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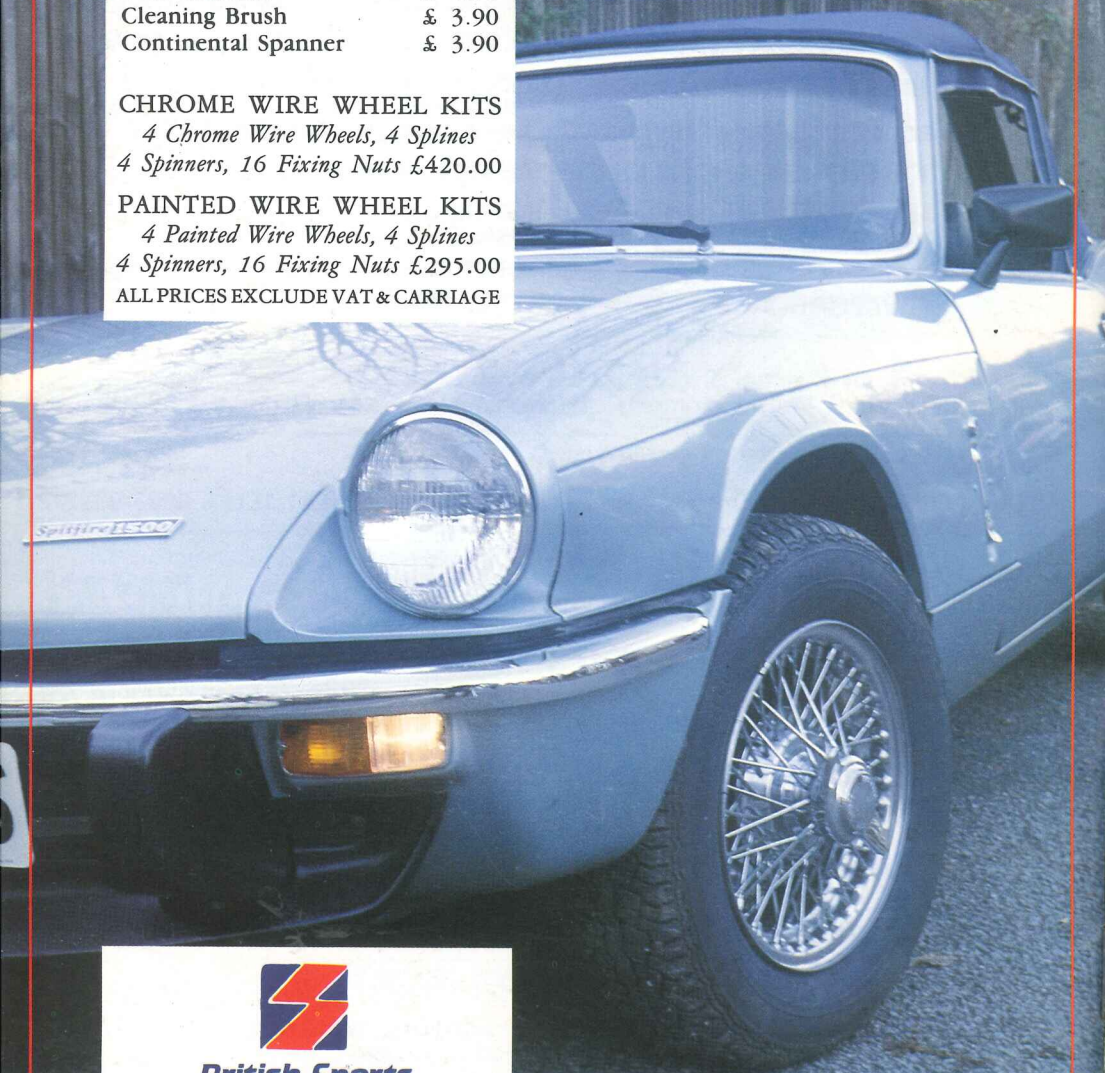
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114



THE COURIER

The Official Monthly Magazine of The Triumph Sports Six Club

VOL.10

No. 114

DECEMBER 1989

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Free to Club Members

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John Cudmore, Peter Williams, Mike Costigan, Leon Guyot, Nick Lord, Chris Childs,
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C o v e r P h o t o g r a p h

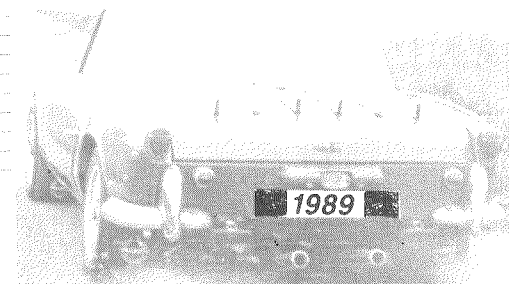
Spitfire 1500 taken at South Of England Meet May 1989

Whereas every care is taken to publish accurate information, the Editor and the Committee of the TSSC do not necessarily agree with all the views expressed within THE COURIER OR TURNING CIRCLE and cannot accept any liability for erroneous or misleading information found therein.

For a full list of TSSC Officials see page 74

EDITORIAL

Closing a decade



Doesn't time fly! 1989 certainly has and, in many respects, so has the last 10 years. For the TSSC it has been a very successful decade, which will be hard to follow. Membership, which was in 1980, around 800 members, is now heading past the 13,000 figure and is increasing at a rate of some 500 new members per month. This is quite incredible as there were many more Club cars on the road in 1980. The 1980s saw the Club build into the UK's second largest car club and 'The Courier' possibly the most informative 'monthly' of them all. Triumph cars have come of age, some 20 years after most of them went out of production.

Looking forward: consolidation is our first requirement and our continuing aim is to endeavour to keep all remaining Club cars on the road. More than ever before has the argument favoured restoring our poorer examples.

I was recently talking to the Editor of the Ariel Motorcycle Club and he commented on how Ariels were going to be used more and more on the road in future. Investment has a nasty bite - if you don't use your vehicle, nothing wears out, manufacturers/parts suppliers perish, so riding Ariels and Triumphs keeps demand up, therefore keeps our classic bikes and cars going. The moral of this is use it and enjoy it!

There will be several changes for The Courier & Review in 1990 - firstly another increase in pages up to 114, with, hopefully, a fair few going full colour throughout the year. Already in this issue you will notice a reduction in the type size to get even more in - this size will now be the norm., unless we hear that you can't read it! This continued growth is primarily to satisfy the constant quantity of 1st class articles - please keep them coming. We will now have to start work on the next decade.

Have a Triumphant Christmas and a Prosperous New Year.

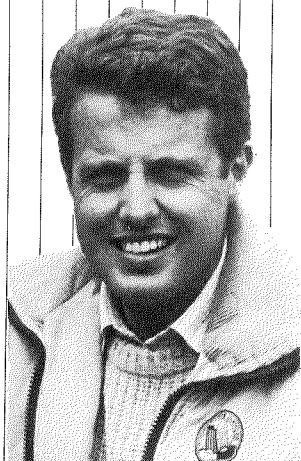
Bill & Jo Sunderland

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Plus 32 Page Classified & Area News Review

PRESIDENTS INTRO



John Griffiths

FESTIVE SEASON

I always find it strange writing this piece in early November, knowing that it will be read in December, the Christmas edition. I'd better not show this to Pam, as she wants no mention of Christmas at Chuzzlewit Drive until Christmas Eve!

But yes, that time of year is fast approaching and, no doubt, a lot of you will be "Having a bit of a do" in your Areas. This is a great time of year to get to know fellow members in your Area, so do make the effort to join in; I'm sure you'll enjoy yourself. I hope you all have a very happy Christmas.

If you're stuck wondering what to put in someone's Christmas stocking, have a look at what's on offer from TSSC Special Offers, or from TSSC Regalia. You don't even have to go out, just pick up the phone and order.

Or you could order a book from Triumph Bookshop. There are lots of great books on Triumphs that have been published over the last few years. One more recent book with some Triumph coverage is "British Family Cars of the Early Sixties". It is a long awaited sequel to British Cars of the 50's and takes a nostalgic look at cars of the 60's, including the Herald.

Another newish book is, "Lets Build a Kit Car", which may appeal to some members.

What can be better than something in the stocking to do with TRIUMPHS on Christmas morning?

MY CAR - VITESSE MKII CONVERTIBLE

A couple of weeks ago, I was asked to write a short article for a local NatWest Motor Club newsletter. Why not reproduce it in The Courier, I thought so here it is:

TRIUMPH VITESSE MKII CONVERTIBLE - 1970

YES, I drive modern tin cans as well, but to get back to basics you've got to go back a few years. Back to the days of separate chassis', rear wheel drive and motors with torque.

Well, I have to admit, I'm biased. I've been a TRIUMPH fan since I first discovered that my high chair converted into a wheeled vehicle (who remembers those?). From the age of 14 to now (36), a Vitesse of one sort or another has always been in the family, as well as many other Triumphs, including GT6s, 2.5PI, Spitfire and Heralds.

What is it about the Vitesse though? apart from the fact that they're increasing in value by about 30% each year!

Well to mind mind, you always have a job beating a straight six motor. Bags of torque, superb top gear performance, imposing engine melodies and magnificently smooth.

The twin-carburettor, 2 litre engine gives maximum power of 105 bhp pushing it to 60 in around 11 seconds (abit slow by today's standards) but from 30-50 in top in 7 seconds, which is about equal to the GOLF GTi 16V. But the magic is not just in the performance, it's the traditional, exciting manner in which it performs on the road.

The press might say to exciting indeed Vitesse have always been slated for twitchy back ends, but this was largely sorted on the MkIIs and as usual was overstated by the "kill British" press of the late 60s and 70s. It is a tremendously agile car and lots of fun to drive with verve. Driven with a bit of skill it can still get you from A to B as quickly as most things on four wheels.

I bought my current Vitesse 15 years ago. I suppose I ought to be getting

bored with it by now but I never do. Over that time it has also introduced me to a whole variety of outside interests.

For a couple of pleasing years, I drove it every day, including commuting daily from Cheltenham to Bath. The hard drives over the south Cotswolds in winter took their toll on the bodywork, so I set about restoring it.

That took a few years but later led to a few wins in Club Concours events. During this time I started to modify it, you know the sort of thing triple webbers, fully balanced engine, lowered suspension etc., etc. That led me into BARC hillclimbs and sprints and even a few class wins. I competed from Wiscombe to Goodwood, from Prescott to Harewood. One of the high spots was when a National magazine published an article entitled, "Porsche—Beater Vitesse".

The pressures of work, (move to London yawn, yawn) children and heavy involvement with a national Triumph Club saw me retire (temporarily!) from racing. It has recently been restored again and is now slowly moving back to standard specification for family fun.

Fifteen years of variety and true motoring fun. Here's to another fifteen.

The Vitesse remains an undeniably practical car for the enthusiast to own. Its separate chassis, easily detachable body panels and forward hinging bonnet make it ideal for maintenance/renovation or indeed modification. Today Vitesse continue to compete in Historic Rallying, in Hillclimbs and on the circuits. The only problem is they didn't make very many:

YEAR	MODEL	BODY	NO BUILT	VALUE *
1962-1966	Vitesse 6 (1600cc)	Saloon	22814	£2200
1962-1966	Vitesse 6 (1600cc)	Convertible	8447	£2500
1966-1968	Vitesse 2 Litre MkI	Saloon	7328	£2200
1966-1968	Vitesse 2 Litre MkI	Convertible	3502	£2400
1968-1971	Vitesse 2 Litre MkII	Saloon	5649	£2600
1968-1971	Vitesse 2 Litre MkII	Saloon	3472	£3600

VALUE* = based on A1 condition



The interest in these cars today is amazing and has made the TSSC the second largest Marque Club in Britain today!

PRAISE AND CRITICISMS

I must say, I find the new magazine Popular Classics a good read. It seems to present a fresh approach with a good sense of how to enjoy older cars. It's also prepared to say what it thinks and presents a good deal of common sense, or so it seems to me. I don't know if they're that keen on Car Clubs but perhaps that's because they don't know how much an organisation like the TSSC can offer a Triumph owner. We'll have to educate them, won't we?

The December edition of Popular Classics carries an interesting, albeit short, article on Spitfires.

Talking of Spitfires, the photo here of a superb MkIII was sent in by Miss C Curtis, with her Valuation Certificate. Doesn't it just sum up what open air Triumph motoring is all about!

I'm an avid watcher of BBC2's TOP GEAR programme but why didn't they show John Woolley's Vitesse in their coverage of the Pirelli Classic Marathon, especially as John finished a superb 7th overall. Disgraceful. ★

(We put things right keep reading this Courier - Ed)

If you are reading this magazine and do not belong to The Triumph Sports Six Club - further details can be obtained on 0858 34424

NEWS REVIEW

CAN YOU HELP?

One of our overseas friends from the Triumph Club of France has a problem. They have built an early Spitfire to Le Mans Spitfire spec, but at present they are not allowed to race it because it is fitted with an 'Ashley-type' fastback roof. They need some sort of proof that cars were raced at that time (mid to late sixties), a photograph or magazine article would do, perhaps of a car in Club racing. If you can help, please do so as I believe if the TSSC can't help, they will be unable to solve the problem. Contact me, Jonty Wild, (0462) 456315 (address as inside rear page). Whatever you can send I will FAX to the French club and return to you straight away.

S.I.P. MIGMATE 130 TURBO MIG WELDERS

The TSSC Offer (Courier 111 and 112) has proved very popular, with orders still being placed. We did originally say that the offer was for a limited period only and that is still the case, although because of it being so popular, we are now considering putting it in to a future issue of the Special Offers Brochure. However, SIP have informed that there will be a price increase of around 10% in January. Because of this, I have decided to keep the offer open during December. Prices as per Courier 112 i.e.

SIP MIGMATE 130 TURBO
P&P

Option 'Pack A'

P&P

Joddler

P&P

Crimper

P&P

Orders to TRIUMPH SPORTS SIX OFFERS —
(0462) 456315, address inside rear page)

CAR STOLEN

Stolen from Sutton Coldfield area on October 29/30th: Triumph Herald 13/60 Convertible, reg. no VBA 983J. Chassis No. YE714408L. Engine No. GE78300HE. Red with black hood. £100 reward for information leading police to recovery of vehicle. If you can help, please contact: D S Warren-Armes, 4 Little Alton Lane, Sutton Coldfield. Tel. (021) 353 7477.

INFORMATION WANTED

Can anyone tell if any 14" wheels fit TSSC cars? (i.e. stud-wise) and what cars they come from? Contact: Jonty Wild, tel: (0462) 456315.

TRIUMPH NAME

Following-up John Griffiths' article 'What's Happening to the MG Name?', did you notice this exciting article in Autocar and Motor last week (November 1st issue)? The return of the TRIUMPH name is surely the aim of all Triumph clubs. Here it is again for those that missed it: "Rumours of Rover Ragtop Speculation is rife in the US that Rover's exciting 800 coupe for the '90s (Autocar & Motor, 18 October) could be joined by a convertible. Autoweek last week claimed that a ragtop Rover prototype is ready for management approval. Rover UK will not confirm the existence of such a project but refuses to offer a firm denial.

The rumours come amid a concentrated push by Sterling to reassure dealers that the marque has a future.

Addressing a gathering of US dealers, company president Graham Morris hinted that certain names under Rover ownership (that includes MG, Triumph and Austin) could reappear on low-volume products. Autoweek claimed that this would be part of Rover's five-year plan to become a niche marketer in the US."

CALLING BOND ENTHUSIASTS

The good news for all Bond enthusiasts is that the next Turning Circle is to feature the Bond Equipe. The success of Turning Circle is down to YOU, so start writing interesting copy - be it a single page, fully-blown technical write-up or photos of you and your car plus a paragraph about your views, interests and love of the marque. All contributions large or small are welcome. Please send to Peter Williams - address as per General Secretary. Deadline copy date end January 1990 though, as always, earlier copy would be greatly appreciated. Peter Williams (address inside front cover)

PROPSHAFTS

Further to my question why should the splined joints of the propshaft be adjacent to the differential, as shown in the Triumph workshop manual (thanks Mr Hindgley). Mr James Boyce of Transcardan Ltd writes in to say that since the propshaft is balanced off the car, it doesn't matter which way round the propshaft is fitted. Nor does it have to be refitted in the same position on the differential and gearbox flanges. However, should the propshaft be dismantled for reconditioning, then to preserve the balance it is essential that the flanges and splines are replaced in exactly the same orientation and position relative to each other.

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J A Thomason

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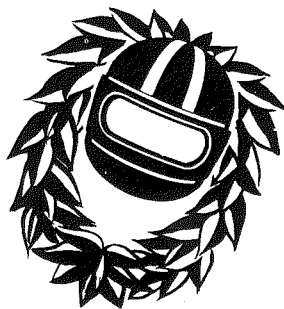
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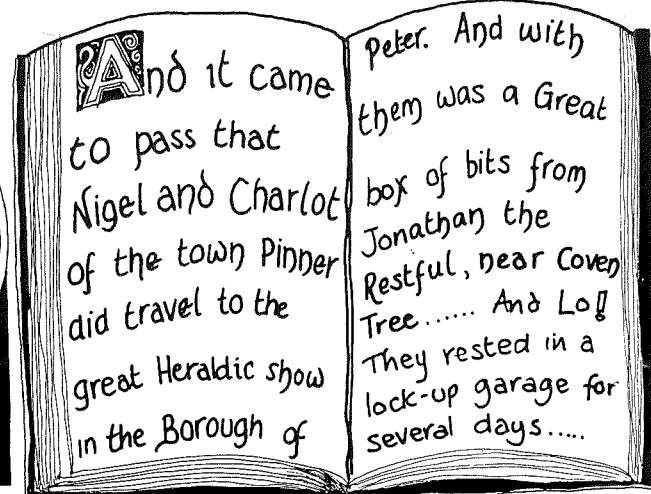
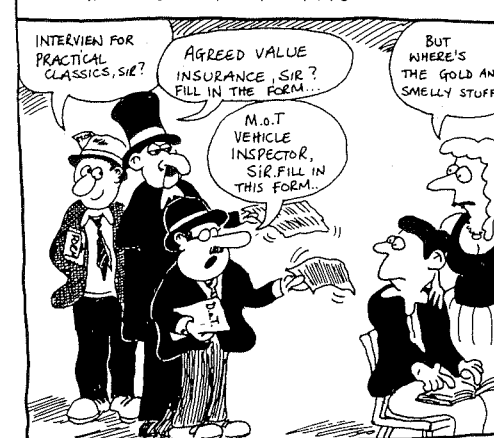


BY CHRIS SHERIDAN

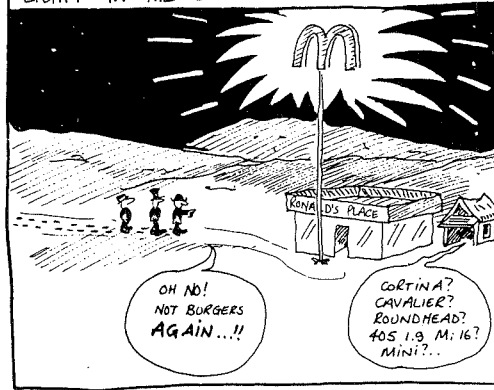
"AMIDST MUCH BANGING AND FOUL LANGUAGE, A CHARIOT WAS MADE FROM THE BOX. AND HE WAS NAMED..."



