

# The Goshawk Society

# *Flier*



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## *The History of WHC43 Rolls-Royce Wraith Windovers Limousine*

*Story by David Timmons(USA)*



*Lovingly restored and enjoyed by David Timmons for over 32 years, WHC43 was recently acquired by James Sinard. It was displayed at a CCCA event in Ohio this past September. Photo: Sinard*

Sir Henry Royce died in 1933, yet his philosophy of engineering perfection with continuing improvement endured. This was exemplified the following year as a new design was proposed in the evolution of the small horsepower range of chassis which had been gaining increasing acceptance since its inception in the 1920s. The "Wraith," as it came to be known was envisioned as a modernized successor to the popular 20/25 hp model introduced in 1929. This had sold well as demand for the large horsepower model

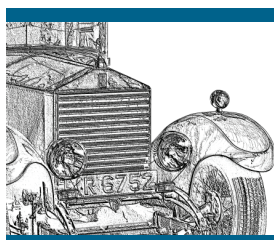
declined. The Wraith would carry an ethereal name connoting silence, as did the senior cars. It would incorporate technical and production advancements along with tradition, such as making almost all components in-house and an emphasis on hand-built quality, cost being a secondary consideration. The average wage in the Rolls-Royce Derby works was 5 pounds per week at the time.

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# The Goshawk Society of the Rolls-Royce Owners' Club

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# Flier

The Goshawk Society *Flier* is the official publication of the Goshawk Society, an affiliate of the Rolls-Royce Owners Club, Inc. (RROC). The RROC is dedicated to the maintenance and preservation of Rolls-Royce and Bentley automobiles and its 9,000 members who own or admire the marques. Member submissions are welcomed.



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## Chairman's Message

HAPPY NEW YEAR!!! I never thought I would be SO happy to bring in a new year and leave 2020 behind. The pandemic continues but I hope you have either already received or have an appointment to receive a vaccine. Winter is half-way over and I am hopeful that we will have an early spring so we can take our PMCs out of their winter hibernation and get them ready for the Annual Meet in Lake George and the tour that will happen after the meet.

As I indicated in my last message, Mary White has organized our tour that will occur immediately after the Lake George Annual Meet. It doesn't look like Ernestine will be ready but I will be there to cheer you on as you depart on what will be a great tour of some lovely country. Because of the pandemic, the RROC Foundation has re-scheduled the 25/30 pre-war car maintenance seminar. It is now planned for May 15.

The Annual Meet will be shorter than in past years, but I look forward to seeing all of you at our lunch on Thursday, June 24th. We will conduct our business meeting during the lunch.

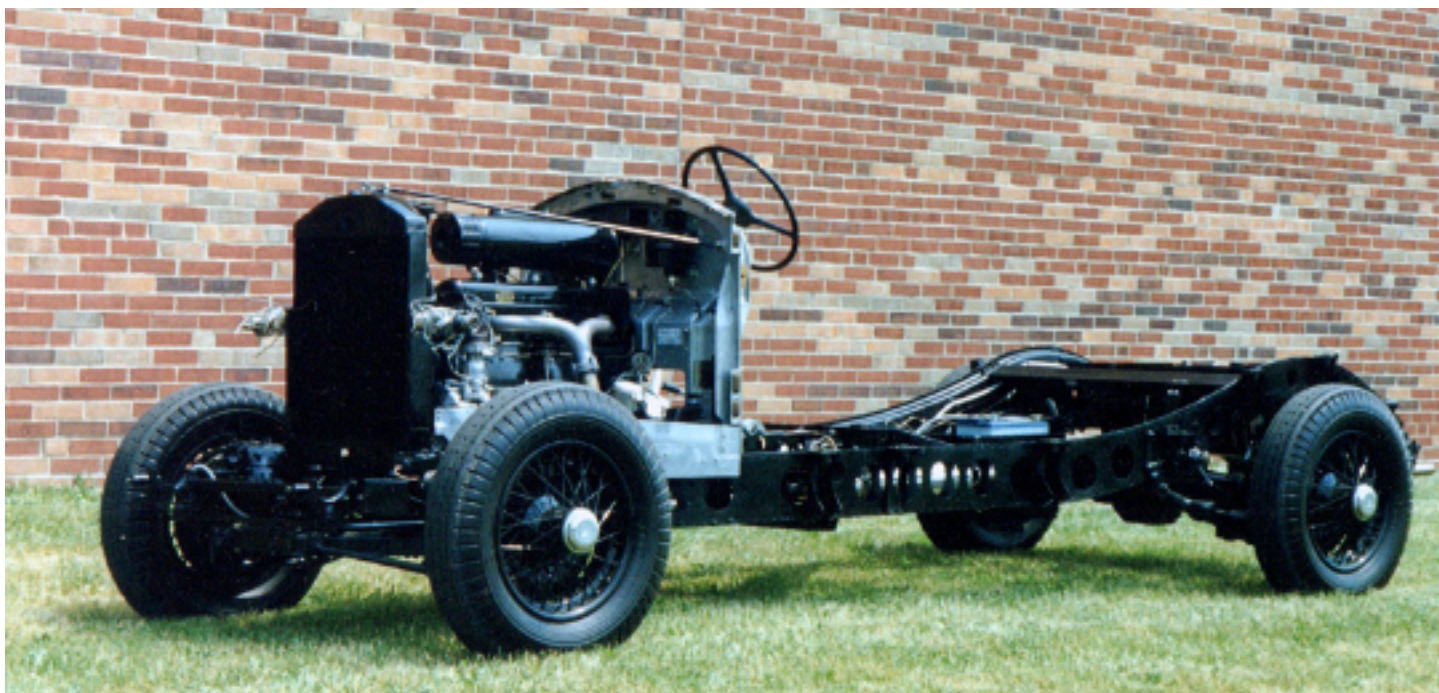
I wish all of you a safe drive to Lake George and in the meantime – stay safe and healthy.

Cheers! Keep Motoring On!

Al Briseno II







*The restored chassis of Wraith WHC43 shows the level of detail that went into its resurrection by David Timmons. It also serves as reminder that Rolls-Royce provided only the chassis during this time frame.*

*Continued from page 1*

A number of configurations were considered early on until the chassis of 136 inch wheelbase was finally arrived at in order to accommodate increasing coach work demands. It would be powered by a six cylinder overhead valve engine displacing 4.25 L, which translates to a “Treasury” horsepower rating of 25/30. Concurrently, the 12 cylinder 40/50 hp Phantom III was under development and many of its advancements were incorporated into the Wraith chassis, notably Rolls-Royce’s first use of independent front suspension derived from a U.S. General Motors system. Other chassis firsts were an all welded box section cruciform frame, variable shock damping control, hydraulic central jacking system, duplex electric fuel pumps mounted in the frame, cam and roller steering gear, knock off wheel hubs and under bonnet radiator filler parrot. Significant improvements were shown in the servo-assisted mechanical braking system and the silent synchronized gearbox, permitting fingertip shifting with the right hand described as a “delightful mechanism.” Wraith engine introductions included automatic spark advance, twin ignition coils, an oil filter, a cross-flow cylinder head with larger valves and suspended front engine mounting.

Similar accolades accompanied the Wraith’s market appearance in mid-1938. Published tests cited its attributes with enthusiastic statements such as “a feel of tautness with light and positive steering,” “a

delightful motor car of great charm and refinement,” and “its running is like floating along on a cloud.” Its rare combination of meticulous prewar engineering along with modern advances was notable. In the late 1930’s, custom coachbuilders had reached their peak in design, styling and construction. Most of those did not survive World War II and the Wraith was among the last to carry the best of this passing art form. Costly complexities and maintenance challenges of the concurrent Phantom III focused more demand on the Wraith. With only 492 built before production was halted by war in September 1939, the Wraith had the smallest output of any Rolls-Royce chassis except the exclusive postwar royal Phantom IV. Nonetheless, to this day Wraith enjoys one of the highest survival rates of any model; a testament to its inherent reliability.

Rolls-Royce had become primarily an aircraft engine manufacturer in the re-armament just before World War II, and was re-organized into separate aero and automotive divisions. In the war time military manufacturing a “rationalized range” of automotive design was developed for production efficiency using more proprietary components and incorporating economic measures. The result being that the postwar Silver Wraith built in the aero plant at crew differed in many respects from its Prewar Derby-built predecessor, which remains a unique blend of the traditional and modern.

# Fit for a General: Montgomery's Rolls-Royces in War

Story by Tom Clarke (UK), From *The Roycean*, 2013

'Monty', the name still resonates decades after the last war. Field-Marshal Bernard Law Montgomery (1887-1976) could be said to rank with the Dukes of Marlborough and Wellington as one of the greatest soldiers in British military history. His strategic thinking and forceful personality inspired his troops but disagreements with political and military leaders – later rehearsed in his controversial memoirs – inflicted damage on his reputation. Winston Churchill said of him (in a quotation that varies in sources), 'in defeat, unthinkable; in victory, insufferable'. He is best remembered for two great victories: in late 1942 over Erwin Rommel at the Battle of El Alamein in north Africa, which turned the tide of the war for the Allies and gave them a stunning first victory; and for the momentous Normandy campaign in 1944. As Churchill also said, 'Before Alamein we never had a victory. After Alamein we never had a defeat.' With the coming of the D-Day invasion of Europe on 6 June 1944 Monty's official Rolls-Royce Wraiths, WHC43 and WMB40, were soon ferried across to his HQ. Although WHC43 was to remain there for the remainder of the campaign and beyond, whilst WMB40 was later returned to England, the mistaken belief has taken hold that WMB40 was Montgomery's only D-Day or main campaign car (not least in the writer's book 'The Rolls-Royce Wraith', 1986, and RREC Bulletin no.300). This article seeks to redress the balance by showing that WHC43 was the only car actually purchased in Monty's name and, through images taken from period film footage, that WHC43 was the car used most by Monty in all theatres of the European war. In doing so the part played by other Rolls-Royces elsewhere will also be outlined. WHC43 was restored by David Timmons some years ago and is today cherished by him in Ohio. His assiduous research made this article possible. (Pictures 1 & 2)

## Early life and career

Montgomery's early years in south London were rather more prosaic as a son in the large family of the kindly Rev. Henry Montgomery and his domineering wife Maud (daughter of Dean Farrar, a renowned religious figure). In 1889 the Rev. Montgomery became Bishop of Tasmania and the family therefore lived in far-off Hobart for the next twelve years. The



Picture 01: WHC43 when brand new. It was equipped with Ace wheel discs from new whereas that feature was not fitted to its sister cars WMB28 and WMB77. At some point later in the war WHC43 was seen without some of its discs, presumably because some issue prevented them being refitted. (Courtesy of John Fasal)

Picture 02: The sales sheet for WHC43 showing 'General Montgomery' as the intended user from new.

severity of Monty's upbringing by his obsessed mother left him with complicated feelings about authority and affected his later career. Significantly, it seems to have made him protective of his troops and they were energised by his training regime and regular presence amongst them.

