



202312

....now driving beyond LVG @ 50

LVG Calendar 2024

NOW is the time to contact our Group Leader Phil ...while stocks last. A good quality calendar which will last you all year. All 365 days includedgood value !



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Santa Jon



Merry Christmas to all ...from the LVG Committee

Editorial ...

Thank you to everyone who has emailed words for this issue, ranging from a few lines to a 9 page article ! If any reader has a fine TR photo or two that I may use, please sendincluding possible cover pics?!

Pete will loudly mutter the answers to his Quiz and I am pleased to hear that he plans to carry on muttering in 2024. Read also about Brian's Garage clearance ...and you will just have to put up with my including so many rally pics, including Elfyn Evans winning the Rally Japan.

As another year ends, I would like to thank Phil and Mike for continuing to plan interesting events for LVG. See page 7 and take a look at the LVG website ...and check regularly for updates. Next year will be the 50th anniversary of my TR3A ownershipperhaps I should plan a celebration ?

Merry Christmas and a Happy New Year to all readers.

Chris.

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DEADLINE DATE ... for articles & photos for next issue is Monday 8 January

=====

*Please send any TRunnion articles direct to the Editor
.....as a **WORD doc attachment** !*

Keep the text small, if possible: TAHOMA, font size 10

PHOTOS : JPEGs of finest quality ...if possible ... please.

EMAIL direct to: chris.trunnioned@btinternet.com

Please keep Text & Photos separate.

My Publisher does not like it if pics are added to a Word doc.



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Meetings Venue and Small Print

Unless otherwise specified, all group lunchtime meetings are on **third Sunday of month** (from 12 noon) at The Cock Inn, Broom. Plenty of parking space behind the pub. This is a "lunchtime meeting" so food is optional. The kitchen at Ther Cock is very small so it **would be appreciated if those intending to eat could please call: 01767-314411 so that they have an idea of numbers.**

WEB SITES :- TR Register: www.tr-register.co.uk
TR Forum: www.tr-register.co.uk/forums

LVG: www.tr-register.co.uk/group/lea-valley

Facebook: "TR Register Lea Valley Group"
www.facebook.com/leavalleyTR

REMEMBER : All recent Trunnions are available on the website but if you are not already receiving them directly, we may not have your current email address. To keep in touch, update your details : **trr.lvg@gmail.com**

Disclaimer The TR Register wishes to state that, whilst we are pleased to assist our readers/members by providing technical information, this is given on the strict understanding that no legal liability of any sort is accepted in respect thereof by the club, company or its servants. Neither the club nor its technical advisors can be held responsible for the consequences resulting from the advice given. Any products recommended are used at the owners own risk and are not endorsed by the club.

Shine & Show time!

Welcome to the home of LVGThe Cock Inn, Broom. Remember to book in advance for Lunch

Check our LVG WEBSITE for all you need to know

About, Gallery, Social Scene, Events, Newsletter and Local Happenings !

Just click below to keep yourself updated :-

<https://www.tr-register.co.uk/group/lea-valley>

Click NOW for LVG updates





Group Leaders' Report

Phil Sanford

I would like to welcome new member Tom Harding who has a green TR7 which is roadworthy, although he has plans to do a few jobs on it over the winter months aided by the spanners he picked up from Brian's Garage. A re-joining member is Richard Lyons who owns a TR3B in dark navy. The 3B is a rare car in the UK, as I believe it was only sold in North America, I await to be corrected. I look forward to seeing both cars and drivers in the New Year. It was good to see the return of the regular listing of new and rejoining members in TR Action.

As far as I am aware there are still no volunteers for the role of Eastern Area Coordinator. If you would like to apply further details can be found on page 10 in the latest TR Action.

Hopefully a good few of LVGers got to the Classic Car Show at the NEC. The show seems to be back to pre-covid size, if not bigger, which does present a problem in getting round it in a day, two would be better. The TR register stand looked busy but sadly no tea and coffee!

How many of you managed to complete Pete Muncer's quiz in the last TRunnion? I must admit I struggled but hopefully he will be revealing the answers soon to sooth my overheating grey matter.

The visit to the National Motor Museum in Gaydon on the 14th November for an after-hours event looking behind the scenes was a great success with the LVG contingent being joined by members from the NLG and Wensum Group. The pies were excellent as was the pudding and of course we got an exclusive tour of the workshop.

Beauty and the Big Beast, the adult panto at the Market Theatre in Hitchin, was another great night out for the Group with 25 of us in attendance, rounding off the evening with a meal at Pizza Express where some of the jokes were explained to me, I am such an innocent!!!!!!

The disposal of spares and tools from the late Brian Chidwick's garage saw an Aladdin's Cave of TR spares and tools on offer in exchange for a small donation to charity. Lynda, Brian's widow, had asked that any money raised go to the Sue Ryder Hospice in Moggerhanger as they had given her and Brian great support during his illness. I am pleased to report that all the spares have gone and we have raised in excess of £500.00.

A heads up for an event we had to cancel during lockdown in 2020, is back on in March next year. The talk on flying Concorde by John Hutchinson, who piloted Concorde for many years, will be held at Hitchin Town Hall, further details will follow shortly.

If you have the time and energy after your New Year Eve celebrations, and the weather is kind, you might like to attend Vintage Stony at Stony Stratford on the 1st January, 9.30am – 2.00pm, £5.00 per vehicle or New Year's Day Classics on the Village Green at Barrington from about 11am until everyone has gone home. Entry is free but they usually rattle a collection bucket at you on the way out.

I would again just like to remind you that it is our Annual Members Meeting at 12 noon on the 21st January 2024 at Mount Pleasant Golf Club, Lower Stondon. Please come along to this excellent venue and hear our plans for the coming year, what we did in the past year and how we are doing financially. There will be plenty of opportunity to air your views on what we have got right, or wrong, plus the opportunity to catch up with old friends. Complimentary tea and coffee will be available. Once the AMM is finished you will be welcome to join our Kick Off Lunch at 1:30pm held at the same venue, for a 3-course meal, a quiz and a raffle with some great prizes.

Our new Events Calendar is now on our website <https://www.tr-register.co.uk/group/lea-valley/social-report/2023/03/2238/LVG-Events-Calendar>

Wishing you all a happy Christmas and a wonderful New Year.

Phil



LVG 2024 events...



What do you want us to organise?

Even better, does anyone want to arrange something?

This year is nearly over and when we look back over our 50th year, it is amazing how much we managed to cram into the last 12 months. Starting with the meeting exactly 50 years after the very first LVG meet at The Station pub in Knebworth, we held our usual Annual Members meeting, followed by the Kick Off lunch and this was all before January was over. Our monthly meetings continue to be held on the 3rd Sunday of the month at The Cock in Broom and in the warmer months we run midweek evening pub meetings. These allow us to get our TR's out and give them regular runs to keep them serviceable. Other visits during the year included, Quainton Steam Museum on DiD, De Havilland Museum, MG & Triumph Spares Day, Kelmarsh Hall, TR@70 at Shelton Mallet, Pirton Car Show, Classic Car Show at NEC, Gaydon Motor Museum and the recent Adult Panto. All this plus our most successful Shine & Show @ Broom, meeting Graham Teeson on his epic 5000 mile British Coast journey and seeing Luke & Luis off and back at Knebworth on their entry in Club Triumph's 2000 mile Round Britain Reliability Run. We even managed a Summer BBQ to celebrate our 50th year. We travelled abroad on a great Trip to TR Club Holland to help them celebrate their 50th year and took our time going via the daily remembrance service at The Menin Gate and coming back via Belgium visiting Brugge. Wow!!! what a year it has been and a fitting celebration of 50 years of LVG.

Below is the draft calendar for 2024 and you can see there will be much to do with your TR.

Unfortunately 2024 will not see a Shine & Show event. This year was the most successful yet, but regrettably we had to turn a few classics away and very early on in the evening had to ask visitors in modern cars to park in the village. Clearly a victim of our own success, but without any contingency to increase the space available for classics or moderns, we have decided to call it a day and go out at the top.

