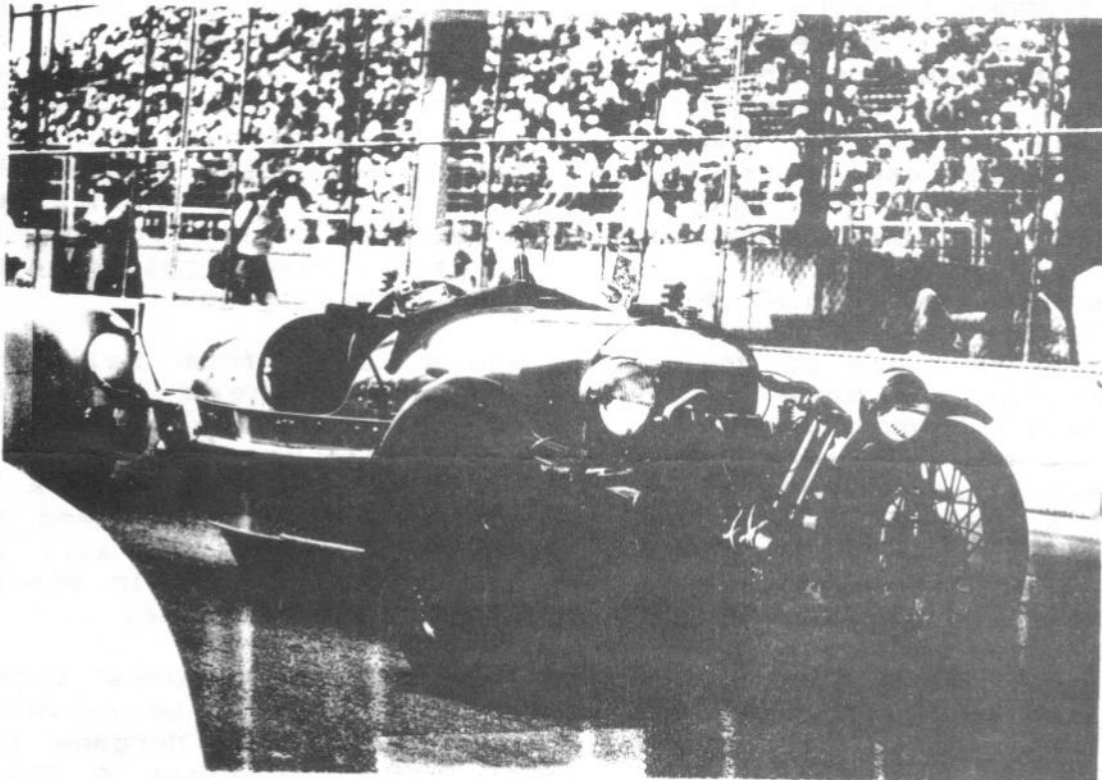




THE PRICE LESS **BLURB**



MAY/JUNE 1990



June 30- MORGAN OWNERS GATHERING (MOG) 20
July 4 Martinsburg, West Virginia
 Sheraton Martinsburg Inn, I-81, Exit 13
July 16-31 MOA WESTERN ADVENTURE
 Cambria CA to Washington DC
Aug 3-5 MOA LURAY
 Mimslyn Hotel, Luray VA
Aug 6 MOA NOGGIN & NATTER
 Canterbury Hotel, DC
Aug 7-8 MOA PA
 Eastern PA
Aug 8-9 3/4 MOA
 Hudson Valley & Watkins Glen NY
Aug 10-12 MOA NIAGARA 90
 Niagara Falls, ON

Alan Marsh
(202) 667-6970
(304) 267-5500
Stephen Roake
(415) 864-3863
Mark Braunstein
(703) 339-5244
Don White
(703) 521-4698
Bill Lowenberg
(215) 482-7599
Bill Lowenberg

Audrey Beer
(416) 857-3210

THE PREZ SEZ!

11 June 90

BOY DID I GOOF: Luckily its not too late. I have not published the map for those who have never been to Niagara to find the Motel; For the regulars its the same Motel, different name, now the Comfort Inn. (3rd name change)

All preparation for M.O.A. & Niagara '90 are well in hand. To date, at the close of the room bookings we have 57 deposits paid & 5 who phoned & promised the deposit would be in the mail, these were from California & Denmark.

This closes out the available rooms at the Comfort Inn. if any more are thinking of joining us & need accommodation we will have to arrange it elsewhere.

NOW I NEED YOUR AID PLEASE: IN ORDER TO CUT DOWN ON THE WORK HOURS BY YOUR VOLUNTEER MEMBERS IT WOULD BE A GREAT HELP IF YOU WOULD SEND IN YOUR REGISTRATION WITH HOW MANY FOR THE SUNDAY DINNER NOW:

Early bookings give our work crew less hassle as the weekend nears, plus give the Restaurant a chance to ensure they have plenty of food & tables set aside for us. This would also prevent any frustrated diners looking for a seat. Please help me avoid last minute chaos

Steve Roake from California asked if there were any Canadians wishing to join the drive ~~at Detroit down to~~ Virginia & back to Niagara? I promised I would extend his invitation to you all, any interested can obtain Steve's phone number from me.

This certainly looks like a weekend never to be repeated, the assembly of Morgans from so many countries & States will never be repeated again in Canada. I know those who will have driven all the way across the US will be most interesting to talk to. so bring your camera's & join the fun.

Audrey Beer.

EDITORIAL

Ah, spring! At last it is truly here (well, sometimes it is). We've been fortunate so far in the lovely days that have greeted our events. It certainly puts a damper on things (pardon the pun) when you're wiping the rain from your brow that's managed to creep in between the top of the windshield and the convertible top as well as around it.

With only a couple of months until MOA Niagara '90, things are in fully swing and the events planned seem to be getting bigger and better as each day goes by.

Our next informal get together will be the Classics Against Cancer Auto Show in Georgetown (see pages supplied by Ray Shier), then the VARAC Vintage Racing Festival in July (see separate page), and as no one has suggested anything for June or July as a club function, I guess our next formal meet will be Niagara. So get out your tyre-kicker boots and family photos (car pics too) and bring 'em along. Get ready to meet some people, spin some yarns and have fun. See you there! See also the reminder for Arnprior after Peter George's article.

EVENT REPORTS

ANCASTER April 22/90 THANK HEAVEN FOR SPRING.

The forecast kept changing as it is wont to do in spring, near the Great Lakes, on a Morgan day. However when we arose it was bright and sunny and dare I say it - warm. Packed up the car, donned our leather jackets and departed. The highways and bi-ways along our journey were speckled with British cars, an E-Type here, a TR6 there, all basking in this lovely first outing for most. It was a little foggy at the top of Hamilton mountain, but half an hour after arriving at the hall, it had cleared and was again the glorious weather we have come to expect for the British Sports Car Flea Market. I had to help out our store and put in a bit of work at our booth, so I left Steve to view the masses of parts. Fortunately at the moment my car is not in need of much (touch wood quick), except for some darn fine bodywork and paint, as all of Steve's purchases were for the racer. I took a break for lunch to walk around and survey the cars - there were lots of fine examples and some not so fine, and lots of people. Went back into the hall to finish up at the booth and decided to make tracks for home. The hall was emptying and many were leaving, their pockets empty and cars full of their purchases. Some club members went on for a pub lunch - it was another fine day, an opportunity to blast out the cobwebs and see our warm weather friends again. Thank heaven for spring!

MILLCROFT INN May 26/90

John's threat seemed to work - people actually RSVP'd, the organizers were able to plan accordingly, and what a lovely meet it was! The first stage, getting to the Fifth Wheel took its toll. Reports were flooding in that "there's a couple of cars just like these at the side of the 401". We figured as long as there were a couple, at least one had to be a runner, so we'd just wait. Finally everyone arrived after righting various wrongs (we'll not get into it here) and after brief pit stops, we made our way to our cars and set off. There were 9 cars at the Fifth Wheel, 3 new ones, belonging to new members, Vern and Amanda Dale-Johnson; Lynn Kuzak and her friend; and Eckhard

Siemsgluess. John led us on a lovely tour through the Halton and Caledon Hills, the weather cooperated and the views and villages we passed through were quite pretty. We reached the Millcroft Inn in Alton a little dusty and very hungry, and without too great a delay found the way to our table after tidying ourselves up. At the Inn we met up with Alastair and Maureen and later the McDonalds. We relaxed over some great food and got to know our new friends and no doubt bored them to tears with our old car stories. Finally as the afternoon got closer to evening, we all departed and made our respective ways home. Many thanks again, John, for a lovely event. There was talk of doing something similar next spring. Start thinking people, of your favourite drive in the country and maybe we could try it - we've got a whole year.

