

Two OEM launch events showed off the latest developments in CV tyres. Richard Simpson reports from Goodyear; Peter Shakespeare from Bridgestone

At its 'Truck World' event, Bridgestone presented three new premium CV tyres. Launches included a new regional heavy truck tyre, Duravis R002, and its latest PCV offering, COACH-AP 001. The company also revealed initial performance data on the recently launched Ecopia H002, its fuel-efficiency tyre.

Meanwhile, Goodyear has sharpened the performance of its on-road truck tyres, and is putting increased emphasis on grip in adverse conditions, while retaining the core virtues of the KMax (high-mileage) and FuelMax (fuel economy) ranges.

Bridgestone claims the cost per kilometre for the Duravis R002 is 15% lower than its predecessor, averaged across steer, drive and trailer. Wear life is up to 45% better than its predecessor with a 'best-in-class' A-grade for wet grip on the steer tyre. At the launch, braking adhesion tests against the Michelin Multi-Way demonstrated superior performance (although this was a subjective judgement by the author). In terms of CO₂ output, the new R002 is rated B-C-B across the combination of steer, drive and trailer. Bridgestone has achieved the improved performance through a combination of new compounds, a reinforced shoulder and new hexagonal tread block. The Duravis R002 tyres are to be fitted as original equipment on MAN, Scania, Daimler, Volvo, Renault and IVECO trucks, following homologation testing.

KMax is Goodyear's most versatile tyre, aimed at 'regional' fleets operating



TYRE PAIR

EXTRAS

A recent focus for Bridgestone is its digital mobility solution portfolio. That newly widened fleet offering now includes Total Tyre Care, FleetPulse and, following the acquisition of TomTom Telematics, Webfleet. To take the former, Total Tyre Care is Bridgestone's comprehensive tyre management solution. Customers can choose from packages that include Toolbox tyre monitoring, Fleetbridge tyre asset and contract management, Basys casing asset management, or the Tirematics tyre pressure monitoring and maintenance system. Tirematics uses tyre valve sensors that can be read remotely as the vehicle enters or leaves its depot, or by a reader linked to an app on a mobile device. This app also includes driver walk-around checks.

Goodyear is also improving its tyre management offering for large fleets, including two different pressure monitoring systems. Back-to-base fleets can use a 'drive-over' reader that records pressure and tread depth set up at the depot entrance to automatically monitor tyre condition. An ANPR camera identifies each vehicle as it approaches; pressure pads measure tyre pressure and lasers monitor tread depth. The details of each tyre and its position on the vehicle are recorded. Pressure and tread details are shown to the driver on a screen and, critically, recorded on the operator's IT system, with items requiring immediate attention being flagged up.

The alternative - more suitable for 'tramping' trucks - is an on-vehicle tyre pressure monitoring system (TPMS). In Goodyear's case, this is mounted in the well of the wheel rim, rather

Moulds produced using 3D printing allow fresh tread features to become exposed as the Goodyear KMax tyre wears

on a variety of motorways, country and urban roads. Of the six KMax Gen-2 steer tyre sizes currently released, two have B ratings for fuel economy, and the remainder C. All achieve a B grade for wet grip, while sound levels vary from 70 to 74dB, depending upon size.

Of the four current drive axle sizes, one achieves a C for fuel, and the remainder D. Wet grip is split equally between grades B and C, while three have sound levels at 72dB, with the remaining size recording 73dB. Goodyear emphasises the consistency of grip over the life of the tyre, with the wet grip ratings being retained until the tyre is ready for regrooving. Moulds produced using 3D printing allow fresh tread features to become exposed as the tyre wears. The new drive-axle tyres offer 6% more 'biting' tread edges over the life of the tyre than their predecessors. Or, by another comparison, the new tyre has as many tread edges when worn to 5mm tread as the predecessor tyre had with 17mm of tread.

In contrast, Bridgestone's FuelMax Gen-2 is aimed primarily at the long-haul operator working mainly on



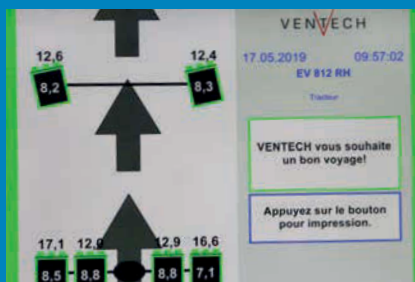
motorways. In the sizes available so far, all FuelMax Gen-2 tyres offer an EU B grade for fuel economy, and all but one size of steer axle qualifies for a B grade for wet grip. All steer tyres have a low 70 or 71dB noise rating. Two of the three sizes of FuelMax Gen-2 drive tyre launched so far have C grades for wet grip, with the other being a B, and all have noise levels of 73dB: quite low given their more aggressive tread pattern. All of the Gen-2 tyres, KMax or FuelMax, can be regrooved and retreaded.

Going head to head with Michelin's X-Way long-haul tyre range, the new Bridgestone Ecopia H002 is rated best in class for fuel efficiency through an

EU label A-A-A grade combination on steer, drive and trailer. Bridgestone claims that by using new Ecopia tyres on all axles, a medium-sized long-haul fleet could make a €240,000 saving per year on fuel costs and reduce CO₂ emissions by 546 tonnes. It bases this claim on an independent 1,030km fuel test carried out by TÜV SÜD using identical MAN Profi-Drive 40-tonne artics, driven in rotation by the test drivers. The H002-shod vehicle consumed eight litres less per 1,000km than the Michelin X-Way-shod truck. The new Ecopia achieved B-B-B EU label ratings for wet grip, across steer, drive and trailer. The H002 is also winter-ready: Bridgestone claims it is the only long-haul tyre range with 3PMSF and M+S markings for all axles.

Available from September 2019, R002 and H002 will initially be available in 315/70, 315/80, 385/65 and 385/55 sizes. Six additional sizes including 295/80s will follow in early 2020. All of the new tyre ranges will be fitted with RFID (radio frequency identification) electronic tags in the side wall below the bead, enabling customers to trace their casings so they get the same ones back after remoulding. Its Bandag retread will have a similar tread pattern and features as the prime tyre.

Bridgestone's new 295/80 COACH-AP 001 tyre has an EU label B grade in rolling resistance and pass-by noise score of 69dB. It also has an EU label B grade for wet grip, and is winter-ready. AP 001 will be available from October 2019. [TE](#)



than in the tyre, meaning that the cover can be removed and replaced without disturbance. The TPMS also monitors wheel temperature (see also pp20-21). Tread depth will have to be monitored manually.

All the Gen-2 tyres have an embedded RFID chip, giving the tyre an identity that will last through regrooving and retreading. A drive-over

reader that will also scan the RFIDs of individual tyres is in development.

Ultimately, Goodyear sees its tyres becoming part of the 'internet of things', with the manufacturer being able to predict which tyres will require replacement and when, and planning its production on a week-by-week basis to meet the demands of contracted fleets.