The events calendar will be updated as new shows are announced, so keep an eye on the official TR Register site for LVG @

<https://www.tr-register.co.uk/group/lea-valley/social-report/2023/11/2238/LVG-Events-Calendar>

Thanks to everyone who attended any of our 2023 events and remember you don't have to do everything, it is just great to see you, even if you don't have a classic and or only join us occasionally.

We look forward to seeing everyone next year.

Phil & Mike.

January 2024

Sun 7th - Bicester Scramble @ Bicester Heritage OX27 8AL

Sun 21st - AMM & Annual Kick Off Lunch @ Mount Pleasant Golf Club SG16 6JL, from 12 Noon Meal selection in advance essential. Email trr.lvg@gmail.com



February

Sat 10th - Drive your Triumph Day. In honour of Sir John Black (some say the saviour of Triumph cars). Venue TBA. Watch this space for what LVG will do.

Sun 11th - MG & Triumph Spares Day. Stoneleigh Park CV8 2LG

Sun 18th - Sunday Lunchtime Meeting - Cock at Broom at 12 Noon

March

Tues 5th - Concord pilot talk. TBC and possibly in Hitchin.

***Sat 16th - TR Register AGM, Stratford Manor Hotel CV37 0PY. Registration required to attend.**

Sun 17th - Sunday Lunchtime Meeting - Cock at Broom at 12 Noon

Fri 22nd - Sun 24th - Practical Classics Car & Restoration Show @ NEC Birmingham.
<https://www.tr-register.co.uk/...>

Sat 23rd - Cars on Ramps @ Robsport, Shepreth. Booking essential. TBC

April

Wed 3rd - Midweek Pub Meeting. Venue TBA

Sun 21st - Drive it Day. Watch this space for what LVG will do.

Sun 21st - Sunday Lunchtime Meeting - Cock at Broom at 12 Noon



Members and Friends

The 2024 calendar is already starting to fill and in the depths of Winter, we can only hope for some sunshine and warmth to get our cars out. We continue to meet at least monthly and some hardy souls attend in their TR's, but you don't need a classic to be in the club or attend. Come along and say hello, it would be great to see you.

TRR - LVG Committee



Pete Muncer

First of all this month, the information you have all been waiting for, the answers (in red) to last month's quiz. As stated previously, there is no trophy to be awarded, but anyone answering all 20 questions correctly, clearly should be a candidate to organise the next quiz. I will be intrigued to see the top scorers – I seem to remember that a former Group Leader was good at both answering and setting questions – how did you do this time Mr. T? The questions covered F1, TR and classics, and some topical items, with the format inspired by "Only Connect" on BBC2.

Round 1 – Make the connection:

- 1) What links these former F1 drivers – Mike Hawthorn / Phil Hill / John Surtees / Kimi Raikkonen **All won their single F1 World Championship driving a Ferrari (1958 / 1961 / 1964 / 2007)**
- 2) What links these drivers - Max Verstappen / Jack Brabham / Jackie Stewart / Niki Lauda **All have won 3 World Championships (also Nelson Piquet & Ayrton Senna) – Max may win more!**
- 3) What is the link between these races - Indy 500 / Monaco G.P. / Les Vingt-quatre Heures du Mans **All were won by Graham Hill – the only driver to do so (1966 / 1963-65 & 1968-69 / 1972)**
- 4) Le Mans 1961 – what links the cars finishing in 9th/11th /15^t positions **The team of Triumph TRS cars**
- 5) Whose name is on the Rugby World Cup trophy **William Webb Ellis - supposedly the inventor of the game of rugby**
- 6) What links Canley, Speke and Solihull **Factory sites where Triumph TR's were produced**
- 7) These Lotus cars were better known by their names rather than Mark numbers – 14 / 26 / 28 **14 Lotus Elite / 26 Lotus Elan / 28 Lotus Cortina**

Round 2 – Finish the sequence:

- 8) Ginny Soden / Steve Redway / Wayne Scott / **Trevor Good**
Editors of TR Action
- 9) New Zealand / New Zealand / South Africa / **South Africa**
Last 4 Rugby World Cup winners – South Africa beat NZ by one point in this year's final
- 10) Silverstone 1950 / **Aintree 1955** / Brands Hatch 1964
First year when the British G.P. was held at the circuit
Farina (Alfa Romeo) won in 1950, Moss (Mercedes) in 1955, Clark (Lotus) in 1964
- 11) 1991cc / 2138cc / 2498cc / **1998cc**
TR engine sizes from TR2 to TR7
- 12) This sequence is in reverse chronological order –
Phil Sanford / **Pierre Miles** / **Julian Hensman** / **Jon Marshall** (know your
Group Leaders)
- 13) Nino Farina / Juan Manuel Fangio / Alberto Ascari / **Alberto Ascari**
Winners of the first four years of the F1 World Championship
(Ascari did the double in 1952/53)



Round 3 – Missing vowels:

14) Mercedes / Ferrari / Haas / Aston Martin
Current F1 teams

15) Carlos Sainz / Sergio Perez / Yuki Tsunoda / Oscar Piastri
Current F1 drivers

16) Ken Richardson / Graham Robson / Neil Revington / Harry Webster
TR personalities

17) Semi trailing arm / Overdrive / Fuel injection / Michelotti
Parts of a TR & a TR designer

18) Italia / Doretti / Peerless / Warwick
Non-TR's supported by the TR Register

19) Jabbeke / Hopcrofts Holt / Southmead Industrial Park / Mount Pleasant
Golf Club Significant locations for the TR Register and LVG

20) Easyjet / Ryanair / EL AL / Wizz
Airlines using Luton Airport (be careful where you park)

Right, now back to the usual Mutterings, and our esteemed Editor reminded me that November was the time of year when the RAC Rally used to take place. However, rather than looking back to the 70's and 80's, let us see what is happening these days – and the answer is not a lot - currently there is no round of the World Rally Championship held in the U.K. The Welsh Rally GB was last run in 2019, and the Welsh government withdrew their sponsorship and financial support following the Covid crisis. It seems doubtful that we will see a Rally GB using the stages in the North York Moors, Kielder Forest, Lake District, or Scottish Borders in the future (all used extensively on RAC Rallies back in the day). Finding new sponsors will be the problem, and concerns over the environmental impact of rally cars blasting through the forests could be a factor now. I guess we might have to wait until electric technology advances to the point, where rally cars can run all day without needing a battery top-up – drivers might have to be careful on the road sections even then – 20mph limits?

Now to next year - planning has started for CACCC tours, and the Springing Up Tour in April will be based at the Ufford Park Hotel, near Woodbridge in Suffolk, April 11th-13th. As we try to keep varying the areas we visit, the Falling Down Tour in September is likely to be heading west or maybe north - before that the local Tibbles Tour will be on June 23rd - more news to follow in future TRunnions.

In F1, the Max & Red Bull show has finished the season with 19 wins out of 22 races, for a career total of 54 victories (which puts Verstappen 3rd behind Lewis Hamilton and Michael Schumacher). Red Bull have first and second places in the drivers' championship as well this year, with Perez finishing ahead of Hamilton – although rumours a few weeks ago suggested that Sergio's services might not be required by the team next year – maybe he has dodged a P45 now. It's tough in F1.

To finish on an inspiring note, in Classic & Sports Car mag., there is a piece about a chap who built a Lotus Elan from a kit back in 1970, and still owns the car, which has covered 560,000 miles now (which must be a record for a Lotus). He competes in hill climbs and sprints all over the country, driving the Lotus from his home near Glasgow. Quoting the final words from the magazine article - "now here's the thing: he is 88 years old – there's hope for us all yet".

Finally, Merry Xmas and a Happy New Year – see you at Mount Pleasant G.C. on Jan. 21st.



Brian's Garage Spares



A salute to Brian. His TR3A has now been sold and the new owner promises to keep in touch with Lynda and Sarah. So many TR spares and other motoring stuff had been stored by Brian that a massive garage 'clear out' was needed. Everything was to be "free" but takers were invited to leave a donation for charity: Sue Ryder Hospice@ Moggerhanger. Prior to the event day, the "Tech Team"most of the LVG Committee + Howard Pryor sorted everything ready for the big give-away! Ed.

