

**BMW Roadster:  
Made in the USA**



EUROPEAN CAR

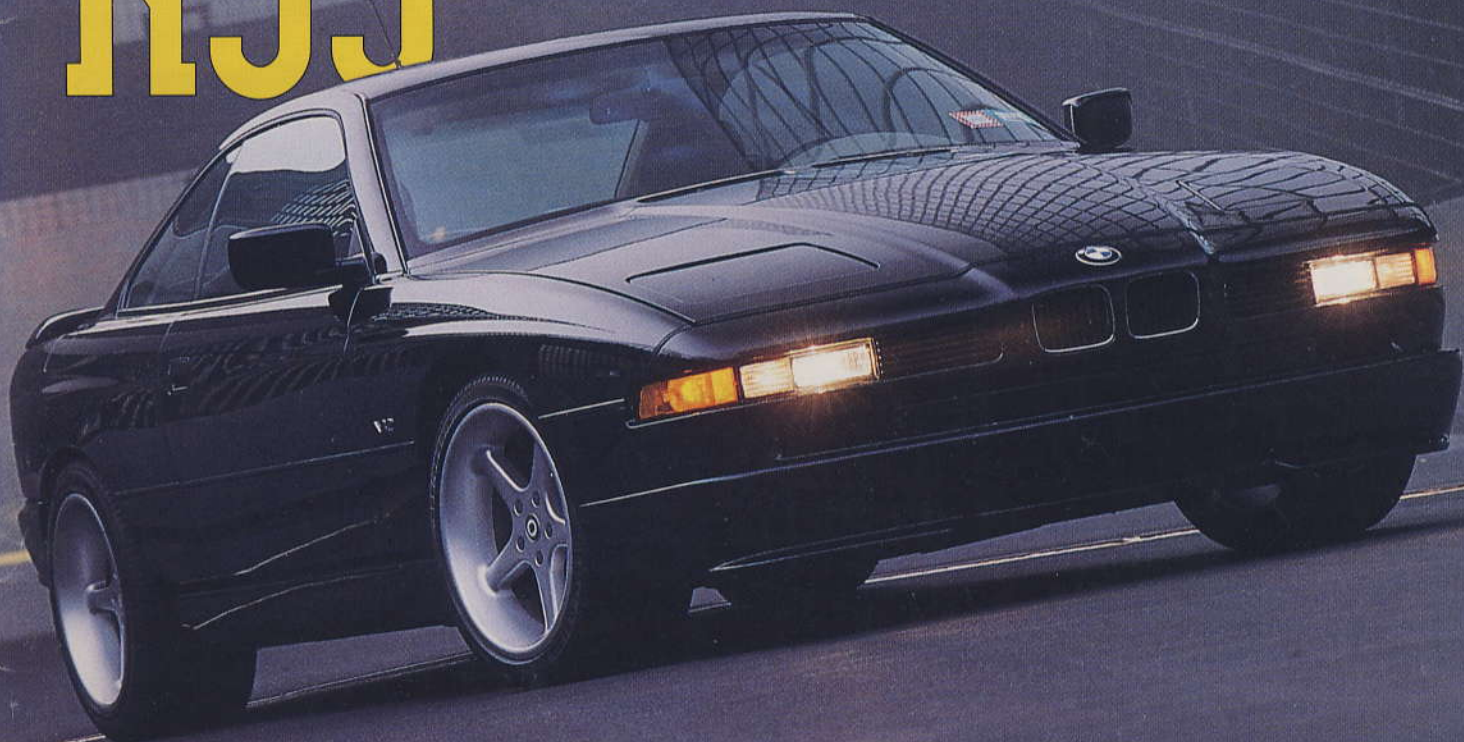
# EUROPEAN CAR

37414

Retailer: Display until 2/24/94

# K55

**Dynamic Authority  
for BMW's 850**



**Neuspeed Jetta III**



**Abarth Tribute:  
Concours Italiana  
Fiat Periscopio  
Porsche Carrera GTL**

February 1994  
US \$2.95  
Can \$3.50  
UK £2.65



# WORLD NEWS

## World Record Audi

*How far can a standard production car go on one tank of fuel?*

by Ian Kuah

The final tally was 2800.4 km (1750.25 miles) on one tank of fuel. Sounds incredible? Perhaps, but over the last Bank Holiday weekend of May, a team of six including the organizer, Gerhard Plattner, and five journalists from four European countries, smashed

all existing numbers to achieve a *Guinness Book of Records* entry under the longest distance traveled by a standard production car on one tank of fuel.

