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COLLECTOR'S EDITION

TRIUMPH TR7

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COLLECTOR'S EDITION

TRIUMPH TR7

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WELCOME

The Triumph TR7 and TR8 are among the most divisive cars in British history. And yet, here at Kelsey Publishing we find that deeply unfair. The things that many deride are ultimately relics of its era rather than true flaws, and if you can look beyond the "shape of things to come" you'll find one of the most entertaining and best value classic sportscars on the market today.

And even that controversially wedgy body has matured with age. What looked awkward in period looks sharp almost fifty years on, and the many modifications that have been developed using factoy inspiration such as Sprint and V8 conversions have given the model more than enough of a sporting presence to quell the period rumours that the car was no true successor to the TR6.

But then, the thing that all the naysayers forget is that that isn't quite the market it was tying to aim for. Consider that the Spitfire was ageing, as was the MGB, and the GT6 had disappeared from price lists completely - and remember that BL was trying to kill all three birds with one wedge-shaped stone. People are friendlier toward the TR8 because it retains that old-school TR character - that was the point of that model. The continuation of MGB and Spitfire production has blurred the lines for those looking back at the car, and with that in mind, the negative connotations of the model seem to ring more true. But regardless of Leyland's internal politics at the time, the Triumph TR7 - and subsequent TR8 - deserve the improvements to their reputation that recent years have seen. Only now, over 40 years on, can we look back and recognise their forward thinking shapes and contemporary interiors for what they were, and recognise that those Dolomite based underpinnings were every bit as capable as the Austin Cambridge bits under an MGB - if not more so.

So this is our celebration of the Triumph sports car that people love to deride. We've got buying tips, modified cars, standard examples, history features and more for the ardent TR7 fan to enjoy. We've looked back at the work of Harris Mann, and even considered the prototypes that never quite made it. In short, you'll be in TR7th Heaven on every page.

Thank you for buying this bookazine. We hope you enjoy reading it as much as we enjoyed making it.

SAM SKELTON EDITOR

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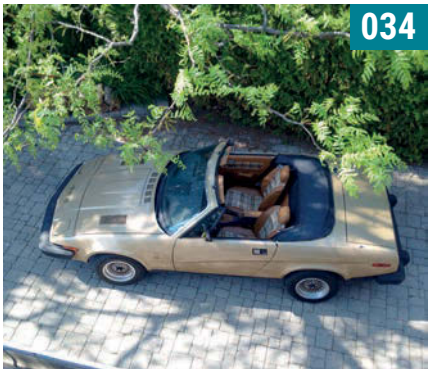


BEST OF BRITISH LEYLAND

COLLECTOR'S EDITION

TRIUMPH TR7

TRIUMPH TR7 1975 -1981

If ever a single car epitomised the confused nature of the British Leyland saga, the Triumph TR7 is that car. Conceived quite sensibly by a still independently run Triumph as a car to replace the ageing TR6, the project became intertwined with the future of the MG brand within the newly-formed BL, would receive a body styled by a one-time competitor and in production would be tarnished by the group's chronic industrial unrest.

Words **PAUL WAGER**


SQUIRE

DEVELOPMENT

The TR range of sports cars had served Standard Triumph well and even by the time of the TR5's introduction in 1967 was still using essentially the same basic chassis as the TR2 launched back in 1953. Needless to say, as the world entered the 1960s, the TR5 was starting to look old-fashioned and an update was required to maintain the car's appeal, especially in the crucial US market.

Demand for the traditional British sports cars in the USA was still riding high. So high in fact that the limited production capacity at Triumph was a restrictive factor. Some 9000 cars could be supplied annually to the North American dealer network, whereas it was estimated that they could easily have sold three or four times as many.

The immediate solution was something of a stop-gap, Triumph taking up an offer from German coachbuilder Karmann which at the time aws keen to expand its contract services. The brief was tight: the car had to retain the doors, screen pillars and bulkhead to keep costs down but Karmann did a neat job in creating the car marketed as the TR6, which gave the TR platform a useful extension.

This could only disguise the age of the underlying design for so long though and Triumph was already working on a project to develop an open two-seater under the code name Bullet accompanied by a two-door coupe codenamed Lynx.

In one of those decisions which was typical of BL, within weeks of the merger which created BL, Rover engineer Spen King was moved to oversee Triumph engineering, while long-serving Triumph man Harry Webster was sent to Austin Morris

In 1970, BL executives made a fact-finding trip to the USA, meeting with British Leyland Inc staff in Los Angeles to discuss future sports car plans as well as meeting editorial teams from American car magazines.

The discussions were informative, proving that what the US market wanted was something attractive looking and sporting, but traditional in its engineering: independent suspension and fuel injection were simply unnecessary and a mid-engined layout was best left to Italian exotica.

This was bad news for MG which already found itself in competition with MG to be the BL sports car band and which had been exploring a mid-engined Hydragas-suspended proposal (the ADO21). Sadly for Abingdon, this made it all the more likely that a new mass-market sports car from the British Leyland stable would wear Triumph badging.

By then the Bullet project was already well advanced, with prototypes for both sports car and coupe constructed by Michelotti. This was the era when it was widely feared that US legislation would ban the sale of new open-topped cars and so the sports car iteration of the Bullet project was a Targa-topped design rather than a fully open car.

Shortly afterwards, BL senior management held a review of the group's sports car proposals then under development, ranging from the ADO70 MG Midget replacement proposal right up to the XJ27 which would become the Jaguar XJ-S. It was at this event that it was decided that both Bullet and Lynx were insufficiently adventurous for the forward-looking 1970s and it was decided that both needed more work.

Meanwhile, over at Longbridge stylist Harris Mann was also working on a sports car proposal and in July 1971 his proposal was unveiled at a review meeting. Without the need to continue any Triumph traditions, Mann's presentation was much more of a clean-sheet design and was as adventurous as the original Triumph proposal had been conservative. His striking wedge-shaped car was of course the design which would eventually become the TR7.

Influenced by the thinking that the US may

ban open cars in the near future, Mann had concentrated on a hardtopped coupe style, adding dramatic styling features to compensate for the lack of an open roof.

Mann's proposal also cleverly allowed for two different cars to be created from the basic design and two full-size models were presented: one wearing Triumph badges and the other badged as 'MG Magna'. Ironically, the MG-badged model was the style which was chosen for production as the new Triumph.

Triumph's engine plans for the new car were similarly modified. The intention for the original Bullet project had been to use four different powerplants: the straight-six in both carburetted and fuel-injected versions alongside the Stag V8, in regular two-valve guise and an exotic four-valve per cylinder fuel-injected variant.

The move from independent Triumph project to corporate BL product meant that a Triumph powerplant was no longer a given. Additionally, although the original in-house Bullet proposals had been developed as an updated TR6, the sloping nose of Mann's wedge made it impossible to accommodate the height and length of the straight-six engine.

Triumph's six-cylinder was also getting on by then, having been developed for the Vanguard Six in 1960 essentially by grafting an extra pair of cylinders on to the engine originally developed for the Ferguson TE tractor in 1947.

A far more modern powerplant was the recently-developed slant-four used in the Dolomite and it was this which was used for the TR7. As developed for the Dolomite, it ran an 1855cc capacity but for the TR7 it was bored out to 1998cc and drove through a four-speed gearbox developed by Triumph from the unit found in the Morris Marina.

Alongside the regular 2-litre car the model range was also to include the so-called TR7 Sprint, running the clever single-cam 16-valve engine from the Dolomite Sprint. In fact a pre-production fleet of around 50 cars was constructed before the idea was canned, not helped by the issues with the Speke plant. With a 0-60mph time no better than the eight-valve car, it didn't work for marketing purposes, although those who have driven the Sprint-engined car report that the driving experience is vastly better.

The car which really replaced the TR6 however was powered by a V8, but in production form the Rover engine rather than the proposed Stag unit which by then had a less than stellar reputation.

HISTORY

So strong was the focus on the US market that the TR7 was launched initially only in the USA. Production began at BL's Speke plant in September 1974 and the car was launched to the American press in January 1975 at an ⟶

LYNX, BROADSIDE AND SPRINT

The TR7 as we know it was originally intended to be only one part of a model range, including a four-seater coupe in the style of the Toyota Celica and a convertible derived from this.

The original Lynx died with the first iteration of the Bullet project, but the idea was revived once the direction of the production TR7 had been settled on. The Lynx was fully engineered with the intention of producing it at Speke alongside the TR7 and by 1974 some five running prototypes had been built, with production scheduled for 1977.

Using the main floorpan, dashboard and underbonnet structure of the TR7, the Lynx received an 11-inch stretch to the wheelbase to allow the rear seats and full engineering and safety sign-off had apparently been completed with a view to launching the car in 1978. Powered by the Rover V8, the Lynx was very different from the TR7 but an unenthusiastic response from British Leyland's US importers ultimately saw the project sidelined.

A single running Lynx prototype survives at the British Motor Museum but intriguingly the prototypes were also presented with MG badging with the intention of replacing the MGB GT.

The Lynx would however live on in a proposed successor to the TR7 which went by the name Broadside. Taking the longer doors already engineered for the Lynx, the Broadside was just four inches longer than the TR7, still managing to offer the '+2' rear seats and looking less awkward in its side profile.

Just two prototypes were built in 1979 – one V8 coupe and one convertible running the 2-litre O-Series engine, which both survive in the British Motor Museum's Collections Centre.

By 1980 however, exchange rate issues, falling sales of sports cars in the USA and the need to concentrate on the volume car business saw the additional TR-based models sidelined: effectively it was too late and the writing was already on the wall.

As a fascinating side note, a replacement for the MGB was at one point considered under the project name Boxer. Based on the TR7, it would have used the O-Series engine and was effectively a cynically badge-engineered version of the TR7 convertible. Unsurprisingly, it never saw the light of day.

TR8... OR TR7 V8?

With the US market of such vital importance to the TR7 programme, it's no surprise that the programme included a more powerful derivative right from the planning stage, but whereas the original Bullet programme had envisaged using the Stag V8 engine, the reality was that the Rover V8 was the one chosen to engineer to production. Not only was it cheaper to manufacture than the Stag unit but it was usefully simpler which promised greater reliability in the demanding North American climates. Triumph was also by then part of the Jaguar Rover Triumph sub-grouping within British Leyland, making the Rover engine a natural choice. Indeed, attempts were even made to revitalise the Stag with the ex-Buick motor.

The TR7 V8 as it was initially known was developed almost entirely for the US market and like the four-cylinder car was scheduled to be launched in North America before it would be offered in Britain.

Running twin Stromberg carburettors on the 3.5-litre V8, the TR8 as it was badged for production, boasted 133bhp, but in an ironic twist the greater emissions demands of California meant that their cars were fitted with Lucas-made Bosch L-Jetronic which improved the power output to 148bhp with improved economy too.

As well as the beefier engine, the TR8 received a bigger brake servo and larger front brake discs, with a taller 3.08:1 axle final drive. The battery was moved to the boot and the steering gained a quicker 2.8-turn rack as well as a smaller wheel. Alloy road wheels were standard and twin tailpipes completed the package.

The official launch was April 13, 1980 with the TR8 offered only in convertible form. American road testers loved it and so did those European journalists who got to sample the car. The intention was always to offer the car in Europe and 25 pre-production cars were constructed, of which six are known to survive. Without the power-sapping catalytic converter, the UK cars on twin Strombergs were rated at 152bhp with impressive performance.

The TR8 however was destined never to arrive in the showrooms, since the axe fell shortly before the entire TR7 range was canned, the reasons being declining sales and the same pressures of investment priority for the volume market.

event in Boca Raton, Florida.

By all accounts this was a frantic affair, with some 35 partly hand-assembled cars sent over to Florida by boat whereupon the Leyland service staff discovered that the combination of production quality issues and shipping damage meant they were all unusable. In the end with help from a local race team, they managed to cobble together 17 useable cars only by cannibalising parts.

After the conservative evolution of the TR line since since the 1950s, the wedgy wonder was an abrupt change of direction and the TR7 certainly polarised opinion among the US Triumph dealers and magazine road testers. The general mood though was that it was a brave effort and priced as reasonably as it was, it was destined to be a success... although refinement, quality and braking performance were all mentioned. One thing the US journalists were agreed on though was that the new monocoque bodyshell offered a feeling of strength and solidity notably absent from the old separate-chassis TRs.

On May 19, 1976 the European TR7 was unveiled and apart from losing the heavy Federal bumpers and side repeater lights, they looked largely identical to the American cars. Interestingly though, the British press, perhaps used to rather more sophisticated sports cars than their US counterparts, were more critical of the car, especially the gearbox and engine vibration.

The gearbox issue was addressed in the autumn of the same year when the TR7 was updated for the 1977 model year and received the stronger axle developed for the Rover SD1 V8 and the newly-developed LT77 five-speed

gearbox offered as an option.

In further nod to the importance of the American market though, the five-speed was quickly made standard for North American cars, which meant it was immediately delayed a month for domestic market cars while gearbox production was improved.

The Seven received further improvements at this time, including taming the tail-up attitude of the early cars by dropping the rear suspension by 25mm, while tyres were widened from 175/70 to 185/70 with silver plastic wheel trims replacing the black centre caps. On the inside, this was the point at which the car received its bold tartan fabric seats.

Troubled times were to come though, signalled by the appointment of Michael Edwardes at the helm of British Leyland on November 1. At that point, a strike at the notoriously militant Speke plant on Merseyside which produced the TR7 was entering its fifth week and Edwardes' brief was to sort out these ongoing problems inside BL.

The strike was destined to last four months but on February 15, Edwardes' decision to close the plant was announced. Union leaders and plant management appear not to have taken the decision seriously but Edwardes wasn't messing around and Speke No. 2 as it was known would close on May 26, 1978.

As Edwardes recounts in his own memoir Back from the Brink, consideration was given to axeing the TR7 entirely but in the end the final assembly was moved to Triumph's Canley home in Coventry, while the body assembly went to Swindon. Assembled bodyshells were transported by road from Swindon to Canley where they were trimmed and painted.

The production move would have far-reaching effects for the future of the TR range, with the proposed Lynx and Broadside derivatives cancelled as detailed in our separate section. The V8-powered car however – destined solely for North American sale – had already entered pilot production by the time the Speke facility closed and its importance to the US market ensured it would continue.

The bad news for the Merseyside workforce was good news for TR7 customers, as it's generally accepted that quality was much improved after the move, with the car receiving some 200 improvements including improved rustproofing, better painting and sealing of the headlamp pods and upgraded seat fabric. The Canley-built cars can be identified by the replacement of the 'TR7' graphic on the nose with the laurel leaf design and the bulged bonnet which was fitted in preparation for the V8 car.

Meanwhile, although a prototype TR7 convertible had been created back in 1975, formal approval for a production version wasn't given until February 1976 and required substantial engineering work before it →

TECH SPEC

Triumph TR7	
ENGINE:	1998cc
MAX POWER:	105bhp
0-60 MPH:	9.1secs
MAX SPEED:	109mph
ECONOMY:	30mpg
LENGTH:	4.07m
WIDTH:	1.68m
WEIGHT:	1010kg

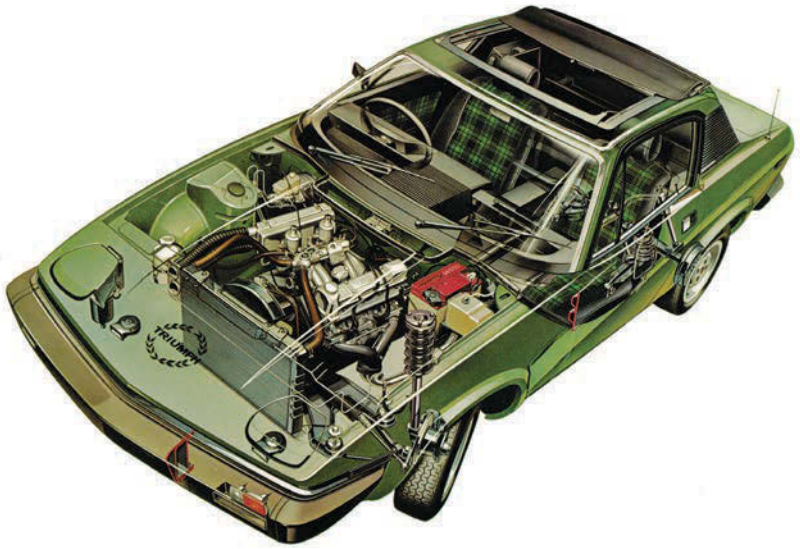
YOU DIDN'T KNOW

• The profit margin on a TR6 for a US dealer was four times that on a Buick.
• The convertible actually weighed 9kg less than the coupe.
• When the Bullet and Lynx proposals were judged to need more styling work after the management review, Jaguar's William Lyons was asked if he could assist.
• The O-Series engine was considered for use in the TR7 after the Dolomite was discontinued in 1981. The 16-valve version developed to meet US emissions regulations later became the Rover M-Series.
• Quality improvements were being devised even as the axe fell on the TR7, including plastic headlamp pods.
• Noted designer William Towns freelanced at Triumph, working in a Portakabin at Canley and developing an alternative to the original Bullet design.
• During development of the Sprint, the 16-valve engines were tested in Triumph 2000s.
• So poor was the quality of early cars that press demonstrators were stripped, repainted and retrimmed before being sent out.
• At the meeting where Mann's design was chosen for production, William Lyons was said to have supported the original Triumph proposal.
• A Bosch-injected version of the Sprint engine was developed for the stillborn SD2 Dolomite replacement and was fitted to a matt black TR7 development car.
• The original proposal had the side crease running right down to the sill behind the front arch, but was modified to its production shape at the request of Lord Stokes.
• The steeply raked screen was designed to allow drivers in the US to see the overhead gantry-mounted traffic lights more easily.
• The V-shape of the TR7's front end made crash safety engineering tricky, since it concentrated impact loads in a small area.
• Regulations and packaging requirements dictated that the body be an inch wider than Mann's original model. This was achieved during the 3D measuring process to create blueprints from the clay model, where half an inch was simply added to the width dimensions.
• When management from Pressed Steel visited the Speke plant to discuss moving body assembly to Swindon, they found striking workers had welded the gates shut.
• The full-length Webasto roof option reduced the TR7 coupe's torsional rigidity by 50 per cent.

was ready for production. A box-section was added behind the seats to connect the sills and B-pillars, with additional door locating latches added, the radiator aperture was braced, the front strut tops were braced to the dashboard and clever 'harmonic' bumpers were fitted. Pivoted around a centre point, these carried weights in the ends designed to counteract the frequency of scuttle shake.

As was by now expected, the car was launched into North America first in May 1979, then unveiled in European specification at the Brussels Motor Show in January 1980 and cars on sale from March 3.

The launch of the convertible saw further detail changes across the range, many of them previewed on the 'TR7 Premium' limited edition: improved interior trim, a one-piece carpet and improved switchgear in a new dark grey dashboard moulding.



In convertible form, the car's appearance was dramatically altered and it immediately polarised opinion less, while in the US market the return of the open-topped Triumph TR was welcomed, especially in V8 form.

The Canley-built TR7 convertible however was destined to be a rare beast, since more Edwardes cost-cutting was to come with it the announcement that the Canley plant would also cease car building operations. It made financial sense to utilise the inactive third production line at the Solihull site and in January 1980 the plant was readied for TR7 production, with the first cars produced in March 1980. Intriguingly, despite this being a cost-cutting measure, cars were produced simultaneously at Canley and Solihull for some five months in the interests of uninterrupted supply for export markets.

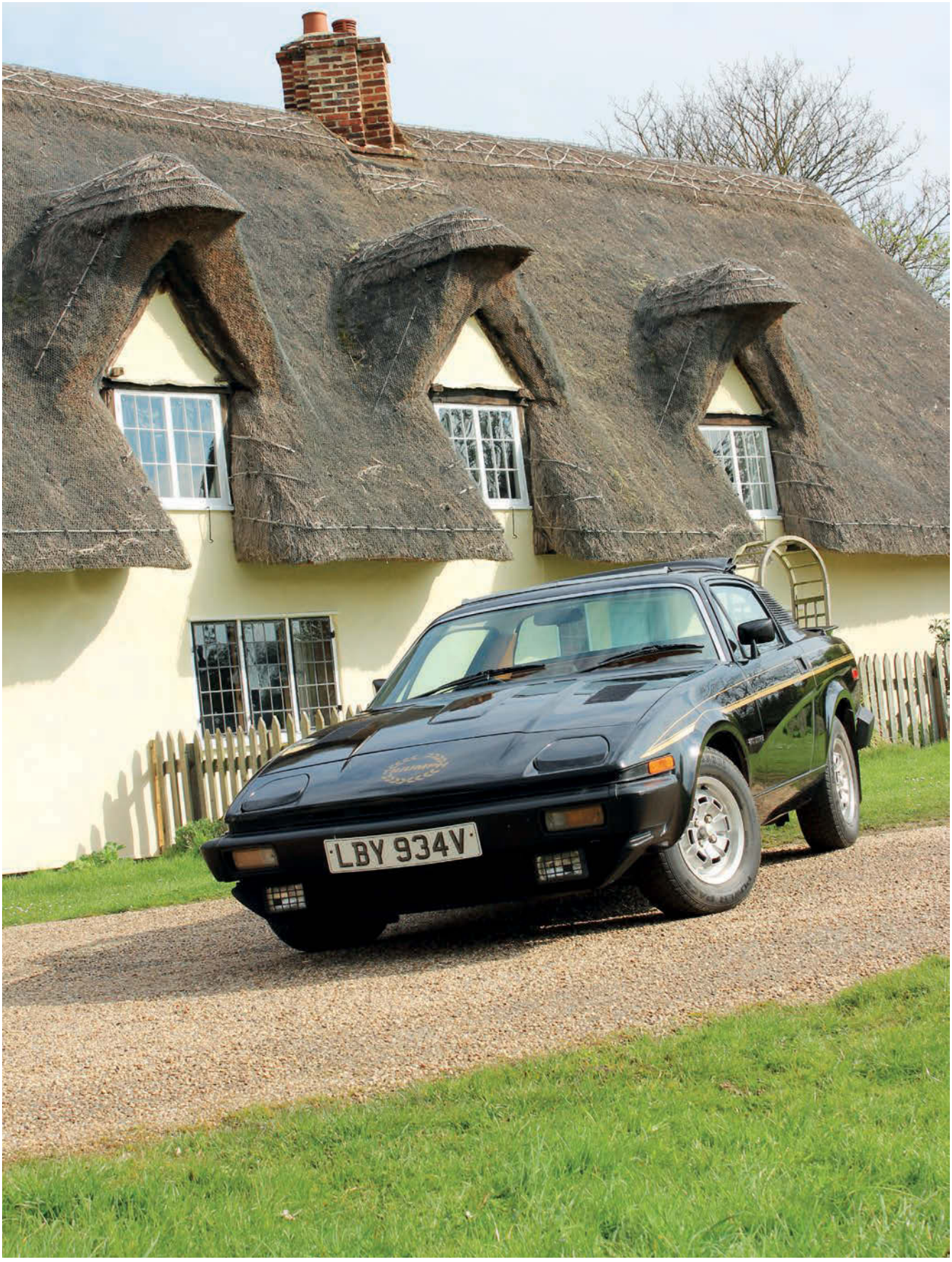
This second production move brought with it more detail changes including the →

THE DELOREAN CONNECTION

With the ill-fated DeLorean manufacturing operation in Belfast in receivership and rapidly heading towards its end, the firm's final managing director Barrie Wills investigated the possibility of continuing production of the TR7 in the West Midlands, initially approaching the West Midlands Development Agency with the idea. The idea wasn't progressed beyond initial discussions, but Wills subsequently investigated the idea of producing the TR7 at low volumes in the DeLorean facility at Dunmurry alongside a reduced volume of the DMC-12 gullwinged sports car.

Together with some DeLorean colleagues, Wills worked up a business plan based on projected sales of 5000 DMC-12s and 4550 TR7/8 worldwide, with John Z DeLorean even handling US distribution. At this point the DeLorean receivers delayed the closure of the factory while an approach was made to BL. The Triumph and TR names wouldn't be offered but a deal for parts supply was struck with BL and a mildly restyled version of the TR7 was worked up – notable for lacking the side creases.

A revised marque name of 'Dunmurry Motor Company' was suggested to distance the new operation from the scandal surrounding the De Lorean name but allow the distinctive graphic to be retained. Wills also approached the Healey family to use their name on a royalty basis but ultimately the FBI 'sting' of DeLorean himself and drugs charges saw the deal collapse.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STAY OF EXECUTION

BL executives who tried early pre-production TR7s weren't impressed initially and as a result were wary of replacing the much-loved TR6 with the new car. Experience had also taught them to be wary of BL's delivery dates and so they had every reason not to trust the promised January 1975 launch date for the TR7 – which if missed would leave them without a sports car in the range.

The solution requested by the US office was to extend TR6 production beyond the proposed end in December 1974 but back home it was felt that to do this would impact on TR7 production.

In the end a compromise was reached with TR6 production extended until February 1975, but even this involved considerable expense in meeting the 1976 model year standards. Bumper regulations in particular were irksome and explain the big overriders on 1976 model year US-specification TR6s. Work was also done on the TR6 engine to keep it up to Federal emissions standards.

One measure of the lukewarm reception the car received at first with the US sales teams was that just two days after the TR7 launch, a request was made to continue TR6 production for a massive two years.

replacement of the laurel leaf graphic with a plastic badge, as well as new interior door handles and trim options. Further changes arrived for the 1981 model year, including a higher fifth gear ratio, new colour options, revised steering wheel, intermittent wiper and revised door locks. US-bound cars gained electronic fuel injection which was reported to transform the car, but it wasn't enough to save the TR7.

BL itself was in crisis and with the need to concentrate on the volume saloon market, the Triumph sports car was simply an unnecessary diversion. On September 10, 1979 it was announced that the Solihull plant would be mothballed and production of the SD1 moved to Cowley. The TR7 would not move with it and the model line would be discontinued. The last TR7 was produced on October 3, 1981 and with its death came the end of the volume-produced traditional British sports car after 115,090 TR7/TR8s had been produced.