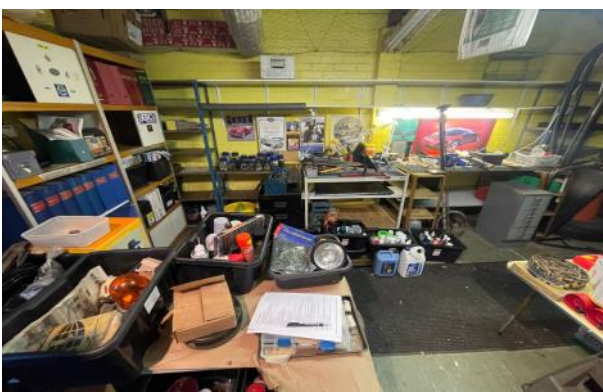


Thank you to everyone who attended the garage free-for-all on Saturday 25 November and thankfully took so much away with them. Sarah, Mark, Ben and I are certainly jolly pleased that the garage is now very nearly emptywell almost!

Thank you especially to Phil and his LVG Committee team who helped to set up the garage ready for the sale and helped on the 25th. Thank you also to all of you who helped move on 50 years + of TR, motoring and assorted books. I know Brian would have been very grateful for all your help to me and his immediate family.

Merry Christmas, Lynda Chidwick

Lynda.



RAC (Roger Albert Clark) RALLY 2023



Victorious Elfyn spearheads Toyota 1-2-3 in Japan

Dominant drive ensures third WRC win of the season for Welsh star.



Elfyn ended the 2023 FIA World Rally Championship season in the best possible way, with his victory at Rally Japan heading home a spectacular 1-2-3 finish for the Toyota Gazoo Racing World Rally Team. Battling challenging conditions all weekend, Elfyn secured a dominant win for Toyota on its home event and led the podium lockout – the result confirming his runner-up spot in the championship fight.

1st Gear Rescue

Jon Evans

Triumph/MG Day June 10th 2023: A number of the LVG attended the Triumph/MG day at Silverstone and had a lovely day, despite the heat! Group Leader Sandford had had some issues with his steering on the way up to the Super Sausage so I thought I would shepherd home in case of any recurring issues. So, the two of us set off navigating around Towcester from Silverstone, GL took a wrong turn that resulted in us ending up in a car park!!

We then found ourselves at a T junction on the A5 in Towcester, Phil pulled out, I waited for a gap and then moved out but stalled right in the middle of the road straddling both lanes. I couldn't work out what happened, I was stuck in first and couldn't select another gear. People were coming from all directions to my aid trying to push me, I was in panic mode as the traffic was backing up in both directions! One of the helpers suggested I dip the clutch and I lurched away in first gear, frantically trying to attract Phil's attention.

Phil pulled in front at one of some large green double gates, which looked like they hadn't been opened for a while. Fortunately there was enough room off the road for both of us as it was now a 40MPH limit! Paul Richardson and Tony Barnard Smith stopped and helped but alas, the car was stubbornly stuck in first gear.

Obviously, I'd picked up the wrong cable lead for my phone charging pack, which was desperately needed for my old Samsung phone but GL came to the rescue again with a lead that worked and fancy warning triangle.

I waved the LVG members off as they've done as much as they could to help to help and @ 16.45, called the breakdown service part of my TRR insurance. This was my first time in four years I had needed to call them. They kept me updated by text and advised a 2 hour wait.

I did sit with the car but it still being a very hot afternoon, I really needed some shade so went across the street. I sat by a T junction under some lovely shady trees. Triumphs were passing me on a regular basis, hooting and waving to see if I was OK. John Hanna stopped to help but sadly there was nothing he could do. Sitting there I did feel properly helpless and, to be honest, more than a bit fed up! A man stopped at the junction, wound his window down and asked what was wrong, I explained and he then said he had a GT6 back in the day and loved it, now driving something more practical an Insignia to pull the caravan. His name was Phil and it have been a day for the Phil's of this world to step up! When I thanked him for stopping, in return he left me some water and a coke to see me through.



I decided to go back and sit with the car, it was still very hot. 10/15 minutes went by a van stopped a lady walked over said "here's a cold bottle of water for you", how lovely. Another 30 mins past and then Phil "Insignia" man was walking across the road towards me. I wondered what was going on, "You're not vegetarian are you" he asked and then presented me with a plate of chicken and a cheese burger, fresh from his bbq, and said "Here's a beer as you won't be driving home". How fantastic, all human kindness was out in force that afternoon & I made sure to send him a thank you card.

Not long after I'd supped the beer and finished eating, Luke turned up with his breakdown truck and as luck was to have it, he was able to take me all the way home. Pleased to say that by 19.30 I was in the hot tub enjoying another cold one!!



Jon.

"Cars on Ramps" returns in the Spring ! With thanks to Simon and his team at 'Robsport'. A chance to have your TR inspected ...possibly followed by lunch at the nearby pub. Watch out for more news on booking your place on March 23





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Some Odds and Ends

Tim Hunt

Many years ago Moss introduced external rocker feed kits for both 4- and 6- cylinder engines consisting of a length of small diameter braided tubing with banjo fittings at each end to improve oil feed to the valve gear. These required no permanent modifications to fit, simply taking oil from a plug hole in the main gallery on the block to a similar one at the rear of the cylinder head. Along with many others I was seduced and parted with some hard-earned for one of these kits. I immediately noticed a significant increase in oil consumption accompanied by unwelcome blue smoke. The problem was that the feed was delivering too much oil to the rocker gear. Moss recognised the issue and quickly introduced a modified design in which the banjo drillings were of reduced diameter and this successfully addressed the high oil consumption issue. However, after running with and without a modified feed I came to the conclusion that the engine as designed was providing sufficient oil to the valve gear and the extra rocker feed might risk starving the bottom end. The important thing is internal engine cleanliness from regular oil changes keeping the rocker shaft drillings clear. I junked my feed kit several years ago and haven't looked back. This diversion was by way of introduction to a small issue I noticed on the recent 10CR. When checking the car at the Mulhouse overnight stop I noticed a small pool of oil sitting low down on the block to the right of the fuel pump. I thought this was coming from the rocker cover gasket and accordingly gave the cover nuts a tweak and cleaned away the leaked oil. However, when I checked again at the next stop I saw that a small pool of oil had re-formed. I then realised the oil must be coming from the set screw and copper washer at the rear of the head to which the supplementary rocker feed is fitted, if one is so inclined. Fortunately on my car there is enough room between cylinder head and battery to get a slim 9/16" AF ring spanner on this plug and lo and behold I got about one and a half flats movement, solving the oil weepage. It might be worth checking this item occasionally on your cars.

Horn problems? Oo-er Missus.

An intermitted or failed horn could well be due to an earthing issue, possibly with the lead from rack to chassis or the link in a flexible steering column coupling. I can recommend a modification I made to my car over 40 years ago and which is still going strong! I fitted a little spring loaded contact that bears on the top of the lower steering column and is secured to the bulkhead. This provides a permanent and reliable earth.

Securing door trims

A suggestion to avoid problems with those pesky original type painted caps covering the four self tapping screws securing the door trim panels on TR4-5, and TR6 for that matter. Why not simply replace them with chrome capped mirror screws as I did many moons ago. I see that a suitable pack of four is available through Amazon for £2.78 with free delivery! OK for the show purists this is not original but looks as if it should have been, after all the chromed appearance matches the door pull, window winder and door handle.



Supplementary steering column earth



Amazon.....

Chrome capped mirror screw



Chrome capped mirror screw on door trim

Tim .



Geoff Gordon's TR2 photo shoot for Magneto magazine.

The piece will be written by motoring journalist Dickie Meaden (that's him in the photo) of EVO and Octane magazine fame.

Shot in Coventry as the thread will be that this is where PKV373 would have done its braking system development work around the streets of Coventry, to then be applied to the three 1955 LeMans cars, PKV374, 375 and 376. Sadly the factory no longer exists, as with much of Coventry.

Geoff.

Some years ago now, I was given a grubby , oily, well worn copy of a motor manual for these early TRsdated 1962. Maybe now it will be possible to include extracts for TRunion readers.

