



Safety Advisory Bulletin

Use of 110 V Hydraulic Generators on MEWPs

This Safety Advisory Bulletin highlights the increased electrical risks when using a 110 V hydraulic generator without a centre-tapped earth (CTE) compared to a 110 V CTE hydraulic generator on a Mobile Elevating Work Platform (MEWP).

Summary of Key Risks

A 110 V non-CTE hydraulic generator produces a floating or single-ended output. A CTE generator divides the voltage equally (55–0–55 V) and bonds the centre tap to earth. Without centre-tapping, a single fault can make the MEWP chassis live at up to 110 V relative to earth — posing a serious shock risk to operators and breaching site electrical safety standards.

Category	Non-CTE Hydraulic Generator	CTE Hydraulic Generator	Risk Level
Shock Voltage to Earth	Up to full 110 V	Limited to 55 V	High
Platform Becoming Live	Possible under single fault	Very limited	High
RCD/MCB Effectiveness	May fail to trip (floating output)	Fully effective	Moderate
Compliance (BS 7375 / BS4363)	Non- Compliant	Compliant	High
MEWP Certification Impact	May invalidate approval	Usually acceptable	Moderate
Tool Insulation Stress	Higher (110 V to earth)	Lower (55 V to earth)	Moderate

Safe Use Recommendations

1. Fit a 110 V → 110 V centre-tapped isolation transformer to produce a 55–0–55 V supply.
2. Ensure RCD protection (≤ 30 mA trip) is fitted and tested regularly.
3. Bond generator frame to MEWP chassis and verify correct earthing arrangements.
4. Label output sockets clearly: “Non-Centre-Tapped 110 V – Not Suitable for Direct Site Tool Use.”
5. Consult the MEWP manufacturer or a qualified electrical engineer before installation.
6. Inspect cables and outlets daily for damage, moisture ingress, or loose earthing.

Compliance Reminder

To comply with BS 7375 (Use of Electricity on Construction Sites) and BS 4363 (Distribution Transformers and Generators for Construction Use), only 55–0–55 V CTE systems should be used to power hand tools or equipment on MEWPs or metal structures.

Disclaimer:

This Safety Advisory Bulletin is issued by Hydraulic Generators Ltd as a formal communication of safety guidance and best practice.

It is advisory in nature and provided for general information to promote the safe operation of hydraulic generators and associated equipment.

It does not replace or override any statutory requirements, manufacturer instructions, or regulatory standards, including those issued under the Health and Safety at Work Act 1974 and associated regulations.

Hydraulic Generators Ltd · 0330 229 4083 · www.hydraulicgenerators.co.uk ·

info@hydraulicgenerators.co.uk

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