BATTLE ROYAL

PERFORMANCE TEST: **KEEDWELL GROUP**

With more than 400 trucks in its fleet, Keedwell Group has to get purchasing decisions right — so it is conducting a comprehensive test of 6x2s from four manufacturers

GROUP SPECIFICATION TABLE

Manufacturer and model	Mercedes-Benz Actros MP5 2545 LS 6x2/2 BM pusher-axle tractor unit, with BigSpace sleeper cab	Renault Range T High 480T 6x2 pusher-axle tractor, with flat-floor sleeper cab	**Manufacturer and model**	Scania R450A6x2/2 pusher-axle tractor unit, with R Highline medium-height cab with high roof	Volvo FH 460 I-Save 62PT3HA 6x2 pusher-axle tractor unit with XL Globetrotter sleeper cab
Chassis	3,900mm wheelbase. Plated GVW 25,000kg (26,500kg design). Plated GCW 44,000kg (45,000kg design). Front axle 7,500kg with steel suspension, 19,000kg (split 7,500kg/11,500kg). Fully air-suspended rear bogie, with pusher-axle, weight transfer and full lift. 295/80R22.5 tyres all round. Single-reduction drive axle with diff-lock, 2.533:1 ratio (others available). 450-litre aluminium fuel tank, 30-litre plastic AdBlue tank and batteries in rear of chassis	3,900mm wheelbase (4,100mm optional). Plated GVW 23,400kg (26,000kg design). Plated/design GTW 44,000kg. Front axle 7,500kg with steel suspension. Fully air-suspended rear bogie with pusher-axle weight transfer and full lift, plated 19,000kg (split 7,500kg/11,500kg). 315/70R22.5 tyres all round, P-13170 single-reduction drive axle with diff-lock, 2.47:1 ratio (others available). 480-litre. aluminium fuel tank, 64-litre plastic AdBlue tank and batteries in rear of chassis	**Chassis**	4,050mm wheelbase. Plated GVW 24,000kg (design 24,300kg). Plated GCW 44,000kg (design 45,000kg). Front axle plated 8,000kg with steel suspension, fully air-suspended rear bogie with weight transfer and full lift on pusher-axle. Plated 16,000kg (split 6,000kg/10,000kg). R780 single-reduction drive axle with diff-lock, 2.59:1 ratio (others available). Twin 250-litre aluminium fuel tanks, 70-litre plastic AdBlue tank. Batteries mounted on side of chassis	3,900mm wheelbase (4,100mm) optional. Plated GVW 23,400kg (design 27,000kg). Plated GCW 44,000kg. Front axle plated 8,000kg with steel suspension, fully air-suspended rear bogie. Plated 19,000kg (split 7,500kg/11,500kg). Weight transfer and full lift on pusher-axle, 295/80R22.5 tyres all round. RSS1344 single-reduction drive axle with diff-lock, 2.31:1 ratio (others available). 80-litre aluminium fuel tank, 68-litre plastic AdBlue tank. Batteries in rear of chassis
Engine	Mercedes OM471/450 (second generation), Euro-6d, 12.8-litre, 6-cylinder in-line, turbocharged and intercooled, with twin overhead camshafts, fixed geometry turbocharger and X-Pulse fuel injection system. Emissions controlled by cooled EGR, DPF and SCR via catalyst exhaust with AdBlue. Three-stage combined exhaust and engine brake	Renault DTI 13/480, Euro-6d, 12.8-litre 6-cylinder in-line, turbocharged and intercooled, overhead camshaft, with common rail fuel injection. Emissions controlled by non-cooled EGR, DPF and SCR via catalyst exhaust with AdBlue. Exhaust brake and Optibrake engine brake.	**Engine**	Scania DC13-148 Euro-6c, 12.74-litre in-line 6-cylinder, turbocharged and intercooled with fixed geometry turbocharger. XPI high pressure fuel injection. Emissions controlled by SCR catalyst with AdBlue and particulate trap. Uprated Scania exhaust brake	Volvo D13K DTC460, Euro-6d, 12.8-litre, in-line 6-cylinder. Turbocharged and intercooled with additional exhaust driven, turbo-compound system, boosting engine output and fuel efficiency. Overhead camshaft, common rail fuel system. Combined exhaust brake and VEB engine brake. Emissions controlled by non-cooled EGR, DPF and SCR catalyst exhaust system with AdBlue