As below, it is interesting to note that the first sports model was priced for sale but then never went into production. Ed.

TRIUMPH TR2 TR3 TR3A

**SPORTS ROADSTER
HARDTOP COUPE
from 1953**

General

INTRODUCTION

The Triumph Sports car was first shown as the 'Triumph 2 Litre Sports' at the Earls Court motor show in October 1952 (model 20 SR).

The engine and gearbox were derived from the Standard Vanguard, the front suspension and rear axle being based on Triumph 'Mayflower' components. In August 1953 a restyled body with spare wheel under the luggage compartment floor was introduced (model 20TR2), known as the TR2.

In 1955 the TR3 (model 20 TR 3) was introduced, the TR2 being discontinued in November of that year. The TR 3 can be distinguished from the TR 2 by the addition of a cellular grille in the front air intake. The TR 3 was built without important modifications until in August 1957 the TR 3 A was introduced with a wider grille and exterior door handles. In January 1958 the TR3 became available for the UK market.

IDENTIFICATION ENGINE NUMBER

The engine number is stamped on a boss on the cylinder block, just below No. 3 sparking plug.

The engine number is prefixed TS and suffixed E. When the engine is factory rebuilt, a new number is stamped in. This number is prefixed TS and suffixed FR.

CHASSIS SERIAL NUMBER

This number is stamped on a plate on the engine bulkhead at the right-hand side. It is prefixed 'TS'.

Typical Chassis numbers (for guidance only)

August 1953	TS 1 onwards
January 1954	TS 310
January 1955	TS 5200
September 1955	TS 8637 (TR 3 Series)
January 1956	TS 9670
January 1957	TS 15020
August 1957	TS 22014 (TR 3 A Series)
January 1958	TS 25640
January 1959	TS 41640
January 1960	TS 65130
January 1961	TS 82040

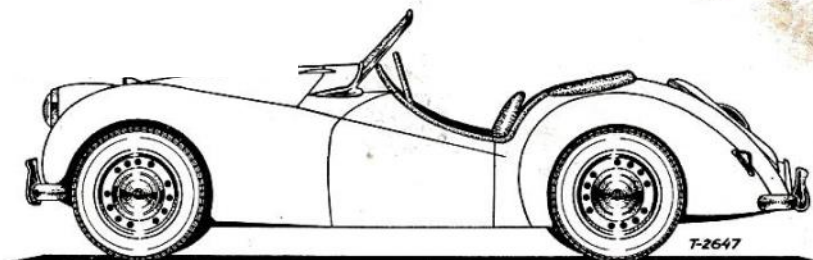


Fig. 5. Two-door, two-passenger Roadster 1952, model 20 SR

1952. 2-Litre Sports

Basic
£555

Including PT
£864 16 8

Editor's Archive Saved from "Spares News" of 1975

This was the year I bought my TR3A (age 22). Pete Buckles wrote the "Spares News" and was trading from his London premises. I bought my TR parts from Pete Cox, who at that time was trading from his home garage in Redditchbefore later moving into what had previously been a butchers shop in the high street.

All a long time agoand interesting £X way of payment. Cox & Buckles Spares were THE suppliers of parts for your TR, long before others started up.

Shop Opening Times:

Thursday	10 to 7	Lunch 1 to 2
Friday	10 to 5	Lunch 1 to 2
Saturday	10 to 5	No lunch
Sunday	10.30 to 2	No lunch

If I don't take some more money on Sundays I shall have to consider not opening. It really is a drag and I can only justify it if I manage to do some business.

Shop Phone 01-648-4825

ORDERING BY POST

Orders by post must be accompanied by payment. Either cash, postal order or cheque. All orders by post should be sent to Pete Buckles at the shop (address above).

In order to facilitate payment of carriage costs the following rules should be followed:

1. Find out cost of goods. If 'specials' as listed in this newsletter use the prices quoted, if Triumph spares find out retail price.
2. Add 20% for carriage, packing, etc. The 'etc' covers postcard sending in the event of queries or notification of despatch. Add £2 extra if B.R.S. is involved e.g. 3A grilles, silencers, springs are sent by B.R.S.
3. Add VAT at 8%.
4. Round amount (upwards) to nearest pound.
5. Send cheque payable to Cox & Buckles Spares with a small mark across the crossing saying "Not to exceed £X", where £X is the amount calculated in steps 1 to 4. Do not fill in box with amount.

Please note: forward dated cheques are not appreciated. The amount charged will be the actual costs of parts plus sending, not the amount calculated above.

With each order please send details as follows:

1. Name (Yours, not the car's).
2. Membership Number.
3. Whether you have subscribed to New Spares Fund.
4. Address for despatch, telephone number for queries and state if you are prepared to accept transfer charge calls.
5. Model, year and chassis number of car.
6. Cheque as detailed above.
7. SAE if you have any query and expect an answer.
8. Latest date which spares will be of use to you.

312

* £2 - for manifold (second hand.)

£3 - for down pipe

Buckles will send manifold to Cox the week.

collect from COX on SAT.

22nd Nov.

1975

COX HAS

Is this a TR6 on steroids ?



TR6 replacement headlight bowl with rim retaining lug.

TR6 Lighting upgrade.

I have upgraded both the front at rear lights of my TR6 so that going forward I can see where I am going and hopefully can be clearly seen from the rear.

For the front I have installed halo running lights and new dip and beam from Gil at "Better Lighting" not as straight forward as I was expecting as the kit does not fit the TR6 headlight system with the inner bowl for beam alignment adjustment. This must go. Then you have no lug to fit the new light assembly. You must change the bowl as the photographs show.

The kit also includes the halo having an amber facility when connected to the indicator circuit which turns off the white halo and flashes amber. The existing front and side indicators remain as original.

Now for the rear of the car. I have changed the reversing light bulb holders to a double format like brake and rear light holders and fitted led bulbs colored red and white. The white fed from the original reversing light circuit. The red light is from a dashboard switch with elimination for hazardous conditions.

With the wiring and bulb holder covers off in the boot I notice whilst there was a place for a side indicator bulb holder none was fitted, and rear side elimination was poor. Holders have now been fitted and bulbs inserted.

Finally, all brake, rear and indicator lights have been upgraded to LED.

Some photographs are attached. Phil took some live pictures earlier today and may send them on.

Regards.

Michael.

Michael Boast



TR6 headlight bowl , no retaining rim securing lug



TR6 headlamp bulb with adjusting inner facility

Tom Harding's TR7



I would like to say thank you for inviting me. The warmth and generosity I have felt so far has been very special. I have a Triumph TR7and although normally very busy, I will try to attend as much as I can. I have owned the car for roughly 7 years and doing jobs over the winter, as I'm sure most of you are. If anyone needs any TR7 advice, please just ask. I'll try to help the best I can and happy to help if anyone needs private jobs doing. I look forward to meeting you all at some point ...and if you want to see what I'm up to, please ask or I'll post photos. Many thanks.

Tom.



Spotted in Norfolk by Roger and Alisonthe bus to Torquay, Devonand another to a Butlins Holiday Camp in Wales.



Keep the date

**SUNDAY 21st JANUARY
2024**

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See the full range Ask Phil or Mike

Letters

Dear Editor,

The other day I had cause to travel to Bedford and used the A600. On my way home I was intrigued to notice that the roadside sign for Deadmans Cross, between Chicksands and Cotton End, lacked the apostrophe that had been present on the sign seen on approaching from the south (see photos). I note that there is an apostrophe in this place name on the Ordnance Survey Landranger map 153 ...and can only conclude that it should be present. Readers, however, are probably concluding that I really should get out more!

Tim Hunt.



Graham makes an error about the TR enginewhich is then corrected by Ian Cornish.....and I have the full article for TRunnion !

Dear Chris,

Oh dearin Graham Teeson's very interesting travelogue, I read this:

This is a small part of the tractor collection and this 1949 Ferguson TEA 20 tractor is where the engine for my Triumph TR4 originated from.

No - it did NOT !