Monty began his life in the Army at Sandhurst in 1906, joining the Royal Warwickshire Regiment in 1908, and was later stationed in India. It was in this period that he became a motorcycle enthusiast, owning a Rudge 'Tourist Trophy' model after 1911 and attending speed trials. During the Great War he



served with distinction and showed considerable leadership qualities. He led troops at the bloody battles of the Somme, Arras, and Ypres. Gradually his military outlook changed in the face of these futile full-frontal assaults with heavy casualties, seeking instead to gain objectives with minimum loss. After the Armistice he stayed with the Army on the Rhine and in 1920 joined the Staff College. He was appointed Major-General in 1938. In the Second World War he was promoted to full General in 1942 and knighted after the victory at El Alamein. He led the Allied 'Operation Overlord' campaign in

Paris as head of the Allied Powers' Western Union forces, latterly as deputy Supreme Commander to Eisenhower within the new North Atlantic Treaty Organisation from 1951. He retired on 20 September 1958.

### War years at home

Morale boosting on the Home front was as important to Monty as it was throughout his time with his troops. Before D-Day, therefore, he was a regular visitor to armaments factories and elsewhere to invigorate the civilian war effort. On these occasions he used Wraith WMB40 (WHC43 not yet being delivered), and it was often transported to far-distant locations in his own train, 'Rapier'. In fact the British government's Ministry of War Transport had allocated a few Rolls-Royce and other cars to senior military figures from as early as 1940 onwards. Some of these cars were donations or loans from members of the public, and the Royal Army Service Corps also had its own large fleet of cars. (Picture 3)

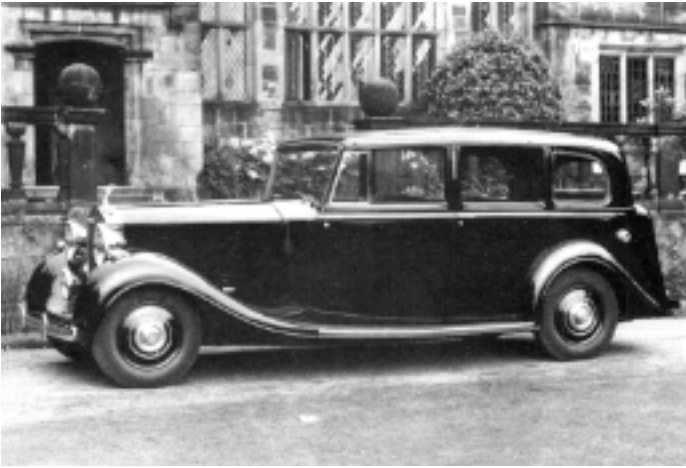
It has to be asked why further Rolls-Royces were later allocated in the fighting zones to Army, Air Force, and Royal Navy leaders as the War entered its last year. An obvious consideration was status, to ensure that military leaders were accorded their rank (apart from greater comfort in harsh conditions!). A second consideration might be national prestige as Britain's ally, the United States, became the dominant partner in the forces fighting in Europe, as elsewhere. Their military leaders were often seen in Cadillacs (sometimes armour plated) and in cars that seemed more streamlined and modern to look at than British ones (apart perhaps from the Humber). One U.S. observer, Major Chester B. Hansen, wrote on 5 February 1945 that Monty had arrived at their Namur HQ 'in a squared Rolls-Royce', not a flattering description of these imposing, and upright, cars. But the fact that the make was noted at all says something about its easy recognition and impact – Monty, ever the showman, played this to the full by flying a large Union flag from a post on the radiator cap. And, finally, the Allies knew that they would each be administering sectors of Germany after the War was over and therefore visibility and high status would be important when imposing authority. Equally, as the campaign swept through liberated France and the Low countries, it helped that military leadership was being shown in such cars to the freed populations there.

Apart from Monty's three principal cars covered in this article many other Rolls-Royces and a few Bentleys were also used by British forces. Some were



*Picture 03: WMB40 on duty with Monty at Bury St. Edmunds in Suffolk in the spring of 1944 – much D-Day training took place around Thetford not far away. The four stars indicate his rank as General. The white paint on the running board edges and the bumpers, along with Hartley headlamp masks, are reminders of the precautions taken during the War when night-time public illumination was restricted – to avoid helping German bomber attacks. A pair of heated demister panels can be seen stuck inside the windscreen. The adulation of the crowd stemmed from Monty's hero status after El Alamein. Behind the crowd the observatory dome of the Athenaeum Club can be seen. A curious aside, given Monty's early motorcycle enthusiasm, the eponymous Montgomery motorcycle was manufactured in Bury St Edmunds decades earlier before moving to Coventry. (Tom Clarke photograph)*

Normandy for the first three months from June 1944. After U.S. General Eisenhower took over as Supreme Commander of Allied forces, in response to the preponderance of U.S. forces and materi  l, Monty was switched to the command of the main British and Commonwealth force, the 21st Army Group, for the northern Europe campaign. On 1 September 1944 Monty was promoted to Field-Marshal. He was raised to the peerage on 31 January 1946 as Viscount Montgomery of Alamein and became Chief of the Imperial General Staff (C.I.G.S.) on 26 June 1946, serving until November 1948 during his period with the British Army on the Rhine. He was next based in



Picture 04: 1939 WEC54 Rippon limousine when new outside Woodsome Hall, Huddersfield. This car is believed to have been used by the Chief of the Air Staff, Sir Charles (later Viscount) Portal. (Tom Clarke photograph)

official vehicles but others were just seizures in the course of campaigns, or loans. Not all actually served outside Britain. An example is experimental Mk V Bentley 10-B-V which was lent by Rolls-Royce to Air Chief-Marshal Sir Arthur 'Bomber' Harris from April 1942. The key details follow for other known cars.

### The Wraiths

Wraiths were allocated to various 'military brass'. 1939 WEC54 Rippon limousine was acquired in 1944 and used by the Royal Air Force, possibly by the Chief of the Air Staff, Sir Charles Portal (later Viscount Portal, 1893-1971). It was present at the formal ceremonial entry into Berlin on 6 July 1945. It survives in a German museum. However, Portal was also photographed alongside another unidentified staff car, possibly an unidentified Wraith to design no. 1394 by Thrupp & Maberly. WEC55 was a Windovers limousine and its coachwork was only completed in 1944 when the car was bought by the Ministry of War Transport on 14 July. There is some doubt about its intended user, an untraceable Admiral F. Lockwood-Goose being suggested but it is certainly known that Admiral Sir Bruce Fraser of the Royal Navy (later Lord Fraser of North Cape, 1888-1981) used it. Many years later it became a hearse and in 1953 was registered in Worcester as LWP133. It survives today with replica coupe coachwork. WEC12 by Windovers was ordered by the Maharaja of Gwalior on 16 February 1942 but later cancelled; it was then bought by the Ministry of War Transport on 21 June 1944 but its use is unclear. It survives in New Zealand. 1939 WLB39 Park Ward limousine was also bought by the Ministry but, again, its intended user is unknown. It,



Picture 05: A Wraith limousine at a Royal Navy meeting, showing part of its Navy census number 56---. Shown are Vice-Admiral Sir Denis Boyd (1891-1965, who crippled the Italian fleet at the Battle of Taranto), Capt. Waldemar W. P. Shirley-Rollison (1900-73), and Commodore Stephen H. Carlill (1902-96). The first two officers were aircraft carrier commanders. Judging by the trees and dry conditions this could be during Boyd's time with the Mediterranean Fleet based at Alexandria, Egypt. The actual Commander in Chief of the Mediterranean Fleet was Admiral Sir Andrew Cunningham whose car this might have been. The car is most likely WEC12 Windovers limousine. Unusually for a Wraith no front overrides are evident. (Courtesy of Andrew Marfell)



Picture 06: WEC55 Windovers limousine seen here with naval officers at the V.E. parade in Caserta, Italy, on 11 May 1945. This followed the surrender of German forces in Italy to Field-Marshal Sir Harold Alexander (later Earl Alexander of Tunis, 1891-1969) on 2 May. WEC55 did not employ the rear door 'upper pillarless' design of WHC43 used by Monty, and was similar to but not quite the same as WEC12. (Courtesy of the late Margaret 'Peggy' Morton, W.R.N.S.)

too, survives. An experimental Wraith, 29-G-VI (later WXA8) Park Ward limousine, was lent by Rolls-Royce to the Air Ministry; and 1936 25/30 h.p. GAN12 Thrupp & Maberly limousine is said to have been used by the War Office in France and Italy – but those details are unconfirmed. These last two also survive. (Pictures 4, 5 & 6)

### The Phantom IIIs

Given the complexity of a Phantom III it is remarkable that enough supplies of routine spares could be sourced in wartime; and it is assumed skilled military mechanics could do the regular maintenance. In the event many of these cars served throughout the war. 1939 3DL52 Hooper limousine was donated in 1940 by Lord Craigmyle to the General Officer Commanding, Scotland. As virtually a new car it was used extensively within the U.K. and carried Army census number M7424 and, after the war, Army registration number 16-YF-70. It was used at least once by Monty, such as on 6 March 1946 when he received the Freedom of the City in Edinburgh. It remained with the Scottish Command until 1966, then moved to the Junior Tradesmen's Regiment until 1974 and was sold between 1977-80 into private hands. 1936 3AZ186 Freestone & Webb saloon was lent by its first owner, Frederick M. Wilcock, who in December 1943 had agreed to its use on government business within Britain during the War. It is said that at various times it carried General Carl Spaatz of the U.S. Air Force, and Montgomery himself, until it was returned to Wilcock in late 1944. It does not appear to have had an Army census number and was used with its normal registration of DGY1. It survives today in England.

