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American Thunder

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Newsletter of the independent
UK Buell Enthusiasts Group

Buell 1125R - The New Liquid Cooled V-Twin Sports Bike

The Buell 1125R represents a major step forward for the Buell Motorcycle Company. With its liquid cooled V-twin engine producing 146 BHP @ 9800 rpm and 82 ft.lbs torque @ 8000 rpm, Buell have designed a motorcycle that can compete in the modern sports bike market. Priced at £8495, the 1125R is expected to arrive in UK Buell dealerships in late 2007.



1125R

The Helicon Engine:

The Buell 1125R Helicon engine is 72-degree DOHC liquid-cooled V-twin specified by Buell and designed in collaboration with BRP-Rotax. Buell also directly contributed technology and engineering on a number of key areas, including the compensating front sprocket, transmission layout, the shift mechanism, engine cases, pistons, intake, exhaust and the new DDFI 3 EFI system. All major components of the Helicon engine are unique to Buell and developed specifically for the 1125R, although a few parts, such as the stator and various fasteners, are used in other BRP-Rotax products.

The new Helicon engine will remain exclusive to Buell and will be assembled by BRP-Rotax in Austria. The Buell 1125R motorcycle will be assembled by Buell in East Troy, Wisconsin.



WWW.UKBEG.COM

Visit the Groups web site for all the latest up to date information. In addition to a social forum and general chat you'll find a specific section that covers all Buell technical questions. There's a wealth of knowledge that has been built up over a period of 9 years and all of it is easy to access. Both tube-framed and XB models have their own sections that cover all known faults and popular modifications. This aspect is one of the main strengths of our web site. The 'Events & Rides' forum is the place to visit for news about what's happening and where. This section details our more formal Buell events which are shown on page 3 of this newsletter and locally based runs and meets which may just have 2 or 3 days notice.

We welcome new members on the web site – but even if you don't want to post a message you're quite welcome to browse all the content.

Helicon Engine Features:

- 72-degree cylinder angle and a very compact case and cylinder head design allow the engine to be located far forward in the chassis, distributing 54% of the vehicle weight on the front tyre.
- A cylinder angle of 72-degrees reduces shaking forces. The engine is also fitted with three balance shafts: two for cancelling primary rotating imbalance and a third for cancelling the rocking couple.
- The displacement of 1125cc was chosen to create an optimal 103.0mm bore x 67.5mm stroke configuration – generous bore for more valve area and better breathing and short stroke for reduced friction, increased rpm range and instant throttle response.
- The engine has a low-inertia flywheel for a quick-revving performance and smooth gear shifting.

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- The engine is a stressed member of the frame and contributes to overall chassis rigidity. The swinging arm pivot is located in the engine cases providing optimal pivot location and adding to overall chassis rigidity.
- Double overhead cams with a self-adjusting chain drive each cylinder to the intake cam and gear drive from the intake to the exhaust cam. This design requires less space over the cylinder head than a two-sprocket design, allows the engine to be located further forward, and reduces engine weight.
- Valves are actuated with finger followers and adjusted with shims, a design derived from Formula 1 technology.
- Finger follower valve actuation reduces friction, permits a quicker valve opening, and eliminates valve float. This design also allows a steep valve angle of 18-degrees and a downdraft fuel injection system. The design of the follower retention system makes shim replacement quick and easy, reducing maintenance costs. Valve covers are magnesium to reduce weight.
- Primary balancing with three internal shafts reduces chassis weight by minimising vibration isolation requirements.
- Dry sump oiling reduces internal windage losses. An integrated oil reservoir is located in the lower left side of the crankcase casting to lower the centre of gravity and help keep the engine compact.
- Buell DDFI3 EFI is a closed-loop system for precise mixture control, resulting in smoother throttle operation and better fuel economy. Dual downdraft 61mm throttle bodies provide superior intake air flow. A new ECU controls the TPS, IAC, and monitors engine performance while continually adjusting to the environment.



