



Welcome to your December Newsletter

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My Way – David Roberts leads intrepid explorers across Italy. - Page 6

Contributions to NorceMog News always appreciated.

Please send your articles to norcemog.sec@morgansportscarclub.com

Cover Photograph – Morgans at Hotel Felback, Steckborn, Switzerland. Report Page 6

Noggin News

December 10th - Christmas Lunch & Annual Awards Barton Manor Hotel, Barton, Preston
Organisor – Linda Fearn Email - Email = lindafearn737@icloud.com
Bookings have closed for this event, however please contact Linda for any late cancellations.

January 14th – The Inn at Whitewell, Clitheroe, Our traditional 1st Event of the Year
Contact – Andy Bleasdale, Tel 07973 315676, Email = bleasers@hotmail.com
Bookings essential



Click [Calendar of Events](#) for draft of 2024 Events known so far.

November Noggin at The Swettenham Arms

Report by John Unterhalter, Photos Peter Murphy & Andrew Threlkeld



Nine Morgans parked with hoods up, enriched the rural ambience of the Swettenham Arms, an attractive pub, situated in a hamlet off the beaten track in Cheshire. It adjoins the former home of Sir Bernard Lovell of Jodrell Bank fame. Behind the pub is La Quinta, an arboretum (now open to the public) which Sir Bernard also established.

27 members were booked in for the private dining on Sunday the 5th of November and 23 members sat down for a delicious lunch, held in a private dining room, appropriately named The Lovell Suite. Views over a lavender field at the rear of the suite further enhanced the outlook from this exclusive reserved room.





There was a lot for members to do and see outside, however because of the inclement weather - rain interspersed with sunshine, not much external activity was noted!

Organisers Peter and Rosemary Murphy had gone to a lot of trouble to prepare seating plans, together with neatly prepared lists of members pre- ordered meal choices for each table.

The room was intimate and soon the sound of conversation resulted from the convivial atmosphere of such a friendly membership group.

Thank you to Peter and Rosemary for organising such an enjoyable event for which members showed their appreciation by enthusiastic applause.



Morgan 4/4 Brake Upgrade

Feature by Tony Cory

When we bought our 1977 Morgan 4/4 in October 2022, the brakes were not the most impressive feature. This was partly due to a seized rear slave cylinder, but after replacing both cylinders and all the rear brake piping, I was still less than impressed. On a test with a Tapley meter the braking efficiency struggled to reach 70%.

The brakes as fitted to the wheels are more than adequate for the lightweight Morgan, and I was not tempted to upgrade them. Instead, I started to look in depth at all the components between my right foot and the discs and drums.

Until the 1970s Morgans were fitted with single-circuit brakes. When twin-circuit brakes were introduced, Morgan used a front-rear split, while most others used a diagonal split. This was because, in the event of a single system failure, the positive scrub radius associated with the unique Morgan steering geometry causes the wheel to turn when only one front wheel is braked.

When the cars had a single circuit, with the same pressure to both front and rear brakes, the rear brakes could tend to lock up before the fronts in the event of an emergency stop. This is undesirable and leads to loss of control, my Hawk Ace (Example photo below) had to demonstrate the front brakes locked first, in order to pass the stringent IVA test).



My Morgan was fitted with a twin-circuit system with a tandem master cylinder, that is, a single pushrod operates two fluid chambers in series. Operating the brakes delivers the same volume of fluid to each of the front and rear circuits. This is not necessarily the same as delivering the same pressure; internal volume of the rear drum circuit and the front disc circuit is likely to differ, and in the case of the rear may be affected by the state of the manual adjustment. A diagonally split system delivers the same pressure to front and rear.

A further complication was due to a differential valve – both front and rear brake lines feed into a valve block, front and rear brake fluid feeds either side of a shuttle, which if the pressure differential between front and rear is sufficient, causes enough movement of the shuttle to activate an electrical switch. This is a complicated precursor to a low fluid level warning. However, when bleeding either the front or rear brakes in isolation from the other, the shuttle is moved and may not satisfactorily reset. I learned – too late – that the electrical switch should be replaced with a locking pin to secure the shuttle in position when bleeding the system. I did wonder whether the differential valve had some effect towards equalising front and rear line pressure, but this is uncertain and probably incalculable.