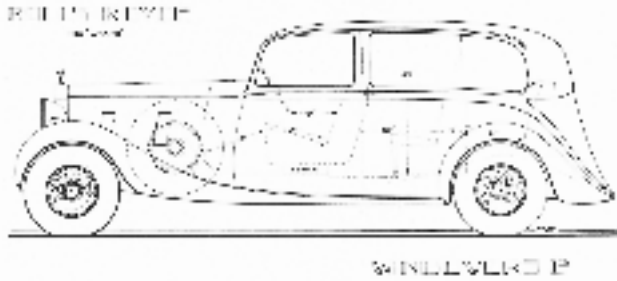
1937 Phantom III 3CP144 Vesters & Neirinck saloon coupe was, according to the late Brian Jewell (a researcher on military vehicles), acquired during the liberation of Belgium and given the Army's census number of M6055219, to be used initially by Lt.-Gen. Sir Charles F. Keightley (1901-74). It is said that it stayed with the British Army on the Rhine until 1958. Part of the basis for this car being quoted as an Army vehicle is a claimed sighting of Montgomery in the car in Belgium. It is now owned in the United States. 1938 3CM129 Windovers saloon was lent by Sir Jeremiah Colman, Bt., from 1940 and used by Air Commodore Viscount Forbes (later the Earl of Granard), including being shipped on a motor torpedo boat in 1944 for his liaison mission to France and its aircraft industry after liberation. It too survives.

The patriotic Sir Julien Cahn, Bt., donated his pair of Woolley-bodied cars to the Army in the 1940-41 period. 3AX15 was a saloon, in use by 1945 on the Rhine with General Sir Brian H. Robertson, Bt. In 1947 it became a British diplomatic car in Germany and was returned home in 1952. It survives in the U.S. rebodied. 3AX37 was a limousine but its wartime use is unclear. By 1950, however, it was on the Rhine being used by Lt.-Gen. The Hon. Sir Gordon N.

Macready. It also survives in the U.S. 3BT187 was a Voll & Ruhrbeck cabriolet sold new in Holland. It was taken first by the German army and later by the British army during 1944 but, again, its wartime use is uncertain. It was known in 1950 with Lt.-Col. L. J. Walker and that same year with General Robertson (who also had 3AX15 above). It survives in the U.S. 3DL50 H. J. Mulliner limousine was acquired by the Ministry of War Transport after the first owner died in 1942 and was with the Air Ministry until as late as July 1960. It was last known in 1971. And lastly, the most far-flung of these cars was 3AZ198, a Hooper limousine. It was based in India from new with General Sir Robert A. Cassels, Commander in Chief of British forces in India until 1941. In January 1941 he was succeeded by General Sir Claude Auchinleck and in May 1941 the car was sold. Its wartime use was therefore limited. It was last known in 1975.

The third of the cars associated with Monty, after the pair of Wraiths, was 1936 Phantom III 3AX79, the most distinctive of the cars ultimately in Monty's hands. It spent all the war years and just beyond with a succession of other military figures in England. It was owned new by Alan Samuel Butler (1898-1987) who was Chairman of the De Havilland Aircraft Co. He commissioned H. J. Mulliner & Co. to build an extraordinary, aerodynamic, saloon body for it with an unusual forward-sloping V-screen. This apparently gave best wind tunnel results. It was registered DUV553. In 1940 he lent it briefly to General Sir Walter Kirke, the first Commander in Chief of Home Forces at the outbreak of war. Butler continued to lend it out, one claim being that Field-Marshal Viscount Gort also used it but certainly the next C.I.G.S., General William Edmund Ironside, used it until May 1940, then Field-Marshal Sir John Greer Dill until December 1941, followed by Field-Marshal Sir Alan Francis Brooke (later Lord Alanbrooke) between December 1941 and June 1946 – which is when Monty became associated with it. During Alanbrooke's use the Ministry of War Transport finally bought the car, ca 1942-43, for a nominal sum and then allocated it in turn to the C.I.G.S. of the day, with Army census number M5201 applied to it. After the war it carried Army registration 16-YF-66. Its driver in this time was Percy G. Parker who, with his brother Cedric (d.1962), also drove the C.I.G.S.'s Wraith. (Biographer Nigel Hamilton also correctly refers to Staff Sergeant Tom Parker, Monty's chauffeur in his later years.)





Picture 07: The original design drawing for WHC43, no. 5567 for body 6594. The two earlier bodies, 6592 (for WMB28) and 6593 (for WMB77), had slight variations indicated by their design no. being 5554/5567 whereas WHC43 was plain 5567.

### Monty's Wraiths

It would be Monty's cars that became more instantly recognisable to troops and public alike. He was allocated two Wraiths. 1939 WMB40 already referred to was a standard Park Ward black limousine owned new by a director of the Bowater Group, Donald F. S. Henderson. It suffered some bomb damage in 1940 and after repair remained registered as FLD99 throughout the war, even after being donated to the Army by Henderson. It was with Montgomery from February 1944, for use within the United Kingdom until the D-Day landings. The Army eventually gave their census number of M5109209 to it, and after the War it was recorded with the Army's registration plate 16-YF-67. No images have ever been found of the car bearing the Army's census number, unlike Monty's forthcoming second Wraith, WHC43. It must be likely that WMB40 was brought to Europe for significant occasions, such as carrying high-ranking visitors to operate alongside WHC43, and then returned so that it was at other times available in England for use there by others.

The main car in this story, 1939 WHC43 by Windovers, was one of three near-identical stock limousines (bodies 6592-94) held by Rolls-Royce in late 1939. WHC43 was the remaining unsold example. Interestingly, 6594 for WHC43 was marked by Rolls-Royce as a 'sale or return body'. Body 6592 was fitted to WMB28 and 6593 to WMB77. All three survive. Although WHC43, like WEC12, was eventually sold to the Maharaja of Gwalior on 16 February 1942, through his U.K. agents Hendry Bros., this order was cancelled on 4 August 1942, probably because of wartime shipping risks. It would never have been an elaborate car, of the kind often seen with

Indian potentates, because it was not a bespoke order. Its first registration was possibly DYX890; if so, this was a June 1937 number almost certainly taken from another car. It then remained in storage until sold to the Ministry of War Transport in February 1944, for the express use of Montgomery, and finally delivered to the Ministry on 26 May 1944 – just in time for D-Day. The Rolls-Royce sales record noted on 22 May that 'N [i.e. Derby factory] to carry out any work necessary prior to car going abroad & to supply a new battery', further indicating that the invasion was assumed and what part the car would be playing. Its Army census number was M5109233 and it eventually carried Army registration plate 16-YF-68 postwar. Crucially, given the harsh wartime conditions yet to come, the car was fitted with a heater! (Picture 7)

### At the front

On 9 June 1944, just three days after the D-Day invasion, Monty's two Wraiths were off loaded at Juno Beach, one of several code-named beaches for the Normandy landings. Hamilton's biography recorded that 'Monty was in good heart. Lt-Colonel Dawnay had brought over the remaining portion of his Tac Headquarters – including two Rolls Royce cars!!

They were kept wherever his personal tactical headquarters (Tac) were situated; this comprised his Leyland caravan (Army census no. L4410754), Mack caravan (L1308619), Fordson caravan (H5828981), and Humber tourer staff car (M239485).



Picture 08: With a guard of honour and military band behind, King George VI's car WHC43 arrived at U.S. headquarters in mid-June 1944. The Supreme Commander of Allied Forces, General Dwight D. Eisenhower, saluted and opened the car door himself before standing back. (Courtesy of British Pathé, film 1985-16)





Picture 09: Another view of the King's visit to General Eisenhower in mid June 1944 using WHC43. (Courtesy of Critical Past, film 65675044492-002291)



Picture 10: King George VI and U.S. Lt.-Gen. Courtney H. Hodges of the U.S. 1st Army salute U.S. troops during the King's visit in mid June 1944. WHC43 forms the backdrop. (Courtesy of the Imperial War Museum, B10898)

Soon after the D-Day landings the Prime Minister, Winston Churchill, could not be held back and visited Normandy on 12 June, just one and half days after the liberation of the immediate area. He came again on 21 July, the day after the complete liberation of Caen. When the Rhine was crossed by the 21st Army Group, leading to the crossing of the Siegfried Line, Churchill drove with Monty in WHC43 to the Line and to see the devastated city of Wesel during 3-5 March 1945. He was back in late March.

