



STAG NEWS

Magazine of the Triumph Stag Club USA
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1973 Stag Restoration

Triumph Stag Club USA

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Submissions should preferably be non-formatted MS Word documents. Articles of 1,500-2,000 words are preferable but larger submissions can be accommodated. The Editor reserves the right to make changes to any submission for layout purposes. Photographs or diagrams should be sent separately as high-definition JPG files (>4000KB) with appropriate cut-line/caption descriptions. The author should provide a short biography. Send by e-mail to the Editor ahead of the deadline dates of March 1, June 1, September 1 and December 1 for inclusion in a future issue.

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On the Cover

Terry Hunt's 1973 Stag out for a drive in Wilmington, DE following a complete restoration

Photo: Terry Hunt



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Mike Eder, Mound, MN

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We Need Volunteers

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Contact Michael Coffey or Terence McKillen for further details

DEADLINE

The deadline for the next issue of

STAG NEWS is:

Jun. 1, 2021

To submit material for publication refer to details on inside front cover

STAG ARTICLES WANTED!

Producing a magazine dedicated to a single classic car model issue after issue, as we do at Stag News, can be challenging. In order to keep providing interesting articles and stories, we need to hear from more of our membership. Thanks to those who have already stepped up to the plate and prepared a once off submission or have become regular contributors.

Please consider sending us an illustrated article about your Triumph Stags; the hunt for a suitable model, the restoration projects completed or underway, the modifications you have made, the difficulties faced, why you still love them, the outings and trips you take, the shows and events that you attend, the friends and associates with whom you share this passion.

We would like to hear from members in as many different States and Provinces (and internationally) as possible in order to keep the content regionally balanced.

Renew your membership ON-LINE at
www.tscusa.org/join.asp

Back on the Road



As I write this, it seems like spring has finally arrived here north of the Border. We experienced a particularly cold and snowy winter, at least from mid-January through to early-March. It shouldn't be too long now before we can all get back on the road again in our Stags - whether top down, top up, or perhaps air-conditioning at full blast, depending upon the prevailing meteorological conditions in your part of the continent. Let's hope that the expanding roll out of community vaccination sites in the fight against COVID-19 across the USA and Canada will allow for some outdoor British Car gatherings later in the year when we might be able to highlight the Stag in its 50th U.S. anniversary year.



In this issue John Macartney, former Personal Assistant to the Chairman of British Leyland, Lord Stokes, continues with an insight into some of the reasons for the Stag's unusual warranty issues when first introduced, especially to the USA market. Peter Robinson, Membership Secretary & Registrar of the Stag Owners Club in the UK continues his historical review of the Stag's introduction to the USA market 50-years ago while Delaware resident, Terry Hunt describes how he brought a 1973 Stag back to life with a complete nut-and-bolt restoration carried out inside his single-car garage. Contributing Editor, Michael Link has prepared a report on this year's Drive Your Triumph Day held on February 10 with a photo-collage of mainly Stag participants, while I have done a little research into the recent upswing in Stag prices.

Terence McKillen



Top - Paul Wood's French blue Stag at Boise, ID on Drive Your Triumph Day | Center - Terry Hunt's beautifully restored 1973 Stag | Lower - X790, a prototype Stag used for North American emissions testing

Founder's Corner

April

Well members, I for one did not expect this isolating Coronavirus to continue with the severity that we are experiencing. I hope this newsletter finds you all in good health and enjoying life.

From my viewpoint I see an increase in the repair, upgrade, repaint and enjoyment our members have been expressing about their Stags. You have taken the mandatory isolation brought about by this dangerous epidemic to enjoy your Stags. I see this from the high volume of telephone and computer inquiries from so many of you. Stagparts USA has experienced a dramatic increase in parts sales and many of you have shipped engines, transmissions and entire Stags for repair, upgrades and improvement for enjoyment when we get past this horrible epidemic.

Unfortunately, my health has not been the best with some surgeries during the later part of last year and into the spring of this year. Hopefully, over the next few months I can expect full recovery. It has been a very difficult time socially for all of us, but it will get better.

As you can see on the inside front cover, we have many new members and some re-joining after a short pause. Thank you all for your support for our club. Don't hesitate to give me a phone call or email if you need assistance with your Stag. That is what this club is all about; support for all members with their beloved Stags!

Michael Coffey - Founder

The Story in the States

by Peter Robinson, SOC Membership Secretary & Registrar

Continuing his review of the Stag 50 years ago today with respect to the USA, Peter Robinson continues.....

It could be said that the failure of the Stag in the United States was the overriding reason why the car was dropped from the Triumph/BL portfolio without a successor in 1977. I don't necessarily agree with that but it is a fact that the USA experience was not a happy one.

I took the opportunity previously to outline the background so I won't repeat this, suffice to say that due to the continuing uncertainty about the regulations which Stag was to have to comply with in the United States, further development work had to be done on the USA cars after the UK release in June 1970.