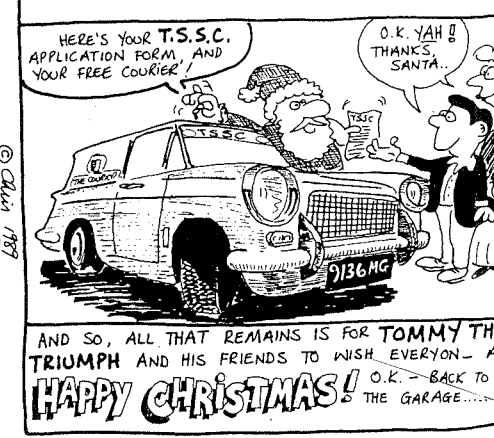
... AND ALL BEARING GIFTS ...



AT THE SAME TIME, THREE MEN JOURNEYED TO THE LOCK-UP, GUIDED BY A BRIGHT LIGHT IN THE EAST....



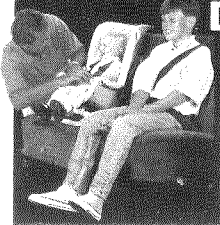
... BUT THE BEST VISITOR WAS STILL TO COME!





Mike Crewes

THE NEW SEAT BELT LAWS AFFECT DRIVERS AND CHILDREN IN THE BACK OF CARS.



COP SHOP

WHERE YOU FIT IN.

As from 1st September 1989, if seat belts or child restraints are fitted in the rear of a car, it is the driver's legal responsibility to see that children under 14 years of age use them. Not the mother's responsibility, not the father's, but yours as the driver... even if it is the first time you ever gave a child a lift.

WHAT'S 'APPROPRIATE' FOR THE CHILD?

Ideally, a child should be restrained in a purpose-designed restraint appropriate to the child's weight. The restraint will be labelled to show the weight for which it has been designed. The term 'an appropriate restraint' thus includes all of the following:

FOR CHILDREN UNDER 1 YEAR OLD.

For children under 1 year old, a carrycot which is itself restrained by straps or an infant carrier.

Important: if there is a child restraint in or on your car and there is space for it to be fitted without the use of tools, it is considered available for use by a child of the appropriate age and weight. It must be used.

Over 60 children are killed and over 7,000 injured while travelling unrestrained in the rear of cars each year. Three-quarters of these lives could be saved and two-thirds of the injuries avoided, if they all wore restraints.

The essential point is that the seat belt or restraint should be appropriate for the age and weight of the child. If it is, but not used by the child, you risk a £50 fine. (The child risks far more: greater injury or even death in a crash.)

This is in addition to existing seat belt wearing laws for car drivers and front seat passengers - all of whom must be restrained, whatever their age.

FOR CHILDREN OF 1, 2 OR 3 YEARS OLD.

For children of 1, 2 or 3 years old, an appropriate child seat or harness or a booster cushion used in conjunction with an adult belt.

FOR CHILDREN OF 4 TO 14 YEARS OLD.

For children of 4 to 14, an adult belt.

EXCEPTIONS TO THE LAW.

A child does not have to be restrained if...

- △ all the available, appropriate restraints are being used by other children. In other words, not all children in the car have to be restrained, but all the available restraints must be used if they are suitable for the children in the car. This allows large families or groups of children to travel together without breaking the law.
- △ the seats are occupied by adults who are restrained. (Why priority to adults? Because the heaviest unrestrained passengers can cause most injury to others when thrown around the car in a crash.) However, adults must not deny a child the protection of a seat belt by sitting in that seat and not using the belt.
- △ or because the seats are occupied by restraints inappropriate to the child's weight which can only be

removed using tools.

- △ or because a restrained carrycot, which cannot be carried elsewhere and is occupied by a baby less than a year old, is on the only available seat.
- △ or because the seats are being used by passengers exempt on medical grounds from wearing a seat belt.
- △ or because the only available seat is folded away to make room for luggage.
- △ or if the child has a medical exemption certificate issued by a doctor.
- △ or the child is disabled and wearing a disabled person's belt.
- △ or if the child is travelling in a licensed taxi or hire car where the rear seats are separated from the driver by a fixed partition.

If rear seat belts have NOT been fitted: while the new law does not require rear seat belts or restraints to be specially installed, it is far safer for you and the children you drive that they should be. And be used. All cars built after 1981 already have the anchorage points in position.

THE LIFE SAVERS.

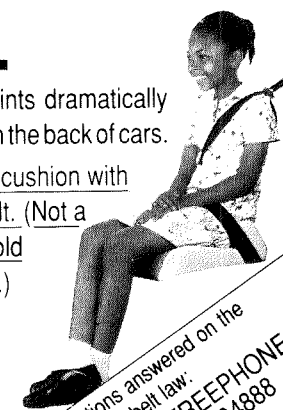
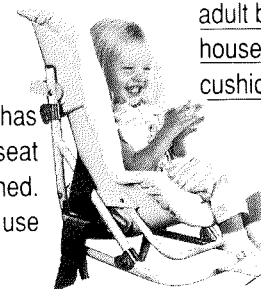
The use of safety belts and child restraints dramatically reduces the risk of death and injury to children in the back of cars.



Rear facing infant carrier.

Child safety seat.

Booster cushion with adult belt. (Not a household cushion.)



No change in the front. Since 1983, it has been compulsory for car drivers and all front seat passengers of whatever age to be restrained. Children who are less than one year old must use a child restraint.

IMPORTANT. If you feel your child has definite medical reasons why he or she should not wear a seat belt or use a child restraint in the front or back of a car, you should apply to a doctor for a medical exemption certificate. There may be a charge for this. You will need to show the certificate if a policeman asks why your child is not using an appropriate restraint which is available to be used.

Free examinations. If you are entitled to certain Social Security benefits, your child can obtain a free medical examination through the Department of Transport. Children registered as disabled are also entitled to a free examination.

For an application form, please write to Department of Transport, Room C18/21, 2 Marsham Street, London SW1P 3EB.

Your questions answered on the new seat belt law:
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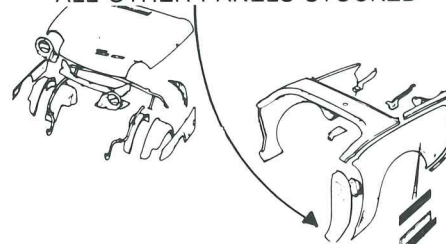
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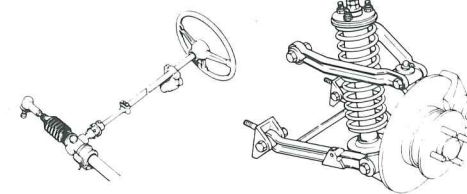
ALL OTHER PANELS STOCKED



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Track Rod Ends	£4.95
Lower Steering Joint	£10.50
Vertical Link (State Model)	£32.00

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STANPART Trunnion Block/Bushes	£12.00
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Rear Shock Absorber (Shop Soiled)	£10.00
Top Ball Joint	£7.90
Spax Adjustable Shocks Front	£27.50
Spax Adjustable Shocks Rear	£27.50



ROTOFLEX REAR SUSPENSION —

Rear Shock Absorber GT6	£16.50
Rear Inner Wishbone Bush	£4.90
Rotoflex Couplings inc. Bolts	£21.00
(Genuine B.L. WILL LAST!!!!!!)	
Rear Shocker Mounting GT6	£12.50
Complete Bush/Spacer Kit	£19.50
Rear Spring Eye Bush	£4.95

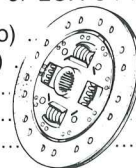
NON ROTOFLEX REAR SUSPENSION —

Driveshafts	£45.00
Wheel Bearing Kits (all seals inc) ..	£9.50
Rear Trunnion Kit	£2.50
Universal Joints	£5.00
Wheelstuds90
Rear Spring Eye Bush	£4.95

CLUTCHES —

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Herald/Spitfire (Telco)	£29.50
Herald/Spit IV (B&B)	£49.56
Spit 1500 (B&B)	£57.00
Vitesse/GT6 (LUX)	£47.50
Vitesse/GT6 (B&B)	£69.00



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FESTIVAL OF WHEELS - GLASGOW 1989



This year's Classic, Vintage and Custom Car Show was a great success with first rate club stands and a great cross-section of vehicles all under one roof.

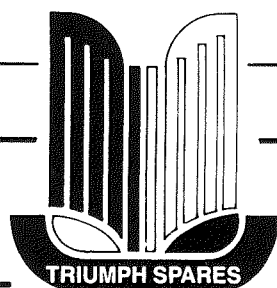
Our Club stand attracted a lot of attention with five exhibits which were all immaculately presented. The efforts of Club members who manned the stand have been adequately rewarded with a substantial increase in new Scottish members.

Thanks go to the exhibitors, namely: Chic Doig - Spitfire rolling chassis, Ian Wheeler - Herald 13/60 convertible, Ken McLure - Spitfire 1500, Jimmie MacGregor - Vitesse MkII convertible and Hugh Roberts - GT6 modified. Hugh and Chris's beautiful GT6 won the best car on the stand and went on to win the "Best Car of Show" prize of a silver plate. This was a very pleasant surprise and certainly made the long trip from Plymouth worth the while. Not only that, but brought the 'Triumph Sports Six Club' some recognition in Scotland.

The other vehicles on the stand were all of a very high standard and won the hearts of many a visitor who were only too happy to reminisce with the owners.

Many thanks for the help and support of members in presenting the stand.

John Malcolm



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WHAT ARE YOU DOING IN 1990?

The time has arrived for me to start compiling the Events Calendar for 1990. It is very important that, if you are considering running a National or Regional TSSC Event, you give me the proposed date as soon as possible. The same applies to anyone having dates of National and Regional shows at which the TSSC will be represented.

I want to be able to publish the 1990 TSSC Events Calendar as early as possible, hopefully in January or February, therefore, well in advance of the 'season'. It really is vital to the success of your event for it to be in that first issue of the Calendar and to have Club backing. The first issue of the Calendar is printed on a two colour, separate sheet, which is given to all existing members, all new members joining and is often given away to interested parties at major shows. Because of the cost of printing, it is not possible to reprint with changes, so if you miss the first issue, you will not get in to this version of the Calendar.

It is also vital that your event is officially recognised by the Club. If you do not register it, you will not receive financial help, appear in the magazine, receive Club equipment or receive any other Club assistance available and remember, event dates are accepted strictly on and first come, first served basis and it is important to avoid embarrassing date clashes.

So if you are organising or helping to run one of the types of events mentioned, or know anybody who is, then contact me: Jonty Wild, 13 Common Rise, Hitchin, Herts. SG4 0HN, tel: (0462) 456315.

JOHN KIPPING

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Vitesse	£55.00
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Special Offers NEWS



SCULPTURED MODELS:

Many members are now familiar with the very high quality sculptured models sold by the TSSC via the Special Offers Brochure. The range presently only advertises the Herald 1200, 13/60 and Vitesse II convertibles and the Spitfire IV, 1500 and GT6 III. The news is that the range available has been increased and now includes the: Herald 13/60 and Vitesse II saloons. The costs are as per the TSSC Offers Brochure, i.e.



Unpainted - £21.85 + £3.50 P&P
Painted (as your own car)
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ORDER NOW FOR CHRISTMAS

It is hoped to expand the range again soon to include the earlier Spitfires and GT6s. There are other models that would be fairly easy to produce, but a minimum number is required to make the work involved worthwhile and economic. But, because of the relative rarity of the cars that I have in mind within the TSSC, I am not sure if there is sufficient demand. So if you own one of the following vehicles and are interested in an unpainted or painted version, then drop me a line to register your interest and if the minimum number is achieved (or even if we can get close!) I will try and organise production.

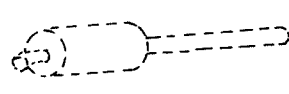
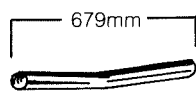
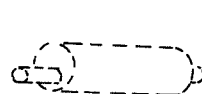
HERALD 1200 ESTATE, HERALD 13/60 ESTATE, COURIER VAN, HERALD COUPE (SMOOTH OR RIBBED ROOF)

Write to: TSSC OFFERS Jonty Wild, 13 Common Rise, Hitchin, Herts SG4 0HN (0462-456315)

BOND EQUIPE STAINLESS STEEL EXHAUSTS

Some time ago I tried to establish what exhausts were fitted to the early Bonds, i.e. the GT 2+2, the GT4S and the GT1300, so that we expand the range of TSSC stainless steel exhausts to include these cars. My theory was that they were a combination of Herald Spitfire parts. I asked for any clues that members could give me to support this. Unfortunately, at that time, no-one could help. However, I now think that I have solved the problem. I have found out which boxes and down-pipes were used and I presently only need one piece of information to be able to supply these systems.

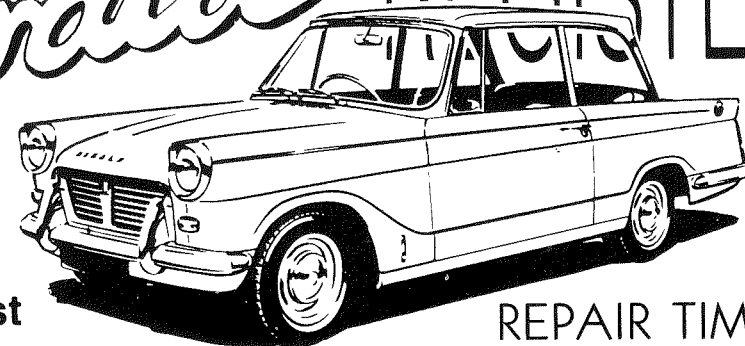
There is a connecting pipe that joins the two boxes, which I believe is a shortened version of a similar pipe from early Spitfires. I have a sample of this pipe (as shown below), but I need confirmation. So please, if you own an early Bond which has a system like the one shown below, contact me, details as above, so that I can send the sample for comparison - your help will be much appreciated by me and by other Bond Equipe owners.



38mm

38mm

Herald REGISTER



Chris
Longhurst

REPAIR TIMES

HOW LONG SHOULD IT TAKE??!

Motor manufacturers publish "Schedules of Repair Operation Times" for their models to guide garages in quoting for repair times. According to the December 1960 schedule for Triumph Heralds, the following times are valid for cars in "good" condition. Allowances are made for non-productive times (parts from stores, finding tools, final resting).

MECHANICS:

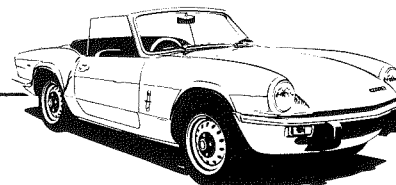
Engine + Gearbox (remove and refit as a unit, detach and refit gearbox)	4 hrs 30 mins
Adjust tappets	30 mins
Cylinder head (remove and fit gasket)	3 hrs 00 mins
Timing cover (new seal, gasket, chain tensioner)	4 hrs 00 mins
Clutch (remove gearbox from inside car and renew clutch unit)	4 hrs 00 mins
Propshaft (remove and refit and fit joints)	2 hrs 15 mins
Halfshaft (remove and refit, renew UJ)	2 hrs 30 mins

BODYWORK:

Bonnet (remove, refit new, change fittings, align)	8 hrs 15 mins
Roof (remove and refit - saloon)	4 hrs 30 mins
Rear body (remove and refit new, includes roof off, seats, carpets, petrol tank, sills out and replace)	26 hrs 00 mins
Body complete (remove complete, change chassis frame and refit body)	40 hrs 45 mins

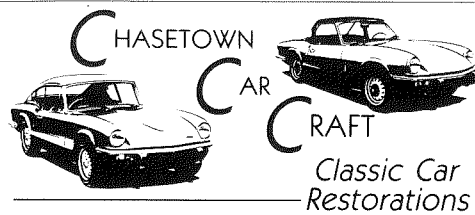
A few examples from the manual; can you do it as quickly (or slowly)?!

MERRY CHRISTMAS



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Spitfire IV/1500	£63.00 + VAT	2.80
Herald/Vitesse	£58.00 + VAT	2.80

Quality Carpets		
Spitfire (Edged & with (gear shift gaiter)	£40.00 + VAT	3.50
Herald/Vitesse	£40.00 + VAT	3.50
GT6 (inc Tailgate area)	£60.00 + VAT	4.60

Sterring rack (all models) - exc £20.00 + VAT 4.00

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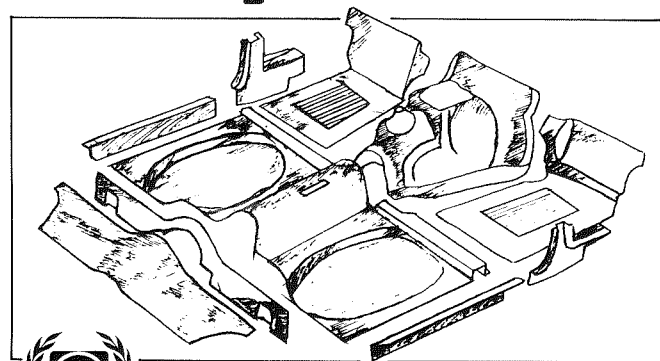


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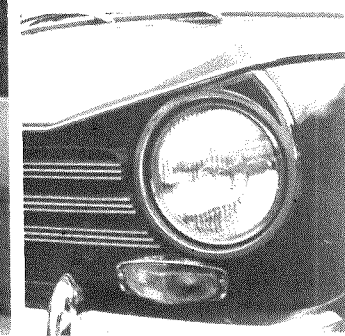
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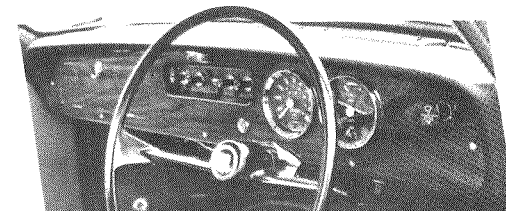
HERALD 13/60

This month's photo was supplied by Les Allen of Redruth in Cornwall. The car is mostly original, though with a few personal touches. It has covered 110,000 miles and has been in Les' hands for 15 years.

The Model Name 13/60 has nothing to do with the Treaty of Bretigny and Ransoming the King of France as John Griffiths lectured back in 1984. The name is derived from Triumphs wish for a model name to express the power of their new model, i.e. 1300 cc and 60 bhp. The numbers are not factually correct; Triumph rounded-up or down to make a short, easy to remember title. Thank goodness they did, or you would now be reading the 1296/61 column.

The model was announced in August 1967 as a stop-gap pending the introduction of a new model to completely replace the Herald. The Triumph 1300 Saloon code name "AJAX" originally planned as the replacement, was now to be a "luxury" small saloon in its own right. With the 1967 Earls Court Motor Show fast approaching, Triumph decided simply to update the existing 1200-12/50 range, the Motor Show cars actually being converted 1200s.

