



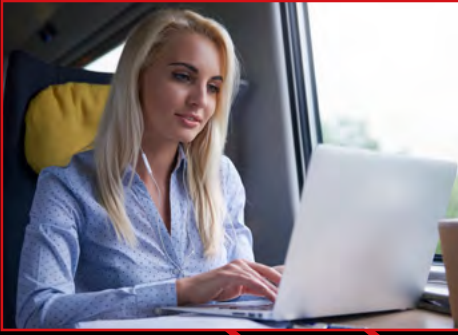
EST: 1995
EMPLOYEE OWNED



**THINKING
PASSENGER.
REDUCING
DOWNTIME.
IMPROVING
EFFICIENCY.**



WWW.FLOTECINDUSTRIAL.CO.UK/RAIL



THE FLOTEC RAIL DIVISION MISSION:
"To be a trusted and leading supplier of reliable hose
and engineering solutions to the rail market."



THE FLOTEC CORE VALUES.

A COMMITMENT TO INNOVATION:

- ▶ To continuously investigate and find new ways of doing things for the better.
- ▶ To develop, create and invent unique solutions relevant to the task in hand.
- ▶ Where appropriate, to apply existing ways of doing things to a new market.
- ▶ Where appropriate, to modify existing assets to perform better.
- ▶ Where appropriate, to radically transform and disrupt markets for the better.

STAKEHOLDER TRANSPARENCY - ETHICS AND TRUST:

- ▶ To be trusted by all stakeholders for operating and behaving in an ethical, honest, and trustworthy manner.
- ▶ To ensure that all stakeholders conduct themselves in compliance and accordance with Flotec's core values.
- ▶ To encourage excellence with all stakeholders and throughout the multiple supply chains within which Flotec operates.

BELONGING, EMPOWERMENT, OWNERSHIP AND ACCOUNTABILITY:

- ▶ To be a culture of diversity, inclusivity, creativity, innovation, teamwork, and family.
- ▶ For each person to feel valued, appreciated and belonging to the Flotec culture, its shared mission, and values.
- ▶ Each person to feel empowered and take ownership and accountability of their work.
- ▶ To acknowledge, celebrate and reward successes and achievements.

THE CUSTOMER SERVICE PLEDGE:

- ▶ To offer a solutions-based approach for all customers.
- ▶ To provide a polite, courteous, professional, and knowledgeable experience.
- ▶ To focus on service, solutions, and delivery.
- ▶ To give such an exceptional service that customers keep coming back.

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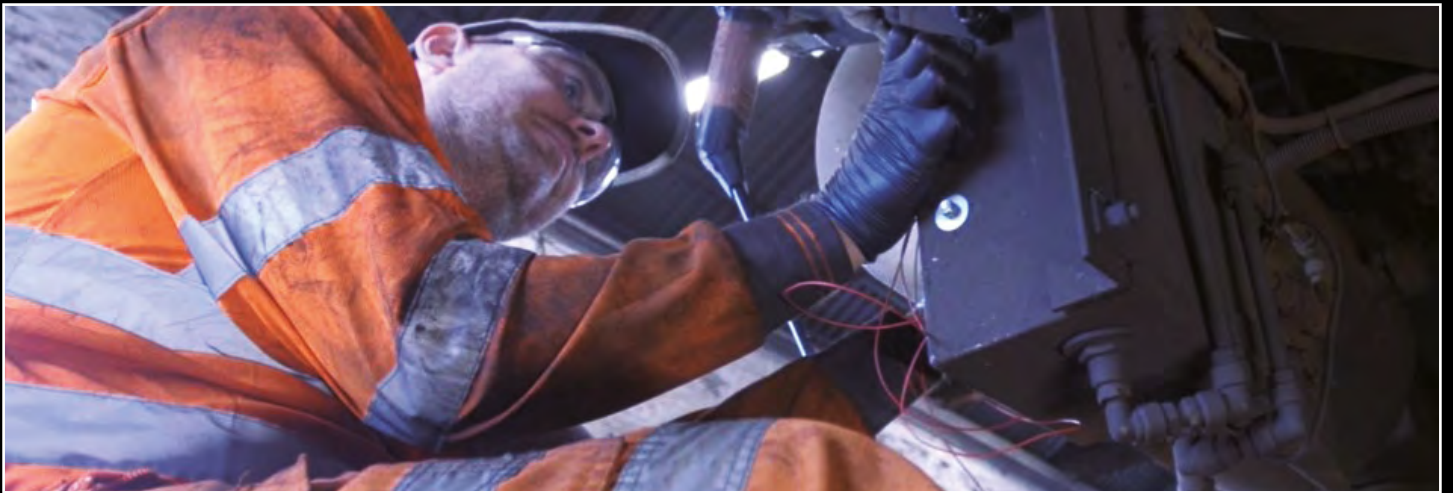
Return to Idle (RTI) Issues with DMU Rolling Stock

