Technical Bulletin 117

Title: The dangers of cables buried in walls and partitions

Date issued: 29 February 2016

Note: *This version of Technical Bulletin (TB) 117 replaces the version originally published 20 September 2010 which is now withdrawn. This version has been reviewed and where appropriate revised to ensure that it remains both current and relevant.*

This Technical Bulletin reminds Gas Safe registered businesses/engineers of the need to be aware of cables buried within walls and partitions of buildings they are working in, especially when installing and fixing gas appliances and associated pipework etc

Introduction

This Technical Bulletin (TB) has been published to remind all Gas Safe registered businesses/engineers to be aware of cables buried within walls and partitions of buildings they are working in, especially when installing and fixing gas appliances and associated pipework etc.

BS 7671[(1)] requires cables to be normally run within 'safe' zones within an electrical installation, or be mechanically protected so as to prevent damage, or be buried at a depth greater than 50mm from the surface of the wall or be residual current device (RCD) protected. See **Figure 1** below for the guidance on 'safe' zones.

If there is an electrical accessory, such as a socket-outlet or light switch near to the location of a gas appliance or associated pipework that is being installed, then great care needs to be taken by the registered engineer to ensure that any electrical cables are not damaged as this could lead to a fatal electric shock being received by the engineer or occupants of the building.

Where available any plans/drawings highlighting the cable routes for the electrical installation should be checked. However, this is not a foolproof method of locating cables as plans/drawings are not always followed 'on-site.' If this is not possible then the use of a proprietary cable locator may be considered. **Figure 2** below, shows a typical propriety cable/pipework/stud locator device.

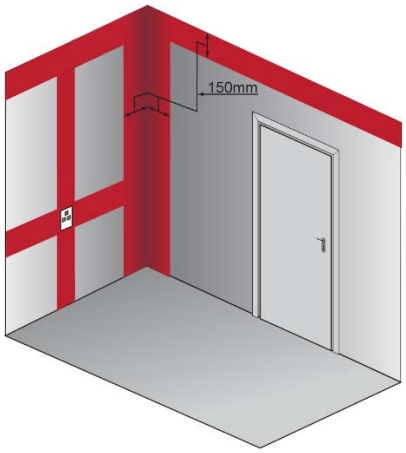

Figure 1 - 'Safe' zones

Figure 2 - Cable locator

These devices provide a warning if cables are detected within a wall. There are a variety of detectors available that offer varying types of audible and visual alert to the user. Some cable locators also have the facility to detect studwork and pipework; therefore the correct setting should be selected before using the locator.

The use of the cable locator is not a fool-proof method of finding buried cables, i.e. pipes or cables behind foil backed plasterboard may not be picked up by a cable locator. Therefore, if any doubt exists regarding the presence of electrical cables, then work should not be undertaken until it has been ascertained that the wall or partition is safe to work on. This may require very careful wall structure penetration (area as small as possible) to identify if there are any buried cables within that area of the wall or partition.

The advice given in this TB is also relevant when penetrating floors, ceilings and the like.

IMPORTANT NOTE

When working on a gas appliance that contains electrical components, it is essential that safe isolation of the electrical supply is carried out prior to working on the appliance to reduce the risk of electrocution.

Note 1: *For information about the safe electrical isolation of gas appliances, see TB 118[(2)] which can be viewed at: https://www.gassaferegister.co.uk/sign-in/ - login and visit the Technical Information area.*

Note 2: *For details of current gas safety legislation, building legislation and industry standards for the geographical areas covered by Gas Safe Register, see the Legislative, Normative & Informative Document List (LNIDL)[(3)] at: https://www.gassaferegister.co.uk/sign-in/ - login and visit the Technical Information area.*

Note 3: *For general information about the process behind the development of Gas Safe Register Technical Bulletins and the expectations for all Stakeholders, see TB 1000[(4)] at: https://www.gassaferegister.co.uk/sign-in/ - login and visit the Technical Information area.*

Bibliography

(1) *BS 7671: 2018 – Requirements for Electrical Installations*

(2) *TB 118 - Safe electrical isolation of gas appliances*

(3) *LNIDL - Gas Safe Register Legislative, Normative & Informative Document List*

(4) *TB 1000 – An introduction to Gas Safe Register Technical Bulletins*

Note: *Gas Safe Register Technical Bulletins and the Legislative, Normative & Informative Document List can be viewed at: https://www.gassaferegister.co.uk/sign-in/ - login and visit the Technical Information area*

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