The 1200 Herald acquired the 1300 cc 8-port engine intended for the AJAX project (a down-tuned version of the contemporary Spitfire engine), the transmission being up-graded to accord with the Spitfire and Vitesse in production at that time. The interior was brightened up with Vitesse front seats and the rears being moved down and back to provide increased leg room. The rear quarter trim panels now had cut-outs to give increased elbow room.



The dashboard design later used in the Vitesse 2 Litre Mk2, though with additional dials.

The dashboard was an all new design with two large dials for speed, with a few warning lamps and fuel and temperature with a few more warning lamps. The rest of the switch gear with the exception of the one handed washer/wiper control was housed in a recessed panel at the centre of the dash.

Externally, the car acquired the Vitesse style of bonnet, though with single 7 inch headlamps and a new design of radiator grille. The bonnet also lost its Standard Triumph shield but retained the word TRIUMPH. The wheels acquired new trims though the nave plates (hub caps) remained the same. At the rear, the boot lid had new badges showing both the Triumph and Herald 13/60 names and a new style of number plate light which also doubled as a boot light, with the lid open and the side lights on.

The front disc brakes acquired larger 14LF calipers, giving an extra 6 in² to the braking area.

This was the last serious attention Triumph gave the Herald range and the car changed little until its extinction in 1971. A few changes did occur, however, and although some were documented, others were not.

The wiper drive mechanisms were changed to those of the new Toledo and 1300 saloons. Because these were wider cars this necessitated moving the wiper arms further apart. On later cars, the nearside spindle emerges on the outside of the washer jet. To achieve this the windscreen surround and deck assembly needed to be re-drilled and thus new part numbers issued. This occurred at body numbers GET 28836 (Saloon) RET 8681 (Convertible) and EET 9034 (Estate).

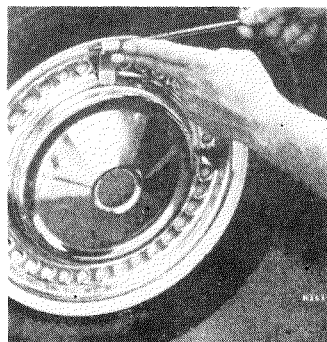
Metal grille bars were replaced with plastic from commission number GE 69234.

Finally, at a point very late in the production run, steering locks were fitted. The column of the MkIV Spitfire was used and a new dashboard, without the ignition switch was fitted. Unfortunately, no records are at hand to show when this change occurred, so I need your help. The earliest car I have registered with a steering lock is GE 81785. If your car is earlier than this, please let me know.

The saloons finally ceased production in December 1970 with the introduction of the Toledo, the estates and convertibles lasting a little longer until May 1981 (they were not replaced).

Next, a belated thank you to Jonty for helping lift the body off my estate.

Lastly, unfortunately from now on I will not be able to reply to any written queries unless they are accompanied by an S.A.E.



*New design used solely on the 13/60.
Saloon and Convertible Part No. 214492
Estate Part No. 214771*



Plastic grilles were fitted from GE69234

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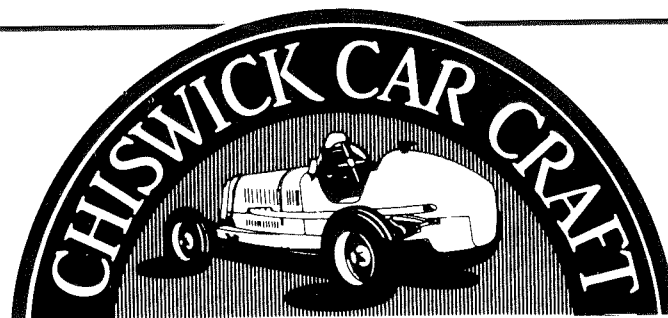
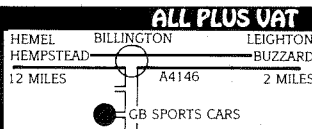
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BOND *Equipe* REGISTER

Peter Jacklin

As promised, here are some further details of members' cars:



1. SDB 696J: a very smart, red 2L MkII, in fact, the latest one on the Register, which is owned by Phil and Sue Evans from Cumbria.



2. DHN 456H: originally a Jersey registered car, now enthusiastically owned by Reverend Bob McDonald from Bradford. This is the latest convertible known.



3. HBK 430E: a white 4S MkII in nice condition and owned by E J Lincoln from Cornwall, who is also restoring a 4S 1300.

It has been brought to my attention that the conversion of the rear reflectors on the 2 + 2 to fog lights mentioned in the October Courier, may not strictly comply with the Motor Vehicle Regulations, as the minimum separation required between these lights and the brake lights is 100 mm. This is not possible with the standard arrangement, due to the reflector and the side/brake lights being adjacent. One way of overcoming this problem is to change over the relative positions of the side/brake and indicator fittings. There is at least one Equipe that I know of running around with this arrangement, since its rebuild! Also, don't forget that a warning light should be wired into the fog light circuit.

Now that I have set up the Register on computer, I thought it might be worthwhile publishing the revised earliest/latest list for each model, plus the current state of the register, so here it is:

Earliest	2 + 2	516 FYL	Serial No	101	(101)
Latest	2 + 2	BVE 626B	Serial No	541	(544)
Earliest	4S	ARN 176B	Serial No	1004	(1001)
Latest	4S	GBM 357E	Serial No	2904	(2934)
Earliest	4S 1300	RAB 2F	Serial No	2942	(2935)
Latest	4S 1300	PER 382J	Serial No	3479	(3505)
Earliest	2L MkI	MRY 7F	Serial No	4041	(4000)
Latest	2L MkI	RAY 710G	Serial No	4586	(4590)
Earliest	2L MkII	EJ 3	Serial No	4617	(4591)
Latest	2L MkII	SDB 696J	Serial No	5427	(5431)
Earliest	2L Convertible	DPU 334G	Serial No	4692	(4614)
Latest	2L Convertible	DHN 456H	Serial No	5362	(5431?)

(Figures in brackets are the actual first/last Bond Production serial Numbers)

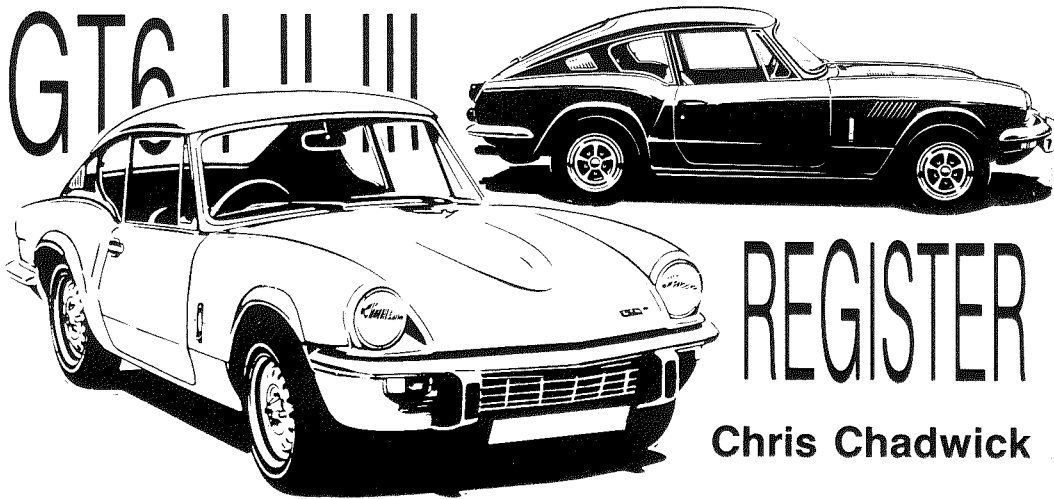
This is the up to date position as taken from the records in my possession. Many 2L I.V.R. forms for some reason do not show Serial Numbers and, as we do not have any Factory Records for 2Ls, I cannot obtain them from Commission Numbers as with the 4-cylinder cars. Any comments or updates are welcome.

The totals of each model on the Register are as follows:

2 + 2 = 27
 4S = 95
 4S 1300 = 56
 2L MkI = 63
 2L MkII Coupe = 53
 2L Conv. = 40
 2L (no model) = 28
 Model not known = 6

GRAND TOTAL = 368,
 this represents 8.4% of total production.

Finally, a Merry Christmas and a Prosperous New Year to you all. Don't waste those long, winter nights, get to work on those cars ready for next year.



REGISTER

Chris Chadwick

The classic car enthusiast by now seems to be very well supplied with remanufactured parts. We are all very pleased because without the efforts of the tradespeople involved, we would be unable to replace those car parts that wear out. Yet occasionally a part is overlooked, perhaps because there could be little profit in making such a small item or perhaps because a modern equivalent is available. Thus, although it is by now relatively easy to keep a classic car provided with major 'service' parts, less hard-wearing parts can be more difficult to get hold of.

Quite a few of these 'difficult' bits are now nearing the end of their useful life on my own car and I have, therefore, made a point of buying replacements whenever I have seen them for sale. This year I decided that I would spend an entire day hunting for some of the bits still outstanding. What better way to spend a day than at Beaulieu?

The 1989 Beaulieu Autojumble was the largest ever and a single day could hardly have done justice to the diversity of stalls and other attractions. This year I found Beaulieu a little difficult to reach because the New Forest was ablaze in the summer heat, so that traffic had to be re-routed through Lyndhurst. But I managed the best part of an afternoon 'on site' and felt quite pleased with myself. First, I was after a pair of original GT6 horns. The GT6 had Lucas 2H or Lucas Clearhooter horns fitted as standard and my own MkIII car had the latter when new. Lucas Clearhooters seem to be very scarce today. I last saw a set on a Triumph 2500 saloon and I think that they may have been fitted to the more upmarket British Leyland cars of the era. However, this is pure guesswork on my part. The original horns on my car packed-up long ago and, although I have occasionally fitted replacements, they have never lasted for long, with the more high-pitched of the pair seemingly failing the sooner. Of course, I could always fit a modern plastic replacement but this would cause a few raised eyebrows amongst the concours boys!

If your own car has Clearhooters, do keep an eye open for them on your travels. They will probably be very cheap, perhaps no more than one or two pounds. But they are increasingly difficult to find. It may be that your car has the alternative Lucas 2H model and, if so, you are probably a bit better off since every second BL car in a scrapyards has them. But for how long I wonder?

I was also after some dust caps for the brake and clutch master cylinders.

You may not know it but both master cylinders had these fitted when new. Today you can look at fifty cars and not see one. We are, of course, well supplied with the master cylinders themselves but the replacement item does not seem to have the dust cap as part of the package. This seems a bit of a shame because a cumulation of small things can detract from the underbonnet appearance.

An original brake servo is now also a problem. The GT6 had an option of a Girling Powerstop servo, and on later cars this became a standard fixture. But they do not last for ever and the last Powerstop servo left the Girling factory a long time ago. You can tell when they are about to go on the blink; occasionally they can stick solid with the result that the brake pedal suddenly becomes very heavy to operate. Sometimes, however, they wear and the system starts to use brake fluid as it is sucked into the engine down the vacuum line to the manifold.

The problem is that although replacement servos are available, they do not look right. The Lockheed replacement works well but it alters the appearance under the bonnet. Rather than fit one of these, I decided to keep my eyes open for a replacement, secondhand Girling servo. If it works for a period, great.

Further parts that I required were an original overdrive switch (they get bashed about very quickly) and a temperature gauge. Neither can be obtained new today, so that replacements can usually only be obtained from a car breaker. In the case of the gauge, the operation had failed due to being rusted up inside and the green, plastic dome that gives the instrument its green colour at night had melted with the heat of the bulb. Clearly the instrument had to be replaced. But you try finding one with the correct design of face!

I enjoyed mooching around Beaulieu and I will go again next year if I can. But I found none of the parts that I required at this, the largest autojumble in Europe. I was reminded that the youngest GT6 is now seventeen years old and the supply of many of the seemingly less important parts is drying up. Get them while you can.

To close, I would be very interested to hear from other owners of various marks of GT6, what parts they, in turn, have found difficult to acquire. This is a point which must surely interest all.

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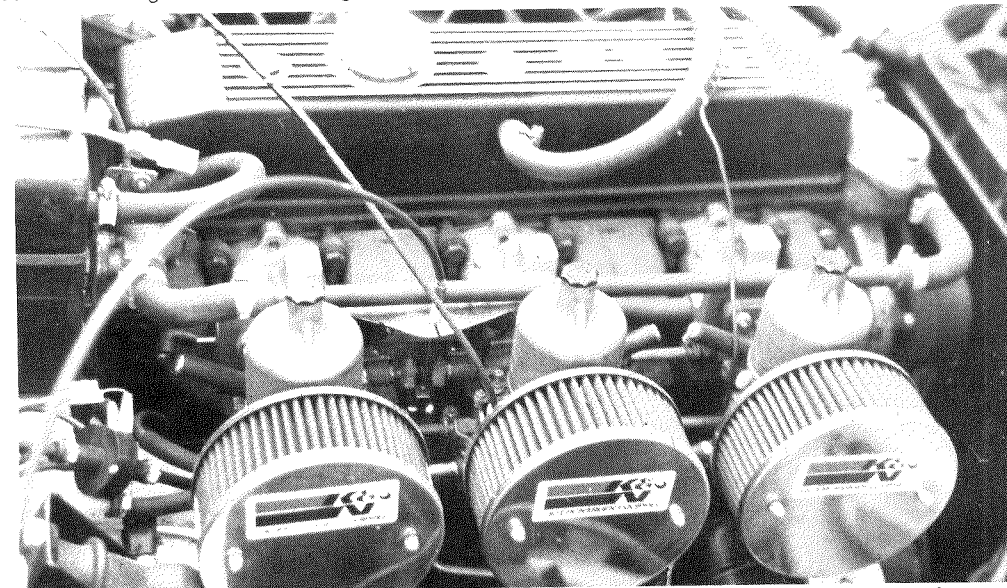


Andy Bonner

6003 VC at the start of the Pirelli Marathon,
Tower Bridge, London

Many of you will have already read the results/reports (Full report in this Courier) of the 1989 Pirelli Classic Marathon. From our point of interest the result of the event must have been John and Allison Woolley's magnificent 7th place overall and 1st place in their class.

John's Vitesse is based on the one-off special built by 'the Works' for Vic Elford to drive in the 1963 Spa-Sofia-Leige Rally. The original car suffered a terminal fire part way through the event and was subsequently written-off. John has managed to obtain the original works registration, 6003 VC, which completes the period look.



Good under bonnet look, showing the triple 1 1/2" SUs that John was using

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The engine specification for the Pirelli was as follows:

Late 2 litre Mk1 Bottom End (i.e. as MkII)
Kent TH3 Camshaft
Duplex Timing Gear
SAH Cylinder Head (Mk1 type)
Triple 1½" SU Carbs
Standard Exhaust Manifold

Tested on a rolling road, this engine was giving 118 bhp at the wheels. This is more than the works car was getting back in 1963 and shows how under-developed the car was then.

N.B. An extractor exhaust manifold will release a bit more power.

John has also made the following modifications to his car:

Spitfire 1500 front anti-roll bar
Hard front suspension springs (400 lb)
GT6 MkIII rear spring (late type)
4.11 diff ratio
All synchro gearbox (MkII) with overdrive
Standard brakes with Mintex pads and linings



For next year, the organisers have banned the use of one-off specials and in order to compete, John will have to convert the 1600 engine size as per the original Works Vitesse rally cars. Both he and I are presently building up what we hope will be fast 1600 engines for separate projects and I hope to be able to give details and results of this in a future article.

Next year's event is already fully subscribed but if you want to know more, contact the rally organisers at the following address: Classic Marathon Ltd., 85 St Johns Road, Tunbridge Wells, Kent TN4 9TU. Tel: (0892) 24746. For historic rallying in general, you need to join the register. Contact Martin Jubb, Historic Rally Car Register, 38 Longfield Road, Bristol BS7.

BMIHT RECORD TRACE

As previously reported, the cost for this service has now gone up to £10 and includes a nice certificate. If you have previously had your trace done at the old price (£5), you can part exchange the old type letter for the new certificate by paying the extra £5.

I have recently acquired the following spares which I wish to exchange (not sell): 3.27 diff (recon.), Girling brake servo (new, boxed and complete) and a pair of Vitesse rear brake drums (new, Stanpart). Wanted: extractor exhaust manifold for Mk1 engine. 2 litre overdrive gearbox. Vitesse/Herald rear wings. My address is at the back of The Courier if you can help.

Thanks to all of you who have responded to my request for photos. They will all be used and returned eventually, where requested.

STOP PRESS: I've sold my Vitesse! Pause but I've bought another one. More details next month plus new of some previously unavailable panels now being reproduced (this does not effect my wanted list as given previously).

Merry Xmas to you all and Happy Motoring in 1990. To all those people whose Vitesse's have been off the road, "being rebuilt" for too long, make yourselves a New Year's Resolution: get it out of the garage and use it. It's what they were built for!

INTERNATIONAL LIAISON SECRETARY

LEON F GUYOT



Winter's coming to members in the northern hemisphere, whereas in the other half of the globe, conditions are usually better about now, with the notable exception of Adelaide in the recent Australian Formula 1 Grand Prix, otherwise known as the most expensive underwater stock car race in the world.

Just a quick report this month, as I've been so busy that I didn't have time to draw breath.

An interim report on progress in the recruitment of overseas members: in March 1989, we had some 437 International members, whereas today, we have 488 - a welcome increase of over 10%, thus maintaining parity with UK membership. This is very encouraging for us all and proof, I assume, that the Clubs dedicated team must be doing something right!

Especial thanks to our International organisers, who must sometimes feel a bit distant from the rest of the Club but don't worry, every member is right behind you, in spirit, if not in form.

The present breakdown of International members is as follows, in alphabetical order:

Austria	3	Hong Kong	2	Tetsunori Morita, Peter Reichenbach and Philip Branigan.
Australia*	19	Italy*	16	It is interesting to note that we have two members in
Barbados	1	Japan	5	Yugoslavia now, i.e. Trajo Bazerko and Zoran Uzunov; also
Belgium*	27	Luxembourg	1	two in Zimbabwe, George P Stewart and Willwm Ankersmit
Bermuda	2	Malta	4	and two in Brazil, namely Eduardo B F Perillo and Antonio
B.F.P.O.	21	Netherlands	43	Dias Pina.
Brasil	2	New Zealand	11	The heading photo this month arrived at the Club Office
Canada*	11	Norway	21	as a postcard, sent from Linkoping in Sweden on 8th Oc-
Channel Isles*	30	Poland	1	tober, from our friend, Ulf Wincrantz. It shows his very smart
Cyprus	1	Portugal	11	GT6 MkII and Herald 13/60 estate, 'summering' as a con-
Denmark	9	South Africa*	7	vertible. Thank you Ulf for sharing your cars with us.
Egypt	1	Spain	10	I hope you all enjoyed the Michelotti article last month. For
Eire	26	Sweden	16	a future months Courier we have a special treat, a sneak look
Finland*	18	Switzerland	21	inside the Triumph factory's 'Export Division' in this article,
France	21	U.S.A.*	40	which first appeared in Motor magazine, week ending
Gibraltar	1	West Germany	76	January 21st 1967. My thanks to Andrew 'Onny' Mackie of
Greece	4	Yugoslavia	2	the Surrey Area for borrowing it and to his friend, Mr
'Gulf'	2	Zimbabwe	2	Westmarland, for lending it to him.

