# CHANGINGEAR

June 2008 (2)

## Stoneleigh 2008



#### National Rally 2008 - Billing Aquadrome Details inside

the magazine of the NG owners club

# THE NG OWNERS CLUB

Please send all contributions to Changi*NG*ear to the editor (Chris Humphreys) The NGOC web site: <u>www.ngownersclub.org.uk</u> is maintained by Mike Peel

President: Nick Green

Chairman	
	Haydn's Wood, 1 Vicarage Close, Kingswood,
	Surrey. KT20 6QF (Tel: 01737 832367)
Secretary	.Bob Preece
	12 Oakland Walk, West Parley, Ferndown, Dorset.
	BH22 8PF (Tel: 01202 573644)
Membership Sec	.Bob Morrison
	11 Cox's Road, Shrivenham, Oxon. SN6 8EL
	(Tel: 01793 783105, e-mail: rmorri1847@aol.com)
Treasurer	.Susan Stretch
	6 Wroxham Road, Woodley, Reading, Berks.
	RG5 3AT (Tel: 0118-969 3355)
Magazine Editor	.Chris Humphreys
	65 Woodfield Drive, East Barnet, Herts. EN4 8PD
	(Tel: 020-8361 1863, e-mail: ngoceditor@woodfield5.demon.co.uk)
Local Area Contact	Members
Sheffield, Leeds, Ye	orkshire Dennis Roberts (01142 878515)
Midlands	Mark Staley (01332 723927)
	Ed Powell (01386 47374)
East Anglia	David Edwards (01284 788118)
New Forest & Distr	ict Keith Baker (02380 864310)
South Wales	Brian North (02920 341671)
Technical Contact	Members ( <i>willing to help on technical matters</i> )
	om 1800) Neil Taylor (01733 561492)
TF (MGB 1800 base	d inc. SVA) Chris Humphreys (020 8361 1863)
SVA (technical & no	n-technical) Mark Staley (01332 723927)
General & technical	queriesJohn Hoyle (020 8393 2555)

All contributions to this magazine only contain the personal opinions of the individual concerned. The Club accepts no responsibility for advice or information in this magazine or any other item of Club literature. Neither does any advertisement featured imply an endorsement or recommendation by the Club.

# Contents

Chairman's Letter2
Editorial2
Secretary's Notes4
Regular Meetings5
Events Calendar 20086
Events Web Sites8
News from Findhorn Cars9
Members' Letters & Articles11
NGOC National Rally 200816
Book Review
New Members—Welcome
Sales & Wants
Club Products, Regalia, & Literature inside back cover



Next issue: September 2008

Deadline for submissions: 15th August

# NGOC National Rally Billing Aquadrome Friday June 20th to Sunday June 22nd 2008 See centre pages Don't miss it!

# **Chairman's Letter**

MOT nearly failed, a speedy repair to the washer pump motor saved the day! I thought I was fireproof especially as I was the one who had suggested that the winter period was a great time to carry out modifications and general servicing.

Nevertheless the season for NG motoring has started for me, as I hope it has for all, by supporting local events and other car club meetings. As we all know rain is no help and the car has had to be dried out on the odd occasion, hopefully this will be less of a problem now that the warmer weather is happening.

Warm weather leads me nicely to the subject of the NATIONAL RALLY on the weekend of  $20^{th} - 22^{nd}$ of June at Billing Aquadrome which is not too far away. I would ask everyone who can come to please make the effort to support this event, even if



you can only manage one day out of the weekend. If your diary is as full as mine I can understand that things get a little difficult when trying to fit all one's activities into what is a relatively short summer season.

Please make room for this Main Club Event of the year. It has always been a friendly and sociable occasion with a chance to appreciate the lasting quality of the NG marque.

Peter Clark

# Editorial

What a lovely summer we just had - the week and a half following the May Day Bank Holiday weekend. I cannot remember the last time (if ever) I drove the NG for 11 successive days while my tintop languished wistfully in its spot on the road outside the house. Just as the weather decided to do its inevitable down-turn, the NG's heater valve decided that 2 years

was enough of a life and so it dribbled its contents over the distributor. Fortunately, I had just arrived home and so



there was no overheating (except to my temper). The valve has now been replaced, the coolant drained (it was due for a change) and replenished – then roll-on the summer weather again!

I wonder how many weaknesses there are on the MGB based mechanics. We all know it is basically a very reliable design but the fuel pump is a well known Achilles heel (although mine has not let me down yet). The oil pressure gauge flexible hose seems to be another component which fails with apparent regularity - just ask John Hamilton-Smith who has had two go in only a few years and mine went too. Now I have fitted my 3<sup>rd</sup> heater valve and was told by the supplier that yes, they don't last long because the diaphragm inside splits. Are our weak spots limited to these 3 things or are we perhaps deceiving ourselves about the reliability of our cars? Or perhaps these are not weaknesses but just unfortunate co-incidences. At least our cars are easily and cheaply fixed - unlike their modern counterparts!

By the time you receive this issue, there will be only a short time to the NGOC National Rally. If you are joining us please book your camping, B&B or Premier Inn a.s.a.p. if you haven't already done so (see centre pages). After the disappointing cancellation of 2007's rally due to flooding and a close call (by 1 week) of a similar occurrence in 2006, it was decided that the risk in booking Stratford-upon-Avon again this year would be just too great. So that is why we are returning to Billing Aquadrome (our venue in 2002, 2003 and 2005), a pleasant site in a central location. Although some find it a little noisy, we are situated in a quiet part of the site with plenty of space and we can guarantee a good time – see you there!

I would like to publicly thank Paul Gray and Dave Holland, for their continued diligence in their production of articles for the magazine. Both Paul's V8 build diary and Dave's Book Reviews have been a great asset to the magazine. Thank you too, to the other members who have contributed; without you all there would be no magazine.

If you have never contributed to ChangiNGear (and this is a large number of you), please consider doing so. Don't think your contribution won't be suitable – it almost certainly will be – and it is more than likely to be of interest to other members. The magazine can only benefit from more variety so get writing. We really need some more pictures too! I prefer to receive items digitally but I am quite happy to type them up or scan them in if you have no access to a computer (photos will be returned to you).

Finally, just one more plea to return your Member's Information Form if you have not already done so - that is considerably more than half of you – and thank you to those who have.

Happy NGiNG!

Chris Humphreys

# **Secretary's Notes**

#### **Forthcoming Events**

<u>June 20-22</u>

National Rally-see centre pages.

#### July 11-13

Festival of Speed

Goodwood, Chichester, West Sussex I have no information on this - just a note to let you know the date.

