

# Royal College of Science Motor Club

## Termly Report to CSB

### **What is the RCS MC?**

The RCS MC is the society charged with the care of the Royal College of Science's vehicular mascot Jezebel Dennis. Donated to the students of the RCS in 1957, Jezebel is now a sprightly 96 years old and still attends a large number of events both on and off campus – as far we can ascertain Jezebel does the largest number of miles of any solid wheeled tire vehicle anywhere in Europe – for more information check out our website [www.union.ic.ac.uk/jez](http://www.union.ic.ac.uk/jez). Consequently the main work of the club is keeping Jezebel in a working condition and acting in her capacity as Mascot for the RCS (in doing so advertising the University and Union).

In addition to weekly (often twice weekly) garage sessions working on Jezebel, the club maintains a large collection of resources and information on Dennis N-type fire engines (of which Jezebel is the only remaining example that has been in continuous use). We keep in contact with collectors the world over and have recently been advising a chap in the Australian Outback who has started restoring the town of Tambo's N-type which has been on display in the open for nearly 23 years.

A lot of the work the club does is supported heavily by Alumni of the club. Due to insurance requirements there are currently no students able to drive Jezebel so we are currently reliant on Alumni – we hope to have one student driving during next term once she has turned 21, as well as a number of other students insured to drive at the start of the next academic year. Alumni regularly come in both at short notice and on a regular basis to teach members of the club and help us in the on-going conservation and repair work the club does.

### **The First Term**

The Autumn term is both Jezebel's busiest and quietest time of the year. The members of the club worked every day during Welcome Week (and nearly every day the week after as well) to ensure that as many Freshers as possible got a ride on Jezebel during the first week. In addition to giving lifts to students from Halls to the Mingle on both nights, Jezebel gave tours of London to all the students in Fisher Hall when they weren't busy climbing up Queen's Tower. We also took part in the Freshers' fair, again giving tours to any interested people (Freshers, Undergrads, Postgrads, Staff, and members of the public all got a ride) and helped with the RCSU Autumn Ball. We estimate that we carried over 500 Freshers to/from various events during the first week of term and we aim to increase this number next year helping to make Welcome Week even more memorable for the new students.

The whole of the first week Jezebel was struggling with a slipping clutch and on multiple occasions had to be pushed out of her garage before she would get going. This, combined with part of the brake rod failing on the Wednesday of Welcome Week, meant that Jezebel was unable to attend the RCSU Pub Crawl. Two Alumni of the club were kind enough to come in early Thursday evening and helped to make up a replacement brake rod (as far as we can tell the part that failed was an original piece and had done 96 years' service), despite the repairs, the issue with the clutch made Jezebel undriveable. Alumni, returning members of the club and a number of new members of the club spent Friday evening and all day on Saturday taking the clutch apart, identifying and then fixing the problem, before finally reassembling the clutch. This having been completed Jezebel was able to attend her engagements the following week.

Following on from the advertising, we held a number of introductory garage sessions to allow the new members of the club a chance to learn the basics of how the fire engine works and get their hands dirty. These events, coupled with the issues described above meant we

carried out a lot of maintenance work over the first couple of weeks of term and all members of club have had plenty of opportunity to get thoroughly involved regardless of their experience level.

We also ran two pump training and practise sessions in October. Jezebel still has a working pump (now at least 40 years old) which is rated to over 750gpm (the same as on modern fire engines) and Motor Club often does pumping displays when she attends shows in the spring and summer. The pumping sessions were held in Hyde Park where we suck water out of the Serpentine, before returning it through brass branches. Members of STOIC were also invited along to have a go and do some filming and they are putting together a video about the trip. We had a number of new members taking part, and we were kindly assisted by Alumni who have been doing pumping displays for many years with the club.