Jointly sponsored by Continental Tires and Audi, the event was put together by Austrian Gerhard Plattner, who holds 11 Guinness records for driving feats connected with distance and/or fuel economy. When the Porsche 924 was launched 15 years ago, Plattner drove one around the world, making it the first sports car ever to complete such a journey. When the Porsche 944 Turbo came out in 1988, he repeated this feat to commemorate the 100th anniversary of the motor car, at the same time setting a record for the 944 Turbo as the first car fitted with a catalytic converter to traverse the globe. In September 1992, Plattner drove an Audi

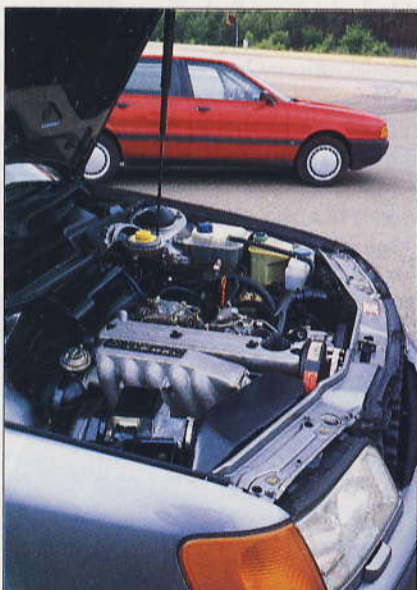
80 Turbo Diesel around the world with the goal of an average speed of at least 80 km/h and a fuel consumption figure better than 4 liters/km. He achieved 86 km/h and 3.78 km/l.

With that record behind him, Plattner's objective for 1993 was to clinch the world record for the ultimate distance traveled by a standard production car on a single tank of fuel.

It was fairly obvious that the car would have to be a diesel as compression-ignition engines are most economical at low speeds. Weighing up all the obvious choices, the Audi 100 2.5 TD stood out as the ideal vehicle for this record attempt. With 115 bhp at 4000 rpm and 196 lb-ft of torque at 2250 rpm, a 0.29 Cd and an 80-ltr fuel tank, it had all the right credentials for economy and great

range. Audi claims an official maximum speed of 121 mph and a best fuel consumption figure of 57.2 mpg, or 4.9 km/l at 56 mph.

In the old days, car manufacturers and their component suppliers used to work almost in isolation. Today however,



major car manufacturers work very closely with their tire and lubricant suppliers to make sure they are able to produce a homogenous and near-optimum package.

Continental tires are noted not just for their superb wet and dry grip but also very low rolling resistance, characteristics which were hitherto mutually exclusive. Another Continental strength is good wear resistance. In early 1992, in conjunction with Porsche, Continental scored another first with their new CZ91 high-performance tire on a Carrera 2 Tiptronic, which ran around the Nardo high-speed bowl in Italy for 24 hours at an average speed of 230 km/h (143.75 mph) on one set of tires. This attempt gave Porsche and Continental the distance and speed records for automatic cars, their high average speed helped by not having to stop for tire changes.

It would have been all so well for the staff of Audi and Continental to make the record-breaking attempt, but the two organizations were so confident of their products that they invited five journalists from European countries to share the driving stints with Plattner. Thus, I found myself on Continental's "hit" list, asked if I would like to represent Queen and country.