The Exhaust Emission Problem

Some of the necessary emission testing could be done in the laboratory using engines set up on one of the test dynamometers in the engineering department but ultimately there needed to be some road testing to check the performance under real conditions. It was known that although the standard Stag engine set-up met the regulations currently in force during 1970/71, it did not satisfy the new emission regulations for 1972, so work was needed to reduce these emissions. The standard way of doing this at the time was



X790 in all its glory. Image: (Philip Smith Collection)

to reduce the compression ratio and then alter the timing to give a burn characteristic which reduced the carbon and nitrogen emissions. However, and despite the experience with the 2.5PI engine in the TR range cars, which failed to be able to manage these emissions, it was decided to give fuel injection another go and during October/November 1970 one of the prototypes, X790, was involved in the testing of a Bosch fuel injection system on the 3.0 litre engine.

Unfortunately for Triumph, the tests did not prove successful and it was obviously decided that the way forward for

the 1972 model year in the States was to fit pistons with recessed tops, giving a compression ratio of 8.0:1 (as compared to the standard 8.8:1 ratio) and then to retard the ignition to 10 deg. B.T.D.C. (compared to the standard 14 deg. B.T.D.C.)

The Testing

Testing to comply with the USA regulations was in two parts. The first was to establish that the engine set-up could comply with the regulations and the second was to test that those emissions were still valid at the perceived end-of-life of the car. For this second part, the life of the car was assumed by the USA authorities to be



A USA spec engine being tested on one of the dynamometers at Canley. Image: from 'This is Triumph', a promotional film from 1971/72



The registration has changed but this is X783. Check out 'Don Fardon' on Google – he owned the car in the late seventies and this was the personal registration number he used

50,000 miles and therefore every model of car sold into the States after the 1971 model year had to go through a 50,000 mile road test with the emission results being submitted to the newly formed Environmental Protection Agency (EPA) to show that the regulations could be satisfied.

I have no results of the dynamometer tests but I do know that the 50,000 mile test on Stag for the 1972 model year started on 14th January 1971, 14 days after the Clean Air Act amendments 1970 were signed into law on 31st December 1970. The car for the test was selected as the prototype X783, one of the cars used for USA styling development (amongst other

This route is about 50 miles of mixed urban/country driving and had to be enacted almost continuously over 1,000 times. Only one service for the emission equipment was allowed but I presume that the car itself could receive it's normal servicing throughout the test. The test was completed on 7th July 1970, which meant that the equivalent of two members of staff (day and night driving) were fully employed for six months just driving a car to show that the USA regulations could be fully met. Multiply this by TR6, GT6 and Spitfire and you can see why some small manufacturers in the States were very

upset at the overhead which this brought upon them and you can see why Triumph dropped the poorly selling saloons out of the USA equation.

Within the SOC archive there is a copy of part of the report sent to the EPA in the U.S. and this has been scanned and lodged on the club website, should anyone want to check it out. A summary is shown above right.

The car (but not, unfortunately, the engine, which

would have been removed for engineering assessment) is now held in my own Stag archive in Norfolk.

What Else Was Going On

In February 1971, very little was going on as everything had already been set for the USA press release and the public show debut. However, Triumph still needed to show the USA authorities that the Stag satisfied the basic emission and build regulations which existed before the 1970 amendments came into force and our records show that early in the year, LE860 was sent out to Detroit for testing by the USA authorities. The car was fitted with an experimental numbered engine, X1235.

Triumph also needed cars to be available for the release date as they didn't want to repeat the problems of the lack of cars available for showroom and sale which occurred after the UK release, so

Model:	Stag	Reg No:	TKV 754 J	Test Vehicle No.:	1
Engine Family:	TA	Engine Displacement:	183 cu in	8 cyl	
Transmission:	Manual	Fuel System:	Carburation		
Emission Control System:	Exhaust Swap	Engine Modification:	Charcoal Canister		
	Crankcase		Carburettor Depression		

DATE	ODOMETER READING	SYSTEM MILES	EVENT OR TEST MILEAGE	TEST No.	EXHAUST EMISSION RESULTS						EVAP gms/test
					V.F.D.			HOT CYCLES			
					HC	CO	NO	HC	CO	NO	
14.1	5592	0	0	1	2.58	14.7	3.08	0.70	8.6	1.52	0
3.2	9813	4221	4000	2	2.58	11.4	3.28	1.18	6.8	2.14	0
12.2	13608	8016	8000	3	2.02	14.5	3.69	1.37	9.8	2.12	0
23.2	17602	12017	12000	4	2.70	14.5	3.49	1.25	9.3	2.48	0
19.3	21715	16123	16000	5	2.80	16.6	3.26	1.18	10.5	2.27	0
1.4	25841	20249	20000	6	2.47	19.4	2.86	1.39	16.2	1.71	.1
16.4	29799	24207	24000	7	2.34	16.3	2.98	1.26	9.2	2.52	.41
16.4	SCHEDULED SERVICE										
19.4	29809	24217	24000	8	2.12	18.4	2.00	1.18	12.9	2.10	0
10.5	33744	28152	28000	9	2.24	17.3	2.10	1.29	19.0	1.66	0
18.5	37557	31965	32000	10	2.22	23.0	2.38	1.00	18.9	1.74	0
27.5	41720	36128	36000	11	2.04	24.8	2.72	1.26	13.9	2.64	0
9.6	45638	40046	40000	12	2.20	19.9	2.61	1.07	15.2	1.81	.4
21.6	49674	44087	44000	13	2.48	20.3	2.58	1.10	12.0	2.14	0
29.6	53628	48036	48000	14	2.54	19.9	2.55	1.03	10.2	2.18	.2
7.7	55601	50909	50000	15	2.20	18.5	2.57	1.15	13.6	2.24	.3