Historically, DMU's have encountered RTI issues in warmer months.

RTI failures are usually caused by contaminants such as pollen blocking the engine system with steep inclines adding further problems to train performance.

RTI can catastrophically slow the vehicle down or worse, bring the train grinding to a halt.

Inevitably, this leads to end-user delays through to train cancellations which results in passenger and rail network disruption as well as significant costs to the train operator.



Flotec has developed a series of innovative solutions to address seasonal DMU RTI complications:

- Hydrostatic Hose Applications
- Reservoir Maintenance
- Advanced Fan Control
- Variable Displacement Pump
- Variable Pitch Fan (VPF)





The blades of the variable pitch fan rotate on their own axis to change the pitch and reverse through the cross position.

This guarantees the air will always be increased and in the optimum position to produce maximum air flow when in both cooling and cleaning modes.

Fitting a VPF effectively maintains radiator cooling efficiency by eliminating blocking contaminants, maintaining air flow through the radiator, increasing energy savings and eradicating RTIs.

A hard-wired fan control system installed into the existing electronics of the train ensures that the 'cleaning' process is not engaged when the vehicle is either stationary or drawing into a station.

Installing a variable pitch fan reduces the frequency of radiator washing which in turn, reduces damage and maintenance costs whilst extending their lifespan and effectiveness.

Scan the QR code to learn more and find out about the four modification options available.



Hydrostatic Hose Solutions

Poor routing and support are major factors in premature hose failures.



Flotec uses shorter hose lengths to reduce the amount of material and weight whilst improving the routing to avoid ballast strikes.

Flotec utilises correct clamping and bracketing, eliminating the need for spiral wrapping.

The Railtec™ MED2-HT hose can withstand temperatures of up to 150°C.

Tested to a market leading **600,000** impulse cycles.

THREE times longer lifetime than other hoses on the market.



Leak-Free Guaranteed - MegaCrimp Coupling

Within the MegaCrimp® is a remarkable 'C-insert' component ensuring the connection stays round to the shape of the hose, eliminating the issue of the 'polygon' effect which is known to contribute to leak paths.

Abrasion Resistant Rail Hose Covers for Track Maintenance Machines.

Flotec recommends applying its MegaTuff and XtraTuff hose covering innovation to yellow plant and track maintenance machines.

Why?

Because track maintenance machine hydraulic hoses are exposed to frequent abrasion.



Flotec have partnered with Gates to offer the latest hose protection solution by creating the MegaTuff and XtraTuff branded products.

MegaTuff has been proven to be over 300x more abrasion resistant than other hose products on the market. XtraTuff is 25x more abrasion resistant than standard hydraulic hose coverings.



Also available for track maintenance machines and yellow plant operators is a series of spare hose packs and self-assembly crimping machines to reduce downtime and minimise cost.

Blue Stripe EPDM Rail Coolant Hose

Whilst silicone hose is a common coolant application for rail rolling stock, Flotec recommends using its innovative EPDM Blue Stripe product.