The TR's engine is a **modified version of the Standard Vanguard's engine** as described in great detail in my 2-part article in TR Actions 241 & 242 (March and May 2010)

It is true that the engine provided by Standard for the Fergie was a wet-liner and actually has a crankshaft which is made of the same material as that in the Vanguard and the TR ...and is so nearly identical that, thanks to the efforts of the Spares Development Fund (and Roger Hogarth in particular), one can now purchase a brand new crank from Moss (301815).

There is a detailed description of this process in the Spares Development Fund's website (trsdf.uk)

I have lost count of the number of occasions on which I have had to correct people's misunderstanding on this matter !

Best wishes,

Ian .

Please see the detailed article over the following pages

TRunnion Extrathe last 5 days of Graham's coastal tourwill be published before the end of the year .

WHENCE CAME THE TR's 4-POT ENGINE?

Ian Cornish

Published in TR Actions 241 & 242 (March & May 2010)

Standard's "Shadow" Factory

In 1939, at Banner Lane, Coventry, the Standard Motor Company commenced the construction of a new, "shadow", factory and this was in operation in 1940, making aero engines. Shadow factories were built away from the existing factories in order to reduce the risk of damage from air raids, from which Coventry, as an industrial centre vital to the War effort, later suffered very heavily. This 1,000,000 square feet (93,000 square metres) plant stood idle once the war had ended, and Standard's Managing Director, Sir John Black, was anxious to find a use for it. Such a large empty factory was also of interest to Harry Ferguson, and a deal was struck between the two men.

After the War was over

It must be remembered that the day after Victory in Europe Day (the War ended on the 7th and VE Day was 8th May 1945), the American Government rescinded the Lend Lease Act, and it is well known that, because of this and the fact that Britain was hugely in debt, the regime of rationing was even harsher within Britain after the War ended than it had been during the worst of the War. These factors drove the foundation of the post-war Labour Government's export campaign – if Britain did not export, it could not afford to import the food needed to feed its people. The Government's slogan at the time was: "Export or Die". We might consider this a little melodramatic now, but in the immediate post-war era, this slogan was employed by the Government to exhort all British manufacturers to bring in foreign revenue - sometimes to the detriment of domestic production - in support of economic growth. With the urgent need for the country to earn foreign income to aid reconstruction, priority was given to supplying raw materials to those companies which concentrated on exporting their products – hence, the maxim "Export or Die" had very real meaning. Ferguson and Black were assertive – they persuaded Sir Stafford Cripps, President of the Board of Trade, to sanction a loan and materials for commencement of tractor production, and Cripps advised Black to build the tractor!

As usual, Ferguson was to be in charge of design, development, sales and service, while the Standard Motor Company made the tractors for him. The two men thought on similar lines and realised that a commonality of some components between tractor and car (in reality, there were very few), combined with economies from greater volumes and some sharing of overheads, could reduce costs for both enterprises. To simplify production and cut costs, Black had decided on a single model policy for new cars, and planning for what became the Standard Vanguard commenced in 1945. In the interim, the Canley factory re-commenced production of what were basically pre-War models with some modifications: Standard 8 and 12 models in July 1945, and the 14 in June 1946.

Development

The Ferguson Tractor was announced to the press in November 1945 and tractors were produced in July 1946, although agreements, giving the Standard Motor Company the right to manufacture the Ferguson tractor for 10 years, were not finalised until August 1946 – Harry Ferguson believed that a handshake between gentlemen was sufficient! It was an expensive time for Standard as the company had bought the rights to Triumph for £75k (although this was recouped

immediately from the sale of the bombed-out factory – I am indebted to Graham Robson for this “inside” information, which corrects data from another source!) and then spent a further £3 million over the next two years on re-tooling Banner Lane for Ferguson production and in adapting Canley for the Vanguard. Harry Ferguson set up an independent company (Harry Ferguson Ltd - HFL) to market, design, research and develop the tractor and its implements. This company joined the American Harry Ferguson Inc. under Ferguson Holdings Ltd. HFL operated from premises leased from Standard at Fletchamstead Highway, adjoining the Canley site. Harry Ferguson moved back to Britain from the US, buying Abbotswood, a 600-acre estate near Stow-on-the-Wold. Work on tractor and implements commenced in 1945, based loosely on the American Ferguson-Ford design – but much was changed. Incredible as it may seem, everything was drawn twice – by Ferguson’s draughtsmen, then to suit Standard’s own filing system! A limiting factor was the size of the tractor’s rear axle, which provided the mountings for the Ferguson System’s unique and patented 3-point linkage - the configuration couldn’t be changed else the older Ferguson equipment wouldn’t fit. The axle was based on that of the American Ford Ferguson light truck, which restricted power to 20 hp!

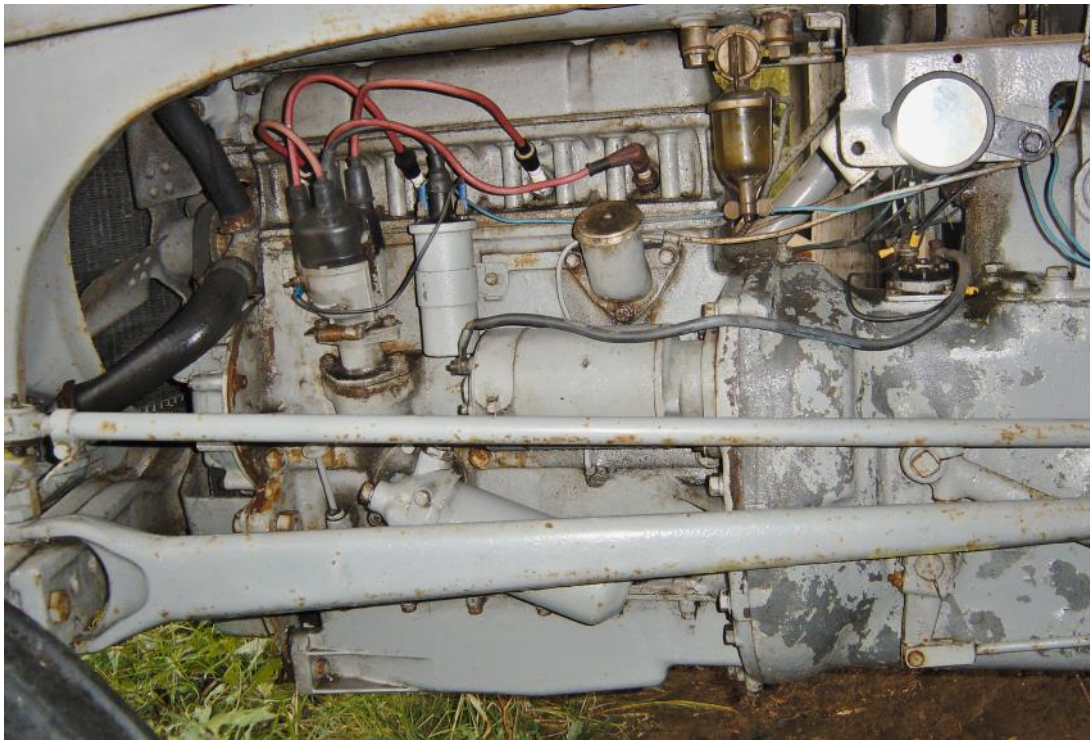
The first product of the new "alliance" was the TE20 (TE = Tractor England), and the first one came off the Banner Lane production line on the 6th July 1946, equipped with an engine from Continental Motors Corporation in Michigan, USA. The little grey Fergie, as it became known, was a milestone, not only for Ferguson, but for agriculture in general, as it was so light and manoeuvrable, could be equipped with a wide range of equipment and tools built to the same System - and it was affordable and inexpensive to run.

Under Ted Grinham, design and development of the British engine proceeded at Standard, and, whilst the design was loosely based on Continental’s engine, there were no licensing issues. There was influence also from Citroën’s 1911cc, wet-linered, overhead-valve engine, used in the 1939 Light 15 car. The Standard engine was 1849cc, 80 x 92, using flanged wet-liners with figure of 8 sealing gaskets at the bottom, and the oil filter was external (unlike the Continental, where the filter was inside the sump, making replacement - via a cover plate at the base of the sump - a messy job, with the risk of subsequent oil seepage from the cover). A Zenith carburettor was chosen – although not liked by Harry Ferguson, he couldn’t afford the £25k cost of developing something else! The design target was 25 hp at 2,000 rpm (governed speed), with an operating range of 400-2,000 rpm.