production at Speke and Canley was switched to the production of USA spec. (Federal) cars alongside those for the UK and European markets – but as this was before the requirements of the new Clean Air Act amendments could be effected, the cars being produced for the 1971 model year used the standard pistons and the 'normal' 8.8:1 compression ratio. These 1971 cars still needed to satisfy the general requirements for positive crankcase ventilation (PCV) and to include improved petrol fume venting systems and the 'emission efficient' Stromberg 175-CDSE carburetors (instead of the standard 175-CDS carburetors used in other markets). One of the earlier cars built for the initial publicity in America was LE 1179 L.

The pick-up in the production of USA spec. cars started towards the end of January 1971. LE 1179 L was built in mid-February 1971 and was fitted with engine No. LE 134 HE, i.e., the 134th engine built for the USA and it was a high compression engine. This initial USA build continued through to August 1971 – however there is a catch, which is quite important and not so far investigated to any degree in any currently available literature, but I mustn't get ahead of myself so you will have wait until later for this to be revealed.

[With information and assistance from Dave Jell (holder of much Stag development information) & Chris 'The Map' Robinson].

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things) and it was first registered as TKV 754J on the day which the test started. The engine fitted was noted as LF 94 E – which in 'engine speak' denotes that it started out as a non-USA engine (i.e., a LF engine) but with a non-high compression set-up (E as opposed to HE). The car was in manual form and without air conditioning. The fuel vapour control system was in place and presumably the carburetors and distributor were changed for the USA type before the tests started.

For the purposes of the test a fixed test route on public roads was used and this basically went south out of the factory, up through Coventry city centre, through Bedworth and Nuneaton to the A5, heading south through Hinckley to the A426, through Rugby and Bilton to Princethorpe, then back to the factory through Cubbington, Kenilworth and Burton Green.

Stag - 50 Years On

by John Macartney



The original plan for the Triumph Stag back in 1970 was to build the majority for the North American market. After all, that was the target market where research indicated that the Stag would compete with a similar sized model from Daimler-Benz.

Sadly, that didn't happen. For a start, too many potential customers did not see the Stag as a worthy competitor to the German product which already had a substantial following, and the Stag was quite a lot more costly than a home-brewed alternative from Detroit. That said, it took only a very short time for those Stags that were sold in the United States to raise a number of faults that by their severity, killed the car stone dead and saw its withdrawal from the market in the States less than two years after its launch.

In the UK, Europe and other world markets, the problems that had beset the U.S. Federal specification cars were replicated too. These have all been thoroughly documented in many different publications, but I will summarise them here

again.

*Cooling problems as a whole
Unsuitable water pumps
Radiators not up to the job
Cylinder head distortion*

It took quite a long time to uncover why these issues were so troublesome because the various development cars had shown no sign of any of these defects and at least three of them after UK launch were moved on within the company to the Sales & Service Training Division to use as 'fault rectification' vehicles at dealer premises. Those cars had already racked up a considerable number of miles as pre-production prototypes and for a while, no-one in the Engineering Division and Experimental Departments had the slightest idea of what ailed the production cars, but not the prototypes. Certainly, Engineering fully grasped the fact that even though you could run a prototype ragged in long-term and high-speed testing with nary the slightest sniff of a problem, put any car into production and little old ladies

(as customers) could and often did create a raft of new problems. Needless to say, a lot of financially well-heeled individuals and companies were buying the Stag in considerable numbers – and the warranty claims came flooding in.

When Engineering had entirely failed to come up with some tangible and meaningful answers to the horrendous costs that the Stag was racking up in warranty claims, it then started to do some detective work within the portals of the Purchasing Department. It needs to be said that those employed in purchasing with varying levels of responsibility, never really got on with Engineering and especially when there were high levels of warranty claims hitting the front door mat every time there was a mail delivery. Equally, the Service Division couldn't come up with any helpful answers as it was usually tucked up in bed with Engineering and dependent on Engineering to provide answers so that Service could send out 'Now hear this!' Service Bulletins. One way and another, it



The author's own two Big Six Triumphs. A 1973 2000 in Mallard and a 1970 2.5PI in Sienna. parentage came from the larger saloons that North America never wanted. Those two generously proportioned five seaters made so much money for British Leyland in such large numbers around the world between 1963 and 1980

was all rather a dog's breakfast of chaos and a lot of people working hard in covering their tracks. But, as is often the case, when senior management get involved and order all affected departments to liaise totally and completely with one another in all aspects, people at all levels find themselves 'exposed' – and that's when answers to questions start to be uncovered.

The result of which was for the Stag the bulk of the blame for the problems could be laid at the door of the Purchasing Department. In précis form, this is what was uncovered:

Water Pump failures. Engineering specified a six-vane pump of a certain dimension. Purchasing however, were informed by several suppliers that a four-vane unit would be cheaper and as four-vane impellers were already in production and use in other applications, the cost for making tooling for a mould for a different unit could be saved. Purchasing liked that idea and ordered the cheaper unit which

on simple and later flow tests showed it was not creating the water flow required of it, such that overheating was highly likely.

