



Spreading the load?

Dear Mark,

Re the news item on page 11 of the June edition of C&A - "New ALE widening trailer reduces ground pressure."

I am completely mystified by this story, as I cannot see how merely widening the wheel track on the trailer actually reduces the pressure applied to the ground. Neither can my neighbour - and we both have an engineering background.

If you have a 200 tonne load supported on - for the sake of argument - a 10-axle trailer with four wheels on each axle set, it surely does not matter how widely spread apart the pairs of wheel are. Whether they are 3.6 or 4.3 metres apart, the pressure on the ground beneath each wheel will be the same - $200/40 = 5$ tonnes. Given that the pressure influence on the ground spreads outwards from the point of contact at 45 degrees either side, there obviously comes a point where the influence cones intersect - which is where you could get higher loading than on the surface if the intersection were relatively shallow. But I don't see that this would be affected very much by changing the track by this relatively small amount. Neither can I see the rationale for a reduction in ground pressure by lengthening the axle spacing by 10 percent, on the same grounds.

Presumably ALE and Goldhofer have done the sums and come to the conclusion that it works. Can someone explain how?

Thanks and kind regards,

Simon Walker
Principal, I.E.T.S

Oxfordshire
England

We were at Vertikal days when this letter arrived, but publisher Leigh Sparrow responded:

Dear Simon,

I have to admit to ignorance in not reading this article properly myself and do agree with you that merely widening the overall width does not change anything, apart from spreading the load over a wider area, this is something some states in the USA are keen on, with their bridge formulas and demands for wider spaced axles. While spreading the load can avoid local load concentrations it could of course have the opposite effect in some cases as you point out.

We would like to use your letter to gather some feedback from other readers, and will seek further clarification from ALE.

Editor Mark Darwin requested a response from ALE and received the following letter.

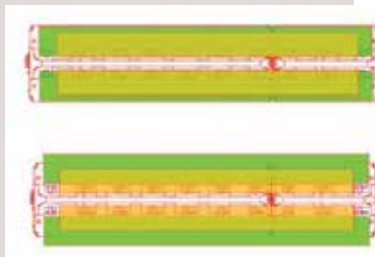
Hi Mark,

I've received a prompt response from Lead Engineer Nick Jones.....hopefully this should suffice in an explanation for Mr Walker. Typically the 'ground pressure reduction' is with respect to the interaction between the wheels and the structure they're travelling over.

Mr Walker is correct insofar as the ultimate load that is carried by the axle doesn't change but he has already noted that the change axle width will affect the interaction of load paths from the wheels down through the structure - from the studies we undertook we noted that for a typical motorway structure (multiple beam type bridge) would see a benefit by relieving the load under the spine of the trailer by forcing the load wider.

By increasing the pitch of the axles on the trailer, again looking at typical bridge spans, we would notice a potential reduction in bending and shear forces by virtue of the fact that there are one fewer axles actually on the bridge during critical stages. The simplest way of looking at it is reviewing the simple 'shadow areas' of the trailer.

Below, are a typical 3m THP/SL trailer (orange) vs the shadow loading of the ALE widening axles in un-widened and widened configurations. The reductions aren't a coverall for all structures and situations but give an opportunity for an alternative in cases where the structures are close to their maximum capacity. Typically on longer structures the benefit is reduced to almost nil, however these structures are rarely utilised on heavy haul routes.



UK Crane operator theory testing compromised

Dear Sir,

You may wish to consider the undermentioned for inclusion within your Letters page. In the June 2016 letters to the editor, Mike Ponsonby quite rightly highlighted that crane operators are uniquely skilled, and mentioned the myriad of hazards that they must master to fulfil the requirements of operator competence.

Most of the accepted card schemes insist that basic training of crane operators needs to cover fully the skills and knowledge required for their safe operation, including specific hazards and maximum capacities and limitations of the crane used. I'm sure we would all agree that the vital ingredient of basic training should consist of two

elements, theoretical and practical training.