The Tractor/Vanguard Engine

In designing a dual-purpose, tractor and car, engine, Ted Grinham and his team had to cater for the major difference in the construction of the vehicle: in the car, the engine/gearbox assembly is supported on a chassis, but in the Ferguson, the engine is the **sole** structural member linking the front axle to the rear of the tractor – in this role, it is subjected to considerable bending forces (note: this technique has been used in rear-engined Formula 1 cars for several decades now). On a Continental-engined Ferguson there are ¾ inch diameter tie bars down either side of the bottom of the pressed-steel sump – these being required to provide the structural strength necessary between front and rear. With Standard’s tractor engine, the block/crankcase and sump were designed *ab initio* to support the whole structure without any such reinforcement, which required these castings to be far more massive than those for the Vanguard car, although within the engine, there are numerous similarities.

At the front of the tractor engine (see Figure 1), there is a substantial front axle support assembly, which encloses the crankshaft-mounted (fan belt) pulley wheel on both sides and below, and is bolted to the block and to the sump. This assembly provides the central pivot for the front axle, in addition to the mounting points for the radiator and the bonnet, which hinges forward (like the later Triumph Herald) to expose the engine. The forward end of the fuel tank is supported by a bracket which is part of the thermostat housing casting.



1 2 3 4 5 6 7

Figure 1 – Standard Engine of Colin Boother's Petrol/TVO Ferguson

1 - Front Axle, 2 - Front Axle Support Assembly, 3 – Alloy Cover over Timing Chain & Governor, 4 – Alloy Sump, 5 - Oil Filter, 6 - Starter Motor, 7 - Clutch Housing

Production

Initially, the Ferguson TE20 Tractor was fitted with the imported Continental 1966cc Z-120 unit. However, once the 2088cc unit being developed for the Standard Vanguard became available in September 1947, the tractor version of this engine, at 1849cc capacity, was phased into Ferguson production from 26th January 1948, although tractors with Continental engines remained in production until July 1948. There were two engine production lines at Canley, one for car engines, the other for tractor engines; the latter then were transported to the Ferguson works at Fletchamstead. The Standard tractor engine was designated TEA20 (there is debate as to whether or not there should be a hyphen or stop in this designation, so I have made life simple!), with pre-production from September 1947 and the first public demonstration of a Standard-Ferguson on 11th December 1947. Arnold Staples tells me that in all performance demonstrations of Ferguson versus other tractors - however powerful - the opposition was thrashed on pulling power, ease of use (so little time required to hitch and dismount equipment), manoeuvrability and economy.

Modifications to Standard's tractor engine in 1948 included: different steel for exhaust valves and a change to Tecalemit inclined oil filter (replacing vertical type). The tractor engine was initially $80 \times 92 = 1849\text{cc}$, with a compression ratio (CR) of 5.77. Throughout, I have discarded the conventional representation of CR e.g. 5.77:1, as all ratios are with respect to one. The engine produced 23.9 belt horse power @ 2,000 rpm – an engine speed which was seldom used. Belt horse power is easy to measure on a tractor as there is a take-off pulley used to drive static machinery (this pulley was an option on the Ferguson and was fitted onto the Power Take-Off at the rear). In 1950 (tractor 172598), the engine was increased to the same dimensions as the Vanguard car: $85 \times 92 = 2088\text{cc}$ (giving 28.2 belt hp @ 2000). The CR of the petrol engine was increased later to 6.0; for use with TVO fuel (Tractor Vaporising Oil), the CR was 4.8 (23.9 belt hp), later 5.1 (25.0 belt hp). The lower-revving tractor had semi-circular inlet and exhaust ports, and equal-sized valves with single springs, whereas the car had its exhaust smaller than the inlet and two springs per valve. The tractor's sump and timing cover, both of which were structural members, were made of cast alloy – instead of pressed steel for the car, where they are just covers.

Despite the fears about the strength of the tractor's rear axle, Arnold tells me that he met only two cases of rear axle failure. In both instances, this was as a result of ploughing with (at the rear) one steel wheel (i.e. no tyre) and the other a rubber-tyred wheel. In fact, the weakness of the Ford-Ferguson axle lay in the pinions within the differential, not in the crown wheel and pinion, and the factory made available a modification to beef-up the differential.

Although only 314 of the Ferguson TE20 Tractors were built in the first year of production (1946 – all with the Continental engine), 20580 were produced in 1947 and, by the time the last one was produced in 1956, a total of 517,651 (including variants) had been built. These sales figures are an indication of its unique capabilities - Ferguson's patents on draught control, combined with the huge range of implements, meant that no other manufacturer could compete. Alongside the competition, the Fergie looked almost fragile (which it wasn't) and lightweight (which it was, its dry weight being just a shade less than the Phase I Vanguard), but its performance far exceeded that of heavier and more powerful beasts – it punched well above its weight! The Fergie was immensely popular and had captured almost 80% of the tractor market in Britain by 1949; even today, many TE series tractors (and their successors up to 1956) are still in use. The replacement for the TE series, the FE35, was fitted with the same Standard engine, but using 87mm liners to increase capacity to 2187cc and thereby give a useful boost to torque and power. Harry Ferguson, having received "an offer he couldn't refuse" (as Michael Thorne, described it!), teamed with Massey-Harris to build rather more powerful tractors, but still based on the Ferguson System, and Standard manufactured tractors for Massey-Ferguson until about 1958.

The Standard Vanguard

During the War, a huge number of Americans were based in Britain and a fair number of American cars must have been brought over for the senior personnel and for staff use, and these cars were left here – after all, an American would not want an old car when he got back home! The Vanguard was a completely new design, its exterior styling being reminiscent of many contemporary American saloons, especially the Plymouth. The bold four-door body featured a distinctive, sloping rear boot lid and an attractive "wrap-around" grille – quite unlike any other British car. Although the Vanguard still had a separate chassis, the mechanical specification was thoroughly modern and included all-synchromesh gears (with column change, but only 3 forward speeds), coil independent suspension at the front, and 4-wheel hydraulic brakes when many contemporary cars were still using mechanical linkage for the rear. Beneath the bonnet sat the all-new four cylinder, 85 x 92 engine of 2088cc, complete with down-draught Solex carburettor, overhead valves and a CR of 7.0, producing about 68 BHP @ 4,200 rpm. The Vanguard was announced in July 1947, but produced from April 1948 (according to the Standard Motor Club - another source gives July) – although only about 1,750 cars had been produced by October 1948, and most were for export. The car was an instant success, selling well at home and abroad in all the important export markets, and it gained a considerable reputation for being tough and capable of withstanding considerable neglect and abuse. In 1948, production of the Standard 8, 12 and 14 models ceased (with a total of just over 90,000 cars), and that September, Standard announced estate, van and pickup versions of the Vanguard. Great numbers of Vanguards were sold into all branches of the armed services, both in Britain and abroad. Production of the initial Phase I Vanguard ceased at the end of 1952 (or January 1953) after 184,799 units had been sold, and it was succeeded by the Phase II, in which the only significant change was to the shape of the rear of the bodywork.

Standard stuck with the single model policy until September 1953, when the new Standard 8 commenced production. It is worth mentioning that the basic design of this little, 803cc, 4-cylinder, engine grew and grew in bore, stroke and number of cylinders to power the Vanguard 6, Herald, Spitfire, Atlas van, Triumph 2000, Vitesse and, ultimately, the (2498cc) TR5/250/6 and the saloon 2.5PI/2500 – but that's another story!

Which came first - the chicken or the egg?

The Ferguson tractor, using a Continental engine, was first sold in July 1946, while the first Ferguson with a Standard engine dates from 26th January 1948. The Standard Vanguard was announced in July 1947, but production was awaiting completion of the new engine line at Canley. For the Vanguard, production commenced in April 1948, with the engine being 2088cc, 85 x 92, from the start.