Radiator size and capacity. Again, Engineering had specified a certain type of radiator and very clearly indicated the number of tubes, tube internal diameter, tube spacing and the spacing and thickness of the horizontal cooling fins. Coventry Radiator and Presswork (aka CovRad) were located opposite Standard-Triumph's main plant and enjoyed virtually a monopoly for radiator supply for the whole UK motor industry. CovRad 'experts' felt it was their duty to tell Standard-Triumph that they could supply an alternative that "would be just as good as" the version Engineering had specified. CovRad went on to say they had encountered quite a number of difficulties in making radiators for the prototypes and while they could continue down that route, there would be a significant incremental cost as a result of a lower number produced per hour and further higher cost of raw materials. CovRad went on to assure the company it could make a radiator that would meet overall cooling criteria, although it would mean a departure from the spec laid down by Engineering. It had already been proved by Engineering that the radiator the company had contracted to buy was inadequate.

Cylinder Head distortion. Once again, Purchasing was a culprit – but in this instance it was not the only one. The alloy that was used on the prototype engines met a certain specification - those in production did not. Again, the supplier had promulgated an argument the preferred alloy would have a substantially higher raw material cost against the one the company could have specified - but didn't. The alternative alloy - which the supplier felt would be equally satisfactory, proved to be totally unsuitable and this was a major cause of head distortion [*It is not clear that the alloy used in the production heads was different from those on the pre-production or prototype Stags – Ed.*] But there was another issue here that was a major contributing factor to the overall cooling problem. After a casting is made in a foundry and the sand core to make the casting is removed, it should be a relatively easy task to ensure all the pieces of the core are removed and this is usually facilitated by purging the internal passages and smaller 'drillings' of every last trace of the sand core. Compressed air, high pressure water injection

and a selection of wire probes are used for the process. In Stag's case, there were certain parts of the V8 block that made this purging next-to-impossible when the process was initiated by the foundry. This was because access to such locations was either difficult in the extreme, or pieces of the core with their wire formers had got jammed in place, thus either impeding or totally obstructing vital coolant flow. The bottom line was Standard-Triumph's foundry contractor, simply did not have the time to ensure each block was fully purged if it was to meet the company's contracted delivery schedule. Equally, the company had little time to do the same exercise before machining processes got underway. This was not a foundry problem but one that could only be laid at the Engineering Division's original drawings and this demanded a fairly major re-work of the block. Even then, it still failed to achieve the original objective and of the many Mk 2 Stags that were later built with improved water pumps, the correct head alloy and the original spec radiator design, cooling issues on certain cars were still not unknown. That said, there was a major improvement, but it still wasn't perfect.

Some readers may be aware that in 2009, I undertook an 18,000-mile charity drive across Canada and the United States in a fully rebuilt Stag that had undergone a total restoration before I set out from Florida. This rebuild was done at the home of Joe Pawlak. Joe had already rebuilt his wife's Stag which is as trouble-free as many others are not, and he had a team of fifteen or so volunteers from the Illinois Sports Owners Association who took the car I was to use, literally right back to bare metal in every respect. In fact, the rebuild of the car amounted to some 15,000-man hours.

And then, as if he hadn't done enough over the years in rebuilding his Mk 1 Spitfire, a TR7 and other Triumph worthies, Joe's latest task was to rebuild the U.S. Stag Press car (LD2) from a wreck into what you see now.

For the Stag purist, LD2 is a feast for the unusual because it was hand built (aka 'off tools' in Coventry) and what a fantastic job Joe has done. Anyway, when Joe and I met up again halfway through the 2009 event at his home he showed me a plastic Ziplock bag containing the remains of that same casting sand they'd extracted. I was horrified at the amount that had still been in that engine. However, it needs to be said that throughout the whole journey, the



*LD2 - Before and after restoration.
Photos courtesy of Joe Pawlak*



car which had been entrusted to my care, hardly ever saw its temperature gauge ever go across the midpoint.

I admit there were two occasions when it had me 'a little bit worried'. The first was waiting to cross into Canada on my way to Montreal and I was stuck in a traffic queue at the border. The air temperature that day was close to 100 deg. F and as I'd had some fuel vaporisation issues that day on hot starts, I decided to keep the engine running and the heater blower doing its best to blow hot air up the windscreen.

Using the heater blower just made things intolerable in the cockpit, so I turned it off. It took the better part of an hour to get over the border and after stopping the heater blower, I watched the temperature gauge like a hawk. It advanced just a tiny bit up the gauge until the needle was about 2/3rds across – and there it stayed.


