ECP change

Change ref: TN02.07.ECP02

Date.	**Subject:**	**ECP ref:**
Aug. 2007	LPG tightness testing - bubble tester instructions	7.12.1 and Appendix D

Reasons for issue.

Bubble testers have become very popular and the BSS Essential Guide promotes their use. Several examiners have asked the BSS Office questions in relation to the allowable fitting locations and how to check on fluid loss.

The BSSTC reviewed these aspects of the use of bubble testers with the collaboration of suppliers.

The result has been changes to the Appendix D of the ECPs clarifying, for the purpose of the test procedure in Appendix D, the location of the bubble tester, the identification of fluid loss before testing starts.

Examiners carrying out the tightness test can only use a bubble tester located on the low-pressure side of the regulator and installed within the cylinder locker or housing.

If bubble testers are installed in other locations outside of the cylinder locker or housing, the BSS examiner cannot use them as part of the BSS examination. Therefore in such a case, an alternative means of testing that complies with 7.12.1, must be used. But please note, provided that there is a compliant means of testing available, a bubble tester fitted outside of the cylinder locker or housing in itself does not constitute a failure in Part 7.

Description of item and risk.

The fluid in bubble testers is transparent and within a cramped, dimly lit LPG cylinder locker it can be very difficult to tell whether the fluid chamber is full or empty.

The aim of ECP change is to help ensure effective tightness testing is carried out and to help examiners protect themselves from the potential risk of undetected gas leaks.

Basis for change

Examiners have reported instances of empty fluid chambers on bubble testers.

Details of ECP Change

As described in the new Appendix D (Edition 2 Rev.2 August 2007) attached

Implications for BSS examinations

Examiners are asked to read and review the new Appendix D (Edition 2 Rev. 2 August 2007) attached and start to apply it immediately.

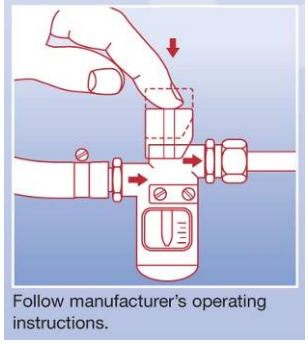
Failures under this process will be part of check 7.12.1 OR check 7.12.2

Fig 1 & 2: Bubble tester illustrations from Chapter 7 of the BSS Essential Guide

Fig 1

Bubble tester - a highly recommended installation

Fig 2



Follow manufacturer's operating instructions.

D APPENDIX – LPG INSTALLATIONS TIGHTNESS TESTING USING A BUBBLE TESTER

D.1 PREPARATIONS

1. Check that the bubble tester is installed in a cylinder locker or cylinder housing, if not seek to undertake another means of testing as detailed at 7.12.1. If no alternative means is available the craft will fail check 7.12.1
2. Ensure all gas appliance control valves (taps) are closed but appliance isolation valves are open
3. If the supply is closed, open gas supply at main shut off valve if fitted, otherwise open cylinder valves
4. Check all joints and connections between the cylinders and the bubble tester with leak-detection fluid

D.2 FLUID CHECK PROCEDURE

1. If a bubble tester by-pass arrangement is fitted, ensure the valves are set to allow flow through the bubble tester
2. Light a low-flow burner (e.g. on gas hob)
3. Press down the test button and hold it down in this “test” mode for at least 10 seconds
4. At this stage bubbles should appear in the clear fluid chamber assuring the operator that fluid is present in the fluid chamber
5. If no bubbles appear, check for fluid in the fluid chamber
6. If there appears to be insufficient fluid in the chamber, you should;
   - ask the owner, or owner’s representative to top up the chamber with the correct fluid before commencing the LPG tightness-test; or,
   - if this cannot be done, seek to undertake another means of testing as detailed at 7.12.1; or,
   - if no alternative means is available, record a failed check at 7.12.1

D.3 LPG TIGHTNESS TEST PROCEDURE

1. Turn off low-flow burner
2. Operate the button in the “test” mode for at least 10 seconds.
3. If bubbles are visible in the fluid chamber at this stage the LPG system is not LPG tight
4. No bubbles indicate that the system is LPG tight
5. Return the by-pass arrangement to original position (If fitted)
6. Return the main shut-off valve and appliance isolation valves to the position they were in prior to starting the test procedure at D.1