The record attempt was to be run under controlled conditions within the confines of the Contidrom, Continental

Tire's test facility near Hanover. This facility contains various different test tracks like a circular steering pad that can be partially wetted, a handling course that can also be wetted with sprinklers and a 2200m-long high-speed test track with semi-circular high-speed banking at each end.

Taking turns to drive the Audi 100 2.5 TD from 6:00 p.m. on Friday evening until it literally ground to a halt, we would be using just the high-speed test track with its semi-circular high-speed banking. But to avoid fuel-wasting tire scrub, we would not climb the banking, keeping rather to the level part on its inner circumference.

The driving arrangements were quite flexible and few of us could stay the whole three days, but each journalist did at least two days. Each person's run per day consisted of a three-hour stint at night or early in the morning and a two-hour stint during the day when it was hotter and therefore more tiring. In fact, we hoped that it would be hot, as the warmer air would present less air resistance to the Audi's passage. Thankfully, bottles of mineral water were not thought to add too much to the weight of the car!

The technique was quite simple. As the object of the exercise was ultimate fuel economy, the car would do the work by running along in top with no input from

the driver other than steering. With the motor turning over at just above idling speed and giving a steady 46 km/h (28.75 mph) in sixth gear, the driver's first task was to get up to that speed using as little fuel as possible. The recommended technique was to move off the line gently in first, change up quickly to second, then third, and drop it into sixth. Personally, I felt that minimizing the changes and therefore unburnt fuel on the over-run might work to advantage and so used a few more revs in first and second and dropped it straight into sixth.

My first stint was three hours on Saturday morning, and I was initially apprehensive about the possible onset of boredom. After all, watching the same scenery come round again and again for three hours must be the next worst thing to watching the proverbial paint dry. Especially as the bulk of the scenery consisted of drab concrete track.

One of my first solutions for boredom was to calculate that it took 4 min 3.8 sec to cover one lap of the 2.8km long Contidrom high-speed track doing 46 km/h. But my saviour as a great music fan was the multitude of decent radio stations burning up the German airwaves. Everything from Radio Berlin to the BBC Overseas broadcasts on BFBS

95 ▶

## ◀75 We hear...

son and heir, Tonino. To be built at Bologna, 15 miles from Lambo's Sant'Agata factory, it will trace Ferruccio's enterprise from the Lamborghini tractor, his first vehicle, to the Countach Anniversary, his last before selling out to Chrysler.

- Austrian company Steyr-Daimler-Puch, which already builds Chrysler Voyager mini vans for sale in Europe, is to begin later this year assembling Jeep Grand Cherokees.

- Zagato, the 74-year-old Milanese carrozzeria, has suspended trading because of cash flow problems. It's expected that Lotus' new owner, Bugatti, will buy the company for its low-volume production expertise with aluminum bodies.

- Contrary to earlier impressions, Porsche's new mid-engined coupe, codenamed 996, will not immediately replace the 911 when it debuts in three year's time. The latest, and apparently last, 911 should stay in production until the end of the decade—and beyond, if customers keep demanding it.

- Volvo is soon to offer supplementary airbags mounted in front seat bolsters, providing a cushion between the occupant and side of the car. Complementing Volvo's structural Side Impact Protection System, this should further reduce chest injuries during violent side impacts.

- Jaguar's facelifted XJ6 range, to be unveiled this fall, will include a challenger to BMW's M5. With wide tires and sports suspension, the quick Cat will use a four-liter AJ6 six-cylinder powerplant with supercharging, giving as much power and

torque as Jag's 5.3-liter V12, but weighing and drinking less.

- BMW is developing an all-new range of inline four-cylinder engines, to be used first by the next-generation 3-Series in 1997. Features of the design, called M80, include four valves per cylinder and variable valve timing.

- When Honda chief Nobuhiko Kawamoto recently revealed that his company had been exchanging information with Ferrari's road and race car divisions, executives' faces at the Italian marque went the same color as their cars. Ferrari's Formula One team quickly benefited from this cooperation with a new four-valve V12, which was more powerful than its previous five-valve engine, but hadn't expected the secret of its improved competitiveness to be revealed. So now a joint statement claims the alliance has "exhausted its initial targets." Which means the romance is over.

