

Protecting Critical Hydraulic Systems on Refuse Collection Vehicles

MUNICIPAL FLEET - HYDRAULIC HOSE PROTECTION - FIRE SAFETY - FLEET RELIABILITY



Firefighters tackling a refuse lorry fire caused by lithium-ion battery ignition.



Waste unloaded at roadside to control a burning refuse lorry — crew safety at risk.

THE CHALLENGE

As temperatures rise during summer months, refuse collection vehicles face an increased risk of onboard fires. A warning issued by Nuneaton & Bedworth Borough Council highlighted multiple bin lorry fires caused by incorrectly disposed lithium-ion batteries and disposable vapes entering the waste stream.

When waste is compacted inside the vehicle, damaged batteries can enter thermal runaway — generating intense heat and rapidly igniting surrounding combustible materials. Battery fires in bin lorries across the UK have increased by 71% since 2022, with over 1,200 incidents recorded in the last year alone (NFCC, 2024).

THE RISK

Hydraulic hoses are essential for operating the compaction mechanism and tail lift. If exposed to extreme heat or direct flame, the rubber can fail — resulting in hydraulic oil leaks that may further intensify the fire. Damage to electrical wiring can disable critical vehicle systems, making emergency response more difficult and significantly increasing repair costs and vehicle downtime.

THE SOLUTION

High-temperature Firesleeve from S Riley Fabrications can be installed over exposed hydraulic hoses, electrical cables and other vulnerable components within the rear compaction area. Manufactured from knitted E-glass fibre with a high-grade silicone elastomer coating, Firesleeve is designed to:

- Protect against radiant heat from burning waste
- Resist direct flame for short durations
- Shield hoses from abrasion and impact damage
- Help maintain hose integrity during a fire event
- Protect operators from accidental contact with hot hydraulic lines

CONTINUOUS
260°C
 500°F

MOLTEN SPLASH
1200°C
 2192°F

DIELECTRIC
30kV+
 HV harness safe

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THE BENEFITS

Installing Firesleeve as part of a preventative maintenance programme provides several operational advantages:

- Extended hydraulic hose service life
- Reduced risk of heat-related hose failures
- Improved protection of critical hydraulic systems
- Increased vehicle reliability and reduced downtime
- Reduced maintenance and repair costs
- Improved safety for vehicle operators and emergency responders



SRF Firesleeve — six standard colours, 4mm–203mm ID

THE PRODUCT

Standard SRF Firesleeve is available from 4mm to 203mm internal diameter in 15-metre coils or custom cut lengths. Hook & Loop Retrofit Firesleeve installs over existing hoses without disconnection — ideal for vehicles already in service.

INDUSTRY CONTEXT

Battery fires in bin lorries and at waste sites across the UK have reached an all-time high — over 1,200 incidents in the last year, an increase of 71% from 700 in 2022 (NFCC / Recycle Your Electricals, 2024). Research by the Environmental Services Association estimates battery-related waste fires cost operators, fire services and the environment approximately £158 million per year.

While Firesleeve cannot prevent a lithium-ion battery from igniting, it plays a valuable role in protecting critical hydraulic and electrical systems — helping to limit secondary damage and maintain vehicle functionality during an incident.

CONCLUSION

As refuse collection fleets continue to face the challenge of battery-related fires, protecting vulnerable hydraulic hoses and electrical systems is an important part of a comprehensive fire protection strategy. Firesleeve offers a practical, cost-effective solution to improve durability, enhance safety and support reliable fleet operation throughout the year.

SPECIFY FIRESLEEVE FOR YOUR FLEET

Available in standard and custom sizes. Hook & Loop retrofit option for in-service installation without downtime.

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