1 Differential valve disassembled.

Note that for some reason the differential valve uses a larger thread size for the front brake pipes – this means that new front brake lines must be fabricated with unions sized to fit the new 4-way connector – in my case 3/8" UNF thread.

Morgan pedal effort is high – due to low leverage, both mechanical (pedal ratio) and hydraulic (master cylinder bore size). Stepping from a modern saloon into our 1977 Morgan requires a fourfold increase in pedal pressure. Some means of reducing this without inducing excessive pedal travel would be welcome.

In considering how things could be improved, I looked back at how I'd designed the braking system for my Hawk 'Ace' that I'd built some ten years previously. All braking parameters were inputs to a spreadsheet which could be manipulated to ensure the front-rear balance was reasonable, and that the rear wheels would not lock up before the front (a requirement of the IVA test I had to pass, and which many older Morgans would presumably fail). The Morgan's disc-drum setup was quite similar to the initial setup of my Ace.

Putting the Morgan's parameters and axle weights (that's another story) into the calculation, I could see that the rear was probably over-braked, which could cause the rear wheels to lock up first, making the car difficult to control in an emergency stop situation. I fitted high-friction (Greenstuff) front pads which seemed to reverse this situation, but I was far from certain the front-rear balance was optimised. The best answer is to retain the front and rear independent circuits, but to supply each with a separate master cylinder and to incorporate a balance bar, as fitted to racing cars. This system is also routinely used in kit cars, and I had my experience building the Ace to draw on.

The normal way to fit a balance bar is through a modified brake pedal, involving some fabrication work. However, I was really reluctant to fabricate new, or modify the brake pedal. It would no longer match the clutch pedal, and the balance bar housing would require welding in place. I am not an accomplished welder, but I did want to do the mods myself. I decided to investigate whether the balance bar could be located on the engine side of the firewall and operated from the existing brake pedal via a short link. The proximity of the cable operated clutch mechanism would be an issue and require some careful fitting of any new components.

The new arrangement would create an opportunity to reduce the master cylinder diameter, and hence the pedal effort.

After a few hours measuring and sketching, several days drilling, turning, boring and milling, this is

what I came up with:



2 Balance bar unit, trial assembly

The **balance bar assembly** uses a Racetech balance bar configured for 2.5" centres, operating on twin OBP 0.625" diameter **master cylinders**. The tube of the balance bar assembly is a light press fit into an eye of a robust pivoting **link**, which transfers motion from the brake pedal to the master cylinders.

The **link** comprises an inner **steel plate** of 3/16" thickness, sandwiched between two **alloy plates** each of 10mm thickness. The steel and alloy profiles are the same except for a rearward projection at the top of the steel plate, which is drilled to accept a **clevis** which provides the attachment for the brake pedal link. The composite link has two further holes, a lower drilling of 0.5" diameter to accept the **pivot pin**, and an upper hole carefully bored at 1.0" diameter to provide a light press fit for the **balance bar tube**. The substantial thickness of the link and the large diameter of the pivot pin minimise any tendency to twist when the balance bar fulcrum is located off-centre.

The link is pivoted between a pair of alloy **trunnion plates** which separate, and join with, 6mm thick alloy **front** and **back-plates**. The front plate locates the master cylinders, and the backplate provides a location against the chassis crossmember which forms the lower part of the firewall bulkhead. The trunnion plates are joined to each of the front and back plates by four **M5 countersunk screws**. Four 8mm diameter stainless steel **through-bolts** are arranged to run from the cockpit side of the mounting, through the back and front plates and attach the brake master cylinders. The lower pair of bolts run close to the alloy bars, which are placed in compression. The upper pair of bolts run through 20mm diameter **alloy sleeves** which take the compression load.

