

# TRANSPORT Engineer

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them is likely to increase the risk of injury and alternative practices are clearly advisable.

For many applications involving handling items on and off a commercial vehicle, a crane or platform-lift can be a practical and affordable solution. The traditional view is that cranes and platform-lifts are viable only for handling larger items but the latest models from the leading manufacturers are suitable for all loads covered by the current manual-handling regulations. They are designed specifically for use on most light commercial vehicles and can be installed with little or no modification to the chassis or bodywork.

Bearing in mind that these products are generally used by people who are more concerned with other aspects of their work they need to be easy to operate, robust and reliable. There is no point in equipping vehicles with something that is difficult to use or has features that are not required.

The best designs will be simple to use and efficient. There is a trend towards greater use of hydraulic power as this offers a number of benefits in terms of handling precision, performance and operational safety.

Whatever the choice, load-handling equipment should only be used after staff have received proper training and the appropriate risk assessments have been completed. This is not difficult and should help to ensure that companies and their employees continue to carry out their tasks as safely and efficiently as possible.

A booklet published by Penny Hydraulics offers free guidance on manual-handling regulations with practical advice on how to reduce the need to handle loads by hand. The booklet includes numerous case studies explaining how we have helped customers reduce manual-handling and implement best practice through our design, manufacturing, installation and training service. Free copies are available from the Penny Hydraulics website:

[www.pennyhydraulics.com](http://www.pennyhydraulics.com)

**Richard Short**

Sales director, Penny Hydraulics  
Clowne, Derbyshire

## Don't let oil companies pull the wool over your eyes

As a former fuels and lubricants troubleshooter for the old Shell Mex & BP company, I have considerable empathy with much of the content of Mr Utton's letter on automotive lubricants and additives (*Transport Engineer* February).

Like many fleet engineers I know, I would welcome being brought up to date by him on this fascinating subject, in particular on the relevance of the multitude of global oil-test standards to current European truck operation.

I remember meeting, in the 1960s, an incredible tribologist, Dr Denis Somersmith, who was an adviser to ICI at Billingham. He was an enthusiast supporter of Shell industrial lubricants but he reckoned that they were far too good and were therefore likely to be too expensive. To demonstrate his point he would take me out in his family Mini, lubricated with straight 5W engine oil. This was very much cheaper than the 10W-40 "Super Motor Oil" that Shell had just launched. This 10W-40 oil had been developed in conjunction with OEM (original equipment manufacturers) to reduce battery size, weight and cost, to improve fuel economy, and to combat crankcase ventilation challenges. The concept misfired as engine noise and oil consumption were noticeably worse. Duckhams had a field day with its 20W-50 because oil consumption was less and engine noises were dampened.

I also remember a lecture on optimum oil-change periodicity (ocp) given by Dr Shirley Schwartz at the ETMC (European Truck Maintenance Council) international conference at The Hague in the 1980s. Shirley was a senior General Motors scientist who had been given the task of producing a dashboard indicator for Cadillac to

automatically indicate when an engine oil-change was due. She described the empirical testing her team had carried out in Alaska and Death Valley, California and concluded that the ocp was a direct function of the number of times the engine fired and sump-oil temperature. She said that her team had found that oil quality had no major effect on ocp. In the three years I worked for Shell I never did come across an engine failure caused by lubricant type. Lack of lubricant - yes, and there was one instance where engine oil had become acidic. I must have taken hundreds of samples in my time there.

As many fleet engineers know, I have been fortunate to have been involved for over 30 years with the IRTE/BTAC fuel consumption trials at the Mira proving ground at Nuneaton, Warwickshire. Most of the results have been reported in *Transport Engineer* as well as in technical magazines in the US, South Africa and New Zealand. Low-rolling-resistance tyres, low-viscosity transmission lubricants, and scientifically-fitted aerodynamic interventions have demonstrated their fuel-saving potential, but the same could not be said for fuel and engine-oil additives. With 50 years experience under my belt, I had become a cynic. But then last October I was asked to organise an IRTE/BTAC test for Nanoboron, which had developed an engine-oil additive containing a low coefficient of friction boundary lubricant. To cut a long story short, improvements of 10.3 per cent and 11 per cent were recorded respectively on the high-speed and stop-start circuits at Mira. A full report is available from Dr Mounir Adjrad at Nanoboron, 271 Regent Street, London W1B 2ES.

Back to Brian Utton's letter: I am beginning to think he doth protest too much (but only a little).

**Roger Denniss**

Lorry Logic

Repton, Derbyshire

## Government help needed to really put these claims to the test

I read with considerable interest the letter from Castrol's Brian Utton (*Transport Engineer* February) on the use of oil additives that are said to both improve both fuel consumption and reduce exhaust emissions. There is a plethora of these products on the market.

In my many years as a fleet engineer and more recently in my role at the Road Haulage Association, hardly a week has passed without another company producing an additive or lubricant of this sort, it seems. Usually, it is said to be the only one that works. In common with many other engineers, I like to keep an open mind on such matters. After all, if we never considered new products of any kind then we would still be using a horse and cart as our means of transport.

The firms developing and producing these products have apparently spent considerable amounts of money on research and development and it could be that, just maybe, there is some benefit to be had from using some of their products. But how are we to know?

It is impractical for most transport firms to verify the claims made and to have certainty as to the impact on other factors, such as component life and reliability. As a result, these products are likely to never to make a serious impact because the perceived risk usually outweighs the claimed benefit.

I wonder if there is a role here for publicly-funded research. The government is constantly highlighting the need to improve the environment by developing and testing new technologies and perhaps it could bring together the product promoters along with mainstream vehicle and lubricant manufacturers to provide wide-ranging evidence that transport engineers can have faith in.

**Steve Biddle**

Head of technical services, Road Haulage Association  
Weybridge, Surrey □