THE FACTORY

P. George

It had been my intention to recount the yarn of Duplicity at Breslau today. Duplicity at Breslau was to be the narrative that would expose the mystery that has shrouded the facts of a car that could not remain stolen. But, alas, this tale will have to wait for another time. A recent trip to England has changed my plans. Today's offering will be a short recollection of my tour of the Morgan factory. A visit to Malvern is a must for any Moggineer going to England. Malvern is just south of Worcester and is on the west side of the M5 between Birmingham and Bristol. The town of Malvern is just like any other small English countryside town. Life goes on at a unhurried pace and you get the feeling of contentment when you look around.

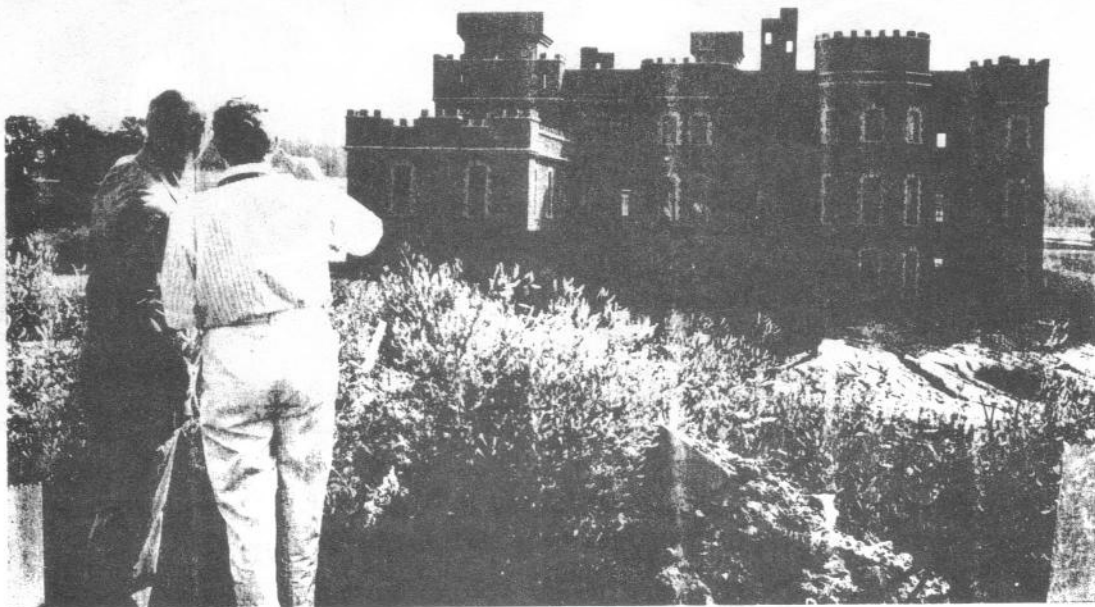
The outside appearance of the Plant is deceptive. Everything looks normal and within keeping of the surroundings except for the sign at the main gate which in several different languages instructs visitors to report to the Main Reception.

The reception area is a record to the Morgan racing triumphs and in its own right is a step back into history. (It is not my intention to describe each detail to a minute degree but rather only to whet your appetite. In my opinion, touring the factory should be a personal experience.)

From the reception area you go through Stores to the Despatch Bay. It was in the Despatch Bay that I saw a Company Director participating in the Final Inspection of a car prior to shipment. In the sheet metal shop a craftsman was rebuilding the body of a 1948 Drophead Coupe. After a brief introduction he spent quite a few minutes answering my question "What body modifications are necessary to install wire wheels." I wandered on and eventually arrived at the machine shop. And I must say "It was a hub of activity". Next I moved on to the Upholstery Shop. Here you could feel the sense of pride, accomplishment and self-satisfaction.

I could go on and mention that I spent several minutes watching a hood being formed or I could detail how a painter was taking great pains to ensure that the preparatory ground coat was ready for the next covering. And naturally, I should spend a phrase or two on the various assembly stages that I saw. This I will not do, but rather leave them for you to see on your visit to Malvern. I returned to Reception at the end of my wanderings to buy a few gifts and Mr. Morgan autographed the book for my daughter.

Once again I would like to mention the Canada Day Celebrations 1st July at the Robert Simpson Park (on the Ottawa River), Arnprior. It is a fun day. The celebrations start with a parade that goes through the downtown area and ends at the park. At the park there is a car show, awards ceremonies and day long entertainment. (Maybe this year there will even be a British Car category.) And one can't forget the fireworks display after dark. If you'd like to come and need further information phone me Peter George at 1-613-832-3620. Hope to see you there and do have a good day.

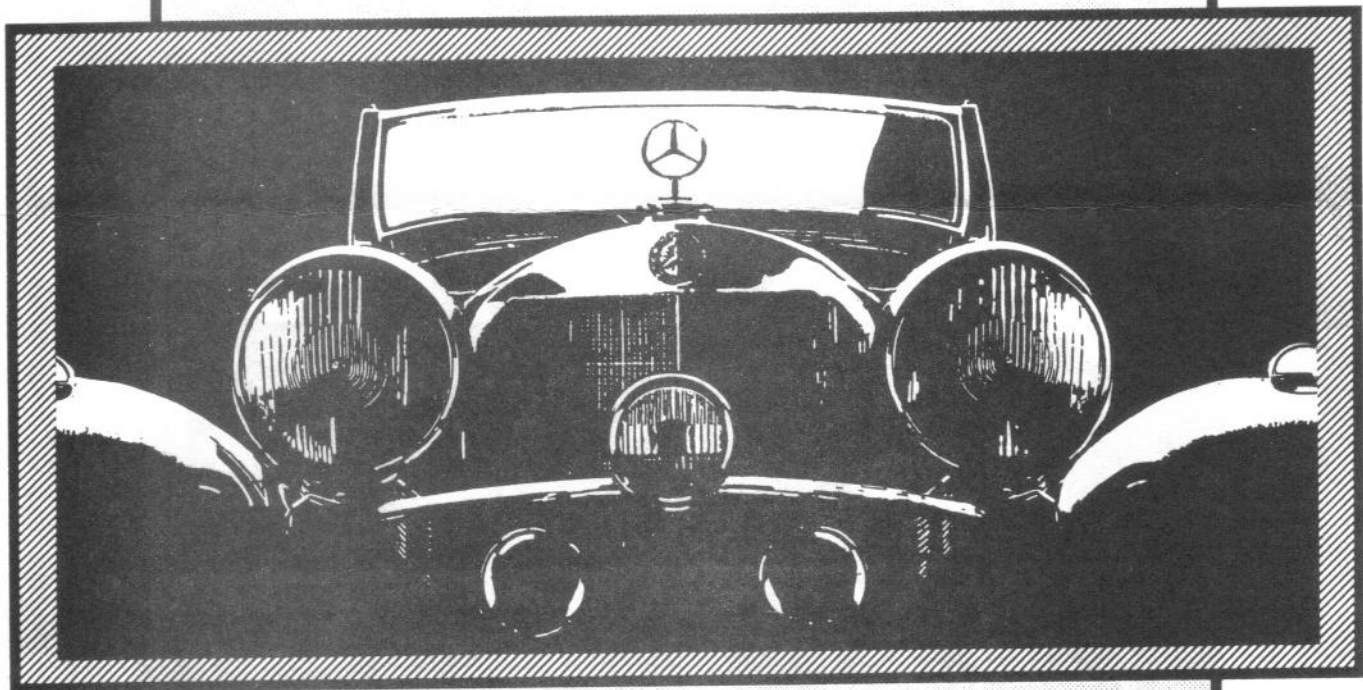


We all know that there have been rumors about a possible move by the BEER's.
Are they given this one up for sale
some serious consideration ???

The
CANADIAN CANCER SOCIETY
is pleased to present

**THE THIRD ANNUAL
Classics Against Cancer**

AUTO SHOW



Sunday, June 17, 1990
Cedarvale Park, in Georgetown



open to any
road or race
vehicle built
in 1970 or
earlier:

Antique &
Classic
Modern Exotic
Race Cars
Kit Cars
Modified Cars

To Acton

Show Schedule

Registration opens	7:30 AM
Judging begins	9:00 AM
Registration closes	10:00 AM
Gates open to the public	11:00 AM
Awards presentation	4:00 PM

GEORGETOWN

Winston Churchill Blvd

Guelph Street (Hwy 7)

Maple Avenue

CEDARVALE PARK

Trafalgar Road to 401

Main Street

to 401

to Brampton

FEATURES

- Live Musical Entertainment
- Free Continental Breakfast
- Dash Plaques
- Goody Bag
- People's Choice Award
- Photos of your Vehicle

GENERAL

This event is presented by
 The Halton Hills Unit of the Canadian Cancer Society

With the great assistance of
 The Town of Halton Hills
 Provincial Papers
 Halton Rapid Print
 The Historical Automobile Society of Canada

and many other enthusiasts and organizations associated with Halton Hills

Entry Fees (Donations)

- * Pre-entry - \$20 per vehicle with registration form received or postmarked up to and including Friday, May 18, 1990.
- * Entry fee - \$25 per vehicle with registration form received or postmarked after May 18, 1990 and up to show day, Sunday, June 17, 1990.
- * Multiple car discount - \$5 per car after the first vehicle
- * Entry fee includes admission for driver and one passenger

CANADIAN CANCER SOCIETY
SOCIÉTÉ CANADIENNE DU CANCER

Mr Ron Johnson
 RR 1 Limehouse
 Ontario L0P 1H0
 (416) 877-4394

Yes, I wish to exhibit in the CLASSICS AGAINST CANCER AUTO SHOW

Please reserve space for _____ vehicles (number of vehicles)

My cheque/money order for _____ (payable to the Canadian Cancer Society) is enclosed.