Maximum power	443hp (330kW) at 1,600rpm	473hp (353kW) at 1,400rpm to 1,800rpm	**Maximum power**	444hp (331kW) at 1,900rpm	463hp (345kW) at 1,250rpm to 1,600rpm
Maximum torque	2,200Nm at 1,100rpm (2,400Nm in 12th gear with certain axle ratios)	2,400Nm at 950rpm to 1,400rpm	**Maximum torque**	2,350Nm at 1,000rpm to 1,350rpm	2,600Nm at 900rpm to 1,400rpm
Gearbox	Mercedes PowerShift 3 G211-12. 12-speed auto, with manual override, direct-drive top gear. Advanced PPC control using GPS technology combined with PACC cruise control. Eco-roll	Renault Optidriver AT2612F 12-speed automated with manual override, direct-drive top gear. Economy and standard modes. Optifuel map-based economy software package. Opti-roll freewheel function. Optivision GPS cruise control function	**Gearbox**	Scania Opticruise GRS 905 14-speed (12 main gears and two crawlers), automated two-pedal control with manual override. Direct-drive top gear, integral layshaft brake. GPS-controlled smart cruise control system influencing gearshift strategy and engine performance	Volvo I-Shift ATF2612 12-speed automated with manual override, dash-mounted gear controls. Direct-drive top gear, I-Roll function combined with Long Haul fuel software. I-Save economy software includes I-See map-based cruise control/gearshift strategy to maximise economy
Ratio spread	14.93-1.00:1	14.94-1.00:1	**Ratio spread**	16.64-1.00:1	14.94-1.00:1
Brakes	Air-operated EBS-controlled disc brakes. ABS, ASR and hill hold, electronic handbrake. Full range of mandatory safety systems, including AEBS with Active Brake Assist 5 and adaptive cruise control	Air-operated EBS-controlled disc brakes. ABS, ASR and hill hold, electronic handbrake. Full range of mandatory safety systems, including AEBS and adaptive cruise control with distance control function	**Brakes**	Air-operated EBS-controlled disc brakes. ABS, ASR and hill hold, conventional parking brake control. Mandatory safety systems include AEBS and adaptive cruise control with distance control	Air-operated EBS-controlled disc brakes. ABS, ASR and hill hold, electronic handbrake. Full range of mandatory safety systems, including AEBS and adaptive cruise control function
Cab	BigSpace flat floor sleeper cab with medium-height roof, single bunk layout, full deflector kit. MirrorCam system in place of conventional mirrors. External storage lockers and additional driving lamps. Single bunk layout, interactive dash and control layout, touch-screen control system, combined driver information system, internal storage lockers. Night heater, air conditioning and electric roof hatch	T High flat floor sleeper cab with four external lockers, full deflector kit and additional driving lamps. Twin-bunk layout with folding top bunk that can be split lengthways to provide a safe stowage area. Combined driver information system with dash display, conventional control layout with steering wheel controls. Leather steering wheel trim, carbon-effect dash trim. Night heater, air conditioning and electric roof hatch	**Cab**	Scania R Highline, medium-height with Highline roof. Two external lockers, full deflector kit, additional driving lamps. Twin-bunk layout with extendible lower bunk, fridge and microwave. Driver information system with steering wheel-mounted controls. Manual roof hatch, air conditioning and night heater	Globetrotter high roof sleeper. Four external lockers, full deflector kit, additional driving lamps. Single-bunk layout with additional overhead storage on rear wall, fridge and microwave. Driver information system with conventional control system and steering wheel controls. Electric roof hatch, night heater and air conditioning
Vehicle supplier	City West Commercials	Renault Trucks UK on long-term evaluation	**Vehicle supplier**	Purchased used at two years old	Volvo Trucks on long-term evaluation