#### July 30

Classics on the Common Harpenden Common, Harpenden, Herts

Chris Humphreys is the contact for this. It is an informal meet of classic vehicles but has a very large turnout – especially if the weather is fine. By pre-booked ticket only, for a fiver you can take your classic vehicle to this charity event and wander around a plethora of old memories.

#### <u>August 16-17</u>

Air Display & Classic Car Show Rougham Airfield, Nr Bury St Edmunds, Suffolk

I do not have any information on this meeting but the East Anglia contact member David Edwards will give some guidance on it. Telephone him on 01284 788118.

#### Aug 23

Shrivenham Village Fete

Shrivenham, Oxon This is our membership secretary's home village and Bob and Angela Morrison are



two of the main organisers of the fete, so come along and give them some support and have a wonderful day out in the sun with your NG. Last vear there was quite a gathering of club members showing their cars along with other people and their vintage vehicles. Some of which must have been worth a small fortune. Apart from the vehicles there are stalls selling all sorts of articles too numerous to list here, so bring a picnic and come and enjoy a really fun day out for the whole family. If you want more info then call Bob Morrison or me Our numbers are on the inside of the front cover.

#### Aug 24-25

Knebworth Classic Motor Show Knebworth Park, Stevenage, Herts This one is in the grand setting of Knebworth Park with a number of additional attractions. See elsewhere in this issue for last year's report. Contact Chris Humphreys for further details.

Bob Preece

#### **Regular NG Meetings**

Sheffield, Leeds, Yorks area: various meets & activities (Dennis Roberts 01142 878515 - Phone for details)

Midlands - Monthly evening meet: every 1st Tuesday, 7.00pm The Boot Inn, Repton, nr Burton on Trent, Staffs (Mark Staley 01332 723927 - Venue adjustable, phone for details)

**Oxford - Monthly lunch-time meet:** date depends on interest, 12 noon The Six Bells, Warborough, off A423 Oxford/Wallingford (Bob Morrison 01793 783105)

East Anglia area: various meets & activities (David Edwards 01284 788118 - Phone for details)

Surrey - Monthly evening meet: every 2nd Tuesday, 7.30pm The Club Room, Brooklands Museum, Weybridge, Surrey (Peter Clark 01737 832367 - See also "Monthly Natter" panel)

Kent - Monthly lunch-time meet: every 2nd Sunday, 12.30pm (John Jewsbury 01622 890992 - Phone for current venue)

New Forest - Monthly lunch-time meet: every 1st Sunday, 12 noon (Keith Baker 02380 864310 - Phone for current venue)

Cardiff (Sth. Wales) meet: by arrangement (Brian North 02920 341671 - Brian also does engine reconditioning)

#### The Brooklands Club ~ Monthly Natter Meeting Dates 2008

- Evening
- Jul 8: Motoring Quiz plus a round of the MGCC Pride of Ownership Competition.
- Aug 12: Walking Treasure Hunt
- Sep 9: Music Evening
- Oct 14: Autumn Natter

- Jun 10: Pride of Ownership & Jazz Nov 11: Torchlight Walking Treasure Hunt
  - Dec 9: Enthusiast of the Year Awards, Waistcoat & Ladies 'Feely Bag' Competitions, Jazz Evening, Hot Sausage Rolls & Mince Pies.

## **Events Calendar 2008**

Date	Event	<u>Contact</u>
8 Jun	London ~ Brighton Kit & Sports Car Run Start: Mercedes-Benz Museum, Brooklands KT13 OSL	David Holland
14 Jun	Classic & Sportscar Action Day Castle Combe, Wiltshire SN14 7EY	l nfo only
20-22 Jun	NGOC NATIONAL RALLY Billing Aquadrome, Great Billing, Northants NN3 9DA	Bob Preece
21-22 Jun	National Kit Car Festival Newark & Notts Showground, Newark-on-Trent, Notts. NG24 2NY	Dennis Roberts
28-29 Jun	Wings, Wheels & Steam Country Fair Rougham Airfield, Nr. Bury St. Edmunds, Suffolk	I nfo only
28-29 Jun	AutoGlym HSCC Historic Festival Brands Hatch, Fawkham, Longfield, Kent DA3 8NG	l nfo only
29 Jun	Charles Church Memorial Fly-in Popham Airfield, Coxford Down, Winchester SO21 3BD	Dave Holland
11-13 Jul	Festival of Speed Goodwood, Chichester, W. Sussex PO18 OPX	l nfo only
30 Jul	Classics on the Common Harpenden Common, Harpenden, Herts opposite AL5 2JF	Chris Humphreys

Date	Event	<u>Contact</u>
9-10 Aug	East of England Kit & Car Builder show EXEC Centre East of England Showground, Peterborough PE2 6XE	l nfo only
16-17 Aug	Air Display & Classic Car Show (inc. Sports Car Day on Sunday) Rougham Airfield, Nr. Bury St. Edmunds, Suffolk	l nfo only
23 Aug	Shrivenham Village Fete Shrivenham, Oxon	Bob Morrison
24-25 Aug	Knebworth Classic Motor Show Knebworth Park, Stevenage, Herts SG3 6PY	Chris Humphreys
24-25 Aug	Hampshire Pageant of Motoring Broadlands, Romsey, Hampshire	l nfo only
25 Aug	Rare Breeds Motor Show (Lavenham Carnival) Recreation Ground, Lavenham, Suffolk	David Edwards
7 Sep	West Lancs Festival of Transport Leisure Lakes, Mere Brow, nr. Southport, Lancs	Chris Nelson
13-14 Sep	Beaulieu International Autojumble Beaulieu Event Fields (National Motor Museum), Hampshire SO42 7ZN	l nfo only
19-21 Sep	Revival Meeting Goodwood, Chichester, West Sussex PO18 0PX	l nfo only
2 Nov	London ~ Brighton Veteran Car Run Start: Hyde Park	Roy de Boise
15-16 Nov	Great Western Kit Car Show Westpoint Exhibition Centre, Exeter, Devon EX5 1DJ	Bob Preece

# **Events Web Sites**

#### Web Sites for Venues

Beaulieu Motor Museum Billing Aquadrome Brands Hatch Brooklands Museum Castle Combe Circuit Goodwood Harpenden Common Kent County Showground Knebworth House Lavenham Mercedes-Benz World Newark & Notts Showground Popham Airfield Rougham Airfield Shrivenham Stoneleigh Park Westpoint Arena, Exeter

www.beaulieu.co.uk www.billingaquadrome.com www.brands-hatch.com www.brooklandsmuseum.com www.castlecombecircuit.co.uk www.goodwood.co.uk www.classicsonthecommon.com www.kentshowground.co.uk www.knebworthhouse.com www.lavenham.co.uk www.mercedes-benzworld.co.uk www.newarkshowground.com www.popham-airfield.co.uk www.roughamairfield.org www.shrivenham.org www.nac-stoneleigh-park.co.uk www.westpoint-devonshow.co.uk

