

Hi, and welcome to the 4th edition of ProMAX Motorsport's monthly newsletter. This month sees the first of our monthly **Open Evenings** take place at the Brackley Performance & Service Centre. These events are planned to be an informal gathering of Porsche enthusiasts and take place on the 2nd Thursday of each month. The first of these is April 13th – more details on **Page 2** along with details of the ProMAX Motorsport **Track day** (in association with Goldtrack) on Monday April 24th.



Our featured customer car this month belongs to Ian Lockey. More details of Ian's immaculate 944 Turbo can be seen on Page 3. As 2006 is the **21st anniversary** of the launch of the UK **Porsche 944 Turbo**, we will also be looking back at this often under rated Porsche model on **Page 8**.



With April now upon us (and this month's newsletter 2 weeks late due to my commitments in the USA), we are seeing many cars coming out of winter storage for use throughout the warmer months. On **Page 4** you will find our **Getting Ready for Summer** check list – this addresses some of the more common issues we have been seeing as Porsche owners bring their cars out of the garage for the first time since their winter hibernation at the end of last year. Get the most out of 2006 by being prepared with hints and tips from ProMAX Motorsport!

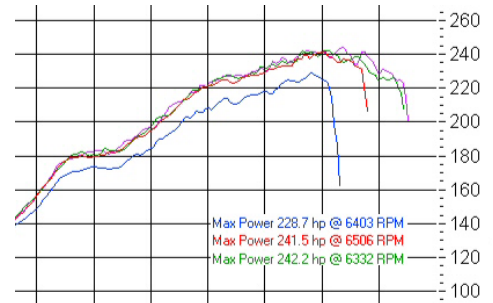


On **Page 5** we explain the myth behind the wheel offset. With numerous callers and email enquirers asking about our new **Veloce 3.6 wheel** and being unsure as to whether they are suitable for their model Porsche – we explain what 'ET' and 'PCD' mean to the Porsche owner. Also included is some information on tyres and what's important to look for when choosing tyres to suit your particular model.

On **Page 6** we look at the importance of good quality **servicing** on your car and explain how to minimise cost and ensure you get the best value from your servicing specialist. With the current trend amongst many independents to cater for later models only, where does that leave owners of older model cars such as the 928, 944, 911 3.2/964 and 968? With the large number of older model cars still on the road, what should you consider when choosing a specialist to service and maintain your car?



With a great deal of our business dedicated to improving performance on the majority of Porsche models, we provide an overview on **Page 7** on what can be done to enhance the performance on various Porsche models. Whilst not exhaustive, this should give you some idea as to what can be achieved and at what cost. All models are covered from the Carrera 3.2 to the current 911 and Boxster models – see what can be achieved with your car. Enhancing performance is often cheaper than you think and can have other positive benefits such as improved economy and better driving manners. More details on **Page 7**.



Finally, on **Page 8** we celebrate **21 years** of the **Porsche 944 Turbo**.



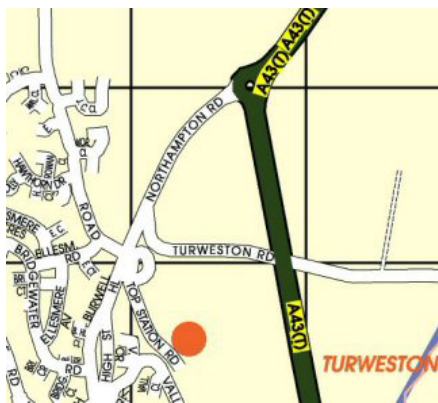
This often under rated super car is possibly one of the best handling performance cars made to date by Porsche. With current prices at an all time low, it's a great time to buy one of these sophisticated, sensational handling performance cars. Not only does the 944 Turbo offer sublime, predictable handling - with road holding surpassing many newer models – it's also easy to look after and a great track day car too! Thanks for reading this month's newsletter. Issue 5 due on 21st April 2006.

On **Thursday April 13th 2006** we will be staging the first of our **Open Evenings**. These will be a recurring event and will take place on the 2nd Thursday of each month at the Brackley Performance & Service Centre.

So what's this all about and why should you think about coming along? Firstly, it's a great opportunity to socially meet other Porsche owners without incurring any costs. You won't be lightening your wallet getting the drinks in – because there is no bar!