The other occasion was when we were being piloted through all the tourist spots of downtown San Francisco. The air temperature was just as high as it had been at Montreal but as we were moving slowly because of heavy traffic, there was insufficient ram air going through the engine intake. Again, the needle moved up to the 2/3rds position – and stayed. I need to point out, the car was running the factory fitted fan, although it did have a Triumph Stag Club USA fan shroud to ensure the intake air came through in the right place. Other than that, at no time in that whole trip did I ever have a cooling problem or cause for concern about the engine overheating. We were driving in some horrendous temperatures on that overall journey, stormed Pike's Peak to 14,500 feet at speed in Colorado and maintained some fairly consistent speeds of 80mph/140km/h plus for prolonged periods on many roads and on days when it really was HOT. Throughout that journey, coolant replenishment – and I checked it daily – was one paper

cupful from a drinking fountain at my hotel in Tallahassee the day after we started that amazing journey. I never had to put in any more at any other time. A fuel pump failure leaving Vancouver was the only issue in over 18,000 miles of hard driving.

So, what should you do if you hanker after a Stag? Well, I think it's reasonably safe to say those that have survived in the States or Canada will probably have been retrofitted with the parts they should have had from the outset. There won't be a wide choice as I vaguely recall there may now only be about 600 left and they'll be anything from rust buckets to something that is concours eligible. So, you buy one you think is worth the money, some work and probably a slug more money before you have something you'll be happy with. But – and it's a big but, I must say I wouldn't be totally at ease until I knew for certain that the cylinder block really was totally devoid of any casting sand or obstructions. Sadly, that means engine out and tear down. However, if you do go that far and your car is an automatic, you might want to think about upgrading the gearbox to a four-speed unit. A Borg Warner unit from a Jaguar is effectively a straight swap and I think I'm right in saying there's another

one from ZF that's just as good, if not better. This is an upgrade many Stag owners in the U.S. and Europe have done over the years and that extra gear makes a huge difference in reducing engine revs and giving a far better fuel consumption.

The bottom line is the Stag really is a superb car. It has oodles of character, is an absolute joy to drive and it's a damned sight more comfortable in which to undertake a long journey than any sports car that ever left the Standard-Triumph production hall. After 18,000 miles in just under three months at the wheel of an excellent example in 2009, I can attest to its superiority.

But then, its parentage came from the larger saloons that North America never wanted. Those two generously proportioned five-seaters made so much money for British Leyland in such large numbers around the world between 1963 and 1980 and scored many spectacular successes in international rallying. They were Stag's true pedigree because suspension-wise, those 'big' Triumphs were all more or less the same under the skin and of all the cars made by the company post-war, they are the ones I love the most. © 



The author on his 18,000 mile North American charity drive meeting members of the Toronto Triumph Club in Burlington, ON | Photo: Tony Fox

Stag Restoration

by Terry Hunt



My plan was to “do” a Stag as a retirement project, but I was having difficulty finding a good candidate. Eventually I found a Mk2 locally on eBay which was pretty much complete, aside from an engine. It was purchased unseen as a potential spares car but when I got it home, I found that the body was in rather good shape with little rust. Most of the engine was missing, just a block, some pistons and a crank remained but there was a 4-speed gearbox in the boot which I decided deserved saving. Now I needed an engine, so another Stag (Mk1) was found with a body long past repair but would provide some additional spares. The engine was complete, and despite appearances, it proved to be in rather good shape. I had wanted to use the first car’s original block, but it was beyond repair.

The heads were fine, so they had a valve job and light skim. The block was over-bored to +20 and lightly decked, the crank was reground -20 and the components balanced. However, I wasn’t happy with the shop’s assertion that cranks never

need hardening so sent it off to Shaft-Tech in Ohio for hardening and polishing. The engine was installed using German IWIS timing chains and the engine assembly went well. However, you do need to be on your best game with this engine as it is not simple and there are lots of items that need special attention. I had calculated the volume of everything before assembly and in the end with the new pistons and skimmed heads, the compression came out at 9.2:1 - just what I was looking for.

I had made the decision to go with an electric water pump so the oil and water holes in the block were plugged with simple Welch plugs (core plugs) and the Davies Craig Model EWP-115 was mounted low on the left side, which is only possible if the mechanical fan is removed. The thermostat was also removed, and the bypass deleted as the EWP controller, mounted in the glove box, would take over those functions. I had a decent Mk2 radiator which tested fine even after I had soldered two stubs in for a VW header tank, but on installation it sprung leaks everywhere. I

think the stress of installation caused the old solder to fail. A supergill radiator was purchased and a 16” electric fan mounted in pusher mode as there was no room for a puller even without the mechanical fan.

The 4-speed gearbox was next, thankfully it was an actual Stag unit with the stronger internals and was in rather good shape. I enjoy overdrive, so a TR6 J-type overdrive box with stripped gears was sourced for the components I needed to convert the Stag box which was rebuilt with new synchros and some bearings and converted to overdrive. Once the overdrive itself was stripped, the cone clutch looked a bit thin so a re-lined one was sourced. The only thing missing was an overdrive top cover, so I had to drill and thread the original for the 3-4 gear inhibitor switches.