#### **Other Web Sites**

Autosport Int. (Racing Car Show) Greenwoods Exhibitions (L2B etc.) Grosvenor Exhibitions (Stoneleigh) Hampshire Pageant of Motoring Historic Sports Car Club Kit Car Shows (Detling & Exeter) London~Brighton Veteran Car Run Total Kit Car (General Kit Car Info) West Lancs MG Owners Club www.autosport-international.com www.greenwoodsexhibitions.com www.grosvenorexhibitions.co.uk www.hpom.co.uk www.hscc.org.uk www.kitcar-shows.co.uk www.lbvcr.com www.totalkitcar.com www.wlancsmg.homestead.com

# These web sites are listed to provide a source of additional information for the events listed in our Events Calendar.

# **News from Findhorn Cars**

am writing this a couple of days after the Findhorn NG team was one of a few only with two cars still running at the finish in the Guild of Motor Endurance event at Mallory Park on 16<sup>th</sup> May. For me it is a real endorsement of the engineering of our cars, namely thorough, if conservative engineering. That said, and with the exception of a very fast Gardner Douglas Cobra, our 3.9 efi cars were about the quickest cars still going at the end, lapping at less than 1 minute 10 seconds.

The TC II is a bigger car, on XJ40 suspension, with a body and chassis to the traditional NG formula of a cruciform chassis and a substantial fibreglass tub. For a reason that I do not fully understand, it did suffer from scuttle shake, but a heavy steel scuttle hoop later, it feels as solid as one might wish. It's a great car and we are much looking forward to I talia Roma rally in September, over the top of the Alps like Hannibal's elephants, not through a rabbit hole underneath!!

The silver TC is close to standard build as many of your cars are, with the independent rear suspension. In the hands of son George and his friend Johannes, it is very quick. We do know that we have to do something about the suspension for this sort of event. The wide tyres expose the limit of the MGB geometry. I have hovered many long hours over this. It is not possible simply to attach new and different wishbones onto the existing lower wishbone points. Their horizontal inclination is all wrong, inducing dive amongst other things. Also cycle wing fouling with the left exhaust manifold is a problem. So I am thinking along the lines of a simple subframe and a wider suspension, with ball joint uprights. Perhaps, when I have designed this, I will no longer be allowed to buy George a new set of tyres each time out!!

On the TC II, the engine was pressurising the coolant enough to be a problem. The next engine I build will have top hat liners. However we have dealt with that with a Land Rover header tank, which has two connections. Coolant bubbled out of the top of the radiator returns via a bottom tank connection. There is not enough room in the TC for one of these tanks, with the efi air flow meter, but we will make up a suitable special header tank.

Another detail is a result of an errant hedge and the need for a new nose cone. Locating the nose cone was always a struggle. The fibre glass is now captive between an angle on the outside and the radiator brackets. This structure has been strutted back to the torgue brace bolt. At the bonnet hinge, a hinge pin bracket going right and left as opposed to just one way, has solved an incessant bonnet location problem. The bonnet nose cone fit is now always as one would wish, which is a real joy.

Oh and one great piece of news, I was dreading the first MOT of the silver TC, which was registered as a new car. I was not optimistic about the emissions, but it is a kit car and so has only to pass a visible emissions test. That is a result!!

Finally one of you may be able to help, please. I am looking for a new supplier of our bonnet badges, preferably in CNC stainless steel. If you have a friend who can machine these, I would be delighted to hear - thank you.

PS. Lest readers with 1800 cars should think that I have gone V8 crazy and forgotten them - you will know that two vital pieces of equipment for MGB engines are:

- a mallet to hit the petrol pump when it is feeling bolshy and
- a piece of emery paper for the points.

I have a large supply of mallets, but I don't like emery paper. There is an alternative. For the supercharged engine that is still in the MGB, I bought and finally fitted EDIS ignition. I have forgotten what the initials stand for, but with a cheap and cheerful ecu from Matt Kimmins - <u>http://www.kimmins.info</u> and you can find other useful information at:

http://www.kewengineering.co.uk/ upgrades4mgs/Electronics/ edis1.htm, you can transform your engine's ignition. The super-charged engine is just so much smoother and more responsive now.

In fact the next pipe dream is to fuel inject either a normally aspirated MGB engine or perhaps even the super-charged engine. However, having won various battles with the SU on the super-charger, I think that it is a smaller pulley wheel on the front to get a bit more boost that will be the next tweak here. The point though is that with digital mapping it is so easy to know what is going on and to adjust it.

Best wishes

Nigel Brooks

#### Back Issues of ChangiNGear

Back issues of ChangiNGear are available from February 2004 to the last issue. If you would like any, please let me know - you will just be charged for the postage.

Alternatively, you can now download a PDF version of any back issue of ChangiNGear since Feb 2004 from the NGOC website.

# **Members' Letters & Articles**

#### Knebworth Classic Motor Show 26<sup>th</sup>, 27<sup>th</sup> August 2007

Held in the vast grounds of Knebworth House (probably better known for its rock concerts), the Knebworth Classic Motor Show is able to enjoy plenty of room. The vehicles were arranged loosely into their age



groups and there were quite a number of auto jumble stalls. It was necessary to pre-book to display the car but there were sections for kit & custom cars and a number of club stands. Photos show an MG 18-80, a Model T Ford and the JBA club stand.





The day I went was bathed in lovely sunshine and I returned home resembling a tomato! There are other attractions at Knebworth including several things for the youngsters – adventure playground, fort, astroglide, bouncy castle, miniature



railway, etc. – not to mention the house and gardens.

A good helping of nostalgia and plenty of people to talk to made an enjoyable day out.

This year's event is on 24th & 25th August—see you there?

Chris Humphreys

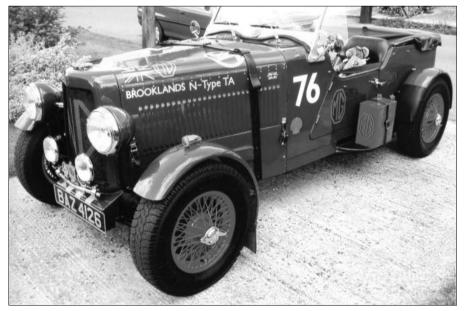
#### Nelly's Grand Day Out (Part 2)

Another strange thing dear reader is that over the past 5 years NG Nelly has undergone a transformation into a 1930's style racer, like those which graced the banks of 'Brooklands', particularly in the hands of one of my own heroes Nathan Black, a successful MG driver of the 30's in Magnas and Midgets. Nelly, with her 1798cc (MGB) engine, racing green paintwork and new red wire wheels and proper graphics and decals of the period, had just completed this metamorphosis in time for the Brooklands festival anniversary. Hence Nelly is now an 'NG TA Brooklands'. I dreamt of the day that she is pictured on the bank of that famous old track like the

cover picture of ChangiNGear.

