LIQUIP INTERNATIONAL PTY LTD - ENGINEERING DEPARTMENT - 13 HUME RD SMITHFIELD SYDNEY NSW AUSTRALIA 2164
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Tech Talk 46: Wiring for Liquip Road Tanker Electronics.

This tech talk should be read in conjunction with tech talk 37: Wiring wisdom.

General Guidelines for Liquip Electronics on Vehicles.

- Ensure tanker and vehicle are gas free.
- Ensure tanker and vehicle are in a non-hazardous area.
- Use anti-seize lubricant or water-proof grease on all screw-in equipment and fasteners.
- Never weld on a vehicle unless all electronic equipment is completely disconnected electrically from both the tanker and other equipment.
- Use high quality water-proof conduit and fittings to IP66 minimum for all wiring and junction boxes.
- Use water-proofing flexible compound such as silastic in all glands and joints not available as water-proof by design.
- Mount all equipment away from direct spray areas such as behind the tyres and out of direct sunlight. Always select the most sheltered aspect.
- Coat all terminals and cable end and joints with non-conducting grease or vasoline after final testing.
- Check entire electrical circuit and housings for potential water entry prior to sign off.
- Cable ends may be crimped with ferrules for better connection but do not just solder cable end (fatigues and corrodes). or, as a poor second choice, bend the bared wire back over itself to provide more clamping bulk.
- Common grounding of a system is most important. Do not rely on common chassis grounding at various points, run a full-length dedicated ground cable. Max resistance, battery-ground to any ground-point to be 1 ohms.
- Crimp joints are preferred to solder joints. Pre-coat with grease for corrosion protection.
- Always fit as much loose cable length into junction boxes and housings as practicable to allow for future servicing.
- When pulling multiple cables through conduit, always consider using cable with one or two extra conductors to allow for any future requirements.
- Always completely segregate power and intrinsically safe wires into completely separate conduit and in accordance with I.S. wiring rules.
- Carry out complete wiring check for accuracy and continuity before connecting power to any device.
- Observe International and local legal requirements. In the event of conflicting instructions seek qualified advice before proceeding.
- Apply cable relief inside all housing entries.
- All equipment to be supplied from a fused power supply.
- If no power, first check battery charge and fuses in supply line.
- Bags of desiccant are not effective - good water proofing is.
- Do not route communication cables past ‘noisy’ electrical apparatus such as solenoids and alternators.
- Check instruction manuals for recommended cable type.
- Use specialised, genuine tools for all electrical work.

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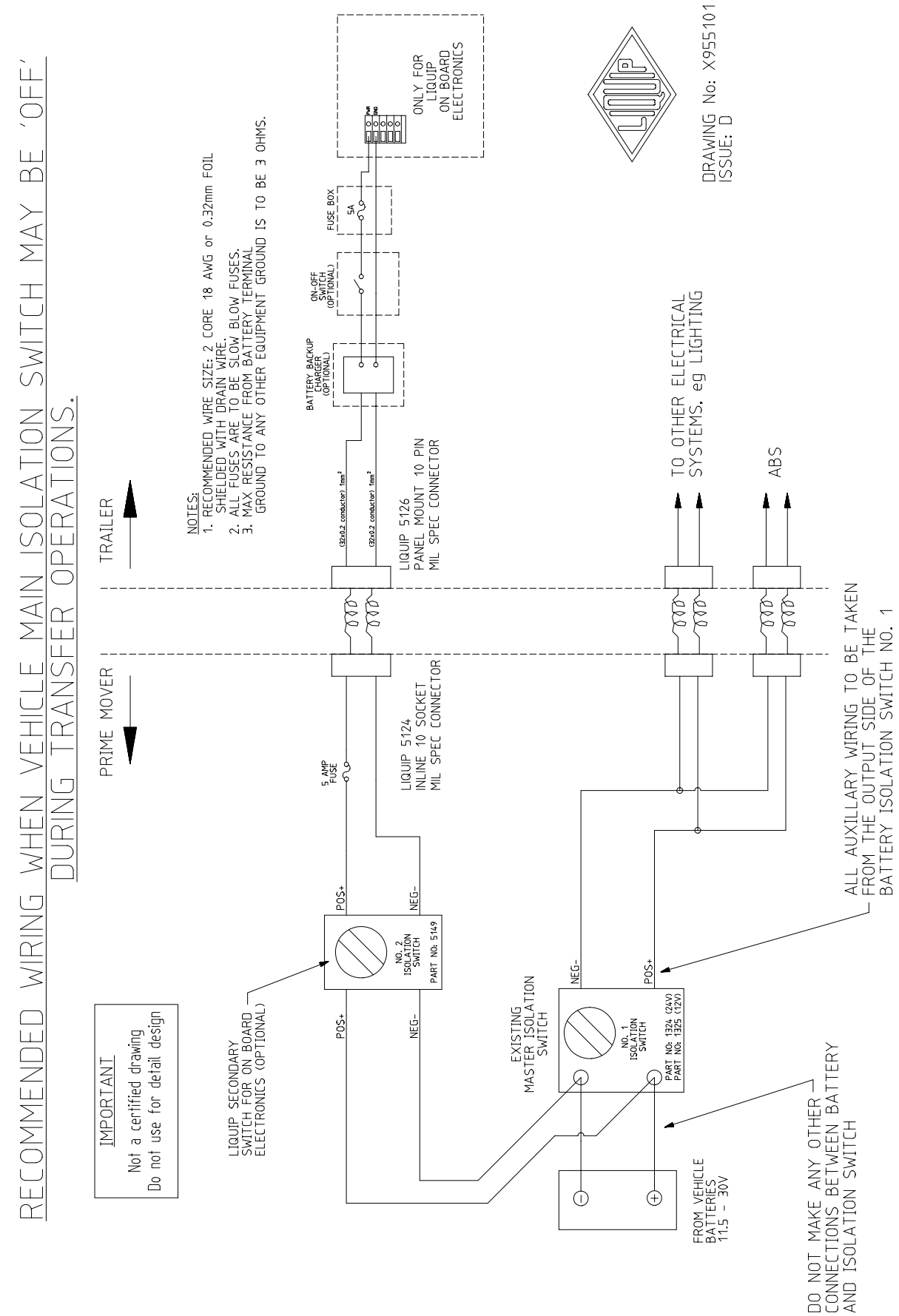
RECOMMENDED WIRING WHEN VEHICLE MAIN ISOLATION SWITCH MAY BE 'OFF' DURING TRANSFER OPERATIONS.