Refreshments will be available at no charge (Tea, Coffee, soft drinks & nibbles). The only expenditure will be your time and the fuel you use to drive there. What



else? Well you get to meet and chat with Roger Keys, Andy Everett and myself (Andrew Sweetenham) giving you the opportunity to determine whether our facility is right for you without having to commit your car to a service or repair

job. Have a look at the facilities and see if what's on offer is as good as many are saying it is.

Above all, come along and have a relaxing evening in the company of other Porsche enthusiasts and see what happens. It should be an interesting evening and if numbers continue for future months – we may introduce technical seminars and workshops for specific cars and service processes. All Porsche owners and their families are welcome and we look forward to seeing you on Thursday April 13th – a nice way to unwind and finish off prior to the Easter holiday!



Directions on how to get there:

- From the M40 take the A43 north, from the M1 take the A43 south.
- Follow signs to Brackley North.
- At the Roundabout that intersects with Northampton Road, you will see a large BP Service Station.
- Turn off at Northampton Road and head south.
- Take the 2nd left, this is Top Station Road. Follow this back on yourself and then round to the right.
- The Sidings Industrial Centre is the 2nd bay (about 450 metres after turning off).

Monday April 24th 2006

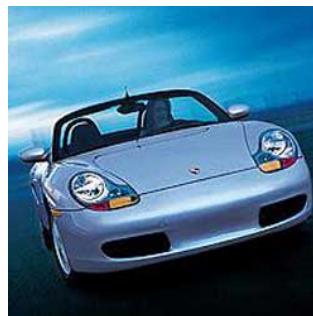
Donington Park Trackday (in association with Goldtrack – UK's finest track day organiser!)

Have you booked your place for the Donington track day? It's only a few weeks away and will be a Goldtrack organised event at the Donington National Circuit. If you missed the details in last month's news letter, here they are again:

- Organiser: **Goldtrack**
- Contact: **Melindi Scott**
- Telephone: **01327 361361**
- E-mail: events@goldtrack.co.uk
- Noise Limit: **98db**
- Start: **09:00** Finish: **17:00**
- Format: **2 groups only**
 - **30 mins on track, 30 mins off track**
- Location:
 - **Donington Park Leisure Ltd.**
 - **Donington Park Grand Prix Circuit**
 - **Castle Donington**
 - **Derby DE74 2RP**

Nearest Motorway: **M1 J23a.**

To obtain the discounted price of **£170.00**, please mention ProMAX Motorsport when you book.



All types of Porsche model welcome. We look forward to seeing you on track on **Monday April 24th!**

This **1988 944 Turbo** belongs to **Ian Lockey**. This exceptional condition 944 Turbo is certainly one of the best condition examples we have seen to date and has some tasteful modifications as well as some very effective performance mods making it seriously fast!



Notice the twin vent badge panel – this was custom made to channel more air into the intercooler located beneath. The car also benefits from a sensational set of 18" split rim alloy wheels and has recently also been the subject of the monobloc front calliper upgrade – more details on this next month! A custom front air splitter completes the purposeful look of this great looking car. So what's under the bonnet?



Ian's car has also been the subject of a moderate performance upgrade program. It's currently running the ProMAX Level 4 kit– which includes the SciVision MAF kit conversion, ProMAX HP DME chip, 55# Siemens injectors, LR Super 61 Turbocharger, LR Dual Port Wastegate and Manual Boost controller. The software on this car was dyno tested at Thor Racing (on another car with identical set-up) at **370bhp and over 370lbft** torque. Boost is set to 1.3 bar (approx 20 psi).

Hence, depending on which dyno you use – power is anything from 330bhp to 370bhp! Which ever way you look at it, this car has serious tyre shredding performance.



This is what Ian say's about his cars revitalised attitude: **"I would recommend the above ProMAX kit to anyone with a 951. With an estimated 370bhp and 370lb/ft my 18 year old Porsche has been brought up to 21st century technology with a bang! The car is smooth in town traffic with no flat spots or hesitation...put your foot on the loud pedal and WOW! There is hardly any turbo lag and it pulls like a train all the way to the red line in every gear with no tail off in boost! With 'plug and play' there is no messing around and the installation is almost stealth in appearance-Amazing!**



Many thanks to Ian for supplying the pictures and agreeing to be customer car of the month! If you would like to feature your car in a future newsletter – please get in touch with some suitable digital pictures and we'll feature yours! It's seen by 1,900 readers!

