

ON THE RIGHT TRACK

From its headquarters in Derbyshire, SRS Rail System International manufactures and provides road/rail hire vehicles that keep millions of the UK's train passengers on the move. John Henderson visits

Founded in 1986, SRS Rail System bought the UK's first road/rail truck during that year, and since then this specialised fleet has grown organically. Its fleet of converted vehicles travels most of the way on the road, then mount the track at a level crossing and complete its journey by rail. Originally designed by a Swedish railways engineer, the idea has since been extended to include a range of truck-mounted equipment.

Having been set up in the south, SRS Rail System moved to a purpose-built premises in Bolsover, Derbyshire to take advantage of the site's central location. The company supplies rail equipment hire in the UK, Europe and the Middle East. Track and sleeper deliveries, tunnel and bridge maintenance or overhead electrification works are all part of any give week's workload. Basically SRS Rail System will carry the majority of tasks required to maintain a railway.

A high percentage of its 130 staff work out of hours, when the rail network is quieter. That's because of the extraordinary importance of keeping repair work to pre-arranged schedules.



"Any over-running work we're involved in is subject to penalties worth thousands of pounds per minute, and any potential delays can affect millions of commuters," declares general manager Gethin Thomas (pictured above).

ROAD TO RAIL: HOW IT WORKS

The trucks' transition from road to rail is via a hydrostatic power take off (PTO) behind the gearbox, which drives a powered rotating bogie at the rear of each truck. The rail wheels are lowered by hydraulic power; some vehicles can even cope with variable track gauges, thereby offering an incredible adaptability. All highway features on the truck have to be inhibited when operating on the rails, and this even extends to the truck's lighting system, with separate illumination systems used on track. The traditional front

white/red rear lights also have to be joined by static reds when vehicles are stationary on track. Heavy duty clutches and compressors are required, as UK rail operations require low speed manoeuvring: working mode is 3mph and maximum travel is 20mph.

In 16 years of buying trucks, Thomas has never looked at another brand than Volvo. "Our brief is far too complex for most and the amount of detail and time spent specifying new vehicles may put others off," he says. (The supplying dealer is Crossroads Truck and Bus in Rotherham; its support is one of the reasons given for sticking with the marque). Operators of the only road/rail articulated crane in existence, last year the company took delivery of four Volvo FE rigids (pictured above) into its fleet of 45 trucks, including an FM 6x4 tractor unit. The latest 18-tonne FE rigids were

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Gethin Thomas

Pic credit: Craig Eccleston

specified with all-round steel suspension and medium cab. The 4x2 chassis have nine-speed manual gearboxes, eight-tonne front axles and additional lower passenger door glazing panels.

Once a Volvo chassis is delivered to SRS Rail System in Bolsover, the company fits secondary front and rear sub-chassis, with the latter frame hosting rail wheel drive gear. Specialist over-centre device attachments to the front and rear axles also lock these components when the truck is raised on the rails. The front rail wheels simply guide the truck; the rotating rear rail bogie (pictured, right) provides forward or reverse motion via a hydrostatic drive. Thomas continues: “The rear rail bogie can be tucked away under the chassis when not in use. When lowered down, it turns through 90° before engaging with the rails. The hydrostatic system is powered by the Volvo’s PTO – either Cobham-style or gearbox-mounted – and requires an engine speed of between 1,200 and 1,500 rpm.”

All the additional equipment used on the Volvo rigids is designed and manufactured by SRS Rail System using CE European components, though final assembly is in China. Once completed, road/rail trucks go through the Individual Vehicle Approval (IVA) process and final checks are made with Volvo Trucks for homologation and technical capacities. A separate UK Rail approval process includes CE marking of the machine as a whole. From initial conception to working on site, a new unit goes through a 14-month process. In the last eight years, Thomas and his team have produced a total of ten road/rail Volvo variants, which represent a massive investment. “The base chassis costs pennies in relation to what we spend on the truck conversion,” he adds.

No wonder that these vehicles are keepers. The oldest Volvo truck in this fleet is now over 30 years old. “Spare parts are becoming rarer for it now;



however the truck continues in front line service. Specialised vehicles like ours represent a large investment, and we like to get a full life service from them,” reports Thomas.

SPECIFICATION

As far as specification goes, the managing director acknowledges that “276bhp is plenty for our operations, and we’re happy to stick with manual gearboxes for the unique rail operating environments. Any automated system and its associated software adds in too much over-complication with existing equipment.” He delivers a detailed technical overview of any chassis orders. Vehicle running heights are also crucial, both on road and on rail, with the latter adhering to a rolling profile height and width restriction to protect overhead wires and tunnels.

Bespoke vehicles like this are perhaps not suited to supplying dealer service contracts, so SRS Rail System uses comprehensively-equipped workshops at Bolsover. Also, the company delivers all of its training in-house. New starters with an HGV licence progress to access platforms first and then progress in time to the more complex crane vehicles.

Documentation prior to rail jobs is complex and all contracting work is subject to strict windows regarding start and finishing times. Thomas concludes: “Delays equal huge financial penalties. Our trucks need to be ultra-reliable and are subject to a huge amount of preparation and pre-work checks every time. We fit back-up systems to cover any electrical or hydraulic system issues; these are part of the required rail standards, and, of course, help cover any eventualities on site.” **TE**