WORDS: BOB BEECH / PHOTOS: NIGEL SPREADBURY

Commercial Motor This special head-to-head differs considerably from the normal format, in that we have four competing vehicles. They are all part of a long-term fuel and vehicle performance trial by Keedwell Group, with the outcome certain to influence the future vehicle replacement plans. Since there are currently more than 400 vehicles in the fleet, it is very much in the interest of the manufacturers involved, and their respective dealers, to see their products perform to their full potential.

From the outset, great care has been taken to plan and organise the project, ensuring that the results are collated and interpreted correctly.

The four vehicles involved are monitored via the same Mandata telematics package, and the trucks are used on a wide range of different routes and cargoes that accurately reflect the overall operation. After all, there is little point in choosing a vehicle specification that suits one aspect of the business with the vehicles based at a depot in one part of the country, but does not give optimum results in another region.

Andy Evans is heading the trial and is keeping meticulous records of all aspects of vehicle and driver performance. Any spurious inconsistencies, such as non-operational movements for maintenance, are removed from the data. Four drivers have been chosen on the basis of their consistently high performance data and their positive attitude to the vehicle trial. Also, the four trucks are based at three different locations, but the vehicles regularly work from different depots to give a mixed workload. In addition, all of the vehicle fleet is limited to 52mph, which has shown to offer real benefits in terms of fuel use and have a minimal effect upon journey times.

Both the truck and driver performance are measured on a weekly basis, with a separate analysis of the weeks where the drivers achieve A+ across all five of the measured disciplines. This is important for accuracy and to be fair to the drivers and their trucks. If a vehicle suffers from delays, downtime or other factors beyond the control of driver and operator, this can dramatically affect the figures and skew the results for an individual truck.

This includes particularly bad weather in one area and excessive traffic congestion (like the summertime holiday rush that gridlocks the M5 motorway alongside the company's Highbridge headquarters) – both could have a huge effect upon fuel use and is beyond the drivers' control.

Another example would be if a vehicle spent a high proportion of the week on rural roads in more remote parts of the country. Despite what some trainers claim, there are limits to just how much a driver is able to make full use of the cruise control when the road twists and turns with a constantly changing gradient.

LEVEL PLAYING FIELD

We agree entirely with this even-handed approach. Collating figures without qualifying the true accuracy of the information can be a time-consuming and ultimately misleading process, if the bare information is taken at face value.

Vehicle telematics allows operators and manufacturers to access huge streams of data at the touch of a button. In particular, driver behaviour can be closely monitored, but care must be taken to ensure that the data is interpreted correctly.

> **Great care has been taken to plan and organise the project, ensuring that the results are collated and interpreted correctly**

We have seen many instances where the figures might give a false impression of the real driver performance, particularly in a hire and reward operation. One driver might return a fantastic set of figures in terms of fuel use, driving disciplines and other measured data, but if that individual is frequently given a more straightforward run, with just single deliveries and collections, it is very difficult to make an accurate comparison with another driver that is regularly given a far more demanding schedule.

After all, productivity is invariably reflected in vehicle earnings. A driver that is actually carrying out more work will inevitably be incurring greater fuel use and other associated costs, but may well be earning the company a lot more money in the process.

Given the wide-ranging nature of this on-going trial, it is best to look at the individual vehicles, the reasons for the inclusion in the trial and their performance to date.

SCANIA R450A

The Scania is to a certain extent something of the odd one out in this process, since it was not purchased new or specifically to take part in the trial. It was actually a replacement vehicle, purchased as a used two-year-old truck to replace an 11-year-old R420. It was also the preferred choice of a very long-serving driver who is not a fan of German or French-built trucks. Scania has figured strongly in the Keedwell fleet in the past, but it has lost out to German and French competitors in recent years.

The early results when the Scania went into service showed a high level of consistency in terms of performance and fuel use. For this reason, it was decided to use this truck as the benchmark vehicle to measure the other contestants against. The new generation 6-cylinder Scanias have earned themselves a strong reputation for first-rate fuel economy in many fleets. Operators tell us that the manufacturer's sales staff use this potential fuel saving, along with the relatively high residual value of the product, as a means of justifying the higher-than-average upfront price for a new Scania.

The DC13.148/450 engine fitted to this particular truck is almost certainly to the earlier Euro-6c emission standards, so the current Euro-6d power units have both detail changes and revised software. This might well give improved fuel economy as well as lower emission levels. All manufacturers are continually fine-tuning many aspects of the driveline and electronic architecture,

and often existing vehicles are subject to a number of updates while in service. Otherwise the rest of the driveline is pretty much current.

Also, the easy-driving characteristics of the new-generation models, coupled with the decent levels of cab comfort, make the trucks very popular with most drivers. Other factors, such as good long-term reliability, often translate to a long working life for the first owner and possible successive operators. The 450hp version of the well-proven DC13 engine gives decent performance at 44 tonnes although it's no record breaker on long hills. The 500hp version is just that bit more comfortable, but the 450hp recovers well as soon as the gradient eases. It's a very relaxing truck to drive. The current Opticruise transmission works well and Scania has resisted the temptation to go for ultra-high overall gearing for most applications, which makes the truck more drivable on cross-country routes. The one thing missing from the standard specification is a truly effective engine brake. The exhaust brake has been uprated compared with the previous generation, but it could still be better, and the optional gearbox retarder is just too expensive for many big fleet operators.

