperature and limit thermostats operating correctly?	✓	✓	
Appliance serviced?	✓	✓	

Safety Information (Yes/No)

Has a Warning/Advice Notice been raised? NO

Have warning labels been attached?

Has responsible person been advised?

If Warning/Advice Notice issued, insert Serial No*

General safety checks (Yes/No/NA)

Gas booster(s)/compressor(s) operating correctly?	N/A
Gas installation tightness test carried out (if Yes, see separate form)?	N/A
Gas installation pipework adequately supported?	YES
Gas installation pipework sleeved/labelled/painted as necessary?	YES
Chimney system installed in accordance with appropriate standards?	N/A
Chimney outlet termination(s) satisfactory?	N/A
Fan-flue interlock operating correctly?	N/A

Ventilation type – Natural (go to item 1.) Mechanical (go to item 2.)

1. Room/boiler room/enclosure	low-level free area (cm²)	N/A
	high-level free area (cm²)	N/A
Is ventilation satisfactory Yes/No? (if No, see Details of remedial work required)		YES
2. Mechanical ventilation flow rate	inlet (m³/s)	N/A
	extract (m³/s)	N/A
Mechanical ventilation interlock operating correctly?		N/A
Is ventilation satisfactory Yes/No? (if No, see Details of remedial work required)		YES

Details of work carried out

QUARTERLY SERVICE

Details of remedial work required

DECLARATION OF GAS SAFETY – I confirm that all of the above work described on this form has been satisfactorily completed in accordance with the current Gas Safety (Installation and Use) Regulations, standards and procedures.

Gas operative's signature

K455 V 1.85B

TREMORFA Ltd.
02920 330000

SERIAL NO. 182813104

DATE 05/11/15
TIME 11:11:42

COMBUSTION

FUEL	NAT	GAS
O2 %		4.4
CO2 %		9.3
CO ppm		14
FLUE °C	211.3	
INLET °C	21.7	
NETT °C	189.6	
EFF (C)	92.1	
LOSSES	7.9	
XAIR %	26.6	

Cal. due on 20/07/16		

CO/CO2	0.0001	

PRS mbar	-0.00	

YUASA BATTERY
Customer
OVEN No 10
Appliance

Ref. ASL

■

K455 V 1.85B

TREMORFA Ltd.
02920 330000

SERIAL NO. 182813104

DATE 05/11/15
TIME 11:39:24

COMBUSTION

FUEL	NAT	GAS
O2 %		6.9
CO2 %		8.0
CO ppm		11
FLUE °C	201.8	
INLET °C	21.1	
NETT °C	180.7	
EFF (C)	91.1	
LOSSES	8.9	
XAIR %	49.2	

Cal. due on 20/07/16		

CO/CO2	0.0001	

PRS mbar	0.00	

YUASA BATTERY
Customer
OVEN No 9
Appliance

Ref. ASZ

I: 0800 408 5500

2725
366284
-11-15
J. HEALEY
ENGINEER

Job address:

Name: Ynasa Battery
Address: Rassau Ind. Estate
Ebbw Vale

Postcode: _____ Tel No: _____

Received by (signature): _____

Client details if different:

Name: _____

Address: _____

Postcode: _____ Tel No: _____

Appliance details

	No. 2 AS7	No. 3 AS8	No. 3
Location:	<u>Factory 3</u>	<u>Factory</u>	
Type:	<u>Warm Air Heater</u>	<u>Warm Air Heater</u>	
Model:	<u>Combat</u>	<u>Combat</u>	
Serial No:	<u>306</u>	<u>306</u>	
Burner manufacturer (if different):	<u>—</u>	<u>—</u>	
Flue type:	<u>open balanced</u>	<u>balanced</u>	