We are sorry to lose any member but especially Marta Einarsdottir from Iceland; not the easiest place to run any vehicle! And Ishtiyao Nagree in Bombay, India. Remember, every member counts in the TSSC, that is why I extend a special hello to all new members, especially to our Japanese members, i.e. Atsushi Kawamura, Keigo Kamitani,

Another part of the elusive jigsaw of Triumph history slots into place.

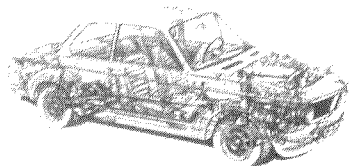
Until next month, be careful out there - Leon.

AUTO CAR

18p

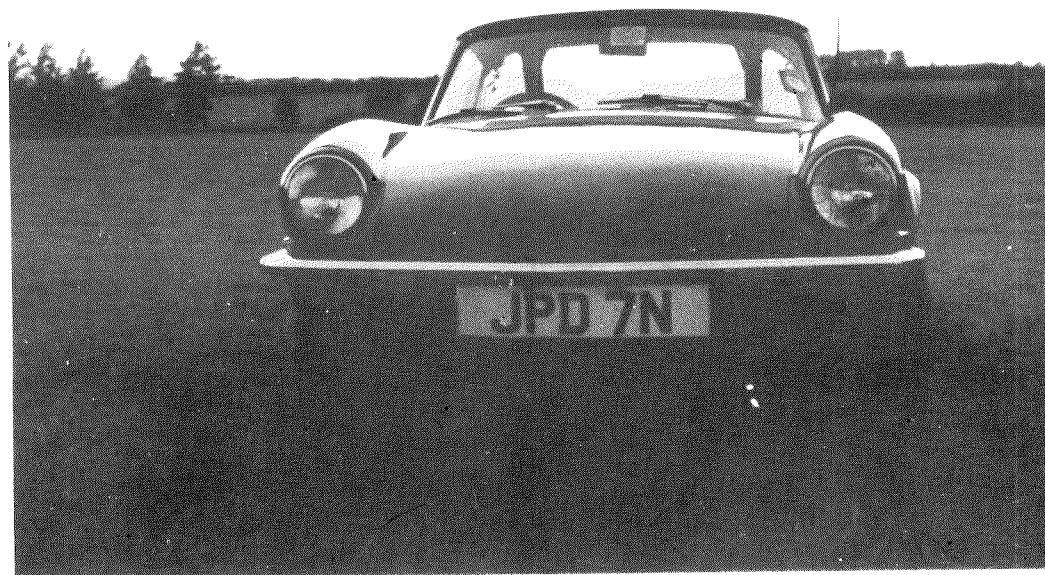
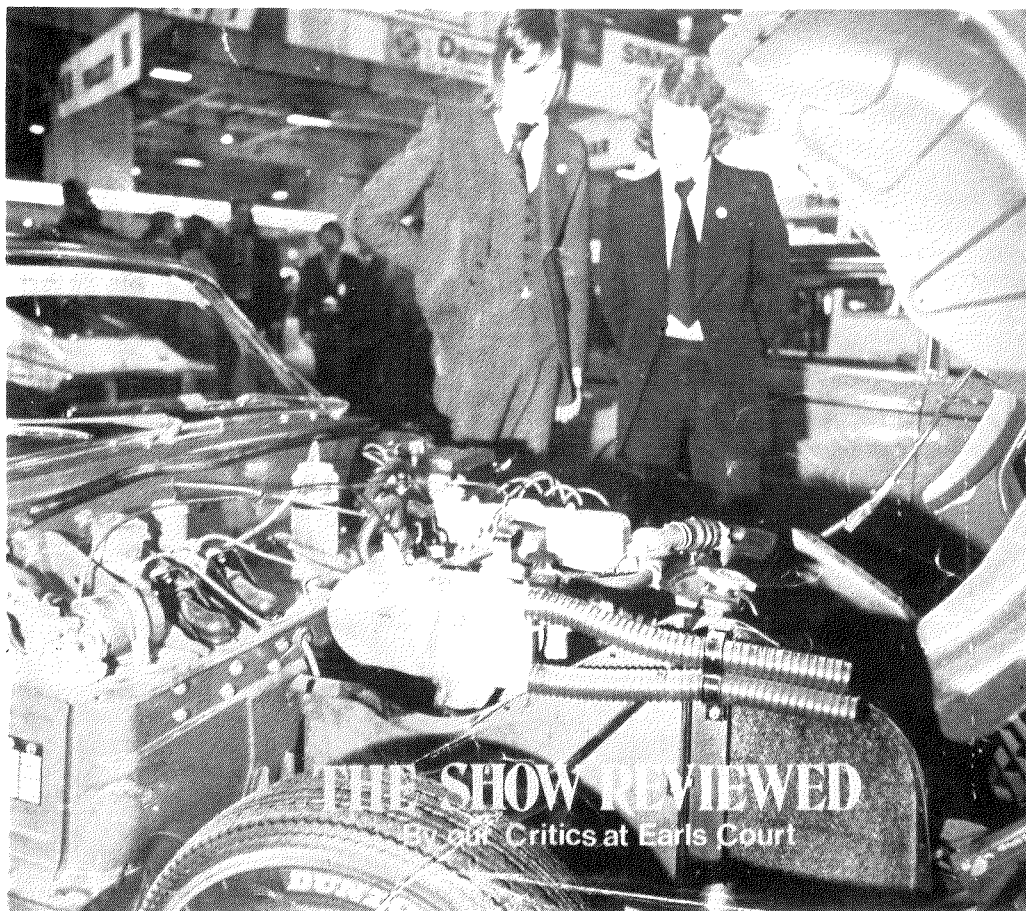
ROAD TEST
AND CUTAWAY

BMW 2002 Turbo



HAPPY BIRTHDAY!

Fifteen years ago this month, the Spitfire 1500 was released in the U.K. Is there anybody out there lucky enough to have received a new Spitfire 1500 as a Christmas present in 1974?



This month's heading photo shows JPD 7N, a Vermillion Spitfire 1500, owned by Phil Russel, watching the sun set on 1989!

SPITFIRE IV John Thomason ***1500 REGISTER***

SPITFIRE WEEKEND

Many thanks to the few that have written to me supporting the idea of a UK Spitfire Mega Meeting. There have been some good ideas such as arranging the cars at the meeting in commission number order and meeting the cars that went through the factory with yours! However, I am afraid that a far greater indication of support is needed before the idea becomes viable and is supported by the Club. I hope everyone is not waiting for "the other person" to write to me, otherwise I am afraid the idea will die a death! After this month there will be insufficient time to organise such an event for 1990 last chance!

BONNET CARE

The bonnet of the Spitfire comprises something like a third of the body of the car and, as such, should receive a proportionate amount of attention. A tidy, well looked after and correctly aligned bonnet, not only considerably improves the appearance of the car and helps to preserve an expensive part of the car but also eliminates a number of otherwise annoying rattles.

1. ADJUSTMENT

Since the bonnet is practically the whole front end of the car, it interfaces with many other body panels, namely the sills, doors, front bulkhead, quarter valances and front bumper. As such there are eight adjustment points and correctly aligning a bonnet can take quite a long time. However the end result is well worth the effort. Adjustments should be carried out in the following sequence to avoid repetition and unnecessary adjustments.

a. Bonnet Hinges

Fore and aft, and height adjustment is achieved by altering the position of the bonnet hinges. Access to the hinges is achieved by removing the black plastic overrides fixed by the three bolts shown in Fig. 1. N.B. The black radiator grille usually has to be removed in order to remove the overrides from the car.

Start by adjusting the bonnet fore/aft position by loosening off the bolt in Fig. 2. The correct position is achieved when the rear bottom corner of the wheelarch aligns with the top corner of the sills, and the gap between the front bulkhead and the top of the bonnet is the same at both sides. The gap is usually between $\frac{1}{4}$ " and $\frac{3}{8}$ " and is such that the rubber fender (Pt. Nos. 632020) shown in Fig. 3, does not chaff the paint on the front bulkhead.

I have found the best way of moving the bonnet is to gently lever the adjusting bolt or hinge with a large screwdriver. Tighten the adjusting bolt and raise/lower the bonnet several times to ensure that the adjustment remains. N.B. If the bolt is siezed in the hinge bush, then as the bonnet is lifted up and down, the bolt undoes itself and the adjustment is lost.

b. Bonnet Cone and Locating Plate

Firstly check the condition of the bonnet cones. I have seen them completely sheered off which results in a rattling bonnet. The cones, Pt. Nos. 612962, are readily available at approx. £1.50 each.

Loosen off the two securing screws, such that the locating plate slides freely fore and aft. Fig. 4. A drop of oil helps! Loosen off the bonnet cone locking nut, allowing the cone to move sideways, Fig. 5. Lower the bonnet and check that the cone seats squarely in the locking plate. This can be seen more clearly if the door is opened. Re-tighten the locking plate in the correct position.

Next, screw the cone in or out of the captive nut in the bonnet to respectively lower or raise the rear height of the bonnet. The height is correct when the rear of the bonnet is flush with the top of the front bulkhead, and when the rear corner of the wing is about $\frac{1}{4}$ " to $\frac{3}{8}$ " above the top edge of the sill. Check the cone still seats squarely into the locating plate, then tighten the bonnet cone locking nut.

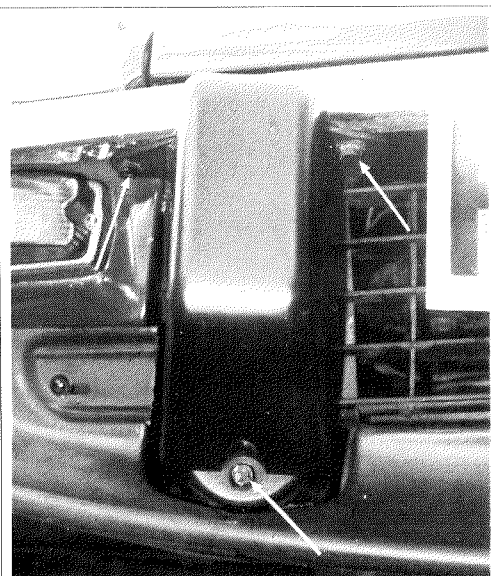


Fig. 1. Location of override securing bolts

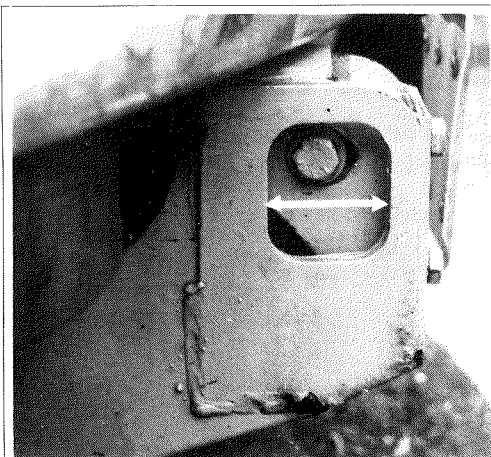


Fig. 2. Fore/aft movement of bonnet

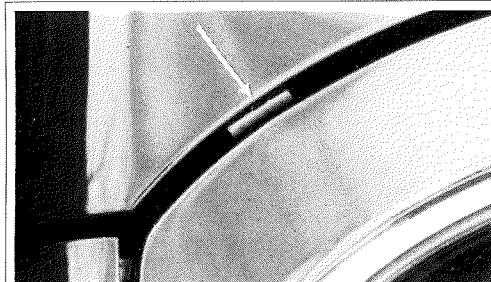


Fig. 3. Correct gap between top of bonnet and front bulkhead

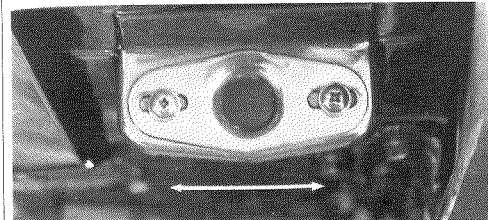


Fig. 4. Fore/aft movement of bonnet cone locating plate

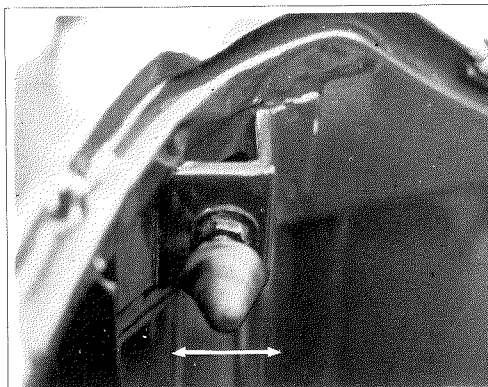


Fig. 5. Bonnet cone locking nut & sideways movement

c. Bonnet Height

Returning to the bonnet hinges, Fig. 6, raise/lower the front of the bonnet until the gap between the bottom edge of the wing and top edge of the sill is parallel. Fig. 7 (the size of the gap at the back has just been set by the bonnet cone). The gap between the bonnet and front bumper should also be parallel. N.B. There is a small amount of adjustment provided in bumper height. The gap between the doors and rear edge of the bonnet should be parallel, but the doors can also be adjusted.

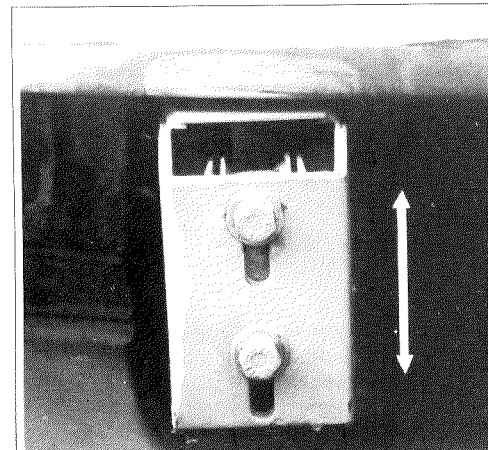


Fig. 6. Bonnet height adjustment

If you have had to lower the height of the front of the bonnet, then ensure that it does not now catch the top of the bumper when it is lifted up and down. If it does, then the height must be increased again to provide sufficient clearance. Either a tapered gap between the sill and wing, or the rear of the bonnet being higher than the front bulkhead must then be accepted.

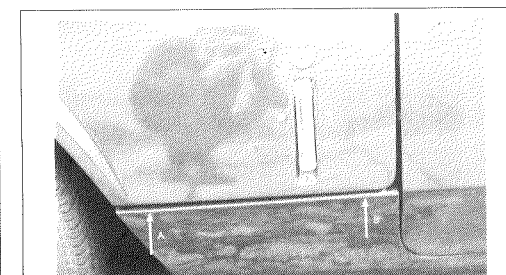


Fig. 7. Gap between A & B to be parallel

Gap at A adjusted by raising/lowering front of bonnet
Gap at B adjusted by raising/lowering height of bonnet cone (excuse the self portrait!)

The bonnet should now be aligned with the sills, front bulkhead and front bumper. Do not worry that the bonnet does not align with the quarter valances, they should be adjusted to fit the bonnet, using adjustment of the brackets shown in Fig. 8 and not vice versa but that's another story. Before refitting the overrides, it is well worth oiling and Waxoyling the bonnet hinges. Check also the condition of the chassis 'turrets' to which the bonnet hinges are bolted - 10 to 1 they are rusty. They should be treated accordingly.

N.B. It is possible to adjust the shape/position of the bonnet using the adjustment provided on the tubular frame of the bonnet. However, this should only be attempted as a last resort and if you know what you're doing!

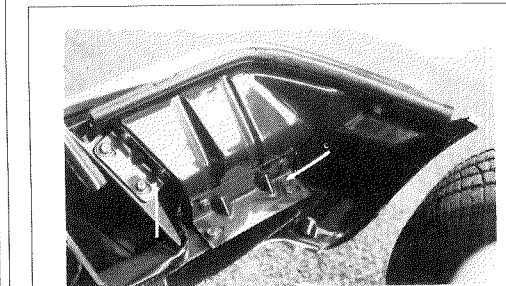


Fig. 8. Adjustment brackets of the 1/4 valance

Bonnet Latches

With the height of the bonnet correctly adjusted, loosen off the two bolts in Fig. 9 and adjust the height of the latch until the bonnet catches latch easily but at the same time slightly pull down the bonnet cones into

their locating plates. This adjustment is usually overlooked and is the reason why bonnet catches either spring open or are difficult to open! In addition, if the catch doesn't pull down the bonnet cones into their locating plates, then this can also be a cause of a rattling bonnet.

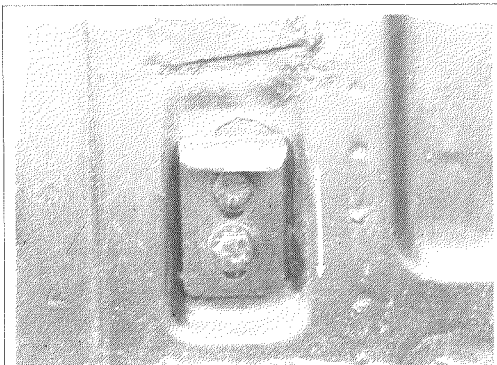


Fig.9. Bonnet latch adjustment

Bonnet Catches

The worst thing Triumph did to the Spitfire bonnet, or any other Club car bonnet, was to design and locate the catches such that they can be used to lift the bonnet. The end result is stress cracks around the catch, and buckled wings which eventually pull out of alignment. The only solution is to carefully push the corner of the wing back into alignment. Do not attempt this if there is filler in the wing, otherwise it will crack. Remember, NEVER lift the bonnet with the catches, use the wheelarch.



Fig.10. Lubricate bonnet catches particularly the bottom roller. Note bonnet lock above

When refitting bonnet catches after respraying etc., I have found that small paper/light card washers soaked in Waxoil, placed between the heads of the fixing screws and the wing, prevents the all too common rusting in this area.

Bonnet catches should be well oiled, otherwise they seize, especially the bottom roller, which then develops a flat making it difficult to release the catch, Fig. 10.

Bonnet Locks

Fitted to prevent bonnet catches being lifted, they can provide a deterrent. However, a determined thief will force the bonnet catch and bend the wing.

Bonnet Stays

Believe it or not, I have seen very few bonnet stays correctly fitted as in Fig. 11. They are either bent or fitted upside down! Where the stay hinges to the bonnet inner wheelarch, ensure that two large penny washers are used, otherwise the hinge wears through the inner wheelarch. In addition, either two locking nuts or nyloc nuts should be used to prevent the stay from wearing loose.