TECH SPEC

Triumph TR8	
ENGINE:	3528cc
MAX POWER:	155bhp
0-60 MPH:	7.7secs
MAX SPEED:	135mph
ECONOMY:	25mpg
LENGTH:	4.06m
WIDTH:	1.68m
WEIGHT:	1010kg

THE LAST OF THE TRIUMPH TRS

Until recently it was widely believed that due to the plentiful supply of cars and general lack of appeal, a TR7 was a bargain purchase. Now that there are so few of these cars left that is no longer the case and the best cars are changing hands for fairly large sums of money. However, it is still possible to pick up a reasonable car for relatively little.

Words **JOHN CLANCY**

The first TR7 prototype was completed in November 1972, and production commenced less than two years later. The early cars did not resemble Harris Mann's impressive styling buck in so many ways, not least because the rear end of the car sat so high in the air. This was an issue that persisted until the first batch of revisions in March 1977, which included lowered suspension settings.

Industrial strife was rife throughout the British Leyland empire during this period and just as the TR7 went into production British Leyland went bankrupt. Looking at it from this perspective, it is perhaps easy to see why TR7 build quality was initially so poor. Despite the early failings, the factory did not seem to be able to produce enough cars to satisfy the demand – in 1975, the appeal of that futuristic design was so successful that stories abounded of customers following TR7-laden car transporters to dealerships. How different the history of these cars might have been had they been fully developed in the first place. As it was, the cars soon gained a poor reputation and as we all know, once a car gets a bad reputation it is almost impossible to shake it off. Despite this, the truth is that to drive a properly sorted TR7 is a delight.

Late in 1977 there was a particularly long strike at the TR7 Speke No.2 factory which resulted in its closure in October 1978. This consigned a couple of the derivative models to the history books and caused setbacks to others, not least the V8 model which had already been in pre-production with up to 150 cars shipped to the USA. Production was moved to Triumph's Canley headquarters and hundreds of improvements were claimed for the re-launched model. The futuristic TR7 decal on the nose was replaced with the larger Triumph laurel wreath, but this would change again after the final move to Rover's Solihull factory whereupon a nice round enamel badge was applied.

The TR7 drophead appeared in 1979, but cutting the roof off had turned the TR7 into a bit of a blancmange and substantial re-engineering was carried out to get some of the rigidity back. It did not prove possible to restore all the lost strength, and hence the drophead is less of a driver's car than the original coupe. The TR8 finally went on sale in the USA in 1980, the same year that Bosch fuel injection was introduced for TR7 and TR8 cars destined for California. The rest of North America followed suit with fuel injection in 1981. Very few of these cars are present in the UK today. but there are some.

The soaring value of sterling against the dollar ultimately sealed the TR7's fate, and it was finally cancelled in October 1981. Almost 115,000 were sold, which makes it the →

biggest selling TR ever by quite some margin. Sadly, of the 20,000 or so sold in Britain only around 2000 are believed to still be extant and of these only around 550 are on the road at any time. Perhaps now is therefore the time to finally consider the last Triumph sports car for your next classic.

CHASSIS & BODY

The TR7 was an all new monocoque and just about every part of the car contributes to its overall strength. The sills and the floorpan are probably the most fundamental aspects, and any visible rust or evidence of filler needs proper investigation. New sills are available, but supplies will be limited until the clubs succeed in getting their replacement panel project underway (keep an eye on **www.trdrivers.club** for progress). Robsport have aftermarket tooling for the inner sills so the situation there is more promising. Robsport International and Rimmer Bros. have good supply of aftermarket patch panels which are capable of repairing just about all the notorious rust prone areas of the body, with the possible exception of the doors. Currently there are still new door skins available, but in addition T.D. Fitchett hold small stocks of original coupe doors (£450). Other rust prone areas of the body where patch panels are available are the headlamp panel where it meets each front wing, front outer wheelarches, rear wheelarches, rear wing forward of the wheelarch where it meets the sill and finally the rear deck (petrol filler tank panel) where it meets the rear wings.

Chassis legs front and rear can rot, but at the rear they are particularly difficult to inspect owing to the safety-conscious location of the petrol tank above the rear axle. New old stock replacements are available (rear chassis legs are £81.60 and £90 per side from Robsport) but it's not the easiest of jobs. While we're talking about some difficult jobs, removing the petrol tank is just about the worst task you can undertake on a TR7/8. The tanks rot from the inside at the most forward, deepest spot and it can be difficult to see in there even with a suitable inspection camera. New tanks are available from T.D. Fitchett and all the usual dealers for around £500. Water in the tank is a very common problem and can be difficult to diagnose, often being mistaken for ignition faults. Inspect the petrol cap rubber seal for signs of ageing and ensure the drain holes beneath the filler neck are always kept clear.

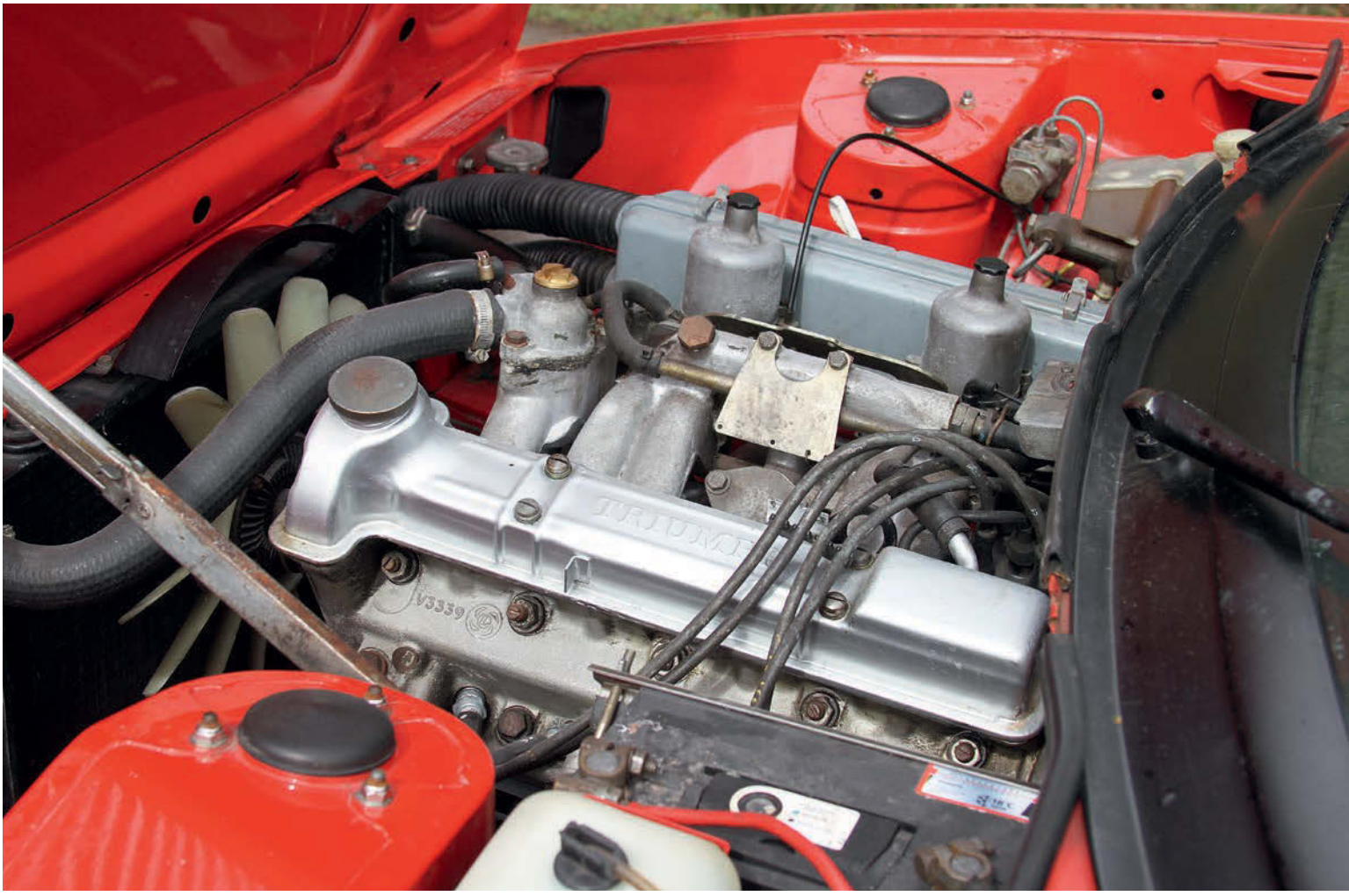
Just behind each wheel is another favourite rust spot because the cars get a real battering here. At the front this means cutting out part of the bulkhead, while at the back it is the rear sills that turn to dust. While you're at the back, check the spare wheel well from the inside. Also have a good poke around the rear bulkhead and floorpan because it is imperative that the areas where the trailing arms secure the rear axle to the body are solid. Ensure also that the trailing arms themselves are good because these can rot for England if left unprotected. Check the front inner wings thoroughly around the strut top mounts. It has been known for a few cars to be allowed to go so far that suspension turrets collapse inwards onto the engine with potentially fatal consequences. The front subframe should be sound if it has been protected, but if not a secondhand replacement will have to be sourced.

You could be forgiven for thinking you only need to check under the carpets of a drophead for water ingress, but you'd be wrong as water can find its way into a coupe too. The door seals are the usual culprits, but not always – the finishing panel around the base of the windscreen can hide a hornet's nest of tinworm, and if the panel has been eaten through then water seems to find its way down into the footwells. Usually the sill carpets are glued into place, but see if you can check under everything because as mentioned earlier, the sills and floors are fundamental to the car's strength. If water has got in through the windscreen surround, then bear in mind that the windscreen is bonded in and is therefore also a structural element of the car. Don't bank on removing it without it cracking somewhere.

Headlamp pods are aluminium and with the rubber pedestrian protection guards causing a nice little water trap, they are prone to paint flaking at the leading edge. If the pods need repainting, a thorough grinding down of the front of the pod is required to ensure the flakey paint issue does not return 18 months later. If considering a drophead, it should go without saying that you will need to check the convertible roof and frame. New hoods cost around £350 and up depending on your preference.

ENGINES

The 8-valve, slant 4 engine is actually a surprisingly robust and reliable unit providing it has been built correctly and properly maintained. These cars were always criticized for head gasket failures, but this is not so prevalent today owing to owners knowing how to look after the cooling system. The old style blue antifreeze with corrosion inhibitors prevents the silting up of the waterways providing it is changed every few years and not allowed to drop below a 30% mix. This is important because removing the cylinder head can sometimes prove impossible – the studs can virtually weld themselves to the head and no amount of cursing seems to change



that. British Leyland dealers all held a special, rather large tool for removing a Triumph slant 4 or Stag V8 head, and Robsport have their own version of this, as do other dealers.

Oversized head gaskets are recommended these days owing to the special Payen gasket no longer being available. Reports suggest that the thicker gaskets do the job just as well. Some will immediately fear that the compression ratio will be reduced which is true, but the difference is minimal and worth the trade off for peace of mind while you're stuck in traffic on the M25 (£23.70 for a +20 head gasket set from Robsport). All this advice applies equally to the 16-valve TR7 Sprint engine –as fitted to the Dolomite Sprint – as well, but may differ when it comes to the timing chain because the 16-valve has duplex chains whereas the 8-valve has just one.

A few years ago the specialists were recommending the chains manufactured in Germany as these did not stretch, but these days they recommend the Indian supplied timing chains which do stretch. Apparently, the stretching is now considered better because owners can hear when the chains start to rattle whereupon they tend to get them changed. With the German items, it is possible to forget about the chain, drive with the same one in place for more than ten years (or 25,000 miles, whichever comes first) and then suffer a catastrophe when it finally snaps. A timing chain kit including all the guides and gaskets costs £42.60 from Rimmer Bros.

Viscous fans are driven by a rather large pulley and have long endured a reputation for seizing up. When they do seize, this can cause the fan to fly off at high speed which can smash the radiator with complete loss of coolant. An electric fan conversion has long been a sensible recommendation, and these days owners are fitting Revotec now that Kenlowe no longer supply aftermarket kits. A manual override switch is a recommended addition, even though these no longer come with the kits.

There are around 110 factory-produced TR8s in the UK, and additionally many standard TR7s have been converted to the venerable Rover V8 motor. These engines are renowned for their longevity, but if purchasing a converted car ensure that it has been done properly. Similarly there were 61 TR7 Sprints and there are quite a few cars converted to 16 valve as well as original factory cars and fakes of the factory cars. Best advice here is to join a club that knows these cars to avoid being caught out.

TRANSMISSION

The early cars came with a four-speed transmission which had been developed down the ages from the Triumph Herald. Five-speed cars with the well known LT77 gearbox followed, but these are substantially heavier and while they are more suitable for motorway cruising, they are not quite as sporty. Fuel economy is better in the five-speed car because of its longer legs, but 30mpg is fairly normal for a four-speed unless you're using it just for local stop-start journeys. The optional three-speed automatic was introduced in 1976, and these are often a very good purchase as they generally seem to have had little use. Surprisingly, these automatic cars drive rather well and feel much quicker than the quoted figures suggest so do not rule one out before trying it.

Five-speed gearboxes have an oil pump that relies on the engine running, so a five-speed car must never be towed unless →

the propshaft is disconnected or the rear wheels are off the ground. Cars that have been towed tend to develop a gearbox whine almost immediately, so be careful. Four-speeders nearly all whine from the differential as they are rarely rebuilt properly during reconditioning – a properly built four-speed diff should make little noise but finding one that doesn't is a rarity. The good news is that, providing they're not screaming at you, they tend to go on for a very long time before they disintegrate.

SUSPENSION, STEERING & BRAKES

Four-speed cars had 8in drums at the rear, five-speeds had 9in. Smaller wheel cylinders in the four-speed cars mean more pressure is applied so some consider them superior. When properly sorted, whether a four-speed or a five-speed, the handbrake should secure the car to the steepest of slopes without too much trouble.

Disc brakes at the front used to have a reputation for warping, but those stories seem to have largely gone these days, perhaps because now the cars are considered classics they are no longer driven as hard as they once were. Servo assistance should mean the pedal pressure is light to bring the car to a halt efficiently in even the most extreme of circumstances. A few too many heavy brake applications in quick succession and they will fade, though. Many have had brake upgrades installed and given that the TR7 brakes were only ever marginal at best, an upgrade is a good recommendation – there are several routes to choose from ranging from pad material to different discs and calipers, so talk to club members to get some idea of what would best suit your state of tune and driving style.

Rack and pinion steering should be quick, light and precise and a TR7 should be straight and true and rarely upset by even the most fearsome of potholes. If any TR7 has heavy steering at anything but parking speeds, then something is wrong. The needle roller bearing kit for the strut top mounts is a good and cost-effective addition to the car (£27.54 from Robsport) and recommended as it makes the steering even lighter. TR8s had power assistance, a hydraulic pump meaning you can still feel the road.

Steering wheel wobble is another area of consternation and all too common. Rarely is this down to a simple wheel balance, so don't be fooled. This has sometimes been caused by slightly bent halfshafts in the rear axle, so finding the cause can be a major headache and rather expensive. These cars should handle and steer beautifully, but it seems that every

aspect of the setup is critical and anything out of alignment by the smallest of margins can cause trouble.

Soft rubber bushes were used all over, but if these have been replaced with solid polyurethane bushes then you can expect a little more road noise; the bonus is an even better handling car. Polyurethane bushes are most important at the rear because the four-link axle location can prove dangerous in wet conditions if sideways movement of the axle produces sudden breakaway – opposite lock correction only tends to induce a slide in the other direction. Usually the only way to get out of this snaking effect is to completely lift off the throttle. The Works rally cars had a different rear axle location which included a Panhard rod to eliminate this wayward tendency, but solid bushes go some way to achieving the same. This should only be something to bear in mind in damp conditions, as at all other times the TR7 should be fairly tenacious. If not, then suspect worn bushes.

INTERIOR & ELECTRICS

The TR7 interior is nicely ergonomic, and you rarely have to take your eyes off the road for anything. The seating should be extremely comfortable, but if it is not then suspect a worn seat foam or broken diaphragm. When seats are first rebuilt you will sit too high for a while, but they soon settle down. Interior trim is usually hard wearing, but the later blue and tan check seems to suffer more than the earlier red or green tartan and the brushed cord of the earliest cars. TR Drivers Club members have reproduced the green tartan in recent years, but in the main now you will be looking for secondhand replacements. Tan and blue vinyl paint has been produced by the TRDC to restore the vinyl of later cars if they have been bleached by the sun, and reports suggest it is extremely effective.

With regard to the electrics, alternators and starter motors reconditioned with cheap parts are no longer such a problem thanks to the introduction of high-torque starters and uprated Lucas alternators. It is a different matter with windscreen wipers, and just about every car seems to have problems with them at one time or another – running too slowly or getting them to park are the issues. Grease drying out on the slider switch within the motor housing is often the cause of the failure to park.

Headlamp motors are no longer considered an area of much concern, possibly because the cars are more cosseted these days. Keeping the whole area around the motors and wiring sprayed up with WD40 every couple of years seems to keep them fully functional. The real weak point of the whole headlamp system is the dashboard switch, so carry a spare. Some recommend a relay to protect the switch, otherwise the full current goes through it. It's not unheard of for a TR7 to be driving through the night when the relay audibly engages and lowers the headlamps to leave the poor driver in complete darkness.

WHAT TO PAY

A top-notch TR7 could be worth over £10,000 now given their rarity and the queue of people wanting to find a good one. There is little, if any, difference in price between a coupe and a drophead. The coupe is the better car, but many sports car fans cannot imagine a two-seater with anything other than a convertible roof. A good compromise is the coupe with the full-length sunroof, but these can leak so make sure you check. Bargains can be had for as little as £3500, but you will need to know what you are looking at and expect that there will be some expense in the not too distant future. If you are a reasonable home mechanic and handy with a MIG welder, then you really could snap up a good car for peanuts and turn it into a great car.

A genuine TR7 Sprint in top condition is difficult to price, but probably almost as much as one of the genuine right-hand drive production TR8s of which there were between 18 and 22. I would expect a perfect example of one of these to sell for at least £20k now, but possibly more.

CONCLUSION

These cars were underrated for a long time, but are now appreciated by a growing number of enthusiasts. For a long time people seemed to be embarrassed to say they liked the TR7, particularly the coupe, but now they seem proud to shout their admiration. That is reflected by the reaction you get when driving a good one. Young boys in particular think they have just seen a brand new car that has been designed for the future, which surely speaks volumes for the outlandish style that Harris Mann first penned all the way back in 1971.

A BIT OF A HOOLIGAN

We first saw Calvin Andrew and his 1978 TR7 V8 at Donington in 2015 when he was roaring around the Heritage Loop. We saw them again at Lincoln this summer when he was just coming off the rolling road, and the size of the grin he was wearing meant we really had to ask him to tell us the story behind his car.

I didn't create this car, but bought it ready-converted to V8 power and with an MoT. I got it after having a bit of a disaster with the first TR7 I'd ever bought. That had been in 2007, and because it was a non-runner at the time, my very first experience of driving a TR7 was backwards on the starter motor, out of the seller's garage and onto my trailer.

I got that TR7 home and soon had it running like a dream. In fact the whole car looked lovely and felt very smooth and light, but I took it to a friend of mine, Martin Pitt who is an ace mechanic and a gentleman, and he discovered that it was totally rotten underneath. I then took it to a local Triumph specialist to inspect, and they came back with a price of £6000 just for the welding and paint. I'd only paid £1500 for it, and even that was a fair amount for a TR7 back then – clearly I'm not the best buyer in the world!

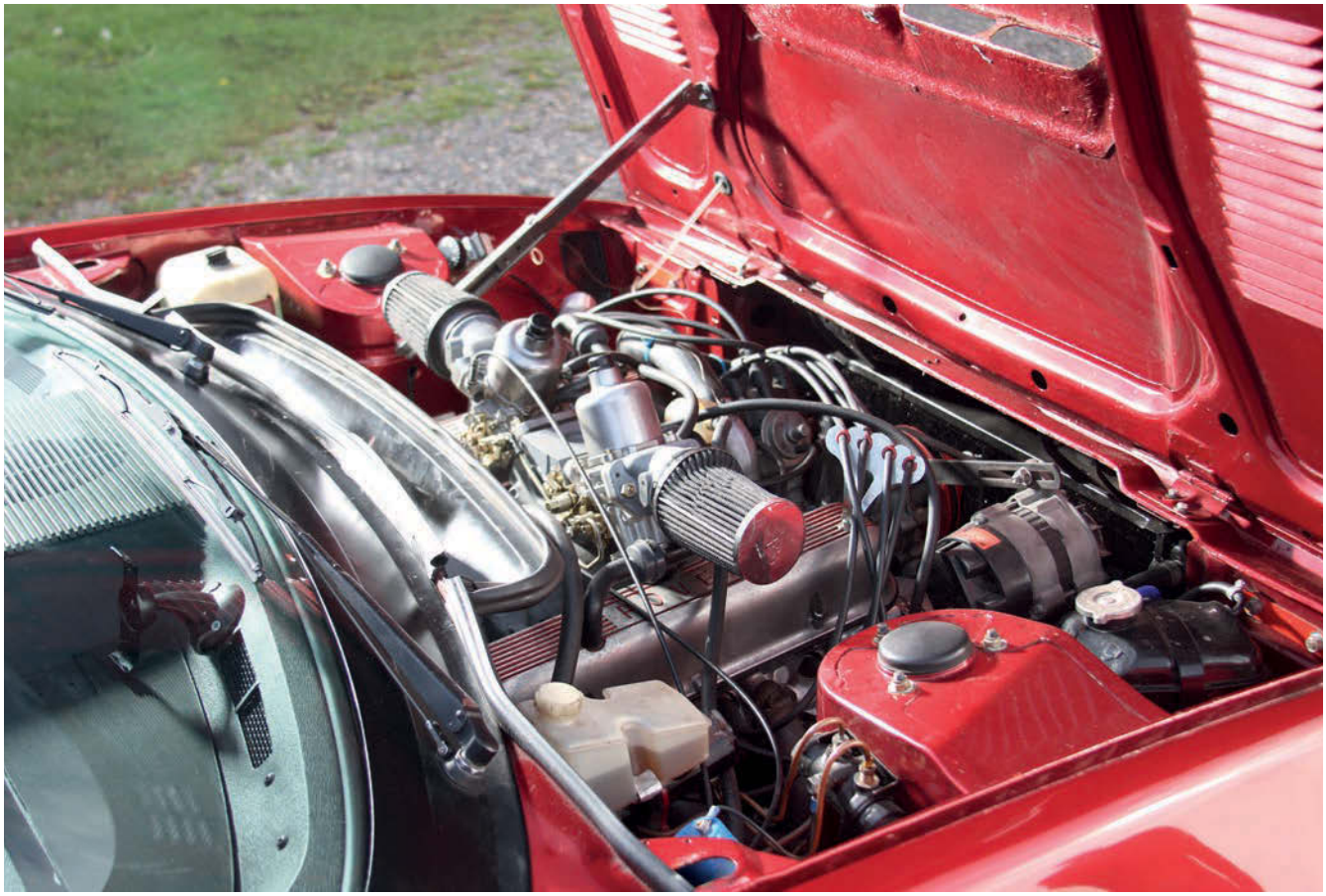
Luckily we'd bought it from friends who gave us half the money back, and I then sold it as a project so didn't lose too much on the fiasco. But I was gutted, and my wife Ange was strangely sympathetic. She encouraged me to look for another one, so we got a budget together of £3000, which I assured her was plenty for an absolutely spot-on 2-litre car. Then this TR7 V8 came up at £3200...

I went down for a test drive and bought it. This time I did check all the key points and it wasn't rusty at all, but of course it is still possible to buy a solid car that hasn't been properly converted. This would have been in 2011. The previous owner had died, and his brother had kept the car running and MoT'd. I would describe it as a good ten-feet car. You can see for example where the boot had previously been fitted with a spoiler, but the holes left by this had merely been filled and painted, but from ten feet away it did look stunning.

So when I got it, the TR had been painted and the V8 fitted. The suspension had been modified too, but not brilliantly – the rear springs used to drop out of their locating pans on full extension because they were shorter to lower the car. It also had adjustable shock absorbers, but old bushes. When I took it for a spin up the road, I couldn't get it to corner smoothly because there was so much play in the rear bushes that the back wheels were moving all over the place. So I fitted all new bushes at the back (uprated, but still rubber rather then polyurethane), and Martin devised a method for keeping the springs securely in place.

At the front of the car there was the correct subframe, but the mounts had been put on incorrectly and Martin could move the frame with a screwdriver. We sorted that out, then turned our attention to the engine. This had always been a bit smoky and we thought that not only was it probably a 135bhp V8 from a Land Rover, but it may even have been an army V8 with just 110bhp – and that would have been before wear and neglect had taken their toll.

The file came with a rolling road readout of 160bhp, but I have no idea what engine that would have referred to. However, it always sounded great. Things came to a head a couple of years ago though, when I wanted to take the TR to the Spa Classic. We could see →



that the valves and the cam were completely shot, and we could only assume the bottom end was in the same condition. So I saved up some money and bought a V8 off eBay that was supposedly ready to fit. It cost £1500, but had been rebuilt, mildly ported, and as a bonus it came with a bellhousing and a spare TR7 five speed gearbox. It was an unknown quantity, but the sellers gave me the number of the mechanic who built it. I called him, and to be honest I think he was a bit upset that they were selling it as he had put a lot of effort into the build.

This time I thought I'd got lucky – we fitted it, fired it up and it ran like a dream. For a few minutes, at least; then it started clanking and making some very expensive noises. It took us ages to pinpoint the problem, which was that

one of the pushrods had too much play because the cup on the rocker had worn through. We replaced that with one from another engine, and it has been running well ever since. I really should get round to fitting new rockers at some point, though...

The car came to me with the standard two-litre front brakes, so I have fitted Princess four pot calipers and Capri vented discs. To be honest, even now they are not perfect. I probably need to move up to a bigger Sherpa van master cylinder, but it hasn't stopped me (no pun intended!) from using the car. I've taken the TR7 V8 to Spa, and I've sprinted it a couple of times, even winning a trophy at Blyton despite having the old engine in. To be fair there were only two people in the class, and the other person was a friend who was also driving my TR7 V8!

I went to Cadwell Park last August with the new engine for a track day. The TR7 with its short wheelbase and wide track has a reputation for being a bit like a FWD hot hatch in that it can let go without any warning, especially in the wet. And it was very wet at Cadwell. This is more of a venue for motorbikes than cars really, and there are only two places where you can easily overtake – the back straight and the main straight. If you have big V8 in a lightweight TR7, there isn't much

that can get past on the straights. The problem is that it is in a 40 year old car so when you hit the bends, all the little Clios are suddenly on your tail.