Combustion checks

Appliance No.	No.1		No.2		No.3	
Firing mode	Low	High	Low	High	Low	High
Heat input rating (kW)		<u>88</u>		—		
Gas burner pressure (mbar)		<u>7.1</u>		—		
Gas rate (m³/hr)		—		—		
Air/gas ratio control setting		—		—		
Ambient (room) temperature (°C)		<u>15.2</u>		—		
Flue gas temperature (°C)		<u>393.6</u>		—		
Flue gas temperature net (°C)		<u>378.4</u>		—		
Flue draught pressure (mbar)		—		—		
Oxygen (O₂) %		<u>7.9</u>		—		
Carbon Monoxide (CO) ppm		<u>36</u>		—		
Carbon Dioxide (CO₂) %		<u>7.4</u>		—		
NO _x %		—		—		
Excess air %		<u>60.7</u>		—		
CO/CO₂ - Ratio		<u>0.0004</u>		—		
Gross efficiency %		<u>79.7</u>		—		
CO flue dilution ppm		—		—		

Additional checks (Yes/No/NA)

	No.1	No.2	No.3
Flue flow test satisfactory?	<u>Y</u>	<u>N</u>	
Spillage test satisfactory?	<u>Y</u>	<u>N</u>	
Ventilation satisfactory (see also Ventilation type)?	<u>Y</u>	<u>N</u>	
Air/gas pressure switch operating correctly?	<u>Y</u>	<u>N</u>	
Flame proving/safety devices operating correctly?	<u>Y</u>	<u>N</u>	
Burner lock-out time (seconds)	<u>10</u>	<u>N</u>	
Temperature and limit thermostats operating correctly?	<u>Y</u>	<u>N</u>	
Appliance serviced?	<u>Y</u>	<u>N</u>	

Safety Information (Yes/No)

Has a Warning/Advice Notice been raised?	<u>NO</u>	—
Have warning labels been attached?	—	
Has responsible person been advised?	—	

If Warning/Advice Notice issued, insert Serial No*

General safety checks (Yes/No/NA)

Gas booster(s)/compressor(s) operating correctly?	<u>Y</u>
Gas installation tightness test carried out (if Yes, see separate form)?	<u>Y</u>
Gas installation pipework adequately supported?	<u>Y</u>
Gas installation pipework sleeved/labelled/painted as necessary?	<u>Y</u>
Chimney system installed in accordance with appropriate standards?	<u>Y</u>
Chimney outlet termination(s) satisfactory?	<u>Y</u>
Fan-flue interlock operating correctly?	<u>Y</u>

Ventilation type – Natural (go to item 1.) Mechanical (go to item 2.)

1. Room/boiler room/enclosure	low-level free area (cm²)	
	high-level free area (cm²)	
Is ventilation satisfactory Yes/No? (if No, see Details of remedial work required)		<u>Yes</u>
2. Mechanical ventilation flow rate	inlet (m³/s)	
	extract (m³/s)	
Mechanical ventilation interlock operating correctly?		
Is ventilation satisfactory Yes/No? (if No, see Details of remedial work required)		

Details of work carried out

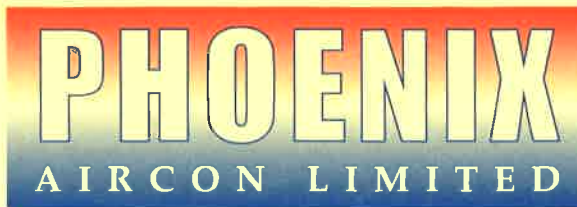
<u>Annual service</u>

Details of remedial work required

<u>NO3 not working due to missing parts and parts disconnected.</u>

DECLARATION OF GAS SAFETY – I confirm that all of the above work described on this form has been satisfactorily completed in accordance with the current Gas Safety (Installation and Use) Regulations, standards and procedures.

Gas operative's signature [Signature]



HEATING, AIR CONDITIONING AND REFRIGERATION ENGINEERS

CLIENT: <u>WJASO PATRICK</u> SITE LOCATION: <u>WJASO PATRICK</u> CONTACT: <u>WJASO PATRICK</u>	ARR. TIME: <u>2.30</u> DEP. TIME: <u>4.30</u> NORMAL HRS: <u>18</u> TRAVEL HRS: <u>1</u> ABNORMAL HRS: <u> </u> TRAVEL HRS: <u> </u> TOTAL HRS: <u>26 x 2</u> MILEAGE: <u>30 x 2</u>	SAT: <u> </u> SUN: <u> </u> ENGINEER: <u>J. L. & B. S.</u> DATE: <u>24-10-15</u> VEHICLE REG: <u>CG14 YCA</u> Work Complete? YES ☒ NO ☐ Separate Report? YES ☒ NO ☐ CHECK DATE: <u> </u>
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REPORT:

Model:
Serial No:
Location:

20467

WJASO PATRICK WJASO PATRICK WJASO PATRICK

ASS A36 A62

OVEN No 1 OVEN No 2 OVEN No 3

CO. RAM. 2.7% CO. 32.000 CO. 2.0 RAM.