The **pivot pin** is machined from a 0.5" diameter grade 'S' UNF steel bolt, which passes through the offside alloy bar, through the link, and screws into the nearside alloy bar. The pin is drilled to accept a **Zerk nipple** and cross-drilled to provide grease to the centre of the link. The threaded section of the pin is entirely within the nearside alloy bar, the link bears on the plain shank of the pin.

A **cover plate** is arranged to fit over the top section of the assembly to help prevent the ingress of road dirt.

Compared with a conventional balance bar installation, the advantages are that no modification to the brake pedal is required, no welding is needed, and the mods are easily reversible. The whole assembly takes up a little more space under the bonnet than the tandem cylinder and its spacer block, but not that much more. The backplate sits close up against the bracketry for the mechanical clutch linkage, and just under the flange at the top of the crossmember. The hole for the connecting linkage to the brake pedal had to be enlarged to accommodate the clevis attached to the link.

A word of caution concerning the fitting of the balance bar. Most cars, and our Morgan is no exception, require between 60 and 70% of the braking force to act on the front wheels. This does NOT mean that the balance bar should be set to favour the front brakes in that proportion. The single-leading-shoe drum brakes are much less effective at converting line pressure to braking force than the front discs, and in practice the balance bar needs to be set to favour the rear brakes.



3 Balance bar unit components

On the first day of Autumn the job was complete, ready for road testing, save from any necessary 'snagging' and adjustment. I set the balance bar to distribute the pedal load approximately 57:43 in favour of the rear brakes, which was my calculated figure.



4 Final installation

Road testing with a Tapley meter (a type of decelerometer) showed a consistent deceleration of around 0.92g, or 92% efficiency. Bearing in mind my nine-year-old budget tyres, I was happy that the adjustment was reasonably well optimised, though I may experiment with some fine tuning. In an emergency stop the car pulls up straight indicating the front wheels are locking first.

What's left to do? The removal of the differential valve has left me without a leakage or low-level brake fluid warning. I have two float level indicators surplus from a previous project that I may be able to adapt to the integral master cylinder caps. I also noted that I need a new brake pedal rubber!

What might I have done differently? A slightly longer assembly so that the clevis did not move through the bulkhead would have meant a smaller hole would be required in the bulkhead. Moving the 4-way union for the front brakes (containing the stop lamp switch) further forward would have improved access. I used cupro-

nickel for the new hydraulic pipes. This is more durable than copper, but forming the flares takes much more effort and in some cases the union nuts need to be much tighter to get a good seal. I may return to using copper in future.

In conclusion, the braking performance of our Morgan has been much improved, which gives greater confidence in driving. We are 'future-proofed' against needing an unobtainable tandem cylinder replacement in the future. On the road, the brake pedal is firm, the effort is reduced and the travel increased, though this still remains quite small. I'm satisfied this is a very worthwhile improvement. If anyone would like further details, please contact me on cory693@btinternet.com.

Tony Cory



Odissea Italia 2023

David Roberts reports on a soiree into Europe with friends.

The objective, once my 4/4's rebuild was completed, was always to drive the car to Italy. Why Italy one might ask? Aside from the obvious answers such as food, wine, culture, history, scenery, etc. I have been visiting this beautiful country for almost a quarter of a century and have close friends who live in Pisa and Rome whom I visit regularly. So, why not share such a road-trip with like-minded Morgan owners?

The headlines: 24 days, circa 2,900 miles in company with ten Morgan owners, six cars from Cheshire and joined, once in Italy, by German and Swiss Morgan owners and our dear Italian friends from Pisa.