I started off going round and trying to be careful, letting everybody pass so I didn't hold them up. I then took 20 minutes of tuition, which was the wisest thing I ever did. The instructor kept telling me to go quicker. I do know Cadwell from sprinting there in my old Bond Equipe, but he showed me how to straighten out the corners with the correct apexes. By the fifth lap of him telling me to just go for it, I did and it was fine. He got me going round a gear higher at every bend, saying I had enough torque to pull me round whereas dropping down a gear would have me spinning the wheels. I'm a bit of a hooligan at →

heart and this sounded less exciting, but it was quicker and smoother.

For all the excitement though, the unpredictability could be scary. At the top at Park Bend, the car just let go for no reason. I would like to assume there was something on the track (that good old fallback rather than blaming driver error!), but I don't know. All I do know is that coming round Park Bend I was nicely set up for the corner, not pushing too hard because it was still very wet, and the back end let go with no warning at all. I went down the road swinging like a pendulum, but fortunately managed to keep it heading in roughly the right direction.

That was my last track day experience. Some friends are talking about going to Bo'ness hillclimb in 2017, so perhaps we'll give that a go. I also have a distant dream of hillclimbing in France. They have some amazing events there on closed roads, and I am a big fan of all things French.

And I still need to fit new rockers. That might help me find the missing 6bhp – when you came in I'd just been on the rolling road hoping for 165-170bhp, but it recorded 194.8bhp at the flywheel and 250lb.ft of torque. That is quite a lot in such a small car. I'm a terrible one for dropping it down to second if I can, but in reality it would probably cope with just about anything in fourth gear alone.

I had been toying with the idea of going to a four-barrel carburettor, but the guy on the rolling road said he wouldn't bother as it was running superbly on the twin SUs. I might still do it, because with a decent four-barrel I could get up to 220bhp.

There would probably be room under the bonnet because the previous owner has fitted a Subaru-style bonnet scoop. That is now looking a bit worse for wear, but I've grown to quite like it. I'm not convinced it helps much with engine bay cooling, but I would miss the scoop if I ever changed to a regular bonnet.

There are loads of little things that need doing, but most of them are cosmetic and I

prefer to do the more important jobs. I did have it rewired because the electrics were in a real state, and we've just done the top mounts on the steering which has lightened that no end. It has the traditional TR7 steering wobble between 50-60mph, so my next job is to buy some spigot rings to locate the wheels more accurately rather than relying on the wheel nuts. I'm not convinced that will cure the problem, but I've replaced everything else so I am hopeful, and the rings only cost a few pounds. The wheels are ten spoke Minilite style wheels from Australia by the way, 15in wearing 205/45 tyres, which is as large as you can go on a TR7 without seriously catching the bodywork.

I really love the TR7 and think that as a model it has been under appreciated for too long. My family are now on board as well. Our boys are 10 and 12, and my eldest loves it when I drop him off at school in the TR7 V8. As for Ange, if you'd told her before she met me that she would have gone on a holiday to Italy for 3½ weeks, looking round four car museums and visiting car-related stuff as part of the holiday (including stopping at a scrapyard so her husband could dash out and ask permission to take photos), she would have thought you were crazy.

Now though, she is as keen on the social side of the cars, the social history if you will, as I am on the vehicles themselves. And that is fascinating, looking at how cars used to be such indicators of social standing or aspirations. And the TR7 really was aspirational. If like me your first memories of the model were when it was in the doldrums, it is easy to underestimate the impact it had when new. My first experience of sitting in a TR7 was in a knackered yellow one that my friend had borrowed. I thought it was so exotic, even though I never really warmed to the shape as by then people were dissing it. But as the TR7 has grown on me, I have grown to appreciate what a fantastic car it is. If you're able to run just a two-seater as your only car, I can't think of a better classic to have than one of these.

HARRIS MANN AND THE TR7

We talk to designer Harris Mann about the car which gave him worldwide acclaim.

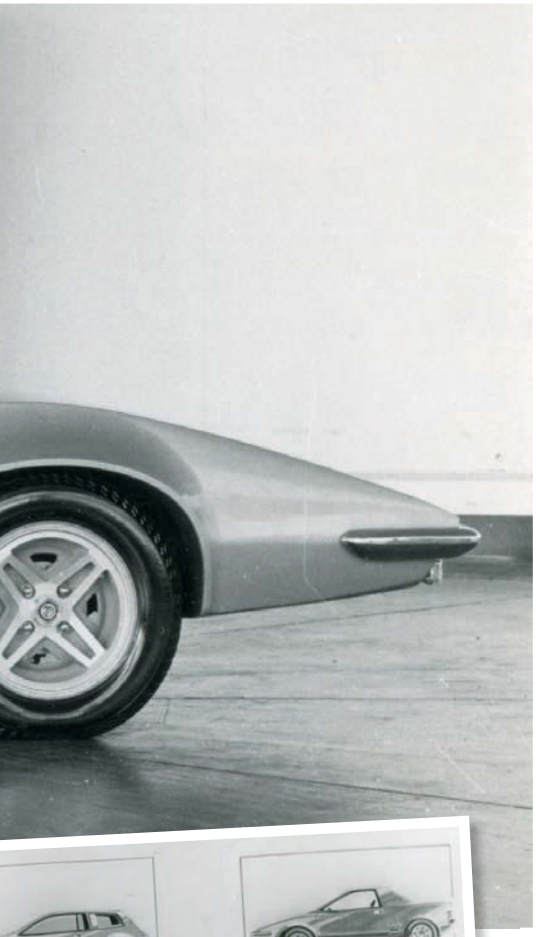
WORDS: **MIKE TAYLOR**

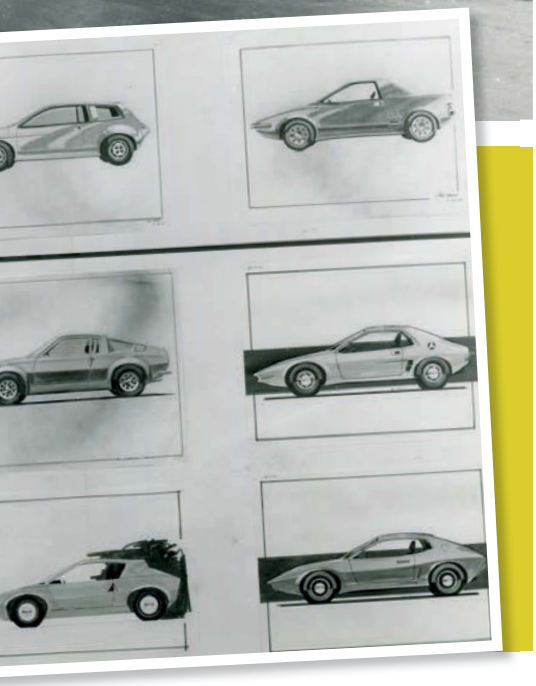
In the minds of Triumph aficionados, the name of Harris Mann will forever be linked with shaping BL's wedge-shaped TR7. Launched in 1975 as a fixed head coupe, over the years the car has shouldered its unfair share of criticism despite selling in greater numbers than any other Triumph TR before it.

To talk in detail about the car and how it came about, I met up with Harris at the British Motor Museum in Gaydon, where there are several examples on display.

We began with Harris telling how he first became involved with car design, saying: 'I've often wondered where my love for drawing comes from because it didn't run in the family. Design is not only about producing shapes, it's about being able to think in three dimensions. Some designers produce wonderful work, but ask them to transpose their drawings into three dimensional representations for manufacture and it fails them. I have worked with modellers (whose job it is to create the shapes that designers like me produce using clay and modelling tools) and this has taught me a great deal. I've been able to see the effect of picking up a modelling tool to add or remove clay and witness the effect it has on the overall shape.'

Despite failing his 11+ exam, Harris later





passed an entrance exam to attend a Technical School where, among other things, everyone was involved with building a working model steam locomotive. He then moved on to the Duple coach company as an apprentice, attending Regent Street Polytechnic on day release and evening classes before emigrating to the States where he thought the opportunities were greater. There, he took a job with the prestigious Raymond Leowy Associates studios in New York, producing tread patterns and wall graphics for tyres.

When that position was cancelled, he returned to the UK. After National Service, Harris returned to Duple, before moving on to Commer as a draughtsman and then joining Ford as a Feasibility Engineer assessing new projects. He was selected to work on the Cortina programme, which involved the Blue Book, Ford's principle to strictly manage weight and cost. This was a time when a number of US stylists from the Pasadena Art Centre joined Ford UK, and they proved very helpful to Harris.

After producing a portfolio of work, Harris applied for a job in Ford's design studio and was accepted. There he worked on cars like the Capri, Escort and Transit van. In 1968 Ford's design Director Roy Haynes left to join BMC. Very soon Harris joined him. Within two years the company, now BL, employed 200,000 people and ranked fifth among the world's vehicle manufacturers. Within a short time, Haynes had left and Harris and his fellow designers were relocated from Cowley to Longbridge.

BL's Engineering Director, Harry Webster, was still wedded to the notion of using Michelotti as a designer at the time, and when Harris arrived in Birmingham this presented him with a challenge. 'We'd be working on a new project and Harry Webster would arrange for a similar solution to be produced by Michelotti and shipped over for comparison,' says Harris. 'As time went on it was the Longbridge proposals which were more often the ones chosen.'

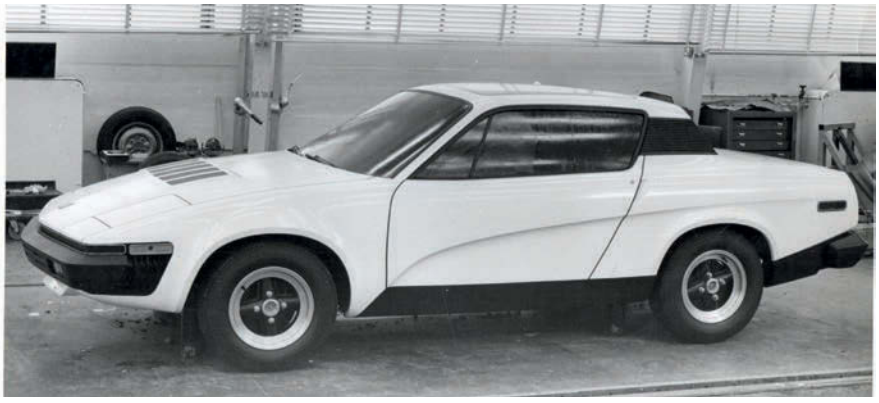
Anxious to stimulate further interest in UK designs, Harris shaped a new concept for Pressed Steel Fisher. 'It was to demonstrate the company's latest equipment for transposing engineering drawings into manufacturing body panels,' he explains. 'I was influenced by the wedge shapes being developed by studios such as Guigiaro and Bertone. My model, called Zanda, was a futuristic-looking mid-engine sports coupé with low frontal treatment and was exhibited at the London Motor Show in 1968. It would have made an ideal next generation of sports car for BL.'

By way of something completely different, Harris next designed a four-wheel-drive →

concept hatchback. The drawing was illustrated in The Autocar magazine as an example of the way BL wanted to go in the future, but it remained just a magazine illustration.

The TR7 programme was initiated under the code name Bullet in the 1960s when several disparate considerations came together. First was the need for a replacement for the TR6. Also, emissions and safety regulations emerging from the States defined increasingly critical issues over pollution concerns, while US safety considerations were gathering speed to the point where some schools of thought suggested that ultimately soft top sports cars would be outlawed. Other contributing issues involved BL's sadly creaking finances and the impact of industrial action: where would the new car be built and how complex would it be to manufacture? The recently introduced VW-Porsche 914, a folded paper shaped mid-engined design was highlighted as being a clear market leader in styling for modern sports cars with a removable Targa roof. Bullet would need to embrace these factors.

Work began on the first generation of Bullet in 1969. Looking remarkably like the 914, it represented the first steps in the car's development. A trip to the US undertaken by head of Triumph engineering Spen King and marketeer Mike Carver to canvas key sports car representatives over design revealed the need to include a mechanically conventional layout for long term reliability, with market leading performance capability and design flair. It's with all these points in mind that Harris and I approached the rally based TR7 on display to discuss the project.



'I wanted to create something completely different to the existing Triumph range, which I thought was a bit old fashioned,' he says. 'The TR6 had a long bonnet and represented a car of the past. We were now competing head on with models emerging from Japan. They were much more stylish, it was a whole new design territory.'

As a designer Harris was always thinking about the visual aesthetics of the car's appearance. 'With Bullet I was determined to emulate some of the more adventurous shapes being done by Guigiaro at Ital Design. His work did influence my ideas. I wasn't consciously designing a wedge shape, it just emerged from my sketches.'

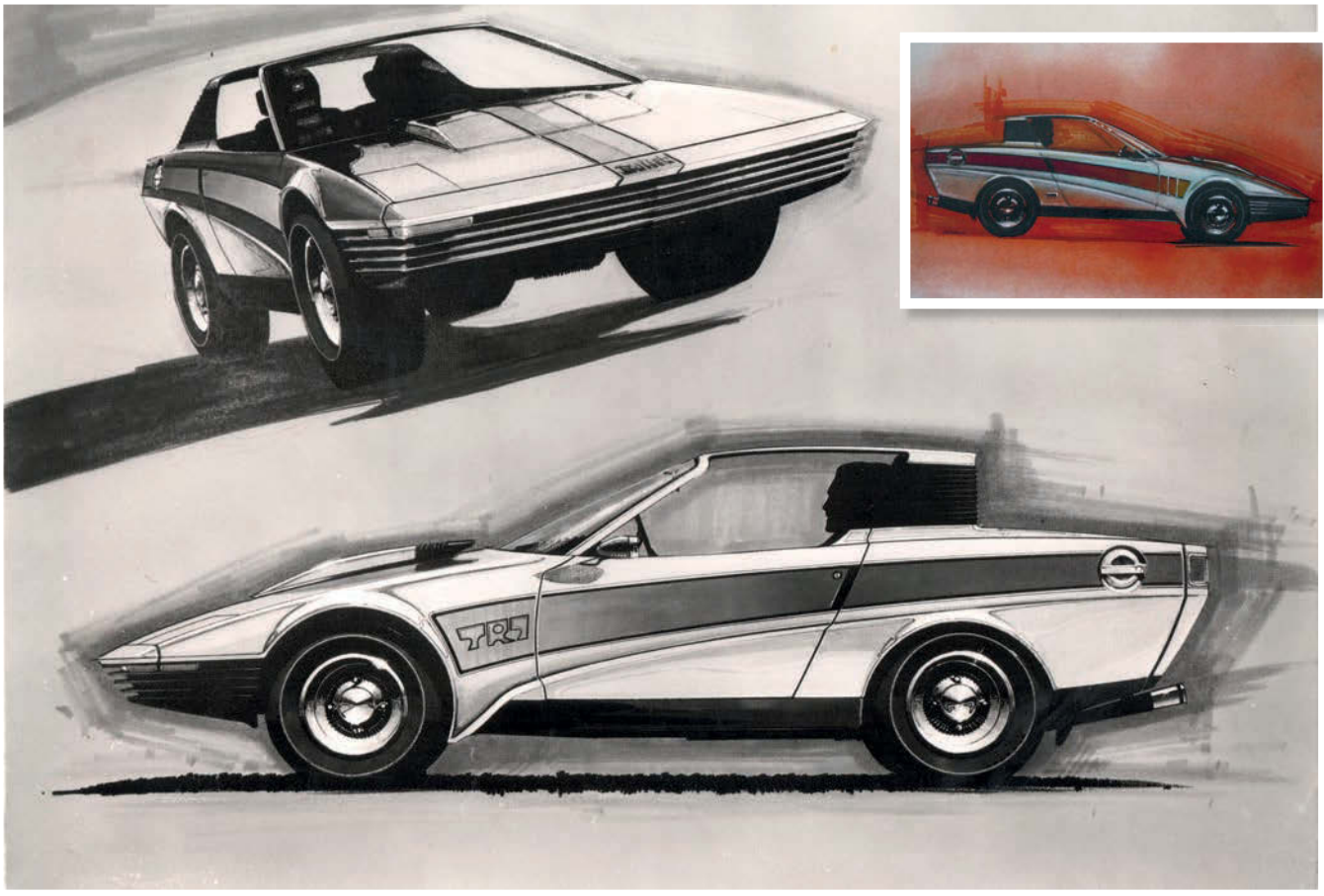
Harris then explains how this model was

squeezed into his busy schedule. 'Triumph stylists at Coventry were under considerable pressure with other design programmes, so Longbridge was asked to take on the Bullet programme. It was a very quick project with no opportunity for compromise. At the outset I received dimensions from Triumph's engineering department including wheelbase, track, the height of the engine, the location of the heater, seats, the degree of overhang back and front, the position of the fuel tank and even the fuel filler, which was to be located in the righthand side of the rear deck. That's why it had a cut-off rear roof section. Why they couldn't engineer it so the fuel filler was on the side of the rear wing, I've no idea. These parameters all set firm guidelines for my work.'

Were Triumph planning to base Bullet on a common saloon floorpan, I wondered? Harris doesn't think so. 'During the early days, with the exception of dimension constraints I was left very much alone to shape the car, which was probably a good thing,' he smiles. 'The interior accommodation was critical. Had we done a mid-engined vehicle it would have been much more difficult to create a reasonable amount of space in the cabin. For example, once I knew where the fuel tank was to be located I could then design the boot arrangement, which in turn took account

of things like the suspension turret locating points.'

As we look carefully at the TR7's overall concept, Harris remarks: 'Like all previous Triumph sports cars, the TR7's principal market was to be the US, although satisfying the increasingly stringent safety regulations



would prove a nightmare.' Harris continues by examining the frontal treatment with its shallow nose and pop-up headlights. 'Bumper heights and structural supports were a major concern with Bullet,' he concedes. 'They had to be sufficiently robust to pass the impact test, which involved swinging a weight against the front of the car which had to withstand it without becoming deformed. Rear impact damage was another consideration, which dictated the strength and mounting assemblies for the bumpers.

'The height restriction for the headlamps was another consideration and dictated that they should be made to pop up out of the front apron. My original design called for the headlamp shells to cover a larger area, but this was discarded in favour of smaller ones.'

Moving on to the bonnet, Harris explains the science behind its concept. 'I wanted the bonnet length to emulate the size of those being seen on mid-engined cars emerging around this time out of Italy. And while I knew that it was going to be a four-cylinder power unit, I didn't know which one because in styling the car it was not important that I should know this, all I had was a silhouette of the power unit shape so I could superimpose it onto the side elevation of my drawings. The central fluting on the bonnet line was added to give the bonnet panel greater height over the engine. The vents either side were introduced to reduce under bonnet temperature, though exactly how effective they are unless the car is stationary, I'm not sure,' he grins.

Viewed from the side, the rake of the TR7's windscreen gives the car a streamlined elegance not seen on previous TRs. 'This dictated the location of the air vents for the heater, which had to be positioned between the trailing edge of the bonnet and the base of the screen in the scuttle panel,' he says.

Next we tackle the shape of the A-post and its correlation with the windscreen and roof line. 'One aspect of US safety regulations was the head swing, the seam where the roof meets the windscreen. This had to be as far forward as the design would allow. In the States drivers

were reluctant to wear safety belts, but by moving the head swing forward, when the driver approached US-type overhead mounted traffic lights, they were obscured from the driver's eye line. Over time these regulations were revised.'

Looking at the coupé roof line, we see that it appears to be foreshortened. Explains Harris: 'This had to be done to accommodate the location of the petrol filler, which was positioned at the front on the righthand side of the rear deck. This in turn determined that the roof line be cut short, with the rear window dropping down almost vertically. On my original sketches I put the petrol filler above the waistline and just rear of the B-post. Canley disagreed, saying it would be vulnerable in a side impact accident, despite the fact that other companies found a way round it. My idea was for a sloping rear fastback type design meeting up with the top of the transom panel, but the petrol filler position killed that notion.'

As we discuss the roof design, I ask Harris about the subtle recess running around the perimeter of Bullet's roof panel. He says this feature was added to provide a positioning line for when installing a Webasto-type folding roof - an accessory that was believed to have been popular in the absence of a fully folding roof arrangement.

One aspect of the Bullet's design treatment which has come in for criticism are the swage lines that run down the sides of the car, adding a distinctive Harris Mann styling touch. 'I designed in these creases to create visual movement,' he remarks. 'I wanted the car to give the impression that it was moving even when it was stationary. In fact, on my original proposal the lines began at a point behind the rear of the front wing. Later, I altered them so they appeared to begin part way up the wheelarch.'

Returning to the overall concept of Bullet and Spen King's involvement as Harris's work progressed, he recalls: 'Spen would come over from Canley to Longbridge and make some suggestions, but overall the TR7 as it reached production is largely as I drew it with the exception of a slight upsweep to the rear of the doors. These were going to marry up with a line that ran round the rear decking, but manufacturing explained that this feature could not be incorporated into the design without fear that the lugs would be damaged when the panels were removed from the press.'

Another design component which Harris was eager to include was a Targa-type roof. 'Again, the production engineers intervened, saying that they couldn't work out how to make the fastenings. This was when Spen took over and the programme moved forward into production.' Later, Bullet was also subjected to wind tunnel tests, but because of its short roof length the rear showed up poorly under evaluation.

Moving to the interior of the TR7, Harris explains: 'John Ashford, who was part of David Bache's team at Rover's studio in Solihull, shaped the dashboard treatment and the seating. The instruments were the work of David Keepax at Canley, who was a very fastidious designer and would spend hours shaping the individual characters in the gauges for optimum visibility at a glance, hence the reason why these instruments are so easy to read.'

Bullet reached the market as the TR7. By the time the programme had progressed to encompass the convertible version, Harris had moved on and this aspect of the job was done by Michelotti. 'I think that the modifications to the body/chassis monocoque needed to create the strength to turn it into a convertible were done later,' says Harris as we view the soft top TR7 on display. 'When the car was developed into the TR8 for export to the States, modifications had to be done to the bumper mountings to stop them from resonating over rough surfaces.'

We then move on to view two Bullet based projects which were stillborn under BL□s sports car programme. First is Lynx, an accomplished fastback coupé with a TR7 nose and sloping rear, while the other is Broadside, a 2+2 convertible with a lengthened chassis to provide accommodation in the rear. Missed opportunities? Clearly BL were too focused on saloon car sales and industrial actions disputes to bother, especially in a climate where money at BL was hard to come by and niche models the first to be dropped.

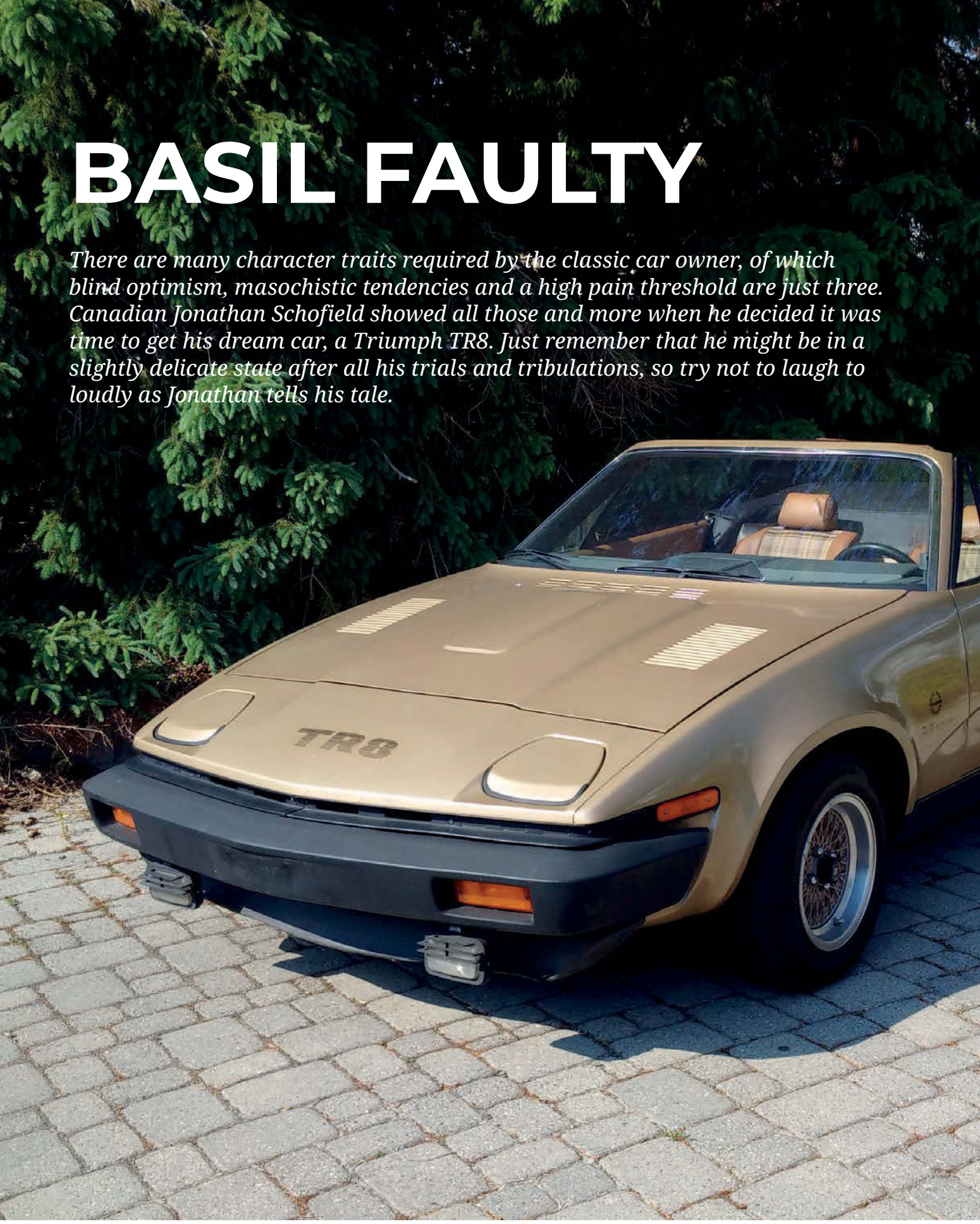
Finally, I ask Harris what if anything he would change were he to design the TR7 today. He says: 'I would certainly remove the pop-up headlamps and replace them with smaller units with lenses integrated into the bumpers. I'd also revise the treatment of the rear window and relocate the petrol filler into the rear wing panel behind the B-post so I could introduce a flowing rear to meet with the transom panel as I'd originally intended.'