The last item on my re-build wish list was indeed some kind of classic steering wheel and although reproductions are available I hadn't found anything suitable (Nelly's, incidentally, being a 40 year old 'Motolita' black one). So this gift from the motoring gods was not only timely but also slightly spooky! I'm sure you'll agree now you know, why I'm surely gob smacked!

This was one treasure that would not be returned to its dusty tomb to languish for another ½ century. I rushed out of the doorway swirling yet more dust in my wake, returning within a moment realising I hadn't actually said thank you to Alan! Sheepishly I promised him "ale for life!" Maybe I was a bit hasty though, vowing that his wonderful



"Bad news... your job

hasn't been started

vet! We had a rob-

bery... but you were

lucky, they left your

steering wheel"

gift to Nelly would be fitted this very day! Immediately! Now!

"Get a life, Baz" said my chum George, 2 days later, after I had been struggling to fit it to Nelly's MGB steering column. "Find a bloody big nail and hang it on the wall in the garage, it'll never fit". A few choice words later I conceded that he may be right! However, somebody that won't take no for an answer probably

sums me up and after a pint or two, discussing ways of making the thing fit, I ended up with 4 pages of scribbles and notes (henceforth to be called technical drawings!) I was resigned to the fact that it

would have to be engineered to fit and it wasn't going to be cheap.

If, dear reader, you were brought up in the 1950's or even before that, you will recall those garages where everything was of great fascination to a lad in short trousers. The smells, sights and sounds that stay with us forever. Where I live we still have such a place, 'Lolly Pop Petrol Pumps' and all the cars have spoke wheels – a time warp.

Making the pilgrimage to this shrine, to all things nostalgic, I held out the dusty bag (now containing vital parts from Nelly's steering column) to the gentleman in the brown warehouse coat, apparently the grandson of the original owners and a dead ringer for young Mr from 'Are You Grace Beina Served' (about the same age too!). With the other hand I offered the 'technical drawings' (scribbled scraps of paper), he sighed and accepted the dusty (grainsack) bag as if it would go bang at any moment. Retrieving the wheel from the bag, he smiled the smile of a man who

> thought I'd lost my head gasket (I'm getting used to that). "Don't see many of those around no more. If we do it's usually attached to a motorcar! Ho ho. Best thing you can do with this is find a GERT big hook

and hang it on it!" Very funny I thought, losing my own sense of humour rather quickly. "Leave it with me" said young Mr Grace, "and your pages of sketches, and we'll see what we can do". It seemed that my cunning plan (In Baldrick's immortal words) might work after all.

So I wasn't completely mad after all (although when the final bill arrived I knew I was barking). Over a week later I visited the workshop to get an update on their progress. "Bad news" said young Mr Grace, "your job hasn't been started yet! We had a robbery" he continued. My heart stopped beating, "But you were lucky, they left your steering wheel but took all our metal stock, your lump of aluminium included". Phew, I'd thought the worst!

After a few more days they called me with the good news that all was ready for me to pick up. Young Mr Grace poked his head out from under a pretty little MG TA (which coincidentally had been in a

barn for 40 years and was now being brought back to life), its steering wheel amazingly was identical to mine but much more chewed up and rusty. "I found an advert in a

sales catalogue from 1935, it shows your wheel available for purchase". The huge tome of black and white pictures did indeed show it at a retail price of £2.10s.8d. Young Mr Grace pulled out the finished article from under his bench. A gleaming work of art, the aluminium boss had been turned on a lathe for 11½ hours (at £35 an hour). My MG original boss was now bolted to the bottom of this new piece and the steering wheel was 4 ½ inches away on the top, with black allen key bolts through it's centre, my NG horn boss fitted perfectly. The hollowed out middle of the new aluminium was wide enough inside for me to fit the large steering column nut with a socket extension. The bottle shaped original steering wheel boss was cut down and cleverly used as a template for lining up the bolt holes. 'Chuffed' isn't the word and returning home it was fitted within minutes. A trial run up my village High Street confirmed my belief in the whole project, although its size made it feel like you were driving a lorry! Nelly's 'Brooklands' transformation was complete. There was nothing 1930's



about the bill when it came though and they didn't take credit cards! What more could I expect from a 'time warp' garage?

So dear reader, there must be a

moral to my story? Probably - if confronted by mates bearing gifts from their attics it's best to tell them to leave it where it is! I shall always have a reminder of this time as my bank statement shows 'OD' every month, which I take to mean 'Oh Dear'! Was it worth it? It was fun and surely dear patient reader, that's why we love our NGs.

Nelly has now appeared before the public at the next Bluebell Classic Car meeting, proudly sporting her shiny new wheel, but Nigel the copilot teddy still steals everybody's attention. As someone once said, "It's the sum of the parts that make up the whole"!

So we did have our 'Grand Day Out' and the ale was indeed 'cracking'!

Happy NG Days.

Baz, Nigel & Nelly Robinson

#### Winter Warmth

Can't make a personal recommendation (yet) for this product but was prompted to mention it after seeing a recommendation from a Citroen Special owner. We had no idea that one can buy an electrically-heated waistcoat for motor-cycling until our son mentioned recently that he was proposing to buy one for his winter 'biking' to complement the heated handle-bar grips that both he and his fiancée swear-by.

The Citroen Special guy has used a heated waistcoat in his Lo-

max for several years & said that even the neck is heated, thus stopping cold draughts. There is even an optional thermostat.

The waistcoat can even be used when not in the car with a rechargeable battery pack that clips to a belt – apparently traffic wardens are supplied with them (no wonder they seem comfortable to stand around in the cold arguing about your parking ticket!)

Apparently, power consumption is 45w & they are even machinewashable. Food for thought...

Paul Gray

Have you been anywhere or done anything in your NG? Why not send in a few words and/or pictures for ChangiNGear?

Next issue: September 2008 Deadline for submission of articles: 15th August

#### KIT AND REPLICA CAR INSURANCE Backford Bloor & Co

#### 10% DISCOUNT FOR CLUB MEMBERS NEW REDUCED RATES JUST LOOK AT THESE BENEFITS

Discounts available for restricted driving Age of vehicle, Age of driver Guaranteed agreed value (subject to valuation form and photos) *Free* legal assistance *Free* personal accident cover

Talk to the experts on **0151 356 8776** or log on to <u>www.insurance4kitcars.co.uk</u>

#### With us you are a name not a number

Backford Bloor & Co is a trading style of M R Bloor & Co Ltd who are authorised and regulated by the Financial Services Authority.

