# CLASSIC SCENE

HIGHLAND CLASSIC MOTOR CLUB

## CLUB OFFICIALS

**Chairman:** **Trish Brown**
Tel: 01862 832337
chairman@highlandclassic.org.uk
**Secretary:** **Alice Brown**
Tel: 01862 832337
secretary@highlandclassic.org.uk
**Treasurer:** **Ian Thompson**
Tel: 01463 790969
treasurer@highlandclassic.org.uk

## ARCHIVIST

The club has an extensive archive of information relating to all aspects of classic car ownership. To access this please contact Ranald Smith, at Hawthorn Cottage, 2 Burn Road, Inverness IV2 3NG. 01463 236459
ranaldsmith@btinternet.com

## MEMBERSHIP

**Bryan McIlwraith**
Renewals should be sent to Bryan at 72 Lochalsh Road, Inverness IV3 6HW
Tel: 01463 222839 (Work)
01463 232144 (Home)
bm@invernessosteopaths.co.uk
Please let Bryan know if you have an email address.

## HCMC HOMEPAGE

www.highlandclassic.org.uk &
Webmaster@highlandclassic.org.uk

## EDITOR

**Alan Goff**
48 The Cairns, Muir of Ord, IV6 7AT.
Tel: 01463 871114
Email: editor@highlandclassic.org.uk

## CLASSIC SCENE

**The next 'Classic Scene'**
**GOES TO THE PRINTER**
**on the Monday of the week preceding the next meeting**
***Please*** send articles by e-mail or typed.

## COPYRIGHT

Neither the Editor nor the Officers of the Highland Classic Motor Club are necessarily in agreement with opinions expressed in this magazine. Such opinions are entirely the views of the author and imply no recommendation by the Highland Classic Motor Club.



## COVER PICTURE

A Very Nice Ford Corsair.

Shame about the noisy V4 engine!

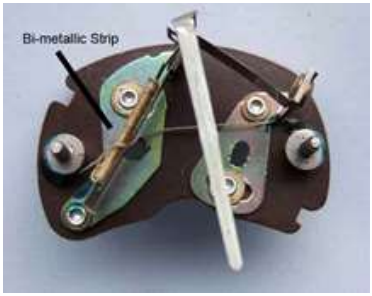
# THE EDITORS MONTHLY RANT

## WHATEVER HAPPENED TO CVT?

CVT? The constantly variable transmission. It was first seen in any numbers on the Daf range of small cars. They called it the Variomatic and much fun was made of it as the car driven by elastic bands. Not strictly true as it was the transmission that used rubber belts very similar to a fan belt. My Dad had a Daf 33 for a while and the Variomatic was fine in a low powered car. The only real problem was you had to start the car in gear as you couldn't shift into drive from neutral while the engine was running. So no revving the engine after starting as it would move off. Volvo then bought Daf and a few Volvo's and re-badged Daf's were around with the Variomatic. Volvo then lost interest in the Daf side of things as it was rumoured that they only bought Daf for its truck division. Ford then brought out a Fiesta with a CVT and they had updated it from a system that instead of pulling on rubber belts to one which pushed via a complex chain. A friend on mine bought such an equipped Fiesta as her Mum shared the car and couldn't drive a manual because of a back injury. It was very different from the Variomatic as the engine was bigger and seemed to be always at high revs at the slightest hint of accelerator pedal. Sounding very much like a manual car with rampant clutch slip, until you lifted off the accelerator and the revs died away to nothing. The CVT then seemed to disappear from the scene. At the beginning of the month Jane and I went to Florida and included was a rental car. I was quite happy with the car offered, a compact size Chevrolet Spark. On our first visit to the US I upgraded to a Chevrolet Monte Carlo, with a "hood" you could land a helicopter on. The "Spark" had an auto box and it took a few days to realise that the car didn't really seem to change gear. A quick look in the handbook revealed that the car was in fact a Daewoo Matiz with a CVT box. The latest version of the CVT does seem to have "steps" that seem a bit like a gear change and I have no complaint about it's usability. But floor the accelerator and yes, it still sounds like clutch slip!