If you've yet to see the signs of spring, I can sympathise with you. It seems to be getting later and later each year – well it sure seems that way anyway here in the UK. With the nights now finally staying light for longer and the weather at last becoming milder, we are seeing many Porsche models tentatively sampling some tarmac action for the first time in a few months. After being thrust from the warm confines of the garage or humidity controlled carcoon – what should be done to ensure your pride and joy is in good health and to ensure you don't become the victim of an unnecessary breakdown resulting from your car's infrequent use?

Firstly, let's take a look at the battery. If your car has a modern alarm and immobiliser – chances are the battery will be drained to the point where it will no longer have the capacity to start the car. It's well worth using a battery conditioner and charging system such as the Carcoon system shown



above. These devices will even recover a fully discharged battery and nurse it back to a useable status. These devices can be left connected to the car's battery permanently – great peace of mind knowing that your car's battery will not be drained and able to start the car after a lengthy lay-up. The Carcoon Charge and Conditioning system is £39.95 from ProMAX Motorsport.

With your car fresh out of storage, it's worth checking over all the essential fluids. On air cooled 911 models – get the engine up to temperature and observe the oil level gauge followed by a confirmation check using the dipstick. If the car has been laid up a while, it's quite possible that moisture and contaminants have settled in the oil – hence, it's worth carrying out an oil change to ensure your engine has adequate protection when used over the coming months. ProMAX Motorsport use and recommend modern ester based synthetic oils such as Royal Purple. These oils are far more advanced than traditional synthetic brands and give excellent protection on both



water and air cooled engines. A good tip is to let your old engine oil drain overnight. After a filter change and fresh synthetic oil has been added – remove the coil lead and turn the engine on the starter until oil pressure has built up – then start the engine. ProMAX Motorsport use Royal Purple synthetic oil as standard. It can also be purchased retail at £42.95 per 5 litre pack from the Brackley Performance & Service Centre. ProMAX Motorsport recommend having your engine oil changed at least annually – even if low mileage. If you use your car in dusty or very damp conditions – it is recommended that the change frequency be increased.



Whilst we are still on the subject of fluids – for cars that have power steering (most 944, 928, 968 and 964 & later 911 models), make sure your ATF still looks fresh and is not showing signs of bubbling when the steering is operating. Check also that you have the correct concentration of anti-freeze in your coolant. ProMAX Motorsport use a 50% AF and distilled water coolant mix in all Porsche models that require corrosion inhibitor properties (methanol free). A coolant change can be carried out at our workshops for just £69.95 inclusive on most models (excluding 911 air cooled of course!)

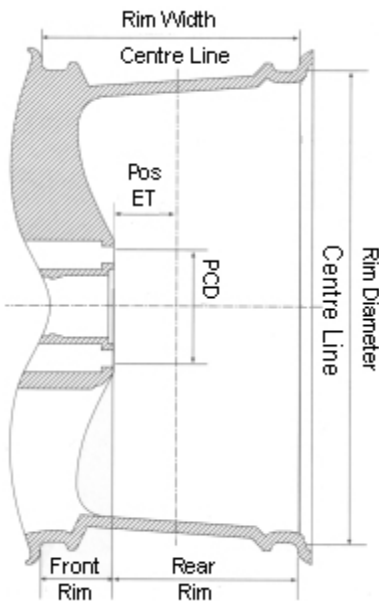
When was the last time you changed your brake fluid? ProMAX Motorsport recommend ATE Super Blue Racing.



This is well beyond the requirements of DOT 4 (but not DOT 5.1) and is an excellent cost effective brake fluid replacement for Porsche models. In stock at £15.95 per litre. Want your fluid refreshed but don't fancy the hassle of doing it yourself? We'll bleed your fluid through and give you a thorough brake check for just £74.95 inclusive (subject to no snapping bleed nipples or other difficulties encountered).

Finally – tyres. Tyres are your lifeline with the road; Make sure they are in good condition. Ensure the pressures are correct and that the tyre type and size is correct for your car. Modern high performance tyres for Porsche cars are generally ZR rated. Thoroughly inspect the sidewalls for crazing and / or cracking. If you need tyres, give us a call. We take great care of your precious rims and change tyres on site at the Brackley Performance & Service Centre. Enjoy the summer and happy Porsche motoring for many months to come!