MERCEDES-BENZ ACTROS MP5 2545

The current Keedwell fleet is dominated by Mercedes-Benz, with a large number of Actros MP4 2545 6x2 tractor units based at depots throughout the country. One of the main factors in the decision to concentrate on Mercedes products has been the first-rate fuel consumption returned by the German-built trucks. The 450hp version of the 12.8-litre OM 471, in its second-generation form, was introduced a while back and is fitted to some later MP4 models and the current MP5 range. Mercedes increased the torque output to improve driveability. An asymmetric turbocharger gives better response across the rev range. Other detail changes to the engines improved fuel consumption and went some way to overcome driver complaints regarding sluggish performance, especially at 44 tonnes.

Other detail changes to gearbox software and engine management were introduced with the MP5. These include an improved and expanded Predictive Powertrain Control system, with a very advanced cruise control that utilises both GPS control and a memory function. This allows the truck to learn the route and optimise gear change strategy, power delivery and even road speed to give the best blend of performance and fuel economy.

The net effect is that the engine is more responsive in standard mode and the transmission reacts more quickly at junctions and in slow-moving traffic. Previous versions could be hesitant when engaging a starting gear and often made overly ambitious block changes at the worst moments. It seemed to get worse as the truck got older, almost as if the fuel economy software was overriding any other data input.

Obviously the most visible exterior change is the MirrorCam system, which replaces the conventional mirrors. This bold move by Mercedes has certainly attracted attention. We reckon the system works very well in almost all situations, but do find that it takes time to adjust to both the rearward view when manoeuvring and the camera focus in certain situations. The interactive dash, with its touch-screen is a very interesting development, replacing conventional buttons for most functions. There is quite a lot to take in at first, but it actually works very well in practice.

For fleet use, the latest Actros has a lot going for it. The changes to the driveline software and the removal of the mirrors potentially improves the fuel consumption, which is an impressive feat considering the previous model's reputation for first-rate economy. But it is essential that drivers are given full instruction to get the best from the technology. Some, particularly those who are totally at home with electronic devices, will soon understand it all, while others might take a little longer to embrace all of the systems.

RENAULT RANGE T HIGH T480

Renault has been promoting the flat-floor Range T High quite strongly in the UK in recent years. The previous lack of a right-hand-drive option was an issue for operators who required a bigger cab for long-distance operations.

The standard sleeper cab has proven to be a good choice for medium-distance operations, and a very worthy replacement for the Premium, but drivers do like the extra space afforded by the bigger cab. The layout works well, with decent storage, a comfortable bunk and a very commanding driving position.

This particular truck has been loaned to the operator as a long-term demonstration vehicle. There are some other Range T's in the fleet, including a flat-floor anniversary truck and some lower-cab drawbar outfits. Previously, the company ran a large number of Premium tractors and found them to be good workhorses, but lacking driver appeal by modern standards.

Renault has been working hard to refine its Volvo-derived drivelines, to both improve fuel consumption and driveability. As far as we can tell, the changes are more subtle than dramatic. Optimising software now brings careful control of combustion, turbocharger response and minimises emissions.

The DXi 13 engine now has low-friction pistons, new valve seats and changes to the particulate filter and catalyst exhaust. Other options include an air compressor that disengages drive when it is not in use and a variable-flow power steering pump, which reduces parasitic losses.

These changes have been combined with the enhanced driveline management software. Part of the optional Fuel Eco + Pack, includes the Optiroll function, soft cruise control and Optivision GPS control.

The complete Optifuel programme includes this technology along with advanced driver training and telematics monitoring. The net effect of all of this is the potential for improved fuel consumption and lower maintenance costs.

The manufacturer's claims of improved economy were sufficient to attract the operator's interest, and Renault seems confident enough of proving its point by providing a vehicle for long-term assessment in the trial.

NEED TO KNOW

Tweaks to the Range T's software have improved combustion, turbocharger response and reduced emissions

VOLVO FH 460 I-SAVE

Volvo has made great strides in improving the fuel consumption of its mainstream heavy-truck models, particularly those powered by the long-serving 12.8-litre D13 engine. The innovative Turbo Compound versions have proven to be extremely frugal both in *CM* road tests and assessment features. This is supported by many operators' experiences with vehicles in service, although the re-introduction of turbo-compounding by Volvo was treated with a degree of scepticism by some with long memories.