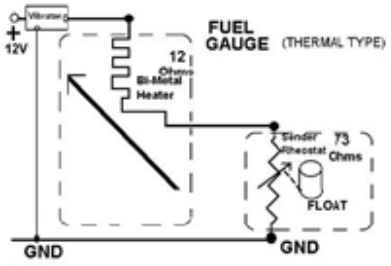
**Classic Fuel Gauges**

Many older cars use an electro-thermal fuel gauge system. These are based around bi-metallic strips wound with resistance wire. Passing an electrical current through the wire heats up the bi-metallic strip, the two bonded strips of different metal types expand by different amounts and the strip bends. Cunning mechanical mounting can make this bend pull on a spring-loaded needle. Add a scale and you have a way of measuring electrical current. More current generates more heat and the needle moves up the scale.




Now if you vary the current in proportion to the amount of fuel in your tank you have a fuel gauge. This is done by connecting a float to an arm and having an electrical wiper move across a strip of carbon or a coil of resistance wire changing the electrical resistance. Careful arrangement will cause more current as the float rises in the tank. In a series circuit with the fuel gauge, the current is now proportional to the fuel level, and we have a fuel gauge. A clever feature of this arrangement is that it takes time for the strip to heat or cool the bi-metallic strip in the gauge so there is a natural damping of the needle reading to even out the effect of fuel sloshing around the tank.

Here's an electrical diagram.



In motor vehicles, the battery voltage is rarely constant as it can be under charge when driving or low voltage when starting on a winter's day and so as described earlier, the fuel gauge would give a variable reading. What we need is a way to keep the voltage constant. Welcome back to the bi-metallic strip! Let's make it into the traveller of a switch.

In a series circuit more voltage from the battery causes more current which bends the arm and opens the switch until it cools again. This happens 2-3 times a second. More current means more bend, which means more time spent switched off. What you get is an electrical vibrator, and the average of the "offs" and "ons" over time is effectively a constant voltage – just what we need.

Because of the damping nature of the fuel gauge you can't see this off-on pulsing happening and we get a fuel gauge that is independent of battery volts.

**Fault Finding**.

Ethanol in modern fuels can eat away at the float causing it to leak and not er, float giving a low reading.

The voltage stabiliser can go open fail with no output or variable output. It's difficult to measure the output volts accurately as they pulse but you might get something around 6-8 volts on a 12V system.

The thin wire coil on the bimetallic strips can break on either the voltage regulator or in the gauge.

The wiper at the sender end can fail and this can be checked with an ohmmeter and moving the float up and down.

And don't forget the basics of circuit continuity and good connections.

**Conclusion**

A good working fuel gauge should ensure you don't run out of fuel on a club run – unlike the author.

**Calum.**

# FOR SALE
## Both ads from Gordon Stewart

I have a MGB GT 1977 that I would like to sell, It is British Racing green, it is a good runner, engine, gearbox & O/D all good, it does need welding for nearside sills but have all the sills here. I have a new uprated front brake system for it just fitted(£275), all the seats have been fully refitted in Muirhead soft black hide (over £1000). It has all doors & panels fitted, brand new wooden steering wheel, dash in but seats & interior stripped out, all carpets & interiors in excellent condition. It drives & goes very well, it has been converted to unleaded fuel & all inspections welcome...

The car is in dry storage garage in Fife, so as I cannot finish the work, do you have any members that would be interested in the car as a whole or for parts, I have the V5 & it has an ace 6 digit number plate too, am open to offers & it would be great to hear back from you.