- A ram-air system pressurises the air box for a gain in peak performance. The air intake is located between the front fork legs and below the fairing. The 12 litre airbox is designed to accommodate a large air filter and to be easy to service.
- Twin side-mounted free flowing radiators are mounted longitudinally within aerodynamic cowlings. The position of the radiator system lowers the centre of gravity and centralises mass, and allows the cowlings to direct free-flowing air to each radiator. The cowlings have an internal vane (splitter) to split airflow efficiently and were designed with computational fluid dynamics (CFD) models to optimise airflow at all speeds and to

create a pressure differential around the radiator to pull air through the core. Hot air is also exhausted away from the rider for enhanced comfort.

Chassis & Suspension Features:

- The all-new frame is made in the USA and is the stiffest chassis ever offered by Buell. Its rigidity is aided by the engine, which is a rigid stressed member of the chassis. The inner frame incorporates airflow channels that create a low-pressure area behind the engine to draw hot air out to the rear of the motorcycle. The aluminium frame spars double as a 21.2 litre fuel tank.
- The stiffness of a new cast aluminium swinging arm has been tuned for the 1125R. The pivot point of the swinging arm is located in the engine cases to create a more rigid connection between the rear wheel, the frame, and the front wheel.

• A fully-adjustable Showa rear shock/spring unit features an external piggyback reservoir for good heat dissipation. To reduce weight, the shock is mounted directly between the frame and the swinging arm without linkage, and its off-centre placement optimises airflow through the motorcycle.

• Fully-adjustable Showa 47mm inverted front forks and new triple clamps stiffen the torsional response of the front end and improve steering response. A new fixed bushing slides against the hard-chromed surface of the fork tube, reducing friction. Compression adjustment can be made with a simple hex-key tool.

Wheelbase: 1387mm. Rake: 21-degrees. Trail: 83.8mm. Seat height: 775mm.

Thunderstorm V-Twin Engines – 2008 updates:

The rest of the Buell 1203cc and 984cc range use an updated version of the Thunderstorm engine.

The timing cover is eliminated, as the engine is now crank timed from a new crank position sensor, which eliminates the need for manual timing, reducing maintenance costs. The ECM actively monitors and adjusts timing based on the riding environment. The new sensor makes thirty reads per revolution, compared to the previous two reads per revolution, for more precise control of fuel mapping and timing to conditions.

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Additional updates to all 2008 Thunderstorm engines include:

- The size of the crankpins is increased to 1.5 inches from 1.25 inches.
- A higher-output oil pump supports oiling to the new crankpin area. The new oil pump is driven off the crank – a design based on the Buell XBRR production racing motorcycle.
- A new eight-row oil cooler offers enhanced cooling and all oil line ends are now equipped with jiffy-tite fittings.
- A new ECM with increased computing capacity.
- DDFI 3 actively controls and monitors the TPS (throttle position sensor) IAC (idle air control) and timing. DDFI 3 automatically zeros the TPS and adjusts fuel metering for a smoother idle, eliminating service intervals and reducing the cost of ownership.
- A new progressive throttle cam and cables provide smoother throttle input from stops and requires less rotation to full throttle.

The 2008 Thunderstorm 1203cc engine produces 103 BHP @ 6800 rpm and 84 ft.lbs torque @ 6000 rpm.

The 2008 Thunderstorm 984cc engine produces 92 BHP @ 7500 rpm and 70 ft.lbs torque @ 6000 rpm.



Event Report: UKBEG Emma Radford Buell Festival - Saturday 21st July

UKBEG's main event of the year is always held at the Lincolnshire Aviation Heritage Centre, East Kirkby. This year's event just happened to coincide with that period when most of the UK experienced torrential downpours. Some of the worst flooding seen in years affected many parts of the country, including the area around East Kirkby. We thought the event would be a disaster because of road closures and dire weather forecasts. Despite the conditions 54 Buells attended the event and we had 118 bikes in total. Many people also came in cars which helped to boost the numbers. This was a magnificent effort by members of UKBEG and the European V-twin clubs which we invite. Some riders had travelled 250 miles that morning just to be there, meaning a round trip of 500 miles in one (soggy) day!

Buell UK also attended with their events team. They brought a selection of the latest Buell models for escorted test rides but the weather and road conditions meant these had to be cancelled. The Spitfire flying display was also cancelled. At least the weather didn't prevent the Lancaster bomber taxi-run from taking place.