By now it was spring and time to get my Stag out of its storage container and give it a proper examination. I had stripped it bare aside from suspension and now it went off to a media blaster to remove the paint and detect any rust holes. It was, as I had suspected rather good! There

was some rust in the front valance, a little area on the front lower area of one wing, the left side seam from rocker to body behind the B-post looked suspect and the passenger footwell had a fair sized hole, but otherwise it was fine. The biggest job was fixing the damage caused by previous owners. At some point in time, a 5-speed gearbox had been installed and the cross-member had been cut away and now had no strength left, so I used the one from the donor. The transmission tunnel had been distorted presumably to give some clearance which was painstakingly pulled apart by releasing the spot welds and re-aligning, but some metal was so stretched and fatigued that patches were needed. Finally, as a fix for some presumably light rust in the pan beneath the rear seat, some glass fibre matting had been applied. This allowed moisture to collect underneath and it had rusted very badly. This was my biggest problem as the complex panel was beyond my fabrication skills and tools. Replacement panel are no longer available and the only place I could source one was in the UK. After cutting it down to size with a grinder at my brother's house during a visit, much to the enjoyment of the neighbours, it was shipped back to the States. The old panel was cut out and this one inserted. It fitted well and was almost impossible to see afterwards.

I had made a rotisserie from three Harbour Freight engine stands, so once the suspension was stripped the shell was mounted on it and the access was much better in my single-width garage. I started patching and repairing the body. I used a stud welder to pull a particularly nasty 2ft-long crease in one door and various other minor dents in the body. My aim is always to use as little filler as possible. I used some

autobody epoxy glue on the repair patch on the rocker to body joint as it was a hard place to weld and this not only solved that problem but ensured a good waterproof seal. The underneath was covered in Rocker Schultz and painted body colour then the various fuel and brake lines were installed before I took it off the rotisserie and on to a dolly for painting.

This is the fourth car I have painted in my garage. It's not easy but I seem to manage it! I used PPG DCC paint which is expensive but sprays well. It's a two-part single-stage paint. When painting at home you are bound to get dust in the finish and colour sanding is a must, so I ensured there was plenty of paint on the car. Before that I had put a coat of epoxy primer on the bare metal, and on some spot areas where I did the body repairs, I applied and levelled the filler to where I wanted it and followed that with another two coats of epoxy. Then on went 4-6 coats of polyester hi-build followed by blocking and reapplying as needed, followed by another coat of epoxy as a sealer. This is the hard bit; it takes many hours but gives a good finished. A low humidity, warm September day was needed, and the garage had been cleaned, sealed off with plastic sheeting and five fans covered in filter material were used as extractors. Filters were used on the air inlet side as well. I did use an air-fed respirator as it still gets nasty in there. I purchased a Festool nib remover which is a tungsten block used to scrape paint nibs and runs from new paint. It worked very well, and I was glad I had it, despite its rather high cost! After a full colour sand and buff, the paint looks great.

By now the suspension had been restored, cleaned up and painted with all new shocks and new bushings all round. I

kept some of the bushings that attach to the body in original rubber for smooth riding, but the rest are all poly to control movement. The power steering pump was rebuilt, along with the power steering rack, a first for me but it seems to have gone well. New brake and clutch masters were sourced. The brake servo was sent out as it seemed that it was not much more expensive



than the parts needed. In the end it was the only thing I did not do myself. New disks, calipers were rebuilt with new pistons and the brake lines are all new. I had the differentials from both cars and chose the original which seemed to be OK with not a great deal of backlash and no leaks, but I did not open it up, a decision I would later regret.

All the wire looms had been removed from the car and were checked, pins cleaned and replaced where needed, wires repaired and rewrapped with some extra additions for the EWP and fan. I also made a relay box to hold the fan relay and some headlight relays and fuses to take the strain off the headlight switch. LED taillights were installed, and the rear holders had good grounds soldered in. I also installed a Wideband O2 sensor in the exhaust, which makes carb tuning a snap and may come in handy later. I did not bother with a gauge as I can use a laptop to read it when tuning. All instruments had



Terry's Springer spaniel Penny knew she was on to a good thing



The Stag was purchased sight unseen



been stripped, repainted internally and LED bulbs installed, I can now actually see them at night!

I had worked on the dash wood early on. Some of it was de-laminating so glue was used to stabilise and then re-veneered. However, the dash pad itself was not in great shape so a replacement was obtained. Carpeting was installed with a little adjustment needed to get the fit I wanted as it seemed a bit too wide. Seats were stripped, repainted, re-foamed and recovered. Not the easiest seats I have ever dealt with but got there in the end. The rear seat base foam is not available, so it had to be repaired and reused. The tonneau was also recovered along with the T-bar which needed some heavy straps to get the bolts aligned. The windscreen was installed in ten minutes, but the trim took another 2½ hours. Next time I will install the trim before the glass is fitted. The hood frame was stripped and rebuilt with new shims and bolts where needed.



Very neat engine bay

There are fourteen different bolts used on that hood which was quite distorted and needed lots of bending and multiple fittings to get it working. I found that it was best to adjust it without any of the springs fitted, that way its easier to move around. The Mohair hood went on without much drama. I spent weeks on that hood and all for something I will probably only use twice a year.