Alongside the various garage sessions and events, the committee have been working to bring all the of documentation of the club up-to-scratch; a number of changes to licensing laws, MOTs and the insurance regulations meant that a large amount of paper work was now in need of updating. In light of these changes and other changes the club has made to its general operating procedures meant that the club's constitution was in severe need of updating. After consultation with Alumni, members and following a General Meeting, a new constitution was passed (and subsequently ratified by the RCC). This was a lot of work for the committee as the club has a large number of regulatory processes and lines of responsibility made necessary by the nature of the club – we have to conform to certain health and safety requirements and ensure that we look after Jezebel in such a way that she can continue to be used by students of Imperial College for years to come. We are already beginning to make plans for Jezebel's centenary which will be in 2016.

Jezebel also took part in Commemoration Day assisting in the ferrying of the Rector and other special guests between 176 Queens Gate to the Royal Albert Hall, as well as giving lifts to students back to Queen's Lawn. When not driving backwards and forwards, Jezebel was parked at Queen's Lawn or the Royal Albert Hall so students could have their photo taken with the vehicle.

November sees the annual Veteran Car Run from London to Brighton. Whilst Jezebel is too young to enter the event herself she often drives the route acting as a tender vehicle for Boanerges. Over the last two years this event has seen Jezebel brake a number of parts resulting in her being off the road for most of the next 6-9 months followed by light duties whilst she is being 'run in'. This year the committee decided that we would only drive half way to Brighton, as both Jezebel and Clementine had only recently finished major engine work. Despite the torrential rain that fell most of the morning, Jezebel made it to Staplefield (the half-way point) without too much bother – the club made its traditional breakfast stop at Alumnus 'BJ' 's house for a cooked breakfast and a chance to dry out. The return journey was also reasonably uneventful and Jezebel made it back to her garage without going bang for the first time in three years.

Typically the second half of November, and the winter months are Jezebel's off season, when we do any overdue maintenance or conservation work. This year looks to be no exception; the gear box is currently suffering from a leak and is in need of some attention and when we had the rear wheel off earlier in the term it was noted that the brake linings were in need of replacing, this is planned for early in the New Year.

However, before the end of term we are planning a trip to see the various Christmas lights that are up in places like Oxford High Street. This year we are aiming to promote this to as many people across campus as possible. This used to be a big event for RCSMC but over the last few years the trip has not taken place as Jezebel has been off the road. We hope to

continue to make Jezebel as visible as we can and get as many students taking part in trips and events as possible.

### **General Mechanical State**

Currently Jezebel is in working order. We hope that the current set of bearings will now last for another 10-20 years (if not longer). It has been the failing of bearings that has been the main cause of Jezebel spending most of the last two years off the road. In general Jezebel is continuing to behave as expected for a vintage vehicle approaching her centenary and as well as expected for a Dennis N-Type.

We are intending on investigating the gearbox which is currently leaking oil more than is expected (every single N-Type leaked/leaks oil from the gearbox). There is also a 'larger than normal' oil leak around the nearside rear wheel, it was this that motivated the removal of the wheel earlier in the term. This is believed to be coming from the rear axle and will be investigated when we are changing the brake linings in the New Year.

There are a number of projects that we would like to complete over the next few years in preparation for Jezebel's centenary but we will be arranging these in the coming months and years, details will be in future reports.

### **Financial State**

Owing to the large amount of repair work that has happened on the bearings over the last few years, the club has made claims from the 'Motor Club Reserve' (for more details see the paper: *The Motor Club Reserve, a note by Philip Power [July 2012]*). The last but one set of bearings were paid for out of the pocket of the Alumni, and the most recent (i.e. the set that are currently in the engine) were produced for the first time by the club in an effort to save on costs and to avoid dependence on increasingly expensive and difficult to find skills. We are now able to do any further bearing casting in-house should it become necessary (we sincerely hope this will not be any time soon).

The club operates according to the following principals:

- The cost of purchasing equipment, maintenance and buying parts for Jezebel, and any other ancillary costs associated with the operation of the garage are met by the Union through the grant given to the club and, in the event of a large expense, the Motor Club Reserve.
- Jezebel's attendance at Union, College, or RCSU event (or any other society) is met by the organisers or from the grant dependent on the specific nature of the event. This is organised in advance. Owing to the nature of the insurance and regulations governing the license needed to drive Jezebel, the club cannot charge for her attendance at any event, but the cost of fuel (at zero VAT), and any expenses for the crew may be charged – donations to the club are also fine.
- Members and Alumni of the club give their time free of charge to drive, repair and look after Jezebel (one of the main reasons why membership of the club is free).
- The cost of running club trips or events is met by the members taking part or any SGI as these are not covered by the grant (again part of why membership of the club is free).
- In exchange for donating his/her time, a member is (potentially) trained in repairing/maintaining the fire engine, driving the fire engine, operation of the pump, and other similar skills.