ET – what does it stand for? In the normal terrestrial world of performance wheels – **ET** is an abbreviation for the German words: **'Einpress Tiefe'** meaning offset (actually it means 'push in depth', but we refer to it as offset). The offset value (usually measured in mm) is the distance the hub mounting face is off set from the

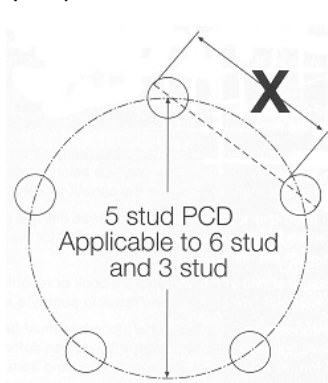


actual physical centre of the wheel. This is necessary to enable the wheel to mount on a hub with substantial brake disks, ABS sensors and bearings (for example).

To demonstrate: a front wheel may have an offset of 48mm (where the fitment is correct). Fitting a wheel with 25mm offset would result in the wheel being 23mm further offset than the correct wheel.

Likewise, if you reverse the situation, fitting a 48mm offset wheel to a car that requires 25mm would result in the wheel being too close to the inner arch and possibly not having enough clearance to avoid fouling the brake calliper. In this case, a 23mm hub spacer could be used to correct this.

PCD (Pitch circle diameter): The pitch is the diameter (mm) of the circle that intersects the stud centres. To



fix a wheel correctly, the number of studs and the pitch should be the same on the vehicle and the wheel. The following calculation can be used to work out the PCD for a 5 stud Porsche wheel: Length 'X' x 1.7012. The **Veloce 3.6** wheels use a PCD of 130mm and a front offset of ET 52 and a rear offset of ET 47 – the hubs on all Porsche cars using 5

studs are PCD 130. This includes 924S, 944, 944T, 968, 964, 928, 911 3.2, 993, 996, Boxster and 997 models.

So what do the markings on tyres mean? Let's take an example of a typical Porsche tyre size:

265/35ZR18 93W

The following can apply to different parts of the tyre rating format:

- [1] Tyre width in millimetres
- [2] Tyre aspect ratio (percentage of tyre width)
- [3] R = Radial construction
- [4] Tyre diameter (applicable rim diameter)
- [5] Load index
- [6] Speed symbol
- [7] Tyre outer diameter in inches
- [8] Tyre rating (tyre structure-ply rating)
- [9] Tyre internal diameter in millimetres
- [0] Ply Rating

In the case of the 265/35ZR18 93W, the **'265'** part refers to the width of the tyre. **'35'** is the aspect ratio (ratio of width to sidewall height). **ZR** means it is a radial tyre with a **'Z'** speed rating (beyond 155mph). **18** = the diameter in inches. **'93W'** refers to the ply rating. The ply rating is also effectively a load index.

So what should you look for when choosing the right tyres for your car? Apart from the obvious such as cost and performance, how do you determine the suitability of a particular kind of tyre? There are yet further markings on a tyre that help determine suitability for your car: Maximum cold inflation and load limit, tread wear; traction and temperature grades and tyre ply composition & materials used. There are some excellent budget brands such as Toyo, Kumho and Falken. Established brands such as Michelin, Pirelli and Continental are all popular on Porsche – check with other owners and drivers to see what they recommend.

Remember to check your tyre pressure every month, including that of your spare wheel. Low pressure in your tyres can be dangerous and can result in blowouts. This check should be carried out when the tyres are cold, after driving about a mile. If you need to check a warm tyre, add 0.3 bar to the recommended pressure. Loss in tyre pressure can be the result of natural diffusion of air in the tyre through its component parts. It can also be due to a drop in temperature, or to a slow puncture which, with tubeless tyres, does not lead to a sudden flat but may, over the longer term, lead to permanent damage. So, take care of your tyres and in turn, they will take care of you!

Servicing is essential to ensure you maintain your car's performance and also to ensure your car continues to drive as Porsche intended. Nothing new there – but what should you be looking for - when choosing a suitable specialist to service and maintain your car? What are the real costs? What assurances will you have that your car is in capable hands and is safe in your absence?

These are all questions that we asked ourselves when we created the ProMAX Motorsport Performance & Service Centre at Brackley.