Did Spen King pass Harris a severely poisoned chalice in the shape of major design constraints with an extremely short project timescale? 'The TR7 received a lot of praise and a lot of flak, but I think that was because it was different,' says Harris proudly. Nevertheless, after its introduction in September 1975, the TR7 went on to sell very well and the futuristic wedge remains an important component in Triumph's latter day history.

Thanks to Harris Mann and John Ashford for help with this feature.

BASIL FAULTY

There are many character traits required by the classic car owner, of which blind optimism, masochistic tendencies and a high pain threshold are just three. Canadian Jonathan Schofield showed all those and more when he decided it was time to get his dream car, a Triumph TR8. Just remember that he might be in a slightly delicate state after all his trials and tribulations, so try not to laugh to loudly as Jonathan tells his tale.



My desire to own a TR8 started with the August 1980 Car and Driver magazine. The TR8 ragtop had transformed the ugly duckling TR7 into something beautiful. It had a V8, it had wedge styling, it was fast and it had a five-speed – I couldn't wait to own one! However, in the ensuing 36 years, I never even got to see one. The TR8 was my automotive unicorn.

Then Basil Faulty arrived in my life due to a combination of factors. My father had died and I regretted not spending more time with him in his final years. Despite Parkinson's blunting his life, he was always happy to hear about my passion for cars. These feelings resurfaced when disease hit close to home and my wife Vera was away supporting those she loves. I did not want my sons to feel this way about me, so I decided to get an old car that we could enjoy. I told them of my plan and began sending pictures of potential cars. Note that Patrick is 6ft 4in and stiff as a board, and Matthew might as well be Gumby. [That would be the plasticine Morph to UK readers who grew up watching Take Hart on TV – Ed.] They also disagree on almost everything! Undaunted, I set about finding the perfect classic. Some choices were:

• **Lotus Europa** – Matt and Pat remembered my old Europa. I thought I had hit a home run, but after 30 minutes of trying to stuff Patrick into one...

• **SAAB Sonnet** – 'You must be joking,' said Matt, 'I was after the Europa.' Pat surprised me with: 'Excellent, as long as it is the 2-stroke,' but would never have fit.

• **Triumph TR8** – Matt: 'Good Lord, that thing is ugly.' Pat: 'No @#$%^&* way.' I'd had my fingers crossed for my unicorn, but my hopes were dashed.

• **Alpine A110** – 'Is that a fibreglass frog? How much uglier can these things get?' followed by: 'It must be French.' Perceptive!

• **Porsche 914** – Matt: 'Oh god Dad, what is with you and ugly cars?' Of course, Pat thought it was beautiful.

• **Lotus Elise** – 'Awesome, but they cost HOW much?!!'

• **1965 Mustang** – 'My favourite, but coupé only,' said Matt. Pat thought it was a tractor. Groan.

• **Volvo 122** wagon with a Rover V8... I was getting desperate, and you can guess the responses.

This went on and on, nothing was working. I saw a TVR 2500M for sale, sent them a picture and miraculously both loved it! It looked big enough for Patrick, so I tried to buy it but failed. Then there was another one, lost again to a European bidder. Then there were no more. I didn't realise at the time that the TVR was rarer than the TR8, so I continued searching.

Now that I had tried to spend money, a level of urgency surfaced that had not been present previously. (Or that may have been due to the impending return of Vera...) Either way I

continued searching, and then up popped my unicorn at a dealer in Montreal. I decided it would win the boys over, sent a friend to look and he reported it was in mint condition. Not considering that his 75 year old eyes might have missed a few things, I bought it sight unseen. The journey had begun.

A week later Basil arrived looking resplendent in Gold, just in time for a returned Vera to declare: 'What the hell is that, and why is it leaking onto the driveway?' While I was on my knees looking for the cause of the leak, the front door slammed. Home life has never been the same since.

I immediately arranged a permit and headed out to get Basil's safety check, wind blowing where my hair used to be, waving at beautiful women. I wasn't expecting to have any problems with the inspection because Basil had been safetied in Quebec and I had the paperwork to prove it. Thirty minutes later as I trudged home, leaving a dead Basil at the road side, I was starting to wonder. To keep my spirits up I reminded myself of the wonderful sound of the V8, and then it started pouring. It was a sign. I ran back to Basil, put up the top, climbed inside the wet (and getting wetter) interior and started to cry – I had slammed my finger in the door and it really hurt.

Half an hour later, nursing my bruised finger, I gave the starter a twist. Basil burst into life, and the sound was intoxicating. I headed home and parked in the dry, warm garage. Basil seemed happy to be home. Figuring it was old petrol that was my problem, I emptied the tank and spoiled Basil with 94 Octane, reorganized the safety check for a sunny day, burned another vacation and headed off. Wind blowing where my hair used to be, waving at beautiful women... well at least to the one tailgating me in a giant Cadillac SUV, but it was a vulnerable feeling as I am sure the Escalade could have eaten Basil in one bite.

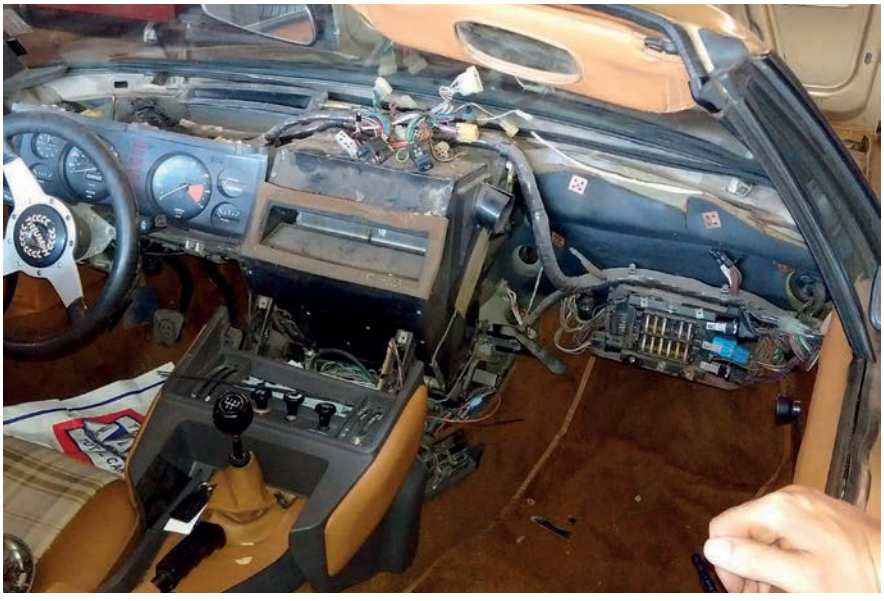
I had driven 3km downhill when the roaring stopped and Crazy Cathy the Escalade driver was gaining fast. I coasted to a stop. Deathly silence ensued. I do not know how long I was sitting there, but the sound of thunder galvanized me into action. I put up the top and sprinted like Insane Bolt to Lowes, bought duct tape and a roll of plastic sheeting, then sprinted back to Basil and prepared him for the worst. 'It was the worst,' I thought as I trudged uphill towards home in the rain. I did not dare call Vera for help. I needed a Tylenol. Tired, cold and dispirited I made it home on foot. Vera was waiting with hands on hips. Oh boy...

I drafted in help by revealing to my eldest son that I had bought Basil. After a momentary silence, he said he was coming over. I told him he better be prepared to push. It seemed obvious there was a fuel flow problem, so I prepared to remove the fuel filter and check the carburettors. We unwrapped Basil in the sun, climbed in and I turned the key – Vrooom. I drove home, the wind blowing where my hair used to... you get the picture. I parked Basil in the dry and warm garage. He seemed happy to be home. Matt started laughing, Vera did not.

Never one to be beaten in a fight, I crammed my brain full of every piece of information available. I bought a TR8 workshop manual, discovered Victoria British and The Wedge Shop, spotted another TR8 and left my business card. After numerous attempts to solve the problem, I determined it was the fuel pump. No

problem, I would just order one. This was not as easy as I had expected, and Basil continued resting in his nice warm and dry garage for a couple of months. Eventually I gave up and bought a modern solid state pump. There is another story here involving a poor mechanic, twisted supply hoses, endless ticking inside the cabin, spraying gasoline, more swearing, bruises, cuts, breakdowns, plenty of anger, more 'Oh my Gods!' from Vera, until I finally put Basil on stands and fixed the problem myself. This was in the crowded little garage he had been banished to. Vera did not want Basil near her new Land Rover.

I was proud of myself and my battle scars, and was confident that safety check number three would be a breeze. It was sunny and warm as I started out with the wind blowing... oh why sugar coat it? The wind was in truth whistling through my clenched teeth. Against my expectations we made it, 5km downhill all the way. I left Basil for the inspection, called Matt and he picked me up. I couldn't keep the smile off my face. I was victorious. I had defeated Basil's demons.



I was a fool. After three hours of bliss I received a phone call. 'Hello, is this Mr. Schofield?' 'Yes...' There was a short period of confidence sapping silence, then: 'Your car is on fire!' I can honestly say this was the last thing I was expecting to hear. When I arrived, Basil was sitting majestically outside with telltale wisps of smoke emanating from the interior. At least it wasn't raining. I went into a coma, but was brought back to earth by: 'That's not all that is wrong.'

'It was safetied in Quebec,' I said pitifully. They tried not to laugh.

The list was not too long:

- Left front spring has collapsed
- Right front spring on its last legs
- Rubber bump stops have crumbled
- Suspension bushes are worn out
- Starting circuit wiring loom has melted
- The firewall grommets have all cracked
- The steering arms are seized
- The alignment has left town
- The balljoints barely exist
- There is a power steering fluid leak
- "Power steering?"
- The front shock absorbers are shot
- The starter motor is grinding against the block (as were my teeth!)

My head was spinning. No wonder unicorns are extinct. I barely heard the rest of the issues, but had Basil flat-bedded home to the dry and warm garage. Basil seemed happy to be home and he stayed there for six months. I'd had Basil for more than a year and the furthest he had travelled by himself was 5km downhill. What had I got myself into?

I started lying to Vera almost every day, staying up late, meeting with strange people on darkened corners, stripping dashboards out of neglected TR7s and did I mention the lying? I had an addiction, and it was Basil Faulty.

Significant sums of money began disappearing from my account as I stayed up late at night staring at the computer and pressing 'BUY IT NOW.' I became emaciated and irritable, and had bags under my eyes the size of an Austin Healey Sprite.

My unicorn was NOT going to defeat me, but who knew that grommets could be so hard to find, that 'available' wiring harnesses were just teasing, that small pieces of rubber could be as expensive as gold bullion, that nobody round here sells 13in tyres, or that there are far more lefthand side rear lights available than righthand side ones? (I forgot to mention that Basil had been pushed into a truck bumper while he was engulfed in flames!) I was a sad case of dashed dreams, a hollow shell of my former self. I had a garage full of Basil Faulty parts, and a Faulty Basil just sitting there, smiling!

The following six months consisted of trips to Terry Cullwick (my saviour), Stephensons Steering, AAMCO, deciphering wiring diagrams etc, until Taa Daa – Basil was finally back together. With trepidation, I approached and turned the key. A wonderful cacophony of sound filled the garage. I screamed: 'BASIL LIVES!' and started laughing maniacally: 'Muhuhahahahaha.' But I was soon choking on the exhaust fumes so had to back out of the garage. Vera rolled her eyes. Cough.

I drove away towards AeroTek to show Matt, the day filled with promise. Basil sprinted from light to light, his brakes worked, his steering was direct, he did not porpoise or make crashing noises. I was sure all the beautiful ladies were winking at me as I roared past, though in hindsight their eyes may have been burning from the exhaust fumes as Basil was running a bit rich. Who knew Strombergs needed oil?

Nevertheless it was a romantic moment. I drove past AAMCO, downshifted as I sped past Terry's shop, turned past Stephensons Steering and pulled into the AeroTek parking lot. Seven

kilometres, a new record. I parked in the President's spot, where Matthew was waiting. He was smiling and saying something. I coolly shut off the sonorous 3.5 V8 and said: 'What?'

'Is that fluid pouring out of the bottom?' he repeated...

Embarrassingly, every word of this story is true, and I haven't even mentioned the bootlid slamming on my head while I was trying to access the battery, or the rear brake caliper that failed while trying to stop in the driveway – luckily a bumpy trip down the steep hill at the bottom of the driveway into the Koi pond was averted by ramming my father-in-law's Mercedes 560SL that happened to be parked there. After all, If I'd told you all that then it might have sounded unbelievable.

However, I am happy to admit that I am not the handiest mechanic, nor the most patient. I will also admit to being accident prone and loving unpopular old cars, having owned a Europa, an Interceptor S2 and now Basil Faulty. I admit to lying repeatedly to Vera about Basil and I admit to never giving up when I should. It is that final aspect of my personality that has helped me to survive my Basil ordeal. I am sure it is a trait shared by most of my compatriot members of the Toronto Triumph club, or at least all those who own TR8s.

As of this day, Basil is resting in climate-controlled comfort for the winter and Vera has sat in Basil Faulty only once. It did not go well, but that is another story.

Our grateful thanks to Jonathan for sharing this fantastic story. It first appeared in Ragtop, the magazine of the Toronto Triumph Club (www.TorontoTriumph.com), and we are also indebted to its editor, Terence McKillen, for his kind assistance.

TRIUMPHTUNE TR7

A 2-litre, 8-valve TR7 has long been considered the poor relation in the TR line, but how many people have actually driven a good one? And not only a good one, but how many have driven one that has been uprated similarly to many of the earlier TRs? This is the story of one such car, a car that has been in the ownership of Triumph World columnist John Clancy since the early 1980s.

TriumphTune was originally the generic parts name given to the factory-approved uprated components supplied by SAH Accessories. Syd Hurrell was the man behind SAH, but the mantle was passed to his son Terry and thereafter the company name was changed to TriumphTune. I had no knowledge of the company until Sports Car Monthly magazine featured a two-part article entitled 7 Up in 1985. I made the mistake of reading this and becoming interested in the possibility of tuning my own TR7.

There were a series of tuning options, of which the ultimate was Plus Kit C. I wanted that kit, but it would be a major outlay for me at the time, plus I had no idea how to install any of it. But I took a chance and towards the end of 1985 the first part of the kit was purchased and installed. This was the Weber DCOE twin choke carburettor conversion. The car still had the standard exhaust system at the time, but that didn't seem to matter as performance was noticeably more lively, but it was the noise that came from under the bonnet that was the most impressive feature. How I liked to squeeze that throttle pedal after those Webers went on! Funnily enough, I still like to do the same thing to this day, I just wish the price of petrol would come down!

It wasn't long before the Achilles heel of the TR7 reared its head in the form of a blown head gasket. Still, that meant the head was coming off and I would have the opportunity to install the TriumphTune sprint profile camshaft, long stemmed and gas-flowed valves and uprated valve springs. It took a couple of attempts to get all this installed correctly, but the first test drive with that camshaft in place was memorable. The engine was released from its standard, strangled state and it revved more like a motorbike than a car. In the mid-80s there wasn't really much around that could compete with it and that made it all the more enjoyable.

The exhaust was the next thing to be changed and this meant that as far as the engine was concerned, Plus Kit C was complete. Brakes and suspension were all upgraded later simply because I'd overspent and really couldn't afford to go through the same learning process on the handling and stopping side of things, but it was the excitement of having such a quick car during a period when there weren't many quick cars around that drove the TR7 into my heart. I had always liked the way the original TR7 coupé looked, and after purchasing mine I quickly appreciated the superb interior. I had never ridden in a car so well appointed or comfortable, despite having been for drives in just about everything by then including the best from Ferrari, Porsche, Lotus and Lamborghini. To this day, I still maintain that the TR7 is the most comfortable car I have ever driven.

The down side of TR7 ownership in the early years was that wherever I went there always seemed to be people prepared to tell me what they thought of the TR7, and it was rarely anything good. I certainly knew of the many maladies that had afflicted the model during production as well as the unreliability issues mostly related to the head gasket, but I could not understand quite why such vitriol was directed at the TR7 by so many people who had never even driven one. We British like to →

support the underdog, and so it was inevitable that I would want to keep mine just to ensure there would be consternation among those who had poured such scorn on it. For much of the time I have had my TR7 it has been my only car, and although I have rarely had cause to use it every day, it has been driven whenever required and it is still used the same way today. It certainly means driving is a fun experience despite the general decline in courtesy and the standard of driving over the years.

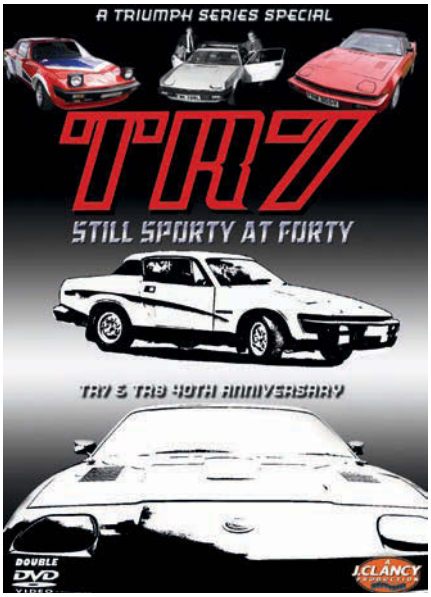
In 1997 a major restoration was commenced. This was intended to be a rolling restoration, but the first stage took far too long and hence the following year the second stage was undertaken by Robsport International who got through their assigned task a lot more quickly. What followed was a comprehensive rebuild which took place over several extended visits during the next three years. The standard of the work was exceptional, with photos at each stage of the process to evidence this. However, I have to admit that seeing my car with only the gearbox turret between the front and rear bulkheads was somewhat alarming.

In more recent years I have been living a very long way from Robsport, so it has not been possible to take the car back for remedial work as often as I would like and major renovation work has since been undertaken by A.M. Restorations in Plymouth. Many Stag owners will know that this restoration house is run by Andy Moss, who has one of the finest Stags in the land. As a result of the work carried out by Robsport and A.M. Restorations, my TR7 is now one of the finest TR7s in the land, so perhaps I have something in common with Mr Moss there.

Chris Putt is a mobile mechanic for the Plymouth area and he too has been invaluable in keeping my car up to scratch. The most amazing job he ever did was to change the petrol tank on my driveway back in 2007. It was a job he never wanted to repeat, but I suppose it was inevitable the same thing would be required again one day. That day has just passed. Since that previous tank installation in 2007 there had always been a smell of petrol,

and despite my initial thoughts being that the tank had rotted from the outside in, it now seems that there was a leak around the mid-way point of that replacement tank from day one. I have just cut it open to have a clear view of the internal rust situation and there isn't any. TR7 tanks usually rust from the inside at the most forward point in the base, but there is no evidence of corrosion there or anywhere else. Modern fuel may have something to do with what has happened, but at this point I am uncertain as to why petrol was finding its way out of the tank and onto the hot exhaust below. No wonder I never saw any evidence of leakage – it was being burned off before it had a chance to appear as liquid on the floor below. Hence Mr Putt returned to repeat his greatest hit just prior to the Classic Motor Show at the NEC in November 2018. I did a lot of work under there myself before the re-assembly, and I have uploaded another Triumph World video to YouTube to detail this and other elements of this story to accompany this article – see https://youtu.be/9Nx8Ivyrs08.

After such major work there is always a little apprehension before embarking on a journey. A few local trips were undertaken first, but now I am back to travelling the country and can report that the TR is performing as well as ever. Driving has changed as the years have gone by so my days of driving like a hooligan are long past, but there are occasions where the TriumphTune performance is pressed into service. Yet while standing starts can be exciting and propel you from a standstill to the 60mph mark in under seven seconds, it is at higher speeds that the car is at its best – a squeeze of the throttle and the car is propelled forwards with surprising alacrity.



The steering too is extremely precise and similar to having a quick rack installed, but this may be partially down to the needle roller bearing kit on the strut top mounts making the steering very quick and very light. Polyurethane bushes are everywhere, while Spax adjustable shock absorbers and uprated springs (specified at 200lbs but they're not quite that hard) ensure this car handles as well as possible. The brake kit is a Robsport upgrade, originally from a Capri 2.8i but with the help of spacers they fit inside the original TR7 steel wheels. This is important to me because whilst I may not particularly care for originality under the skin, I do like my car to look original from the outside. And while black was only ever a colour for special edition cars, my car had already been re-sprayed black when I purchased it so that is how it has stayed. It also had the same silver stripes, so it looks very much the same now as it did when I first saw it.

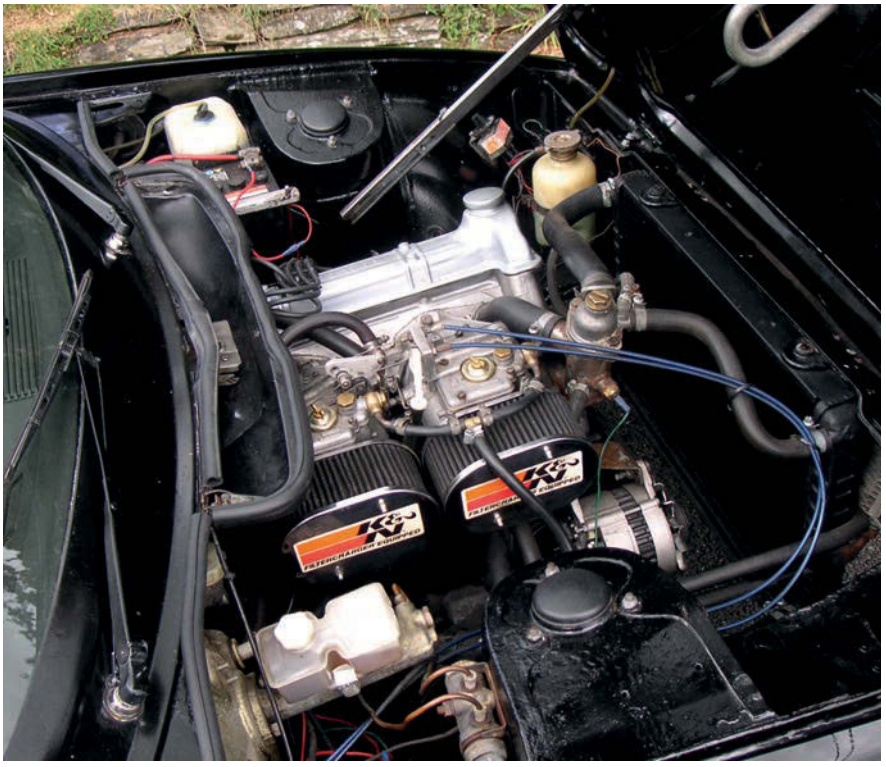
After so many years with the same TR7 it was only natural that I would get more involved in the TR Drivers Club at some stage. I have been a member since 1986 and their enthusiasm for the wedge-shaped TRs was perfect for fuelling my own passion. Around 2004 I met up with a fellow long-term member by the name of Jay Human who had started the hugely successful TR7 Forum just a short time before. I had been talking to a good friend who was a BBC film editor about the possibility of a TR7 documentary for release on DVD, →

and it was ultimately with Jay Human's moral support that I finally set out on this venture.

Originally it was intended to be a fairly private production aimed at club members, but as it became more widely known what I was doing, it seemed to grow into something far more ambitious. That DVD was Code Name: Bullet and it went on sale in 2007. Simon Hebditch at Robsport International really got behind it to help make it a success, and it was Simon who talked me into doing something similar with the Triumph Stag the following year. As a result, I ended up spending ten years documenting the history of Triumph cars on DVD.

I came to realize that if I didn't get on with it – and get on with it quickly – it would soon not be possible to make a comprehensive Triumph documentary because so many former Triumph personnel were dying. So when I set about Code Name: Stag, I needed to start finding former Triumph engineers who would be able to tell us some of the more important stories, as well as some of the more obscure ones behind the evolution and production of that car.

It snowballed from there and many of the



people who we now have on camera telling the history of their careers at Standard-Triumph are sadly no longer with us. I have found this particularly sad as I had grown to know so many of these people really well. The recent death of beloved former Triumph World columnist Mike Cook upset me greatly, as without Mike I would not have been able to cover the American side of the story so well. From his position within Jaguar North America Archives, Mike let me have access to all the archive films and anything else I requested, which included every Triumph film originally made by the USA arm of Standard-Triumph. I must have really got on his nerves at times, but he never showed me anything but friendship and appreciation for what I was doing.

So whilst there has been great sadness at the loss of so many Triumph friends, equally I have some great memories during my time making the Triumph DVDs. Arriving at the homes of former Triumph members of staff in an immaculate TR7 to carry out in-depth interviews never failed to break the ice, and it made it so much easier to get people to relax before turning the cameras on.

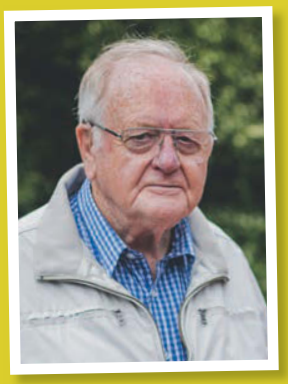
As the years went by it became obvious that everything I had made after Code Name: Bullet was somewhat different to that original production. My list of Triumph contacts had become more extensive too, and that warranted a second TR7/8 documentary. Work on Bullet Reloaded actually commenced in 2011, but would not be completed until late in 2013. Many visits to the USA meant it ended up being the biggest single production I ever made.

I sent a copy to every motoring journalist I could find around the world, and that seemed to stop the incessant negative press the TR7 tended to suffer. This public relations exercise was followed up by the TR7 40th Anniversary celebrations the following year, which I ended up organizing in the UK alongside TR Drivers Club editor Andrew Poynter. This was initially a TR Drivers Club idea, but other clubs joined in internationally and we had events all over the world scheduled to take place around the same time. The TR7 suddenly had a new-found status, and it has never looked back.

It now has a certain amount of respect despite all the problems and bad press that hampered its early life. There are still some poor examples out there, but there are many more good examples than bad. Values have been increasing markedly in the past few years and a top-notch car will now set you back around £15k. Bargains can still be had, but you need to know what you are looking for before venturing out on a search as these cars can be a minefield and trouble for years to come if you get it wrong.