Name _____

Address _____

City _____ Postal Code _____

Phone (res) _____ (bus) _____

Sponsor(if applicable) _____

Club(s) affiliation _____

Make _____ Model _____ Year _____ Class _____

Do you wish your vehicle to be judged? Yes _____ No _____

Points of Interest _____

Please send an entry form to: _____ who is also interested in displaying their vehicle

EXPERIENCE TIME TRAVEL

25-35 years ago, our cars were the cars you owned, or dreamed of owning. They were the cars you drove or watched at Mosport, Harewood, Watkins Glen or even Brands Hatch.

These cars were your past. They can be your present once again!

VARAC is dedicated to preserving, restoring and racing the cars we all grew-up with.

Lotus, MG, Cooper, Jaguar, Triumph, Austin-Healey and all the rest. Some names may be gone, but we're making sure the cars are still here for everyone to enjoy. It's what they were made for.

Since 1976, VARAC, the Vintage Automobile Racing Assoc. of Canada, has helped keep the spirit of 1950's and 60's club racing alive in Canada. And it's not only alive, it's become the fastest growing segment of motorsport.

This summer the 12th Annual VARAC International Vintage Racing Festival will be held at Shannonville Motorsport Park July 6, 7 & 8.

Last year, over 150 Vintage race cars competed, now it's your chance to find out why Vintage Racing has grown so. If you love real, competitive racing this is the place and event for you.

Cars you can recognize, drivers you can see, machines that aren't "on rails". Maybe even one just like your car. Three full days of racing activities for all classes, including our new Classic Sedan series featuring original Mini Coopers and Lotus Cortinas all staged on the improved Shannonville circuit.

At this year's event, the Vintage Grand Prix of Canada Cup will be awarded to the winner of one of the six race classes and the competition will be fierce.

Mark your calendars now, make plans to attend or race



(check with us concerning requirements for both your car and you). Don't miss being a part of the fun at North America's fastest growing Vintage Race.

For general information:

Mike Rosen

745 Queen Street East, Toronto, Ontario, Canada M4M 1H3

phone: (416) 469-5599

Fax: (416) 469-1622

For entry information write:

Entry Clerk, Diana Lamont

289 Eglinton Avenue East, Toronto, Ontario, Canada M4P 1L3

phone: (416)484-1533

Fax: (416)484-4503

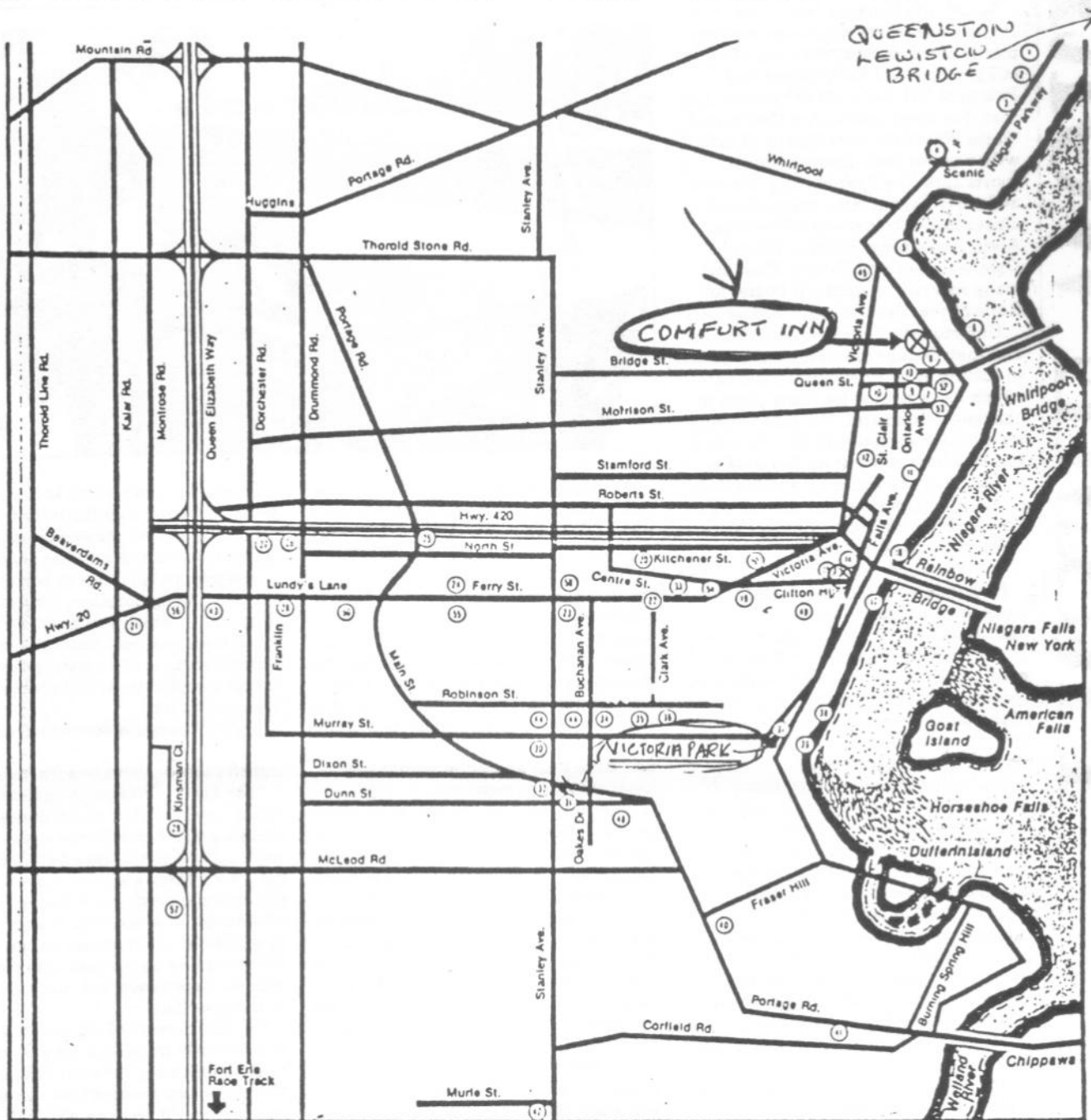
**SHANNONVILLE
MOTORSPORT PARK
JULY 6, 7, 8, 1990**



**SEE VINTAGE RACING
THIS SUMMER AT A
TRACK NEAR YOU!**

April 28/29	Mosport
May 12/13	Mosport
June 9/10	Mosport
June 21/24	Mid Ohio
July 6, 7, 8	Shannonville- VARAC
July 28/29	Mosport
Aug. 3,4,5	Waterford Hills Michigan

Aug. 24,25,26	Gratten Michigan
Aug. 30-Sept.3	Lime Rock Connecticut
Sept. 7,8,9	Watkins Glen N.Y.
Sept. 22/23	Mosport
Sept. 28,29,30	St. Jovite



Niagara Falls Canada Map

- 31 Bus Terminal
- 8 CNR Station
- 33 Casa D'oro
- 23 Capri Restaurant
- 28 Calrn Croft Motor Hotel
- 9 City Hall & Provincial Court House
- 55 Continental Inn
- 58 Dansk Factory Outlet
- 38 Double Deck Tours
- 52 Downtown Shopping
- 21 El Rancho
- 2 Floral Clock
- 6 Great Gorge Trip
- 50 Lundy's Lane
- 25 Greater Niagara General Hospital H
- 30 Happy Wanderer Restaurant

- 34 Holiday Inn by the Falls
- 22 Hungarlan Tavern Restaurant
- 24 Inn on the Hill
- 27 Jack Bell Arena A
- 12 Jade Garden Restaurant
- 17 Maid of the Mist
- 14 Maple Leaf Village
- 41 Marlaneland
- 11 Michael's Inn
- 20 Niagara Falls Arena A
- 18 Niagara Falls Museum
- 29 Niagara Go-Karts
- 13 Niagara Falls Canada Visitor & Convention Bureau
- 57 Niagara Square
- 53 Niagara Transit
- 40 Oak Hall Par 3 Golf Course
- 42 Oneida Silversmiths Factory Outlet
- 45 Pan Air Helicopters
- 48 Panasonic Centre
- 51 Mama Mia's
- 7 Police Station