The Pellegrini (pilgrims/travelers): Dot & Adrian Long (2017 Plus 4), Sue & Rob Etherington (2009 Plus 4), John & Amanda Doyle (2022 CV Plus Four), Roger Benton (2022 CX Plus Four), Stan Foxall (1994 4/4 1600), Tina & Ingo de Boer (not in their Morgan 1980 due to constraints), Anna & Fredy Granacher (1973 +8 4 speed), Gabi & Werner Wehrli (their 2021 CX Plus Four was O/S with defunct clutch hydraulics) and Sue & I (1960 4/4 Series II spec'd as a 1500 Competition *Lightweight*) and last but not least, our dear Italian friends Gianni (a member of the association of Italian sommeliers (AIS)) and his lady, Sandra, who were my 'boots on the ground' and invaluable

in checking out car park arrangements and security as well as arranging vineyard tours, wine tasting, the piano concert and the picnic.



Not Quite The Last Supper, Terra Rossa, Montepulciano, Tuscany, Mon 2nd October (image credit John Doyle)

Returning via Switzerland, in addition to Anna & Fredy and Gabi & Werner, we were joined by Morgan owners Yvonne & Walter Labhart and Nathalie & Reudi Brechbühl owners of a 1973 Plus 8, 2022 Plus 4 and 2017 Plus 4 respectively.

The route: Cheshire to Portsmouth – Caen, Vierzon, Lyon, Bourg St. Maurice, Col d'Iseran/Moncenisio alpine passes into Italy; La Morra (Piemonte in Italy's premier wine-making region), Lerici on Liguria's beautiful coast, Montepulciano (Tuscany) and finally Pisa. Then across the San Bernardino Pass into Switzerland, Bellinzona, Steckborn (Lake Constance/Bodensee), Bingen am Rhein, Rotterdam to Hull and home.



Approaching temple of San Biagio, Montepulciano, Tuscany, Tues 3rd October



Driving over the Chevril Dam, Tignes, Haut-Savoie, France, Sun 24th September (image credit Adrian Long)

Odissea Italia Soundtrack: 'On Days Like These' sung by Matt Monroe and "Get a Bloomin' Move On' (otherwise known as "The Self Preservation Society"), both written by musical legend Quincy Jones and used on the 1969 feature film 'The Italian Job', 'Born To Be Wild' by rock band Steppenwolf, Gunga Din by The Byrds and 'The Chain' by Fleetwood Mac and used famously in part, since the 1980s at least, as the introduction to Formula 1 television broadcasts.

Activities: getting extremely wet driving to Portsmouth and rather damp through France. Drying out in brilliant sunshine from the Alps through Piemonte, Liguria, Tuscany and Switzerland. The return journey from Italy became damp through Germany, extremely wet through The Netherlands and damp from Hull to Cheshire.



Colle del Moncenisio, Piedmont, Italy, Sun 24th September



Summit of the Col d'Iseran Pass, Haute-Savoie, France 24th September

Driving along the famous Mulsanne Straight on the Le Mans 24 Hour circuit, driving over alpine passes, eating fabulous meals (some indulged in taster menus with accompanying selections of wine), wine tasting, dining at L'Agave at Framura, fresh seafood at Lerici, more vineyard visits and wine tasting, taking boat trips on the Bay of Poets, a picnic on a Tuscan hill with Montepulciano in the near distance.



Montecchio Vesponi, Arezzo, owned by 14th C knight and commander of the Florentine army, Englishman John Hawkwood (aka Giovanni Acuto) Sun 1st Oct.

A private visit to the castle of John Hawkwood (aka Giovanni Acuto) who commanded the city of Florence's army in the late 14th century, even more wine tasting, more food, chilling, swimming in pools and the sea, laughter, chatting and laughing, cocktails, visiting historic towns and cities such as Volterra, Cortona, Montepulciano, Pisa, Lucca, climbing 237 steps of the Guinigi Tower with its seven trees growing at the top and its stunning views over Lucca, taking coffee and being entertained by buskers in the Piazza Anfiteatro (Romano amphitheatre).

Visiting Florence, Siena and Cortona, allowing Italians to take selfies with the Morgans and inviting them to sit in the Morgans, taking a few Italians out for a spin, photo opportunities arranged in front of hotels and wineries; the list goes on.

