APPENDIX C SERVICE ENGINEERS COMMENTS

To: Roger Hill  
From: Len Eastell  
Company: Advantica  
Date: 20/7/01

Subject: Comments on procedures for checking for leaks in Seals of Room Seal Appliances

Were the procedures clear?  Yes

Were the procedures easy to use?  Yes

Was a leak detected?  Yes

Which method was most successful?  Smoke Tube

Are there better methods for finding these leaks?  Sometimes a naked flame on a long pole can be used if it is
            shadowed quite easily by a leak.

How often do you find leaks in seals?  Y/N  

Please give other comments on the procedure:  The Tekcopa did not register the leak which was picked up by
            the smoke tube and matchbox. Was this because it was detecting air
            rather than flare gas emissions?
To: Roger Hill
From: D. Hartlebury
Company: C5
Date: 26th July 2001

Comments on procedures for checking for Leaks in Sealed Room Sealed Appliances

Were the procedures clear? Yes
Were the procedures easy to use? Yes
Was a leak detected? Yes

Which method was most successful? Smoke Tube & Smoke Mover

Are there better methods for finding these leaks? No

How often do you find leaks in sealers? 4-6 times

Please give other comments on the procedures

START WITH CASING OW

D. Hartlebury, Certification Services, 26th July 2001
To: Roger Hill
From: D. Shipman
Company: Advantica
Date: 26/7/2001

Re: Comments on procedures for checking for Leaks in Sealed Room Sealed Appliances

Wore the procedure clear? Yes

Wore the procedure easy to use? Yes

Was a leak detected? Yes

Which method was most successful? Puffer

Are there better methods for finding these leaks? Probably not

How often do you find leaks in service? Frequently

Please give other comments on the procedure: None.

Figure C3 D. Shipman, Certification Services, 26th July 2001
To: Roger Hill
From: Paul Greenwood
Company: 26. 24. 31. 501
Date: 26/7/01

Re: Comments on procedures for checking for Leaks in Sealed of Room Sealed Appliances

Were the procedures clear?  Yes

Were the procedures easy to use?  Yes

Was a leak detected?  Yes

Which method was most successful?  Notable

Are there better methods for finding these leaks?  No

How often do you find leaks in seals?  Very rarely

Please give other comments on the procedures. I was impressed to note that a small spring with tension using the guide should use this method. Using appropriate methods I could have detected the appropriate. But having used the guide that I would have confirmed the date on the barcuing.

Figure C4  Paul Greenwood, William Freer, 26th July 2001
To: Roger Hill  
From: STEVE GOLDTHORPE  
Company: British Gas Services  
Date: 9/9/01  

Re: Comments on procedures for checking for leaks in Sealed Appliances

Were the procedures clear?  
YES.

Were the procedures easy to use?  
YES.

Was a leak detected?  
YES.

Which method was most successful?  
Smoke TUBES.

Are there better methods for finding these leaks?  
YES, I believe a lime mixture would be better.

How often do you find leaks in seals?  
NOT OFTEN, most below measure pressure and no problems.

Please give other comments on the procedures  
NA.

Figure C5    Steve Goldthorpe, British Gas Services, 9th August 2001
To: Roger Hill
From: John Moseley
Company: British Gas Services
Date: 9/8/01

Re: Comments on procedures for checking for Leaks in Sealed of Room Sealed Appliances

Were the procedures clear? 

Yes.

Were the procedures easy to use? 

Yes.

Was a leak detected? 

Yes.

Which method was most successful? 

Smoke Tube.

Are there better methods for finding these leaks? 

Yes.

How often do you find leaks in sealed? 

?

Please give other comments on the procedures: 

Adding other info. 

Copy query to Roger.

John Moseley

9/8/01

---

Figure C6 John Moseley, British Gas Services, 9th August 2001
CHECKLIST FOR USE BY A SERVICE ENGINEER (SEPARATE SHEETS)

A checklist has been produced to check the boiler. It is on an A3 sheet of paper and is included as 0. For use in the field it has been split into two A4 sheets and an A5 sheet, as shown in Figure C6, Figure C7 and Figure C8.

1. Before the check is made:
   - fixings
   - fastenings

2. When the case has been set up:
   - smoke / bag test through flue terminal

3. Lift the boiler:
   - CO / CO₂ ratio
   - corrosion?
   - case
   - backplate
   - water leaks
   - mechanical deterioration
   - combustion chamber linings

Figure C7  British Gas Service comments
To: Roger Hill  
From: A.J. Swann  
Company: T.M.S.  
Date: 9-8-01  

Re: Comments on procedures for checking for Leaks in Seals of Room Sealed Appliances

Were the procedures clear?
Very clear.