- 32 President Motor Inn
- 35 Pyramid Place
- 1 Queenston Heights Restaurant
- 19 Ripley's Believe It Or Not
- 3 School of Horticulture
- 14 Sheraton Hotels
- 14 Shirt Shop
- 36 Skylon
- 5 Spanish Aero Car
- 26 Stamford Arena A
- 14-36-49 Souvenir Photos
- 14 Suisha Gardens
- 14 Swiss Fudge
- 39 Table Rock Restaurant
- 39 Table Rock Scenic Tunnels
- 54 Turf 'n Surf
- 15 Tussaud's Wax Museum
- 37 Victoria Park Restaurant
- 4 Whirlpool Golf Course
- 56 White Water Slide
- 43 Ye Olde Barn Restaurant
- 44 Your Host

FRAMEWORK

CARS with wooden body frames are often dismissed as obsolete – but that's not at all true. As the Nineties begin, the only British manufacturers to use wooden frames for their bodywork are Morgan (all models), and Rolls-Royce (the Phantom VI), but it wasn't always like that. For many years after the Second World War there were dozens of cars with wooden body frames: popular sports cars like T-series MGs, Morgans and early Jaguar XKs, many middle-class models from marques such as Alvis, Armstrong-Siddeley, Bristol, Daimler, Riley and Vanden Plas, and many specially coachbuilt bodies for Rolls-Royce, Bentley and Daimler cars.

Unfortunately, wooden body frames and their fixings are notoriously prone to rotting away, especially in old cars which lie neglected for many years in changeable climates. For that reason, we went along to see Melvyn Rutter in Essex, whose restoration business is always tackling frame reconstructions (mostly for Morgans, but sometimes for T-series MGs and other types), to see what the private owner can do – or should try to do – for himself.

Melvyn's business – selling Morgan parts by mail order – started in Wanstead in 1976, but in 1982 he moved to a garage in Essex. Since then the garage has been modernised, body frame reconstruction became an integral part of the business, and other Morgan specialists now send their framing problems to him to solve.

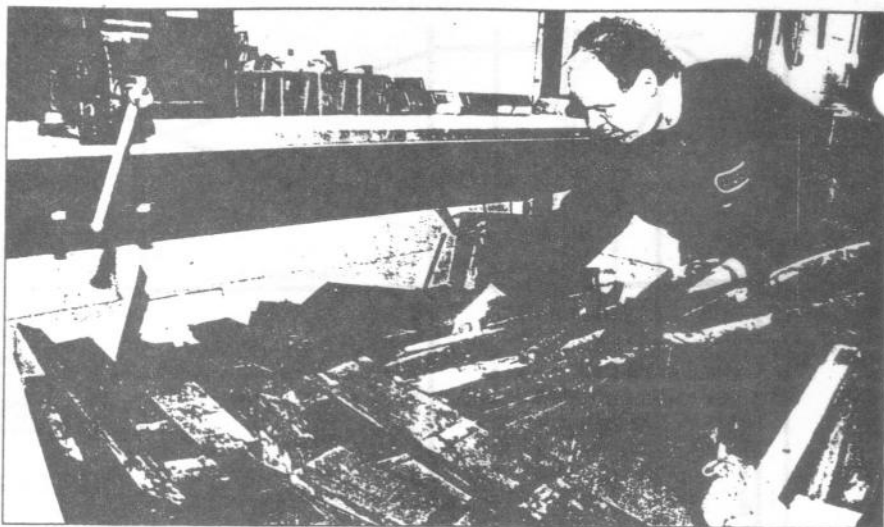
Beginning the major restoration of woodwork isn't easy. In some cases no drawings of wooden sections were ever produced, and in almost every case the drawings which *were* produced have disappeared. Sections rarely had separate part numbers and were certainly not stocked against spare parts requirements. In almost every case the patterns needed to produce replica sections have been junked. Except at Morgan (where the waiting list is extremely long), factory rebuild facilities no longer exist.

How should the private owner assess what needs to be done?

"One of the easiest ways is to look at the door posts, where hinges and doors (particularly on big limousines) put heavy loads on the frame. Partly open the door, use the handle to try to wag it up and down, and see if the pillar moves around. That's the area which takes the most hammering; it gives a good idea of what the rest of the body may be like.

"In many cases body frames weren't treated by preservative compounds like Cuprinol, which means that when they got wet they began to rot away. Dry climates like California (even cold, dry climates) are kindest to wood frames, but humid climates eventually cause them to crumble away. The enemies are water, humidity, salt, and anything which is thrown up from the roads. Infestation by insects is sometimes a problem too. In many cases the frames were ruthlessly built down to a price and as a result they didn't last very long."

A visit to Morgan specialist, Melvyn Rutter, to see what's involved in restoring wooden-framed Classics



Most body frames were, and still are, built from ash, a wood which was chosen generations ago because of its flexibility. Restorers still use ash and it seems to work well; there is little advantage in using other woods (oak, mahogany or whatever) because they are not as versatile. It's important to realise that construction methods vary from marque to marque. Morgans, for instance, have wooden rear wheel arches, T-series MGs have steel ones, and in post-war years the upper-class coachbuilders used more and more steel and alloy sections as inner structural members.

Except in the case of modern Morgans and Rolls-Royces, the enthusiast should assume that spare parts or sections no longer exist. Therefore, before rebuilding commences, the enthusiast should first of all find out if remanufactured 'pattern' parts exist for his particular car – MG T-series frames from Naylor Brothers are a good case in point. Complete body frames or, in almost every case, sections or 'corners' are available, and in most cases these will still need individual fitting before reassembly can begin. Every one-make club, where appropriate, will know about these. In round figures, a complete roadster wood frame for a Fifties or Sixties British two-seater costs around £1,500, but one-off jobs could cost a great deal more.

Unless one is a fanatic for originality, it is much more satisfactory and a lot cheaper to fit new pattern parts than to try to restore what you already have, or to be stubborn and try to make your own new pieces. Remember that fitting, adjusting, and detail alterations can and should take up as much time as actually making the pieces themselves.

The only other way to start a rebuild, however, is to have the 'wreckage' copied and made good:

"That's the only way – and you *must* have something to work to," Melvyn confirmed. "With the typically coachbuilt one-off, two-off or five-off bodies, there will be no other remaining record of any type, so your own worn-out body is vital."

If you buy a car which is in such an awful condition that the body frame cannot be copied, the one remaining option is to lean on another enthusiast's generosity and arrange to borrow his car for copying purposes. This may be the point at which you hand over the job to a professional restorer – but don't expect him to quote a fixed price for the job, as complications and problems will always crop up.

If a DIY owner is something of a woodworking expert at home, can he transfer those talents to a frame rebuild?

"No, I don't think so. A cabinet-maker could cope, I'm sure, but otherwise there's a world of difference between work around the house and work on a car frame; there's a lot of three-dimensional stuff, and working to tiny tolerances, in a car body. Even the way in which the wood should be cut – using the grain flow to the best advantage – is special. Experience, not just expertise, is all-important."

The full horrors of old age in a wooden body frame can only be exposed by stripping away the skin panels; Murphy's Law ensures that the most badly corroded sections will be hidden by steel, other wood, glass, trim or carpets:

"All the trim has to come out, straight away. All the seats, carpets, trim panels, hood mechanism, everything. It's only then that the truth is exposed."

Irrespective of how good your memory is, you must not rely on that to tell you how to put the frame back together again. Before and during the dismantling of the frame itself, be sure to take lots of photographs to help in reconstructing it.

If the frame is reasonably sound, it will also be valuable if you take a lot of measurements – door sizes, overall widths, cockpit lengths and, in particular, diagonals – and make sketches of the way joints go together. In most cases the joints have been made in such a way because that is the simplest and most efficient method; why try to change what experts have found to be



***“The golden rule is:
if in doubt, cut it
out”***

most satisfactory? Incidentally, it rarely pays to substitute steel floors for wooden floors, which seem to last remarkably well. Try not to alter the design at rebuild time – you may make new problems for yourself in later years.

If the body looks as if it will fall apart before you can take it apart, make hardboard templates of certain areas at this point. They will be invaluable when the time for reassembly comes around.

This is the point at which you must assess what is worth keeping and what has to be renewed. How do the doors close? Does the body sit squarely on the chassis? Is the surviving framing still fit for purpose?

