Isolation Procedures for Safe Working on Electrical Systems and Equipment

This instruction chart illustrates the safe isolation procedure to be applied when working on electrical systems and equipment.

Isolation means the cutting off of the electrical supply to an electrical installation for safety reasons. This is carried out by operating devices that have been provided within the electrical installation for isolation to make the electrical system, or part of it, DEAD.

Once the electrical supply has been isolated, the means of isolation must then be secured so that the system/equipment cannot be inadvertently made live.

It is important that all sources of electrical supply are isolated and the system/equipment proved to be DEAD before work is carried out.

The Electricity at Work Regulations requires the isolation of electrical equipment and systems to prevent danger. All electrical systems or equipment must be DEAD before installation or maintenance is carried out. A system is any part of an electrical installation from the source of supply to the equipment installed. The regulations also state that no person shall take part in any work activity unless they possess the necessary technical knowledge and experience in order to prevent danger, or is under suitable supervision.

THE RULES OF SAFE ISOLATION ARE:

• Obtain permission to start work (a Permit may be required in some situations)
• Identify the source(s) of supply using an approved voltage indicator or test lamp
• Prove that the approved voltage indicator or test lamp is functioning correctly
• Isolate the supply(s)
• Secure the isolation
• Prove the system/equipment is DEAD using an approved voltage indicator or test lamp
• Prove that the approved voltage indicator or test lamp is functioning correctly
• Put up warning signs to tell other people that the electrical installation has been isolated
• Once the system/equipment is proved DEAD, work can begin

An approved voltage indicator or test lamp must comply with the Health and Safety Executive’s guidance note GS38. The approved voltage indicator or test lamp must be “proved” using a known live supply or proving unit before and after use to show it is working correctly.

NOTE: Both the Electricity at Work Regulations and the Health and Safety Executive’s guidance note GS38 should be referred to with this guidance.