- VW's exterior design chief, Herbert Schäfer, is retiring. His successor, Peter Schreyer, moves across from Audi. And Audi's interior designer, Ulrich Lammel, is also joining VW. His predecessor, Brit Charles Ellwood, now heads VW's studio in Simi Valley.

- In the world's most prestigious sedan racing series, the German Touring Car Championship, Alfa Romeo has beaten home favorites Mercedes-Benz. Former Grand Prix racer and Ferrari F1 development driver Nicola Larini also took the driver's title in an Alfa, a 430bhp V6-powered carbon-bodied paceframe-chassis 155. Most popular car was BMW's last-generation M3, but unlike the Alfas and Mercs, none were factory entered. Alfa reputedly spent \$20 million on the season.—PB.

## AUDI WORLD RECORD

477

kept me amused. Even so, after a while, you start to look at the track, examining every tire mark, every expansion joint and even blades of grass by the side of the track. Every now and then, the monotony was broken by Gerhard's voice coming over the walkie-talkie with his own brand of light-hearted banter. And when you least expected it, he would appear at various points of the track brandishing his video and still cameras to record the event.

After the boredom of the three-hour day run, I assumed that my night stint would have even less to commend it, but it transpired that the three hours that started at midnight on Saturday passed rather more quickly.

The music on the radio was more inspiring for a start and I found myself swapping between good jazz, classical and pop stations. But more than that, as my drive wore on, I found myself fascinated by the colors of the night. Illuminated only by the dipped headlights of the Audi and the soft moonlight, the light gray/brown-colored track took on new aspects which served to concentrate one's senses. The trees became strangely

deformed black shapes on the periphery of this surrealistic landscape and as the Audi trundled round on each lap to face the moon, this round orb in the sky took on a distinctly green complexion as seen through the top of the graduated tint of the windscreen. Closer to home, the only real color was the warm reddish glow of the Audi's instrument panel that told me we had used just over a quarter tank of fuel 19 hours into our record attempt.

What also made the night stint shorter was the ability to play "games" with the environment. With a large amount of input shut out from one's senses, one becomes more acutely aware of what is left. Out of interest, I tried shutting off the lights on various parts of the track and found that especially when turned toward the moon, I had more than enough light to drive by down the straights or even on the banking going into the main straight. Against the moon, the straight stood out as a dark strip with the reflected light illuminating the lighter colored concrete along its sides.

At the end of the straight, I used the 4.10m reflective sign as my aiming point

96 ▶

# R+A

PERFORMANCE

Your East Coast Installation and Service Specialist.



Expert installation and quality service for more than 14 years.

Specialized service and performance engineering for BMW, Audi, VW, MB, Porsche, Saab and Volvo.

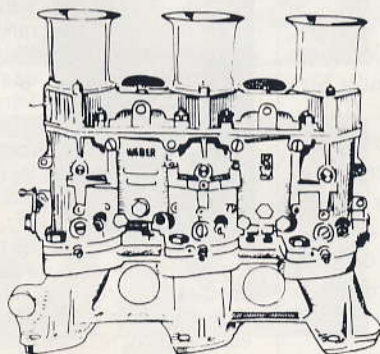
Andrew King, *President*  
**R+A Applied Arts, Inc.**

555 Gutheil Place  
Lyndhurst, NJ 07071  
(201) 933-8833

## 911 Weber Conversions

### \$960-\$1650

14 Varieties of Manifolds: \$250 a pr.



#### 911 (1978-1993) to 46 IDA 3C WEBERS: \$1650

- Carburetors
- Weber Linkage
- K&N air cleaners
- Pressure Unit
- 46mm manifolds with Custom flanges

#### 911 (1974-77 CIS) TO 40 IDA 3C WEBERS: \$1475-\$1500

- Carburetors
- Weber Linkage
- K&N air cleaners
- Pressure Unit
- 40mm manifolds with CIS flanges