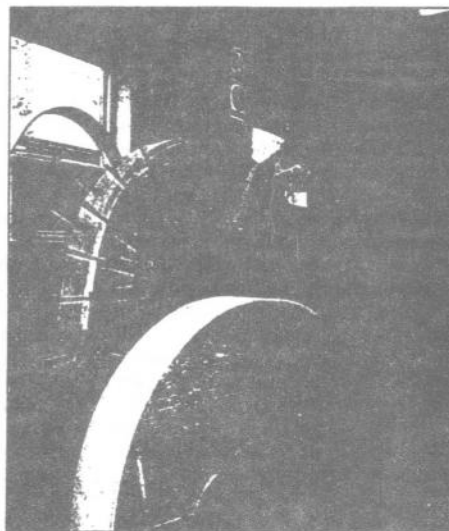
Should you leave the frame on the chassis as its own jig? Only if you are going in for partial renewal – but if a completely new frame is needed then there is little point. It is much more important that you should have a

completely flat workshop floor instead.

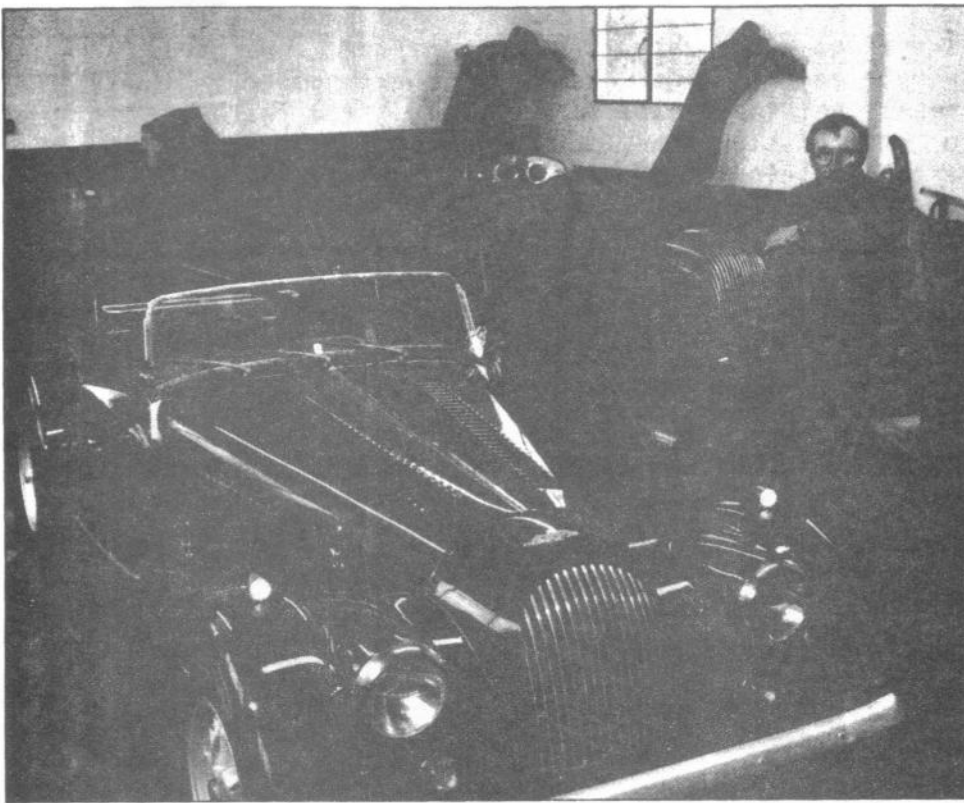
In many cases (and sometimes for no logical reason) restoration and renewal is only needed on one corner, or in one area. In that case the body can be left on the chassis, but of course individual sections will still have to be copied, line for line and curve for curve. How far should you go to preserve what's left? Be logical, but the golden rule is: “If in doubt, cut it out.”

When the job is complete (and even if there was no sign of preservative in the frame when you started work), spend a lot of time and money on applying preservative to the finished frame, and then on using household primers and paint to seal the members. Pay special attention to the joints and exposed edges, and use the highest-quality modern adhesives. Use high-quality fixings and screws, and plate the various brackets as well. Use a mastic sealant around panel edges, to stop water seeping into the wood in future. It will not stop the rot for ever, but it will ensure that the next rebuild is pushed back by many more years. **A**

Opposite, it is important to keep the old body parts to copy. Above, ‘pattern’ parts may exist and these are often cheaper and more satisfactory to fit



Some of the body shaping can be quite complicated and may be beyond the capabilities of a DIY enthusiast



Worcester SORCERY

Morgans have a reputation for premature disintegration, and their restoration demands skill. John Worrall, an expert in the Worcestershire marque, distills his wisdom for Liz Turner. Photos: Julian Mackie

A Morgan's construction is so very simple – yet the car is quite fiendish to maintain and restore. It has a steel chassis, an ash frame, and a steel body (sometimes with ally panels) tacked on with panel pins. So Morgans suffer from rust and wet rot, and no two are the same. And although most parts are available, anything on the bodywork will have to be cut and adapted to fit.

John Worrall adores Morgans. He is the chairman of the Morgan Sports Car Club, and, with his wife Jean, spends most of his life restoring 'Mogs' to concours prize-winning standards and driving them all over Europe to shows and club events.

Worrall originally trained as a chemist and worked for Beechams and ICI, but the lure of the Mog got too much for him. So, four years ago, he gave up the security of his job to set up Heart of England Morgans at Halesowen, in partnership with Mike Duncan, and so far he has no regrets.

Over the years he has restored more than half a dozen Morgans, including a 1936 Series One, a 1964 Plus Four Super Sports, and two 1970s Plus Eights.

PRICES

Rare Morgans are now beginning to make serious money. When we spoke to him, Worrall had just acquired a rare and very beautiful 1955 drophead coupé potentially worth about £40,000, and if you are lucky enough to find an early Super Sports, you're looking at £55,000.

A late seventies model in reasonable condition might only fetch £8000-£9000, but you should be very careful when deciding how much you want to spend. Morgans were built to a budget, and in comparison with other production sportscars their build quality is poor. Before a shake-up at the end of 1986, neither the chassis nor the wood frame were given any treatment against the ravages of wind, weather and water.

So, if you try to save money by buying a cheap car, you could land yourself with a lot of problems.

That said, few enough Morgans were made that every one is worth saving. Morgan have never made many more than 400 four-wheelers a year and they

have traditionally exported at least 60 per cent of that production, which means that fewer than 12,000 cars have made it onto the UK market.

Morgans have one major advantage over most other classic cars in that the factory which made them is still in existence and still makes the cars in just the same way, using many of the same agents – and it still produces batches of old-style parts.

Now, as always, each car produced has a ticket listing the customer's individual specifications. And, as each car is tested, given a chassis number and driven away, its details are entered in a ledger and kept. So no matter what state your car is in, if you have the chassis number, you can call the factory and look up exactly what equipment, what engine and even what paint that car originally had.

CHASSIS

To check the condition of your chassis, just tap along it with a screwdriver. A different note, or a dull thump, indicates rust, or a plate welded into it. "I think you can put a whole new side or crossmember on a chassis," says Worrall. "You could get one made. But you shouldn't plate an existing length."

If you are considering a major rebuild he would strongly recommend a new chassis from the factory. "After all, it is the whole basis of the car and it only costs around £300, or £450 if you get the front cross-frame jugged in by the factory – which I would recommend, to ensure it all aligns properly."

Galvanising is offered as an option, but Worrall disapproves. "Galvanising is basically plating, and with a chassis which is going to flex the way a Morgan chassis will, the plating will eventually crack. Plus, if you have it galvanised and then start drilling holes in it, what's the point?"

Instead he recommends having the chassis shot-blasted and metalised. (He uses Greville Hardfacing of Redditch, or Redditch Shotblasting, and pays around £150). In this process aluminium or zinc wire is heated until it is molten, and then passed through an atomising head and sprayed onto the metal, so the spray of tiny particles seize onto it, forming a dense corrosion-resistant coating.

This process is more usually seen on exhaust manifolds and the finish is quite rough, so it will need some rubbing down. If you just want to use the car every day Worrall recommends rubbing it down a little and spraying it with an epoxy-powder coating. But if you're aiming for concours standards, it can be flatted down and sprayed with black enamel.

As for painting it with Hammerite, Worrall shudders at the very suggestion. "It's too brittle, and it pinholes, so moisture can still get through, particularly if you don't use primer. A lot of it is down to how it's applied, but it's so difficult to get right."

To try to protect the chassis a little further he drills a couple of holes in each of the crossmembers and fills them with Waxoyl.

"I've seen them rot out so often, and Waxoyl is very good for this application, but that's the only place I would put Waxoyl. A lot of people put it under the wings as well, and I'm sure it does the job, but it's sticky and attracts a lot of dirt. I prefer a good stone-chip paint for the underneath."