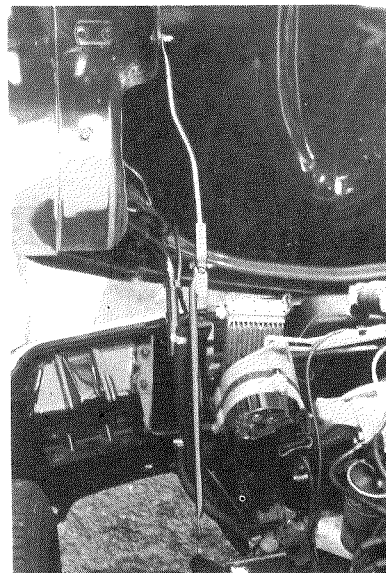


Fig.11. Correct fitment of bonnet stay

Bonnet Underside

Beneath the rusty water marks, road spray and oil film, the paint on the underside of the bonnet is usually in very good condition. Fig. 12. Unless covered in underseal, an hours cleaning gives an instant improvement to the under bonnet appearance of the car. A clean bonnet also allows potential rust problems to be identified and treated early.

Rust!

By far the worst offender is the double skin that exists around the wheelarch. Clean out the groove between the outer wheelarch and the wing with a thin screwdriver and then flood with Waxoyle. With the bonnet up, applying the Waxoyle to the uppermost part of the wheelarch allows it to run all the way around the wheelarch, Fig. 13. The excess runs out around the headlight and can be collected in a small container. Cleaning out the mud that builds up around the inside of the wheelarch with a scrubbing brush and hose pipe, will also prevent rusting.



Fig.12. Partially cleaned bonnet underside revealing good condition paintwork

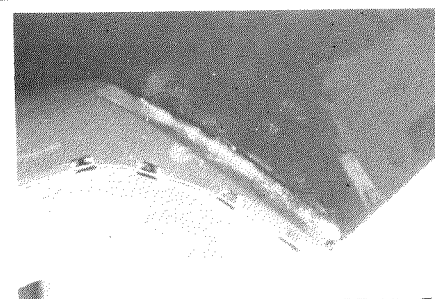


Fig.13. Waxoil groove between wheel arch and wing

Another major area of rust is that behind the headlight bowls. In bad cases, the area around the bonnet tubular frame fixings can crack away, making the whole bonnet

very rickety. Try and catch it before it ends up like Fig. 14! Where the tubular frame passes over the top of the wheelarch, should also be Waxoiled.

Additionally, it is worth running Waxoyle into the leading edge of the bonnet, down where the headlamp looms lurk.

Cracking at the corners of the bonnet in the area around the headlights is, to a degree, fairly universal on Spitfire IV bonnets. It is to be expected really when one considers the stresses set up in the metal at these points as it is bent to follow contours in three different directions. No amount of filler will make the cracks disappear. If repairing/respraying a bonnet, have a small plate welded in beneath the bonnet at this point.

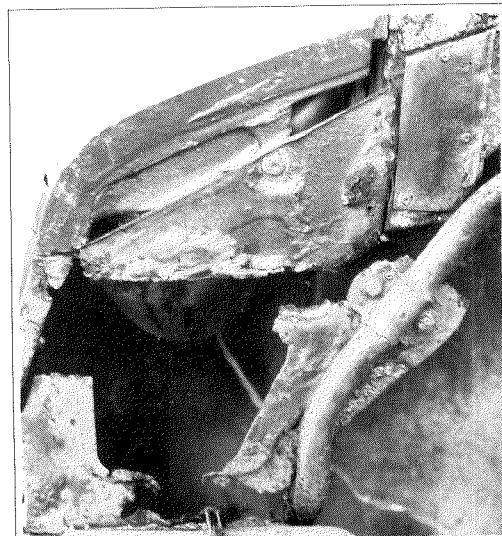


Fig.14. Try and treat the rust before it ends up like this!

Wheelarch Mud Flaps

Don't underestimate their importance. If fitted correctly they prevent water and much spraying up the inside of the wing, Fig. 15 and getting into the groove between the wheelarch and the wing, causing the dreaded rust. The rubber (Pt. No. 613666) is held on with nine clips. Pt. No. 608520, still available from B.L. at 22p each.

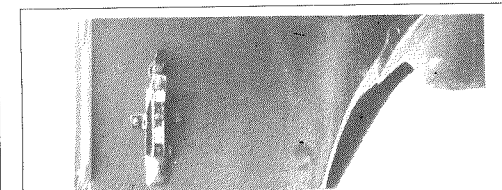


Fig.15. Road spray as a result of not fitting wheel arch mud flaps

Take care of your bonnet, otherwise it will cost you a lot to repair/replace.



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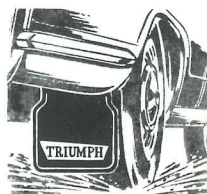


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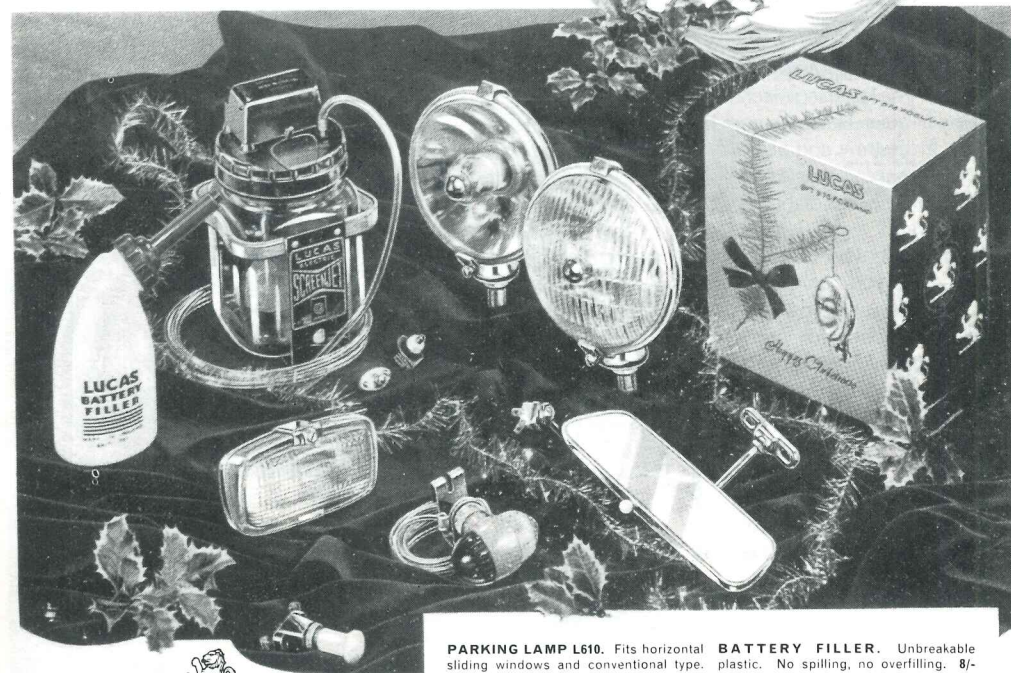
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Spitfire I II III REGISTER



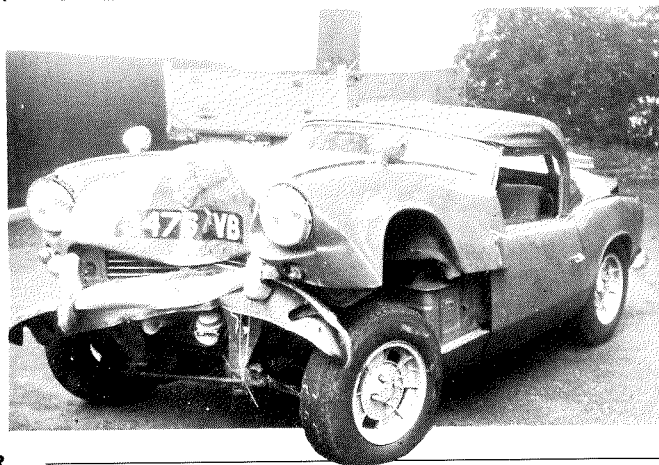
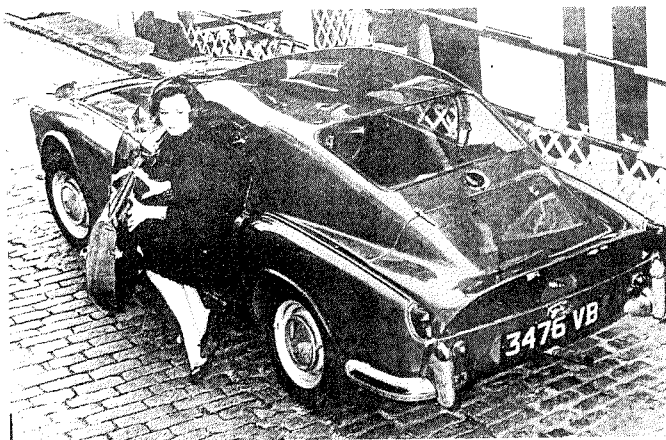
Now everyone knows how to stow their hoods correctly, I thought I'd devote December's article to members' cars.

The first picture shows, from Heidelberg, Martin Stather's 1970 MkIII. The car was originally black, now red. He would like any information on the hardtop. It's made of steel with black upholstery on the inside and has a plain plastic rear window, with several, small holes for ventilation. The fastening mechanism consists of quick fasteners from the soft top in the front and bolts in the rear. Martin would also like to track down the first owner of the car - are you out there?

Secondly we have Eddie Thorne's Spitfire 4. As you can see this car was originally used by the John Sprinzel Company for publicising their Fibrepair hardtop conversion to give the Spitfire a 'fast back' in contemporary Italian idiom.

The accident that took place in 1968 resulted in a new chassis being fitted. The car was then used until 1976, when Eddie stored it for 13½ years. It is now happily on the road again.

Gerry Woods from Aborfield, near Reading, has an interesting 1962 Spitfire 4 and he is keen to trace its early history. The previous owner was a restaurant proprietor from North Devon. He bought the car 9 years ago in Kuala Lumpur, Malaysia and took it with him to Sri Lanka, Puerto Rico and Jamaica before bringing it to Britain. The car is in good condition and the upholstery was restored in Malaysia



in leather. The car is red, its chassis number is FC25362, the engine number FC26195HE and the registration LP 5219. Can anyone out there help Gerry?

Finally, we have a picture of Katy Jones' (Wolverhampton) 'Heathcliffe', a 1968 MkIII, whose current running performance is due to her brother-in-law, Paul, who has his own MkIV Spitfire (shame!).

That's it for this month, folks - keep sending the photos and information. Have a happy Christmas and New Year and see you in 1990.



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Rear W/Screen Seal	£14.50
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Bonnet Scuttle Seal	£4.00
Front Valance Seal	£1.00

SPIT/GT6 SEALS:

Front W/Screen	£13.50
Hood Header Rail Seal	£6.75
Door to Door Glass	£5.60
Bonnet Scuttle Seal	£4.00

All other seals available for above cars.

CHROME/LOCKS/BRIGHTWORK:

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Front Wing Vitesse	£54.00
Rear Wing Her/Vit	£53.50
F/Wing Arch Repair	£12.00
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PANELS SPIT/GT6:

Front Wing Spit IV. GT6 III	£34.50
Sill - all Spit/GT6	£10.00
Rear Wing Original Spit I/II/III GT6 I/II	£46.00
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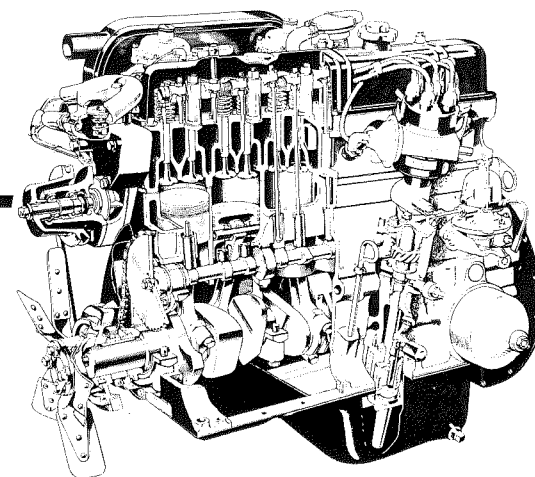
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RE-CON OR JUST A CON?

A guide to engine remanufacturing



Many members are quite capable of rebuilding their tired or blown engines, a few even make a business of doing it for others, but to some, the telltale signs of a smoky exhaust or a reluctant-to-extinguish oil pressure light do nothing more than trigger an impending feeling of uncertainty or even mild panic. Not only an uncertainty of cost of repair, but who to go to for help. Well, all is not lost. If something awful happens under your bonnet, it is comforting to know that assuming it is in one piece, almost anything can be put right.

Replacement engines for older cars are unlikely to be brand new, unused items, even if bought from the manufacturer. They will be reconditioned or remanufactured, i.e. they will be somebody else's old worn out engine rebuilt. Obviously, remanufactured engines don't come cheap and one painted engine will look the same as the next painted engine, so how do you know what you are getting for your hard-earned money? Sadly, anyone can claim to have remanufactured an engine, even if the work has been limited and insufficient, for there is no legal definition of what is a "remanufactured engine". This brings problems if you wish to bring a complaint to the Courts. The "cowboys" who sell inferior products are the genuine remanufacturers' biggest problem. They can carry out a little work on the head, give it a wash down with paraffin, a coat of paint, and call it what they like. Often, such products are sold at a low price that would prove impossible if all the necessary replacement components were new. However, life is not as risky as it may seem - thanks to the F.E.R. or Federation of Engine Remanufacturers.

The F.E.R. has been in existence since March 1938, its aim was, and still is, to improve the quality of the remanufactured engine. Ninety per cent of the full members of the F.E.R. are small engineering shops, at present standing at over 200 companies. There are also around 70 associated

supply members, many well known in the motor trade, such as G.K.N., Autoparts and A.E. Autoparts. It is probably worth noting that a large number of the member companies will not agree to actually remove and refit your engine, but most of them will be able to recommend several local fitters/garages who will do that for you.

Becoming a member of the F.E.R. is not simply a cost of paying a subscription. Each applicant is vetted by a general committee member. Workshops are inspected and the quality of work is carefully checked. Machine tools and equipment possessed by members must cover all areas of engine remanufacturing. It also needs to



prove the ability to perform all aspects of the necessary machining work, in other words, bore and hone cylinders, grind crankshafts, carry out a range of operations on the cylinder head and degrease and clean components.

The F.E.R. is a self-governing body and once members have shown they are capable of doing a good job, they must perform all work to the very high standards laid down, if they wish to remain members. This is, where you the paying customer really benefits.

- 1) Personal attention by an owner operated, and therefore strongly motivated company.
- 2) Warranty registered by the Office of Fair Trading (normally 12 months/12000 miles).
- 3) In many cases, a good stock of engine parts for sale to the D.I.Y. man.
- 4) A conciliation service in the unlikely event of anything going wrong. Any complaint found to be justified may well result in the offending company being expelled.

As you can see the displaying of the F.E.R. logo is basically the companies guarantee of quality assurance and your warranty of a job well done.

Before I move on to the technical side of things *please note* some of our regular advertisers in the Courier may well supply engines but may well not be members of the F.E.R. Although warranties and quality of workmanship vary, the standards offered are generally high. This

article is not intended to take away business from those companies.

F.E.R. CODE OF PRACTICE - Definitions

Full Engine - should consist of: a cylinder block with crankshaft, conrods, bearings, pistons, cylinder head with all valve gear, oil pump, camshaft, timing chain or belt and sump, where applicable.

Short Engine - A cylinder block assembly with crankshaft, conrods, crankshaft bearings, pistons and camshaft with bearings, if applicable.

F.E.R. CODE OF PRACTICE - Engine Specification

1. All engines to be completely dismantled and thoroughly degreased.
2. Cylinder Block to be rebored and honed with cross etch finish to F.E.R. Technical Standards. Misaligned or faulty bearing housings to be re-machined to suit bearings supplied. Distorted cylinder faces to be re-machined with minimum stock removal.
3. Cylinder Head to be re-machined with minimum stock removal on head face. Valve guides to be replaced as necessary. Valves and Valve seats to be refaced. Damaged Valves to be replaced and valve inserts to be fitted where required. Rocker gear to be replaced as required.
4. Crankshafts. All serviceable crankshafts to be reground on all journals to appropriate undersize. F.E.R. Technical Standards to be adhered to.
5. Camshafts, camshaft bearings and camfollowers. New or serviceable shaft to be used. Bearings and camfollowers to be replaced as required.
6. Con Rods to be replaced or rectified as required.
7. Oil pumps to be checked, overhauled or replaced.
8. Flywheel to be reground and new ring gear fitted.
9. All damaged stud holes to be plugged and re-tapped, loose dowels to be replaced with O/S dowels.
10. Engine to be re-cleaned after machining operations and assemble to F.E.R. Standards with all parts in a serviceable condition, correct torque loading of bolts to be observed and the 100% replacement of Pistons, Bearings, Gaskets and Oil Seals, Timing Chains, Core Plugs, Lock Washers and Filters where fitted. It was agreed that the engines should not include any of the ancillary parts, i.e. manifolds, carburettor, electrical equipment, etc.

F.E.R. CODE OF PRACTICE - Technical Standards

Surface Finish of Crankshaft Journals - Not to be in excess of 15 micro inches

Maximum Ovality of Journals - .00025" up to 3" diameter

Maximum Taper of Crankshaft Journals - .00025" on a 3" width of Journal

Journal Dimensions - Up to 3" diameter + or-.00025". Up to 4 1/2" diameter + or-.0005".



Thrust Width Limit - Engine Makers Limits...

Maximum Ovality of Bearings - .00025" for Car Bearings

Centre of Axis of Crank - .001" at flywheel end

Parallelism of Axis of Crank (Run Out) - .001" per ft. length

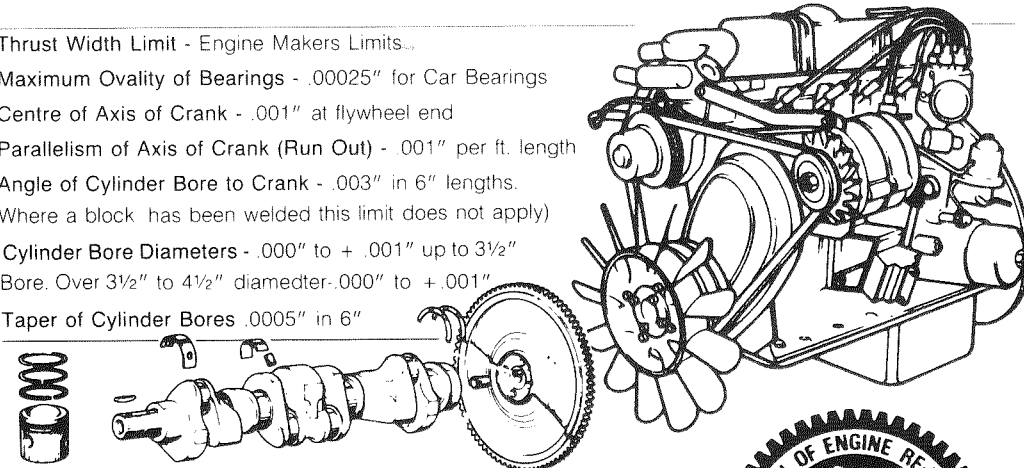
Angle of Cylinder Bore to Crank - .003" in 6" lengths.