Were the procedures easy to use?
Smoke match was difficult to use successfully around seal.

Was a leak detected?
Yes.

Which method was most successful?
Smoke tube.

Are there better methods for finding these leaks?
Yes, I think I'm aware.

How often do you find leaks in seals?
Quite often but only by means of visual check.

Please give other comments on the procedures:
The key for most successful method is the smoke tube. The only drawback is that accurate measurement of what products of combustion are coming out cannot be taken.

Are smoke tubes robust enough?

---

Figure C8  A.J. Swann, T.M.S., 9th August 2001
To: Roger Hill  
From: William Freer Ltd, Steve Harrison  
Company: 
Date: 13-8-01 

File: Comments on procedures for checking for Leaks in Seals of Room Sealed Appliances  

Were the procedures clear?  **yes**  
Were the procedures easy to use?  **yes**  
Was a leak detected?  **yes**  
Which method was most successful?  **Smoke Test**  

Are there better methods for finding these leaks?  **NOT THAT AWARE OF**  

How often do you find leaks in seals?  **MAKE SEALS WHEN REQUIRED, AROUND 5%**  

Please give other comments on the procedures  

**FIND PROCEDURES INFORMATIVE AND USEFUL FOR FUTURE SITUATIONS WITH THIS TYPE OF SEAL.**
To Roger Hill
From Richard Bates, William Freer Ltd
Company

Date 13.09.01

Re: Comments on procedures for checking for Leaks in Seals of Room Sealed Appliances

Were the procedures clear? Yes

Were the procedures easy to use? Yes

Was a leak detected? Yes

Which method was most successful? Smoker tube

Are there better methods for finding these leaks? No

How often do you find leaks in seals? Marked bricks were found, 5% of the time

Please give other comments on the procedures

Smoker tube was most successful due to casing, seals proving to be in good condition but the smoker test finding smoker from casing.

Figure C10 Richard Bates, William Freer Ltd, 13th August 2001
To: Roger Hill
From: D. Whitehead
Company: William Freer LTD
Date: 13-8-01

Re: Comments on procedures for checking for Leaks in Sealed Room Sealed Appliances

Were the procedures clear?  YES

Were the procedures easy to use?  YES

Was a leak detected?  YES

Which method was most successful?  SMOKE MIRROR OR TORCH

Are there better methods for finding these leaks?  RARE

How often do you find leaks in sealed?  RARE

Please give other comments on the procedures

Figure C11  Dave Whitehead, William Freer Ltd, 13th August 2001
To: Roger Hill
From: William Freer Ltd
Company: [Redacted]
Date: 17/08/01

Re: Comments on procedures for checking for Leaks in Seals of Room
Sealed Appliances

Were the procedures clear?  Yes

Were the procedures easy to use?  Yes

Was a leak detected?  Yes

Which method was most successful? [Redacted] method

Are there better methods for finding these leaks?  No

How often do you find leaks in seals?  [Redacted]

Please give other comments on the procedure

---

Figure C12 Anthony Pass, William Freer Ltd, 13th August 2001
To: Roger Hill
From: A.K. Tifford
Company: WILLIAM FREER LTD
Date: 13-08-01

Re: Comments on procedure for checking for Leaks in Sealed Room Sealed Appliances

Were the procedures clear?  Yes

Were the procedures easy to use?  Yes

Was a leak detected?  Yes

Which method was most successful?  Smoke Tube

Are there better methods for finding these leaks?  Match

How often do you find leaks in sealed?  Very few.

Please give other comments on the procedure

Figure C13  Anthony Taylor, William Freer Ltd, 13th August 2001
To  
Roger Hill

From  
Dave Harris

Company  
William Freer Ltd

Date  
13-8-01

Re:  
Comments on procedures for checking for Leaks in Seals of Room Sealed Appliances

Were the procedures clear?  
Yes.

Were the procedures easy to use?  
Yes.

Was a leak detected?  
Yes.

Which method was most successful?  
Smoke Tests

Are there better methods for finding these leaks?  
Watch

How often do you find leaks in seals?  
Very few.