# NGOC National Rally (20-22 June 2008)

#### Billing Aquadrome, Crow Lane, Great Billing, Northants NN3 9DA

The full address and postcode of our venue is above for anyone who has not been to the site before. Billing Aquadrome is situated not far from junction 15 of the M1 motorway and is thus central and easily accessible for most members.

#### Directions:

From the North

- Exit M1 Junction 16
- Take the A45 to Northampton
- Follow the signs to Billing Aquadrome for about 7 miles From the South
- Exit M1 Junction 15
- Take the A508 to join the A45 ring road
- Follow the signs to Billing Aquadrome for about 4 miles

#### Don't miss the National Rally!



Our club will be in the field, named Puddleduck Place, which is next to the river (see plan of the site on page 18) away from the busier part of the Aquadrome. The camping area, which is flat and well drained, is in this rally field and a marquee will be erected. Lets all hope for excellent weather for our main meeting of the year and the marquee will not have to be used too much to keep us all dry.

Now for the not so good news—site fees. For campers the cost per unit will be £13 per night if you prebook at least 7 days before the event (i.e. before  $13^{th}$  June) on 01604 784948. This is a discount rally rate. If you fail to book in time then you will have to pay at the gate the full rate of £19 per night. For day visitors the charge is £10 per car on the day.



# NGOC National Rally (20-22 June 2008)

If you are not camping or B&B ing then there is a Premier Inn just by the entrance to the Aquadrome. Rooms are from £51 per night but it is best if you pre-book a.s.a.p. on 0870 990 6510.

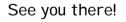
We will have our usual gas BBQs so bring your food or purchase something from the store on site. Tea and coffee will be available all the time in the marquee, just pop in and serve yourself.



- Great venue
- Easy to get to
- Good facilities
- Many local attractions
- Shops & eating places on site
- Fishing, boating and walking
- Marquee & gas bar-b-cues

Please check the club web site <u>www.ngownersclub.org.uk</u> nearer the date of the rally just in case there is a last minute problem (as there was last year with the flooding of the Stratford site).

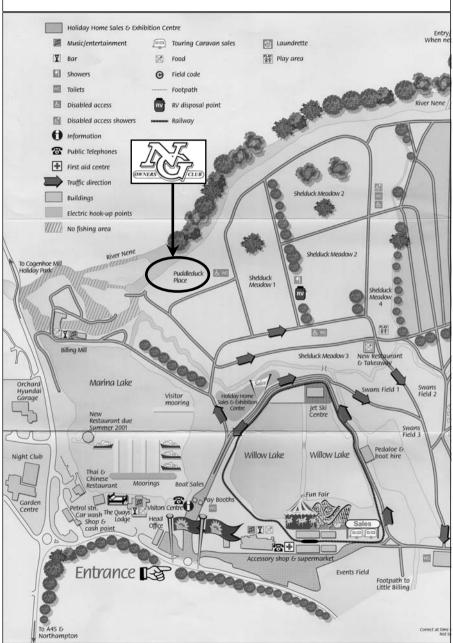
Bob Preece







We are on the Puddleduck Place area with a marquee (near to the W.C. block). We have the whole area from the river to the road (see plan below).



# Members' Letters & Articles (cont.)

#### TCV8 Progress Part 5 (Feb '08 - Apr '08)

When making up the handbrake mechanism, I was rather disappointed to find that the h/brake was not fully effective, locking one wheel but not fully locking the other no matter how hard one heaved on the lever. The brakes are standard Sierra rear disc units that have been reconditioned & hence should be in first-class order. We had been told that these units don't have a decent h/brake and were not expecting miracles but at least expected them to work up to a point! Since the hydraulics were not finished at this point we decided to finish and bleed the hydraulics before having another look at the handbrake. Suffice to say that, after several applications of the footbrake, the handbrake now pulls up evenly on both wheels and seems to be adequate, although not brilliant. We shall have to see what the MOT brake-dynamometer makes of it.

An exciting stage was to run up the oil pump to check for leaks in the system but also to look for visible signs of oil being supplied to the right places. Just before this, I had a fit of conscience that we hadn't stripped down the rocker shafts to ensure that the hollow rockers were clear of gunge such that their bearing surfaces and top ends of pushrods would receive a good supply of oil. This only took an hour or so & was soon sorted.

To do the pressure test, we connected up the electric oil pressure gauge to the battery & perched it on the scuttle (we had drilled & tapped a mounting hole for the pressuretransducer on the remote oil filter housing). Neither the inlet manifold nor the valley gasket was fitted at this stage so that the camshaft & followers would be visible. The rocker covers were also not fitted. With the distributor removed, we were able to use a half-inch diameter shaft in place of the distributor, connected to the drive-dog on the oil pump, and rotated the oil pump using an electric drill. When assembling the oil pump we had packed the gears with Vaseline to aid initial priming of the system having been told that the pump on these engines does not self-prime if run dry. We poured in 5 litres of oil and started the drill. It took what felt like ages to get an oil pressure reading but the gauge rose steadily until we had a reading just greater than 40 lbf/ in<sup>2</sup>. We kept the drill running for a minute or so to give all the joints in the system a good pressure-test and also to watch for evidence of oil being circulated to the required areas. Obviously we will have to as-



Some earlier photos of the build



sume that the crank & other internals are getting their share of oil under pressure but we were able to see oil emerging at all 16 of the follower bores and from both rocker shafts. It was hard work for the poor old drill which started smoking after all the hard work!

After completing the oil pressure test, we then moved onto fitting the inlet manifold. I had previously fitted the carbs' plenum chamber to the manifold as a subassembly hoping to fit the HIF6 carbs at a later date only to find that it is impossible to access the lower carb mounting nuts at this stage. I had to therefore separate this joint to pre-fit the carbs to the plenum. Incidentally, there is no gasket available for this alloy-to-alloy joint and we had applied a smear of Well-Seal to the mating surfaces before assembly. Having done this initially, I had second thoughts about not making a gasket and hence took the opportunity, after removal to fit the carbs, to make a gasket. A small amount of Well-Seal was applied to the central portions of the gasket faces.

I had some help in the garage recently. Donna very kindly agreed to break down some old wiring looms to enable me to re-use the individual cables in a new loom. We had somehow ended up with an old NG loom, an MGB loom and another from sources unknown. It's surprising how fresh the cables look when all the dried mud and old loom tape has been removed. Our intention is to fit a single block with all the relays and fuses under the dash and to build the new loom itself into the car as we go. The plan will be to use the period BMC colour-coding on the wires for easier fault-finding etc.