His Majesty King George VI travelled constantly to visit his forces overseas. These journeys included the British Army in France during 1939 and north Africa after El Alamein, and so naturally the King visited Monty in Normandy. This occurred ten days after the landings, on 16 June 1944. He was in Italy in August. From 11-16 October the King returned to inspect troops in Holland with Monty. The King's accommodation for the week was with Monty in his caravans based in Eindhoven – he was already familiar with the caravans from his north Africa visit. (Pictures 8-13)

Space does not permit a detailed account of Monty's campaigns after D-Day or where and how his official cars were used. The photographs will tell their own story but a few occasions can be outlined. On 5 November 1944 WMB40 was in use at Ghent in Belgium, without WHC43, when Monty inspected troops and awarded medals. This was one of the few instances supported by period images showing Monty using that car with his driver but no other passengers. In essence, WHC43 was used more often, from his HQ for meetings with British, and U.S., Army and Air Force leaders at various fronts, as well as at ceremonies in liberated areas.



Picture 11: The King (centre), Monty (seen back to the camera in black beret, hands held behind), with WHC43 in Holland during June 1944 after arriving by air in a liberated zone to hold an Army medals ceremony. (Courtesy of British Pathé, film 2123-14)



Picture 12: The King leaving the medals ceremony in Holland during June 1944 in WHC43. This clearly shows its Army 'drab' paint scheme and road wheels now without discs. (Courtesy of British Pathé, film 1985-17)



Picture 13: Monty with other officers enjoying a picnic from the back of WHC43. The car appears to carry a 4-star plaque which would mean a date just prior to 1 September 1944. (Courtesy of David Timmons)



Picture 14: The bitter winter of 1944-45 – WHC43 struggled for traction in this situation. This is believed to be Monty with the 5th Infantry Division on 5 December 1945 near the Brunswick - Polish border. The rear bumper akimbo indicates earlier confrontations. The arc shape of the back window is another useful way to distinguish this car from WMB40. (Courtesy of the Imperial War Museum, BU11868)



Picture 15: Although only four stars are displayed for the five-star Field-Marshal Montgomery (further evidence perhaps that this car was by now mainly used by other generals), WMB40 is shown on 5 March 1945 as the 'Priority' car with WHC43 unmarked behind. Winston Churchill and Monty were in the lead car WMB40 and again during a visit to Citadel Julich in Germany after its capture. (Courtesy of British Pathé, film 1994-02)



Picture 16: Churchill was determined to see the key action and arrived for the crossing of the Rhine at Wesel by Monty's 21st Army Group on 23-24 March 1945. Naturally WHC43 was on hand to carry the Prime Minister. (Courtesy of British Pathé, film 2111-04)

Monty excelled at communicating to troops, leaving them sure of victory. He was less good in his relationships with U.S. Generals George S. Patton (1885-1945) and Omar N. Bradley (1893-1981) but when, by 20 December 1944, the Allies were stalled by a German counter-offensive Eisenhower made the important decision to give Monty command of the 1st and 9th U.S. armies. Within days his leadership had begun to show results and the tide in the battle of the Ardennes had turned by mid January 1945. The movements of WHC43 in this troubled period reflect the situation – 2 December 1944 at Harde in Belgium for a meeting with U.S. Maj.-Gen. Matthew B. Ridgway at 18th Airborne Division HQ; then at the momentous Maastricht commanders' conference 7-9 December (just days before the German armies broke through – the Battle of the Bulge in the Ardennes), fairly typical forays in these turbulent weeks. The initiative soon returned and before long the fighting was taken into Germany itself. (Pictures 14-18)

An interesting difference in personal security between Monty and his U.S. counterparts is revealed in extracts from Hamilton's biography. Fear of rear-guard sniping by German sabotage troops in September 1944 led Eisenhower and General Bradley to lower their visibility, described on page 208 (quoting Major Hansen) – 'All this has led to increased security precautions in the headquarters. We have removed the [identification] plates from the General's jeep - he rides in nothing else, no more sedans'; Hamilton continued, 'The Cadillac Eisenhower had given Bradley on the eve of the Maastricht conference was now locked away in a





Picture 17: Monty and Maj.-Gen. A. C. Gillem of the 13th Corps, 9th U.S. Army, study maps at Gillem's HQ on 8 March 1945. WHC43 forms a useful map rest. General Sir John Burnett-Stuart is at the rear in the beret. (Courtesy of the Imperial War Museum, B15460)

garage. Not only did Bradley now ride in an open jeep without any markings in sub-zero temperatures, but he was persuaded to surrender his helmet with its three stars also ...' Meanwhile, Monty was often seen 'Travelling in his heated Rolls-Royce with outriders ...' (page 245). When Monty was given command of the 1st and 9th U.S. armies during the critical days of the German Ardennes offensive in December 1944, he said to his A.D.C. Lt.-Col. Christopher 'Kit' Dawnay, 'Kit, I want the largest Union Jack that will go on the bonnet of the car. Also eight motor-cycle outriders' (page 210) – this was intended to raise Monty's visibility when he drove out to meet the two U.S. forces he now commanded. The change in personal security was clear at the Maastricht commanders' conference, two weeks earlier, where Bradley's jeep was seen incongruously behind Monty's imposing Rolls. Evidently Monty did not fear snipers and usually wore his beret, not a helmet. In such ways did he project his forceful personality and inspire troops with certain victory. But the War Office that same month, quoted in Montgomery's memoirs page 294, warned Monty about his security and that he 'can no longer afford to be casual in these matters'. It made no difference! (Pictures 19, 20)

### The war's end, victory parades

With the final surrender on 8 May 1945 WHC43 became the sole formal car. WMB40 had probably been returned home after the March 1945 visit by Churchill. Now in peacetime mode in occupied Germany, on 3 June 1945 Monty's new HQ moved



Picture 18: Monty in WHC43 touring a displacement camp in Germany during 1945. The appreciative refugees were able to erect a simple welcome arch and even mounted a guard alongside. (Courtesy of British Pathé, film 2074-05)



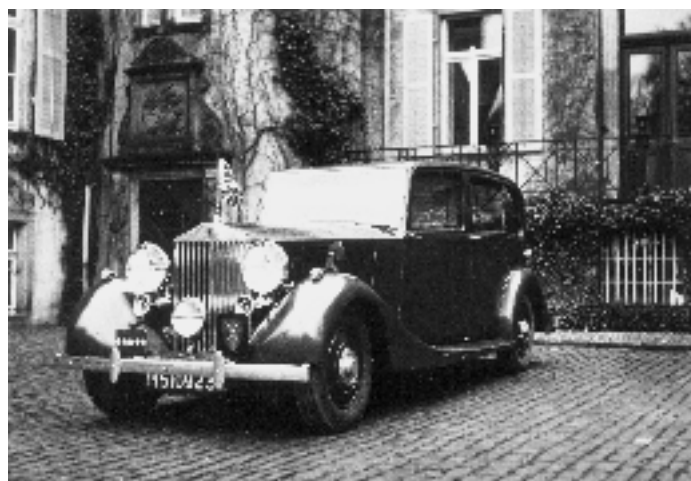
Picture 19: Monty in his typical attire, and U.S. General Bradley, during the Maastricht commanders' conference 7-9 December 1944. The cars in the background say it all: Monty's Rolls-Royce proclaimed his presence, with no concessions to avoid snipers, whilst Bradley was limited to a jeep. (Courtesy of the Imperial War Museum, B12591)



Picture 20: Churchill and Monty with WHC43 on 25 March 1945 in Germany, visiting the U.S. XVI Corps. General Eisenhower arrived in the car seen at the top. (Courtesy of British Pathé, film 2024-06)



Picture 21: Probably taken in the summer of 1945, WHC43 is seen with just Monty and his driver. It is likely to be the meeting in Lübeck on 10 July 1945 with Major MacPherson of the 15th Scottish Division. Notice that the wheel discs have been refitted! One reason he might have chosen this car over WMB40 is that its pillarless rear door and side windows improved both his vision and that of the public when the car carried dignitaries. Views of Monty using just WMB40 in the war zones are rare, pointing to that car being intended for visitors. (Courtesy of the Imperial War Museum, BU8720)



Pictures 22 and 23: WHC43 was photographed at Monty's German HQ at Schloss Ostenwalde, near Osnabrück, on 17 December 1945 by Francis Nunan Howard (1905-ca 1983) of New York. He had arranged the photoshoot with Monty's aide-de-camp Capt. Noel W. Chavasse, explaining that the car was of interest to readers of *The Antique Automobile* magazine in the U.S. (Howard was a well-known classic car enthusiast postwar.) Although told by J. S. Inskip Inc. in New York City that the car was a Park Ward (another instance of WMB40 being assumed) Howard quickly saw that the body was Windovers, the other car. He also noted that the car was painted a 'dull Army brown' (sometimes called olive and possibly even green) whilst the other car was 'glossy black'. Monty agreed to stand with the car for one of the photographs. A rubbing strip on the side of the running board is a feature not seen on the car new or currently. (Courtesy of the Imperial War Museum, BU11936 & 37)



southwest from Lüneberg Heath, near Hamburg, to Schloss Ostenwalde just east of Osnabrück, about fifteen miles from the 21st Army Group's main HQ at Bad Oeynhausen farther east. (Pictures 21-23)

Montgomery had not attended Eisenhower's victory parade in Paris on 8 September 1944. But on 25 May 1945 it was Monty's turn – in Paris he used a Bentley drophead coupe, B112HK, to receive an honour from General De Gaulle, the Grand Cross of the Légion d'Honneur. Crowds thronged the Champs Elysées as Monty's car crawled forward. He still had this car in May 1946 although it is not understood whose it actually was. It had previously been used by Prince Bernhardt of the Netherlands. For the victory parade in Brussels Monty was seen in an open Lagonda, CNE600, clearly marked with a Field-Marshal's five-stars plaque. (This was 1938 LG6 chassis 12341, owned from almost new by Joop Nieuwenhuis of Holland and the East Indies. It was lent for the victory parades and remained in family hands until 1977. The added CNE600 registration is thought to be unconnected to the car.) The same Lagonda was used by Monty in Amsterdam on 1 September 1945 but it was followed by another Bentley drophead coupe, a two-tone car with a 3-star plate (B180AH, B181AH, and B23LE are likely candidates). In Copenhagen the parade after liberation saw Monty in a Danish royal open car provided by King Christian X. (Picture 24)