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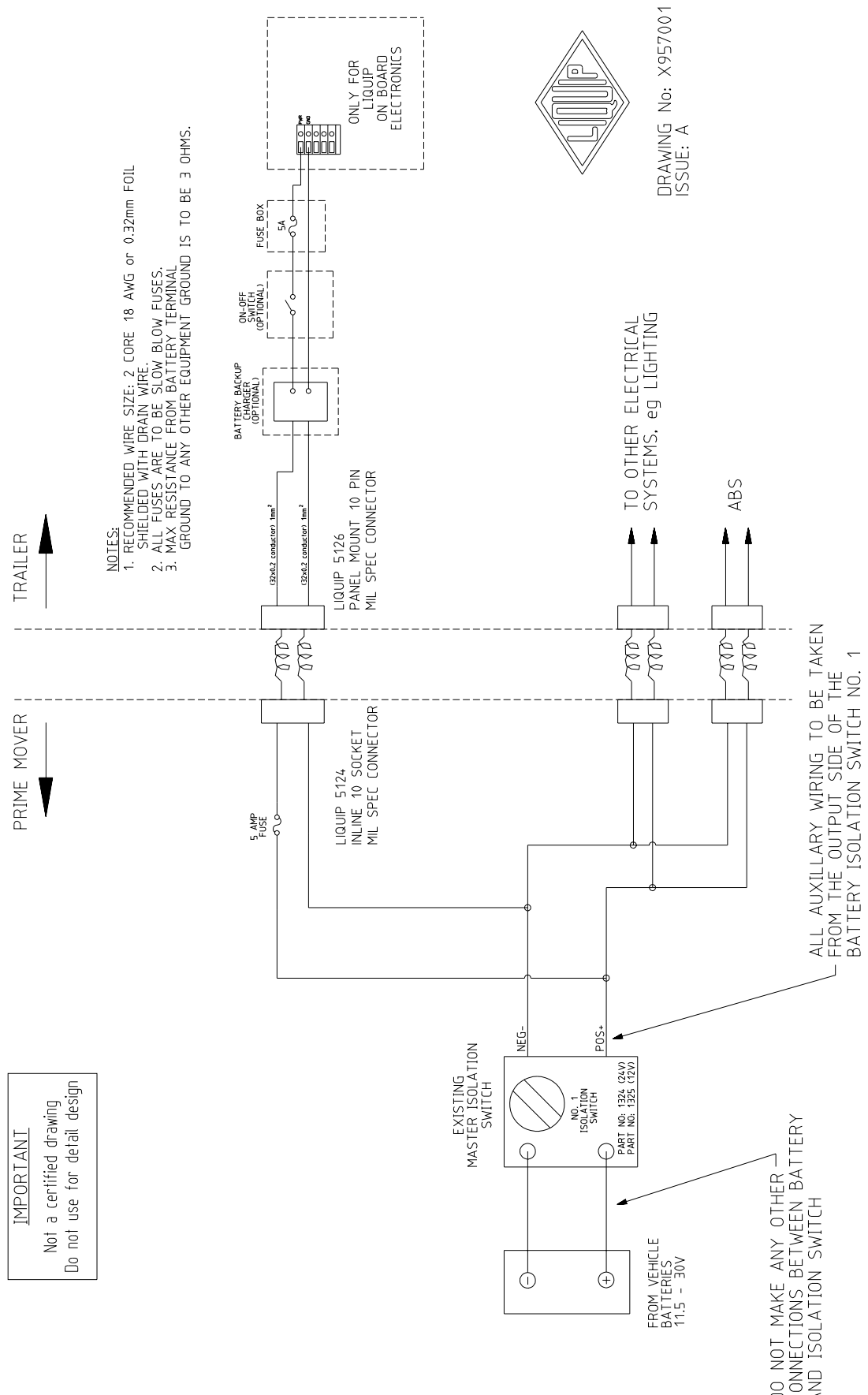
RECOMMENDED WIRING WHEN VEHICLE MAIN ISOLATION SWITCH IS ALWAYS 'ON' DURING TRANSFER OPERATIONS.



IMPORTANT
Not a certified drawing
Do not use for detail design