So that impulsive purchase of a black and silver TR7 back in the 1980s actually ended up having a major impact on my life. If anyone had told me back then that I would play a part in the success of the TR7 decades later, I would have thought they were nuts. I had no expectation that I would be driving the same car all these years later, and that I'd still love getting in that same TR and driving it in all conditions. No other car has ever generated the same feelings for me, and certainly not the same excitement. It's maybe a little strange, but when I'm ensconced in those TR7 seats I feel like king of the road. Maybe it helps that even today the car's performance is a match for just about anything else, but I think it is more because it's a great looking car with a great cockpit, the perfect driving position and most importantly, such a wonderful history. Maybe it's time you bought one too.

LYNX, BULLET, BROADSIDE AND BOXER



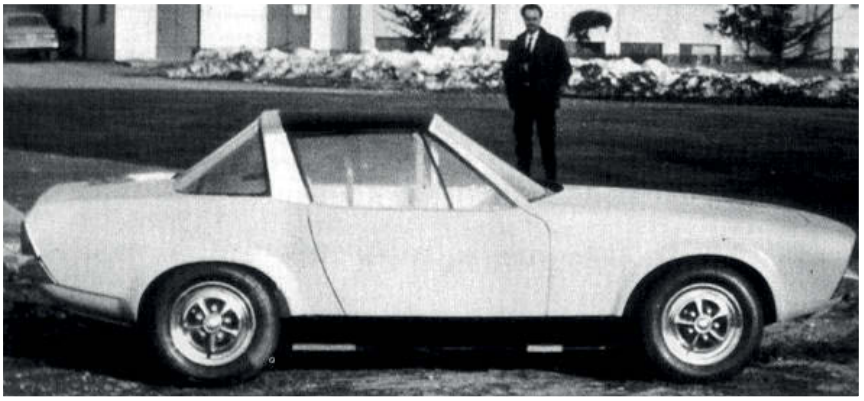
Mike Taylor talks to designers John Ashford and Harris Mann about their work involving fascinating Triumph might-have-beens the Lynx, Bullet, Boxer, Broadside and Lynx again, plus Bullet 2 which became the TR7.

WORDS: **MIKE TAYLOR**

During the 1960s and 1970s, Triumph's talented designers were involved in several exciting concepts which sadly remained just prototypes, never to see the light of showrooms. To discuss these exciting projects, we were extremely fortunate to talk with two designers who contributed to them both – John Ashford who had worked for the Rootes Group, Ford and then Lucas, and Harris Mann who joined a design studio in the States for a short while before returning to the UK to work initially at Ford.

On leaving Lucas, John joined the design centre at Triumph's Canley plant in 1968. At the time Harry Webster was Engineering Director, while Spen King was Chief Engineer and his direct report. The head of Triumph's Styling Studios was Les Moore, while the company's Chief Body Engineer was Arthur Ballard. Indeed, while Webster had a penchant for using Italian designer Michelotti for creating many of Triumph's most successful models, to discount Moore and his team (which included Norman Davies, Ray Innes, John Ashford, David Keepax, Richard Hunt, Brian Keane and others) would be to do them a grave injustice.

'The genealogy of the TR range of sports cars can be traced back directly through the TR5, TR4A, TR4, TR3 and TR2, most of these models receiving face lifts from the Triumph styling studios with input from Michelotti,' explains John. 'In contrast, the TR6 which was introduced in 1969 was the result of a revamp of the TR5 by Karmann of Germany, the changes largely affecting the front and rear of



the car – beneath the new skin lay the familiar separate body/chassis structures and Triumph-designed power transmission.'

Critical to this story was the merger of BMC with Triumph, Rover and Jaguar to form British Leyland (BL) with a projected sales figure of £800m, of which the company's Triumph, MG and Jaguar sports cars were crucial. It was at this stage, in 1967/8, that the green-to-go signal was given for two new medium sports car programmes. Bullet was the code name for a replacement of the charismatic TR6 as the lead large sports car in the TR range and Lynx was to take over from the GT6. Both projects had moved into high gear at Triumph's Canley HQ based on conventional Triumph drivetrains and running gear when John arrived.

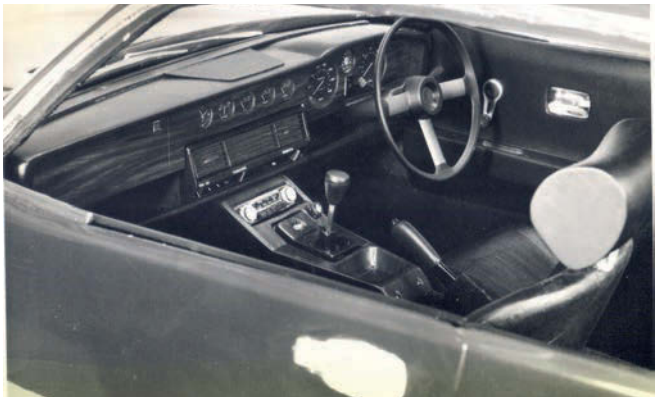
The first proposal produced by the team was for Bullet, which encompassed elegant proportions with knife creases to the body panels reflecting current design trend moods and incorporating a Triumph Stag type 'T' bar roll over frame. Photographs taken of the prototype model on the grass outside the design studios illustrate strongly the theme the stylists were projecting.

The Lynx prototype meanwhile was to feature twin headlamps, a long sleek bonnet and a sloping rear with an opening tailgate and a Kamm-type transom panel below. Significantly, in addition to the work done by Canley, Italian designer Michelotti also lent a major hand in creating this stylish coupé. Again photographs were taken of the car on the grass outside the Canley studios.

So important was the American market to the success of any new Triumph sports car that vital feedback from this pivotal market base was garnered by Spen King and product planning supremo Mike Carver when they undertook a whistle stop tour of Triumph's US dealer network, receiving valuable comments regarding how the next generation of Triumph sports cars should look. Responses suggested that they should encompass a conventional drivetrain layout with simple, reliable engineering and up-to-the-minute styling.

At this point, under the considerable weight of political changes within Triumph which was now part of British Leyland and feedback from Carver and King's US visit, the first iteration of Bullet was canned, and its place was taken by a new programme, Bullet 2 if you will, which would make use of the latest production assembly components – Toledo type suspension and steering, and the slant-four Dolomite engine.

At this point, Harris Mann enters our story. Along with Roy Haynes in 1968, Harris had left Ford and joined BL, where he took up residence at the design studios at Cowley before moving on to Longbridge where he designed Zanda, a wedge-shaped sports car, which was exhibited on the Pressed Steel Fisher stand at the Earls Court Motor Show in 1969. By now head stylist at the Longbridge design studios, Harris had to work within →



the Bullet 2 guidelines as set out by Spen King, which dictated wheelbase and track dimensions, power unit specification and even detail items such as the location of the fuel filler (which had to be positioned on the offside leading edge of the rear deck). Mann's solution encompassed a distinct wedge theme, with a Targa type roof just like the first Bullet proposal seen at Canley.

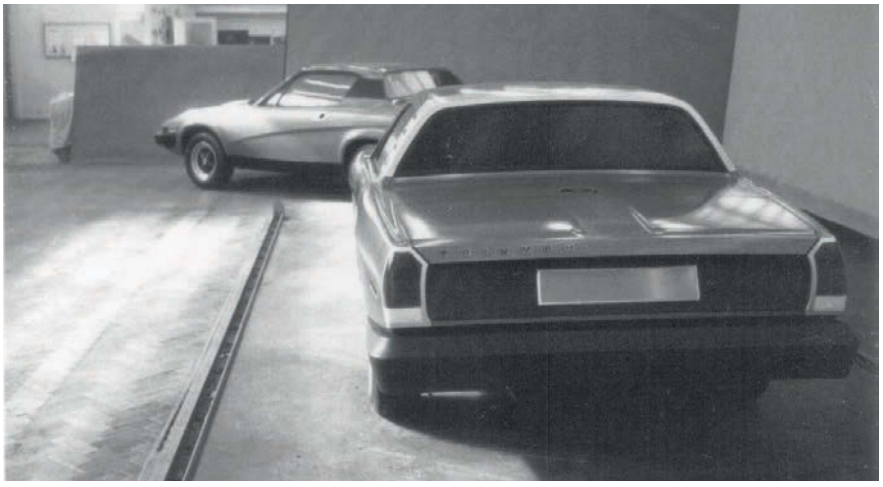
With the second-generation Bullet completed, it was taken to Triumph's production engineering department for consideration. The only hiccup was that Targa top: Triumph's engineers claimed they could find no way of attaching it to the body, so Bullet 2 became a fixed hard top coupé.

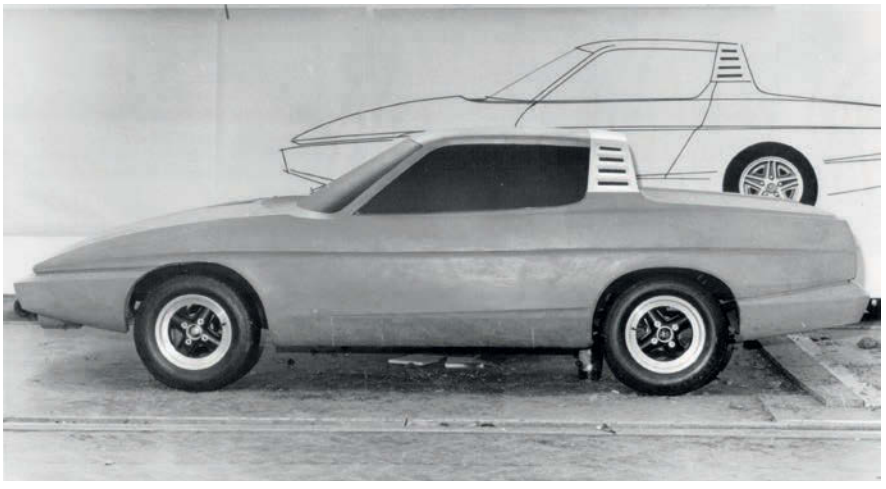
With Bullet's exterior styling approved, the interior and other detail design work was undertaken by the design team at Canley. In line with modern thinking, the dashboard comprised angular shapes to accommodate the instruments and controls, while the acutely curved windscreen allowed for the steering wheel and seats to be located some way rearward in the cabin, giving the car a feeling of spacious elegance.

'After my Bullet proposal was approved by Stokes and the board, it was passed to Spen King for production engineering,' Harris tells us. 'Not long after, I was asked to produce an MG version of the new model. The plan was to carry over many of the body panels, door cards, windscreen and other items from Bullet to make this new model.' Called Boxer, the philosophy for Harris and his team was to identify what made an MG an MG, and therefore different to a Triumph sports car. With these characteristics in mind, Boxer featured subtle styling differences at the front with a centre 'bib' let into the grille apron. At the rear Harris gently shaped the wing/transom panel seam, giving it a subtle convex curve with different light clusters to suit. To top it off, an MG badge was affixed to the front apron.

'This car could have been introduced with the Rover V8 engine while the Triumph version would have retained the 4-cylinder power unit,' asserts Harris. 'The two models would have been different, yet could have been assembled down the same production line.' In the event, the MG Boxer was rejected on the grounds that the car was insufficiently different from the Triumph version, now named TR7. The real reason is more likely to have been BL's corporate resistance to an MG competitor, or simply Lord Stokes's preference for the Triumph name over MG for future sports cars.

One of the reasons why, when Bullet reached the market in January 1975 as the TR7, it was available only as a fixed-head coupé was that during its creation there had been very real concerns that US safety regulations would soon





ban convertible cars, and the US market was seen as vital to the new model's success. It wasn't until later when this fear of legislation banning drophead coupés in the States receded that Triumph drew up plans for a soft top version.

'The work needed to transform the TR7 into a drophead coupé was given to Michelotti,' continues John Ashford. 'A prototype was built to illustrate at first hand the changes needed to the TR7 coupé's body panels, including strengthening of the sills and chassis pan essential to create the necessary torsional rigidity to manufacture a drophead version. The soft top TR7 was put into production in 1979.'

There was also a V8-powered TR7, called the TR8. Before this was created, the Competitions Department at Abingdon under the management of John Davenport and Engineering Liaison Manager David Wood had developed a V8 version called the TR7 V8 for rallying. Developing this provided valuable information for the production engineering team regarding the changes necessary to the body and suspension to create the V8 version, but marketing of this model was restricted to the US, and sales volumes were limited through a poor dollar/sterling exchange rate and the lamentable build quality of many cars.

So far so good for the production cars we all recognise, and many readers will already know of the TR7 development story. However, there were also two other projects which emerged from the TR7 programme on which we want to focus today. As already mentioned, the original prototype Lynx was a four-seater with a sporty fixed fastback rear. 'With the TR7 up and running, thoughts were turned to resurrecting the Lynx programme as a way of maximizing the TR7's already established market, hopefully extending sales and attracting a broader reach,' continues John. 'At the outset, the TR7's chassis pan was extended to enable us to add rear seats and a load carrying platform behind.'

The programme was started at Canley with rudimentary models created by Les Moore and David Bache. However, this project soon witnessed the beginnings of a protracted conflict of opinion over styling – David Bache, head of Rover's design department at Solihull, was adamant that Lynx should have discreet opera type elliptical rear windows which were popular in the States at the time, while John was equally convinced that Lynx should have a UK styling appeal with full-size rear windows. John then produced a freelance styling rendering and pinned it to the wall of the styling studios in Canley, where it was seen by Spen King and Managing Director →

Bill Davis when they walked through the department.

'They were impressed, and I was tasked with producing a one-third model,' John reveals. But at a presentation where senior Triumph staff were gathered to appraise the Bache, Moore and Ashford models, John's version had been quietly hidden behind a curtain. Just in time John pulled the curtain aside to expose his work, which was then approved by King and Davis in preference to the Bache and Moore proposals. 'At this point the order was given for a full-size model to be produced,' grins John at the memory. 'The design for the interior was then done by Triumph designers Norman Davies, David Keepax and Richard Hunt at Canley.'

However, more antics followed when, at Bache's insistence, the side scallops first seen on the Maestro and Montego cars were incorporated into the Lynx fastback, along with an opening glass tailgate to give access to the rear platform. The model was then moved to Solihull, with additional engineering undertaken at Canley.

Says John today: 'There were several issues with Lynx, and the industrial problems at Speke which ultimately lead to the closure of the plant clearly contributed to a decision to cancel the programme. BL's lamentable finances were another contributing factor, but perhaps surprisingly by this time Triumph's reputation in the States had taken a tumble, so a major market opportunity for Lynx was destroyed. What made the whole thing really sad was that when the red light was given to halt the programme, it was already fully engineered with all the body tooling completed. Lynx was to have been an elegant V8-engined fastback, and that it was cancelled shows the state of BL's financial health and industrial relations at that time.'

That is all very true, but another consideration was the limited production capacity of Rover's V8 engine, which was already being fitted to the Range Rover and Rover saloons. In reality there was very little slack in the system for building high extra volumes for installing the V8 engine into Lynx.

Interestingly, the TR7 as the foundation for other models did not stop there. 'Codename Broadside was a drophead coupé version lengthened to accommodate seating in the rear,' explains John. To facilitate this the chassis was extended, giving the TR7 the visual flavour critics always said it needed had Spen King's design directives not been so specific. The frontal treatment mirrored that of the Harris Mann TR7, while the doors were given a small fillet at the rear of the glass above the door frame.

'At one point Broadside and Lynx were being worked up at the same time,' adds John, 'although others had inputs into Broadside as well, including designers at Solihull. The beauty of the Broadside programme was that it provided more versatility than Lynx with the suggestion of both a soft top or fastback body options. Also, the car was to have the choice of either the latest O-series or the Rover V8 engines.'

A number of Lynx body panels were intended to be used in the assembly of Broadside, and like Lynx, this concept could have incorporated many items from the BL parts bin including the Rover SD1 rear light clusters. Sadly, lack of finances contributed to the demise of this programme too, and in 1979 it joined the pile that made up Triumph's growing graveyard of promising might-have-been proposals.

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TR7 COUPE VS TR8 CONVERTIBLE

There is a world of difference between the earliest production TR7s and a last of the line TR8. Such were the changes that if it weren't for the almost identical cockpit, it would be difficult to tell from behind the wheel that you were driving what is fundamentally the same car. John Clancy is your guide.

Introduced in January 1975 with a 1998cc slant 4 engine, a fixed head unit-construction body and a strict two-seater cockpit, the TR7 was a revolution in British sports car design. Unfortunately it was a revolution that not everyone liked. The four-speed transmission and light rear axle kept the weight down which aided performance, but it was also a major source of criticism. The LT77 five-speed gearbox was offered as an option towards the end of 1976 and soon became a standard fitment for North American cars, whereupon lack of supply meant it was withdrawn from the rest of the world.

In March 1977 a series of revisions were brought in which included lowered suspension, along with the introduction of tartan trim and full width wheel trims. These days, even the earliest TR7s generally have that same lowered suspension installed.

The 16 valve Sprint engine was always intended to go into the TR7, but an ongoing strike at the Speke assembly plant killed this derivative just as it was ready to go into production. Around 60 are believed to have been built, and many of these were quickly snapped up by BL employees who were eligible for a management company car. The fastback, four-seater derivative, code named Lynx, was another casualty of the strike, but the first batch of pre-production TR8s were completed before the Speke closure. These were shipped to America without any decals, many bearing the identity of TR7 V8 on the chassis plate rather than TR8. The TR7 drophead was another derivative to survive the closure, and several of the first pre-production dropheads built at Speke are extant today.

Introduced to America in 1979 and the rest of the world in 1980, the drophead certainly made the TR7 feel like a completely different car. By then there had been such an improvement in overall product quality that this impression really shouldn't have come as any surprise. Right from the start the drophead outsold the original coupe, and by the end of production this was by a factor of nine to one.

The four-speed had been dropped from the line-up completely and although the five-speed had a higher top speed (114mph as opposed to 109mph), the acceleration times were markedly slower. The often quoted 9.1 seconds for the 0-60 dash is actually taken from the four-speed performance figures, with the five-speed varying from 9.6 seconds up to 11 seconds. Not surprisingly, this helps to make a four-speeder the more capable car on twisty country lanes, with the five-speed having the advantage on motorways. There was a three-speed automatic from 1976, and this variant is actually a very nice car to drive and surprisingly peppy.

It has been easy to blame the original →

Speke factory for the poor quality of the early cars, but more recent research has largely debunked that story. There were undoubted problems with many, if not most of the early cars, but even after production had moved first to Canley and then on to Solihull, build quality cannot be cited as consistently good. But Speke was closed in May 1978, and Canley therefore took the credit for all the improvements that had been planned, with good publicity being made for the 200+ enhancements that were claimed.

The final move was made to the Rover factory at Solihull late in 1980, and the best quality cars are generally considered to have been built at Solihull. However, due to some jiggery pokery this was somewhat messed up soon after when SD1 production line workers were switched to building the TR7 and vice versa. On the face of it, this was not the most successful management decision for a pair of products considered so important to the future prosperity of British Leyland.

It is usually difficult to compare a four-cylinder car with a V8, but in this case the last of the line four cylinder cars do stand up surprisingly well. Group 44 race team driver and owner Bob Tullius summed this up better than anyone else I have interviewed when he said: 'The TR7 and TR8 are the same car, just a different motor.' Yes, there were slightly bigger brakes on the V8 cars along with revised suspension, but once the TR7 had adopted the five-speed gearbox and stronger, heavier rear axle, the engine was the only significant factor to distinguish the two models.

Then again, we also need to consider that there are American versions of these cars and rest of the world models; by 'American' read 'gutless'! The TR8 was only ever officially sold in North America and so the world never had much chance to drive the full-fat, un-molested 155bhp version of the V8 car. It was all set for production and at least 18 pre-production examples went down the line at Solihull just before cancellation.

Ironically, the product planning department, who had been scratching around for ideas

of how to sell more cars, came up with a marvellous idea and sent a representative to see TR8 UK Executive Engineer George Spence and his manager Brian Cook the day after cancellation. The representative said to them: 'Let's do a special edition of 1000 TR8s and we'll sell the lot – they'll go like hot cakes!' Unsurprisingly, he was not received with much enthusiasm and was told quite curtly that if Product Planning had have come up with the idea a day earlier, they might have saved the whole project.

Suspension on the American market cars is typically somewhat softer than on UK cars. I was riding with Jim Tencate, senior Triumph Wedge Owners Association official, in one of his TR8s when I noticed that he was not preparing to avoid a sizeable highway pothole about 100 yards ahead of us. I braced myself for the impact as we approached this cavernous black hole of enormous dimensions, but the car breezed over it with hardly a sound or any variation of direction. This would not have been the case with my own TR7. I prefer the firmer ride of the UK cars, but America was the target market for these sportsters and they had requested a boulevard cruiser rather than an old-style bone shaker that had been the norm up to that time.

The drophead bodyshell is not as robust a structure as the coupe and those of us who know the TR7/TR8 well can identify the lesser quality of the drophead as a driver's car. The compromise is not that great however, and so for anyone who really cannot imagine a sports car without a rag top it should not be a consideration.

If only the money had been available at the start to carry out the original Harris Mann style with the knock-out roof panels, things might have been different. Alas, money constraints, plus the fact that the engineers were originally designing the car to withstand a 40mph impact test, consigned the concept of the TR7 with a removable roof panel to the scrap heap. But the Drophead is still a very good car to drive, and when you consider that the TR7/TR8 range is the best handling of all production Triumph models then you will appreciate that you have a pretty good starting point. Only the peculiarly short wheelbase requires that the car needs to be driven with more care in wet conditions, but otherwise the grip provided by any TR7 or TR8 is exceptionally good.

Purchase prices vary greatly and bargains can be had if you are lucky, but as a rule of thumb I suggest around £25k for one of the 18 pre-production UK spec TR8s in good condition, whereas around £15k will get you a reasonable repatriated American car. TR7 prices tend →

to start at about £2k for a basket case up to over £13k for a top-notch car. Price variations between drophead and coupe have largely gone now as people increasingly appreciate the coupe as the original and purest form of TR7.

This is not strictly part of the comparison *[So what's new there? – Ed]* but a genuine TR7 Sprint value is hard to estimate as there are so few of them around and any prospective purchase will need verification from the TR Drivers Club as some fakes are to be expected nowadays. Up to £20k for a top TR7 Sprint would be my guess, but perhaps I'm biased as it is my opinion that the TR7 Sprint is the best car of the entire TR7/TR8 range.

TR7 Resident Engineer Peter Wilson had one as a management car and he didn't want to give it back at the end of his three year tenure. Peter explained to me that the 8 valve and 16 valve cars feel very much the same until you get to 4000rpm; above 4000rpm and the Sprint becomes a totally different animal. I concur with Peter, and the TR7 Sprint feels like the car that the TR7 always should have been. Given that we are talking about 1978 here, this model would have been a real road burner at the time.

Its performance was quite special, but I expect the brakes would have been considered marginal at best – a criticism that can be levelled at the entire range. The TR8 was strangled somewhat by emission controls, but California did get a fuel injected car that put some of the lost power back into the engine. EFI was standardized across the Americas for 1981 when the TR7 also got EFI across all States. Sadly the TR8 was never a great seller owing to its high cost (due to the unfavourable pound-to-dollar exchange rate) and the fact that the world had just been through the second energy crisis which put gas guzzling V8 cars out of favour.

Even in its detoxed 133bhp state of tune though, the 3500cc Rover V8 engine has such torque that driving one is effortless. By comparison the early TR7 is very different. The four-speed transmission means the car is wonderfully under-geared, but in American form there is a distinct lack of power to make full use of this (90bhp compared to 105bhp for UK and rest of the world cars). Californian cars had even less power up until 1977 (76bhp) as there was only a single carburettor due to the State's even more stringent emission test. I have not driven a single carburettor car, but serial TR7 enthusiast Steve Thomas from North Devon has one and he very much enjoys the way it drives. When you consider that Steve has a plethora of these Triumph wedges including a fire-breathing, genuine TR8 coupe in rally trim, perhaps the original TR7 deserves more respect after all.

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PROJECT TR7 PART 1

With the help of some lovely people at the TR Drivers Club, we get a TR7 convertible that promise to give us only a few minor headaches and a whole lot of driving fun. Well, that at least is the plan!

REPORT: **SIMON GOLDSWORTHY**

I've always been into Triumphs, though in the past this interest has been channelled largely into Heralds and Dolomites. I've come close to taking the plunge with a TR7 on a few occasions, but something else always seems to have got in the way. In recent years though, it has not been easy to visit specialists in order to create technical features for the magazine, and so we have increased the number of project cars on the go in each issue from one to as many as four.

You can probably imagine what temptation that has been put in front of somebody like myself! Certainly it was all the excuse I needed to find myself inspecting a gold TR7 DHC that had been stored for many years and needed a lot of work. I ran the details and pictures past John Clancy of the TR Drivers Club. John was very helpful and knowledgeable as he always is, but I came away from our chat with the distinct impression that he thought I would be well advised to hold off on this one and look instead for an example in better condition.

Not that the project car was impossible to restore, but it would certainly have been a major task and was concerned that if I started off with the wrong car, it might well dampen my enthusiasm for the model. To somebody as passionate about TR7s as he is, such an outcome would have been a tragedy. Perhaps that is why John and TRDC Events Co-ordinator David Johnson emailed me a couple of weeks later to say that an X-reg DHC had just been put up for sale by a member in the Worcester TR Drivers Group, John Amos. They reckoned it was a good car that had just not been used much in recent years.

A MODEST PAPER TRAIL

As John said, there was not a lot of paperwork still with the car, but it did come with the following sizeable bills from recent years:

January 2004:
- Respray complete car
- Spray wheels and fit new tyres
- Fit new Viscous fan hub
- Fit s/h headlight motor
- Tune engine
- Change axle oil: £1324

April 2014:
- Recon wiper motor: £151.54

November 2017:
- Paint, stickers and labour: £1299

December 2017:
- Mohair hood and fittings: £459

In one of those serendipitous coincidences, it just so happened that I was going to be in that area the following weekend, so I struck a deal with Mrs G – I would visit a couple of open gardens in the area and pretend to be interested, and in return she'd come with me to have a look at the TR7 on the way home. It won't take a genius to put two and two together and figure out what happened next, because this was one of those rare occasions when everything worked out perfectly; the gardens were actually OK, and the TR7 – well, why don't I hand the keyboard over to owner John →

Amos to fill us in on the background, and also the current state of play?