The event is dedicated to the memory of UKBEG member Emma Jane Radford who passed away 22-04-04, aged just 26. Emma suffered from Cystic Fibrosis so we use our main event to raise funds for the Papworth Hospital unit which looked after her. This year we raised £568 on the day plus a further £592.08 from the sale of Buell parts kindly donated by Allan Brownridge of Buell UK, making a total of £1160.08. Next year's Emma Radford Buell Festival takes place on Saturday 19th July 2008 – hopefully in drier conditions!!



Pictures courtesy of UKBEG members.

Buell S1 White Lightning. Owner: Michael Smith.



Michael attended the UKBEG Buell meet which was held at the Norfolk & Suffolk Aviation Museum, Flixton, on the 24th June.

His 1998 S1 White Lightning is one of the best examples I've ever seen and was easily the best Buell there. It seemed such a shame to get it dirty but bad weather plagued the day.

Michael is the second owner and has ridden it for 3 years, during which time he covered 11,500 miles. As of the 24th June the bike had a total of nearly 19,000 miles on the clock. Many of the modifications you see in the pictures had been carried out by the bike's first owner, but Michael wasn't happy with some aspects of the machine and the engine needed attention. He decided to take the bike apart and performed a full rebuild over a period of 4 months.

When I first saw the bike I thought the frame had been nickel plated but Michael explained it was in fact powder coated. The work had been carried out by Aerocoat of St Olaves. Web site: www.aerocoat.net The frame cost £110.00 to coat. The results are stunning and should prove more durable than plating or normal paint. In addition to the frame, Michael entrusted Aerocoat with the wheels, engine mounts and many of the smaller brackets etc. These had been finished in a grey/black powder coat and were to a similar high standard.



Michael rebuilt the engine using standard Buell parts supplied by St Paul Harley-Davidson/Buell in Minnesota. Web site: www.stpaulhd.com The cost was a great deal cheaper than sourcing the parts in the UK, even with the added factor of shipping and customs duty etc. New heads and pistons with a slight overbore were fitted and this cured the smoking which afflicted the original engine.

Taken as a whole, Michael's Buell has been tastefully rebuilt. The polished engine cases, forks, yokes and swinging arm compliment the powder coated frame and wheels. Too many bikes are ruined by over the top customisation, but this particular S1 White Lightning has a beauty that is more than skin deep.....



'The Emporium' - The UK's Independent Buell Specialist
 Unit B6, New Mill, Park Road, Dukinfield, SK16 5LX.
 Telephone: 0161 343 3077 or 07860 433939.

Contact: Maz Matsell for all your Buell repair & service requirements.

Buell XB12X Ulysses Owners Survey

This is the first in an occasional series of features which concentrate on one particular Buell model.



The Buell XB12X Ulysses was introduced in 2005 and was the companies first 'adventure sports' motorcycle. It makes a superb road bike, but off-road suitability is limited to forest tracks etc. where the surface isn't too rough. The two pictures above show forum member 'Geordie Mick' on his Ulysses at a Mallory Park track day. Continued on page 6...

UK Buell Enthusiasts Group Events Diary 2008

There's a full program of UKBEG Buell events and meets taking place in 2008. The **Events Diary**, within our web site www.ukbeg.com, shows up to date information and contains hyperlinks to the different locations shown below. Please contact Chris Jessop for further details about any of these events. Tel: 01924 518224 evenings .

2007:

December 30th Sunday. UKBEG 'Cabin Fever' Meet.

National Motorcycle Museum, Birmingham.

2008:

March 16th Sunday .

UKBEG Buell Day.

Brooklands, Weybridge, Surrey.

April (Dates TBA) Sat/Sun.

UKBEG 10th Anniversary Weekend.

Newmarket, Suffolk.

May (Dates TBA)

UKBEG NW200 Trip.

Northern Ireland.

May 25th Sunday.

UKBEG Buell Day.

Sammy Miller Museum, Hampshire.

June 13th to 15th Fri/Sun.

UKBEG Yorkshire Weekend.

Ingleton, Yorkshire Dales.

June 21st/22nd Sat/Sun.

UKBEG Buell Weekend/BBQ.

Dockgate 20 HD/Buell, Southampton.

July 2nd to 6th Wed/Sun.

Buell Motorcycles 25th Anniversary.

Wisconsin, USA.

July 19th Saturday.

UKBEG Emma Radford Buell Festival.

East Kirkby, Lincolnshire.