The cost for a lot of customers is not just the cost of the service and parts. It is often a cost to their time. For many, time is a very valuable commodity and when a provider helps minimise the time involved for the customer (in getting their car serviced) – this translates to better value. How does ProMAX Motorsport achieve that? Well, to start with – we work to a very strict schedule. All work is allocated a specific time slot – if the job runs over, we build in 20% contingency time just in case. We also provide **FREE delivery and collection** (up to a 30min travel time radius) and offer a **FREE courtesy car***. We provide regular phone / email updates to the customer and also offer wireless (or wired) internet connectivity for those that want to wait but want to use their time effectively whilst they do so.

Typical service prices are listed below. All prices include labour, VAT, parts and consumables. Not only that, but we use very high quality ester based synthetic oil as part of our service. Royal Purple – feel the difference! Please enquire if your model is not listed.

Menu Service Prices

Type	Mileage Interval	Price
All (exc. 911 air)	6,000	£129.95
911 air cooled	6,000	£159.95
924S/944/Turbo	12,000	£259.95
924 2.0/Turbo	12,000	£219.95
968	12,000	£219.95
928	12,000	£299.95
911 SC	12,000	£445.95
911/964	12,000	£489.95
930/965 Turbo	12,000	£489.95
993	12,000	£269.95
996	12,000	£179.95
Boxster	12,000	£179.95
Cayenne	12,000	£319.95

In addition to great value - ProMAX Motorsport look after your car. We have very secure premises, ensuring your car is always securely stored if left with us overnight. We have Red Care security with immediate Police response and a modern secure facility. Your car is in safe hands and only genuine Porsche or OEM parts are used as specified by Porsche themselves.

In addition to our excellent low cost service facilities – we are getting quite a reputation for effectively diagnosing electrical and electronic issues. These are very prevalent on older 928 and 944 Turbo models – so if you run one of these – ProMAX Motorsport can really help you keep on top of the complex electronics used. The 928 is a real tour de force when it comes to electrical subsystems



and has quite sophisticated diagnostics for an older car. We have PST2 diagnostics to help with this – but having this kind of equipment is not a substitute for having the necessary aptitude for this kind of work – Fault diagnosis is a very challenging part of our service provision. It's an area we do excel in – please take a look at some of the website



testimonials for further information. Shown above is the KTS300 Hammer (still needed for some C2/C4 diagnostic tests). On the right is the PST2 system used for 1995 & later cars (also diagnoses models from 944S2 through to Cayenne and 986/996 models). In addition we use additional equipment to measure emissions, ignition knock and on road performance. So whatever model Porsche you drive (providing it uses Bosch Motronic or later), we can diagnose and resolve the majority of electrical issues quickly and efficiently. This gets you back on the road quicker and costs you less.

So, next time your car is due for a service (and it is geographically convenient for you to visit us), give ProMAX Motorsport a try. Our mission is to provide high quality efficient services to an exceptional standard - fairly priced with a solid and dependable after sales service. All work is fully guaranteed and we really do take pride in putting you first!

* Courtesy cars may be subject to a fee.

Performance Tuning for Porsche models has been going on since the inception of Porsche themselves. With such a strong performance and racing heritage,



it's hardly surprising that owners want to extract even more performance from their Porsche cars – especially for track and race use. Improving the performance of your car needn't be limited to just enhancing engine

performance. Anything from getting rid of excess weight to fitting high performance tyres can all contribute to improving the performance of the car. When embarking on a program of enhancements, it really makes sense to give it the full cycle of thought.

What do you want to achieve? Often, outright power is not sought after with many looking for improved drivability or just better handling. If you're considering upgrades for your car – please get in touch. We have solutions for most Porsche models whether you are looking for a simple Performance Chip upgrade or a full brake and suspension enhancement.



Some of the more popular performance upgrades are MAF kits for all 944 models and 911 3.2 and 964. What is a MAF kit? MAF is an abbreviation for Mass Air Flow and is a superior type of electronic air mass metering to the older Air Flow Meter type systems. The Air Flow Meter in older

Porsche models (1984 to 1991) did an elegant job of communicating air flow to the ECU. However, its design presented a restriction to the incoming air. This in turn compromised high RPM engine power as the engine would struggle to ingest enough air to make more




power. The solution to this was the use of a cylinder shaped Mass Air Flow sensor that used a hot wire or film to measure air mass (as the air cools the wire). The MAF did not impose the same restrictions and was also not subject to mechanical wear and tear. All modern Porsche models use a type of MAF sensor as did most 928 and all 968 models. Owners of 924S, 944, 944 Turbo, 911 3.2 and 964 can now use this improved technology which will improve performance and economy. Details on the website!