It seems to me that although Fergusons with the Standard engine were available a few months earlier than the Standard Vanguard, it was really the case that engine design, development and production were combined, and that it was basically only a

matter of allowing the engine a higher rev limit which changed it from a unit ideally suited to a light tractor to one ideally suited to a saloon car. The most significant differences were:

- Crankcase/cylinder block casting – far more massive for the tractor
- Cast covers for sump and timing chain (pressed steel for the car)
- Cylinder head casting – the tractor had semi-circular inlet and exhaust ports
- Valve sizing
- Cylinder bore (initially - although the tractor was increased from 1849cc to the same 2088cc in mid-1949)
- Position of the starter motor – left for Ferguson, right for Vanguard
- Inclusion of a centrifugal speed governor on the tractor's camshaft drive
- Oil filler on the side of the cylinder block on the tractor, whereas through the rocker cover on the car
- Gravity-fed Zenith up-draught carburettor on the tractor, pressure-fed Solex down-draught on the car, which had vacuum advance on the ignition
- 6 volt electrics on the tractor up to 1951, 12 volt on the car from the start.

My father had his butcher's shop on the steep Lansdown Road in Bath, and I can remember a friend's father driving us - three schoolboys - in his new Vanguard up that hill at a speed which seemed phenomenal at the time! And it was, because most rival family cars were using engines of about 1500cc. Ian Gibson recalls that his father ordered a new Vanguard Phase 1 and, having run it for a year, he found them so much in demand that he sold it for the price he had paid - plus a second-hand Standard 8 drop-head thrown in! Note: this was NOT the new Standard 8, which was produced from 1953 onwards.

From Vanguard to TR

In order to minimise the costs involved in developing the Triumph sports car, as much as possible had to be based on existing components from the Standard cars of the time: the Vanguard and the Mayflower. The former was chosen for engine and gearbox, the latter for front suspension and rear axle. What a pity that the Mayflower's rear axle was chosen, as it was quite inadequate for the task! I have never understood how the racing and rally teams managed to cope with oil-soaked rear brakes, nor why the factory took so long to resolve the problem by changing to the "Girling" axle!

Whenever an engine, even one which is considered strong, highly reliable and capable of lengthy service, is used as the basis for a "souped-up" version, there is a good chance that the extra stress resulting from such changes as higher rotational speed and higher compression will reveal problems never previously seen. This was the case when Triumph took the Vanguard engine as the basis for its new sports car. Let's look at the vital statistics:

Vehicle	Bore/Stroke	Capacity	CR	Power @ rpm	Torque
Ferguson	80 x 92	1849cc	5.77	23.9 Belt HP @ 2,000	
Ferguson	85 x 92	2088cc	6.0	28.2 Belt HP @ 2,000	
Vanguard	85 x 92	2088cc	7.0	65 BHP @ 4,200	113 lbf.ft @ 2,000
20TS	83 x 92	1991cc	7.5	75 BHP @ 4,500	
TR2	83 x 92	1991cc	8.5	90 BHP @ 4,800	117 lbf.ft @ 3,000

Notes The Ferguson figures are for the Standard TEA20 engine; the tractor's power was always measured at the belt.

20TS is the car which was shown at the Earls Court Show in 1952, but never actually produced (for which we should all be extremely grateful!).

The Vanguard produced about 68 BHP (bare); torque was 108 lbf.ft @ 2,000 initially, then increased to 113 lbf.ft @ 2,000 (Ian Gibson cannot say why!).

The TR2 was announced in 1952, but sold from 1953.

Problems and Solutions

In two articles in The Autocar in April 1955, John Rabson described the development of the TR2. The first article detailed the considerable number of changes required to the Vanguard engine in order to create a sports car engine which was as thoroughly reliable and tough as that of the Vanguard.

1. **Head Gasket:** to cope with the higher compression ratio, a considerably greater torque (increased from 60-65 lbf.ft to 100-105 lbf.ft) had to be applied to the head nuts. This caused the upper surface of the block to lift around the studs and, as a consequence, the head gaskets blew. Solution (see Figure 2): the block casting was modified so that the studs screwed into the base of the block (i.e. the upper part of the crankcase chamber), thereby putting the water jacket into compression rather than tension. In addition, the extra torque on the head nuts squashed the figure of 8 seals at the base of the liners to such an extent that the small upstand of the liners above the block was lost, which caused the head gasket to blow! A change of the figure of 8 seals, from a soft material to copper, solved the problem. As a further precaution (remember that the liners should sit only a few thousands of an inch above the top of the block), production tolerances on the various components were reduced.

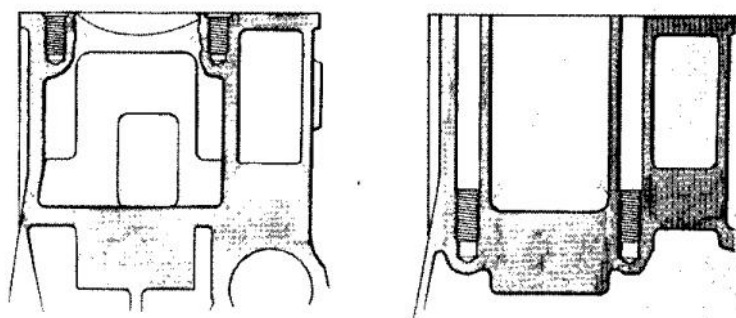
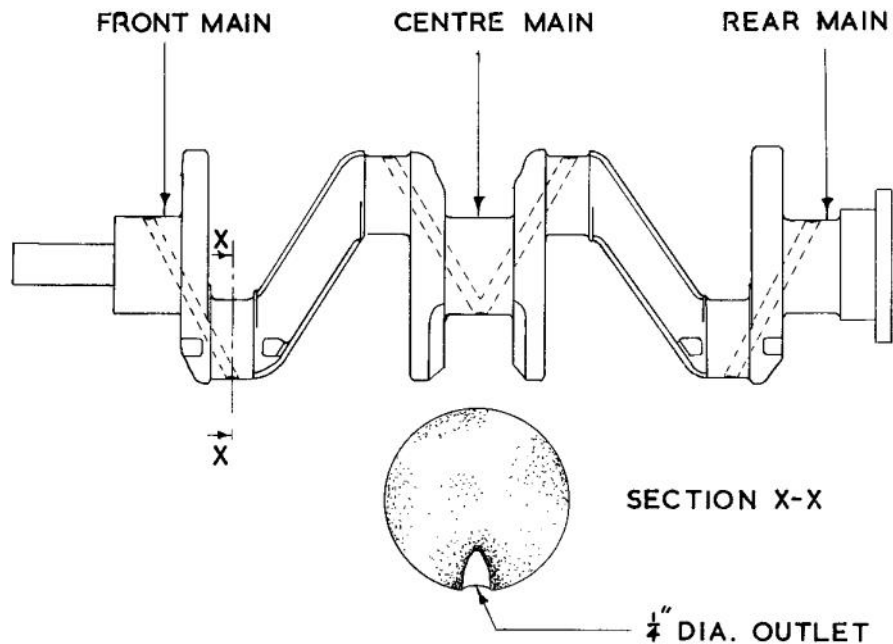
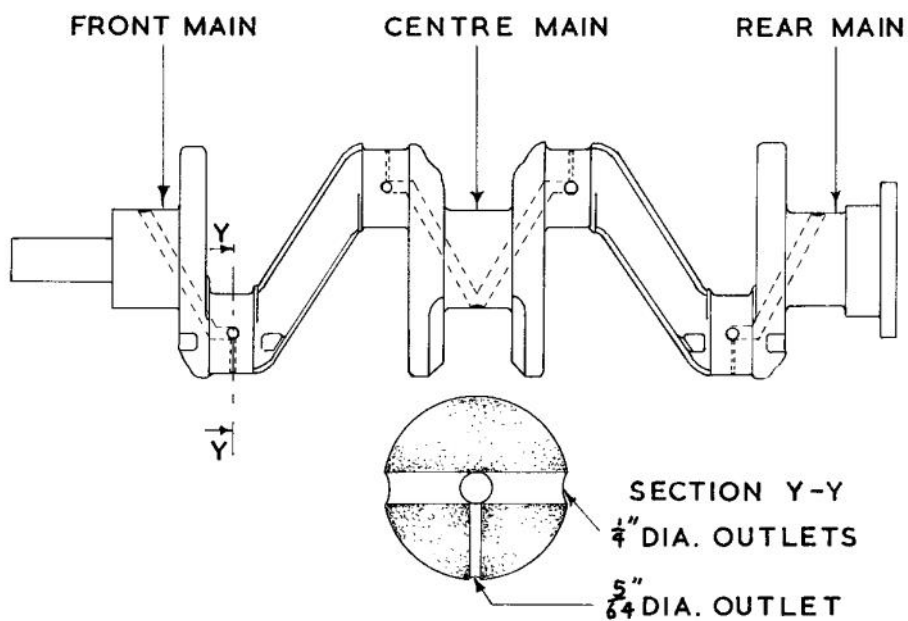