Stopping over at Steckborn on the banks of Lake Constance, accepting Swiss Morgan owners amazing hospitality and whilst some *Pellegrini* visited the Rheinfall (the Rhine Falls), others elected to go sailing on Bodensee (Lake Constance) aboard Walter & Yvonne's 38ft sailing cruiser.

Personal highlights: Everything - the trip ran like clockwork. The weather once near the Alps, was warm and became unseasonably and increasingly hot and the sun shone upon us non-stop for 20 days. Whilst some hadn't met



Piazza della Repubblica, Cortona, Arezzo,

prior to the trip's planning meetings, everyone got on like a house on fire – no moans and no grumps; it was simply end-to-end good nature and fun!

The private tour given, by a member of an archaeological society and the charming and elegant owner of Montecchio Vesponi, of a medieval castle once owned by an English knight, John Hawkwood (aka Giovanni Acuto).

Jaw dropping moment: Far too many but one is of Dot Long dancing in a Pisa street! Yep, and there's a photo to prove it! (Ed note – photo not provided!). Adrian borrowed a drone and to see the group and the Morgans at the top of the Col d'Iseran and Montecenisio passes was simply stunning.

Rewards: Seeing new friendships forged between UK, German and Swiss Morgan owners. Roger's Plus Four repaired and running perfectly and his continued company on the trip rather than a premature departure.



*Piazza della Repubblica, Siena, Tuscany,
Sun 1st October*



Vele Storiche Pisane, Pisa, Tuscany, Sun 8th October

Challenges and Frustrations: Italy's poorly maintained roads, a dead 2022 CX Plus Four when its *Overseer* software decided to play no longer resulting in a dead car. Now I thought that a car's 'overseer' was the driver/owner but I am obviously mistaken and so, will stick with my *analogue* Morgans (On-board computer? ECU? What are those?). The CX Plus Four was fixed despite the diagnostic software being unique to Morgan, protected, and therefore restricted to dealers of which the only one in Italy was 200 miles distant. In addition, the rough Tuscan roads loosened one HT lead and caused my 4/4 to run on three cylinders only (an easy fix) and, whilst driving through Holland, the 2009 +4 experienced a slow puncture.

Regrets: Saying farewell to our German, Italian and Swiss friends as we headed north. Having offered and taken quite a few photos of enthusiastic Italians sitting in the Morgans and, having taken quite a few Italian passengers for short spins in the 4/4, my one regret was being turned down an opportunity to take a photo of a female officer of the Italian police sitting in the 4/4 – such an image would have been rather arresting!

Response to the Morgans: Actually, I fully expected the enthusiastic responses, however those that we received from the Italian people to the Morgans were amazing, whether at hotels, wine producers, lunch stops, service areas or on the open road. The hotels reserved special parking for our Morgans, and this was much appreciated; not only that, but they often requested the cars to be displayed prominently for photographs. Strangers politely asked permission to take selfies and beamed with excitement when asked if they wanted to sit in the cars.

In one very ordinary village, whilst buying provisions for an evening meal at the village shop, a group of youths asked about the car and one cheeky sixteen-year-old, asked for a ride in the 4/4; I thought "Why not?" and so, to his immense delight, I took him out for a spin.

On the open road and autostrada, drivers blew their horns, would overtake slowly so that passengers could take photographs, passengers would wave enthusiasm and give 'thumbs-ups'

and motorcyclists would wave arms and even legs in appreciation and pillion passengers took photographs on their cellphones – how could one not appreciate such admiration and enthusiasm!



Room with a View



Sig. Roberto & Sig.ra Sarrotto, Roberto Sarrotta Wines, Neviglie, Cuneo, Mon 25th September



Museo delle Sinopie, Pisa, Tuscany, Friday 6th October

Driving a sixty-three-year-old Morgan to Italy: One objective of the five year rebuild of the 4/4 was not only to build the car as a basis of a historic competition car that was light in weight and sensibly tuned for performance, but also for the 4/4 to be a reliable and dependable car and comfortably trimmed for touring. These objects were fully achieved and last year's MSCC Holland's 50th anniversary was the 4/4's shakedown and first European trip and it exposed only minor issues to be resolved.