Please give other comments on the procedures

Figure C14  
Dave Harris, William Freer Ltd, 13th August 2001
To: Roger Hill
From: Anthony Ames
Company: William Freer Ltd
Date: 13-08-01

Re: Comments on procedures for checking for Leaks in Sealed of Room Sealed Appliances

Were the procedures clear?  yes
Wore the procedures easy to use?  yes
Was a leak detected?  yes

Which method was most successful?  smoke
Are there better methods for finding these leaks?  no
How often do you find leaks in sealed?  very rarely

Please give other comments on the procedure

I found the tests we did were very good for service.

Figure C15  Anthony Ames, William Freer Ltd, 13th August 2001
To: Roger Hill  
From: Jim Norman  
Company: William Freer Ltd  
Date: 13th August 2001

Re: Comments on procedure for checking for Leaks in Seals of Room Sealed Appliances

Were the procedures clear?  Yes
Were the procedures easy to use?  Yes
Was a leak detected?  Yes
Which method was most successful?  Smoke Test
Are there better methods for finding these leaks?  No
How often do you find leaks in seals?  Very Rare
Please give other comments on the procedures  Very Good

Figure C16  Jim Norman, William Freer Ltd, 13th August 2001
To: Roger Hill
From: Robert Baxter
Company: William Freer
Date: 14th August 2001

Re: Comments on procedure for checking for Leaks in Seals of Room Sealed Appliances

Were the procedure clear? YES

Were the procedures easy to use? YES

Was a leak detected? YES

Which method was most successful? Smoke tests

Are there better methods for finding these leaks? NO

How often do you find leaks in seals? <20%

Please give other comments on the procedure

Figure C17  Robert Baxter, William Freer Ltd, 14th August 2001
To: Roger Hill  
From: John Flynn  
Company: WM Freer  
Date: 14/8/01

Re: Comments on procedures for checking for Leaks in Seals of Room Sealed Appliances

Were the procedures clear?  YES

Were the procedures easy to use?  YES

Was a leak detected?  YES

Which method was most successful?  SHAVE TUBE.

Are there better methods for finding these leaks?  NO

How often do you find leaks in seals?  15%

Please give other comments on the procedures

---

Figure C18  John Flynn, William Freer Ltd, 14th August 2001
To            Roger Hill
From           Dave Parnell
Company               W. Freer Ltd
Date            14-08-01

Re: Comments on procedure for checking for Leaks in Seals of Room Sealed Appliances

Were the procedures clear?    Yes

Were the procedures easy to use?    Yes

Was a leak detected?    Yes

Which method was most successful?  Sonartec

Are there better methods for finding these leaks?    No

How often do you find leaks in seals?    Quite common

Please give other comments on the procedures

Figure C19       Dave Parnell, William Freer Ltd, 14th August 2001
To: Roger Hill
From: Stuart Whitehead
Company: Wm Freer
Date: 14-8-2001

Comments on procedures for checking for Leaks in Seal of Room Sealed Appliances

Were the procedures clear? yes
Were the procedures easy to use? yes
Was a leak detected? yes
Which method was most successful? Smoke tube
Are there better methods for finding these leaks? No
How often do you find leaks in seal? Quite often

Please give other comments on the procedures
Smoke tube was a lot better than Smoke matches we use
Good information for checking Rodac's seals

Figure C20  Stuart Whitehead, William Freer Ltd, 14th August 2001
To: Roger Hill
From: Trevor Reavenall, William Freer Ltd
Company: W. Freer Ltd
Date: 14/8/01

Figure C21 Trevor Reavenall, William Freer Ltd, 14th August 2001

Comments on procedures for checking for Leaks in Seals of Room Sealed Appliances

Were the procedures clear? Yes

Were the procedures easy to use? Yes

Was a leak detected? Yes

Which method was most successful? Smoke test

Are there better methods for finding these leaks? No

How often do you find leaks in seals? Rarely

Please give other comments on the procedures.
To: Roger Hill  
From: Brian Tester, William Freer Ltd  
Date: 16 - 8 - 01  

Re: Comments on procedures for checking for Leaks in Seal of Room Sealed Appliances

Were the procedures clear? **YES**

Were the procedures easy to use? **YES**

Was a leak detected? **YES**

Which method was most successful?

**Smoke Tube**

Are there better methods for finding these leaks? **NO**

How often do you find leaks in seals?  

**NOT OFTEN**

Please give other comments on the procedures

---

Figure C22  Brian Tester, William Freer Ltd, 14th August 2001