Figure 2 – Location of Head Stud Bosses:
Vanguard (left) and TR (right)

2. **Big-Ends:** the combination of higher engine speeds (up to 6,000 rpm), greater compression and better breathing in the TR mean that the loading on the big-ends will be much higher than in the Vanguard. Big-end failures occurred after 2-3 hours at sustained 5,200 rpm, so the bearing material was changed from white metal to indium-coated lead bronze bearings. Then, modifications were made to the main bearing shells so as to permit oil to pass more rapidly from the crankcase via the main bearings to the crankshaft, and thence through the crankshaft drillings to the big-ends. This was not a complete cure – see next!
3. **Crankshaft:** see Figure H2, which Neil Revington drew for me in 1976 for the Technicalities Booklet, and which was reproduced in Section A8 of the Technicalities CD. The crankshaft was originally drilled from the main bearings to the big-ends (see upper drawing), but, with the higher crankshaft speeds and the increased bearing clearances necessitated by the use of lead bronze bearings, this resulted in a considerable loss of oil owing to centrifugal action. To reduce this effect, the crankshaft drillings were modified (see lower drawing) so that the greater proportion of the oil would be discharged around the periphery of the big-end bearing, which is closer to the centre line of the crankshaft, by making a $\frac{1}{4}$ inch cross-drilling, and by reducing the diameter of the outlet at the outer end of the main oilway to $\frac{5}{64}$ inch. In addition, to improve the spread of oil round the bearing, the edges of the outlets were “shelled”, and this process also prevented foreign matter “cutting-up” the bearing shell.



EARLY CRANKSHAFT. (PART No 58142)



CROSS-DRILLED CRANKSHAFT. (58142 STAMPED
WITH PART No 301815)

FIG. H 2 BIG END LUBRICATION

4. **Connecting Rods:** no failures occurred, but stiffness was increased and the location between the rod and the cap (see Figure 3) was improved by use of a single tubular dowel to prevent shear loading on the bolt itself, and the big-end bolts were increased to $\frac{7}{16}$ inch.

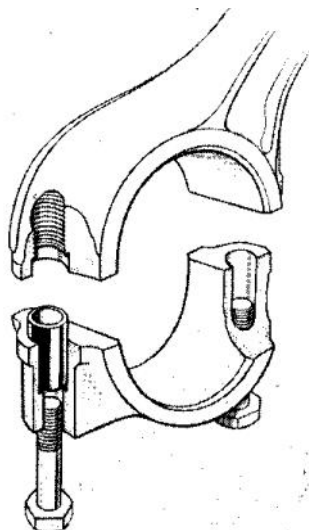


Figure 3 – Connecting Rod: Dowel locating the Big End Cap

5. **Valve Gear:** number 1 exhaust failed after 246 miles at over 5,000 rpm – this was not repeated on the other valves. Special stroboscopic and electronic test equipment showed that the camshaft was bending at about 6,000 rpm – much more on number 1 (0.019”) than number 3 exhaust (0.008”). Increasing the shaft diameter by $\frac{1}{8}$ inch along its length didn’t solve problem. The solution was to increase the diameter of the front half of the camshaft only. As a precaution, the valves were strengthened.
6. **Oil Sealing:** at the rear main bearing, in addition to the outer return oil scroll, a scroll was added to the crankshaft itself.
7. **Crankcase Breather:** there was a loss of oil from the breather pipe when cornering fast (Vanguards are not usually subjected to this sort of treatment!), so the shape was modified to avoid oil being flung out and to condense oil vapour and thereby permit the condensate to flow back to the sump.
8. **Cooling Fan:** the bonnet and radiator on the TR were so low that the fan couldn’t be belt driven, but had to be mounted on the front end of the crankshaft. Torsional vibration of the crank caused breakage of the fan until rubber bushes were inserted in the fan’s mounting.
9. **Oil Filter:** initially, a bypass type was used, but, at engine 12650E, this was changed to full-flow in order to increase reliability and longevity.

Conclusion

I can look back to that immediate post-War era of austerity and remember the rationing, the derelict buildings, the canvas visible on vehicle tyres, the pipes freezing and bursting in the winter, the ice on the inside of the bedroom window in the morning, the chilblains on my ears, the multi-coloured bedsocks knitted by my mother, and the frequent power cuts – candles and matches at the ready in every room! So, it is amazing to consider that, more than 60 years on, we are driving TRs which, using that same basic engine design and construction, are producing some five (and more) times the tractor’s power output - and with great reliability. In fact, the rally/racing folks are getting about eight times the power with good reliability. Of course, these TR engines have:

- greater capacity (around the 2.25-2.5 litre mark)
- higher compression (CR of 10 and more)
- better breathing (inlet & exhaust manifolds, valves and carburettors)
- better camshafts, pistons, connecting rods and crankshafts
- and they spin at much higher speeds (three and more times as fast as the tractor’s engine).

In summary, I believe we owe Ted Grinham and his team a great deal for giving us an engine which really has stood the test of time in all three of its forms!

Acknowledgements

I have used a number of invaluable web, published and oral sources in compiling this story, and I am greatly indebted to each of them. They are:

- a) Ferguson TE20: website ferguson-museum.co.uk/52_ferguson.html.
- b) Standard Vanguard: websites standardmotorclub.org.uk and autoclassic.com/features/classic_car_history/standard_vanguard.html.
- c) “The Ferguson Tractor Story” by Stuart Gibbard, ISBN 1903366089.
- d) Gary Anderson of the Ferguson Club, for directing me to members of that club who had great knowledge. Incidentally, Gary has owned a TR7 since 1980 and has been a member of the TR Register for more than 25 years – small world!
- e) Michael Thorne, for giving me an engrossing guided tour of The Coldridge Collection, his Ferguson museum in Devon, and for his book, “Ferguson TE20 in Detail”, ISBN 0-9549981-3-8. For details of his museum, see website fergusonclub.com/gallery/Album/Coldridge%20Collection/Album.html.
- f) Arnold Staples, for information about Fergusons, resulting from his many years of experience at Hoggarths, the Preston agency for the tractors. Bob Dickins and John Ainsworth, Ferguson enthusiasts living in Winslow, who demonstrated their tractors and implements, answered my questions, allowed me to photograph important details and to drive a Fergie!
- g) Mike Ellis (TR Register’s TR2/3 Registrar) for useful background material – he learnt to drive on a Fergie! Colin Boother, TR Register member, for photographs of his own Fergie. Ian Gibson (TR Register’s Technical Editor), for an amazing amount of information on Fergusons (both Continental and Standard-engined), Vanguards and TRs – is there no limit to this man’s knowledge and experience!
- h) “A Triumph of Development – the story of the TR2” by John Rabson, printed in The Autocar on 8th and 22nd April 1955. It should be noted that there were some factual errors in these articles, and those concerning the engine have been corrected herein. From these two articles, Dave Allen & Dick Strome obtained the text for the first part of Chapter 6 of their “Triumph Guide”, published in 1959 by Sports Car Press, 419 Fourth Avenue, New York 16, NY (Library of Congress Catalogue Card Number 59-9853) – so it contains the same errors!
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