Knowing that I would be driving over alpine passes and high altitudes, I took the precaution of taking the 4/4 to a rolling road as I had guessed at the carburetor and ignition setting and did not want to risk burnt valves or other problems. Aside from a change of primary idle jet, all other settings remained as I had set them. I had immense fun driving over the French/Italian and Italian/Swiss alpine passes (I used to drive competitively in hill climbs, sprints and races in my Morgan Plus 8 and a Formula Ford 1600 for 11 years) but didn't need nor seek to drive at racing speeds on the passes or anywhere else for that matter - getting home safely and without mechanical trauma was a priority.

The 4/4 did suffer from high oil consumption and as yet, the cause of the high oil consumption has not been diagnosed although I suspect that the rope-style crankshaft oil-seals are one of the culprits. Another issue was, the loss of power to one cylinder, the fault due to the high-tension lead to N° 3 spark plug being ejected from the distributor cap most probably caused by the poorly maintained and therefore rough Italian roads.

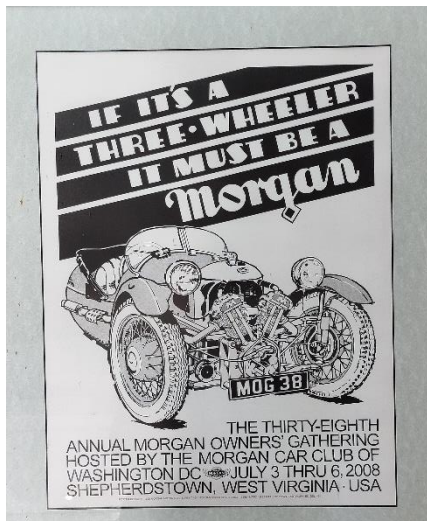
In comparison, my *analogue* 4/4 performed more reliably than the 2022 Plus Four for which its digital *Overseer* decided to intercede, once temporarily, the second time terminally. The absence of easily available diagnostic software for CX Morgans is a significant liability for touring outside the UK. Essentially, failure of a £10 relay or sensor will render the car unusable with very restricted means of diagnosis. Whilst I understand the issues of intellectual property, this restriction is a

serious and, potentially, a major inconvenience and costly impediment when touring in Europe and further afield.

Other older, previous century Morgans, 1994 Plus 8 4 speed and 1994 4/4 1600 CVH performed utterly reliably. Everyone's cars received a full service prior to the trip; the 1994 4/4's owner, as others did, took the precaution of a cam belt change prior to the trip. I took a full spanner set comprising British Standard (BSF/BSW), Unified (UNC/UNF), British Association (BA) and Metric (my 1960 uses all four screw types) as well as a compact UNF/Metric socket set. I also carried a grease gun and disposable overalls, and was happy to grease, at circa 1,000-mile intervals, the suspension of those cars with sliding stub-axes.

Would I do it again? Absolutely! Whilst organising Odissea Italia involved significant planning, everything, but everything, ran according to plan. The Odissea Italia *pellegrini*, whether from Cheshire, or our European friends from Germany, Italy and Switzerland, were a fantastic group of individuals and forged friendships with each other; these attributes meant that my wife, Sue, and I were able to enjoy ourselves thoroughly as the trip was very much our holiday too.

And Finally



A poster from 2008

Whilst we have Mogfest, Morgans at Windermere and wicked Welsh weekends etc. the American Centres also arrange gatherings with the Morgan Club of Washington DC hosting their 38th Morgan Owners gathering in Shepherdstown, West Virginia.

Page 1 Titles

Did you see what I did there? Song titles giving away my age!

-  Good News Week – Hedgehoppers Anonymous – 1965
-  Brothers in Arms – Dire Straits – 1985
-  Stop in the Name of Love – Diana Ross & Supremes - 1966
-  My Way – Frank Sinatra – 1969

For all the latest news on all our events please click this link.

<http://www.norcemog.com/Calendar%20of%20Events/2024Diary.pdf>