CO2 2.7% CO2 4.2% CO2 3.7%

RAT 0.000 RAT 0.000 RAT 0.000

D2 14.9% D2 15% D2 4.9%

XSH 2.7% XSH 2.7% XSH 2.7%

MATERIALS USED				
Order Number	Supplier	Details	£	p
MATERIAL TOTAL				

MATERIALS REQUIRED: ENGINEER'S SIGNATURE: <u> </u>
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SUMMARY OF CHARGES (For Office use only)		£	p
Normal Hours	@		
Overtime Hours	@		
Mates Hours	@		
Mileage	@		
LABOUR TOTAL			
INVOICE TOTAL			
CLIENT'S SIGNATURE: <u> </u>			



Blue -

Retail

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Lead Extraction and Current Status as at November 2015

Dept	Process Served	Stack No.	Status	Number of Emission Points	Substance Extracted	Permit ELV
Factory 2	Oxide Mill No. 4	A1	In use	1	Lead	0.5 mg m ⁻³
Factory 2	Oxide Mill No. 5	A2	In use	1	Lead	0.5 mg m ⁻³
Factory 1	Casting Off-Cut Hopper	A3	Not in use	1	Lead	0.5 mg m ⁻³
Factory 1	Casting Ladles 1 - 16	A4	In use	1	Lead	0.5 mg m ⁻³
Factory 2	Lead Recycling	A5	In use	1	Lead	0.5 mg m ⁻³
Factory 1	Pasting Machine Mixers 2 & 3	A6	In use	1	Lead	1.0 mg m ⁻³
Factory 1	Expanded Grid Line	A7	In use	1	Lead	2.0 mg m ⁻³
Factory 1	Auto Charging	A8	Not in use	1	Acid Mist	No ELV
Factory 1	Lead Dross and Recycling	A9	In use	1	Lead	0.5 mg m ⁻³
Factory 2	Assembly Line 9A	A11	In use	1	Lead	0.5 mg m ⁻³
Factory 2	Pellet Caster / Small Parts Caster	A12	In use	1	Lead	0.5 mg m ⁻³
Factory 2	Assembly	A13	Not in use	1	Lead	2.0 mg m ⁻³
Factory 2	Assembly Lines 6 - 8 and Vacuum	A14	Not in use	1	Lead	2.0 mg m ⁻³
Factory 2	Assembly	A15	Not in use	1	Lead	0.5 mg m ⁻³
Factory 4	Assembly EN Line Vacuum Stack 1	A16	Not in use	1	Lead	0.5 mg m ⁻³
Factory 4	Assembly EN Line Vacuum Stack 2	A17	Not in use	1	Lead	0.5 mg m ⁻³
Factory 1	Cutting Machines 1 – 7 Vacuum	A18	In use	1	Lead	1.0 mg m ⁻³
Factory 1	Dross Bins 1 – 8	A19	In use	1	Lead	0.5 mg m ⁻³
Factory 2	Oxide Mill No. 6	A20	In use	1	Lead	0.5 mg m ⁻³
Factory 4	Ex New NNP Vacuum	A22	Not in use	1	Lead	2.0 mg m ⁻³
Factory 2	Oxide Mill No. 7	A23	In use	1	Lead	0.5 mg m ⁻³
Factory 2	Assembly Line 9 Extraction	A24	In use	1	Lead	0.5 mg m ⁻³
Factory 2	Assembly Line 9 Vacuum	A25	Not in use	1	Lead	0.5 mg m ⁻³
Factory 1	Casting Pots 1 - 8	A26	In use	1	Lead	0.5 mg m ⁻³