Next job was to partially overhaul the HIF6 SU carbs & change the needles from BBU to BBW (2 sizes richer) to compensate for free-flow headers & K&N filters. This was a quesstimate for fine tuning later when/if we find that the engine is any good. Unfortunately, I may have made a mistake in not replacing the o-ring seals on the choke mechanism. This is not a problem with the HS carbs fitted to most Bseries engines but is a potential source of problems in the HIF version. Apparently, if the o-rings dry out the carbs will run very rich all the time.

Before running the engine, it was necessary to jury-rig the alternator output to the battery so that we would avoid the risk of blowing the diodes by driving into an opencircuit. This, like most other aspects of the TC, was a little more difficult than anticipated. The rear of the alternator was almost touching the o/s valve-cover leaving no room for the moulded Lucas plug that we had rescued from the old loom. The solution was to cut off the moulded item & add a connector to each individual cable such that the cable exited very tight to the rear of the alternator body. We just managed to achieve about 2mm clearance. A croc-clip was added to the other end of the charging cable and clipped to the battery. The charge-indicator cable was also connected to the +ve side of the battery with a 12v bulb in series. During later engine runs the battery voltage was monitored and seen to be 14.2 volts indicating that the alternator was working correctly.

With cylinder No1 at TDC, we installed the old Range-Rover dizzy & set the static timing. Before fitting to the engine, we installed a set of points, capacitor and rotor arm and set the points at the nominal gap. For this engine, it is necessary to align the dog on the oil pump shaft with the mating part on the dizzy shaft at the same time as aligning the rotor arm in the correct position with respect to the dizzy body & cap. Bearing in mind that the dizzy shaft will be rotated 30 degrees during insertion, it's a bit of a juggling match! However, it's easier to do than to describe and was soon fitted. With a bulb across the points, the static timing was adjusted using a lever on the crank pulley such that the points were just beginning to open at 6 degrees BTDC. Note that during the re-build we had carefully checked that the timing marker did indeed accurately reflect TDC.

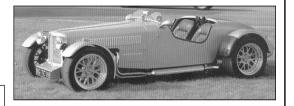
We then fitted the starter &

checked that we still had oil pressure with the engine cranked on the starter and the pump being driven by the dizzy. We were glad to see that the pump, having been previously primed, indicated oil pressure very quickly after cranking was started. We then fitted a compression tester to each cylinder in turn, finding that 4 cylinders peaked at circa 100psi and the other 4 peaked at 150psi. There was no apparent pattern to those cylinders that were down on compression. Bearing in mind that this was an engine that hadn't run for at least 5 years and was stone cold with piston rings that were probably 'gummed up', and hydraulic tappets that were not fully primed, it was difficult to say whether we should be worried about the variation in pressures. At least it should run on all 8 cylinders! Paul Gray

# Member's Information Forms A big thank you to all of you who have taken the trouble to return your Member's Information Forms. Although less than half of members have responded, it is much appreciated. Please also remember to let me know if any of your details change so I can keep the records up to date. Chris Humphreys

**Findhorn Cars Limited** Hill Hampton, East Meon, Petersfield, Hampshire GU32 1QN

tel: 01730 823647 fax: 01730 823580 web: www.ngcars.co.uk e-mail:info@ngcars.co.uk



All NG parts supplied from chassis to brake pads



#### MGOC Octagonal Run 19 Aug 2007

A somewhat wet and dreary Sunday dawned as we made our way to the starting point near High Wycombe for the Octagonal Run organised by the Wycombe Area MGOC. As we supped our bacon rolls, the rain diminished and we were able to enjoy a mainly dry run of 65 miles, though not dry reliably enough to dispense with the hood.

A stop for coffee at the visitors



centre on Dunstable Downs was the halfway point and our final destination was Bletchley Park the home of the Eniama code breakers WW2 during Here we were given an interesting tour by a verv knowledgeable guide.

The Colossus machine, first built in 1943, was the tool the English used to crack the Enigma codes used in German communications in World War II. The breaking of these ciphers was of paramount importance and it is likely that the war was shortened by up to two years and many lives saved as a result. For many years the honour of being the first electronic computer went to the American machine ENIAC as secrecy prevented information about Colossus being passed on. However, Colossus is now generally recognised as being the World's first electronic computer.

A working reconstruction of Colossus has been undertaken and this can be seen on the tour together with a variety of other interesting attractions

(see <u>www.bletchleypark.org.uk</u>).

Chris Humphreys

#### AutoGlym HSCC Historic Festival - Brands Hatch Saturday 28th June - Sunday 29th June 2008.

I'm inviting car clubs (big or small) to come along to the AutoGlym Historic Festival at Brands Hatch at a discounted price and have the chance to park up within Brands Hatch circuit, either on the South Bank or The Colin Chapman way. This means that club members get an up-close and personal experience of the historic racing.

The spectacular amphitheatre of the Brands Hatch Grand Prix circuit will once again see genuine F1 cars in fierce competition, at the Autoglym HSCC Historic Festival on 28th and 29th June 2008. The Festival's headline event is the FIA Historic Formula One Championship, reliving the glory days of F1 from 1966 to 1985. The competing cars are just as they were when driven by such heroes as Gilles Villeneuve, Nigel Mansell and Emerson Fittipaldi.

But it's not just F1 that makes the Autoglym Historic Festival an unmissable event – there is a full and varied programme of historic racing on BOTH days – and a host of attractions for all the family. Wander round the open paddock and you'll have the chance to get up close to the cars and drivers in one of the UK's biggest historic meetings, with classic saloon cars, sports cars and single-seaters.

To keep children amused there's all sorts of entertainment for younger visitors. Whether you prefer the on-track battles, the off-track entertainment, or perhaps simply soaking up the atmosphere of the historic Kent circuit and the free attractions for younger visitors, no one need get bored. It's an event for the whole family.

#### CAR CLUB OFFER:

Car Club members are being offered the chance to come along at a discounted rate of £25 per car for 4 seater or £14 per day for 2 seater (normal cost <u>per person</u> to public is £16 per day in advance or £20 on the day) and you will be able to park on either on the South Bank or The Colin Chapman way.

This offer is for car clubs only, that pre-book their tickets on our Hotline 01707 273999 x 277.