(Where a block has been welded this limit does not apply)

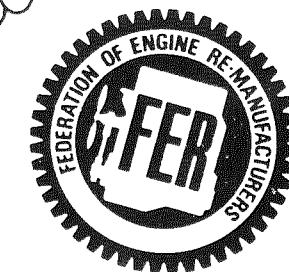
Cylinder Bore Diameters - .000" to + .001" up to 3 1/2"

Bore. Over 3 1/2" to 4 1/2" diameter-.000" to + .001"

Taper of Cylinder Bores .0005" in 6"



The success of the F.E.R.'s objective over the last (or first?) 51 years is obvious, but it continues to strive for higher standards. The present code of practice outlined previously is a voluntary code, i.e. it has no standing as far as the law is concerned. In 1982, when this code was set up, the Office of Fair Trading was consulted with a view to getting Government support. As usual with the British Motor Industry, the Government did not want to know. Others became involved - The Motor Agents Association, the A.A., R.A.C. and S.M.M.T. - and the pressure increased. The O.F.T. has now agreed to a code of practice being established, one that will be based on the F.E.R.'s current technical standards and specifications. This, when it becomes legislation, will be of benefit to all of us, as it will affect all engine remanufacturers, F.E.R. members or not.



As mentioned last month, I have prepared lists of all F.E.R. Members, both at home and overseas. Please send S.A.E. to me for a copy. ★



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COMPETITION NEWS

TSSC SPRINT AND HILLCLIMB CHAMPIONSHIP 1989

The points for the final rounds of the Championship are shown below: Neil Sleightholm

ROUND	2a	8	9	10	11	12	13	14	15	16	17	18	TOTAL
Giles Tinkler	6	-	1	6	-	-	-	-	4	6	3	6	48
Hugh Davies	-	-	3	-	6	6	4	-	-	-	6	-	43
Dave White	-	-	6	-	4	6	6	-	6	-	6	-	40
Robert Roodhouse	-	-	4	-	2	4	2	-	-	-	-	-	23
Chris Haywood	-	-	2	-	-	-	-	-	-	-	-	-	12
Mark Hellier	-	-	-	-	3	-	3	-	-	-	-	-	12
Ian Sutcliffe	-	-	-	-	-	-	-	-	-	-	4	-	4
Steve Lanbourne	-	-	-	-	-	-	-	-	-	-	-	-	2
Peter Dodds	-	-	-	-	-	-	-	-	-	-	-	-	0
Dale Huxford	-	-	-	-	-	-	-	-	-	-	-	-	0
Neil Sleightholm	-	-	-	-	-	-	-	-	-	-	-	-	0

NOTE: The total is the best 8 scores.

ROUND:

2a	13th May	Goodwood	BARC
8	9th July	North Weald	BARC
9	15th July	Goodwood	BARC
10	23rd July	North Weald	BARC
11	6th August	Goodwood	TSSC/BARC
12	3rd September	Gurston Down	TSSC
13	17th September	Goodwood	TSSC/BARC
14	24th September	North Weald	BARC
15	30th September	Lydden Hill	BARC
16	15th October	North Weald	BARC
17	21st October	Goodwood	BARC
18	22nd October	North Weald	BARC

Congratulations to all competitors who took part this year. I hope you had a good time. If you have any comments (good or bad) about this years Championship, please contact me.

Now that this years season is over, I have been thinking about next year. I think most competitors will agree that the number of people attending sprints and hillclimbs has decreased in recent years and, consequently, the only events at which we have a reasonable turnout are Goodwood

and Gurton Down. This means that if you do not live close to these venues or are not prepared to travel to them, then you do not get the opportunity to compete against Club cars. With a view to improving this, I have the following suggestions:

1. Run a joint Championship with other Triumph clubs.
2. Organise events at more circuits around the country, so that members do not have to travel as far if they wish to compete.
3. Do not run the events as a Championship; this may encourage more unmodified cars.

I would appreciate your comments on the above or any other suggestions you have and before I organise next years Championship, I need to know the following:

DO YOU WANT A SPRINT/HILLCLIMB CHAMPIONSHIP NEXT YEAR?
 AT WHAT VENUES OR AREAS SHOULD IT BE HELD?
 HOW MANY PEOPLE ARE INTERESTED IN COMPETING?
 IS THERE ANYTHING WRONG WITH THE RULES OF OUR CHAMPIONSHIP?

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(WELL, THAT'S GOT YOUR ATTENTION)

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THE BRIGHTON CLASSIC CAR SHOW

It is not often that we write an article on an indoor event, but this years Brighton Show was a little bit special for the TSSC. For the first time ever, we were given a feature stand. When you bear in mind that we are the leading Triumph Club and the second largest car club in the world, it was certainly long overdue. So I would like to thank the show organisers 'Greenwood Exhibitions' and 'Practical Classics' for the opportunity.

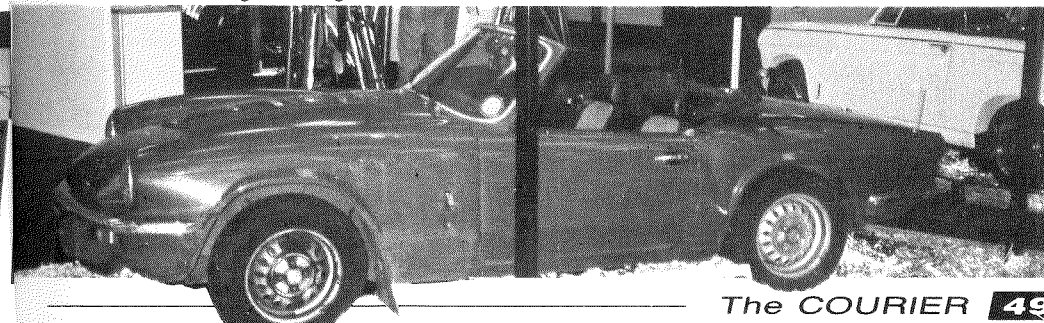
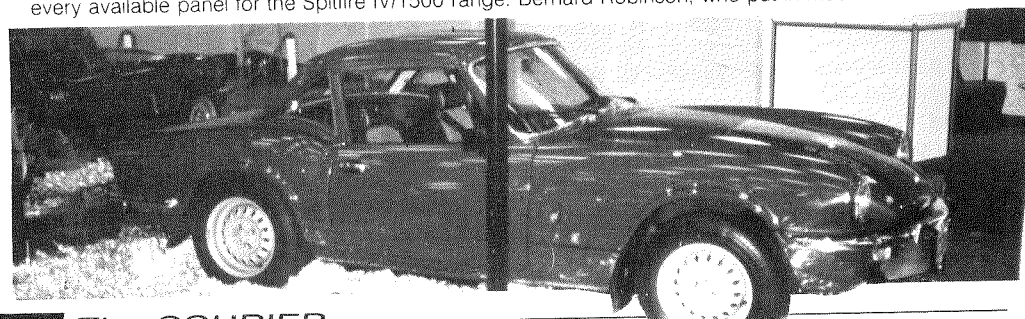
Brighton had been missing for a year, which was sad because, although from the stand organisers' point of view it is the worst show for setting-up and breaking-down - many cars having to be lifted to the upper floor by fork lift truck. It has always been one of the favourite shows because of its friendly atmosphere. So the new organisers already mentioned should be congratulated for resurrecting the show.

Unfortunately, the years absence had an effect on the overall attendance, indeed Saturday was terrible. However, Sunday made up for that by seeing a substantial increase in attendance resulting in a respectable overall figure.

The TSSC stand was designed to show the practical restoration aspects of our cars and how TSSC can help with that restoration. To that end we had four cars and a cleverly designed framework carrying virtually every available panel for the Spitfire IV/1500 range. Bernard Robinson, who put in much of the work and

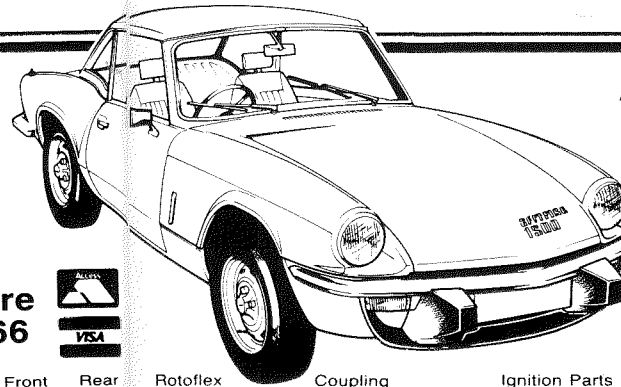
design, deserves thanks. The panels were provided, along with much help, by SWINDON CLASSICS and without them the feature would not have been possible.

Three of the cars were excellent, consisting of Bryan Grace's lovely rebuilt white Vitesse convertible, Clive Spencer's beautiful, original green GT6 and Ranjit Ranasinghe's exceptional Vermilion Spitfire 1500. The fourth car was also a Vermilion Spitfire 1500, although apparently newer than Ranjit's, the gaping holes in the boot, floor and the large patches of a curious dark, reddish brown substance, which seemed to explode from any point not covered in Vermilion paint (and there were lots!), showed that it wasn't quite in the same league as the other Spitfire. Of course, I am being unfair; it was specially chosen as the 'before' model and, as such, made the stand. This car was kindly provided by Simon Roberts, also of SWINDON CLASSICS and I'm told it is about to under-go an extensive rebuild (I wait with baited breath). Anyway, the stand was very good and got the message that the 'TSSC Can Get You from This To This' extremely well. As far as I could tell from the, at times, extremely busy stand counters, the car that was most looked at was Simon's, which I think just goes to show how many people are considering buying one of 'our cars' with a view to restoration. This has got to be good for the future of the cars and the TSSC.



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PIRELLI 1989 Classic MARATHON



The build-up to the 1989 Pirelli Classic Marathon was very different to that of the previous year. First of all, after some good results over the winter of '88/'89, we were expected to do rather better than our 57th overall in 1988; also we had a new car, a replica of the first 2-litre Mk1 Triumph Vitesse, driven by Vic Elford in the Sophia - Liege Rally of 1963. So the pressure was on for a good result pressure felt more by me, after my disastrous navigational error of last year, than by John - he seems to shrug these things off.

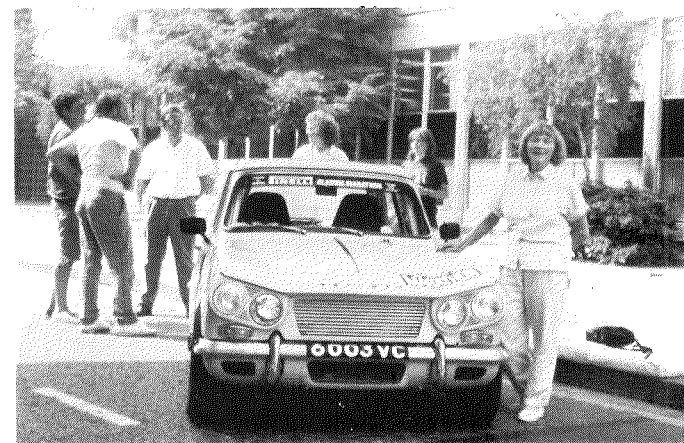
Alison Woolley

We decided to take the children to London with us this year, for the start from Tower Bridge. This meant their sitting on a mattress in the back of the Vitesse for the 100 mile trip to scrutineering in Whitechapel. We set off on Saturday morning, only for the brakes to seize on about a quarter of a mile from home. Having sorted that little problem out (*did Eleanor put her foot on a cable as she climbed in?*), we set off again, only to grind to a halt a mile down the road when the engine cut out for no apparent reason. Sitting in the car while John checked for the fault, my mind was racing ahead would they let us be scrutineered if we arrived late? How late would they still be scrutineering? Was it all going to finish before we even left the village? John found the problem: the engine does cut out if you use the engine cut out switch, doesn't it (and of course we *had* used it when we stopped for the brakes!). Panic over, we continued uneventfully to London.

Scrutineering passed off without incident. Charles Follet Porsche may wonder where they gained a couple of mattresses when they re-opened on the following Monday but once in London, we handed over the children to my mother and disappeared into the Barbican Hotel to renew acquaintances from last year.

Our start number this year was 46, which called for a much earlier departure than previously. However, we didn't complain because at one point they had us running at 55 which, anyone who read of our exploits at Manby in March will know, caused John to say, "In that case I'm not going!" (frantic telephone calls to Chris Bruce in the Marathon Office soon sorted that problem out).

Tower Bridge was packed for the start and there were the 'Woolley Support Crew' resplendent in their 'John Woolley Historic Rallying' sweat-shirts to wave us off, John refuses to wear his (which at least means I have the choice of two!). However, we set off in a wake of eighty year old Ralph Stokes, veteran of many European



The Woolley family at London Wall



rallies of the fifties and sixties (and earlier), driven in an ex-World Cup Rally Cortina, by Mal Perrot who has been driving Ralph on the Peugeot 205 rounds this year and had his arm twisted to come to Cortina.

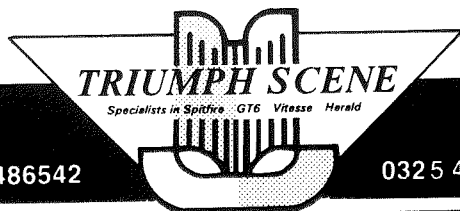
The first leg took us down to Ramsgate, where there was an autotest before we boarded the ferry to Dunquerque. Here the organisers introduced a new twist - at the end of all special tests was Roger Clark, who spun his LHD Cortina over the line to give navigator Tony Mason a shorter run to the table. Our time of 1 min 32 secs left us equal fourth on time but in seventh place overnight as our start number was higher than some of the

others on the same time. The Vitesse didn't help matters by leaping out of reverse gear just at the wrong moment on the test, something we would have to think about for later in the week as the test at the Nurburgring included a reverse slalom

Sunday night was spent in the Centre Parc complex at Erpeheide, where they had laid on a splendid dinner for the competitors, complete with a cake in the shape of a car carried into the darkened dining room by candlelight. Next morning we set off again for a special stage through forestry surrounding an open air museum nearby. The stage was a narrow, tarmac road with some fairly



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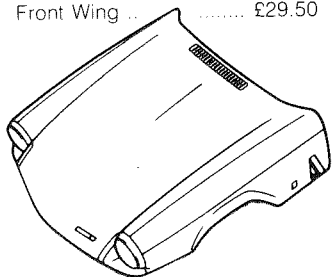


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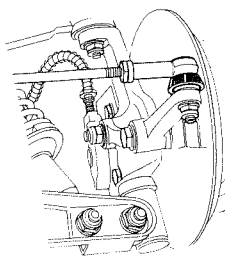
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tight chicanes. We quickly caught Mal Perrot and Ralph Stokes, who had mechanical problems but were unable to get past them anywhere due to the narrow track. Luckily, whatever slowed them seemed to disappear because John did not think we were being held up by them. We arrived at the finish at the same time, which had me panicking about what would happen if we both tried to stop the same clock. I needn't have worried as the marshalls had it well organised with a clock for each of us and they made sure we knew which one we were supposed to stop.

We set off then for Nurburgring, where we were to race over part of the old circuit, including the Carosel. Because of the necessity to keep the average speeds down to below the FISA limits for a category 2 rally, the organisers had set up a reverse slalom test before we were allowed loose onto the circuit - for a flat-out blast to the finish. This time we decided that I should hold the gearlever in reverse to prevent any time wasting repeat of the previous day's problem. Luckily, this worked a treat, and we actually managed to put up the same time as Stirling Moss

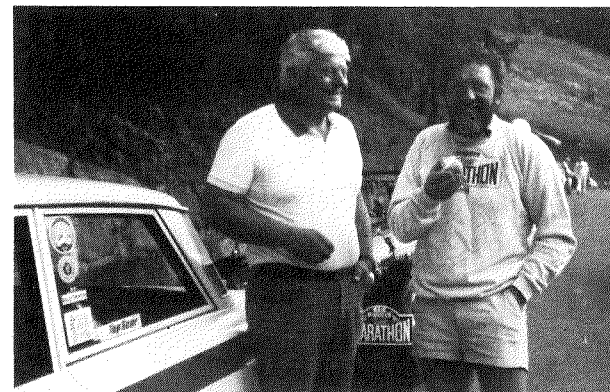
(his problem being that he couldn't see out of the back of his MGB and wrong-slotted one of the cones). It is quite an experience driving (being driven) flat-out round a circuit like the Nurburgring. Although I knew about the Carosel and realised where we were, as John drove into it, my first reaction was, "What the hell are you doing?" as the car seemed to tip on its side round the corner! It is quite something too, to be trying to extricate yourself from a full safety harness as you swoop down the hill to the time control, in order to be out of the car to stop the clock as quickly as possible!

That piece of excitement over, we set off for the Cathedral town of Speyer and a reception from the Major. It was on this leg of the journey that our event nearly finished. John

had upped the tyre pressures for the test at Nurburgring and he then forgot to let them down again. We were travelling in 'convoy' with several other cars, through the German mountains over some wide, sweeping roads, when another car came down the mountain towards us and we suddenly had nowhere to go! With great presence of mind, John saw a gap in the armco and we sailed through it into a soft landing in a pile of sand. Someone,



Nurburgring and a joke with Roger Clark



somewhere was smiling on us that day: there were no nasty three stumps or rocks in the sand and, while another competitor held up the traffic, we reversed back onto the road and continued on our way. That piece of road is now commonly known as 'Woolley's Gap'.

There was no Parc Ferme that night because competitors were scattered in a variety of hotels. This gave an opportunity for some much-needed servicing as the cars were already showing signs of wear and tear. Several crews worked well into the night, sorting problems which had arisen over the first couple of days. Luckily the Vitesse had no such problems. My biggest

worry was the three-quarters of an hour it took to get through on the telephone to home - who on earth were the children taking to for such a long time?!

Wednesday morning saw a special test round Hockenheim. The course had been laid out using what looked like enormous concrete blocks, to make the chicanes. It was only afterwards that we decided that they must have been polystyrene but we were not going to hit one and find out! We then set off again on the long leg through Austria, passing through the sort of countryside which always makes me wish I enjoyed walking holidays (I hate them). After a ten hour drive over some spectacular mountains and including an interesting thrash up a mountain pass, accompanied by Mike Feetham in his Mini

It is significant that the organisers chose to start the second road book with the leg out of Merano on Wednesday morning. The first three days of the event had been gentle and incredibly scenic. After that morning, although scenic, the going was to get tough. For a start, they re-classified the order which meant that our start time was 6.07 am. This meant an alarm call at five in the morning, only to find that the hotel was not providing coffee because their idea of a 'cold breakfast' was cold - not a good beginning for a navigator who needs three cups of coffee before she can be civil in the morning!