ASH FRAME

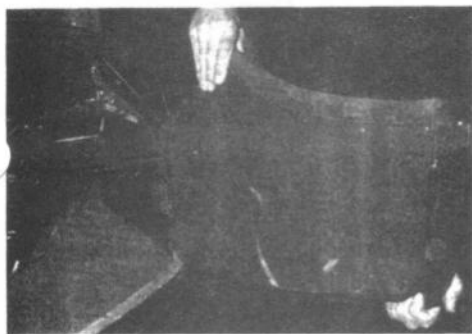
Starting with the bad news, John Worrall says that he has seen Morgans with rotten frameworks at four years old, although he has also come across cars with perfect timbers at 20 years.

"It all depends on how a car has been used and where it has been kept. If it has been subjected to water and not dried off properly, it will certainly be rotten by the time it's ten years old."

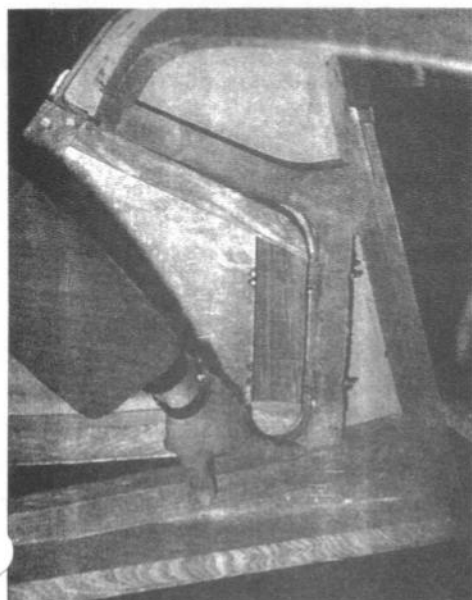
Rot is easy to spot if you can see the wood. If the end of a section looks 'nibbled', or if you can press your fingernail into the wood, then it is rotten. Unfortunately most of the wood is covered by trim or by body panels.



Inadequate rust protection means a rebuild almost always starts with a new chassis



Rotten wood may be covered by trim, but lifting the door will test the hinge pillar



One of the worst areas for wet rot is in the door frames and the sill board

The worst areas for rot are those where water gets in, which is around the base of the wheelarches, along the sill-board, and around the doors. If you open the door and lift it up, watch the hinge pillar: if it tries to twist or move with the door, then the wood behind it will be rotten. If the sill board is rotten it may start bending and distort the body, so beware if the doors are difficult to shut. (If it's not the sill board, it could be a cracked chassis.)

If there is any sort of rot in a piece of wood, that whole piece must be replaced. Cutting out and replacing a lump won't help, as the rot will still be there, working its way along the older piece.

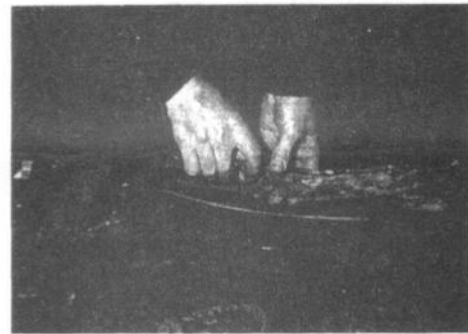
The timber itself is cheap to buy, and you can buy it in cut sections, but getting it into place means taking the car to bits - which is either time-consuming or costly.

If you do need sections or a whole new body frame, there are several suppliers, but it is vital to get the frame made up to the right pattern, as the profile of the car has changed substantially over the years.

The factory can do you a frame for £632+ VAT (for a late model Plus Eight) but with a wait of up to one or two years. However Worrall also recommends specialists Black Phey.

"Their body frames are absolutely superb. They are more expensive than the factory ones, but are slightly better quality. They'll sell you smaller parts too if you want." Price is £1200+ VAT for a two-seater frame.

Any new wood should be soaked in Cuprinol. Worrall usually brushes it on until the wood won't take any more and then leaves it to dry for two to



Panels and metal trim are simply tacked onto the frame using panel pins, which also rust



Worrall suggests replacing rusty nuts and bolts with stainless steel equivalents

three weeks. "Once it has dried, I paint it with yacht paint - if it's good enough to withstand the sea it's going to be good enough for a Morgan!"

In between the wood and the panels is a felt damp-course, but water can still seep down through the holes around the fastenings. So the Morgan factory now also applies a layer of mastic. This is a better sealant, as it will squeeze right up to the nuts and bolts.

BODY

The steel body rusts with the same application that the wood rots. One place to check before you buy is the tool-box, which collects water coming in beneath the back of the bonnet. Once the tool-box has rusted, the water can get down beneath it to rust out the back of the bulkhead. (The bulkhead is one area that should be saved, if possible, by welding in a new section, as it is so difficult to put in a whole new bulkhead.)

The inner wings are also prone to rust, as a result of water getting in under the bonnet. However, there's no strict pattern of corrosion and you only find out how much metal you've got under there when you remove the paint.

Sandblasting will ripple body panels, so Worrall prefers to take the bonnet, cowl and wings along to a metal reclamation specialist and have them dipped in caustic vats; he uses Fast Strip of Wednesbury.

"This process doesn't cause any damage, but it takes off all the paint, corrosion and filler, and the average charge for stripping out a Morgan is about £120. The rest of the paint can be scraped off carefully with Nitromors."

If you need new panels or even an entire new body, you can buy them in steel or in aluminium. A late Plus Eight body costs £983 in steel and £1031 in alloy. A front wing costs £241.50, or £373 in alloy, while a rear wing costs £54 or £92 in alloy; all prices exclude VAT.

Some people prefer aluminium because it's lighter and can't rust, but Worrall doesn't like aluminium wings: "Aluminium cracks, and flexes, and stones thrown up beneath the wings cause dents, which show right through."

"Another point is that the wings are held in shape and strengthened by a flange rolled around steel wire, so you can get electrolysis between the steel and the aluminium and the metal will start to bubble and rot out. But if the car originally had aluminium wings, for example if it was a competition car, then it should have them."

Glass-fibre wings are also available, and are a good idea if you want to go circuit racing, as they are light and easy to replace.

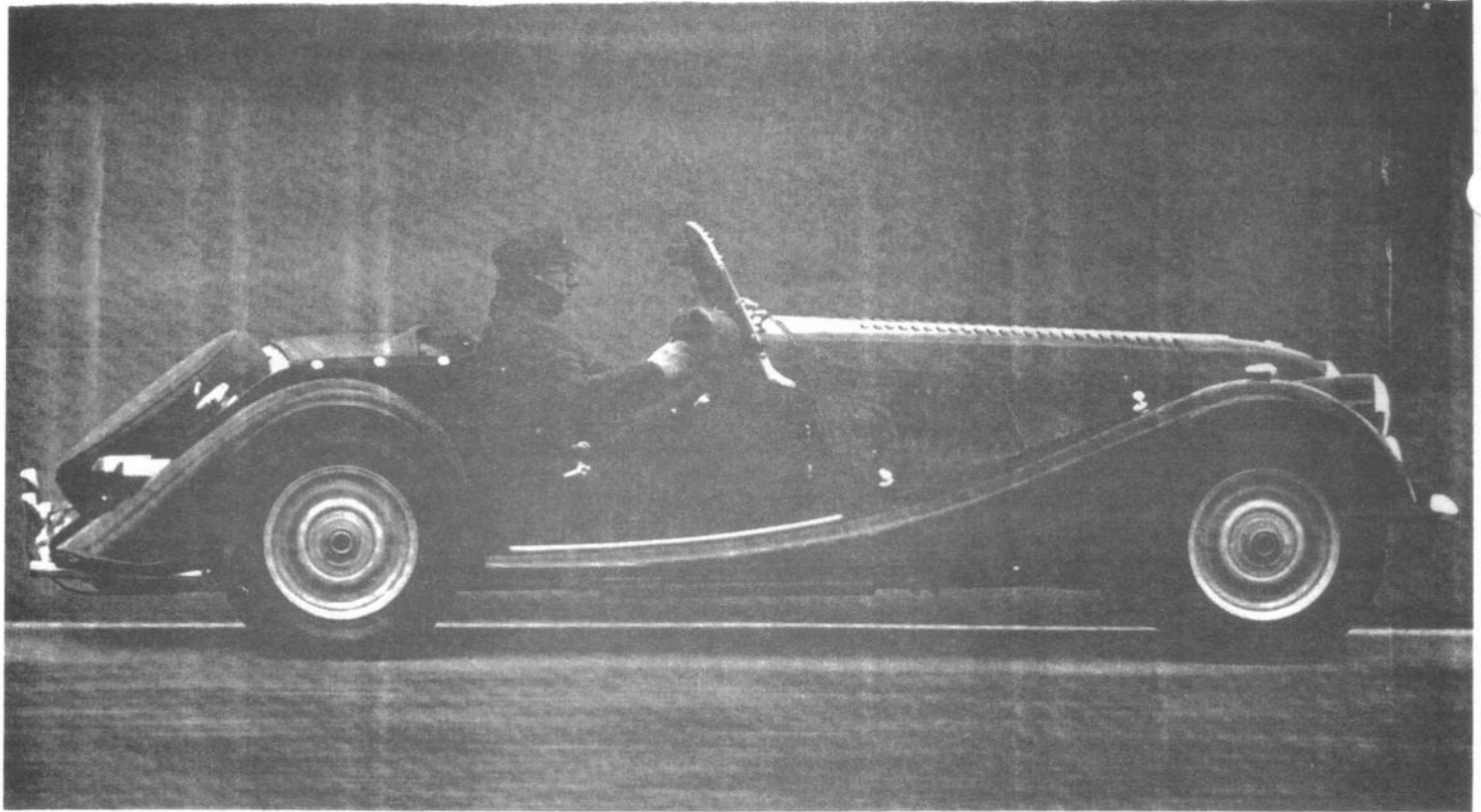
PAINT

Up to 1986 Morgans were sprayed in one piece. So as the car flexes, the line of paint between the body and the wing cracks, allowing water in to attack metal surfaces which have never seen the paint gun.

