Specialist truck gets specialist specification

NMS Civil Engineering in Wigan reports success with its first Volvo truck – an FH-480bhp tractor with sleeper cab and chassis-mounted crane. The unit is in use on the motorway network in the North West, installing barriers, and NMS contracts director Peter Law says it's handling restricted access and uneven surfaces well.

Thomas Hardie Commercials supplied the Euro 4 6x2 tractive unit, which is plated for 44 tonnes gcw and equipped with a tag axle, 14-speed gearbox and Volvo's EBS High electronic braking and stability control, under a five-year R&M contract. The crane, specified and fitted by TH White of Devizes, is a Palfinger PK42502c, with 12.1m reach and 3,140kg capacity at max radius.

So much for the bare facts. Law explains that he specified the tag axle to maximise manoeuvrability, while the low sleeper cab meant the crane could reach across the front. He also wanted to improve mpg over NMS' previous MAN 6x4 tractor, because the new unit needed to work further afield. All of which is easy to request "but you need to get everybody talking," he warns.

Why? "At 6.6 tonnes, you're talking about a big lump of crane, so you've got to watch

the axle loadings. And, because of the tag axle, there were also concerns about where to site the fifth wheel to keep the weight on the drive axle, but still provide enough space for the crane and trailer clearance."

THW handled the engineering. The firm's Doug Wright says the weight was simply solved by using a 9-tonne front axle and bolting on a bespoke twin-plate subframe. However, the coupling was less easy.

"Normally, we fit this type of crane on a 6x4 tractor, but NMS wanted the tag axle, and that meant putting the coupling beyond the usual limit, behind the drive axle. So we did the calculations to prove vehicle stability and axle loadings [with and without the trailer], but went back to Volvo for sign-off on the fifth wheel."

Beyond that, Wright explains that the crane had to be specified with four hydraulic boom extensions for lifting materials off and onto the trailer. That meant going for Palfinger's ISC (integrated stability control – now mandatory under European law, as of 1 January), which senses location of the stabiliser legs and de-rates the crane to stop it slewing into an unstable position.

Additionally, THW fitted a 180/180/360 degree key switch slew interlock (to prevent movement into the live line of traffic) and swing-up legs. "In this case, it wasn't a matter of clearing chassis ancillaries, but of enabling NMS to extend the stabiliser legs over crash barriers, for example, to get full capacity from the crane," he says.

Atomic clock ticks boxes for maintenance

Sometimes, simple thinking provides the best engineering solutions. That's certainly the case at Arla Foods, which, with European Transport Solutions (ETS) in Blackpool, led development of an automatic week-numbering system to improve workshop compliance. Other users now include Diary Crest, Sainsbury's and Biffa, and the result is foolproof management of vehicle maintenance and inspection.

Sean Smith, national fleet manager at Dairy Crest, explains that all his 127 depots now have a large electronic display that's driven automatically by the atomic clock and shows current week number. "All our 4,000 vehicles – electric milk floats, Transits, Astra vans and HGVs – have a yellow sticker, 100mm square, showing the week number when they next need servicing or inspection," he says.

"On the electrics and Transits, it's on the back of the body on the rear offside pillar, and on trucks it's on the B pillar, beside the driver's door. So everybody knows where to look – not just the engineers and drivers, but anyone in the yard."

Not only can they all easily see when anything is next due in, but drivers know

that, if they see a sticker past today's week number on their daily walk around check, that vehicle doesn't leave the yard.

And it's not just vehicles: for Smith, all MOTs, tail lift inspections etc also come under this simple system. It's even on every one of Dairy Crest's FTA road transport inspection reports.

"That enables me and the depot fleet managers to make judgements on whether defects found are acceptable or not. Maybe it was a tyre notification [down to 3mm], but if it was only serviced that week then we're failing. We also suffer with kingpin problems

because of sleeping policemen, so if the report shows a worn kingpin but it's due to be serviced next week, that's about right.

"The point is, it means we can easily go back to our fitters or the contactor, without having to trawl through all the service sheets. And that has helped us manage contractors, such as SEV [Smith Electric Vehicles], much better in terms of KPIs around downtime."

Smith reckons that if you've only got one depot, and regular fitters and management staff, you probably won't benefit. But even then, if the fleet involves a mix of vehicles with varying service and inspection intervals, he suggests it could pay for itself very quickly.

Incidentally, Hanson Cement, formerly Castle Cement, uses a similar system to manage pressure testing intervals of its discharge hoses. Again, there's the tamper-proof atomic clock but, in this case, that drives a colour display at its weighbridges. If the colour corresponds with the truck's colour-coded hoses, the driver knows they need to be removed and checked.