When used together, Blue Stripe hose and PowerGrip Band Clamps have been proven to be reliable for over

750,000 miles of engine use.

The Blue Stripe EPDM hose has been proven to be ten times more resistant to water permeation than silicone hoses.

PowerGrip® Band Clamps

A common cause of hose leakage is the continuous expansion and contraction of hose and fittings due to temperature changes.

Gates PowerGrip® is a polymeric clamp, designed to prevent leakage after fitting.



As the temperature of the application changes, the clamp expands and contracts with the hose, making it completely resistant to leaks.

Key Features:

- Never needs re-tightening
- Conforms to any shape
- Unaffected by oil
- Attractive finish
- No sharp edges
- Environmentally friendly
- Wide band gives better seal
- One style for all applications
- Consistent grip pressure

LEAK FREE AND GUARANTEED WARRANTY BETWEEN MAJOR TRAIN FLEET OVERHAULS!

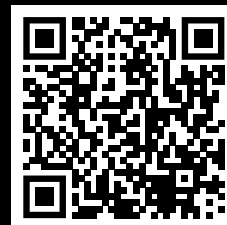


Endorced by Porterbrook and Angel Trains.

PowerShrink Control Box

Flotec's PowerShrink Control Box is a 5kg, 24-volt battery powered portable device, designed to give consistent fitments of the PowerGrip Band Clamp system.

This unit replaces the need for a conventional heat gun, making it perfect for installation engineers looking for a safe installation process that shrinks the Clamps down consistently, every time, removing human error.



The Flotec Rail Hose Management Programme

Flotec's Rail Hose Management Programme offers on-site hose condition reports, recommendations for product and installation improvements, and an on-site hose replacement and fitting service.

The Flotec Rail Hose Management Programme sees the engineering team visit various track maintenance machines to examine and report on areas of concern, including:

- Hose damage
- Hose abrasion
- Hose pressure
- Incorrect routing
- Excessive wear

Once the area of damage has been identified, Flotec will develop an effective engineering solution. This involves replacing the faulty hoses and correctly routing them to increase hose route efficiency, increase performance and prevent hose failures on essential performance parts.

Flotec has specific knowledge in hydrostatic and coolant hoses, abrasion resistant hose coverings, clamping and coupling as well as variable pitch fan train engine control, rail fleet battery charging and spare kit supply. The Flotec Rail Division ethos is to design bespoke engineering solutions to solve genuine issues than merely supply like-for-like replacement worn parts.



Flotec also provide further assistance in future planned maintenance activities in order to deliver a long-lasting rail hose maintenance strategy. For example, Flotec offers fully pre-assembled hose kits for quick and easy installation. This, along with safe hydraulics training, provides a significant decrease in maintenance, repair and overhaul costs.





Train Fleet Battery Charging Units

The Flotec Rail Division has introduced to market a series of rail fleet battery charging units, suitable for different applications.

- Mobile and wall mount options available
- Suitable for maintaining battery sets for starters and auxiliary systems
- Selector switch for either wet or gel type batteries
- Selector switch for different output currents
- Digital meters
- Indicator beacon
- Standard panel mount AC input connector
- Heavy duty DC output connector
- Safety features built in

The Flotec Rail Division has established a stock holding facility of all necessary components to manufacture a series of new battery charging units to supersede the older Prepair models which are beyond repair.

This service supports both existing and new train fleets.

A dedicated workshop area has been set up within the companies manufacturing plant to offer an efficient and timely service for existing Prepair units which are repairable, using competitively priced OEM components.



Flotec Rail Division is an official innovation partner with Angel Trains.

Rail clients include:

- Readypower Rail Services
- Northern
- Volker Rail
- Network Rail
- Wabtec
- Porterbrook
- Angel Trains
- Transport for Wales
- Story Contracting
- Balfour Beatty
- DB Cargo UK
- West Midlands Railway
- East Midlands Rail
- Great Western Railway
- Abellio
- Matisa

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