Many thanks, Mark 07746 117189

I've been approached by Vicky Fraser, from the Funeral Directors in Chapel Street, Inverness, who is selling her late father's car and wondering if I knew of anyone that would be interested. She would like it to go to a good home. It's a 1998 Daimler Sovereign.
For more details she has put it in the www.carandclassic.co.uk/car/C517986

Regards,
Gordon

| DATE | CLUB EVENTS | VENUE & INFO |
|---|---|---|
| 4th Sep 2014 | Club Run | Royal Hotel, Cromarty<br>Meet at North Kessock Hotel 7.30pm |
| 2nd Oct 2014 | Club Meeting | Save a Life. First Aid Basics.<br>Moray Training Centre. 7.30pm |
| 6th Nov 2014 | Club Meeting | Old North Inn. HMS Natal by Paul Monk. |
| 4th Dec 2014 | Club Dinner | At Maple Court Hotel |
| 8th Jan 2015 | Auction Night | TBC Annual Club Auction—7.30pm |
| 5th Feb 2015 | Club AGM | Old North Inn AGM 7.30pm |

| Date | LOCAL SHOWS | VENUE & INFO |
|---|---|---|
| 30th Aug 2014 | Fortrose & Rosemarkie Classic Vehicle Show | Meet by 11.30am Dingwall Auction Mart IV15 9PT for 60min scenic run then static display at Fortrose Academy |
| 6th Sep 2014 | Dingwall Car Show (Great Fail Maree). Dingwall | |
| 7th Sep 2014 | Motor Mania at Grantown on Spey | www.grantown-motormania.co.uk Register Early |

# CHAIR BITTY SEPTEMBER 2014


Did you miss us last month? Well, our Smart had a tantrum. Alice noticed that the Smart appeared to be running a little bit warmer in previous weeks. She did suspect the cooling fan, but as it is hidden away under the car, you can't see what is going on. And the recent journeys weren't long enough to say for sure. So when she drove into Inverness on the Thursday of our meet, the engine temperature rose to alarming levels. We really didn't fancy cooking the car and thus, after giving the car time to cool down, we nursed her back home. It turns out that the fan has completely parted company from the electric motor. Back to the garage it is for a new one.

It was the day after the storm that Alice towed a caravan to Embo with the LandRover. During this trip the clutch started to play up. Not good when you are towing a double axle. After delivering the caravan, Alice nursed the Landy back home (you will by now have gathered that Alice is very good at nursing cars), at which point the clutch simply packs in. The master cylinder is relatively new, so we suspected that either the slave cylinder or the hose connecting the two had gone. Because Landy parts are relatively cheap, we weren't taking any changes and replaced them both. The clutch is now back in working order and light as a feather. Hmmmm, perhaps it was on the way out for some time…

And then, as we are working on the slave cylinder, the wind catches the passenger door and the door top nearly falls off. Now, we purchased a replacement door top about 6 years ago, because it was on its way out then. Just never got quite got round to fitting it. This has now been done. Best bit is, I can open the window again!

Not to be outdone by either car, the Merc has decided to part company with the rear heat shield. Owing to it's shape we did not loose it, it had dropped on to the rear silencer producing a very annoying rattle. 4 Large washers later and that will be sorted too.

After all that excitement, we can do with an uneventful run to the Royal Hotel in Cromarty at our next meet.

Starting point is North Kessock Hotel at 7.30

Cheers,

Trish

## THE ROAD TAX DISC– A SHORT(ish) HISTORY– Part 1.

With the coming demise of the familiar Road Tax Disc from 1st October this year, this would seem a good time to take a look back at their history and origins ... they have an interesting story to relate, there is more to that funny round piece of paper than you might think…

The British Tax Disc or Road Fund License is essentially a document, displayed on all road vehicles, to prove payment of the tax for the use of the public highway in the United Kingdom. The display of Tax Discs on vehicles in the United Kingdom started back in 1921, with the implementation of the Roads and Finance Act 1920, but the whole story of taxation of road use goes back way before then.