JOHN AMOS

I bought the TR7 in 1986, so it would have been about five years old. It was registered in September 1981, but it must have hung around for some time before finding its first owner because according to the VIN number, it was actually a Canley-built car, and they finished production there in August 1980 and moved TR7 production to Solihull. It had an original sticker in the back window of Rickmansworth Sports Cars, so it was presumably sold either new or secondhand by them. That was only a couple of miles away from where we lived at the time.

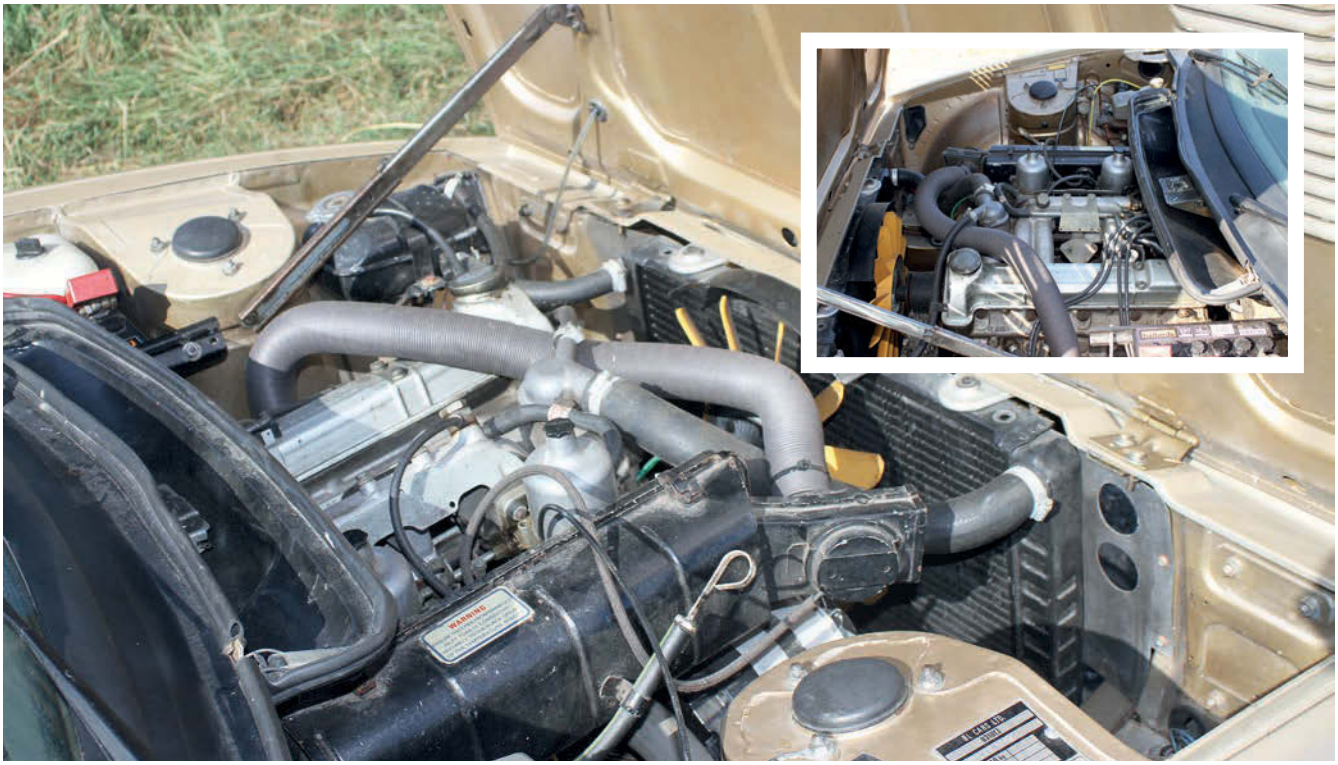
I had always wanted a TR, starting with the TR2 and then rising through the numbers as time progressed, the model evolved and I still hadn't got one! At that time, most young lads wanted either an MG, a Triumph or an Austin-Healey, and I was always biased in favour of the Triumph. I'm not sure why really, because I had never owned one in the past. I've not had that many cars at all in fact, even though I have owned cars since 1955, because I tend to keep my cars for quite a long time. The first was a Mk1 Ford Zephyr. Not that I was a Teddy Boy – I was a bit behind the times and still had wide trousers when everybody else had moved on to drainpipes!

I had that Zephyr for ten years, and sold it to get a Mini Traveller. I found I didn't really miss the performance of the six-cylinder Zephyr because the Mini felt so much faster than it really was, you were so close to the road. I followed that after five or six years with a Riley 4/72, the top of the BMC Farina range, but that was a bit of a rust-bucket so I sold it after three years or so and bought a Hillman Hunter.

I had the Hunter for about ten years, and during that time I finally got my first TR. This would have been around 1980, and although the drop top had just come out, I couldn't afford one of those, so I bought a T-reg Speke-built coupe instead. Oddly enough, it was Australian spec.

I enjoyed that TR, but then I was made redundant so I sold the Hunter and the TR7 and got a Talbot Horizon instead. That was a lovely car and drove nicely, but it was another rust-bucket. Not too long afterwards, I got a small inheritance of around £3500 and figured that I could sell the Horizon and use my windfall to buy this TR7 drophead. This brings us up to the mid-1980s, at which point we were living in Cornwall. In fact, I decided I could get both a TR7 and a Reliant Scimitar, both cars that you could still work on at home.

The only thing that went wrong with that plan was that the Scimitar took all my time,



money and efforts and the Triumph got a bit neglected. I ran the Scimitar for about ten years, but the TR7 engine seized during the first winter of my ownership and it became something of a very slow renovation project. I imagine the root cause of the problem was head gasket failure, but I never really got to the bottom of it.

Mention of cylinder head problems on a TR7 will, to most enthusiasts, conjure up images of struggling to remove the cylinder head, of having to cut through the head studs with a hacksaw to get it off, but I must have been gifted or lucky because everything on mine just undid without a struggle. I stripped the entire engine down, and the bores were all fine, so I just had them honed and it is still on standard pistons. I put new big end and main bearings in, again as standard because I had measured everything up with a micrometre and nothing was worn.

I fitted new thrust bearings too while it was apart, of course. A new timing chain, oil and water pumps as well just as a precaution, and the clutch while the engine was out. I did reset the valve clearances, but I had trouble getting all the shims I needed. On one of them I had to take a bit of a chance, only a couple of thou out but you can just about hear it tapping away.

The TR7 was on about 45,000 miles when I bought it, but back then cars could rust in five years. There were no such problems on the TR7; I have had one small patch put into one of the sills, but that is the only body repair. It was kept in the garage all the time, though. More recently I have noticed a charging issue in that when you put the lights on, the voltmeter drops to nearly zero. I have fitted a new alternator, but that has not made any difference.

A few years ago I had a new hood fitted. I do have a receipt for that work, but I'm afraid I don't have much of the old paperwork as we had a big clearout just before we moved up here from Cornwall. I can tell you that the oil was changed about two miles ago – I had →

it done for the MoT this year. It was covering such a low annual mileage that I used to leave it for longer than the specified 12 months, but the oil always came out as good as new.

I did change the gearbox oil too, and there is a stainless-steel exhaust on the car. I put Koni shock absorbers when I did the rebuild because I had always read how good they were. The brakes have new calipers, but on standard discs. I know some people like to fit uprated discs, but I have never had any problem with the standard set-up. Then again, I have never had to make an emergency stop or got to a point where brake fade was an issue. I have fitted roller bearings on the tops of the struts, but really never noticed much of a difference. I have no idea how fast it goes; I usually drive around 60-65mph.

There are still only 49,140 miles on the clock. I don't really know why I didn't use it more; I think in some ways it was doing the work that appealed to me as much as driving. It didn't help that my wife June had trouble getting in and out of the TR7 easily, or that there was always another car on the drive that had to be moved out of the way first. In fact, if you buy it, your drive home will be the longest journey it has done since I rebuilt the engine, so please do give me a call when you get home to let me know it has gone OK. Oh, and I have no idea how accurate the fuel gauge is – I used to just top it up regularly once a year!

INITIAL IMPRESSIONS

If I buy it? Of course I bought it! A week later I'd transferred payment and sorted out the paperwork, tax and insurance. John kindly collected me from the train station, because this was one of those rare purchases – a project car that I felt totally happy about driving the 120 miles home. It all went without a hitch, and I was able to call John and give him the good news.

On the drive home I had compiled an initial list of jobs to be done, but nothing yet that

seemed particularly challenging. Of course, you never quite know on a model that is new to you what is indeed going to be a relatively simple fix and what is going to be unexpectedly difficult, but I was feeling positive. Top of the list of jobs to do after the initial drive home are to investigate why the gear change feels so sloppy and vague. In fact, it was so vague that after filling up with petrol, I put it in what I thought was first gear and promptly reversed away from the pump! Fortunately I hadn't been attempting a racing getaway, which could have made it all rather embarrassing. For the rest of the journey, I felt my way very carefully into each gear and let the clutch up rather tentatively.

I also need to consider getting a new set of tyres, which is a shame as the ones on there are a matched set of very good condition Goodyears, but they date back to 2003. Other than that, my list includes straightening the steering wheel (I do hate a steering wheel that is on the wonk when you are driving in a straight line), the heater knob is loose, the driver's window catches on the hood when you lift it up, there is a popper rear of the hood that needs replacing, the driver's seat belt seems to retract making it a little tight, the interior door handle surrounds need replacing, and I need to decide whether or not to fit a more modern stereo. There is also a little bit of vibration above 60mph that can be felt through the seat, but nothing too bad.

No doubt there will be more jobs to be added to that initial list in due course, but the car really is a fine tribute to the care and attention it received over the last 35 years from John. Interestingly, although the TR7 was first registered in September 1981, because it was actually built at Canley in 1980 it should already be eligible for re-registering as Historic. However, given the turmoil at the DVLA in Swansea last autumn, I decided it would be easier to just pay up for another year's VED and let it roll over into the historic class in April according to the registration date.

My wife and I had talked about a trip down to Italy in 2020, taking in as many Alpine passes as possible and largely following Club Triumph's Ten Countries Run route from 2017, an event I did with my brother in my Herald. The planned trip with my wife had to be put on hold for obvious reasons, but I now think this delay might have been a blessing in disguise. After all, I now have the perfect car to take on such an adventure. And best of all, Mrs G doesn't drive manual cars, so I won't even have to share the driving!

Shortly before this article was first readied for print, we learnt that John Amos had passed away. This was desperately sad news. Meeting him had been a real pleasure, and he would have loved seeing his TR7 in print. Our sincere condolences to his family and friends.

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PROJECT TR7 PART 2

Our voyage of discovery begins as we investigate why the gear stick feels like it is stirring a bowl of porridge.

REPORT: **SIMON GOLDSWORTHY**

In many ways, our TR7 is in better overall condition than just about any other project car I can recall. Initially I did wonder if it would provide much in the way of work to follow, but that was a short-lived concern. After all, I sincerely hope it will not turn into a marathon in the way that our Project Midget did a while back, but it is over 40 years old and so there will inevitably be things that have failed. It has also been used very sparingly over the last three decades, which is good in some ways, but bad in others because sitting idle for extended periods can itself cause plenty of problems on a car.

After collecting the TR7, I had compiled a short list of first impressions of where it might benefit from work. The roof was one issue because although it was a newish mohair item, it was so tight that the roof was almost impossible to put up. The fabric was also thicker than the original vinyl, so when it was folded away, the hood cover would not stretch over it to secure at every popper. And that is not just a cosmetic worry, because the cover is needed to stop the folded hood from catching a breeze and billowing out the back like a dragster's parachute.

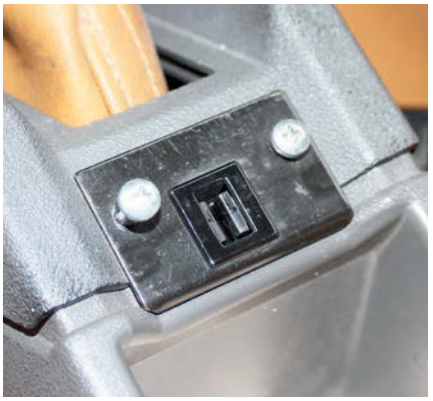
More pressing was a grinding noise emanating from somewhere at random moments, though I think it was more likely to occur in first or reverse. The word 'grinding' makes it sound very serious, but you do develop a sense on classics of which noises are terminal and which sound worse than they really are, and fortunately this one fell into the latter camp. Still, you can never ignore a grinding noise!

However, by far the most unpleasant and worrying thing about the TR7 when I got it, (in fact just about the only unpleasant thing,) was the feel of the gear shift. It had been many years since I'd driven Triumph's final iteration of the TR theme, but surely it should be more precise than this? The action on my car was extremely vague and woollen, and the spring loading did not seem to bring it back to the central plane, meaning you had to poke around to find third or fourth rather than simply slotting the lever forwards or back. Added to this, the detente you had to overcome to put it into reverse was soft to the point of

1 First job was to access the selector mechanism to see if there was any slack in the system that was making things feel so woolly. Using plastic tools to avoid causing damage, the clips on this vinyl surround could be popped up.

2 Before it could be lifted away though, the knob had to come off the gear lever. This is locked into place by a nut underneath. The TR7 uses a mixture of metric and UNF/UNC fittings, so you need to keep both sets of spanners handy.

3 Simon was expecting to find play in the gear stick because the plastic cup underneath its ball had broken up or worn, but there was no movement there. However, the entire remote linkage did move from side to side.



4 Needing better access to investigate this problem, the plastic centre console had to come out. There is not always a set order in which pieces have to come off, but this clip had to be removed to separate the two halves of the console.

5 So did this plastic closing panel that went around the gear stick – it was a tight squeeze, but could be gently manoeuvred past the handle. Fortunately Triumph did not go in for multiple hidden fixings on the TR7.

6 After searching out any remaining screws holding on the central cubby between the seats, that could be removed. It was followed by this section that went around the handbrake lever and the gearstick.

nonexistence, meaning that it was all too easy to put it into reverse instead of first. I did this twice on that first journey home, fortunately not at any point where it was an issue, but it did mean I developed a very cautious approach to lifting off the clutch pedal until I was sure of what gear it was in.

I first suspected worn bushes in the linkage. Checking on Robsport's website showed that they had anti-rattle springs and nylon cups in stock for a few pounds each, so I thought I would start by taking a look on my car to see if I could spot anything wrong.

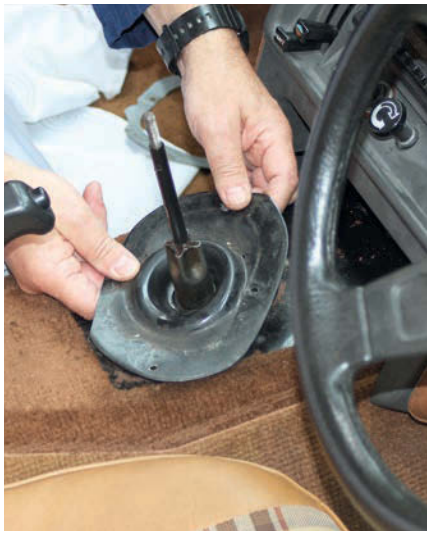
The engine and gearbox are located well back so there is no access to the gear linkage from under the bonnet. I thought I might have to raise the car up onto axle stands and work from underneath, but the prospect of lying on my back on clod concrete and working blind up in a narrow and mucky tunnel did not appeal, so I decided to try working from inside the car. That worked out very well and experienced TR7ers will probably be wondering why I ever considered any other option, but in my defence I have never worked on this model before and am feeling my way.

Fortunately, although the TR7 was built at a time when plastic was used extensively on the interior, it seems to have been designed before the onset of hidden fixings and plastic clips. Instead, most items were secured with sheet metal screws that were easily accessible once you started poking around. The trick was to remember that if someting wouldn't budge, instead of tugging it harder, poking around a little more would invariably uncover another fixing screw.

I started by removing the centre console, which proved tricky until I realised I needed to remove the oddments bin first, and only then manoeuvre off the plastic surround to the gearstick. After removing all of the associated splash guards and tinware, I then had pretty good access to the remote linkage.

As I was waggling the gearstick looking for lost movement in any of the bushes, I noticed that the whole remote linkage mechanism was moving from side to side. And not just a →

7 We still did not have access to the remote housing though, as first we had to remove this metal clamp that was screwed into the propshaft tunnel.



8 The metal plate was there to secure this rubber boot in place to seal off the cabin from the underside of the car. With the metal plate removed, the rubber boot simply lifted out.

9 Finally, there was one more metal plate to remove and wiggle up through the opening cut into the carpet.

10 Now we could shine a torch in and see where the unwanted movement was coming from. This is one of two bolts that go forwards through the remote housing and into the gearbox itself.

11 And this is one of the two bolts that go in from the side, securing the housing via a U-shaped clamp. All the bolts were done up tightly, but the housing was free to move along them by a good quarter of an inch or more.

little, but as though it was barely attached to the gearbox. Closer inspection showed that there were two bolts heading forwards to bolt the extension to the gearbox, plus one from either side further back that went through some kind of U-bracket on the remote. I wondered if the bolts were simply loose, but checking with a spanner showed they were done up tightly.

So next I removed all four bolts, and also the remote linkage itself. The holes through which these bolts passed on the remote housing were very over-size, and the bolts had narrow bushes to help fill the gap. The two bolts into the gearbox had long bushes, while those on the U-bracket were shorter. It was all very curious, and it was clearly wrong. One of the difficulties on assessing a car that is new to you is realise when something is missing – spotting something that is broken is easier than knowing it is not even there in the first place.

Still not able to fathom out how the remote linkage was supposed to be secured and why mine was moving about so much, I checked out the parts book and this showed that there should be eight top hat bushes, one on each side of the four holes. The metal bushes would then go through these – the longer ones into the gearbox because the remote linkage casting is so much thicker there, and the shorter ones from the side. So I checked out Robsport's

12 Taking the fixing bolts out showed that they went through metal bushes, and had large flat washers that stopped the housing from actually slipping off over the bolt heads.

13 Taking care not to smear grease across that lovely light beige tartan interior, Simon could now lift out the remote linkage itself to see if that shed any light on the problem.

14 It made little sense at this point because the holes in the remote housing were so much bigger than the metal bushes on the bolt. Note too the swivel bush in the centre that sits on the end of the rod connected to the bottom of gear stick.

15 That swivel bush has to hook over this pin on the gear selection rod coming out of the gearbox in order to transfer your input at the stick to the cogs in the box. Keeping these two connected made reconnecting the linkage tricky in the confined space.

16 In the meantime, Simon had figured out where the problem lay – this set of eight top hat bushes were missing from the car. A new set cost £16.80.

17 And this is where they should go – one either side of each hole in the remote linkage housing, with the steel bushes through the middle. That way, the holes were filled and the bushes protected from being crushed.

website – they had these rubber bushes in stock for £2.10 each, including the VAT. I ordered a set of eight.

Going back out to the car to tidy away my tools while I waited for the bushes to be delivered, I then spotted that one wire had come off the reverse light switch. I don't know if it had been like that when I got it or if it had broken off while I was fiddling about, probably the latter, but my attempts to resolder the wire were not entirely successful, I think largely because I struggled to get the switch spotlessly clean in the crevices where the solder had to go. So I found a NOS one for sale and bought it for £18.90 delivered.

Then, as I was pushing the car about on the drive, I noticed that there seemed to be some play in the steering column. This was a little worrying, so I got a torch and waggled the wheel while looking under the dash and in the engine bay to see where the movement was coming from. It didn't take long to find – the bottom bush where the column passes through the bulkhead was missing completely, allowing the column to flex its top mount and move up and down at the bottom. Were missing bushes going to be a theme of the TR7?

Back online I went, and Robsport had a polyurethane bush for £10.74. Unfortunately, it was now ten minutes past their closing →

time, so I couldn't call and ask them to add it to my earlier order. However, unlike some places, Robsport don't fleece customers on postage, only charging £2.70 for small items like these. So I simply placed a second order for the column bush. I was, however, very pleasantly surprised when a few hours later I got a notification that I had a refund – Robsport had connected the two orders and cancelled one of the postage charges without me asking. Now that is good service!

A couple of days later, I had everything I needed and was back out in the garage. Inspecting the remote housing showed where it had moved enough to foul on the propshaft below, which explained the grinding noise referred to earlier in first and reverse. There were corresponding witness marks on the propshaft itself, but nothing seemed terminally damaged.

The rubber bushes fitted in the remote housing perfectly and the metal spacers held them securely in place, but my oh my, was it a nightmare to get the housing located properly with the bush on the remote linkage on the selector rod coming out of the gearbox. This rod had a pin on the end which went through a pivoting bush on the end of the extension, but everything had to be done by feel and the rod from the gearbox kept turning out of the way. It was a bit easier when I put the car in gear to stop the rod moving, but it still took an eternity.

Eventually though, I got the first two bolts located and after that the pressure was off. Access for the side ones was OK from above, but better from below – always remember to check a job from both sides. Many people have struggled to change front brake hoses on a Triumph Herald from underneath, for example, before realising that they can simply open the bonnet and sit on the front wheel to do the job in comfort!

I then wound the new reverse light switch in with reverse gear engaged until the reversing lights came on, checked it a few times by moving the stick in and out of reverse to confirm they came on and off as required, and then put all the tunnel trim panels back. I was rewarded with a gear change that felt much more precise, with the spring-loading now positioning the stick accurately in the central plane. I couldn't yet try it out on the road as I still needed to sort out the steering and a couple of other issues that had reared their heads. We'll get to them next month.

18 Without the bushes, the linkage had been able to move about to the extent that it could foul on the joint at the front end of the propshaft situated just below it. That would explain the grinding noise.

19 There were witness marks to this contact on the CV joint at the front of the propshaft. It did not look to have caused any permanent damage, but could this have contributed to a vibration through the seat at 60mph?

20 A NOS reverse light switch was also needed. This turned out to need a Whitworth spanner – you often find with instruments, carburettors and pipe fittings that spanners such as BA or Whitworth are required.

21 Pushing the car about on the drive also revealed another bush that was missing – one that should go here where the steering column passes through the bulkhead. Without it, the column was able to flex more than it should.

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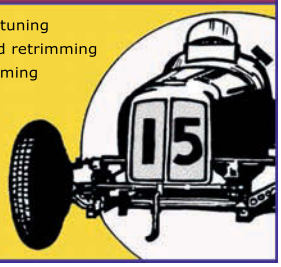

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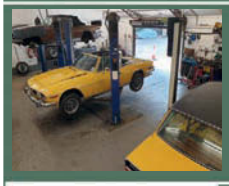

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PROJECT TR7 PART 3

After sorting out the gear selector mechanism last issue, this month we carry on with the recommissioning process with some relatively small but still important tasks.

REPORT: **SIMON GOLDSWORTHY**

Having fitted a set of bushes to the gearbox's remote linkage last issue, I had another missing bush to replace next as I'd spotted that there was nothing surrounding the steering column where it passed through the bulkhead. This meant that the steering column itself could flex around its top mount.

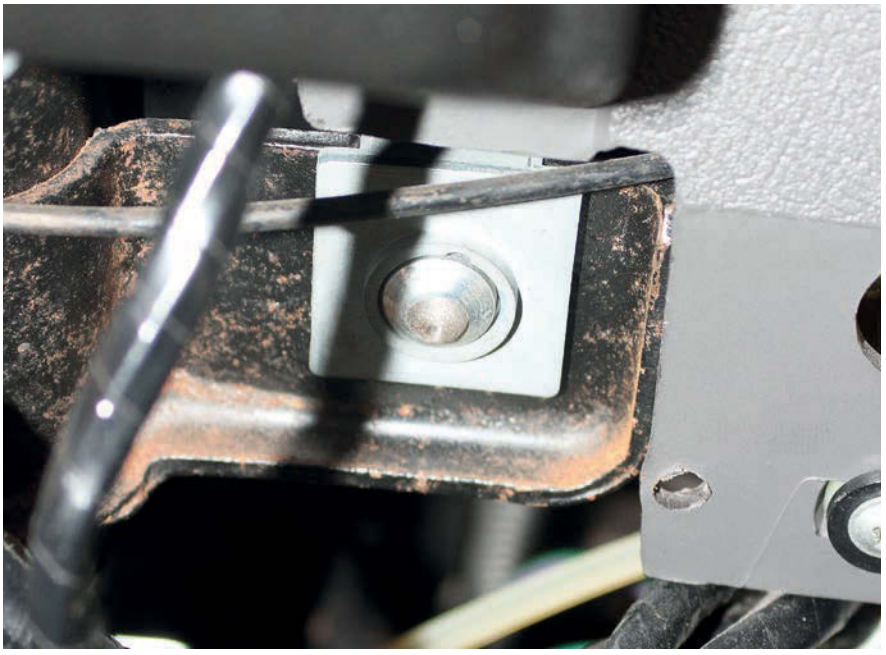
Buying a new bush was easy enough, but then I had to figure out how best to fit it. The TR7 system consists of an upper shaft that goes inside a tubular housing and runs from the steering wheel through the engine bay bulkhead. On the other side of this bulkhead there is a universal joint that fits over splines on the shaft and is secured to it with a pinch bolt. The other end of this UJ is clamped to an intermediate shaft which then runs down to the pinion on the steering rack, to which it is joined with another universal joint.

The tubular housing inside the car is secured to the body with a two shear screws, and I did not want to disturb these if at all possible because you have to chisel off the tops, or drill them and use a stud extractor. Plus, you are supposed to replace them with shear screws, and I didn't have any. Looking to disturb as little as possible, plan A was to undo the two pinch bolts on the UJ near the bulkhead and slide this off the column. Unfortunately, there was not enough slack in the system to clear the end of the shaft in this way.

So Plan B saw me jacking the car up and putting it on ramps, then crawling underneath to release the steering rack – two M10 bolts and 17mm nuts on the nearside, two M10/17mm headed bolts into blind threads on the offside. Then, with the pinch bolt connecting the rack to the intermediate shaft UJ also released, it was easy enough to slide the rack forwards and create enough space to release the intermediate shaft at each end.

I had then hoped to push the new bush over the upper shaft protruding through the bulkhead and into the hole, but I perceived a problem with this plan because there would simply not be enough space for the bush to squash sufficiently for the flanged edge to pass through the bulkhead, which it needed to do so that it was gripping the metal from both sides. However, exploring further under the

1 This was where the upper half of the steering column came through the front bulkhead. It is not obvious at first because of the large steel washer, but the bush above this was missing.