But this version uses the secondary turbine as a means of increasing the torque output dramatically, unlike with earlier versions. The engine power output remains at the same level as with the standard turbocharged versions, but is developed at lower revs. The theory is that the extra 300Nm, which is maintained over a wide 500rpm band, allows a relatively modest power rating to pull very high overall gearing at 44 tonnes and still climb most motorway hills without dropping a gear even if the engine is down to 900rpm. This enables it to recover quickly as soon as the hill eases. The system means that the engine is running in its most economic rev band for most of the time on long-distance operations. The secondary turbine makes full use of the energy that is normally lost to the exhaust system.

The test FH460 has been supplied to the operator as a long-term demonstrator. Volvo has not figured very highly in the fleet for many years and this particular vehicle indicates that both the dealer and manufacturer are keen to redress this situation. Volvo has included a host of other features to ensure the best possible economy. The standard direct-drive I-Shift transmission has the normal fuel economy software package combined with the full I-Save software, which includes GPS cruise control and economy gear shift strategy, with I-Roll and dash-mounted gear control buttons to minimise driver intervention. The direct-drive I-Shift transmission is matched to the 2.31:1 drive axle ratio. Other ratios are available, but this is Volvo's recommendation with the I-Save package. With the operator's policy of limiting its fleet to 52mph, this has the engine running at just over 1,000rpm on the limiter, and the regular driver reports that it copes with most motorway inclines in top gear. This ideal set-up is reflected by the very good fuel returns achieved so far.

Volvo has definitely won the driver over with the well-equipped Globetrotter XL cab in single bunk form, with extra storage on the rear wall, fridge, microwave and TV plus a number of extras. Some may consider this level of equipment to be excessive on a fleet truck, but it is becoming increasingly obvious that if you want drivers to stay away from home all week, a decent level of interior kit goes a long way to attracting and retaining the right people. And given the purchase cost of modern vehicles, it doesn't really add that much to the whole-life costs of a vehicle.

FUEL CONSUMPTION AND CONCLUSIONS SO FAR

SCANIA R450A

All of these trucks are returning levels of economy that would have been considered truly outstanding just a few years ago. The new generation Scania has built on the fine reputation that the earlier SCR-only versions of the previous range gained in fleet use. But it has to be said that the earlier Euro-4/-5 EGR-only engines were far heavier on fuel and the manufacturer had to completely change its emission system policy.

The later SCR-only 13-litre is a far better engine – as much as 2mpg better on fuel, cleaner running and with lower maintenance costs. It speaks volumes for customer loyalty that Scania was able to extricate itself from this situation, particularly when it previously had such a good reputation for economy with its Euro-2/-3 engines. The latest models have built on this, although we hear quite a number of complaints regarding exhaust sensor failure. The latest Euro-6d engines seem better in this respect, but this is only what operators should expect given the relatively high purchase price of a new Scania.

Overall, this is a fine range of trucks, with great driver appeal, but we feel that most of the opposition have closed the gap on fuel use – and in some cases, edged slightly ahead. A latest specification Euro-6d will probably be a bit more economical than this one, improving the overall figures, but the high capital cost is reliant upon Scania retaining its strong residual values and low whole-life costs.

FUEL RETURNS

Best single week	10.02mpg
Worst single week	8.55mpg
Overall total (weeks with A+ driver score with company telematics system)	9.27mpg
Overall total (five-week period)	9.09mpg

MERCEDES ACTROS MP5 2545

Mercedes got it absolutely right with the MP4 Actros as far as fuel is concerned and this looks set to continue with the current MP5. They are relatively easy to drive economically on a wide range of operations, making them ideal for large fleets, and is the principle reason why Keedwell has so many in service. Company boss Stuart Keedwell reports that this has been a massive factor in previous purchasing decisions - quite simply, it has such an effect upon the bottom line in a very competitive transport market. Other factors such as front-end purchase price are a bigger consideration than residual value, because of the unstable nature of the used market with fleet-specification tractor units.

The existing Actros has generally performed well. The highest mileages recorded are in excess of 800,000km without major failure, but there were issues with cracking sumps on early models and the inevitable electronic issues that affect almost every modern truck. From 17-plate vehicles onwards there have been recurring problems with wheel rims cracking on steer and pusher axles with no real plausible explanation. Driver acceptance is generally good, although some find the 450 engine a bit lethargic on long climbs.