"There might have been a flash of primer on there, but I've seen them with very little on," says Worrall. "It depends on whether you were lucky."

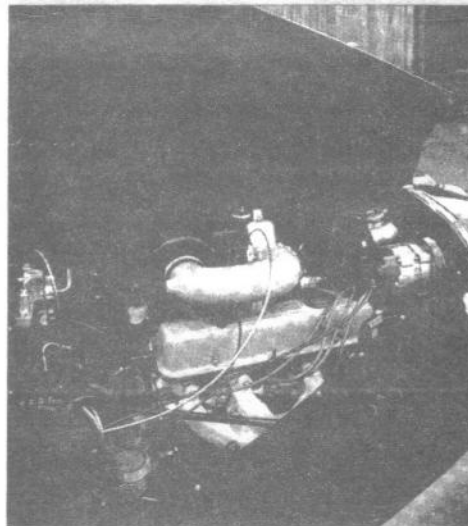
If you're not, it could mean taking a wing off and finding nothing but a sawtooth edge of rust hidden behind the body. Nowadays the factory sprays all the panels separately, and regardless of originality Worrall is emphatic that you should never respray the body as one unit.

Until 1986, Morgans were painted in ICI cellulose. From October 1986 onwards the paint used has been ICI two-pack, which flexes better and doesn't crack as much as cellulose. "If you're going to restore a car to show condition," says Worrall, "then there's only one paint and that's cellulose, because you can get a much better finish, but if you just want to restore the car to use with the minimum of hassle, then I would suggest using a modern two-pack acrylic."



Above: The reward—John Worrall blasts out into the countryside with the top down.

Below: Rover V8 nestles in a concours bay, note silver metalised exhaust manifold



UPHOLSTERY

"Go to a trimmer! Every Morgan is individual, so you can't buy a trim kit. You can buy a hood and a tonneau, but it won't have any fasteners on it because every one will fasten on differently. I've tried to do trimming myself and I've failed miserably!

"The factory has now got such an horrendous waiting list that it won't even take any orders, but you could go to Harpers in Hertfordshire, to Melvin Rutter, or to Brands Hatch Morgans. In fact, most of the Morgan agents and specialists have a trimmer.

"Ideally you're going to use dyed hide, and from Connollys that's about £2.50 per square foot. One hide is about 40 square feet and you'll need three hides or perhaps five for a four-seater."

"Then again though, if you're going to spray it yourself, you've got to use cellulose with some fast thinners because for these modern two-packs you need breathing apparatus.

"But with cellulose you can cut all the imperfections out and work away at it and get it right, while with two-pack you get what comes out of the gun.

"The best primer I've found is an ICI transport primer. It's actually a two-pack primer, but you can use it at home. It's basically a high-built, surface-etch primer. Most Morgans have some aluminium on them, especially as a lot of modern Morgans have aluminium back panels and things, so it's important that you etch-prime the metal. This primer will not only etch the metal, but it will fill any very tiny surface imperfections.

"You'll have to use some filler or lead-loading for the larger marks. Morgans coming out of the factory have always had a lot of filler on the front wings. As the car flexes over the years, it cracks and begins to lift off, particularly around the headlamps.

"When I've sprayed Morgans, I've found the best way is to hang the bonnet and wings up so you can get paint on the bottom edge, have the short edge at the top and spray them 'uphill'. The bonnet is difficult to do because of the louvres. You have to mask up all the louvres and then I would say spray the inside of the bonnet first, so any runs that come through can be taken off before you paint the top.

"Just to give you an idea, or perhaps a shock, if someone came to us with a totally sound car, but wanted a respray because they didn't like the colour, it would take around 136 hours and it would cost around £2500 plus VAT."

NUTS AND BOLTS

"Half the problem with working on any car is struggling with rusty nuts and bolts," says Worrell. "So as you go along, I would recommend replacing them all with stainless steel."

As he has found it so difficult to match each nut and bolt, and had to buy a box every time he wanted just one nut and bolt, he decided recently to recoup some of the cost by making up his own sets and selling them. The response has been overwhelming.

ENGINES

Morgans have been through a lot of engines over the years, and the availability of parts depends on whether these engines were ever used in other cars. But keeping the original engine is vital to the value.

"By the sixties, Morgans had either Ford or Triumph running gear. Because of the number of Triumph cars and specialists around, a lot of the parts for those engines are easily available and the spares back-up is very good.

"If you find a Ford-engined car from the sixties it should have a 1172cc Ford side-valve, a Ford Anglia ohv unit, or very rarely, a 1340cc Classic engine. Tragically, most of those cars have been updated to 1600cc Ford 'Kent' engines.

"Parts are getting a little difficult for all these Ford engines, although exchange 1172cc side-valve engines are available from Belcher Engineering of Bury St Edmunds.

"From 1968 onwards engines are either Rover or Ford (plus a couple of hundred Fiat-engined cars made between 1984 and 1986). Parts for the Ford engines from this time are plentiful, but Rover has the most awful spares back-up, and they've destroyed all the castings for obsolete parts.

"Plus Eights from 1968 to 1976 had the Rover 3500S manual engine, and remarkably, some parts peculiar to that engine are almost unobtainable, including the cast exhaust manifold. The only other car to share that engine is the Rover P6."

Even the cars produced after 1976 are not in an ideal position, as the V8 engine, now only produced by Land-Rover, is different from the V8 of 1982-83.

"On the positive side, although I won't say they're bullet proof, the Rover V8 and the TR 'four' are ever so strong. A Plus Eight engine will run to 100,000 miles in most cases so long as it's been well maintained. Ford engines don't have that lifespan, but they're inexpensive to replace."

GEARBOX

Gearboxes cause the most problems when it comes to finding spares for Morgans, but people with Ford running-gear can breathe a sigh of relief.

"You can get parts and the company is sympathetic to the old car movement in general. All the seventies Morgans have the Cortina GT gearbox and from 1982 they have the Ford Sierra gearbox. Fords in opinion have always made better gearboxes than anyone else in the mass market, so you've got no worries at all."

However things are not so simple for Triumph and Rover engines: "The early Series One 4/4 had a Meadows gearbox, parts for which are totally unobtainable, so you'll have to get them made. The car then changed to a Moss gearbox, parts for which are also totally unobtainable, so again you'll have to get them made!"

"There are specialists who will make up the parts. Luckily Moss also made gearboxes for early Jaguars; their parts are not interchangeable, but at least the necessary expertise exists. You can have a 'box rebuilt for £600-£1000.

"In 1972 the Plus Eight acquired the Rover 4-speed gearbox from the Rover 3500S, and parts are not readily available for this. From 1977 Morgan fitted the SD1 engine and its 5-speed 'box, parts for these are already becoming difficult. Then in 1985 when Morgan went to fuel-injection, they introduced the Vitesse gearbox, which is different again, with none of the internals interchangeable with the SD1 'box; parts are also becoming scarce.

"The Moss gearbox is a slow gearbox with no synchro on first, but it's a super gearbox once you've learned to use it and to change slowly and deliberately," says Worrall. "All the different gearboxes are good, strong boxes. They don't tend to fall apart. It's just that if they do go wrong you can't get the parts. The only answer is to treat them with respect, and change the transmission oil every 2000-3000 miles on Moss-gearbox cars."

STEERING

By 1985 Morgan steering was by various methods of cam-and-peg, using a Burman steering box – the very early ones were from a German milk float!

"These early boxes wear out, and we don't know anyone who can recondition them effectively, as they're difficult to adjust and the play, which was always there, often just gets worse. "Luckily for Plus Eight owners, Burman stopped making the steering box in about 1985 and the cars were given a superb rack-and-pinion system.