2 Simon did consider moving the whole of the upper steering column into the car, but was not keen on breaking off these shear bolts clamping the housing to the bulkhead.

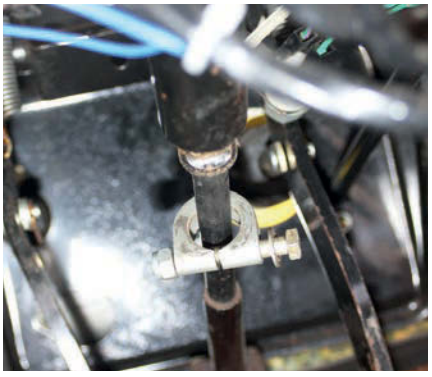
3 The pinch bolts securing the UJs to the shafts were easy enough to remove, but to create enough slack in the system to slide them off the splines, Simon undid the steering rack mounts and moved the rack forwards.

4 That enabled him to slide the intermediate shaft off the steering rack pinion, and also to remove the double universal joint connection from the bottom of the upper shaft.

5 This was the washer that had made it difficult to see that the bush was missing and that was why the steering shaft was able to move about.

6 A SuperPro polyurethane bush for the bulkhead only cost £10.74, and came with its own sachet of silicone grease.

7 Unfortunately, there was no way that the bush could be pushed up the shaft and squeezed through the hole in the bulkhead.



8 But undoing this clamp enabled the steering wheel complete with the upper column shaft to be pulled into the car and out of the bulkhead so that the bush could be fitted.

9 While messing about in the engine bay, Simon spotted something that he really should have noticed earlier – petrol pipes that were badly cracked.

10 So he replaced all rubber fuel pipes with new hose rated as R9, which should be safe for use with today's ethanol-infused petrol.

dash suggested that if I undid a clamp where the inner shaft met the outer casing, it might be possible to clear the decks. That was indeed the case, as I could then pull the steering wheel away from the dash, pulling the inner shaft through the bulkhead and out of the way at the same time.

It was still difficult to compress the bush enough to get it through the metal, but not impossible. I then wiped it with the silicone grease that came with the bush, and reversed the dismantling procedure. Happily, everything felt secure, but still turned smoothly afterwards. Now I need a test run to see how straight I have got the wheel.

I still wasn't quite ready for the road though, as I had spotted some very cracked fuel pipes between the pump and the carburettors. This is becoming more and more common these days, and something you should check on any new purchase. Fortunately I had enough 6mm and 8mm R9 pipe left in the garage from earlier projects to replace all three damaged sections.

There was another rubber-related issue though, and it is also something that I tend to find on every car I buy – the tyres were ancient. This is a particular problem on →

11 The tyres were barely-used Goodyear Eagles that looked as though they had thousands of miles left in them.

12 Unfortunately, this mark on the sidewall indicated that they had been manufactured in the 15th week of 2003 – at 19 years old, they had to be replaced.

13 A minor irritation was that the plastic surrounds to the doors' interior handles were broken, and in a bag in the boot.

14 Rather than try to glue just the cracks together (previous owner Joh had already tried that), Simon filled the whole of the screw holes with epoxy resin.

classics which cover very few miles, and there is no exact science behind deciding whether or not to replace. In this case, none of the tyres were showing any cracks or signs of distress, and their tread was like new. They were also a very good make, Goodyear Eagles, which made it all the more distressing to see that they dated from 2003. In the end, I decided that I really couldn't square my conscience with driving a sports car on 18-year old rubber, so I splashed out on a new set of the same (and correct) 185-70 R13 profile. I did leave the unused Goodyear on the spare wheel for emergency use though; I wouldn't use this long term, but it should be fine as a get-you-home measure, and certainly no worse than a modern car with a space saver. After all, this one would never have seen daylight to kickstart the degradation process.

Those were all pretty important safety steps to take, and show how important it is to inspect any new purchase thoroughly, however smart it may look on the surface. There was also a much less important issue, and I'll wrap up this issue's summary with that. When I bought the TR7, the interior door handle surrounds were not on the car, but in a bag. John, the previous owner, told me he had tried on more than one occasion to fix them, but they kept breaking. I could see where he had tried gluing them, but thought I'd give it another go using a slightly different technique.

First, I sealed up the bottom of the screw hole with tape, then I filled the hole with epoxy resin

15 Putting a strip of Cellotape underneath stopped the glue leaking out before it had set and made the cracked plastic structurally sound.

16 Holes for the fixing screw could then be drilled through the resin, and a chamfer for the countersunk head put into the top with a larger drill bit.

17 The plastic surround on the driver's door could be manoeuvred in without removing the door card entirely...

18 ...but on the driver's side, the interior weatherstrip did not appear to sit properly by the quarterlight glass.

19 So on this side Simon removed the speaker too so the entire door card could be removed and the rubber trimmed to length.

(Araldite). When this had fully cured, I drilled out the screw hole. Because the hole went through the plastic at an angle, I had to support one end n a wooden block and level the base of the hole by eye, then go slowly and gently, first with a 2.5mm pilot bit and then a 4.5mm one to provide clearance. Finally, drilling part way down into the Araldite with an 8mm bit provided the correct profile for the countersunk screw head.

Fitting first the passenger side, I unscrewed the lock button, removed the armrest and then the window winder handle. The card was still held to the door by the speaker, but by popping the card's securing clips free, I could get my hand behind and just about manoeuvre the plastic into place.

On the driver's side, I had to remove the speaker as well to get the whole card off because this was not sitting properly at the top, but kept moving away from the glass. It seemed that the inside rubber was too long and fouling on the quarterlight frame, so I trimmed that back to get it sitting properly. It still felt a little loose, albeit a little better. I also noticed that the window rose too far and had broken through the top rubber on the quarterlight frame, so that is another small job to add to my list. Finally, when pushing the car back into the garage, I heard a faint tap-tap-tap. I was pretty sure it was coming from the propshaft, and that would explain the vibration I've felt through the seat at 60mph. That was duly added to the list, too. ■

PROJECT TR7 PART 4

We continue working through the niggles that came with our TR7, sorting one problem that is not as serious as we had feared and making progress on another that seems innocuous but is actually quite serious.

REPORT: **SIMON GOLDSWORTHY**

When I bought this TR7, the previous owner, the late John Amos, did warn me that there was an electrical fault in that the voltmeter would fall to the red when you put the headlights on. He had fitted a new alternator recently, presumably in an effort to cure this, but without any success – the voltmeter would sit nicely in the central position, but fall rapidly into the red on the left, into the negative band meaning discharge.

I ran a few simple tests on the battery using my multimeter (more details in the picture captions), and everything seemed to be good there, both in terms of the battery's ability to take and store charge and in the alternator's ability to supply it. That suggested there was a problem either with the voltmeter itself, or in the wiring to and from it.

At this point, I got side-tracked with other things and it was a couple of weeks before I went back out to the TR7. This time, when I turned the key to start the engine, the starter motor hesitated for a second or two before spinning over and catching right away. So I stopped it again and checked the voltage of the battery. This returned a fairly lowly 12.4V. I couldn't see anything like a light that had been left on and the battery looked OK, but who knows – maybe the voltmeter knew something after all!

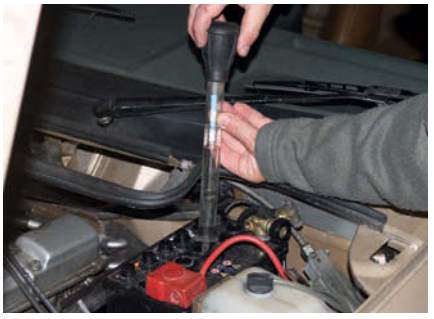
Just to be sure, I checked for a parasitic drain. First, I charged the battery. Then, with everything on the car turned off and all the

1 The voltmeter normally showed a healthy charge, but would drop into the red when the headlights were turned on, suggesting that the lights were causing the battery to discharge even though a new alternator had been fitted.

2 With the multimeter set to measure up to 20 volts, a static test on the engine showed that the battery had a healthy 12.80 volts three days after its last run.

3 Leaving the multimeter connected while turning the engine over on the starter motor showed that the reading fell to 10.84 volts, again perfectly acceptable while the starter is drawing such a heavy load.

4 Crucially it rebounded up to 14.28 volts as soon as the engine was running. It then stayed at around 14.30V when the lights were switched on so the charging system was fine, even though the volt meter started dropping.



5 A hydrometer can be used to test individual cells in a battery, but only if you have access to the electrolyte, not on a sealed battery. You want all cells to give a similar healthy reading.

6 Fortunately, a trip out pointed the finger at a faulty earth rather than a faulty battery. Simon thought he would have to look behind the instrument pod, but decided first to inspect the main earth from the battery.

7 The connector on the cable itself was badly mangled, and the thread in the body was rusty. Replacing one and running a tap through the other effected a complete cure for the erratic gauges.

8 Before packing away the multimeter, Simon also wanted to test for a parasitic drain. To measure for this, the leads need to be connected with black in the COMM socket and red in the mA socket, with the dial set to mA.

9 With the earth lead disconnected from the battery and the multimeter leads connecting between the two, the TR7 showed a reading of just 9.5mA, which is perfectly acceptable. (In the picture, he has connected the leads the wrong way round, so it is reading -9.5mA.)

10 Turning now to the hood, this was so tight that it was almost impossible to close. Pegs on the header rail need to go into two sockets on the windscreen top rail, but they were miles away from each other.

11 There was no scope for repositioning the fixing tabs or header rail on the hood as there was no excess material that could be brought into play, so Simon turned to the hood frame and undid the plastic covers on the B-posts.

12 The hinge mechanism of the hood frame is fixed to the B-post with two bolts on either side. The holes in the frame for these bolts are slotted, and on Simon's car the bolts were positioned centrally in those slots.

doors and the bootlid closed (so that no interior lights would be on), I disconnected the earth lead from the battery terminal and got out the multimeter. With the black lead on the multimeter connected to COMM and the red to A, I turned the dial to 200mA and connected one lead to the now-disconnected battery earth lead and the other to the battery's negative terminal.

The multimeter could now indicate how much power was being drained from the battery by any systems on the car that were still drawing while the engine was turned off. You would expect some current to be drawn by things such as a clock, or a radio's pre-set memory if a more modern unit is fitted. A drain up to around 50mA would be acceptable on a car of the TR7's vintage, but 25mA would be better. On a newer car with far more electronic gadgets and gizmos, a higher reading could be expected. On the TR7 though, I was losing just 9.5mA, so definitely not enough to be draining the battery.

Next, I switched the multimeter back to measuring volts and reconnected the car's battery. This time I measured the voltage across the battery's terminals while the car was at rest, while it was spinning over on the starter motor and again when the engine was running. These results are in the picture captions, but once again they showed that everything was healthy on the charging side.

So now I was down to three options – a faulty battery cell, a duff voltmeter or a dodgy earth connection. Using a hydrometer to check the six individual cells that make up the 12 volt battery, an even set of readings for each one showed that all was good and there was no dead cell. My next plan was to leave the car parked in the garage and record the battery's voltage each day for a couple of weeks to see how quickly it dropped off, but in the end there was no need.

What happened was that I was out in the car when I noticed something strange but very helpful. I had pegged before that the temperature gauge was a little erratic, but now I was watching all of the gauges extremely closely, something of a pattern began to emerge. In normal use, the temperature gauge would rise as far as halfway initially, then drop back to 3/8 as the thermostat opened. At the same time, the voltmeter would sit just slightly above the halfway mark – there are no numbers on this, just -ve on the left and +ve on the right, with corresponding red sections at each end.

However, when I put the heating fan on stage one, the temperature gauge rose immediately above the halfway mark, while the voltmeter dropped to just below half. Since they reverted back to their previous positions as soon as I switched the fan off, I could be pretty sure it was some kind of earthing problem rather than anything to do with coolant temperature. This turned from a promising theory to a racing certainty when I put the headlights up, as that immediately sent the temperature gauge threequarters of the way to hot and the voltmeter into the red, again dropping straight back to normal when I turned the lights off.

Back at base, I thought I would need to remove the instrument pod and check the earths behind it to find a common point for both gauges, but luckily I first tried the simple →

13 So after slackening the bolts, he knocked the frame down as low as it would go. The hope was that positioning the frame lower in the car, it would also lower the hoops and so release some slack in the fabric.

14 That did indeed appear to be the case, because the latch mechanism was now much closer to the slots. It was still quite tight which meant that the fabric was nice and taut, but it no longer put excessive strain on the screen.

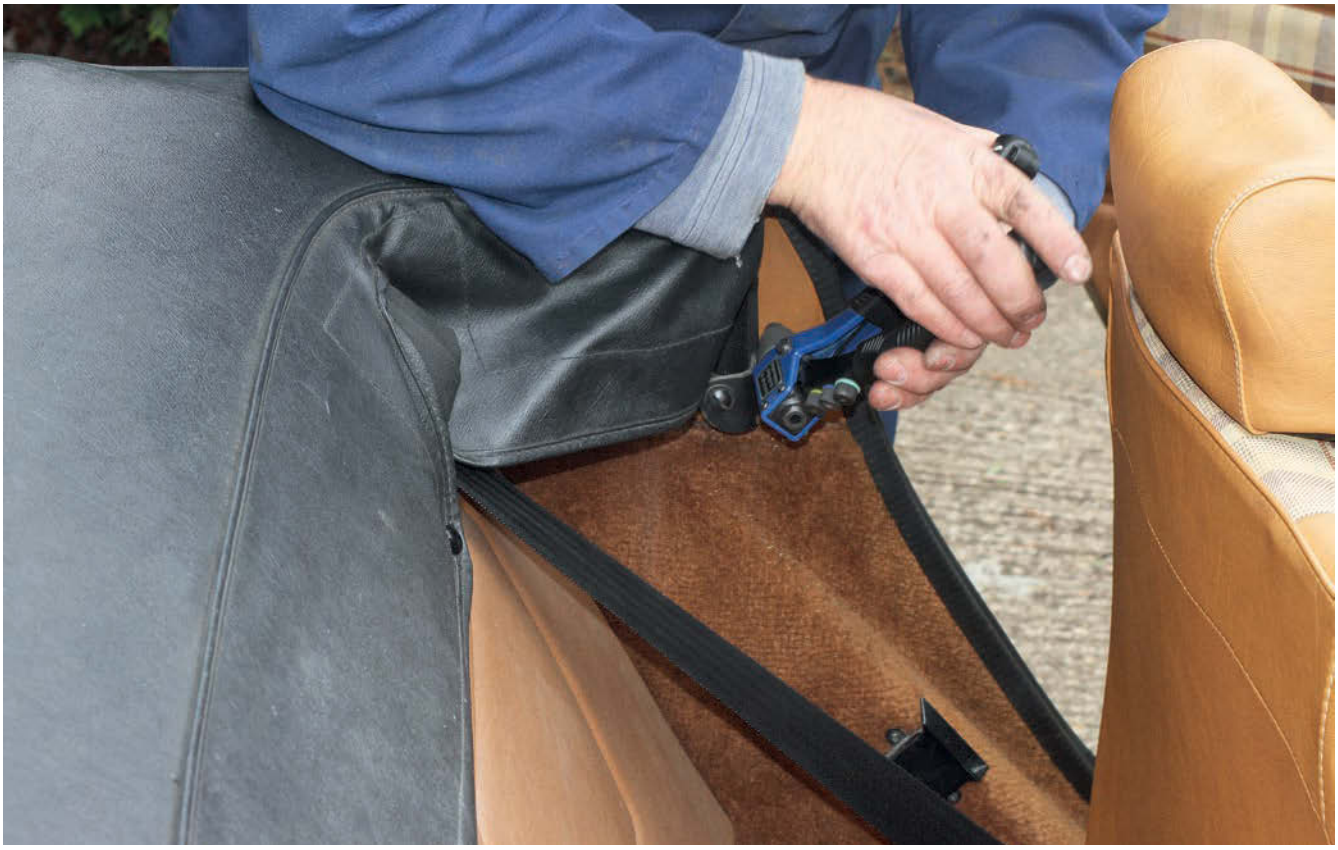
15 Unfortunately, the hood frame was now too low for the plastic covers to go back on. That was not a problem of itself, but there was a button on each of them to which poppers on the hood cover needed to attach.

option of removing and cleaning up the battery earth strap connection to the body. Amazingly, that effected a cure – no more wobbles from the gauges, and a battery that will hold its charge quite happily for weeks. Score!

The next niggle on my hit list concerned the mohair hood which John Amos had bought and had professionally fitted. This was in excellent condition, but was so tight that it was virtually impossible to secure to the screen header rail. John did tell me that he'd bought a couple of ratchet straps to enable him to fasten it, but apart from not being able to see quite how this was done, I was very concerned that this force could end up cracking the screen.

In the end I found I could close it by standing on the sill in the open doorway and putting all my weight on the roof's header rail to force it just about close enough for the tab to reach the hole and get wound in by moving the handle. Clearly this was not going to work long-term, and a related issue was that it was impossible to secure the hood cover properly when the roof was down, maybe because the vinyl cover had shrunk, but I suspect more because the new hood material is thicker than the original. Either way it made the car virtually unusable in all but the most predictable of weather, and may have been one of the factors contributing to its lack of use in recent years.

I looked all around the hood material to see if there was any way I could gain a little more slack, but there seemed no obvious prospect – the fastenings to the rear deck were so close to the edge of the material that they could not be moved further back, and I could see no other



16 The answer for now was to rivet the fastenings directly to the B-posts. (The hood cover is not purely decorative, but stops the folded roof from billowing out when it is in the stowed position.)

17 Unfortunately, moving the hood frame did not make it any easier to stretch the vinyl hood cover over the folded mohair fabric, and invariably one or two poppers had to be left unattached.

18 Forcing then on was not made any easier by the fact that the poppers were plastic – get the angle slightly wrong and the plastic would deform and never go on. Simon does have a cunning plan for the hood cover, though!.

options. Presumably a trimmer could cut the hood open and sew in a small fillet, but at what cost? Similarly, buying a new vinyl top seemed a crushing waste of money and resources.

So I thought it was worth trying something less ambitious. The folding pivots to the hood mechanism are hidden behind plastic covers on the tops of the B-posts. These unscrew with four self-tappers, and that reveals two bolts on each side. The hood mechanism these go through is slotted, and the bolts were in the mid position. So I loosened the bolts, knocked the mechanism down to the full extent of the adjustment and tightened things up again. Amazingly, that did the trick and the hood was now far easier to erect and secure, and the fabric was still plenty taut enough.

Now though, the plastic covers would not go back on because the frame mechanism hung too low. I could cut holes in the plastic or maybe grind away some of the framing, but for now I left them off. However, they each have a popper that is needed to hold down the hood cover when it is stowed. I removed this, drilled holes in the B-posts and rivetted them there. I wouldn't have chosen to drill holes, but these are not going to promote rust or weaken the car, and eventually they can be hidden behind the plastic covers anyway. For now, I needed the car mobile for a show that weekend.

I could now also get the cover to fit, but it was a stretch. I found the remains of a stud in one popper, so removed that. But I think I have an idea of how this can be altered to make it less of a stretch. I need to talk to a trimmer first. ■

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PROJECT TR7 PART 5

As we wrap up our TR7 project, we find there are a surprising number of jobs to squeeze into our last instalment.

REPORT: **SIMON GOLDSWORTHY**

This TR7 was a good car to begin with, so it was never intended to be a major restoration project. Instead, the hope was to improve it a little and correct any faults we found without having to spend a fortune on it. I had intended to have it ready for Club Triumph's Ten Countries Run later this year, but world events changed that as I decided my money would be better spent helping with the disaster in Ukraine. Instead, I hope to enjoy using the TR7 on the roads a little closer to home over the summer.

By and large the project has worked out as planned, but it can still be surprising just how many jobs there are to do on even the nicest of classics, especially if they have seen little or no use for many years. It also takes time for some problems to rear their ugly heads, as was the case with the wipers on this TR7.

Before I get to that though, I have managed to tick off the remaining items on my list of trim-related tasks. You may recall that the fabric roof was so thick that the cover would not clip over it when folded. Having pondered the various options, in the end I took it to Michael at Elliotts Restoration not far from me in Langtoft, near Peterborough. I've known Michael's dad Jason for many years, and the pair of them have now set up in business together. As well as carrying out all aspects of restoration, Michael is also getting into trimming, and he modified my cover so that it fit over the folded hood more easily.

I also have to thank the ever-generous Chris Turner of the TR Drivers Club. When Chris heard that the knobs on my heater control switches were cracked and loose, he sent me a set of better replacements from his stash of spares. When my car was on the club stand at the NEC in March, Chris had also noticed that the vinyl trim surrounding the gearstick was a slightly different shade to the rest of the interior. Once again he had a rummage around and turned up one in the correct colour, and kindly sent that to me as well. Thanks Chris!

1 This was the problem with the hood cover – it would not stretch over the folded hood and could not be secured properly. The problem was compounded by the clips being made of plastic, so they would distort if being pulled over at an angle.

2 The section of the hood cover that dropped down behind the seats and secured to the rear firewall was fine, so Michael unpicked the threads that held the rear strip (the bit that held the plastic poppers) and removed that.

3 He then bought some matching vinyl and sewed in a deeper section. He also replaced all of the plastic poppers (actually called durable dot fasteners) with more durable and forgiving metal ones

4 We still have a little tweaking to do in order to get the curve at the back of the cover lying flat against the rear deck, but crucially given the vagaries of the British weather, the TR7 is now usable with the hood both up and down.

5 The four heater control knobs had cracked where they went on the metal sliders, and so were wobbling about. Simon had planned on trying to glue them, but Chris Turner of the TR Drivers Club sent him a set of better ones.

6 Chris also sent him a secondhand surround for the gearstick, having spotted that the one in the car was a slightly different colour to the rest of the interior. We have no idea when this happened, but it could potentially have been from new!

A NEW PROPSHAFT

Next, attention turned to a vibration that had been noted on the initial drive home after buying the car. This came in at 40mph, though it did seem possible to drive through it to a certain degree as it appeared to lessen after around 60mph. I do hate driving a car with a vibration though, not particularly because it makes the car less comfortable, but more because it is an indication that something is wrong. And that something could have serious consequences – when you combine the weight of a car and its components with the speed at which certain things are turning, then you will quickly appreciate that there are considerable forces at work which may be working on large chunks of metal, and the idea of something like that finally calling it a day and snapping at 70mph is not a pleasant one.

This particular vibration could be felt through the seat rather than through the steering wheel, which suggested that it was not related to the front wheels or the steering. The tyres on the car when I got it were time expired, so I had a new set fitted and the wheels balanced. The problem remained after that, which did rather discount the most obvious first suspect of an out-of-balance wheel. Just to be sure, I swapped the wheels from front to back to see if that moved the vibration from the seat to the steering wheel, but there was no change.

The next item on my hit list of potential problems was a worn or dry universal joint on the propshaft, but checking in the workshop manual showed that on the TR7 the propshaft had a CV joint at either end, and that there was no provision for lubricating these during service. I did get under the car and try twisting the drivetrain either side of each joint, but could not feel any slack. However, talking to a friend and TR7 fanatic, he suggested that on a car which has been sitting for many years with the joint in one position, the grease can harden or rust can form internally, leading to this kind of vibration issue.

He also suggested that rather than replace the joints, it would be far easier and not cost much more to buy a new replacement shaft from Robsport which came with everything on it and was ready to fit. I duly ordered one and fitted it, but again it made no difference. That made it a bit of an expensive way of ruling out the propshaft as the source of my problem, but ultimately I was more than happy to have new and freshly greased joints on the car so it was not a big issue.

The vibration, however, remained. So next I drove gingerly down to Robsport in Shepreth near Royston, and their technician Ben took it out for a test drive. In view of the parts that had already been changed, he was confident that the problem lay within the rear axle. This could have been something as simple as a failing wheel bearing, or it could be down to a bent halfshaft or problems within the differential itself. I felt that stripping and rebuilding a rear axle was getting a bit beyond my pay grade, but Robsport boss Simon Hebditch kindly offered to give me a secondhand axle so that I could test it by substitution, and since there was only room for one axle on and in a TR7, I gratefully arranged to return the following week in a more suitable vehicle to collect it. ■ →

1 Before disconnecting the original propshaft, Simon marked the mating flanges with Tipp-Ex. Then, if he did need to re-fit it for any reason, he could rotate the mating flange by 90 degrees and see if that made any difference to the balance.

2 Placing the old and new propshafts side by side showed they were identical. The Nyloc nuts securing the flanges would have to be replaced, but by chance Simon had put the bolts and some new nuts in a magnetic dish and spotted that the nuts were not magnetic.

3 That meant the replacement nuts must be stainless steel, and Simon was not happy to use them in such a high-tension area. He checked the thread pitch on the bolts – M10x1.5 – and ordered suitable replacements instead.

4 While crawling around under the car, he also spotted that the rubber of the gearbox mount was a little cracked. We don't think it was bad enough to be contributing to our vibration problem, but is something to put on the pending list.

5 Since the new propshaft did not cure the vibration, Simon drove the TR7 to Robsport and their technician Ben took it out for a test drive. His verdict was that the problem almost certainly lay with the rear axle.

WIPER WOES

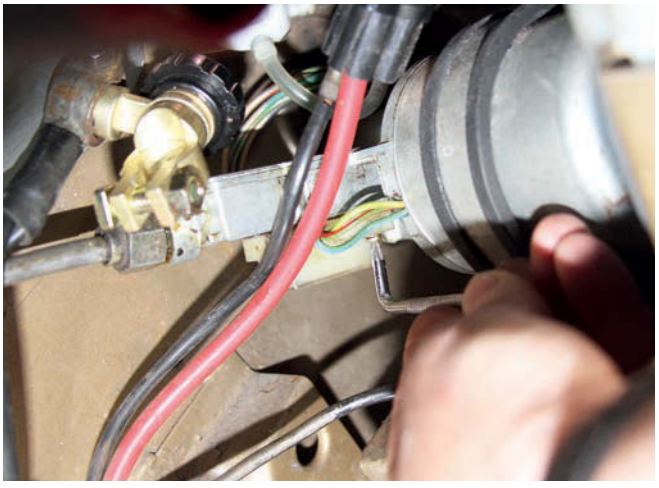
In the meantime, there had been sporadic rain on my trip down to Hertfordshire in the TR7, and this showed up a problem which I had not previously observed, quite possibly because this was my first trip out in the rain. What happened was that when I turned the wipers off, they continued sweeping. Sometimes they would stop after half a dozen uncalled for sweeps, sometimes it would take 30 sweeps or more. Flicking the wiper switch on and off might or might not have helped, but it was certainly not a reliable option, and probably had nothing to do with stopping them, but was a mere coincidence. The problem was all the worse because of the intermittent nature of the rain.