What about brakes? Just by getting your original Porsche brakes into optimum shape and condition can offer quite an improvement. Our calliper refurbishment program enables you to upgrade to as new callipers for as little as £179.95 fitted (per calliper). Adding a good quality brake fluid or flexible braided hoses can also improve braking performance. For track use, try the latest Performance Friction track brake pads – fantastic stopping power at a wallet friendly price!

Suspension is another area where modifications are common. Improving damping; compensating for worn out suspension and increasing spring rate can all be achieved with the KW Variant 3 upgrades for most Porsche models. KW Suspension is stainless steel and offers exceptional quality for what is, in suspension terms, a very reasonable price. With complete kits costing just £1439.95 inc. VAT for 944/968 (for example) – KW offer a cost effective alternative to fitting new but original suspension. KW also have complete kits for all late model 996 and Boxster as well as solutions for 964 and 993 models.



So what ever aspirations you have to improve the performance on your car, get in touch with ProMAX Motorsport and see what can be achieved with you car. Remember, **at ProMAX Motorsport we make your car go faster and your money go further!**





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It's hard to believe that the **Porsche 944 Turbo** was introduced 21 years ago. Think back to 1985. In 1985 we had no Internet (well, not as we know it today). In the UK, Vodafone had just launched a very patchy cell phone service with handsets costing over £3000! (my original cell phone model is on display in the Science museum!). Nobody knew what a text message was and there were no downloadable ring tones! Most cars still used points and plugs ignition and carburetors! Cars had minimal electronics; little regard for safety and a great many were rusting away.

Porsche announced back then in 1985 it's latest turbocharged car with a 220bhp four cylinder



lightweight engine offering 247lbft torque and 155+ mph top speeds with 0-60 in around 6 seconds! Not only did this car have awesome performance, but it also came with optional ABS (became standard

in later years) power steering, Air Conditioning (as standard) and electric windows; tailgate; locking and



mirrors! The big news was the almost perfect 50:50 weight distribution – this made the 944 Turbo one of the best handling cars ever made and is still true to this day!

Introduced in Europe at the end of 1985, the 944 Turbo (factory model designation 951) arrived as a 1986 model. Performance of the 951 was a reminder of the 944's legacy; even in it's toned down production form.

Aside from the turbo charged power plant generating 217 hp with 243 ft/lbs of torque (USA figures), the 951 had other major enhancements over its normally aspirated brother. Specifically, the 951 included an aerodynamic polyurethane front bumper/spoiler with new air intakes serving the turbo's intercooler mounted between the headlights under the front panel. Under body panels were added to cleanup air flow beneath the car. This extended to the distinctive air diffuser mounted under the rear of the car to cleanup exiting airflow past the rear end. The 951 also received Brembo 4 piston callipers to bring the car to a stop as well as special forged alloy wheels. The suspension received stiffer components to round out the comprehensive performance upgrades. The 951 also has the distinction of being the first sports car to offer both driver-side and passenger-side airbags (in the USA only). Porsche also produced 198 versions of the 944 Turbo as Cup racing cars.

250bhp and the Turbo S / SE

1988 saw the introduction of the 944 Turbo S, with 250 bhp (186 kW) and a standard limited slip differential. For the 87 model year, ABS anti-lock brakes became an available option. Starting with the 88 model year, dual air bags became standard equipment on all 944 series



in the USA. In 1989 the 'S' (and SE in Europe) was dropped from the 944 Turbo S, and all 944 Turbo models featured the 'S' package as standard. A final run of Turbo Cabriolet models, were the last 944 Turbo

models to be made by the factory. Only a 100 examples made it to the UK making the cabriolet a sought after model today.

Today the 944 Turbo is still a popular performance car. A fully galvanised body shell and excellent durable mechanicals ensure that a great many of those cars produced over 20 years ago are still on the road today. With the latest examples now at least 15 years old, the 944 Turbo really is a testament to the quality and durability that embodies all Porsche models. The quality of construction of the 944 Turbo really is remarkable with engines completing over 200,000 miles with ease and none of the bugbears associated with other turbo cars of the era. A motoring icon it may not be (yet), but a very fine and enjoyable sports car it is!

Thanks for reading, until next month...