"The other models went to a French-made steering box by Gemmer which was very similar to the Burman, but much better quality. One of those costs £350, and it will bolt straight on. A lot of people have changed over to this box, especially people with Plus Eights from the early eighties. As the wheels got wider and wider over the years, and the tyres got bigger, so the car became heavier to steer. The Gemmer box, because it's better at self-centring, and lighter, has become an accepted modification, and won't detract from the value of the car."

REAR AXLE

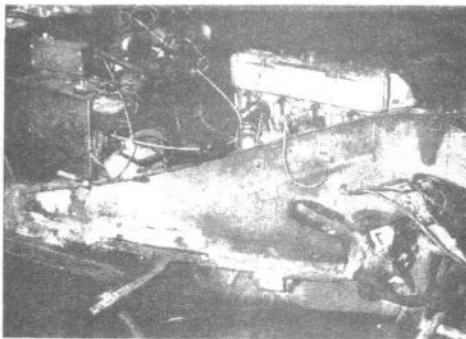
Morgan 4/4s from Series One through to Five have a Salisbury (now GKN) rear axle. Parts are not available, but you can have it rebuilt by GKN or by an axle specialist. Plus Fours also have Salisbury rear axles, but you can put in an axle from a current 4/4, as it is the same width.

Plus Eights are more difficult because of their special limited-slip differential. Salisbury will rebuild them, but they can only put modern internals in the old axle casing because it has changed from imperial to metric. Replacing the diff will cost £1000 at the least. So if you're shopping for a Plus Eight, be careful for any signs of trouble.

"If the back axle whines badly, then it will need a rebuild," says Worrall. "If it clonks, then you check the UJs and the U-bolts, to make sure they're tight; if they are, it may be trouble with that axle. If the diff is beginning to wear, the car will also pull to one side."



Rotten wood in the floor must be replaced, otherwise it will bend and distort the body



Worrall's present project: a 1969 4/4 with a one-off Cosworth engine, now seized solid



Morgans were sprayed in one piece up to 1986, but flexing causes cracks which let in water

"You must use the proper limited-slip diff oil, Castrol B373. It must never be just topped up either – it must be changed, because the used oil will contaminate the new stuff. And ideally you should change it every 4000-5000 miles, although the handbook says 12,000. There's nothing like new oil – and it's cheaper than new axles!"

SUSPENSION

Engines may come and go, the number of wheels may vary, but the Morgan's unique sliding pillar front suspension hasn't changed since 1911 (modern Morgans also have telescopic shocks).

The suspension consists of long, steel kingpins sliding through two sets of phosphor-bronze bushes, and to keep it working well, it needs to be regularly and properly lubricated. From 1950 an oil button was provided on the top of the transmission tunnel, allowing oil from the engine to dribble down the kingpin.

"It's better than no lubrication at all," says Worrall, "but that oil has been contaminated by hydrocarbons which have an adverse effect on phosphor-bronze.

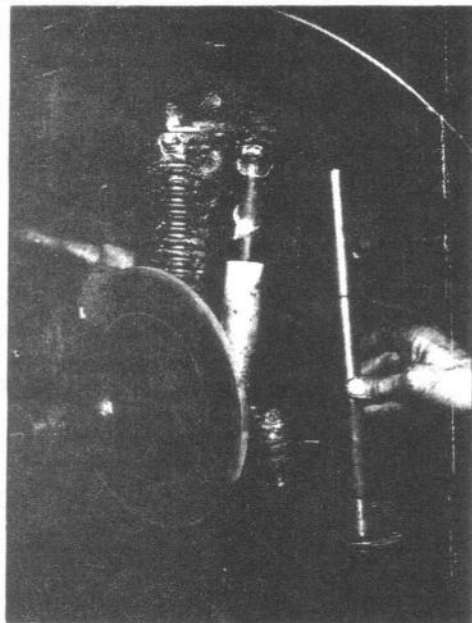
"But if you are willing to get under there with a grease-run every couple of weeks and grease the kingpins with molybdenum-disulphide grease such as Castrol MS3, those bushes will last a lot longer."

The bushes will eventually wear, and the increasing play in the front wheels will cause the car to waver on the straight and to clunk over potholes. Every 15-25,000 miles they will therefore need to be changed. Heart of England Morgans charges about £120 to do the job, or you can buy the parts from Morgan; Worrall sells a front suspension kit for £50, consisting of the coil springs, kingpins, damper blades and shims and bushes. The bushes will need to be reamed out, and a reamer costs £50-£60.

CONCLUSION

Apart from the problems already listed, if you find an early Morgan, make sure it has all its instruments. If they are broken, they can be reconditioned by specialists such as Holden Vintage and Classic, of Hartlebury, but if they are missing, they are almost impossible to replace.

Worrall's parting advice? "The first rule for any rebuild is that it's going to cost you twice as much as you thought, and it will take twice as long. If you're not prepared to face that – don't start."



Sliding suspension is best lubricated with a grease gun, taking care to avoid the brake disc

REGISTRATION

FRI JUNE 29 --- Registration, Welcome Party
 SAT JUNE 30 --- Registration, Regalia, Gymkhana,
 Evening Cookout, Briefings for
 all Main Events
 SUN JULY 1 --- Registration, Regalia Sales,
 Concours, Evening Rally, Evening
 Cookout, Autocross Minibriefing
 MON JULY 2 --- Autocross School, Autocross,
 Noggin, Rally Minibriefing
 TUE JULY 3 --- Morning Rally, Picnic, Fields
 Trial, Social, Awards Banquet
 WED JULY 4 --- Breakfast, Convoys Depart



NOTE: Schedule may change. Arrival _____ am/pm Departure _____ am/pm

NAME (BLOCK PRINT) _____

OTHERS IN PARTY _____

ADDRESS _____

PHONE _____ HOTEL: Sheraton _____ Other _____

PLEASE CIRCLE	TRIKE	ROADSTER	YEAR _____ SERIAL NUMBER _____
	4/4	DHC	COLOR: BODY _____ WINGS _____ INTERIOR _____
	+4	4 PLACE	YEAR _____ SERIAL NUMBER _____
	+4+	S SPORT	COLOR: BODY _____ WINGS _____ INTERIOR _____
+8	COMP/RACE	List any additional MORGANS brought to MOG 20	

NUMBER OF PEOPLE IN OUR PARTY WHO WILL PARTICIPATE IN; SAT COOKOUT _____ SUN COOKOUT _____ PICNIC _____
 FIELDS TRIAL _____ AUTO X SCHOOL _____ AUTO X _____ GYMKHANA _____ AM RALLY _____ PM RALLY _____

PLEASE, to participate in any MOG 20 activity, you must register. THANK YOU

Primary REGISTRATION postmarked before Jun 10	:	\$50.00	_____
Primary REGISTRATION postmarked after Jun 10	:	60.00	_____
One "Significant Other" & family under 16 yr	:	0.00	_____
Each add'l immediate family member over 15 yr	:	15.00	_____
Each adult AWARDS BANQUET, mailed before Jun 10	:	22.50	_____
Each adult AWARDS BANQUET, mailed after Jun 10	:	25.00	_____
Child (under 8 yr) AWARDS BANQUET, before Jun 10	:	10.00	_____
Child (under 8 yr) AWARDS BANQUET, after Jun 10	:	12.00	_____
One Day Only REGISTRATION Per Person (circle day):	:	25.00	_____
FRI SAT SUN MON TUE			

Checks payable to : MCCDC

Mail to : MOG 20 Registration
 c/o Carol Estes
 307 Yoakum Pkwy #1420
 Alexandria, Virginia 22304

Calendar of Events

June 15-17 Markham '90 Car Show, Flea Market, Classic McCowan Rd., N. of
 Car Auction - Markham Fairgrounds, ON Hwy. 7
 June 17 Classics Against Cancer - Georgetown, ON see pages 5-6
 June 22-24 MOG Great Lakes - Midwest Meet - see page 8
 Harbour Springs, MI
 July 6-8 VARAC Vintage Festival, Shannonville, ON see page 7

PRESIDENT Audrey Beer
 R.R.#3,
 Bolton,
 Ontario, L7E 5R9

 (416) 857-3210

EVENTS Gary Macfarlane,
 343,Smith Avenue,
 Burlington,
 Ontario, L7R 2T9

 (416) 681-0081 941-6420

REGALIA Joan McDonald,
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TREASURER Marlies Sands,
 Pipers Hill Farm,
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 Ontario, L0G 1G0

 (416) 936-4341 669-6419

MEMBERSHIP ROSTER Ron Lohr,
 62,Talbot Street,
 Guelph,
 Ontario, N1G 2E9

 (519) 824-9230

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 Aurora,
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An edition of "The Priceless Blurb" will be distributed during January, March, May, July, September, and November each year.

Material to be considered for publication will have reached the editor by the last day of the month prior to publication.