Other Process Extraction and Current Status as at November 2015

Dept	Process Served	Stack No.	Status	Filter Type	Number of Emission Points	LEV or Process	Possible Emissions (process operating temperature)
Factory 1	Grid Casting Aging Oven No.1	A10	In use	N/A	1	200 Ø	Combustion gases (Oven temp 100°C)
Factory 1	Grid Casting Aging Oven No.2	A21	In use	N/A	1	200 Ø	Combustion gases (Oven temp 100°C)
Factory 2	Small Parts Casting Furnace Nos.1, 2 and 3	A 27	In use	HEPA	1	450 Ø	Lead fume if temp above 500°C (470°C)
Factory 2	Cast on strap Line 1	A28	Removed	Mesh filter & electrostatic	0	300 Ø	Oil mist. Lead fume if temp above 500°C (490°C)
Factory 2	Cast on strap Line 2	A29	Removed	Mesh filter & electrostatic	0	300 Ø	Oil mist. Lead fume if temp above 500°C (490°C)
Factory 2	Cast on strap Line 3	A30	Removed	Mesh filter & electrostatic	0	300 Ø	Oil mist. Lead fume if temp above 500°C (490°C)
Factory 2	Cast on strap Line 4	A31	Removed	Mesh filter & electrostatic	0	330 Ø	Oil mist. Lead fume if temp above 500°C (490°C)
Factory 2	Cast on strap Line 5	A32	Removed	Mesh filter & electrostatic	0	330 Ø	Oil mist. Lead fume if temp above 500°C (490°C)
Factory 2	Cast on strap Line 6	A33	Removed	Mesh filter & electrostatic	0	330 Ø	Oil mist. Lead fume if temp above 500°C (490°C)
Factory 2	Cast on strap Line 7	A34	Removed	Mesh filter & electrostatic	0	330 Ø	Oil mist. Lead fume if temp above 500°C (490°C)
Factory 1	Hydro-setting oven Lane 1	A35	In use	N/A	1	200 Ø	Combustion Gases (Oven temp 50°C)
Factory 1	Hydro-setting oven Lane 2	A36	In use	N/A	1	200 Ø	Combustion Gases (Oven temp 50°C)
Factory 1	Pasting Machine No.2 Take-off (Steam)	A37	In use	N/A	1	400 Ø	Steam
Factory 2	Pellet Caster - Gas Burner Stack No.1	A38	In use	N/A	1	300 Ø	Combustion gases
Factory 2	Pellet Caster - Gas Burner Stack No.2	A39	In use	N/A	1	200 Ø	Combustion gases
Factory 2	Oxide Mill No.4 Extraction	A40	In use	N/A	1	450 Ø	Water/moisture
Factory 2	Oxide Mill No.5 Extraction	A41	In use	N/A	1	500 Ø	Water/moisture
Factory 2	Oxide Mill No.6 Extraction	A42	In use	N/A	1	450 Ø	Water/moisture
Factory 2	Oxide Mill No.7 Extraction	A43	In use	N/A	1	500 Ø	Water/moisture
Factory 1	Flash drying oven No 2	A44	In use	N/A	1	600 Ø	Combustion gases
Factory 1	Flash drying oven No 3	A45	In use	N/A	1	600 Ø	Combustion gases
Factory 1	Gas Drying oven No.1 Burner and Steam	A46 & A47	In use	N/A	2	150/250 Ø	Combustion Gases (Oven temp 120 to 130°C)
Factory 1	Gas Drying oven No.2 Burner and Steam	A48 & A49	In use	N/A	2	150/250 Ø	Combustion Gases (Oven temp 120 to 130°C)
Factory 1	Gas Drying oven No.3 Burner and Steam	A50 & A51	In use	N/A	2	150/250 Ø	Combustion Gases (Oven temp 120 to 130°C)
Factory 1	Gas Drying oven No.9 Burner and Steam	A52 & A53	In use	N/A	2	150/250 Ø	Combustion Gases (Oven temp 120 to 130°C)
Factory 1	Gas Drying oven No.10 Burner and Steam	A54 & A55	In use	N/A	2	150/250 Ø	Combustion Gases (Oven temp 120 to 130°C)
Factory 3	Combat Heater No.1 South West	A56	Not in use	N/A	1		Heating combustion gases
Factory 3	Combat Heater No.2 South East	A57	In use	N/A	1		Heating combustion gases
Factory 3	Combat Heater No.3 North East	A58	In use	N/A	1		Heating combustion gases
Factory 2	0.85 MW _{th} Boiler	A59	Not in use	N/A	1		Combustion gases
Factory 2	1.75 MW _{th} Boiler	A60	Not in use	N/A	1		Combustion gases