Simon Hebditch at Robsport advised that there was a plastic parking switch on the side of the wiper motor that kept the blades moving after you switched off until they were in the park position, then a contact would be broken that stopped for flow of current. Sometimes that switch worked loose, and because the contact could no longer be broken, the wipers would just keep going.

Back at base, I located the wiper motor tucked up inside the nearside front wing by the base of the screen, partially hidden from view by the battery and screen wash reservoir. Removing these obstacles cleared access, and the plastic switch was indeed loose. I made the mistake of thinking that the cam which acted on the switch was on the gear wheel inside the motor, and so I moved the switch towards this as far as it would go. After refitting the battery, pouring water on the screen and activating the wiper stalk showed that they did indeed now stop on command, but that they parked quite a long way up the screen. So I removed the wiper arms, repositioned them on the spindles and tried again. This time that parked where I wanted, but when turned on again, they first dropped down lower and off the bottom of the glass before moving only halfway up the glass and then returning to rest.

Back to the long-suffering Simon Hebditch, and he advised that the switch needed repositioning. That is when I realised my mistake – the cam that cuts off the parking switch is on the inner drive cable that takes forward and back motion from a shaft on the gear wheel to the wiper spindles. That means moving the switch towards or away from the centre of the gear wheel will alter the parking position. So I repositioned it halfway along the adjustment slot, tightened it down and tried again. This time it was spot on. ■

1 The wiper motor is tucked up on the nearside where the front inner wing meets the bulkhead. This one has the legend 'TR7' handwritten on it, suggesting that it is a secondhand replacement from a scrapyard or autojumble.



2 The parking switch underneath had come loose, so Simon moved it to the full extent of its adjustment towards the motor's gear wheel and tried to tighten up the securing screw using this S-shaped screwdriver.

3 It was difficult to get in there and tighten it up fully though, so he added a cable tie to stop it moving back away from the motor, unaware that the problem was the loose screw, not the position of the motor.

4 Eventually realising his mistake, the cable tie was removed, the wiper motor clamp removed and the wiper turned over and the screw done up tightly. A cardboard arrow instead of the wiper arms allowed for safe testing of the new parking position.

A REPLACEMENT REAR AXLE

Having returned to collect the secondhand axle, I knew how heavy these beasts were and was not looking forward to the task of changing it. However, I was out of easier options, so girded my loins and set to work.

There is no point in covering every step here as that is covered pretty well in the workshop manual. Hopefully though, a few notes of specific problems encountered on this car will be of more general interest. One of those is that the choice between metric and imperial fastenings on the TR7 does appear to be very random – the rear suspension's radius arms would be held on with one and the radius rods with another!

Of course, previous owners may have been in there and changed things and sometimes the metric and UNF/UNC bolt and head sizes are virtually interchangeable so I may have occasionally picked up the wrong →

1 The rear axle to a five-speed TR7 is a heavy old lump. This one appeared to be in good order, but its real purpose was to rule in or rule out the fitted axle as the cause of the vibration – having two the same would be supremely unlucky!

2 The rear of the TR7 had to be jacked up high to provided easier access. Note that the body is supported at no fewer than four points on axle stands and that the front wheels are chocked – never cut corners on safety.

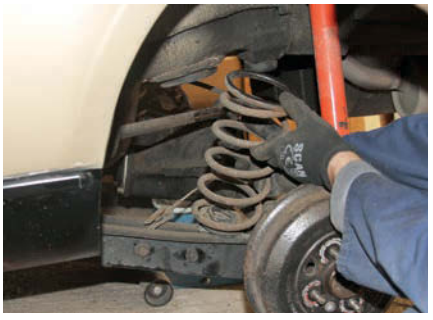
3 A warning has been stuck to the OSF inner wheelarch in the engine bay that the clutch and brake hydraulics have been filled with silicone fluid. Not everybody is a fan, but Simon has never had any problems with this fluid.

4 Because the brake hydraulics will need to be disconnected where the rear flexihose joins the metal pipes on the back axle, Simon put clingfilm under the reservoir cap – the vacuum this creates will minimise fluid loss.

5 The handbrake cable passes through this bracket welded onto the rear casing of the differential, with the second cable being one that runs from cable trunnion assembly across to the nearside wheel.

6 Unfortunately, the clamp that attaches to the handbrake operating lever would not fit through the welded-on bracket. Simon measured the position of the lock nut before removing it to aid with reassembly.

7 You are supposed to use a 6mm spanner on the end of the damper strut to stop it from turning when you undo the nyloc nut. Simon found that a pair of locking pliers were better and did not round off the end of the strut.

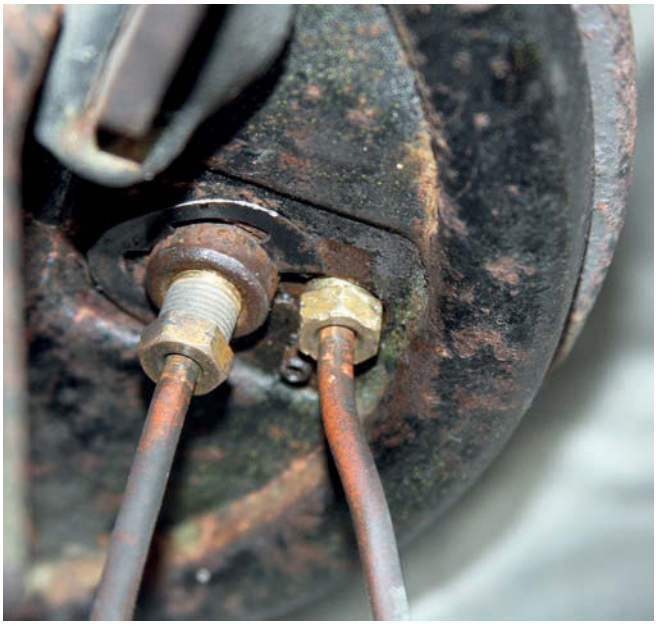


8 A bonus of this design is that with the body supported on axle stands, you can lower the rear axle far enough to release all tension from the rear coil springs, which can then be removed without needing to use spring compressors.

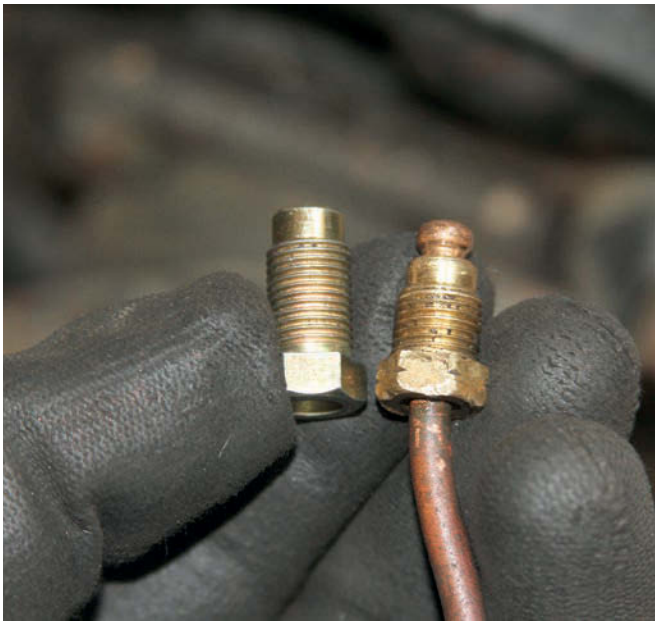
9 Ready to pull out the axle – note that the hard brake lines have already been replaced with copper pipe, one running from the flexihose to the offside brake and another running from that across to the nearside brake.

10 Because the wheel cylinders on the car had been filled with silicone fluid and the ones on the replacement axle probably had not, Simon transferred everything from the original axle across to the new one.

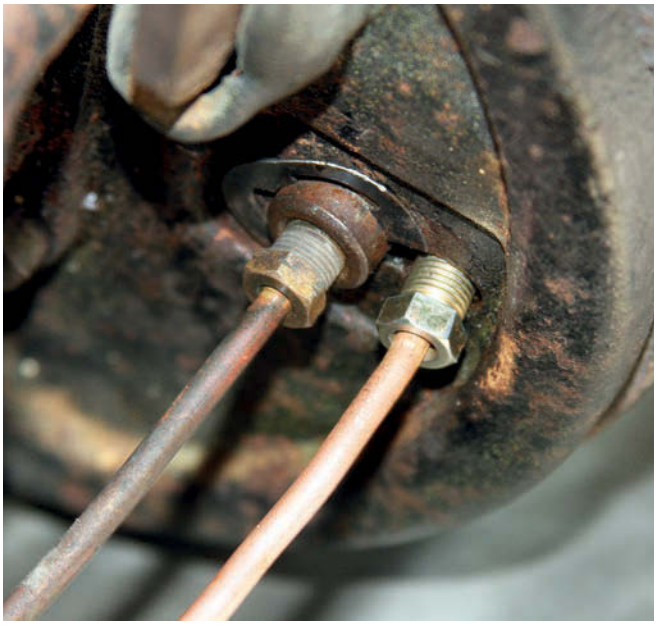
11 The workshop manual makes a point of saying that the shoe pull-off springs run on the backplate side of the shoes like this. The ones on the replacement axle had been fitted on the outside of the shoes, which might appear more logical.



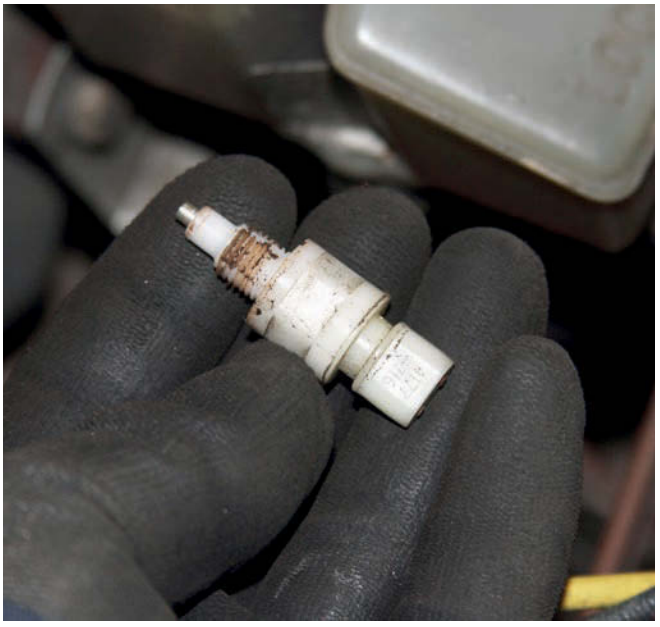
12 The union on the right is used on the offside wheel cylinder instead of a bleed nipple to take fluid across to the offside. It did not feel to be on tightly, but getting a spanner in was still difficult because of the shape of the backplate.



13 Simon figured out the problem was that the union was too short. He found a longer union, and luckily there was enough copper pipe for him to cut off the old end, swap over the unions and make a new flare.



14 The longer union moved the hex head further away from the cylinder, and it now cleared the outer ring of the backplate for easy spanner access. Simon was not happy with the fit of the circlip on the cylinder, so ordered new ones.



15 Bleeding the brakes produced a disappointing fluid flow, bet referring to the manual showed that this brake pressure failure switch had to be removed from under the master cylinder before bleeding. You live and learn!

spanner, but it does go to show that you need to go slowly and carefully on any classic, but especially one from a changeover period such as this, and if a spanner is not a snug fit, then try another. Also, use common sense as well as a workshop manual. My Haynes manual made no mention of removing the rear anti-roll bar before removing the rear axle, but quite clearly that had to be done.

Basically though, the manual was a real help, although all in all it took me a long day working alone to complete the job, and I don't mind admitting that my arms and shoulders were aching afterwards. All of that was forgotten after a short test run though, because the TR7 was at last smooth and vibration free. It is always possible, of course, that this was the first time it has been vibration-free in its life, given the patchy build quality that was endemic in the car industry in the 1970s and early 1980s. More likely though is that the years of inactivity had taken their toll. I'd love to know for sure though, so if anybody out there has the skills, the inclination and the time to help me strip, examine and rebuild the original rear axle, that would make a great postscript to this tale so please do get in touch. ■

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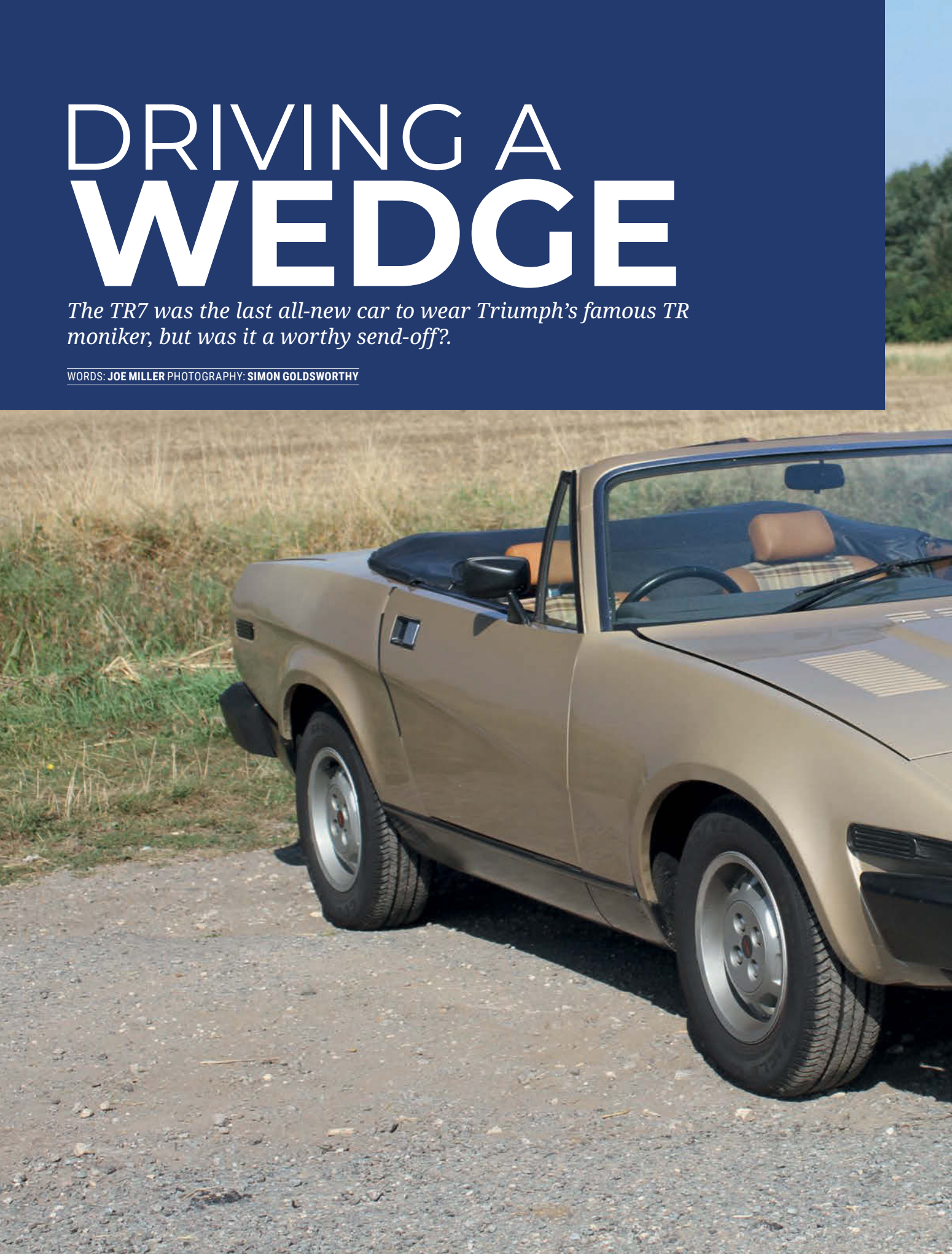
DRIVING A WEDGE

The TR7 was the last all-new car to wear Triumph's famous TR moniker, but was it a worthy send-off?.

WORDS: **JOE MILLER** PHOTOGRAPHY: **SIMON GOLDSWORTHY**




TRIUMPH
TR7
XBM 484X
TRIUMPH
XBM 484X

British Leyland's 1970s turmoil is well documented – the iffy quality and reliability of its cars, combined with frequent high-profile workforce strikes, meant its image and profits were dwindling. It didn't help that many of the brands that had been brought together under the BL umbrella had been competing for the same slices of market pie, leaving with a bloated model range that was effectively robbing Peter to pay Paul.

At the time of the merger, both MG and Triumph were acutely aware that their products were ageing, so each was working on a next generation sports car that could maximise profits in lucrative foreign markets, particularly America. MG's effort was the rakish ADO21, a mid-engined sports car with Hydrolastic suspension, a layout that wasn't a million miles away from that of the MGF some 25 years later. Triumph, meanwhile, surveyed existing American sports car owners and asked what they wanted – the response was simple mechanicals and ease of maintenance, so that's what Triumph came up with. Their concept, the Bullet, had a front-engined, rear-driven layout in the traditional mould but wrapped in futuristic, angular styling with a targa roof.

Ultimately, BL needed money to develop its family models, leaving room for only one

sports car project. MG's cars were in higher demand than Triumph's, but a traditional front-engine, RWD layout would appeal more to the Americans and be cheaper to produce. Such factors, combined with a management bias for Triumph, meant it was the Bullet concept that was chosen for further development at the beginning of 1971. MG's products, meanwhile, would get the bare minimum to keep them going.

Harris Mann was tasked with tweaking the Bullet design from something that looked rather like the Porsche 914 into the recognisable shape we now know, but immediately that American target market caused an issue. Rumours were rife of the US banning convertibles – the same rumour that had landed the Stag with its T-bar roof arrangement. As such, what was christened TR7 would be a coupe only at launch, with the targa top idea dropped. Not a rosy start…

The infamous American emissions crack-down of the period also influenced the engine for the TR7 – a lusty six-pot like the TR6 used wouldn't pass muster with US regulators, so a 2.0-litre version of Triumph's slant four lump was used, but sadly not the 16-valve version from the Dolomite Sprint. Once again, it was hardly exotic.

The ground-up design integrated the mandatory pedestrian impact bumpers more elegantly than the hastily redesigned MGB, but by the standards of the day the TR7 was unusual and controversial. Legend has it that when Giorgetto Giugiaro first saw the TR7, he walked around the car, paused and exclaimed "My god! They've done the same on this side as well." That's something of a joke amongst car designers, whereby a car in its early concept stage will have different variations on both sides to showcase possible choices, and Giugiaro couldn't believe those rakish lines were of a production car. Slightly harsh, given that BL was trying to be forward-thinking.

Leyland management was so keen to get the new sports car exported to start bringing in profits, that the TR7 launched Stateside in 1975 a full year before Britain got it. This meant American journalists got it first, too, and

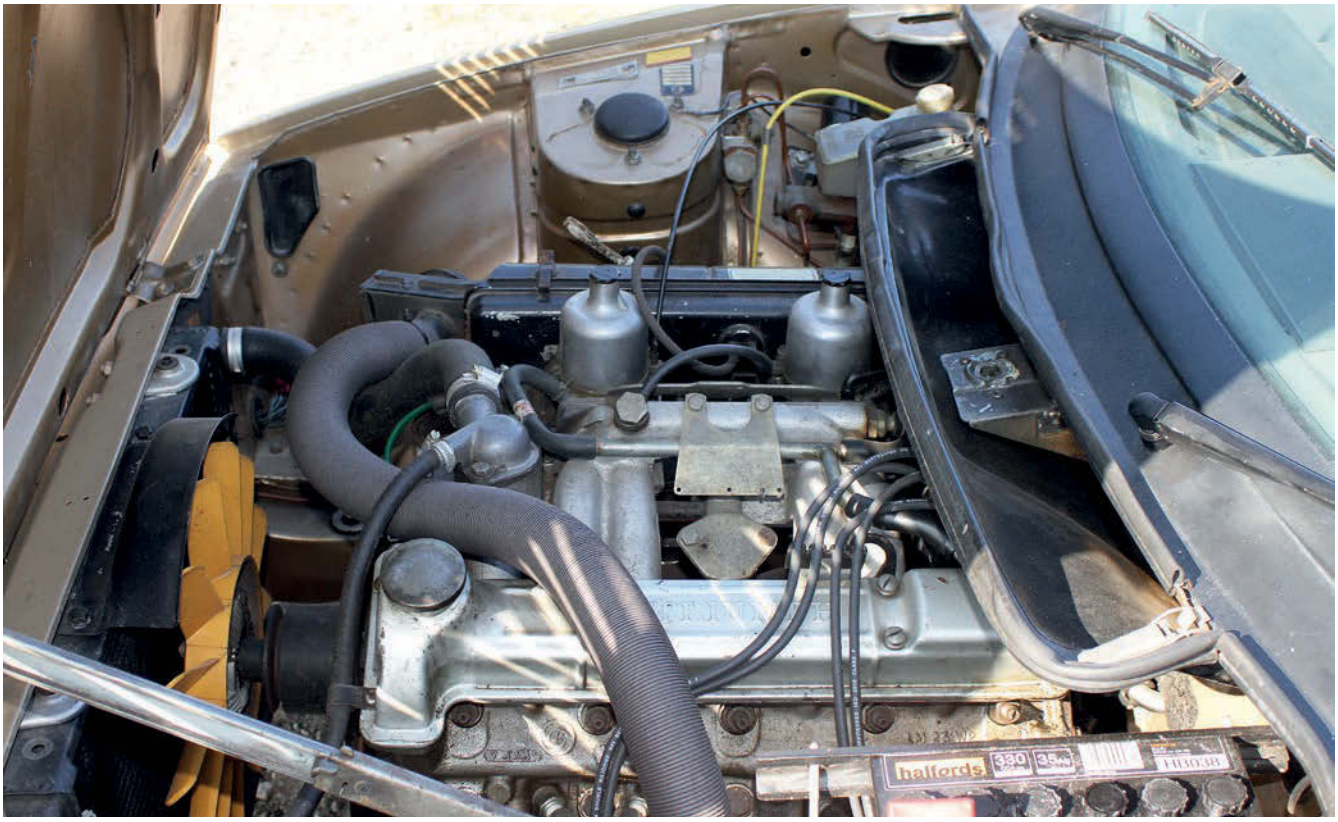
they liked the TR7 – the chassis, comfortable ride and spacious interior were particularly praised, but both American and British journalists commented that the car could use more power. The Americans certainly had a point, with the most powerful cars having only 90bhp, but the UK models could boast 105bhp.

Driving our pictured 1981 car, performance certainly seems keen enough. The 2.0-litre engine is torquey, picks up well and doesn't feel grumbly or harsh at higher revs. It's not an Alfa Romeo twin-cam by any means, but it feels livelier than the humble saloon car engine it is. The rest of the driving experience is similarly positive – the steering isn't razor sharp, but it's well-weighted, direct and the front end responds well. There is some body roll, but the TR7 controls itself well and the trade-off is a superbly smooth ride for a drop-top sports car. It's not as sharp, nimble and exciting as a Midget, but stir away on the snicky manual gearbox and there's MX5-esque easy fun to be had.

The positive reception back in period was only bolstered when it emerged that the TR7 would cost some 20 percent less than the dated Ford Capri. That, that combined with the comfort and enjoyable drive, meant things were looking good.

Sadly, it wasn't to last; a rushed development to get the TR7 Stateside meant the final quality checks were skipped and stories of overheating, disintegrating trim and faulty electrics were worryingly common. TR7 production was moved to Canley in 1978 in an attempt to improve quality, but leaving Speke meant ditching development of the 16-valve Sprint and Lynx 2+2 coupe variants, two models that could've made the difference.

But unlike so many of those BL disaster stories, the TR7 was victory snatched from the jaws of defeat; the quality was stepped up with the move to Canley, new trim options and colours were offered, a five-speed gearbox was



introduced and with the threat of a US ban on open-topped car now quashed, in 1979 there finally came a TR7 Convertible, offering the true British sports car experience and really boosting the car's appeal in the US once more.

These improvements paid dividends, with Triumph selling an impressive 140,000 TR7s in just six years. The talk of being underpowered was silenced from 1978, with the TR8 put into development sporting a 3.5-litre Rover V8. When the pre-production run became series production, the TR8 was offered only with the convertible body style. The more powerful variant was met with enthusiasm in America, and the vast majority of the 2700-odd cars sold went across the pond, with only 35 thought to have been prepared for UK sale.

During 1980, production of the TR7 and TR8 was moved, yet again, to the relatively new Solihull factory. This spelt the end of Canley and would ultimately spell; the end of the TR7 and TR8 too, with demand not increasing enough for BL to reconsider ended regular car production at Solihull too, as the plant was turned over to Land Rover production only. By October 1981, the TR was no more. It would ultimately be the last car to wear the TR badge, with the Triumph name disappearing altogether in 1984 following the demise of the Cowley-assembled Acclaim.

It's sad, really – Triumph put its all into the TR7, offering a bold design and pandering to that vital American market, who loved the car and bought it in their thousands. For all its qualities though, circumstances conspired to end the car's existence.

Many dismiss the TR7 as the poor relation compared to its predecessors and certainly not as elegant, but it remains a superb sports car that puts a smile on your face, is useable every day and is comfortable, practical and something a bit different. Enthusiasts are slowly realising how good these cars are and values are climbing, so now might be a good time to start a wedge fund...

TECH SPEC

Triumph TR7 2.0 Roadster	
ENGINE:	1998cc
MAX POWER:	107/5500
0-60 MPH:	9.8
MAX SPEED:	114
ECONOMY:	29.1
LENGTH:	4.06m
WIDTH:	1.68m
WEIGHT:	1010kg

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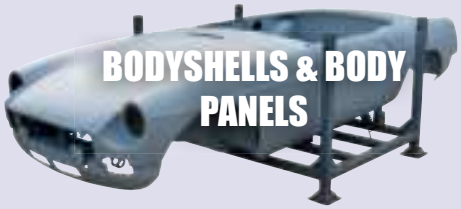

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