August 2nd/3rd Sat/Sun. (TBC) UKBEG Classic Racing Weekend.

Cadwell Park, Lincolnshire.

August 17th Sunday.

UKBEG Buell Meet.

Haynes Museum, Sparkford, Somerset.

August 22nd to 26th Fri/Tue.

UKBEG Germany Weekend.

Eifel Mountains/Moselle Valley/Nurburgring.

September 7th Sunday.

UKBEG Buell Meet.

Llanberis, Snowdonia.

December 28th Sunday. UKBEG 'Cabin Fever' Meet.

National Motorcycle Museum, Birmingham.

Mick wrote this excellent buyers guide to the Ulysses: All models up to 2007 were primarily the same, in 2006 they changed the tyres from the short lived (and often blamed for a weave) Dunlop D616's to the excellent Pirelli Super Syncs. The front forks on late 2006 bikes were reportedly less soft than previous models.

Weak points are sidestands, make sure the recalled version is fitted as they have snapped (mine did 3 times) and there was also a crank nut issue and another bulletin for exhaust mufflers rusting. They are prone to fans failing and oil cooler union weeps, but only marginally.

I had two and did well over 30,000 miles on them in 18 months. At the time I gave them a tough life, 25 track days in six months on #2 bike and in reality they stood up well. Great touring bike, great track bike, great B road blaster, they'll never be all things to all men but they will do it at 85% which is good enough.

There are numerous 55 platers on the market circa £4500 – £5000 so take your time to choose the right one. If you're buying one with around 13,000/14,000 miles on the clock prepare for the 15,000 mile service, which if done properly isn't cheap.

I bought mine from Manchester HD/Buell and Maz Matsell serviced both of them every 2,500 miles.

Forum member, David Coleman, completed a 3,700 mile European trip on his Ulysses earlier this year, visiting eight countries in eighteen days. Here David gives his own account of the trip:

My Ulysses was manufactured in 2006 though not registered until April 2007. I had only done 1,700 miles on it before the Europe trip. The bike has been serviced from new by Maz Matsell at The Emporium, Dukinfield. (See advert on page 5) I took it to Maz at 500 miles and then again at 1,700 miles, two days before setting out. I'm sure many people know how meticulous Maz is, so it will come as no surprise to learn that nothing fell off or failed during the trip.

On first filling up in Holland and Germany I didn't realise that what they call Super is the equivalent of our normal unleaded, i.e. 95 octane. The engine ran quite poorly and was very lumpy and unresponsive to the throttle at low revs. I thought maybe the water was getting into the electric's as I rode through some appalling weather in the first few days. I also had poor/bad petrol on my mental list of things that might be causing the poor running, and sure enough, at the next fill up I had a good look at the pumps and saw that I needed SuperPlus for 98+ octane. Ten minutes after this fill up the engine was running sweet as a nut! I actually found a couple of German (Avia?) fuel companies selling 100 octane so I put that in whenever I could. Whether it was the general running-in process or the higher octane's I don't know but the Ulysses flew like a bird, even up to 10,000 feet altitude in the Alps. I'm afraid I didn't take a note of the petrol consumption but I reckon it was over 50 mpg, maybe averaging around 55, but that is an educated guess.

The Ulysses ran beautifully. I rode many hours in torrential rain and it never missed a beat. I checked the oil every day and used about 1 litre during the trip. I remember my Firebolt used oil at about this rate for the first 8,000 miles then gradually oil consumption decreased as the engine bedded down. I reckon the Firebolt wasn't fully run-in until I got to the 10,000 mile mark, so the Ulysses has a little way to go yet.



This was the first trip where I had GPS on the bike (TomTom Rider 2) and it was a godsend. I did very little motorway riding, about 700 miles in the total of 3,700, and so I studied the map each day and programmed in waypoints that took me through National Parks and areas of outstanding natural beauty. On a couple of occasions it helped me find a hotel in a hurry when the rain started.

The Buell hard luggage was very good. No leaks at all and hardly noticeable on handling. The front end was very light until I screwed the preload adjuster right in.

The factory supplied Dunlop tyres were very hard and not very confidence inspiring. I now have Pirelli Diablos fitted and get a lot more 'feel' from these. However, the Dunlop's are amazingly hard-wearing. The back lasted almost 7,000 miles despite a fully loaded bike.