We made our way to Parc Ferme and lined up with some illustrious company. The rally was led by John Chatham, followed by David 'Piggy' Thompson in a Lotus Cortina, then came Henry Perman's E-Type, fourth was Paddy Hopkirk, fifth Classic Cars Editor Tony Dron, sixth was Stirling Moss, followed by us and we were followed by Roger Clark. Illustrious company indeed! There were a few raised eyebrows at the presence of a Vitesse so high in the running order.



Off we went, almost in convoy, towards the Stelvio and the first real climb of the event. In 1988 the road had not been closed and we wondered as we drove, whether the organisers had managed it this time. Despite what could almost be described as a police escort caused mainly (I think) because they felt John Chatham had been in a bit too much of a hurry to get there, we arrived at the bottom of the Stelvio Pass to find everything in order and, after a short delay, we set off half a minute behind the MGB of Moss and American journalist co-driver Jean Linamood. The previous year the Vitesse had suffered from fuel surge on the corners

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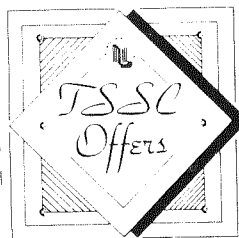
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MACAO SPITFIRE

Motor racing enthusiasts in the Far East will be the first to see a striking one-off Triumph Spitfire in action. The date, late November; the scene, the Guia Circuit of Macao; the events, the Macao Grand Prix and the Automobile Club of Portugal Trophy Race; the Spitfire, the ultimate in its marque as a competitive racing car.

The Macao events are the premier ones in the Hong Kong area and take place over a circuit of 3.8 miles round the houses, up the hilly sections of the Chinese coastal area, and along the straights bordering the South China Sea.

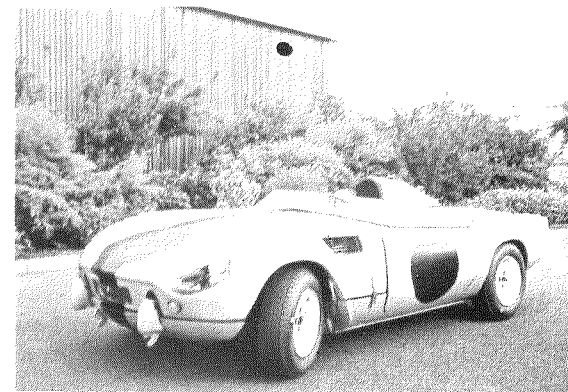
On November 27th, the silver and black Spitfire will be competing in the A.C.P. Trophy Race for G.T. cars; thirty laps of the circuit against competition including Lotus Elans, E Type Jaguars, M.G.B.s, Alfa Romeos, Morgans, Sprites, Sunbeams and so on. Thirty laps through the Solitude Esses, along

the Beach Straight and Reservoir Straight, up St. Francis and Faraway Hill - a circuit described as a combination of the Belgian racing straights and the Monaco course.

The opposition will be there on that day but on the 28th when the Macao Grand Prix is held over the same circuit - and with 60 laps to cover - the G.T. competitors will be joined by pre-1964 Formula 11 and 111 cars.

It was the differences between the regulations governing European events and the Macao event which enabled the new look Spitfire to be developed in the Competition Section of Standard-Triumph's Engineering Division.

Prepared under the direction of Mr. H.G. Webster, Chief Engineer and Director of Standard-Triumph, the Spitfire is a single-seat machine, 410 lbs. lighter than the production Spitfire Mark 11 hard top.



Basically the Spitfire chassis with a Le Mans Stage 2 engine, it has the same bonnet as its Le Mans sisters, but the rear end has been modified in fibre glass to take a headrest and fairing behind the cockpit. A racing windshield adds to the sleek, powerful look of the car.

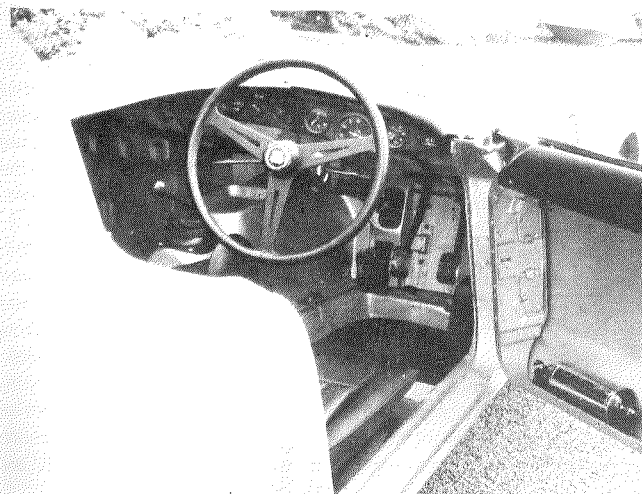
The Stage 2 engine, equipped with twin Weber carburettors, develops 108 b.h.p. at 7,200 r.p.m. and the rear axle ratio of 4.1 : 1 is intended to give maximum acceleration on the uphill sections of the course and to reach maximum performance along the straights.

Inside the cockpit are a minimum of controls, namely revolution counter, oil pressure gauge and water temperature gauge. The lightweight fibre glass racing seat has been constructed in the Engineering Division, and the lightweight steering wheel is also of special design with a leather covered sponge rim.

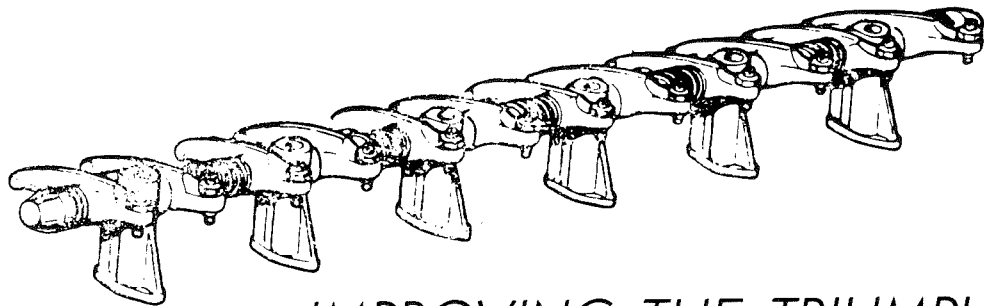
The same length as the production Spitfire minus its bumpers, the Macao car has been fitted with quick-lift jacking points, a long range fuel tank with a capacity of 22½ gallons, and has the latest Dunlop R7 tyres on 5½J magnesium alloy wheels.

As for the car's performance, under test at MIRA and Silverstone it was found that its potential exceeded that of the Le Mans car. It consistently lapped the outer circuit at MIRA at 122 m.p.h. and exceeded 130 m.p.h. on the straights.

Cockpit of the car showing the control facia uncluttered by unnecessary instruments.



Standard Triumph Review November 1965



IMPROVING THE TRIUMPH 6 CYL. LUBRICATION SYSTEM

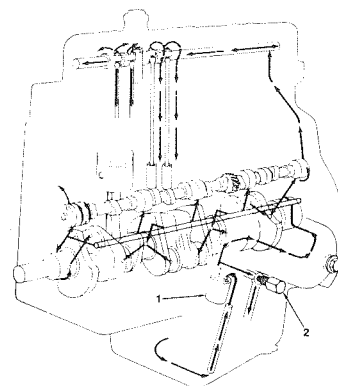
External High Pressure Rocker Feed Conversions

Well done to Rex W. Hayman, Pen to Paper October 1989 Courier for highlighting the inherent problem of fitting such a conversion. I entirely agree with his observations and would like to expand on some of the points raised. This conversion is not entirely new. I first came across it on a Vitesse Mk 2 in 1979. Main gallery oil pressure was fed directly to the rocker assemblies via a thin bore copper pipe. To the best of my knowledge the first commercially available conversion appeared in the supplement to the Triumphtune Catalogue in 1983 and was made in Aeroquip braided pipe. This type of conversion, utilising Aeroquip/Goodridge braided pipe has been much emulated and is now what most suppliers stock.

The existing rocker assembly oil supply is taken from the rear camshaft housing, through a drilling in the block into the cylinder head. It is at considerably reduced pressure. When new, this lubrication is perfectly adequate. High mileages and/or infrequent oil changes result in "oil gunge" partially or in neglected cases, totally blocking the rocker shaft and possibly the oil supply drilling - excessive noise and wear soon become apparent.

The oil pump is in essence a displacer, pressure builds up due to the close fitting of bearings and small diameter oil passages. The rocker assemblies were never intended for main oil gallery lubrication and therefore have generous clearances which are further exaggerated by wear. Fluid under pressure will flow to the path of least resistance. Needless to say where most of the oil flows to when a direct connection is made between the oil gallery and rocker shaft. On high mileage engines a noticeable drop in pressure can be recorded on an oil pressure gauge. If there is evidence of wear and/or poor lubrication of the rocker assemblies, an overhaul is the long term solution. "Bolting on" a high pressure rocker feed kit, or whatever suppliers wish to call it, might cure momentarily the worn rocker problem only at the expense of bottom end lubrication, thus effectively reducing the service life of the engine.

This high pressure rocker feed conversion is a good idea poorly executed. At my time with "Stecol Engineering" the benefits of such a conversion were recognised. To overcome the problems a reducer was fitted into the pipe. It was designed so that it couldn't become dislodged once fitted and further refinements in bore diameter led to a conversion which has the benefits of improved lubrication to the rocker shaft, but keeping within sensible limits. I would be very interested to hear from any members who have been offered these restrictors as a large quantity were stolen from the workshop. As far as I'm aware no one else produces these and in fact most suppliers of the "rocker feed conversions" are totally ignorant to the fact that they are necessary.



Oil Pumps

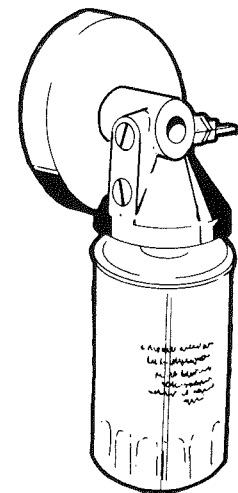
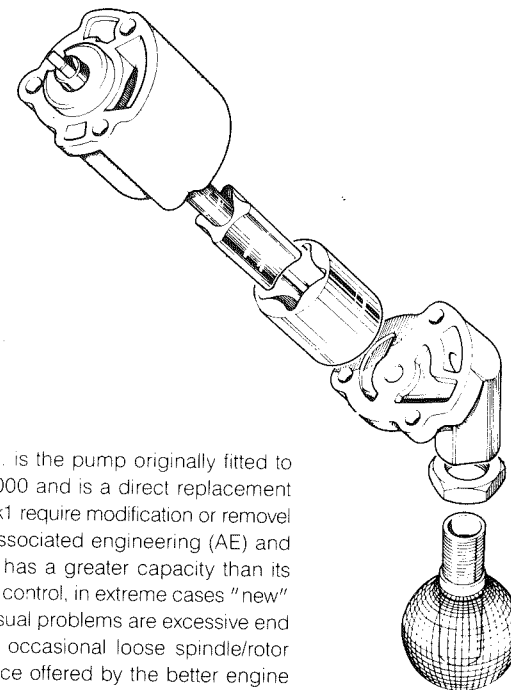
The only pump now available for the six cyl. is the pump originally fitted to the 2.5L models and late GT6 Mk3/Triumph 2000 and is a direct replacement for earlier type pumps. Early Vitesse 2.0L/GT6 Mk1 require modification or removal of the sump windage tray. Manufactured by associated engineering (AE) and is available from both BL and AE stockists. It has a greater capacity than its predecessors although suffers from poor quality control, in extreme cases "new" pumps have to be designated to the dustbin. Usual problems are excessive end float out of true machined surfaces, with the occasional loose spindle/rotor assembly thrown in for good measure. A service offered by the better engine builders is to blue print the oil pump, this requires selective assembly, careful machining and lapping and well worth the cost even on a standard engine.

Spin on Filter Conversion

These are manufactured by Mocal and are available from most "Motor Sport" orientated outlets, originally intended for the TR and saloon range of Triumphs. On Club cars, the filter fouls on the chassis long before its anywhere near upright. This effectively rules out using unipart GFE 148 and A.C. Delco x 18 as neither have a anti-drain tube fitted. Unfortunately this is the type of filter recommended and supplied by some so called tuning concerns. This type of filter requires modifying as Rex Hayman suggests to avoid partial drainage overnight. These spin on filter adaptors are available in two forms, for use with or without an oil cooler. As mentioned previously, the oil filter has to be mounted at an angle, effectively placing the oil cooler feed/return connections directly under the fuel pump, making the installation look somewhat untidy and unprofessional. My answer to the problem is to utilise a conventional oil cooler sandwich plate, as if retaining the standard oil filter, and bolt the spin on adaptor (without oil cooler connections) onto it, thus the position of the oil cooler pipes is not dictated by the position of the oil filter. Another advantage of using this method, an A.C. Delco x 19 filter can be used. It has the same mounting dimensions as the x 18 is considerably larger and has an anti-drain tube fitted. This filter cannot be used without the oil cooler sandwich plate as it will foul on the block.

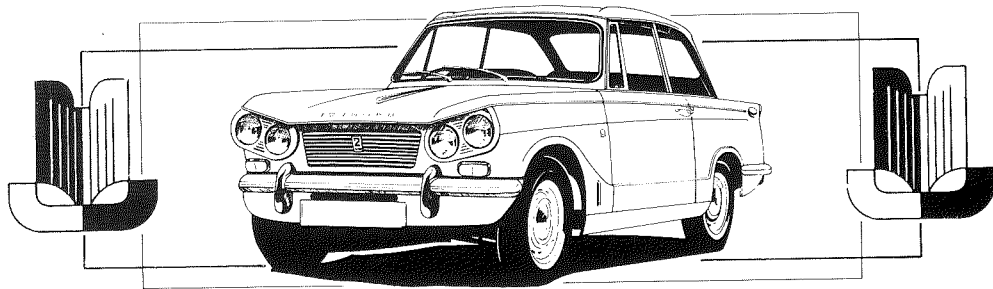
If there's sufficient interest for the reducers used in the high pressure rocker feed conversions. I am prepared to remanufacture them, cost would be £3.50 inc. p8p. Members in the first instance should write to me at the address below.

Finally, North London area members would like to congratulate Leon F. Guyot on his excellent articles on the Demise and Resurrection of his Herald 1200 Conv. as featured in the last four Couriers, and we all thought he was the International Liaison Secretary! Steve Phillips, 11, Whittingham, Tottenham, London, N17 0QG



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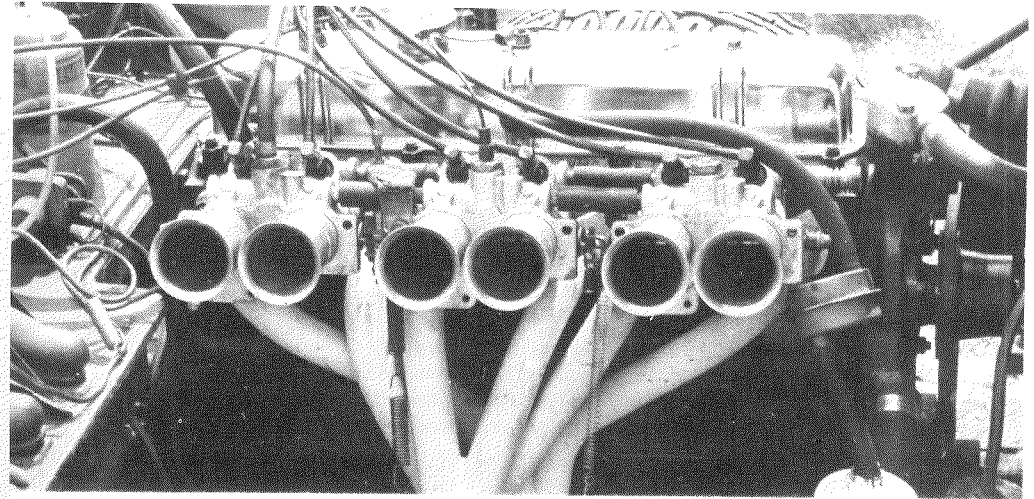
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WHAT DETERMINES FUEL CONSUMPTION?

By Harvey G Troth, PhD, BSc, MoTADI



Introduction

Anyone who drives a Vitesse Mkl or II knows that they are not the most economical of cars. Somewhere between 20 and 25 MPG being the most often quoted petrol consumption. Yet modern cars are very economical compared with older cars, 30 - 40 MPG being achieved with similar sized cars.

In this article the author will attempt to explain the above observations with help from data in "What Car September 1988" and a previous article "What Determines Acceleration and Top Speed?" published in "The Courier (109)"

Fuel Burnt by the Engine

Everybody knows that the engine draws in fuel and air through the carburettor to be burnt in the engine in the correct ratio. Correct ratio? What is the correct ratio? The author being a scientist would say that the stoichiometric ratio of air and fuel is required. That is, the fuel should be burnt completely to carbon dioxide and water, and the oxygen contained in the air should be the exact amount. This is 14.5 lbs of air to 1 lb of petrol. This approach would probably work very well if the fuel had plenty of time to be burnt but it doesn't, especially when the engine is rotating at 5000 rpm. It has been found practically that a richer mixture than that quoted above gives more power to the engine and tuned engines such as the one in the photograph above (not mine unfortunately) operate on a very rich mixture. G Bell - in his book "Tuning Modern Generation Engines" suggests that 6 millilitres of fuel per bhp per minute is a good guideline. On the other hand modern "shopping car" engines are now being

run very much on the lean side to oxidise all the fuel available and hence make them very economical. The situation is summarised in TABLE 1 and Figure 1.

TABLE 1	
REQUIREMENT	RATIO AIR/FUEL
STOICHIOMETRIC	14.5 : 1
MAXIMUM POWER	13 : 1 — 10 : 1
ECONOMY	15 : 1 — 18 : 1

The above data is also shown in Figure 1.

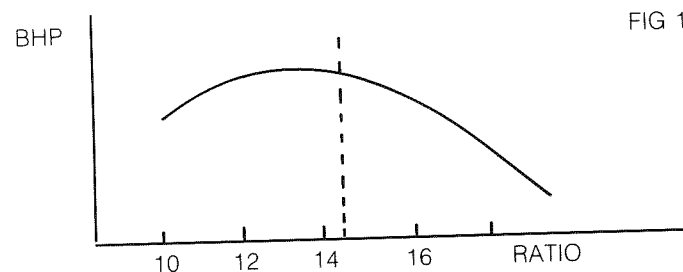


FIG 1

What all this means is that an engine can be operated with more or less fuel depending on what we require it to do. Thus G Bell's 6 ml/min/BHP might represent a 10 : 1 ratio whereas economy engines might run towards 20 : 1 and therefore use 3 ml/min/BHP. Let's see how this works out with modern cars.

BHP, Speed, Drag Coefficient (Cd) and Fuel Consumption

The previous article written by the author showed on a practical basis (plotting the data on a graph) that the top speed of a car could be related to BHP and Cd by the following relationship:

$$V = 16 \left(\frac{\text{BHP}}{\text{Cd}} \right)^{1/2}$$

Where V = Speed in MPH
BHP = Brake horse power
Cd = Drag coefficient

Note: This relationship incorporates frontal area in the factor 16 and hence assumes that most cars will have similar frontal area. As a first approximation this works very well.