For further information/discounts on bulk bookings please call Paula Skinner 01707 273999 x 280

#### PLUS\*\*\*\*

AutoGlym, our event media partner are giving away to the first 1,000 car club members who book their tickets, an AutoGlym car cleaning kit bag gift! (RRP £10.99)

Paula Skinner

#### West Lancs Festival of Transport Sunday 7th September 2008

Now in its 9<sup>th</sup> year this show, organised by the West Lancs MG Owners Club, has been going from strength to strength. This year's show will be held on Sunday 7th September 2008 at the Leisure Lakes, Mere Brow, near Tarleton, Lancashire, just to the north of Southport.

Last year saw nearly 400 static entrants including classic cars, commercials, motorbikes, fire engines, military vehicles and steam engines. In addition a further 50 cars took part in a morning run of about 60 miles.

A member of the show's organising committee, Chris Nelson, is also an NG owner and club member. Providing there is sufficient interest from other NG owners, Chris is planning on setting up an area of the show ground as an NG club stand, providing an opportunity for NG owners in the northwest of England to get together locally.

Entrance to the show is free for exhibitors; there is a £10 charge per car if anyone wants to take part in the run. Public entrance to the show is £5 with all proceeds from the day going to Derian House children's hospice.

Any members interested in attending should contact Chris Nelson on 07970 892581 or by email cinelson@btinternet.com

Links to previous years' shows can be found on the WLMGOC website at <u>http://www.westlancsmg.co.uk</u>



#### Goodwood Breakfast Club

Thanks to Roy de Boise, who made some calls to remind a few of us that the Goodwood Breakfast Club 'season' had re-started for this year. The meeting in question was Sunday  $2^{nd}$  March and the theme of the day was 'tax-exempt cars'.

For those who aren't aware of these events. Goodwood Motor Racing Circuit, courtesy of Lord March, opens its doors to the public on the first Sunday of each month from March to October each year. I think that this is now the third year and the event seems to get more popular each time we visit. Entry is absolutely free whether exhibiting one's car or just attending as a spectator. As a testament to the increasing popularity of this event, nonexhibiting cars were directed to park in an adjacent field, the on-site parking having been filled early in the day. We arrived at 09:15 and were amazed to find that literally hundreds of cars had already arrived.

It was, I believe, the first time that this particular theme had been used and the idea was absolutely brilliant. There were literally hundreds of visiting cars and the organisers were running out of places to park the cars on display with such a large number of entries. They had originally intended to use only the paddock areas but in the end were parking cars along the race-circuit itself.

Thanks to Rov's reminder, there were at least 3 NGs attending and it was great to see them parked in the Goodwood Paddock in the spring sunshine. It was good to see Jeff & Sue Stretch's TCV8 for the first time. Jeff has certainly tidied up the car and, with his clever attention to detail, the car has a realistic period look that suits the TC concept so well (see pic). I was chatting to Jeff at one point when a guy, looking under the TC's bonnet, said "that's what I like to see - big engine in a small car". So far so good; until he spoilt the moment by saying to his mate "but of course it would be much better with twin-turbos and fuel injection".

It was also good to see Roy & Anne de Boise. Roy has carried out a few more improvements to his TC during the winter; in particular the interior, adding aluminium covering to the propshaft tunnel and making plywood floors instead of non-period carpet. Bob & Manda Preece arrived from the depths of Dorset in their TFV8 which looks as good as ever in its 2-tone colour scheme. We noticed quite a few people admiring Bob's car as we walked past.

The event has the words 'Breakfast Club' in the title and the organisers were doing a roaring trade in cooked breakfasts in an under-cover area adjacent to the race-track (probably the VIP area during the Revival Meetings). For



Jeff Stretch's TC at Goodwood

those wanting less exotic fare, there were several mobile 'burgervans' selling the usual fare plus hot drinks.

As for the other exhibits, the scope was quite amazing and it's difficult to describe just how diverse a range of vehicles were on display. As an example, we saw Facel Vegas, I talian exotics, Jags, Daimlers, Maseratis, Aston Martins, Alvis', Lambos, Ferraris, Bentleys, 3-wheelers, rally cars, VW campers, Rileys, Austin-Healeys, Austin 7 specials, a few kit cars, virtually the whole range of old Fords and Vauxhalls, Triumph sports cars, all MG sports models, American cars and trucks including a few hot-rods. I was particularly taken by a 1948 Harley Davison about to celebrate its 60<sup>th</sup> birthday. Another interesting exhibit was an ancient Bristol that looked as if it had been found in a barn only the day before the event! The paintwork was almost non-existent and it appeared to have a 4-cylinder diesel engine. I have no idea whether this was a standard-fit engine but it seems a bit unlikely – any Bristol experts out there?

In conclusion, a great event and there are several more this year take a look at the Goodwood website for details of the forthcoming themes.

# **Book Review**

#### Automotive Electrics Automotive Electronics

Author: Robert Bosch Gmbh Editor in Chief: Horst Bauer I SBN: 1-86058-436-5 Publisher: Professional Engineering Publishing Ltd Price: (I paid £37.97 inc delivery from www.bookdepository.co.uk) Physical size: 240x175x35mm

I had better start by saying that this book is not about basic car electrics, how to re-wire a car or how to trouble shoot faults within a car electrical system. You may be disappointed, but pause a moment and think more about the tin box you drive instead of driving your NG. How does the anti-lock braking work, why does your car now require 42 volts, how does the electronic stability control work?

No part of a modern car has remained untouched by the huge advancement in modern electronics. Along with the increased reliability there has been an ever greater increase in the complexity and much of that is electrical. This leads to a requirement for a heavy weight reference publication. Automotive Electrics Automotive Electronics is one such example with a huge volume of detailed information within the covers. The section covering alternators alone is 47 pages! Now I will confess to not having read from cover to cover – I do usually sleep at night after counting a few sheep – however every so often I have dipped in and become thoroughly absorbed.

How do vehicle stability control systems work? ESP - Electronic Stability Program. No, not by Extra Sensory Perception - Steering wheel angle sensors are the key part of it. Two pages of text and diagrams explain the basics. The ESP applies braking to individual wheels to keep the vehicle on the track the driver has selected. This is compared with the vehicle's vertical rotary motion (another sensor) and the vehicle's speed (another sensor) to prevent the vehicle becoming unstable.

I have a growing interest in fuel injection systems and have compiled many questions. I often wondered how the engine management system could tell if the engine was pinking or knocking beyond the simple but inadequate – "it has a knock sensor". How does the sensor work, what is it made from, how many are there?

Well the sensor is a vibration sensor and uses the piezo-electric effect. The general rule is a 4 cylinder engine uses 1 sensor, 5 and 6 cylinder engines have two sensors, while 8 and 12's have two or more.