David's Ulysses at the top of the Grossglockner Pass in the

Austrian Alps.

Forum member, 'Eugener', wrote this short but succinct appraisal of his bike: I commute from Surrey to central London on my Ulysses each day. This is a 50 mile round trip taking in motorways, A roads and some serious central

It's fast and comfortable on the motorway, a blast to ride on A roads and slips through central London as easily as anything else...though the exhaust note tends to help in 'parting the traffic'!

Like many Buell owners I'm no stranger to the odd electrical problem (indicators working erratically and the odd cut out) but all have been easily fixed and can't tarnish the enjoyment I get from riding it.

I simply love it. It sounds awesome (thanks to a Remus exhaust), pulls like a train and gets plenty of admiring looks. The best bike I've ever owned.

Forum member, Jim Crossley, writes about his ownership of a Ulysses: I bought my Ulysses in October 2006 and have put ~9,000 miles on it, mainly commuting 20 miles each way into London every day. I'm very pleased with it. My only mishaps have been a flat tyre and a snapped belt. The bike only had 10,000 miles on it when the belt snapped, which I thought was an unimpressive amount. I had a Suzuki for 2 years/20,000 miles with a belt drive that I had no issues with at all.

I've had it serviced at 10,000 miles by Warrs, who have been good, but certainly not cheap. My rear tyre (Pirelli) lasted around 5,000 miles, and the front tyre (Dunlop) around 8,000 miles. I had them both switched to Pirelli Scorpions at the same time and did notice a big difference in the handling.

Good points:

- Handles well, although the front still feels a bit twitchy/light sometimes.
- Fuel consumption: commuting I get between 47-50 mpg. On longer trips my best is 57 mpg.
- Size: once you get used to how tall it is, it's a great riding position and everyone I've had on the pillion has commented how comfortable and roomy it is.
- Loads of torque: it's fun to ride and always wants to go faster.
- It's quite often a conversation point at lights with other bikers asking about it.

Bad points:

- The wiring on the front seems poor. The clutch cable obscures the digital display while you're riding, and the wiring loom gets trapped between the forks and the frame when the bars are turned left, leading to regular trip counter/clock resetting on mine.
- The stock muffler is very susceptible to corrosion from salt and grit. Large chunks of paint on mine are coming off and I think I will have to buy a new muffler in the next 6 months.
- The fan! It's loud enough to be embarrassing at traffic lights and comes on regularly with stop-start town riding.
- Very small steering lock. You hit full lock very quickly when doing low-speed manoeuvres. I think this has been improved on the 2008 models. *(It has – editor)*

Would I buy another one? Probably. I was hoping to do longer trips on it but the belt snapping incident has made me realise that they aren't suited for very long tours, as a snapped belt can leave you completely stranded with no warning. Apart from that, it's great fun and still puts a smile on my face when going home at the end of a long day.

Forum member, Gary Bickley, writes about his experiences: I've had my Ulysses since November 2006. I was going to wait for the New Year but the pull was too great! It's a REALLY different machine. I came off a 600 sports bike straight onto the big and tall Ulysses – after a great test ride courtesy of Darren at Manchester HD/Buell. That made the difference really, I had a few hours on the bike around Buxton on a fine day.

The Ulysses has a great riding position, you can really see the road and what's ahead. The torque is just fantastic – leave it in 3rd and ride the corners all day. You really feel part of the machine. The short overhang at the front is so much better than the never ending front end view on a GS or the new Tiger.

When the bike was new it came with a great built-in seat heating system – wow, is it hot! It cools down after a few thousand miles, but it's still warm enough to warm your bum on a cool day. I've recently ordered a right side air scoop to help to cool the engine. The noise the fan makes is a bit weird at first and every time you stop at lights people look at you because they think your bike is about to do a Harrier take-off!

I've not added one drop of oil in 3,000 miles. Fuel consumption seems to be about 45 mpg in general riding conditions and 80 mph cruising. Get into the 90's and it drops to about 35 mpg. Go much over 100 mph and a real bad front end wobble sets in, I'm not sure if this is the tyres or not but the Pirelli Scorpions feel light which is great around town etc. but they do lighten up a lot at speed.