When finally ready to start the engine, it fired on its first crank - and boy what a wonderful sound! Everything went well and slowly over the next few weeks I proved it was all working, especially the EWP cooling. The carbs had been set with the needles at the same height and then adjusted equally to get the correct 14 air-fuel-ratio (AFR) on the wideband sensor. After a few runs the plugs were checked and compared. As each carb supplies specific pistons, I compared one fed by right to one fed by left. Initially I checked 2 and 4. The left looked rich, so I leaned it a little and reset the AFR again on the wideband. On next check it looked good. I ran it hard on a few 90 deg.+ days which finally eased any overheating worries, and I could close the glovebox where the EWP controller is mounted and stop stressing! A slight coolant leak from a couple of Welch plugs on the heads strangely went away after a few days. Some oil leaks were found around the rear of the engine - fixed by resealing the rocker covers, and the sump was torqued up again curing the worst leaks. A little oil was still coming from the oil pump area, probably from the oil pump relief valve. The oil pressure was too high at 75psi, a known issue with the new county pumps so the original relief spring was installed with a couple of shims to get it to 50psi and a new slightly oversized seal was installed. All gears and overdrive were great, and it is a joy to drive.

The Stag's V8 engine has one of the best soundtracks around, its pretty punchy, at least with the high compression I have. It is free revving and sounds positively angry when pushed - who would swap it? Not me! My early impression on driving was that the steering was a bit ponderous; an alignment helped but it still felt wrong. I eventually realised that this Mk2 had a Mk1 steering wheel, so a correct

14½-inch wheel was procured, and it now feels much more responsive and I can now reach the stalks easier. The only thing that was amiss was the differential and rear driveshafts. The diff was whining at around 60mph - not awful but annoying enough and it, along with the driveshafts, had a bit of backlash, causing some clunkiness. Also, there was a big measure of the famous "Triumph twitch" which improved as the molly grease got around the splines but was still quite disconcerting. I decided to open the spare diff to see what it looked like. All looked good, so I renewed the planetary shims which took out any clunk and changed all the seals. I was lucky to get the inner driveshaft flanges apart without too much drama by bolting them together tail to tail to crack one and a simple puller for the other. I have heard of 20-tonne presses failing on those! While I was awaiting a good weekend to swap the diffs I broke down and ordered a pair of CV driveshafts to install at the same time. The differential came off easily as I left the extension in place. I also replaced the quill shaft bearing inside the extension in situ. All went back together fine and what a difference. No clunk, no whine, and no twitch. The CV driveshafts are expensive but on a car this good, I felt they were the icing on the cake.



The EWP was mounted low on the left side



In the paint booth - garage!

Once the cool weather set in, I found that the cooling worked so well that the car could not get up to temperature for a long time, if at all. Without a bypass to help warm it up the cold water from the radiator was just too much despite the electronic control, so a thermostat was needed. As I have a Mk1 inlet manifold I was not keen to restore the bypass as, unlike the Mk2, it will always bypass even in the summer. I therefore installed a thermostat with a couple of 3mm holes to restrict the flow until it opens. I chose an 82 degree high flow which should be wide open in the summer when the EWP controller is set at 90 degrees, for winter I have the controller set to 85 degrees and it is working well.

The car is now hibernating for the winter and I have a few jobs left to do - some LED turn signal indicators and I need to replace the overdrive switch which despite being new is intermittent. The A/C-type vacuum heat control is not working. I suspect the thermostat needs looking at. I had thought about re-commissioning the A/C system with modern components and had checked and prepared everything inside the cabin but reconsidered as I rarely put the top up so when would I use it? All-in-all, I am well pleased with this car and it is definitely a keeper that I can happily drive anywhere. This year is the 50th anniversary meet up in Canada and COVID-permitting, I will be driving up for that. Even though I have done all the work myself it has cost north of \$20k but I have

replaced almost every part that wears and tears so this car is good for a long while, which is more than I can say about myself!

Terry hales originally from the U.K. coming to the U.S. in 1988 as a CAT scanner service engineer. Now retired and living in Wilmington, DE, Terry's first restoration 25 years ago was a TR250. He then rebuilt and turbocharged a Mini, and a 1967 MGB. In retirement, he wanted a car that was a bit more civilised that would allow him to take his grandkids along. The Stag was the obvious choice, especially now that he had honed his skills on the others! He picked up skills along the way and has always done his own welding, painting and all mechanical work, as that is where he gets the most satisfaction from the hobby - Ed. 🐘



Rear seat floor panel before/after



V8 ready for reinstallation



Drive Your Triumph Day

by Michael Link



February 10 was Drive Your Triumph Day, once again organised by Rye Livingston, the Activities Chairman of the Triumph Travellers Sports Car Club in California. Rye's concept is to encourage Triumph clubs and individual Triumph owners around the world to celebrate Sir John Black's Birthday (1895) on that date. Sir John was the man who ran Standard-Triumph for a short period after WWII but perhaps should be celebrated as the genius who acquired the residual assets of the Triumph Motor Company in 1944 from the remnants of Receivership when its fixed assets had been destroyed by the German bombing of Coventry but whose pre-war success in sporting events could be turned into a new branding success through the development of the TR roadsters.