## Later years

On 2 May 1946 Montgomery finally left his European command and returned to England. At a ceremony in Germany in late April 1946, in the traditional British manner of thanks and farewell, he stood in his Humber while troops pulled it along with ropes. WHC43, as the only Rolls-Royce remaining, was driven behind. When he arrived in England to meet his son WMB40 was used for the occasion. General Sir William Slim succeeded Monty as C.I.G.S. in 1948 and it is assumed one of the Rolls-Royce Wraiths was transferred to him. Monty was





Picture 24: Monty in Paris on 25 May 1945 using Bentley 4¼-litre B112HK Park Ward drophead coupe, clearly in Army colours and markings (no. M6011330). The circled star on the bonnet is like the symbol used by U.S. forces. For part of his day in Paris Monty had another Rolls-Royce saloon, a model slightly earlier than a Wraith, driving behind the Bentley at one parade. He had flown into Paris and presumably both cars were locally sourced for the event. (Courtesy of British Pathé, film 1115-14 above, and 2030-09 for other views)



Picture 25: 3AX79 outside the War Office in London whilst Monty was C.I.G.S. (Courtesy of Steve Stuckey)

instead given the use of 3AX79 in the whole postwar period, with an interesting outcome as will be related below. Albert Leach was Monty's driver from 1949-58 and Sergeant Parker was another of his drivers for 3AX79. And so ended Monty's momentous times in northern Europe. Less than two years before, Hitler seemed to have full control of the Continent – victory seems too small a word for the Allied achievement. (Picture 25)

WMB40 continued in Army service in England after 1945 in the care of 20 Company, Royal Army Service Corps (Motor Transport). In April 1964 it was transferred to the Training Centre at Buller barracks, Aldershot. On 6 June 1964, 60 years after D-Day, Monty made a last ceremonial run in it. By now, with its unbroken time in the Army and WHC43 disposed of, WMB40 had come to represent D-Day itself. In 1978 it underwent refurbishment by both Rolls-Royce and Hooper & Co. (Coachbuilders). It next spent time at the Museum of Army Transport in Beverley 1981-2003 and since August 2003 has been at the Royal Logistics Corps Museum at Deepcut, Surrey, fitted with a Bentley Mk V engine, no. B6BP from B22AW.

WHC43 possibly continued briefly in Montgomery's use after his return to England, based at Regent's Park barracks in London (but with a formal address in South Kensington linked to Lt.-Col. Jeffers); and was next allocated to the new C.I.G.S., Field-Marshal Sir William Slim (1891-1970) from January 1949 until May 1953 when he left to become Governor-General of Australia. It is possible that the next C.I.G.S., Sir John Harding, could have used the car from November 1952. The car's usual driver in this period was Sergeant Leonard Dengate. It was sold by the Army on 17 November 1955 as 'beyond economic repair' and it was re-registered PNM891 in



Picture 26: Sergeant Leonard Dengate is seen at Regent's Park barracks with WHC43 during its time as the official transport of the C.I.G.S. after 1946. This was probably in the time of Field-Marshal Sir William Slim 1949-53. By now the car had been refurbished back to glossy black paint and normal wing mirrors fitted in place of the military type. In addition, a further spotlight had been fitted at the front nearside. The horn trumpets were no longer the original slightly longer type with wide mesh, corrected during its later restoration. A similar photograph with Dengate, but taken at the War Office, was published in *Soldier* magazine, May 1951, captioned 'Outside the War Office, Sergeant [sic] Leonard Dengate fixes Field-Marshal [sic] Sir William Slim's flag on his 5-star Rolls-Royce. This car carried the King when he visited 21 Army Group.' (Courtesy of the late Brian Jewell)



Picture 27: With WHC43 sold in 1955 it was left to WMB40 to become the remainder of those wartime Rolls-Royces. It is seen here outside the War Office in Whitehall, January 1956. Five stars were no longer carried. (Tom Clarke photograph)



Picture 28: WMB40 at a military establishment around 1978 after refurbishment.

Bedfordshire, probably indicating its new owner's location. (Its disposal meant that WMB40 had been chosen as a representative vehicle for the Royal Army Service Corps' collection, possibly because it was in better condition at the time.) By June 1958 it was recorded with Associated Portland Cement Manufacturing Ltd. in Beddington Lane, Croydon. By now WHC43 had a different heating arrangement – the original small Clayton heater in the rear cabinet had been removed, along with the cabinet itself, and a much larger Smiths heater fitted under the rear floor (removed during the later restoration). In September 1975 WHC43 found a new home in the United States with Jim Williams in Indiana. (Pictures 27-29)

As Monty neared retirement he made strenuous efforts from late 1957 to keep the Phantom III, 3AX79. It was not a wartime car for him but its role whilst he was C.I.G.S. in the early postwar years made him 'very attached to the car' he wrote, so too his driver of the last twelve years. In fact, the Secretary of State at the War Office, John Hare, had agreed at some time prior to Monty's retirement that he could have the car at full market value. In the meantime Rolls-Royce had even offered Monty a free overhaul if he acquired the car. The War Office opened a file on the car and in the best traditions of the Civil Service an endless round of paperwork circulated from 18 November 1957 until September 1958 to arrive at an agreed valuation. Fortunately for Monty, the curious shape of the car reduced its attractiveness to the market, and big cars were not popular, but there was possible collector interest in such relics of wartime. Monty's good fortune doubled in May 1958 when a full mechanical refurbishment was authorised costing £450 – he would have no need of that free overhaul offered by Rolls-Royce after all! That brought the amount spent on the car in two and a half years to



Picture 29: Not long before his retirement Monty visited Rolls-Royce Ltd. at Derby, seen here with the managing director Lord Hives and 3AX79. Two great wartime figures. (Rolls-Royce Bulletin July 1955 p.15)

£1,650! However, Monty revealed in his application for the car that it had by now done over 300,000 miles so the expenditure was clearly needed to cope with that amount of use.

The War Office consulted Rolls-Royce and several dealers to arrive at a valuation of £300, adhering to the





Picture 30: 1936 Phantom III 3AX79 Mulliner saloon photographed in 1962-63 at Monty's Hampshire home Islington Mill just prior to final sale. It is certainly an intriguing design, the chrome moulding on the waist and rear spats echoing in reverse the angle created by the windscreen. (Late Kenneth Ullyett photograph)



Picture 33: Monty with 3AX79 outside the cramped garage built for it at Islington Mill after 1958. Notice that the car now has the incorrect short trumpets on the horns, as WHC43 used to carry, and wing mirrors have been fitted. The five-star plate now carries illumination. Typical of the man, Islington Mill and its grounds and buildings were all kept in immaculate condition.



Pictures 31 and 32: The front and rear interiors of 3AX79. (Photographed by the late Kenneth Ullyett)

requirement that the car's 'personal association' should not be taken into account – but, with that 'association' in mind, Jack Barclay Ltd. (the only firm which actually inspected the car) thought it could sell for £500 and possibly even £1,000 at auction to a collector. Phantom IIIs normally sold for between £325 and £450 in this period. Christopher Soames (Winston Churchill's son-in-law) was by now the new Secretary of State and he accepted the lower figure. Monty angled to acquire the car as a gift but in the event he bought it for £300 on 15 September 1958 and kept it at his home, alongside his wartime memorabilia. (Pictures 30-33) Four years later, in 1962 (and after the death of his driver it seems), it was sold via Jack Compton Ltd. Monty's next car was a Daimler 'Century' and he also still owned a Sunbeam S.7 motorcycle acquired early after the war. 3AX79 was soon known in the United States but in more recent times the car has been returned to the U.K.

Unlike a grateful nation in 1817, when the Duke of Wellington was given the Stratfield Saye estate in gratitude for the victory at Waterloo, Monty received honours but no formal gifts or lavish pension for his war efforts. He had been a widower since 1937 and the Army had become his home. In 1947, therefore, Monty had to settle down and found his final home, Islington Mill on the river Wey near Alton in Hampshire. Here he established his private museum of war memorabilia and kept his war caravans and Phantom III 3AX79. After his death in 1976 the caravans eventually found their way to the Imperial War Museum's Duxford site in Cambridgeshire. Monty's Humber staff car, 'Old Faithful' (M239459),

is also kept there. His second Humber tourer (M239485) is exhibited at the Coventry Transport Museum. These Humbers were based on Humber Super Snipe chassis and had been used by Monty in north Africa and Italy. But the images of Monty with his three Rolls-Royces down the years stand out for us, not least because WHC43, above all, at various times conveyed a much-loved monarch – King George VI – as well as the very symbol of the war victory – Winston Churchill – and of course always the legendary Monty.



*WHC43 and David Timmons earned an RROC National Award.*



*Above & Below: Interior details of WHC43. Photos: Timmons.*

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## *Acquisition of Wraith WHC43*

*Story by David Timmons(USA)*

In the early 1980s I began to search for a Wraith being convinced of its desirability through my regard for Russell Herrold's WLB 41 Sedan de ville by H. J. Mulliner. Russ acquired this low mileage beauty in 1973. He and Marsha drove it on 40 CARavans in the 33 years until his passing; a great testimony to the comfort, handling and reliability afforded in a Wraith. Very few such cars were available until, in 1988, a rather worn window for his limousine WHC43 came on the market in our area. It has been imported in 1975 by an Indiana travel agent who bought it in the UK from a dealer along with a vintage Armstrong Siddeley. The only known history of WHC43 at the time at the time was that it was "government surplus." Russ Harold had just received a copy of Tom C. Clarke's newly published definitive book about Wraith in which everyone produced was cataloged along with its original ownership. It also contained a

photo of WHC43 in Europe with Field Marshall Montgomery. Realizing it's history I thought the car worthy of restoration but it had been withdrawn from the market in the meantime. It showed up again after going through a trustees auction in Kentucky. I snatched it up and borrowed Russell's trailer and suburban to fetch it. It ran passably, but was an obvious need of work. British army motor pool records show its disposition resulting from a classification as "beyond economic repair." I soon found out that proper repair was far from economical!