What this above equation says is that the lower the drag coefficient, i.e. the more streamlined the car, the higher its top speed will be for a given BHP.

The BHP required to propel a car to various speeds is plotted in Graph 1 for Cd = 0.3, 0.4 and 0.5. From the graph it can be seen that at a constant 75 mph cars with the above Cds will require 30, 42 and 55 BHP respectively.

Many modern cars have a Cd approaching 0.3 and hence this is a very good reason for them being fuel efficient. If this is combined with "lean burn" technology then some quite remarkable fuel consumptions are possible, often approaching 50 mpg.

Graph 2 shows calculations relating the drag coefficient and the volumetric fuel consumption (ml/min/BHP) to MPG at a constant 75 MPH. Here the effect of low Cd and low F can be seen clearly. The calculation is:

A car with a Cd of 0.4 requires 42 BHP to propel it at a constant 75 MPH. If it is fuel efficient then F = 3 ml/min/BHP.

Therefore fuel required is 42 x 3 ml/min
Thus 1 gallon being 4550 ml lasts:

$$\frac{4550 \text{ minutes}}{42 \times 3}$$

$$\text{Such that 1 gallon lasts } \frac{4550 \times 1 \text{ hrs}}{42 \times 3 \times 60}$$

= 0.6 hours and at 75 MPH, 45 miles will be covered.

This car will cover 45 MPG!

SPEED & MPG

By a similar calculation to that described above the MPG vs speed data has been generated for Cd 0.3, 0.4 and 0.5 in combination with volumetric fuel consumptions where F = 3, 4 and 5 ml/min/BHP. This data can be seen in TABLE 2 & Graph 3.

Graph 3 is simplified by only recording the case where the volumetric fuel consumption F is 5 ml/min/BHP and Cd = 0.3, 0.4 and 0.5. One feature which becomes immediately apparent is that by going slowly fuel consumption will be improved considerably! Also the combination of slow driving, good fuel efficiency and low drag coefficient

can give over 50 MPG. 50 MPG has been achieved by the author in a MICRA driven at not more than 60 MPH.

The heavy solid line in Graph 3 is a Vitesse where it is assumed that Cd = 0.45. At a constant 75 MPH it is assumed that a fuel consumption of 24 MPG is obtained. Therefore F is calculated as 5 ml/minute/BHP. The solid line is generated from this data.

The conclusion that can be reached from this graph is that to achieve better than 30 MPG a Vitesse needs to be driven at less than 60 MPH! At a highly illegal 100 MPH it is consuming petrol at the rate of 16 MPG! This arises because of its high Cd and high volumetric fuel consumption!

EXAMPLES OF MODERN CARS

For consistency TABLE 3 is similar to that published in the previous articles. The author has owned or driven all the cars except the BMW and the Porsche. He has also driven and owned the types of Vitesse listed!

TABLE 3
CAR DATA — THANKS AGAIN "WHAT CAR SEPTEMBER 1988"

CAR	Cd	MPG 75	BHP 75 MPH	F	MAX BHP	MAX SPEED	MPG MAX
FIESTA POP	0.40	40	42	3.4	45	85	37
MICRA	0.39	41	41	3.2	55	90	39
PEUGEOT							
205 1.1	0.35	48	35	3.4	55	92	37
SIERRA 1.6	0.34	40	36	4.0	75	104	26
GRANADA							
2.0i	0.33	34	36	4.7	115	117	16
PEUGEOT							
205 1.9	0.34	37	36	4.3	135	125	16
BMW 325i	0.38	35	41	4.0	171	128	14
PORSCHE	0.39	23	41	6.0	330	162	6
VIT 100 (3.27)	0.45	24	47	5.0	100	103	16
VIT 130 (3.27)	0.45	24	47	5.0	130	112	13
VIT 150 (3.27)	0.45	24	47	6.0	150	120	10

A quick glance at the data shows that the modern small car is efficient because of its low Cd factors and low F. In general the more powerful cars keep low Cd factors but more fuel is supplied to the engine to improve performance. The range of Fs observed is 3.2 - 6.0 ml/min/BHP. The latter being for the Porsche.

A further interesting calculation which the author added to the TABLE as a matter of curiosity is the fuel consumption at maximum speed, assuming the same value of F applies at full throttle. The author owns a MICRA for economy and tuition. At 90 MPH which is seldom achievable, calculations show that it still does 40 MPG! I have owned the car for 3 years and it has never recorded under 40 MPG.

Similar performance is achieved by the other small economy cars. Hence for these cars the urban cycle and the constant 75 MPH consumptions are often the same.

At the other end of the scale the Porsche is calculated to give 6 MPG at 162 MPH! Getting more realistic the Granada and the Peugeot 205 1.9 GTi are calculated to give 16 MPG at 117 and 125 MPH respectively.

Enough of these modern cars, how about the Vitesse? Some hint of the horrendous story was given earlier. The three types of Vitesse referred to in the TABLE are a Vitesse with a 3.27 differential such that 5,000 RPM = 100 MPH. 100 refers to standard 105 BHP engine, 130 2.5 litre engine and 150 refers to a tuned engine of the type shown at the beginning of the Article and hence 6 ml/min/BHP is used.

The normal Vitesse is consuming fuel at a rate of 24 MPG at 75 MPH and about 16 at 100 MPH. The highly tuned version is down to 10 MPG at 120 MPH! The photograph at the end of the article is my three twin choke webbers - less tidy than the fuel injection system shown at the beginning of the article but still very effective in burning vast quantities of petrol that is!

TABLE 2 - FUEL CONSUMPTION, BHP AND SPEED RELATED TO Cd AND F
Cd = 0.3 e.g. a Vauxhall CARLTON

BHP AVAILABLE	50	100	150
RESULTANT SPEED (MPH)	88	110	127
MPG			
F = 3	45	28	21
F = 4	33	21	16
F = 5	27	17	13

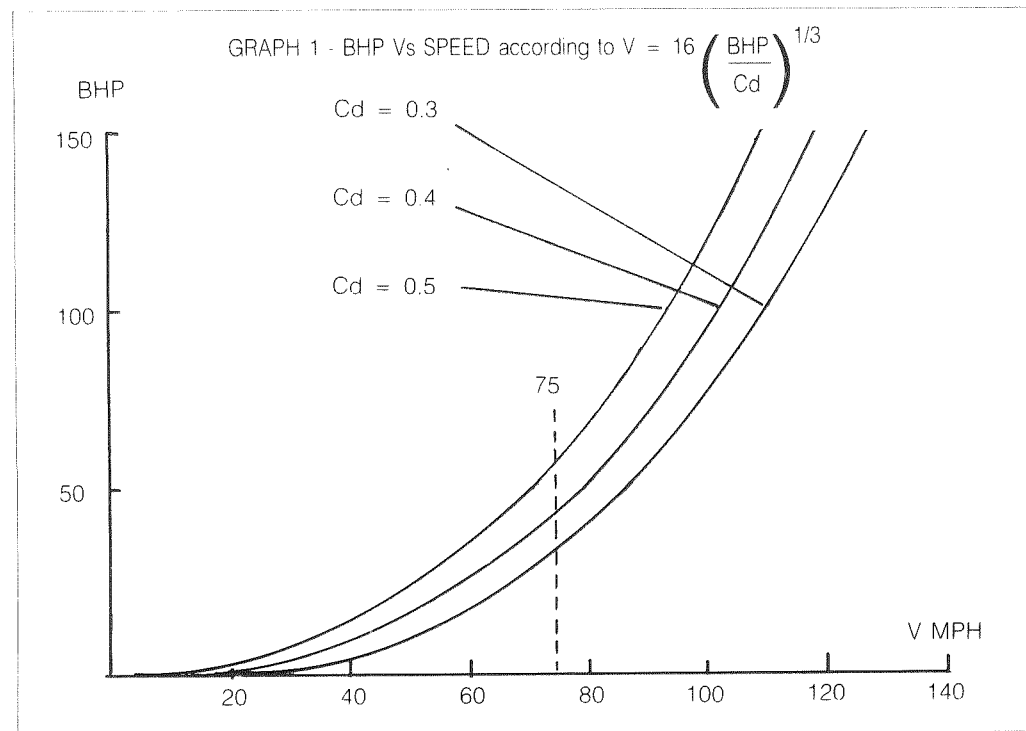
Cd = 0.4 e.g. a Nissan MICRA

BHP AVAILABLE	50	100	150
RESULTANT SPEED (MPH)	81	102	117
MPG			
F = 3	41	26	20
F = 4	31	19	15
F = 5	26	16	12

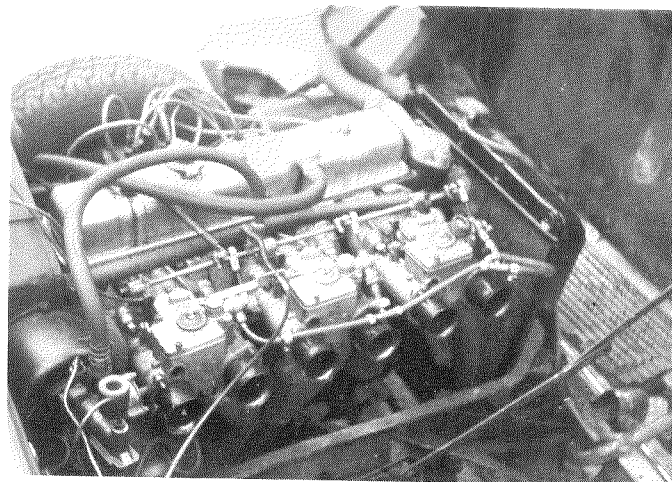
Cd = 0.5 e.g. a LADA

BHP AVAILABLE	50	100	150
RESULTANT SPEED (MPH)	74	93	106
MPG			
F = 3	37	24	18
F = 4	28	18	13
F = 5	22	14	11

For those who are interested, this data can be used to plot graphs similar to Graph 3 for Cd = 0.3 and 0.4.



How do you get good fuel consumption out of a Vitesse? Buy a Micra, Fiesta for Peugeot 205 as a second car!

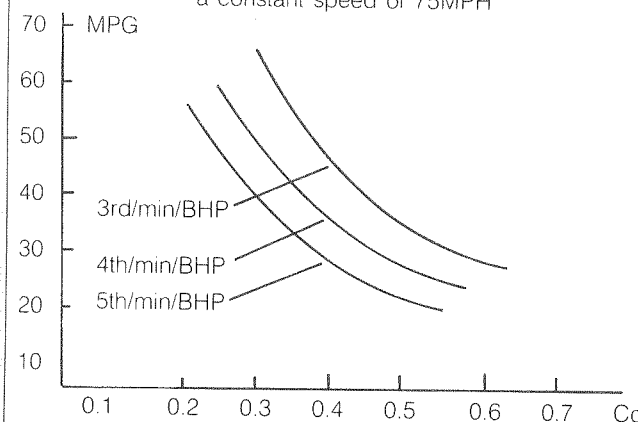


ADDENDUM

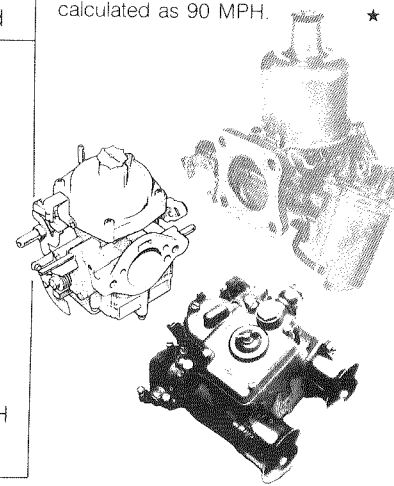
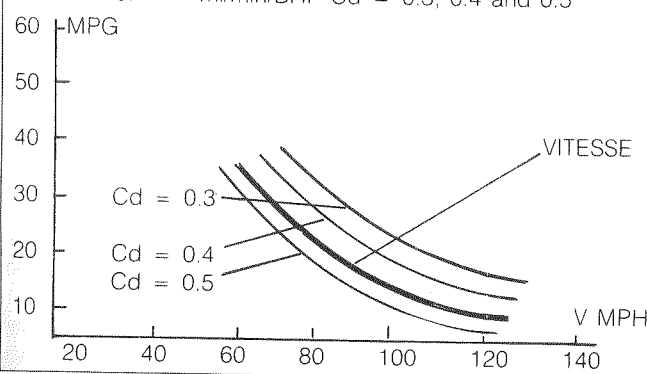
In his letter in the recent Courier, Mr Morfet of York asks me to calculate top speed, acceleration times etc., for Club cars. From published data and the two papers published by the author, it should be possible for him to calculate the numbers.

For example, the Herald is similar to the Vitesse but weighs less and the 13/60 has 60 BHP available. I have estimated Cd as being 0.45. My calculations indicate that the top speed should be 81 MPH, to - 60 about 17 seconds, MPG at constant 75 MPH about 25. However, it is normally driven at about 65 MPG and on this basis 32 MPG would be expected. Now to the GT6 and Spitfire. I believe that the drag coefficient is probably slightly smaller than the Vitesse hence allowance needs to be made for frontal area. Putting this together, a good guess at the Cd to use in the author's calculations would be 0.35. This gives the GT6 a top speed of 109 MPH and a fuel consumption at a constant 75 MPH of 33 MPH. The Spitfire (with hard top) would have a similar fuel consumption at 75 MPH but the top speed would be limited by the 65 BHP available and is calculated as 90 MPH. *

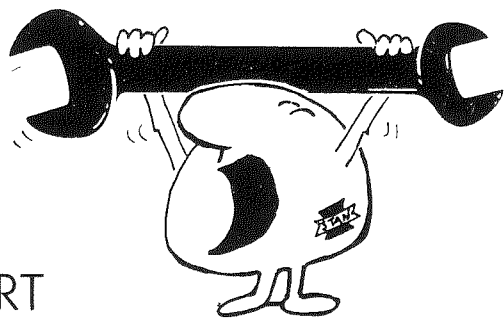
GRAPH 2 - MPG Vs Cd at 3,4 and 5 ml/min/BHP at a constant speed of 75MPH



GRAPH 3 - MPG Vs SPEED
For F = ml/min/BHP Cd = 0.3, 0.4 and 0.5



Technical Tip



CONVERTIBLE COMFORT FOR YOUR HERALD/VITESSE

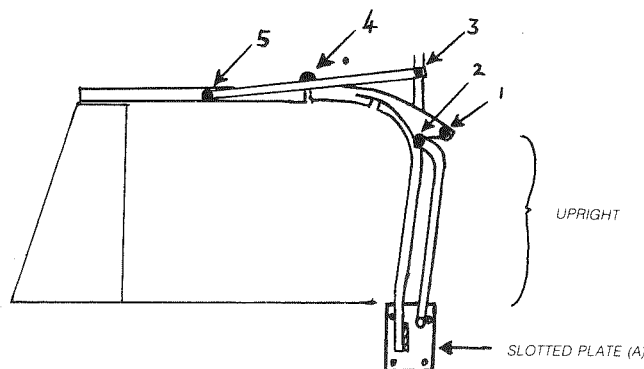
Andrew Mason

If your windows rattle and/or don't shut properly, try adjusting the position of the rubber draught strip against the window glass. The position of the upright (see diagram) is governed by 4 7/16" bolts in slotted holes in plate A. Moving the plate (and upright) back will stop the window fouling the aluminium trim and pushing the rubber draught strip out of its seating.

Next, look at the five bolts arrowed in the diagram and see if they have worked loose. Some have locknuts and others nylocs and washers. Check and tighten accordingly, leaving enough play for the hood frame to move. If they are too tight, they may tighten further as the hood is lowered and the frame will buckle (as I found out!).

This should bring the front and middle parts out towards the glass and provide you with less fresh air and rattles.

HOOD FRAME AROUND DOOR



SPRING IS IN THE AIR ?

N D Grant - Cambs

The rear suspension as fitted to Herald chassis cars is cheap and cheerful, has a reputation for nervous handling characteristics and is radically different in appearance to a 'normal' rear axle. Workshop manuals and classic car magazine articles describing it often claim that working on it can be tricky, especially fitting the transverse spring which requires a special tool (spring lifter).

These facts, taken together, are probably enough to deter most people from tackling it, thinking that it is best left to the experts. However, nothing could be further from the truth: the rear

suspension is "just nuts and bolts" and the transverse spring can be fitted by one man without any form of spring lifter as follows:

Use instructions in Haynes Manual to remove spring, jacking the rear of the car high and note also that there will be sufficient space around the car in a single garage to pull the spring out. You will not need 4ft as the manual suggests, though it will help if you park "off-centre".

Proceed by removing the tail end of the exhaust system and after marking across the differentials three universal joint flanges to ensure correct reassembly, undo these with a pair of spanners (sockets will be too bulky). These are done up very tightly and are best removed using "Mettrinch" 9/16" sprin drive spanners (no shares!) as they prevent rounding off. Those on the half shafts can be loosened by pulling on one spanner so that the second jams against a chassis member. By rolling on your back and using your legs to brace against a rear crossmember, a great deal of force can be applied.

Next, undo and remove the two front differential mounting bolts and make sure that it doesn't try to fall down. This will be extremely unlikely. Give some sharp pulls and pivot it downwards around its rear mounting pin. With most of its weight still supported at the back, it will be easy to catch (it will not fall on your head!). Support with trolley jack.

Assemble the new rear spring to the vertical links, making sure that it is the right way around (and up!), raise the differential back into position and secure front mountings.

Working from inside the car, place the spring mounting studs through the spring plate, "run down" into the differential and then tighten the nuts so that the spring is lowered evenly. Follow Haynes Manual for complete reassembly and torque down all nuts to specified tension.

This may seem a rather time consuming method, however, working this way would be quicker if no spring lifter was to hand and in any case, the job can easily be done in a morning.

I recently fitted a rear spring to my Spitfire 1500 this way and experienced no problems at all.

IN THE PINK

Steve Ash - Devon

I would like to put forward a couple of ideas which may help members to keep their Vitesse running and in good order.

Firstly, anybody who, like me, has a high lift cam in a MkII engine and has suffered 'incurable' pinking.

I found I had to retard my ignition to almost T.D.C. to prevent pinking at part throttle openings. I decided that this pinking was being caused by the vacuum advance unit, which I promptly disconnected.

I set the static advance to 13° BTDC, as per the instructions with the camshaft and have suffered no pinking problems since. The car also pulls much better at full throttle, as it now has the benefit of maximum static advance.

Secondly, the problem of welding outriggers on the car with the body in place. It is impossible to weld the top surface of the chassis to the outrigger. But this problem could be overcome by cutting small, neat 'windows' in the floor over the point where the welding was needed. I guess that this would be possible with all the outriggers. Plates could be secured over the holes after the operation.

Finally, after having removed the side-rail covers and seen how the body mountings on my car have rusted, I intend to make the removal of them and thorough cleaning and Waxoyling of the gubbins hidden behind, a yearly job.

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