One area that needs serious attention is parts availability. Some items are not available off the shelf and even a fleet with this amount of direct influence has had trucks off the road because of shortages. The majority of the Mercedes fleet are purchased with two years inclusive R&M and are then maintained in-house, which makes the parts situation even more critical.

The new MP5 seems to be maintaining the reputation for good fuel use, and the driver says the latest version is more lively on hills. The new model is a further improvement, but it takes time and decent instruction to get the best out of the modern technology.

FUEL RETURNS

Best single week	10.55mpg
Worst single week	9.87mpg
Overall total (weeks with A+ driver score with company telematics system)	10.19mpg
Overall total (five-week period)	10.25mpg

RENAULT RANGE T480 HIGH

Renault has definitely made progress in terms of fuel economy. If this trial had been run a year or so ago, we expect the Range T High would have been well behind the Scania and Mercedes, but careful development work has really paid off. Close attention to detail ensuring that all aspects of the engine and driveline are working at their optimum has made a big overall difference.

The 13-litre has always performed well and given very good long-term reliability, but as with previous Volvos that use the same basic design, they were just a bit adrift of the best in the field when it came to fuel use. When working hard, the engine was pretty much on par with anything else, but they didn't show the gain that others experienced when pulling lighter weights on easier routes. It was as if the driveline had been optimised for working hard at full weight, when unfortunately many UK operators often run their 44-tonners at lighter weights. These new versions seem to have cracked this issue and the fuel returns in this trial are very good by any standards. Previously Renault was forced to promote the 11-litre in some applications where fuel was the biggest priority, which sometimes put it at a disadvantage when others were pushing 13-litre engines that were more comfortable in the hills when fully laden.

Now it has a very good package with this driveline and the flat floor cab. The delay in launching this option in the UK did have an effect on sales, but most operators who have bought them are surprised by just how good they really are. They offer plenty of interior space, with a good layout and reasonable level of equipment. It's probably due a bit of an internal makeover soon and details like improved steering column adjustment would be welcome.

This truck could be something of a dark horse here. The vehicle was provided to the operator after Stuart Keedwell was asked to take part in a consultative process that concentrated on fuel economy. It definitely proves that it's vitally important to keep in close contact with operators at every level.

FUEL RETURNS

Best single week	10.91mpg
Worst single week	9.50mpg
Overall total (weeks with A+ driver score with company telematics system)	10.31mpg
Overall total (five-week period)	10.24mpg

VOLVO FH 460 I-SAVE

As mentioned, Volvo is most definitely onto something with its latest generation turbo compound engines. In the right application they are capable of really first-rate fuel economy, consistently returning double figures at full-time 44-tonne operation, which is quite remarkable. The returns from this FH460 have really caught the attention of this operator, as a Volvo has never headed the fuel consumption league in the past and it appears to be remarkably consistent. This, and other operators' experiences with the new Volvo, show that the road test results *CM* achieved are an accurate reflection of what buyers can expect.

While the fuel returns are impressive, care must be taken to match the rest of the specification to ensure that the truck is geared to make best use of the substantial low-speed torque. They work best when they can be kept in top gear for long periods, so they are probably better suited to long-distance operation. Also, drivers have to trust the technology and not be tempted to override the electronics and change down manually. The engine revs are low and there is very little engine noise, so it's possible to get the impression that the vehicle is struggling and losing speed. In fact, the complete opposite applies and the engine hangs on forever at 900rpm. It is really a 13-litre engine with the torque of a bigger capacity unit.

This operator is impressed with the FH's performance, which puts the manufacturer in contention for future business, but Volvo quite rightly asks a premium for its turbo compound engines and the associated driveline software. It remains to be seen if the fuel saving is great enough to override the increased capital outlay. This trial will have to run for a lot longer before this can be answered.

There might be another option to consider. The latest versions of the conventional turbocharged and intercooled Volvo 13-litre engines now have the latest New Wave pistons for optimum combustion and greater efficiency. If the same I-Save package, along with the latest cab design with improved aerodynamics, which all improve consumption, were combined together, it might prove the best option. The standard 460 with 2,300Nm torque wouldn't have the same low-speed pulling power of the turbo compound, but if care was taken to optimise the overall gearing, it might get close in terms of fuel use at a competitive purchase price.

FUEL RETURNS

Best single week	11.02mpg
Worst single week	10.41mpg
Overall total (weeks with A+ driver score with company telematics system)	10.71mpg
Overall total (five-week period)	10.71mpg