We are fortunate in central Ohio to have excellent vintage Rolls-Royce mechanics in Earl "Butch" Murphy and his son. As they explored the situation, a major restoration of the car was indicated. Murphy's did all the chassis work, disassembly and reassembly. They removed the body, which was sent to D&D at Covington, Ohio, and the engine, which I took to Frank Cooke in Massachusetts. Steve Glazier in Houston, Ohio did the veneer and structural woodwork. Joe Smith in Elyria, Ohio was the upholsterer and the plating was done by Custom Chrome in Grafton, Ohio. I made several trips to the UK to obtain proper components. A visit to the Museum of Army Transport in Yorkshire produced rank and unit insignia exactly as displayed on the car in wartime photos. Authenticity was the guiding principle in the project Chassis build sheets and drawings were available from both the US and UK Rolls-Royce clubs. Windovers coachwork specifications were found. Original upholstery was underneath later layers and was duplicated. Even period Dunlop types are available. Another similar Windovers body is in a Canadian museum and was the source for details for replication of cabinetry which had been removed by the military. A complete set of tools was miraculously discovered.

The project was completed in 1991 and WHC43 began the rounds of Grand Classics, CARavans and Rolls-Royce Owners' Club events. It attained CCCA Premier status (badge # 1767SP) early on and had earned the highest RROC awards by 2000. It has been driven on twelve CARavans and a number of RROC tours. More are planned this year. It has been featured and won at Amelia Island, meadow Brook, Stan Hywet, Glenmoor, CCCA Museum Experiences and numerous other concours. It's an example of how a 78 year-old car that has been through the War can still be successfully exhibited and also extensively driven.



*WHC43 as shown at \_\_\_\_\_. Photo Timmons.*



*WHC43 carries a complete tool kit stowed in a drawer beneath the passenger seat. Photo Timmons.*

***MY FIRST CAR: Owned from 1962 to 1964  
1927 Twenty GMJ75 with replica body by Southern Motors***

*By John Pierson*



*1927 Twenty GMJ75 with later saloon body by Southern Motors. Shown here with the author ca 1963. Note bird mascot rather than the traditional Spirit of Ecstasy. Photo courtesy Pierson.*

GMJ75 started life with a Barker Sedan body. Its first owner was a Mr L. Yeowell. In the 1930s many earlier Rolls-Royces were rebodied with more up-to-date coachwork; Southern Motors was one of the bigger companies that did this work. So here is GMJ75 with its Southern Motors body in 1963. As you can see, it looks more like a 25/30 than a Twenty. And yes, that's me beside it.

I was given a little money for my 21st birthday, and had a job which gave me a little more money. So I could buy a car! At that time "Exchange and Mart" was a weekly newspaper full of small advertisements, somewhat like Craigslist today. I read it studiously every week, as did my friends. Mostly we looked at prewar cars, Austin Sevens, Morris 8s and the like.

For some reason I ended up buying the Rolls. I paid £120, which was probably too much. I later heard of Rolls-Royces being bought for as little as £50.

I used the car as my daily driver for two years, though I also had a Lambretta scooter for part of that time. My home was in London, I was a student at Cambridge, I was doing an apprenticeship in Loughborough, and I had a girlfriend in Oxford. So the Rolls covered a fair mileage. It was very worn, you might say worn out, the brakes were not very good, the clutch slipped, the headlights were dim (but the centre driving light was good). The dynamo (generator) could power the lights and the wipers or the lights and the heater, but not all three together.



I was no mechanic in those days, but I did rebuild the water pump with help from a neighbour. I had frequent tire troubles, buying cheap tires from scrap yards. But the car never left me stranded and I was able to sell it for £125.

Some of the adventures that I remember: one day I was driving in Loughborough when a man in a Minivan signalled to me to stop. He had noticed the strange bird that was the radiator cap mascot on my car (see large photo on page 18). He worked for a funeral company, and offered to sell me a correct mascot. on a cap, for £2. See the next photo. Another time, in 1963, I visited Blenheim Palace and found a dozen or so Rolls-Royces grouped together. I know now that this was an early event for the Rolls-Royce Enthusists' Club. Unfortunately I did not know of the club, and no-one thought to invite me to join.

However, at about the same time a fellow student placed an advert in the university paper inviting owners of Rolls-Royce or Bentley cars to a gathering. I showed up with my Twenty, he had a huge Phantom II limousine, and a third student had a 4 litre Bentley. Nothing came of this meeting, but the Bentley owner and I became friends. His car was just as well-worn as mine. I remember him using large quantities of STP to

try and reduce his car's smoking. Fortunately the mechanical inspection test (MOT test) had not yet started.

At another student get-together, I remember stating that my "ultimate" Rolls-Royce would be a late model Silver Ghost limousine with four-wheel brakes. This I achieved in 1979 with my 1926 Springfield Ghost S333RL Arundel limousine.

I mentioned above my apprenticeship in Loughborough (near Leicester, Nottingham and Derby). The apprentice club held occasional events, including car rallies. I borrowed my father's new Ford Consul for one, but for a night rally I used my Rolls. (see photo lower left)

You will see that one of the side lamps was not working. Later I was warned by a friendly policeman to get it fixed. I could not determine where the fault was, nor could I easily rewire the lamp properly. The car had an electric fuel pump located on the firewall where the autovac had been, so I took a wire from the fuel pump to the lamp. Thereafter the lamp was "on" whenever the ignition was on.

I slowly learnt about the different Rolls-Royce models. I bought a copy of "The Magic of a Name" by Nockolds (£1 - 10s, the receipt is still in the book dated January 1965) and two booklets from Adams and Oliver Ltd. They were the source of parts, both new and used, in those days. The booklets, I have them still, are "A Brief Guide to Rolls-Royce and Bentley Cars 1925-1955" and "A Brief Guide to Rolls-Royce and Bentley Cars 1925-1955 Faults and Remedies Supplement".

In 1964, after two years with the Rolls, I needed something more modern, and bought a 1962 Austin Mini Van. I did not return to Rolls-Royce motoring until 1976 - but that's another story.



GMJ75 participates in a night-time rally organized through the author's apprentice club. Photo courtesy Pierson.



# 1928 Twenty HP GFN57 - Before Restoration

*By Bill Gerrow (NC)*

Here are some “BEFORE RESTORATION” pictures of my '28 Twenty, GFN57. The engine is in good hands in Vermont at the Vintage Garage. It's amazing to see the internal condition of the engine. But even more amazing to hear my brother talk about driving it in this condition around 1981. I can't imagine another vehicle moving, or even surviving for a restoration. There's obviously a very long way to go but each day is one step closer to the finish!





## Twenty HP Website



### WELCOME TO THE ROLLS-ROYCE ENTHUSIASTS CLUB 20HP REGISTER

The aim of the 20hp Register is to provide a forum to help 20hp owners throughout the world make the most of their vintage car. The services of the 20hp Register are in addition to and complementary to those provided by "corporate" RREC and the Area Sections.



*The home page of the Twenty HP Register*

The Twenty hp website was started a year ago by a couple of RREC members (Tom Jones and Alan Harris) but is independent of the RREC, and is an open-access website. All Goshawk Society members are encouraged to check it out:

<https://www.rrec20hpregrister.com/home/>

Owners of 20 hp cars, or just 20hp enthusiasts, are invited to contribute to the Members Cars section or the Technical Tips under Resources & Articles or to any other sections. They can send copy to Tom, or if they prefer he'd be willing to compile notes (even rough ones!) into an article.

BTW, you don't have to be a member of the RREC to become a member of the 20hp Register.

Since it is an open-access website, the policy is not to post anything which is too personal, too political or too contentious!

Tom Jones  
RREC 20hp Registrar  
tomrsjones@gmail.com



## Nose or Tail?

### You Learn Something New Every Day

*By R. Pierce Reid, The Vintage Garage, Stowe, VT*

One source of argument within the Small HP Rolls-Royce and Derby Bentley community has long been the proper orientation of the rotor nose contact in the small horsepower distributor. Now thanks to some objective research including taking a complete distributor and building a working cutaway distributor model from which to test both configurations, we have what we believe to be a definitive answer. And with that answer comes some valuable lessons for the Small Horsepower owner.

#### Your Small Horsepower Engine Simplified

To understand the reason for the design of the Rolls-Royce distributor, it is first necessary to understand how the engine operates. We are all familiar with the basic “Suck, squeeze, bang, blow” operation of the four-cycle engine... or at least should be! But there is a lot more to the actual running than the four steps that come in the various “Rolls-Royce for Dummies” books that try and explain the engine. While the physics of the engine can occupy supercomputers, the author will try and lay out a simple explanation for things like ‘advance’ and the need for such a complicated mechanism behind the “Bang” part of your engine.

First the design of the distributor is based on several factors. One, it has to distribute spark to each cylinder in the correct order... In the case of a Rolls-Royce, it is 1-4-2-6-3-5... in that order. So each cylinder gets a spark when it is at the top of its compression cycle, setting off the combustion that drives the piston down and turns linear movement into rotational movement at the crankshaft. Simple right?

Its second function is to make the spark happen at precisely the right moment during the engine’s rotation. Going “Bang” at the wrong instant means you have an engine that, at best, isn’t running well. At worst, isn’t running at all. In modern cars, this is done with computers. In most older cars (by that we mean it has points and a carburetor), it was handled mechanically, but more on that later. The short version is that the spark and engine speed must match up!