522 Triumphs and Standards, pre-war and post-war cars, participated in drive your Triumph day 2021 which was up from

Images clockwise from top right - Sunset at Perth, Western Australia (Jan Weir); Sons of Lucas, Cayucos CA (Michael Link); Fort Erie, Canada (Colin Moss); TR Register, Marlborough Province, NZ; Southern Alps, South Island, NZ (Athol Forrest); John Forrest National Park, Western Australia (David Ryder)





321 the previous year (329 in 2019). Some went out for a drive with a few friends, others went solo, while those snowbound remained in their place of hibernation. Some organized club drives with 17 being the largest group in Christchurch, NZ. We counted 37 Stag photos. Participants were from all over the world: Australia (56), Belgium (5), Canada (45), Czech Rep. (1), Denmark (1), Finland (22), France (2), Germany (12), Netherlands (18), New Zealand (21), Poland (1), South Africa (4), Switzerland (3), UK (42) and USA (289). 🐾



Images clockwise from top right - Christchurch, New Zealand (Chris Barker); Melborne, Australia (Roger McCowen); Bean Hollow, CA (Chris Weber); Somerset, UK (Gary Martin); Boise, ID (Paul Woods); TR3A/Stag, Niedersachsen, Germany (Peter); Stag/TR6 Rockwood, ON, Canada (Terence McKillen).



Stag Prices

by Terence McKillen

Towards the end of last year, TSCUSA member Gord Linkletter shared with me an on-line European website called "The Parking" which is based out of Paris, France (<https://www.theparking-cars.com>).

The site lists over 125 Stags for sale, mainly in mainland Europe, the United Kingdom as well as a couple in the USA. The advertised prices of some are enough to water one's eyes, with the majority in the +\$30,000 range, a few over \$40,000 and one in Berlin, Germany listed at +\$60,000. I wonder how many cars are actually selling at these prices?

Bring A Trailer (BaT) have auctioned eleven Stags between 2017 and 2020 with prices achieved ranging from \$2,650 up to \$15,000 before seeing a possible price break-out during 2020 when three Stags sold at or just above \$25,000 (excluding fees). In mid-December, a Carmine on Tan Stag with BW automatic sold on BaT for \$26,750, setting a new level for a decent but non-concours car. Two other Stags sold at the \$25,000 mark during 2020, including a 1973 non-standard color (Black on Black) 4-speed manual fitted with a TR6 in-line 6 engine. Bring a Trailer founder Randy Nonnenberg, has reported record traffic levels on his car auction site this year, with no meaningful slowdown in sales volume.

Reference to the Stag Owners Club (UK) magazine shows that decent cars in the UK are being offered in the £15-25,000 (\$20,000-34,000) range with concours level models at or about £30,000 (\$40,000). We know of one Canadian-resident Stag that was sold to a buyer in the UK during 2020 which we believe fetched around \$30,000. Classic Car Mart, the UK monthly magazine, regularly has decent Stags listed in the £10,000 to £24,000 range (\$13,500-32,000).

Hagerty's Price Guide which relies not only on listed asking prices but weights other factors such as auction prices, dealer sales prices and peer-to-peer sales data into their algorithm,



This 1973 Carmine red Stag set a new level on BaT at \$26,750 in December

currently shows U.S. Stag price averages of \$39,500 for concours, \$29,300 for excellent condition, \$19,600 for good condition and \$10,400 for fair condition. Hagerty's price guide show an increase in Stag prices of 18-25% year-over-year from 2019 to 2020.

The Federation of British Historic Vehicle Clubs recently reported on the results from its 2020 National Historic Vehicle Survey. Not only is the number of historic vehicles on the rise in the United Kingdom but there is also a big increase in the sector's worth to the UK economy. The number of historic cars (over 30 years of age) increased by 51% from 2016 while the estimated total annual spending within the industry is up 30% to a record £7.2 billion (\$9.6 billion) generated from 3,820 businesses employing 34,113 people. The numbers are even higher according to HERO-ERA, possibly as high as £18.3bn (\$25.1bn). About £0.95 billion of the annual figure comes from non-UK residents.

There are no recently published numbers for the value and importance of the collector car industry on the U.S. economy but judging from reports emanating from parts suppliers and some of the smaller repair and restoration shops, 2020 set a record year for activity and presumably a significant part of that £0.95 billion spent in the UK came from North American parts buyers.

Obviously, no one knows where the market is going to go from here with any

certainty. Several auction houses seem to be holding out hope for a return to live events later this year. Meanwhile, a mix of online auctions and private sales activity will continue to set the bar, as will progress on containing the virus and the health of the global economy.

Perhaps a more fundamental question is whether our particular sector of the collectible car market will continue to prosper. In a special to the *Globe & Mail* newspaper dated December 4, 2020, motoring correspondent Brendan McAleer suggests that Gen X and Gen Z car enthusiasts are alive and well. According to McAleer "the car hobby has been a gateway to new friendships, skills and adventure" for these cohorts, just as they were for ours.

Data collected by Hagerty tells a more upbeat story. It's true that baby boomers account for the plurality of demand in the collectible-car market—about 42% according to Hagerty's data, but as of the end of 2017, the most recent data available, Gen X and the millennials have matched the boomers and their elders in terms of demand.

The New-Gen car collectors may not be as interested in old British cars as we are and are more likely to collect late 1980s and 1990s European and Japanese models, but the good news is they are still petrolheads. 🐾

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