

# Stress-free stressing: lightweight, battery-powered stressing kit

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Extreme temperatures can make rail tracks buckle and crack. To help prevent this, the rail is stressed before it is installed. This involves stretching the rail using heat or hydraulic tensors to a pre-determined tension.

Any maintenance or repair of the rail needs to consider this latent tension and a considerable force is needed to stretch or pull the rail into place or to keep it static while welding is undertaken.

To achieve this, specialist stressing equipment is required. Because many tonnes of force are needed, the equipment used to be very heavy and would be powered by a petrol-fuelled pump. This could cause transport problems and prove exhausting for operators, who had to manoeuvre kit weighing up to 300kg into position. The power source was noisy and a damaging source of pollution.

## A greener, more user-friendly stressing system

This has now changed with the introduction of the Network Rail-approved **Enerpac RP70A**, a lightweight and durable stressing system powered by an emission-free battery pump. Its components are up to three times lighter than those used in similar kits. Each one features carrying handles and is ergonomically designed for a genuine one or two-man lift. This means the kit can be easily carried to site and assembled in a matter of minutes without tiring the operators. There is no need to remove any ballast.

Stressing commences at the press of a button and the rail is pushed or pulled to the required position. The hydraulic cylinder rods can exert a force of up to 70 tonnes and are protected from damage and weld splatter by lightweight steel sleeves. The clamps then hold the rail in place without the need for any additional force.

The pump is equipped with a quiet and reliable Briggs and Stratton motor, fitted with an 82-volt battery which powers the pump for up to six pulls. For safety, the whole system can be isolated with a detachable key. A kit is supplied with two batteries and each battery can be charged using the supplied charger in around 60 minutes. The pump unit is over 30 per cent lighter than existing petrol-powered units and is an easy two-man lift. Unlike petrol-powered pumps, there is no troublesome pull cord, no to carry extra fuel, and no problems with mixing errors and contamination.

The Enerpac stressing system solves many of the power and weight issues associated with traditional stressing kits and also addresses the problems of noise and emission pollution. Torrent Trackside has invested in a considerable number of units and is now hiring these ground-breaking systems out to rail projects across the UK.