Other Process Extraction and Current Status as at November 2015

Dept	Process Served	Stack No.	Status	Filter Type	Number of Emission Points	LEV or Process	Possible Emissions (process operating temperature)
Factory 1	Dross Recycling Burner	A61	In use	N/A	1		
Factory 1	Hydro-setting oven Lanes 3 & 4 Steam	A62	In use	N/A	1	200 Ø	Combustion Gases (Oven temp 50°C)
Factory 2	Combat Heater No.5 Warehouse No.2 North East	A63	In use	N/A	1		Heating combustion gases
Factory 1	Transferred to F2 as above, currently no heater fitted.	A64	Not in use	N/A	1		Heating combustion gases
Factory 2	Assembly FT and Line 9A Lid Bonding and Terminal Seal	A65	In use	N/A	1	600 Ø	VOC's
Factory 2	Assembly Line 7 Lid Bonding and Terminal Seal	A66	In use	N/A	1	600 Ø	VOC's
Factory 2	Assembly Line 8 Lid Bonding and Terminal Seal	A67	In use	N/A	1	600 Ø	VOC's
Factory 2	Assembly Line 9 Lid Bonding and Terminal Seal	A68	In use	N/A	1	600 Ø	VOC's
Factory 4	Assembly Line 10 Heat Seal (3 work stations, 1 stack)	A69	In use	Mesh Filters X 3	1	300 Ø	VOC's
Factory 4	Assembly Line 10 Terminal Seal	A70	In use	N/A	1	200 Ø	VOC's
Factory 2	Assembly Ex Lines 1, 2 and 3 Lid Bonding and Terminal Seal	A71	Not in use	N/A	1	600 Ø	VOC's
Factory 2	Assembly Charging Ex Lines 1, 2 and 3	A72	Not in use	N/A	1	600 Ø	Hydrogen Gas
Factory 2	Assembly Charging Lines 7 & 9A	A73	Not in use	N/A	1	600 Ø	Hydrogen Gas
Factory 2	Charging Line 8 Stacks 1	A74	Not in use	N/A	1	600 Ø	Hydrogen Gas
Factory 2	Charging Line 8 Stacks 2	A75	Not in use	N/A	1	600 Ø	Hydrogen Gas
Factory 2	Charging Line 8 Stacks 3	A76	Not in use	N/A	1	600 Ø	Hydrogen Gas
Factory 2	Charging Line 8 Stacks 4	A77	Not in use	N/A	1	600 Ø	Hydrogen Gas
Factory 1	Resin Decanting Room	A78	In use	Mesh Grill	1	100 Ø	VOC's
Factory 1 (Ext.)	Resin Mixing Room	A79	In use	Mesh Filters x2	1	300 Ø	VOC's
Factory 1	Laboratory Fume Cabinet	A80	In use	N/A	1	200 Ø	Chemical Vapour
Factory 1	Laboratory Work Bench	A81	In use	Mesh Grill	1	300 Ø	Chemical Vapour
Factory 1	Laboratory AA Machine	A82	In use	N/A	1	100 Ø	Chemical Vapour
Factory 1 (Ext.)	Water Treatment Plant Work Bench	A83	In use	N/A	1	250 Ø	Chemical Vapour
Factory 2	Welding Room	A84	Occasional Use	N/A	1	150 Ø	Occasional Welding fume
Factory 1	Air intake to No.2 pasting mixer	A85	In use	N/A	1	300 Ø	Fresh air intake to paste mixer.
					Total Number of Emission Points	78	

Associated with Burner Efficiencies

Action Plan - Boiler/Burner Repairs

Updated 19/11/15

[illegible]