#### 911 MECHANICAL INJECTION TO 40 IDA 3C WEBERS: \$1425-\$1500

- Carburetors
- Weber Linkage
- K&N air cleaners
- Pressure Unit
- Correct manifolds
- Injector plugs

#### 911 WITH SOLEXES (1965-66) TO 40 IDA 3C WEBERS: \$1425

- Carburetors
- Weber Linkage
- Block-off plate
- K&N air cleaners
- Correct manifolds
- Fuel block

#### 911 T (1970-71) WITH ZENITHS TO 40 IDA 3C WEBERS: \$960

- Carburetors
- Insulators
- Gaskets

The above kits include custom ported and polished manifolds, heat insulators and longer studs gaskets, fuel line, jetting and venturines for your application. Plus our new Watersield K&N air cleaners. The 2.2 T kit is basically Webers.

# PMO

*"The Original 911 Weber Kit"*



135-17th Street, Santa Monica, CA 90402 (310) 393-5423 FAX (310) 394-6313

All orders shipped UPS/COD - Cash or cashier's check - California residents add tax



- PMO Mechanical Injection Kits are street legal for 1969-1973 vehicles in California (CARB E.O. No. D-144). The CIS Kits are legal in California only for racing, non-highway vehicles.

## AUDI WORLD RECORD

◀95

to turn gently into the banking, but even without that, fingertip pressure on the steering wheel fed me the right message that the car was transiting from flat to banked surface. At that point, the lights went back on. Given that we were going clockwise round the inner perimeter of the track, a left-hand-drive car fitted with right-hand-drive lights dipping to the left would have been more suitable! We had a good laugh about that later as it was the one thing Gerhard had not considered even though he had gone to the length of taking out the high-beam fuse to save alternator drag and hence fuel.

And then there were the rabbits. These little characters were present on the back straight which is bounded by scrub and woodland. Darting across into the lights of the oncoming Audi, they seemed intent on suicide. A sharp tap on the horn proved the best way to move them and must have given the poor little chaps a double shock. The near-silent Audi descending upon them lights ablaze and emitting strange noises must have been Bunnyland's equivalent of a close encounter with a UFO.

On my part, the night stint proved far less boring thanks to all these distractions and the three hours passed very quickly compared to my day stint of the same length. I also caught a glimpse of the feelings of isolation and tunnel vision felt by drivers who race in the Le Mans 24 Hours. Thankfully though, I was not doing 150 mph!

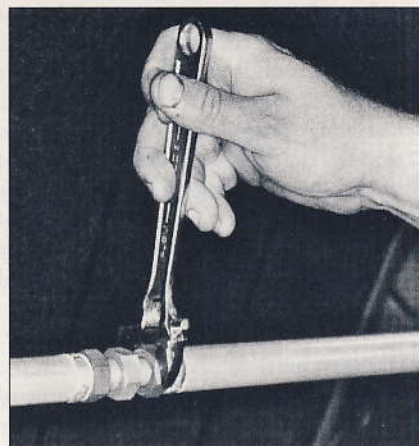
When the car finally ground to a halt at 2:00 p.m. on Monday, it had covered a total distance of 2800.4 km. We were able to calculate a loss of about 100 km through wind resistance from gusts that at times reached 55 km/h. Other factors were rain and low temperatures. In fact, when it rained, using the wipers and the lights at night raised the load on the alternator and engine, consumption went as high as 3:1 1/100km. On the other hand, the low rolling resistance of the standard-fit Continental CV90 tires saved the equivalent of 130 km worth of fuel.

When computed the final figures gave us an average speed of 41 km/h, taking into account the stops for driver changes. The fuel consumption was an impressive 2.8 liters/100 km.