The current budget for this year is looking healthy, and we hope not to need to make a claim for the new breaks as we anticipate being able to cover the cost out of the grant for equipment. A detailed breakdown of this year's budget will be included with our budget application for next year. It is worth highlighting that the way we spend our grant is quite

uneven over the course of the year typically following this pattern: Freshers events sees a reasonable level of expense on fuel and other consumable, Winter sees new parts/maintenance related costs, whilst Spring and Summer is a sustained busy season and sees lots of expenditure relating to fuel and attendance at various events.

Last year following a Health and Safety inspection our wall mounted fan heaters were removed, as was our oxy-acetylene welding equipment. This led to the club, in conjunction with the Royal School of Mines Motor Club and the Veteran Vehicles Motor Club, putting in a grant application to Harlington for £1,751.70 of which we were awarded £1,733.71. This money is to cover the cost of buying oil heaters to heat the garages of the clubs in order to prevent damage to the vehicles during the winter months, and to purchase new welding/heating equipment to be shared between the clubs. Owing to some confusion as to where this was to be paid, the clubs have only recently been in a position to arrange spending the money. We hope to have the new heaters before the end of the term, with the other equipment bought next term.

### **Membership**

As part of the new management arrangements the club was set a membership target of 20 members for our grant to be achieved. The club currently has 30 student members and 13 life/associate members. We typically have between 3 and 7 people in the garage most Wednesday afternoons, with the numbers in on Saturday varying widely depending on how much maintenance/repair work is being carried out.

We hope that the Christmas lights trip will encourage more students to join the club (they have to join before they can go on the trip) but we do not expect that more than one or two are likely to become involved in the general upkeep of the vehicle. This is nothing new, the clubs have existed for over 60 years with a core team of mechanics and a large group of members who take part in club events. This is especially true in relation to summer rallies. In recent years the large community associated with the club has shrunk as the club has had a lower profile on campus due to Jezebel spending a lot of time off the road. We hope that we will be able to raise Jezebel's profile this year and get more people involved.

### **Future Events**

In addition to the Christmas Lights trip already discussed the rest of the year's events / Jezebel's appearances are typically:

- May Brighton Run – this is the Historic Commercial Vehicle's run and Jezebel has won prizes in her class in previous years. We hope to complete the full run this year.
- Postgraduate Commemoration Day, similar event to the Commemoration Day for undergraduates, Jezebel gives lifts to the Rector and other guests and poses for photos.
- RCSU Spring Ball – rides for students at the ball.
- RCSU Summer Ball – rides for students at the ball.
- Kew Bridge Steam Museum Fire Appliance Show – a public show where we do pumping displays. A number of other appliances from the 19<sup>th</sup>, and 20<sup>th</sup> Century attend.
- Isle of Wight Steam Show – this is the longest show that the club goes to, and Jezebel is considered the “star of the show”, due to being off the road, she has not made it for the last few years and we are really hoping to get her this year.

## **RSM Motor Club Termly Report to CSB – Autumn Term 2012**

### **Introduction**

Clementine II (Clem) has been the motorised mascot of the Royal School of Mines since 1960, when she replaced the original Clementine, whose boiler had become unsafe. Clem is a 1926 Morris T-type truck. Clem is cared for by the RSM Motor Club and we do almost all required maintenance and repairs ourselves. These are usually carried out in our twice weekly garage sessions. The club is also responsible for training drivers so that Clem can attend various College and Union events.

The club is strongly supported by alumni. Their knowledge and experience is invaluable, as Clem is different to a modern car in many ways. We are also reliant on alumni drivers as our insurance does not allow anyone under the age of 21, we have a number of student members who are keen to drive Clem when they are old enough.