Don't take your fifth wheels for granted

Oldham-based haulage firm TTX is recommending operators to consider Jost's on-site safety inspection for fifth wheels. "Jost was able to inspect and give a clean bill of health on 30 of our couplings in half a day," says TTX managing director Dave Taylor – indicating that the cost was extremely reasonable.

Jost technical director Dave Deri points out that the service is free to operators taking trucks to its Heywood, Manchester HQ.

More importantly, however, he suggests that, although there are in fact no legal requirements, these are strictly safety critical assemblies. "There should be a visual check – looking for obvious signs of damage or distortion – every time a truck is serviced, but also a full functional inspection at least every six months," he warns. Deri accepts that there's not a lot to go wrong, but points to a survey of operators back in 2007 that revealed 57% believe dropped trailers remain a serious concern – with 82% having experienced one. Interestingly, that survey also found 70% of respondents blaming drivers but still 15%, faulty equipment.

"In fact, it's almost inconceivable that it could be the pin: 99 times out of 100 the fault is either the mechanism or the driver who does not follow coupling procedures properly," says Deri. "The problem is that even experienced drivers can get distracted and forget the final check. Mostly, the trailer comes off in the yard, but when it doesn't…

"We now produce a fifth wheel with embedded sensors and a display in the cab that indicates if the trailer is coupled correctly – and other manufacturers have similar products. The point is you can't take the fifth wheel for granted."

Jost's checklist covers the operating handle and springs, safety latch, latch cord, adjuster rod, pivot bolts and wearing ring bolt. There is also a functional check, using a test king pin, a wear limit check and lubrication assessment. Most manufactures recommend high-pressure grease with a molybdenum sulphate additive.

Deri urges operators and workshops to get a copy of Jost's booklet on driver and technician fifth wheel procedures and checks. "These are 50 year-old designs, but they're too important to overlook," he insists.

Nine-point plan proves MAN and Mercedes

Home Delivery Network (HDNL), one of the largest contractors for online goods deliveries in the UK, has taken delivery of 158 MAN rigids and 500 Mercedes Sprinters. They're all fleet replacements, which is unremarkable, except that in these tough economic times, they're pretty big numbers. And HDNL says there will be more next year – 750 vans and 200 additional tractors.

On the truck side, Cartwright is fitting demounts to 84 4x2 7.5-tonners – all MAN TGL 150bhp BLs (steel front suspension, air rear), while Bevan is building box bodies with tail-lifts for another 61 (TGL 4x2 BBs – springs all round). The remaining 13 are all 18-tonners (MAN TGM 240bhp 4x2s) with Cartwright two-axle drawbar trailers and, again, demount bodywork. All are being provided on four and five year R&M packages, plus MAN Fleet Management – its online VOSA and O-licence compliance tool.

From an engineering perspective, what's interesting is HDNL's evaluation process.

"For the trucks, we outlined nine criteria and went to tender with four manufacturers," explains Brian Wheadon, director of HDNL's fleet, facilities and securities. Fuel efficiency was key, along with dealership support in terms of R&M, opening hours, distances from HDNL's sites nationally, breakdown response times and out-of-hours servicing. "We also checked availability of aftermarket parts against a basket of our top 50 abuse items [commodities], looked at residual values, and our own drivers evaluated the trucks on trial."

The final criterion was vehicle warranty – although Wheadon says that, early in the process, the team also reviewed HDNL's own workshops in Bolton and Oldham to assess whether to take maintenance in-house or go for an R&M package.

"MAN won five of the nine categories outright," he says, adding that "another big plus" was its EGR (exhaust gas recirculation) engine technology at Euro 4, "meaning no AdBlue worries". For him, AdBlue storage and usage have presented problems. "We've had instances where drivers put diesel in the AdBlue tank and that cost £1,000 a time to put right. But we also assessed fuel economy and, on our trials, MAN with the auto box came out best on a mix of cycles."

As for the van evaluation, Wheadon says the process was much the same, with Mercedes, Ford, Vauxhall and Citroen all initially in the frame, but Mercedes winning four of the criteria. He explains that the Sprinters were selected despite the fact that HDNL had purchased 500 3.5-tonne Vauxhall Movanos just 12 months earlier. "Going with Mercedes this time, and their R&M package, meant we were able to close down nine of our depot-based workshops," he states.

Wheadon says his team is now working on the next tender exercise – starting from scratch because of the differences at Euro 5. "MAN says it won't need to change to SCR [selective catalytic reduction] and AdBlue for Euro 5 until they get to the heavyweights. But we don't mind who wins. We're doing another evaluation, with our security, health and safety, and operational managers."

What about the O-license tool? Wheadon reckons that being able to access all his MAN truck maintenance and road worthiness records remotely, via the Internet, will make a big difference in terms of fleet compliance. "I can see it saving us time and money in our administration team," he says.