### Pre- History ...

In late medieval times, tolls or turnpikes were created for the use of a specific length of road, or even a bridge. This was a very direct form of taxation: if you used the road, you paid the toll or tax. It did not matter who you were or whether you rode or had the (relative) luxury of a coach or carriage. Taxation of the vehicles themselves did not rear its ugly head in Great Britain until 1637, when Hackney cabs were required to be licenced. Then in 1747, <u>all</u> horse-drawn carriages, drawn by two or more horses attracted a similar annual tax or licence. The first tax on mechanically-propelled vehicles followed surprisingly swiftly afterwards in 1770. However, these machines were steam-powered and crude and were never used in large numbers, mainly due to their inefficiency and cost, and the rough roads.

By 1861, the Locomotive Acts controlled taxation of vehicles on British roads. At this stage, the administration of the Acts was via the local county offices, a system that was to remain right up until 1974, when the Driver and Vehicle Licensing Centre (DVLA) was created at Swansea - now the DVLA - though it still maintains about 40 local offices. The Locomotive Act of 1865 created the infamous 4mph speed limit and the man with the red flag ! It was around this time that the term 'keeper' came into use, rather than 'owner', a term still seen today on the modern V5C.

If you owned a steam vehicle or a coach and four back in the 1860's, then you needed to purchase an annual licence, through your local county council, valid until the December of that year. Just like the modern-day Tax Disc, if you had more than one coach, you had to buy a licence for each one in your possession. Unlike the present system, the piece of paper that you held only permitted you to use the roads of the county for which it was bought. If you had the misfortune to live right in the 'corner' of a county, in close proximity to one or two neighbouring counties within your likely radius of operation, then additional licences were required for each county's roads used…… at typically two guineas a shot (£2.10 in modern parlance ) per carriage, this was potentially a very expensive exercise!

The licence itself at this time, took the form of a certificate, printed on thin paper, rectangular in shape, that contained the address of the owner, a description of the vehicle ( eg 'carriage drawn by four horses' ), the county of issue and the amount paid.

And so to the advent of the motor car on our roads, with the first car appearing in 1894 - a Benz as it happens, and this car probably still survives. Yes, Britain was importing German cars as long ago as that! The 1896 Locomotive and Highways Act was generally more friendly to the driver, enabling more popular light motor vehicles to be used - vehicles under 3 tons were exempted from the legislation requiring the man with the red flag, and the speed limit went up to a dizzying 14 mph! However, regulations followed on soon, reducing it back to 12mph and introducing such niceties as passing on-coming traffic on the left, and keeping to the right when overtaking. In addition, the driver was required to stop at the instruction of a police officer or any person 'in charge of a restive horse'....Shortly after this, by 1889 the unstoppable grasp of the Tax Man meant that virtually all vehicles on British roads were subject to an annual tax or licence. Though an increasing number of motor- and steam- powered road vehicles began to use our roads, the first legislation to refer to "motor cars" by name, was the Motor Car Act of 1903. This is a seminal Act, inasmuch as it introduces number plates to identify individual cars on the road as they pass, as well as specifically requiring them to be registered annually at the county offices by number. County Councils and County Borough Councils were made Registration and Licencing Authorities. The number plate incidentally, is a French invention, like the roundabout, first used in Paris in 1893.The 1903 Act set the annual registration fee at £1 for a car and 5s ( 25p) for a motorcycle. The Act also passed the responsibility for collecting the tax from the Inland Revenue to the county councils themselves, with whom it stayed until 1974. The speed limit was also a more realistic 20 mph by then.So, we now have the basis of a modern system of controlling the motor car: a car is identifiable as it hurtles past you at 20mph ( just imagine what Top Gear would have been like back then.). Having noted the registration number, the police or any other authority could locate the owner very simply. Not surprisingly fines for driving unlicensed vehicles, speeding and reckless driving all increased as it became possible to identify the culprits. It should be said though that the amount of such offending behaviour, especially speeding, was rising with ever greater numbers of more efficient cars.