#### And Advanced Lesson

The science, therefore, of setting the spark to occur in the right place and the right time is critical to the engine’s ability to run smoothly and efficiently. And

in popular vernacular, the ‘adjustment’ of this timing is referred to as the “Advance.” That is a bit simplistic, because the ‘Advance’ only occurs as the engine’s RPM’s are increasing. In fact, the system also retards the spark as RPM’s are decreasing, always with the goal of having the spark occur at exactly the right time. And because Rolls-Royce quadrants just wouldn’t look right with “Advance and Retard” on them... the company chose the more elegant “Early and Late” as its terminology.

So this raises the question of “Early and Late” in relation to what? To understand this, you have to break down the “Bang” word in our four-cycle symphony into even smaller elements. Simply put, the “Bang” is an explosion that occurs when the spark plug ignites a compressed fuel/air mixture in the confined space of a cylinder. That energy has no place to go, so it pushes down on the top of the piston. That piston pushes down on the crankshaft, which then rotates, turning the linear motion of a piston into the rotational energy that drives your wheels. However, it is very important that the ‘bang’ occur very precisely in relation to the position of the piston (which is set by the crankshaft and indicated by the Timing marks on the flywheel.) For example, if the force generated by the fuel/air explosion occurs at exactly top dead center, there is no mechanical advantage on the crankshaft... in other words, a connecting rod attempting to push the crankshaft straight down won’t drive an engine. There is no mechanical advantage when pushing straight down. And if the explosion happens too late, the expanding gasses are ‘chasing’ the piston down the bore, not pushing the top of the piston and there will be no power at all. So the whole engine must be timed very precisely so that the pressure of the explosion triggered by the spark plug presses the piston downwards, with maximum force just after the piston passes top dead center and begins its downward stroke, maximizing the mechanical advantage on the crankshaft, and maximizing the conversion of the explosion energy into rotational energy, also called torque.

So, why does an engine need to have spark that advances (in RR terms, fires earlier), the faster the car is running? Simply put because, as mentioned above, the explosion of the compressed gasses is actually a chemical reaction that takes place at a fixed rate based



on mixture and pressure. It is not instantaneous as it takes time for all the fuel to ignite and the gasses to expand and become useful energy. Since the compression ratio of the car is fixed. And the mixture is (mostly) fixed, the speed at which the gasses in the cylinder expand can happen only so fast. So the faster the piston is moving, the sooner you have to initiate the explosion to get the gasses to expand and press on the top of the piston at exactly the moment when it is past top dead center and in the right position to exert force on the crankshaft.

If the engine ran at a fixed rate all the time, one would just set the timing and leave it alone. But a Rolls-Royce engine must run through a wide RPM range. So you have to come up with some method of varying when the spark occurs in order to match the expanding gasses and the top of the piston at precisely the right time.

### Are you Idle or are you “Balls to the Wall”

To further delve into this, let's look at a Rolls-Royce Small HP engine running in two states. Idling vs. Full throttle or, to use the steam-engineering term that described a flyball governor when its weights were fully extended, “balls to the wall.”

So to start, we can take a Small Horsepower Rolls-Royce running at a very slow idle (for those who like to count the fan blades) of, say 120 RPM. Properly dialed in, a small hp engine can be made to run this slow. At 120 RPM, things are relatively sedate in a long-stroke straight six engine. Each second, the engine rotates just two times. Each piston is going up and down two times, meaning (with a 4.5” stroke) it is covering just 18 inches per second or just over 1 mile per hour. At this speed, the spark that ignites the fuel-air mixture can occur almost at the top of the piston stroke in order that the expanding ‘flame front’ can exert downforce on the piston and not ‘chase’ it down the bore. Catching up to a piston moving at 1 mile per hour should be easy. Most people walk twice as fast!

But if one calculates the speed at which events are happening, at a more frantic 4,000 RPM, still 500 RPM short of a red line, things are happening much more quickly. Each second, the engine is rotating 66 times. Each piston is going up and down 66 times. With a 4.5” stroke, the piston is covering 594 inches per second or roughly 44 miles an hour.

So if we go back the fixed speed at which the fuel mixture combusts, it must be ignited much earlier in the engine's rotation if it is going to hit the top of the piston at exactly the right moment to exert its force on the top of the piston.

In other words, the faster the engine is turning (aka the faster the piston is moving) the sooner you have to ignite your explosion in order to have the engine run correctly.

### The Mechanical Workaround

There are a number of ways that engineers handled this quandary of making an engine run reliably through a wide range of RPM's. For some early cars or ‘inexpensive’ cars like the iconic single-cylinder curved-dash Oldsmobile, there was no automatic advance. Instead, the driver had a lever mounted on the side of the seat that was constantly adjusted as the RPM's went up and down. On modern cars, it's all done with computers and sensors. And for modern (pre-computer) cars, it was often handled with a vacuum line that used engine vacuum (a measure of engine speed due to air flow) and used this vacuum to adjust the timing.

But Henry Royce, having apprenticed in the rail yards, stuck to his roots and used a very complicated and beautifully-engineered flyball mechanism, much the same as used on a steam engine or as a governor. This mechanism uses centrifugal force that increases with engine speed, causing a pair of weights to extend outwards and through an arrangement of cams and



*The Origins of the Small Horsepower Distributor are found in the Silver Ghost distributor, which uses a flyball governor. You can see the large cast-iron balls on pivots. As speed increases, balls fly outwards... balls to the wall. Photo: Reid*

levers, advances the spark accordingly. This system made its debut on Royce's earliest designs, evolved through the Silver Ghost and then was 'shrunk down' for the Small Horsepower cars. Though complex, this timing adjustor was brilliant and works extremely well in matching engine speed and spark timing very precisely.



*Here we see the flyball advance mechanism of the small horsepower distributor. It is much more delicate and complicated than the earlier Silver Ghost unit. But is a very effective mechanism using bar-weights on a scissor mechanism to control the advance. Photo: Reid*

The flyball governor in your Small Horsepower Rolls-Royce or Derby Bentley is hidden in the bell-shaped housing right under your distributor cap and cup. It is powered off the Water Pump drive using a worm gear that also drives the oil pump. As engine speed increases, the 'weights' of the governor fly outwards and cause the ignition cam (which controls the points) and the rotor (which picks up and transmits spark) to advance in relation to the position of the crankshaft... advancing the spark precisely in relation to engine speed. That it uses 200 parts to do what a vacuum system does with 4 parts is irrelevant. And why we love Rolls-Royce!

### So Where does the Spark Come From?

The last thing we need to delve into before the "nose Vs. Tail argument is settled is to understand how the spark gets created and transmitted. And again, we will simplify things greatly to help understand how that distributor on your engine actually makes spark. Because you must understand this fully in order to understand noses versus tails!

The spark in your car is created through an electrical coil... but more on how that works in a moment. The coil is energized when the ignition is turned on in the car. In a properly-set-up Small HP car (aka, one that has its correct mushroom coil), the 12 volt electrical system is stepped down to about 8 volts by feeding the electricity through a ballast resistor. This small oval-shaped device lowers the voltage and if it is not functioning, either you will burn out your coil or you will get no spark. (Note that the resistor uses nichrome wire that, over time, will oxidize and it will increase in resistance, lowering voltage to the coil. The nichrome wire can also break, leaving you with no power to your coil. Making sure your ballast resistor is good is critical to the proper running of the car. It should have good wire and read between 4 and 5 Ohms of resistance.)

The coil is, in essence, a small transformer. It is designed to take 12 volts and, through magical wizardry, convert that 12 volts into the 25,000 plus volts needed to deliver 30 – 70 milli-joules of energy to each spark plug. That magical wizardry, however, is initiated not by putting power into the coil, but by removing power from the coil. An event that takes place when the points open in your distributor. The points open in your distributor when the six-lobed cam that actuates the moving arm on the points causes one contact to separate from the other. This collapses the energy field (more magical wizardry) inside the coil and that energy escapes instantly.

Where does it escape to? Well, it escapes through what is, not-coincidentally, called the coil wire. This is a wire that extends from the top of the coil to the top of the distributor cap. When it reaches the top of the distributor cap, the energy travels through a carbon contact – a brush – that is running against the metal rotor contact. The energy travels along this contact and then jumps a first gap to reach a contact on the distributor cap. Then it travels up the spark plug wire, looking for ground. And when it reaches the spark plug, it creates a spark that is hot enough to ignite our fuel mixture.



More importantly, because the position of the rotor cam, the position of the rotor, the position of the points, and the position of the advance are all exactly where they should be, the fuel is ignited precisely on cue so that the explosion can drive the piston down with maximum force on the crankshaft. If any of these adjustments are off, your engine is not running at peak efficiency.

If we think of the old axiom that “Timing is everything” we hopefully now understand that the whole process is called “Timing” for a reason. Showing up early of “fashionably late” in your Rolls-Royce may be acceptable. But the timing OF your Rolls-Royce better be spot on.

### Now on to the Nose Vs. the Tail Argument

As mentioned above, one of the elements of the ignition system that transmits energy (aka spark) is the rotor. In the case of a Rolls-Royce small Horsepower, the rotor is a bakelite piece that is slotted onto the points-actuating cam. Attached to the bakelite rotor are metal conductors. One is a springy copper contact on which the distributor carbon rides. The second is the rotor contact from which a spark will jump to one of the six contacts inside the distributor cap. And it is this contact... the proboscis or tail-shaped contact that has created so much debate! And which this article is intended to settle once and for all.

For many years at the Vintage Garage, we have been advocating fitting this contact as a ‘nose’... in other words with the extended portion pointing in the direction of travel, which is counter-clockwise. This actually runs counter to pictures that are in handbooks and counter to much of the conventional wisdom of Rolls-Roycedom.