My letter dwells on the 'theoretical aspect', and the CPCS scheme's ability to instil crane operators with the correct information, and how theoretical training must concentrate on the vital ingredient of underpinning knowledge. The crane operator's ability to digest the underpinning knowledge should be tested to ensure the objectives are met. With the CPCS the trainee must be tested for knowledge retained and this is achieved by tape-recorded sessions of set questions delivered by an accredited tester and model answers against which verbatim responses are marked for accuracy. An 80 percent pass mark is a mandatory pre-requisite to the practical test. Since 2008 it has been a tried and tested system, that I have personally used to test a wide

range of crane operator disciplines and associated lifting duties categories. The custodians of these equipment question/model answer banks are the accredited CPCS test centres geographically spread throughout the UK.

So far so good. However, for the last 125 days, (at the time of writing), an illegal website, based in Romania, is breaching the CITB/CPCS copyright with impunity. The CPCS Mobile Crane, A60, questions and model answers, for example can be yours for £19.99. Appointed Person, Crane Supervisor and Slinger Signaller are also available for a similar price, as are many other construction equipment categories. Put "CPCS answers" into a Google search and this Romanian illegal site rates higher than the CITB listing. A Mr C Toma has made an awful amount of money during 2016 courtesy of

breaching the CITB copyright on the CPCS product.

I have suggested to the CITB/CPCS that they should reconsider the workability of the model answers and whether they should disclose that the majority are now so widely disseminated throughout the lifting sector and beyond that they are totally compromised. Not a single acknowledgement from any CPCS manager, or their management committee, on the compromise of the copyrighted product, they remain firmly in denial.

<https://cpcs-theory-test-answers.com> *

It is now many weeks since the CITB stated that they anticipated imminent control of the website. A Crown Court hearing found in CITB's favour with them having to sit out a statutory period for an appeal to be

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launched by Mr Toma.

As a solution, may I suggest the CPCS remove all the questions/model answers from their test centres and introduce a new system of questions and model answers that can be randomly generated by the CITB and electronically sent to the tester/centre, on the day of the theoretical testing of a candidate's underpinning knowledge. The whole problem of testing crane operators, and others, is further exacerbated by the decision in 2008, by the CPCS, to deregulate formal training. Now any 'Tom, Dick or Harry,' can train crane operators under the CPCS guidelines and without any training checks, the delivery of questions and verbatim model answers has often featured on CPCS test centre 'training days,' prior to the actual test. It borders on farcical.

The CITB have an uphill battle to counter these illegal websites with this type of fraud fairly common due to the ease of access to technology and relative affordability. The Romanian site will eventually be removed but within hours another will appear with anonymous hosting.

Crane employers should ask themselves, "Are we happy that our crane operatives and site safety is served by a card scheme where the underpinning knowledge, test questions and model answers are totally compromised by an illegal website?"

Regards,

Mick Norton BEM

*Note - the actual link in the letter was a google search link running to nine lines of text. We used it on July 6th and it was still functioning.

Monitor is the name

Hello Mark,

Monitor Lifts, Australia, appreciate reading your C & A comments each month! We also read the Australia's Hire 16 editorial that you published with interest, June issue page 9. Of some disappointment was reading Monitor spelt as 'Mentor'! Especially so, after having Leigh Sparrow personally on the Monitor Lifts stand during this event.

Best regards from 'Down Under'.

We immediately wrote back to Monitor with a full and embarrassed apology, we are unsure whether it was a spell check entry or a Freudian slip on our part. We are aware of Monitor of course and the great pioneering work it has done to establish the spider lift concept in Australasia. The company is a leading player in the market, as the importer for Leguan, Omme lift and Platform basket spider lifts, it unquestionably a high quality reputable company. And once again we are sorry for this error.

