



# King concern

**Fifth wheel systems that engage the trailer kingpin, as well as drawbar couplings, are simple mechanical connections. They require basic maintenance and training to use safely, but additional equipment offers extra protection. Steve Banner reports on how to maintain, specify and operate them**

**T**oo many workshop employees seem to think that the best way to look after a fifth wheel (pictured above) is to plaster it with as much grease as possible. So says Paul Clayton, UK and regional technical sales and support manager at Jost.

The problem with this approach, he contends, is that it ends up doing more harm than good. Much of that grease gets trapped between the fifth wheel and the skid plate, attracting grit and causing premature wear.

A thin film of grease is all that is really required, apart from periodic adjustment. Even that is not necessary if you are willing to pay several hundred pounds extra and opt for a low-maintenance fifth wheel with polymer wear plates on top.

SAF Holland's SK-S 36.20 NoLube is a prime example. Neither the wear plates nor the locking mechanism require greasing.

"Low-maintenance wheels are especially popular in the food industry," says Clayton. Operators in that sector do not want to risk lumps of grease and dirt getting anywhere

near what they are delivering.

Nor should a drawbar coupling be liberally plastered with grease, says VBG's UK sales and marketing manager, Howard Ostle, and for much the same reasons.

"Grease is the coupling's enemy," he states. "Oil it instead."

Do that and check the coupling every so often and it should give trouble-free service for years - assuming that drivers are careful. The funnel (pictured, p34, top) is occasionally broken because they try to couple up too quickly, and hit it hard as a consequence. The pin can be damaged as a result, too.

One way of ensuring that a VBG coupling is properly lubricated is to mount an electronically-controlled Mechmatic unit linked to the truck's air system close to it.

Once in every six hours of vehicle operation a blast of compressed air is forced through a connection fitted to the lid of the coupling to drive out any dirt or moisture.

A removable canister built into the unit holds an aerosol can of VBG Mec Oil. When activated, it injects the lubricant through the same connection once every 24 hours. The can should

last for around a year before it requires replacing.

"Look after your fifth wheel and you should be able to take it off a tractor unit and put it on its successor," says Clayton. That is not something that operators usually do, of course, because it would affect the unit's residual value; and concern about residuals is a key reason why sliding fifth wheels continue to be specified, despite the fact that they are seldom if ever slid.

"Years ago there was a case for sliders because there were differences in kingpins between some trailers and others," he says. Nowadays this is far less common, he points out, and the case for sliders is much less convincing in most types of operation.

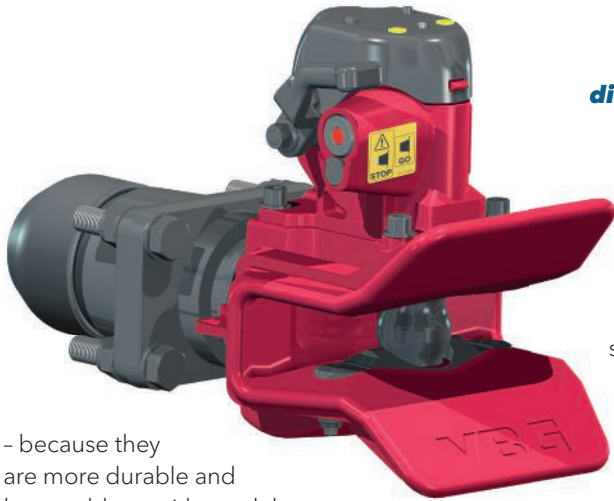
"Eighty-five per cent of them never get moved," observes one industry executive.

## CHOICE OF MATERIALS

Pressed steel models should perform perfectly well in day-to-day service without the need to specify pricier cast ones. The latter should be chosen, however, if trucks are on especially arduous work - in and out of quarries or on and off landfill sites, for example

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- because they are more durable and better able to withstand the battering they are bound to receive.

“If 70% of your work is off-road then you will find that a cast wheel is a bit more forgiving, and there is not all that much difference in weight between a cast and a pressed fifth wheel,” says Fontaine UK sales manager Steve Marshall.

All operators of artics are eager to avoid the damage that miscoupling leading to a dropped trailer can do. Nowadays food and drinks logistics company Culina specifies Fontaine’s 150SP pressed steel fifth wheel that features the manufacturer’s TechLock coupling system. It works by ensuring the fifth wheel’s jaws do not spring shut unless there is secure contact between the shaft of the kingpin and the jaws themselves.

“With the system we used before, drivers would reverse under the trailer, just skimming the kingpin, hear the jaws fire over and see that the dog clip could be fitted,” says Culina group fleet

manager, Mark Matkin. “When they lifted the suspension up, however, the kingpin was sitting on top of the jaws rather than within them.”

Fontaine also offers a three-sensor coupling safety system complete with flashing LEDs on the fifth wheel and in the cab.

When the safety clip is in place and the trailer securely coupled, an LED on the fifth wheel glows green continuously. Also, an LED in the cab glows green for a few seconds, then goes out.

Users include Aberlour, Banffshire-based family-owned logistics company McPherson. Gatehouse security staff as well as the driver can check that the fifth wheel LED is showing green before the truck departs.

Fleet engineering director Ian Jamieson particularly likes the ability to link the sensors and the fifth wheel indicator light to an onboard CCTV camera.

“As well as working with the cameras themselves, which we have pointed at the indicator lights on the fifth wheel, we have also been able to set the sensors to additionally trigger a red light on the monitor in the cab,” he says. “This means

that not only does the driver know when he’s made an error, he knows we’re recording what he’s doing about it, too.”

McPherson runs over 200 trucks and 700 trailers, and specialises in the transport of whisky and other spirits.

Just also offers a sensor system, which monitors the lock jaw, kingpin position and trailer height. None of this means that the driver can disavow responsibility for trailers being dropped, however, says Clayton.

“I’ve never known a fifth wheel drop a trailer all on its own,” he observes. “It’s invariably the driver’s fault.”

To mitigate that risk, Culina has introduced a driver training programme that addresses coupling, along with implementing TechLock. It no longer experiences miscouples, says Matkin. “TechLock takes out the elements of distraction or haste,” he observes.

Any move to driverless trucks would have implications for coupling procedures because there would be no opportunity for driver intervention.

“As it happens we’ve had a fully-automatic drawbar coupling for a while which means there is no need for the driver to get out of the cab,” says VBG’s Ostle. “We’ve sold quite a few in mainland Europe.”

So far as fifth wheels are concerned, at least one manufacturer is working on a system that will couple a tractor unit to a trailer safely, connect the airlines and wind up the trailer’s landing legs, all without human involvement. It is a reminder that driverless vehicles will have a wider impact on logistics than ensuring that cargo can travel safely down the motorway from A to B with no one at the wheel. [iE](#)

**FURTHER INFORMATION**

*IRTE Safe Coupling and Uncoupling Guide – <https://is.gd/jevese>*

*Accident waiting to happen – <https://is.gd/ovedug>*

*Coupling-up – <https://is.gd/biquzu>*