All told, it was an impressive show of the potential economy of a performance diesel and illustrates the significance of engine efficiency, low drag and the contribution of modern tires to fuel economy. Watch for our entry in this year's Guinness Book of Records. ❧

## PRODUCT REVIEW

◀83



*Tighten the center adjuster and then lock it in place with the jam nuts on each side. Replace the rubber caps over the upper shock mounts. Replace the speaker mounting panels and bolt them in place, taking care not to overtighten them.*

brethren Jetta II, Golf and Corrado, the GTI benefits from the addition of a rear stress bar. The installation was refreshingly simple, as the well-designed Autotech bar went on quickly and without a hassle.

The Autotech bar has a distinctive look, with beautiful cast end pieces and well-done TIG-welded construction. The cross bar is made of 1.0-in. 6061-T6 aluminum tubing. Even the trick left/right threaded center adjuster is made of aluminum, with a special hard anodized coating on the threads for good wear and ease of installation. This bar is seriously light at about 2 lb, including the steel U-bolt mountings. For a sharp look, the bar can be brought to a polished shine with some aluminum polish.

Autotech's rear stress bar, part #10-530-002K, lists for A2s including Corrado, Golf II, GTI II and Jettas II. A similar bar for the A1s, part #10-530-001K, is also available. Both are priced at \$89.95 complete with instructions and everything needed for installation. An A3 bar will be available soon. Plan on less than an hour for installation, and a change you can feel in the way your Volkswagen feels in a rough corner. ❧

### Autotech

32240-E Paseo Adelanto  
San Juan Capistrano, CA 92675  
(714) 240-4000

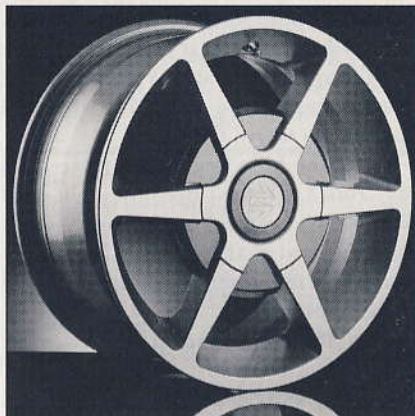
### VW Specialties

Autotech dealer and VW  
high-performance specialists  
17682 Gothard Street  
Huntington Beach, CA 92647  
(714) 848-3766

## PARTS COUNTER

◀20

down, yet the Turbo is still spinning. By releasing the oil through a check valve this enables the Turbo to receive oil to cool the Turbo. All parts necessary for installation are included in the kit. For further information, contact: Canton Racing Products, 14 Commerce Dr, Dept EC, North Branford, CT 06471 (203)484-4900



"Vision" is Momo's latest effort in steering wheel design. Six spokes of the Vision radiate from a removable center plate that can be painted, allowing for any custom color combination. An angular outer lip gives the illusion of a much larger diameter than the 14x6 and 15x7 sizes that are available. It's a high-pressure casting made from a strong yet light aluminum alloy; TUV approved. Vision is available in silver or chrome with an anthracite center plate. For more information, contact: Momo USA, Inc., 2100 NW 93rd Ave., Dept. EC, Miami, FL 33172; (305) 593-0493.



Most autobody experts will agree that taking off pin-stripes, decals and adhesive film is rarely simple. Klean-Strip makes the job easier with new Pinstripe & Decal Remover, specially formulated to be faster, cleaner and smoother than sanding, scraping or heating. After applying an even coat to decals, wait 10 to 15 minutes, then remove with a stripping tool or a non-metallic scraper. Safe for acrylic enamel paint finishes, glass, chrome and metal bumpers, Klean-Strip also clings to vertical surfaces and eliminates sticky residue. Intended for use by trained professionals; available through warehouse distributors and jobbers. Packaged in 14-oz aerosol cans. For more information, contact: W.M. Barr, P.O. Box 1879, Dept. EC, Memphis, TN 38101; (901) 775-5456.

Three new Stage 8 kits are now available for the high-performance automotive enthusiast. Stage 8 uses their patented locking safety bolt technology to eliminate concern

106 ▶