

## Herz Boiler Servicing Checklist

<b>Customer Details</b>			
Name	Balmuldy Primary School	City	
Street	Stirling Drive, Bishop Briggs	Postcode	G64 3AJ
Telephone	tbc	E-Mail	tbc
Engineer Name	██████████	Engineer Signature	██████████
Client Name		Client Signature	██████████
Date of Service	31/01/2020	SQU Ref No.	

Time Sheet Table						
Start Travel	Start Time on Site	Finish Time on Site	Finish Travel	Start Mileage	Finish Mileage	Date
10:00	10:00	16:30	18:37	0	83	31/01/2020

<b>Installers Details</b>			
Name	Alternative Heat	City	Banbridge
Street	Unit 18-19 Scarva rd Ind Est	Postcode	BT32 3QD
Telephone	02843 770700	E-Mail	info@alternativeheat.co.uk

<b>Product information</b>			
Product Type	Pellet Boiler		
Model Type	Firematic		
Model Number	301	Serial Number	1624101884/2016
Manufacture No.			
Filling System	Rigid Auger		

<b>Pre Boiler Service Checks</b>	
Checked hydraulic connections for correct installation?	✓
Main electric supply correct?	✓
Fuel Level	70%
Have you signed in before starting works	✓

## Herz Boiler Servicing Checklist

Hours		
<b>Controller Type:</b>	touch	<b>Hour</b>
Boiler Hours at 100 %:	Nominal Load	176.2
Boiler Hours 60-99 %:	Modulation	820.1
Boiler Hours 30-59 %:	Part Load	88.9
Burn Out:	Scorch / Burn Out	504.4
HoursAtThisService	HoursAtThisService	1589.6
Run Time	Run Time	1589.6
Last Service Hours	Last Service Hours	

Discharge system	Action	Comments
Gear box, bolts, oil and gaskets	Checked	
Agitator disc	N/A	no access
Console, connections and bushes	Checked	
Discharge - screw, cover	Checked	
Discharge - wear and coupling	Checked	
Cover lid and gasket	Checked	
Discharge - motor, gasket and oil tight	Checked	
Discharge - spring, bolting, wear	Checked	
Tighten and grease chain	Checked	
Condition of sprockets	Checked	
Stoker	Action	Comments
Stoker motor - check gasket and gearbox free of from oil leaks	Checked	
Stoker - screw, wear	Checked	
Stoker bearings checked and greased (FM130 and larger)	Checked	
Check 16 $\mu$ F till FM 201 (at 20-35 kW 12 $\mu$ F) change if value decrease by 30%	N/A	
Adjust BFP Gasket and carry out paper test	Checked & Cleaned	
Extinguishing device, temperature sensor, etc.	Checked	

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Stoker pipe, inspection for leaks and wear	Checked	
Check ignition pipe, clean if necessary	Checked & Cleaned	
Check connection gaskets	Checked	
Tighten and grease chain (from FM 130)	Checked	
Check with office for latest tech updates	Checked	
Check condition of sprockets (FM130 and larger)	Checked	
Check stoker tube insulation jacket is in place and sound	Checked	
Check all auxiliary wiring is clear from stoker tubes & pot	Checked	
Check all auxiliary wiring is terminated on outside of support frame (not over stoker tube)	Checked	

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Combustion Chamber	Action	Comments
Check combustion chamber body for visible damage	Checked & Cleaned	
Secondary air holes (1+2)	Checked & Cleaned	
Combustion chamber gaskets	Checked	
Check and lubricate tipping grate drive linkage	Checked	
Check condition of connecting clevis bolt and replace as necessary	N/A	
Check positioning and operation of inductive sensor	Checked	
Grate elements, air holes, wearing, scaling, ease of movement (from FM 80)	Checked & Cleaned	
Clean combustion chamber bricks	Checked & Cleaned	
Ash discharge, hopper lid gasket, screw	Checked	
Scraper floor, deformation, ease of movement (from FM 80)	Checked & Cleaned	
Ash discharge, wearing, support, leak free	Checked	
Check condition of flights at tip of ash discharge auger	Checked	
Check operation of ash monitoring induction sensor	Checked	
Check condition of ash auger drive bearings and bushes	Checked	
Check combustion chamber bricks, wear	Checked	
Check bypass flap closing correct and condition of damper rope seal	N/A	
Moving grate drive unit, deformation (from FM 80) check condition of spilt pin/clevis connecting bolts and replace as necessary, grease joint heads on left/right floor	Checked	
Drives & floor scraper drive (BF500+)	N/A	
Drive unit pushing moving grate	Checked	
Tipping grate drive unit	Checked	
Ash hopper leak free	Checked	
Check condition & clean combustion run sensor	Checked & Cleaned	



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Check ash screw and sluice box for wear and build-up of clinker	Checked	
Motor leak free	Checked	
Push up bin air tightness	Checked	
<b>Ignition Fan</b>	<b>Action</b>	<b>Comments</b>
Check operation of ignition gun	Checked	
Clean ignition pipe	Checked & Cleaned	
Check clean photo sensor	Checked & Cleaned	

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Heat Exchanger	Action	Comments
Check heat exchanger body for visible damage	Checked & Cleaned	
Motor, chain (if necessary tighten), bearing bush	Checked	
Fly ash discharge, wearing	Checked & Cleaned	
Check turbulators + support basket	Checked & Cleaned	
Drive lever, bearing	Checked	
Ash hopper leak free	Checked	
Check and clean ID fan	Checked & Cleaned	
Check HEC lid is securely fastened on completion of works	Checked	
Check HEC lid, heat block & rope gasket is sound	Checked	
Control Box	Action	Comments
Check operation of power contactor and motor contactors	Checked	
Wiring, clamps - tighten screws	Checked	
Power board - check for dust & loose connection	Checked & Cleaned	
Temperature sensors - check accuracy	Checked	
Flue gas sensor - check accuracy & condition	Checked	
Lambda probe - check & calibrate	Checked & Cleaned	
Light barrier sensor (stoker and discharge) check operation	Checked	
Under pressure measure cell (clean under pressure hose)	N/A	
Function test relays for moving grate and ash scraper floor drives	Checked	
Accessories	Action	Comments
Check + function test thermal valve for security heat exchanger		
Check flue gas dust extractor, motors and cyclone		
Exhaust gas fan		



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Update software version to		
Check software settings		
Execute emission measurement		

## Herz Boiler Servicing Checklist

Safety Checks	Action	Comments
Check set temp of high limit stat is in line with operating software	Checked	
Burn back flap motor limit switch protection (check inputs)	Checked	
Check operation of quench valve on stoker	Checked	
Check operation of heat exchanger quench valve	Checked	
All sensors checked function	Checked	
Function fault signal relay checked	Checked	
Check operation of fuel storage quench valve - released >70oC and fault signal relay operating	N/A	
All motor overloads proven against motor rating as stated	Checked	
End switch feed auger checked	Checked	
General	Action	Comments
Remove & Dispose of Ash	Yes	no access
Heat Meter	OKwh	
Heat Meter flow rate	0	

Spares					
Quantity	Part No.	Part Description	Fitted	Required	Status
1	misc	230v 8a relay	Yes	N/A	

General Comment (info only)



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Remedial Actions (completed works or to be actioned)
replace back flow pump relay

Test Report			
Flue Gas Readings			
Combustion Temp	694 °C	Water Temp	74 °C
CO	72 ppm	CO2	11.5 %
O2	9.4 %	Flue Gas Temperature	152.1 °C
Ratio	0.0006		

Flue Gas Print Out (Photo 1)



Flue Gas Print Out (Photo 2)