#### Changi NGear June 2008

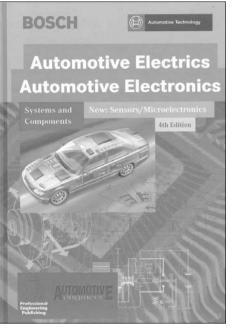
L a m b d a Sensors – I had questions as to how they worked and could I fit one and get a reading from it to set up the fuel mixture.

lambda Sensors measure the oxygen content in the exhaust gases and aive an indication of the air/fuel ratio being supplied and burnt. There six are pages

given to the application, design and construction, operating concepts of these sensors. I had some answers.

Lights – fifty one pages on lighting technology. From the legal framework, projection patterns, operation of incandescent and halogen bulbs, to headlamp reflectors and beam shaping. The detail and depth is immense.

I have to share this gem... Occupant classification and detection of child's safety seat! When the law changed and wearing seat belts became compulsory many years past, manufacturers fitted simple switches in the seat base and within the seat belt latch to detect if the seat was occupied. More recently air bags have become the



expected norm. There was then a new set of problems. If the air bag deploys because the passenger seat is occupied bv miscellaneous items then unnecessary repair costs are incurred If a child is sat in the front or an infant in an additional safety seat is in the front then in this situation it b e may

detrimental to the youngster if the air bag were to deploy. Occupant Classification was born and our cars got even more complex. A special sensor mat is fitted within the seat base and this measures the human sitting profile – the relationship of the distance between the hip bones compared to the body weight. Can you see the future – car seats that display your weight too!

That's exactly why I love my NGs – no electrical complexity.

In conclusion a fascinating read and a mine of detailed information, however at nearly forty pounds I would recommend you borrow a copy from your local library.

## **New Members - Welcome**

MR IAN DICKSON (1403) (TF) BAILDON, W. YORKS

MR ALAN CROUCHER (1404) (TA) DANBURY, ESSEX

MR GEOFF FRY (1405) (TF) NESTON, WILTS

MR ARTHUR HANSON (1406) () OSTRACH, GERMANY

We are always glad to receive new members. Please contact Bob Morrison, our membership secretary—details inside front cover.

Membership is £12 per year or £10 if you set up a standing order (with reduced rates if you join later in the year). Membership includes quarterly issues of ChangiNGear and some companies offer reduced kit car insurance rates. Most of all you will be joining one of the most friendly car clubs around!



## Sales & Wants

Reminder: unlimited advertising is free to members but ads may be removed after 2 issues unless I am notified that you wish to re-advertise, (For nonmembers there is a charge of £5 for 2 issues). Ads will also appear on the NGOC Web Site unless you specifically request otherwise. Ads may be accompanied by a single photo and may be sent to me by post or email. Ed.

## For Sale

Breaking For Spares NG TF. Complete MGB based TF breaking. 1800 engine with Rover 5 speed adapted to fit LT77? Good panels, tub, running boards, etc. Alloy screen, adapted Midget handbrake, etc. 2000 miles since new. Rear springs, shocks, brakes, front brakes, front suspension overhaul, with V8 bushes, etc. Stood 12 years surface rust but good components. Just ask for what you need - all parts chassis, etc. Tel: 01484 422967 Email: jayz@deezs.fsnet.co.uk



NG TF roadster properly registered on V5, colour midnight blue, MOT till March 2009, TAX to Sept 2008,

Donor Marina, built 1996, not used regularly till 2005, full hood, side screens, full tonneau, half tonneau, Lacock overdrive, new gearbox 2006, new dashboard 2005, new battery 2008. Any trial, this car has never seen the rain. Reason for reluctant sale of this beautiful car is new NG TF on the way. £5500 Tel: 01634 861608



NG TA Roadster (1968 donor), 1800cc, navy blue, excellent condition. Documentation including build manual, DOT pass sheet, all MOTs, receipts and info about the car. Californian imported engine, reconditioned, unleaded. Four speed gearbox, stainless steel exhaust, 15"

wire wheels, 4-seater if required, new full hood and half tonneau cover. Tax exempt, MOT to Jan 2009. £4750 Tel: Malcolm 01708 688044 Mob: 07721 415227



NG TF, built 1996, Marina based 1800cc running gear, full tonneau cover, full hood & side screens, fold flat chrome-on-brass windscreen, heater, walnut dash, fully instrumented, electric cooling fan, knockon wire wheels, black paintwork with chrome trimmings. Non Q plate. £5500 ono.

Tel: 01634 362536



NG TF, based on 1973 1800cc MGB with overdrive and wire wheels, correctly registered. 12 months MOT, 6

months Tax. Full weather gear and tonneau. Excellent condition. £4250 Tel: Niall 01981 240632 Mobile: 07775 840448



**NG TF** (1973 MGB Based) **V8**, 5speed. Very good red painted bodywork with doors, cream interior. NG logo radiator and spare wheel caps. New chrome wire wheels plus spare set of wires. New propshaft, new battery, new waterpump. Tonneau cover, wood dash, Mota-Lita steering wheel, fold-down screen and aeros. MOT Dec '07, Tax Feb '08. **£4250 or sensible offer**. Tel: 02392 649127



Please send your NG adverts to Chris Humphreys

(contact details inside front cover).

Remember, adverts are free to members!

#### **Club Products & Regalia** - available from Mark Staley 7 Loxley Close, Oakwood, Derby, Derbyshire DE21 2PU Tel: 01332 723927 or 07711 124153 Email: mark.staley2@ntlworld.com

The following items are now available (logo is contrasting silver/black)



Sweatshirt (navy, dark green) L, XL Polo Shirt (red, black, navy, white) M, L, XL Baseball Cap (navy) Beanie (navy)  $\pounds 12 + \pounds 2.50 p\&p^*$  $\pounds 10 + \pounds 2.00 p\&p^*$  $\pounds 8 + \pounds 1.50 p\&p^*$  $\pounds 7 + \pounds 1.50 p\&p^*$ 

\*p&p charge up to a maximum of £6.00 Please state size/colour, cheques payable to NG Owners Club

#### Club Literature - available from Chris Humphreys

The following 4 items of club literature are now available as PDF files to download from the NGOC website at <u>www.ngownersclub.org.uk/articles.htm</u>. Alternatively send £1.50 per printed copy to Chris Humphreys (cheques payable to NG Owners Club)

- L1: MGB/NG Electrics (Brian Baggerly 1985)
- L2: Car Spraying (Peter Fellows c1985-90)
- L3: Fitting Doors (Mel Clark 2001)
- L4: Fitting Enclosed Boot to TF/TD (Brian McCarthy & Chris Wilson 2001-2)

Several other titles are available - e-mail Chris for further details.

Printed by Nimbus Print, 82 Crown Lane, Southgate, London N14 5EN

# CHANGINGEAR



Photos from Detling

Kit Car Show



the magazine of the NG owners club