Gordon Sparrow 1933 - 2016

Gordon Sparrow, the last of the three Sparrow brothers, who founded the original Sparrows Crane hire business in Bath, England, and built it into a large publicly quoted international crane rental and lifting specialist, died on June 1st at the age of 82.

He leaves behind wife Sheila - the two celebrated their 61st wedding anniversary on May 21st - sons Leigh, Timothy and Mark and daughter Emma, along with eight grandchildren. He had been unwell for the past two years but had a long track record of bouncing back from some of the most dire medical pronouncements, beginning in Germany in 2001, when he suffered a massive heart attack, during a crane buying trip.

Gordon Sparrow - the father of Cranes & Access publisher Leigh Sparrow - was also one of the few surviving founders of the modern mobile crane industry, which began to take root in the UK after the Second World War, and such his passing marks the rapidly approaching end of an era.

The youngest of seven children, he and his two brothers built their mobile crane hire empire on the back of a vehicle repair, service



Gordon later in life

and recovery business that they had established in Bath, Somerset, on the premises from which their father ran a large filling station. The two older brothers, Alf and George started the recovery work around 1946, after Alf returned from the war, Gordon worked with them on weekends and holidays, and joined them full time around 1949, although he was then drafted into the Army for two years of national service, spent mostly in Suez Canal zone of Egypt, where he drove an armoured car with the Royal Dragoons.

The brothers had built a small recovery truck from an ex-army winch tractor, and decided to buy more army surplus recovery trucks and tractors to sell on to local tree and timber companies. They were increasingly called on to use their machines for general lifting duties such as unloading trucks etc.. Then while visiting one sale, they came across a dozen big new American-built Mack wrecker trucks with twin booms and a capacity of 16 tonnes over the rear. They bought one for £300 and later regretted not having bought them all. This opened up the business to heavy recovery and even more lifting work.

They entered the crane hire business proper in 1949, when Alf made a homemade boom which they fitted to the front of a 4x4 Chevrolet Quad gun tractor for a factory clean-up job. The makeshift All Terrain crane came into its own on a contract to install concrete lampstands in Devises, Wiltshire. And a contract to store and string out large steel water pipes for a new water line being installed in the Bath area.

Demand for crane rental began to grow and the three increasingly focussed their time on this aspect of the business, and bought a second hand Michigan truck mounted crane, to which they added a power luffing. They then began talking to crane manufacturers, gaining valuable experience and eventually led to the them buying new cranes, the first being a British-built Coles.

All three brothers operated the cranes, with Alf and Gordon the keenest. By the 1960s GW Sparrow & Sons, as the company was officially known, was the leading UK company crane hire company, and one of the largest worldwide with a strong safety and quality culture that would match the best standards today. The company was floated on the stock market in 1968 and acquired by BET in a hostile take-over bid in late 1985. The offshore business, they founded - Sparrows Offshore - continues to thrive and is a leader in its field.

Gordon and two colleagues - David Flatley and Jim Hagan went on to acquire Coventry Crane Hire and formed Gordon Sparrow Crane Hire in Bristol. The assets of these

business were sold to Ainscough in 1995, and unable to get crane hire out of his blood he formed a third company with middle son Timothy, who had joined the Coventry/Gordon Sparrow business. The new company Sparrow Crane Hire is still operating, between Bath and Bristol. Gordon retained a half share in the business until the end, although he had not been involved for some time.

The funeral was held in Bath on June 22nd with a small crane from this business leading the cortege from his home, through the City of Bath to the cemetery. A feature he would very much have appreciated.



Leading the cortege through the city of Bath - a recently restored eight tonne Tadano truck crane

Footnote

The funeral and reception were well attended by ex-employees, several of them who had started with the original company in the early 1950s as teenagers. They took the opportunity to exchange stories and recall the family atmosphere of those pioneering days. Listening to them and seeing the boxes of old photographs, it strikes you that it should all be recorded, along with other stories from the early days of crane hire, before it is really too late.



First cranes