As with all Buells the stock muffler is very poorly painted. Why can't they just specify a stainless unit as standard? Mine's already had a new one under warranty and will probably have another before the warranty runs out.

Biggest downer for me was that it fell off its sidestand twice whilst left on tickover on a slight incline. Do not under any circumstances leave the bike on its sidestand while ticking over, or be prepared to buy new indicators frequently!

Finally, the Ulysses is great two-up. My wife thinks its really comfy. She loves the seat and backrest, and the good viewing position without feeling vulnerable as on a 600 sports bike.

Forum member, Chris Watts, gives a brief appraisal of his Ulysses: I've done 15,000 miles on my Ulysses, mainly two-up abroad. This year we visited Lake Como in Northern Italy. The bike coped well with all those lovely hairpins and mountain passes. Unfortunately the weather was really hot at 37 degrees and the fan stayed on for most of the time. The only problem we had was with the rear shock, which became very hot and started to fail on the way home. This is being replaced under warranty.

Modifications include: Micron Serpent exhaust, race ECM, Iridium plugs, K&N air filter, additional holes drilled in the air box and air box breathers routed to a dump tank. I've also removed the hand guards, fitted end weights and a taller Buell screen.

Steve Loxton is one of the original members of the 1998/2000 UKBEG and is the Dealer Principle at Black Bear HD/Buell in Newmarket. Here Steve writes about his Ulysses:

I was privileged to be at the launch of the Ulysses at the Worldwide Dealer Meeting in Denver, Colorado in 2005 and decided this was to be my next bike. On my return to the UK I attended the dealer training at Millbrook Proving Ground where we experienced the delights of Erik's new 'adventure sports' machines both on and off road and compared them with their direct competition from BMW, Triumph, KTM and Ducati. I was smitten and put 3-400 miles on two demonstration machines over the next year prior to indulging myself with only the third ever new machine in over thirty years of riding for my 49th birthday. My Ulysses has just had its 10,000 mile service and has performed virtually faultlessly. The only problem has been the indicators ceasing to operate and then operate intermittently for 24 hours prior to righting themselves on a trip to France. This was probably caused by an ingress of water into the switchgear when washing the bike prior to my trip. The original tyres were changed at 5,500 miles (when they probably had a further 1,500 miles life in them) for Pirelli Synchs which offer a greater level of confidence and improved high speed stability. Front brake pads were changed at 10,000 miles and the rear ones look to be only half way through their life.

I have added a fair amount of accessories generally adding to 'The Long Way Round' look but am ashamed to say I haven't ventured further off road than a stubble field beside a crater on the Somme, a feat that was easily matched by the six 'tassle tractors' which were accompanying me. I have fitted plenty of Touratech kit: Zega panniers, bash plate, oil filter and oil cooler guards, folding tip brake and gear pedals, handlebar pouch and off road footpegs. Delivery on some items took forever but the quality of the kit is superb, however I wouldn't recommend the footpegs because they are a lot heavier than the stock ones, the passenger pegs don't positively click into position and space between peg and levers is restricted. I also have the Buell Quest GPS System, tall, tinted screen from Trojan, Free Spirits belt tensioner, RSS right hand air scoop, R&G crash bobbins, Buell tankbag and gel passenger back-pad. After all that overdose of bling I have left the intake and exhaust totally stock because it works well and allows a 'stealth' riding style which doesn't attract unwanted official attention the way the Race Kit on my S1 White Lightning does!

Besides commuting trips to work (130 mile round trip) and runs to UKBEG and HOG (Shock! Horror!) events I have completed two European tours riding solo but with more than a little luggage. The first trip was 1,700 miles over five days taking in the Somme, the Massif Central and the Dordogne. The second was 3,700 miles over ten days through France and Spain to Fuengirola in the south where I took a day out to scratch around the mountains with a 64 year old mate on a Firebolt whose ability and level of bottle (aided by a healthy dose of local knowledge!) put me to shame but highlighted no failings in the Ulysses.

Excellent machine which does everything I ask of it and demands little of me making light work of numerous 500+ mile days. I should add that it lives outside under a cover and apart from its rotting silencer and a few tarnished fasteners the finish is generally holding up well. Dependability has been superb but then it would be having been meticulously maintained at the prescribed intervals by Black Bear's Buell Technical Specialist, Jonathan.

Millau Bridge