The practice (debate?) began, to the author’s knowledge, at a Derby Bentley seminar held in the late 1990’s at Bob Jefferson’s Sports Classics in Mass that included several leading lights of the Rolls-Royce movement. Among the attendees was John Hunt of the Bentley Drivers Club, Bob Jefferson and the author who was at the time VP-Tech, Pre-war of the RROC. During the seminar, John Hunt (who spent much of his career at Lucas and at Rolls-Royce) recommended that the rotor contact be used as a nose, not a tail.

This advice was borne out by several things. One, turning around the contact on the cars present at the seminar, including Martin Kaye’s Derby Bentley made an immediate and noticeable improvement in running and idling. There had been an audible ‘snap’ sound from the distributor as the spark inside the cap was clearly making a big jump.

In addition, examination of the location of ‘spark erosion’ on many caps over the years indicated that it was taking place at the leading edge of the contact. And by turning around the contact and having it act as a nose not a tail, the erosion would move into the center of the contact, indicating that the spark was not occurring at the corner of the rotor, but, in fact, in the center where it could transmit the most energy and had the lowest potential for ‘missing’ the contact or not firing. Pictured with this article are numerous distributor rotors removed from cars over the years showing the erosion, some severe. And, ultimately, the cars simply ran better when the contacts were turned around.

The counter to this argument was that Rolls-Royce literature (including handbooks and factory photos) have always shown the rotor contact positioned on the bakelite rotor as a tail, not a nose. And the additional argument that Royce designed the contact as a tail in order to allow residual sparks that come from the coil when the field collapses to find their way to ground and potentially create additional sparks at the plug.

What was needed was a solution to the argument that could really only be handled one way; by cutting a Rolls-Royce into pieces to find out what was going on inside.



*Distributor rotor contacts -- and the origin of the Nose vs. Tail debate. These show severe wear due to neglect of the distributor. Yet all came off 'running' engines. Though one could say that 'running' is a relative term. Photos: Reid*

Well, ok, not an entire Rolls-Royce. But a distributor mechanism from a Small Horsepower engine had to be sacrificed and turned into a demonstration unit that would let us see exactly when and where timing events were happening in order to settle the argument.

### The Verdict is In!

So with the mantra that “So others may Live” in our thoughts, a surplus distributor was set up on the milling machine at The Vintage Garage and windows were cut and parts were sawn into bits until we could create a working demonstration model of a Small Horsepower distributor. Our demo unit was designed to be set up with a circuit that would turn off a light bulb at the exact moment the breaker points opened (ie. The moment the coil fields would collapse and create spark), allowing us to see the position of the rotor contact. But turning the rotor contact first one way then the other, we could also see where the spark might occur when advanced or retarded (early or late.)

With the points adjusted precisely at .018” as recommended by Rolls-Royce, we could hand-rotate the distributor and compare the positions.



*The Vintage Garage made this cutaway distributor as a demonstration to show the positions of all the parts at the exact moment when the points open, collapsing the field in the coil and making the spark. Everything must work precisely on time if the engine is going to run correctly. Photo: Reid*



*Cutaway governor showing the rotor in position. Each time the red light goes out on our demonstrator cutaway, the spark will 'fire' across the contact an up to the plugs. This lets us see exactly the point at which the points open and where the two contacts are in relationship to each other. For more detail, see the three YouTube videos linked to this article. Photo: Reid*

And the verdict is... It's a tail, not a nose. The Rolls-Royce literature is, indeed, correct and while both positions will run the car, setting up the rotor contact as a tail is the better position.

### All is not what it seems!

This begs the question... so why did cars seem to run so much better with the contacts moved into the 'nose' position?

The answer seems to be two-fold. First, when flipping the contacts over, the contacts in question were often suffering from some level of wear (spark erosion) at one edge. By flipping the contact over, a new surface was ultimately offered up that reduced the air gap between rotor contact and distributor cap contact. That, instantly, creates a better running car. In addition, we never simply 'flipped' the contact. It was always cleaned and, usually, dressed to remove any sharp edges (sparks love sharp edges) and buffed lightly. At the same time, the distributor cap contacts were cleaned. Those small things alone will make a car run better.





*Small horsepower distributor gap being set with .018" feeler gauge. This is in your handbook. The points should be cleaned and reset regularly. Follow handbook recommendations for both mileage AND time. Your car came with a points file in the toolkit for a reason. Photo: Reid*

Second, in delving into why erosion patterns tended to be at the very leading corner of the rotor contacts, the logical explanation is not that the contact was designed wrong, but that these worn examples we see so frequently are the result of poor, intermittent or no maintenance! As points close up (which they do when the rubbing block wears), the timing changes. As the platinum points themselves erode and wear, similarly, the timing changes and the spark can 'hit' on a different point on the contact.

The issue, therefore, is not a faulty design, but is caused by lack of maintenance and regular service to the ignition system!

Properly set up AND maintained, the rotor contact indeed works its best when in the trailing or 'tail' Position. And if improperly maintained, not only won't your engine run correctly, but your ignition will likely fail at an accelerated rate!

### **What's an owner to do?**

First, the ignition system (especially now that you've read this article) should not be a mystery. It is explained well in the handbook and in the Derby Bentley Technical Manual.

But it IS a system that is sensitive and needs regular attention. This includes... making sure your points are adjusted correctly. This is not a 'set and forget' system. It needs to be checked every few months and every few thousand miles. Points and contacts oxidize and corrode, even in cars not being driven. They need to be clean, correctly adjusted and (in the case of the rotor cam) lubricated with a dab of Vaseline now and then. Your car came with a 'Points file' in its toolkit for a reason – to remove oxidation. Further, your plug wires should be in good shape (and the connectors should have their rubber seal washers fitted to keep moisture out). And as mentioned earlier, the ballast resistor should be functioning correctly. Last your sparking plugs should be clean and correctly gapped. And not covered with oil, carbon or other detritus that will prevent good spark.

In addition, a timing light should be used to set timing and confirm that you have everything adjusted right. You have timing marks on your flywheel for a reason. Use them!

These were regular maintenance items that were required on all cars (not just Rolls-Royce and Bentley) until the coming of electronics. And remain critical to the proper running.

So the upshot of all this is that we learned something. We settled a debate. And we did it with engineering. And the biggest thing settled may not be that a 'nose versus a tail' is the magic elixir that makes your car run better. The reality is that there is no magic at all. There is simply proper maintenance of your entire ignition system. Not just the rotor contact.

And with that, the great nose vs. tail debate is over. We may now go back to arguing over whether Silver Ghost Fan blades are supposed to be painted black and who really invented the harmonic balancer.

May there be much rejoicing!

### **YouTube videos to compliment this article:**

<https://youtu.be/DPWpkNKI7wU>

<https://youtu.be/CPyYUx0O4Gg>

[https://youtu.be/FhAwMBro\\_rY](https://youtu.be/FhAwMBro_rY)

## Calendar of Events

2021

- April 25-May 2**      **Phantom I Society YOYO tour in Asheville, NC**  
Goshawk members and their small hp cars are invited to participate in this “You’re On Your Own tour” in western North Carolina. Contact Henry Hensley: [henry1hensley@comcast.net](mailto:henry1hensley@comcast.net)
- May 15**      **New Date**      **Rolls-Royce Foundation 25/30 HP Seminar, Mechanicsburg, PA**  
FULL - CONTACT RRF TO BE PUT ON THE WAIT LIST
- June 23-26**      **Annual Meet, Lake George NY**  
Thursday, June 24 10:30 Goshawk & PI tech meeting, followed by lunch as a group (register on the RROC meet form, order and pay on your own) 30 mile mini-tour to follow (any pre-war RR/B’s welcome)
- June 27-29+**      **Goshawk post meet tour to Saranac Lake and Lake Placid** (all vintage RR/B’s welcome)  
If you want to stay longer in the Adirondack Mountains, join us on a laid back tour of the area. Because of Covid 19 the tour will be simple and flexible - no registrations or fees will be collected and any admission fees or meals will be paid for at the time. Directions and places of interest and restaurants will be provided by email before the meet, then “you’re on your own” to plan your days and enjoy the scenery. We just need to know if you intend to join us so we can project head counts.  
The 115 mile route from Lake George to Saranac Lake departs Sunday morning with an optional stop at the Adirondack Experience, then on through Long Lake and Tupper Lake to Saranac Lake for 2-3 nights.  
We’ll stay at a quaint inn, established in 1923 and fully a renovated as a GREEN vintage-sustainable property a few years ago. It has waterfront accommodations on Lake Flower and is one mile from the city center and 7 miles west from Lake Placid. Canoes, kayaks, paddle boats and bikes are available at the inn, one restaurant is across the street, more are 1 mile away in town. There are picnic tables and grills by the lake to make our own meals. The inn will take reservations with a credit card (not charged until we arrive). There’s a 72 hour cancellation policy.  
Day trips on Monday & Tuesday include driving to and up Whiteface Mountain, visiting Lake Placid - Olympic Museum, Olympic Center tour, Ski & Jump complex, John Brown’s Farm, Uihlein Sugar Maple Research field station, and a visit to the Wild Center. Those needing to return to Lake George for their trailers can take Rt 9N.  
**For booking information at the inn, contact Mary White, [mcwhite@triad.rr.com](mailto:mcwhite@triad.rr.com)**
- September 10-12**      2021 British Invasion & RROC Mini Meet in Stowe VT, Mike Gaetano
- September 20-26**      RROC National Fall tour Saugatuck/Douglas, MI, James Tamblyn

2022

Plans are already underway to **Celebrate the “100th Anniversary of the 20 HP.”** The Goshawk Society plans to offer special events in conjunction with the RROC Meet in San Diego June 21-24. We’ll also host either a Goshawk or vintage tour (5 day hub) on the east coast in fall, probably in North Carolina. Everyone is encouraged to get their small horse power RR’s ready for the road to participate in either events. To help in the planning, let Mary White know if you’re interested in the fall east coast tour as soon as possible.