Last year, Clem's engine was replaced. Her old engine (not her original engine) had a large number of cracks and was unable to maintain pressure. Unfortunately this meant that Clem was off the road for most of last year. The club acquired the spare engine about 15 years ago, when an appropriate period engine became available at a competitive price. The new engine is performing nicely and has already done a significant number of miles.

### **Summer**

In August Clem travelled to the Isle of Wight for the annual Isle of Wight Steam Show. Clem is invited every year, but was not able to attend last year due to the aforementioned engine troubles. The cost of the ferry is covered by the show, all other costs were covered by the members who accompanied her. Clem made the entire journey under her own power.

### **The First Term**

Welcome week is always a busy time for the club, with RSM Motor Club being one of the first clubs that many students have contact with when they first arrive at Imperial. On Saturday and Sunday evenings we gave lifts to students from their halls of residence to the Undergraduate Mingle. On the Sunday afternoon we gave short tours of the local area to students from Fisher hall, while they were waiting to go up Queen's Tower. On Tuesday we held a stand at Fresher's Fair and again gave tours to anyone interested – we had to do one more tour than planned as one group was so disappointed that they had not had a ride on Clem. Tuesday evening Clem accompanied the RSM students on their pub crawl – all the students were very pleased to see their mascot (especially as Davy could not attend for logistical reasons) and have rides between pubs. On the Friday of Welcome Week Clem underwent her last ever MOT - from November all pre-1960 vehicles do not need an MOT.

During the first few weeks of term we held induction-style sessions for new members. These were predominately taken up with routine maintenance, which gave everyone a chance to get involved and begin to find their way around the vehicle. Clementine also attended the Undergraduate Commemoration Day, where she carried VIPs, graduating students and their families between College and the Royal Albert Hall. She also posed for photos outside the Royal Albert Hall and in front of Queen's Tower.

The first Sunday of November is the annual Veteran Car Run from London to Brighton. Clementine is too young to enter but normally goes along to give Boanerges moral (and sometimes practical) support. As Clem and RCS's Jezebel were both still recovering from major repairs (and in light of

the fact that several serious mechanical incidents have occurred on the run in the past few years), it was decided to only go as far as Staplefield (just over half way), stopping enroute for breakfast, kindly provided by an alumnus. Despite the weather, Clem made it to Staplefield and back without incident (and before midnight!).

As it gets colder, things have been winding down towards the end of term but we have started to repaint Clem and replace her windscreen – there are a few other cosmetic issues that we wish to correct/improve but are currently sourcing appropriate materials. We are also running a trip to see the Christmas lights in the last week of term, which we hope will boost the profile of the club and reinvigorate a much-loved motor club tradition.

### **General Mechanical State**

Clementine's 'new' engine seems to be running nicely and we have had no problems related to this. There were a few minor issues flagged as advisories during the MOT, which have either already been looked at this term or will be looked at early next term.

### **Finance**

The club operates according to the following principals:

- The cost of maintenance of, purchase of equipment and parts for Clem, and any other ancillary costs for the operation of the garage is met by the Union though the grant given to the club and, in the event of larger expense, the Motor Clubs' Reserve (see *The Motor Club Reserve July 2012*).
- Clem's attendance at Union, College, or RSM events (or any other society) is met by the organisers or from the grant depending on the specific nature of the event. This is organised in advance. Owing to the nature of the insurance and regulations governing the license need to drive the Clem, the club cannot charge for her attendance at any event, but the cost of fuel (at zero VAT), and any expenses for the crew may be charged – donations to the club are also fine.
- Members and alumni of the club give their time and expertise free of charge to drive, repair and look after Clementine.
- The cost of running club trips or events is met by the members taking part or any SGI as these are not covered by the grant.
- In exchange for donating their time, a member is (potentially) trained in repairing/maintaining Clem, driving Clem and other similar skills.

### **Membership**

RSM MC currently has 22 full members and 10 life/associate members. As Clem has recently been off the road, most of the existing members are those who are interested in the mechanical side of the club (i.e. maintenance and repairs), but we hope to attract more members interested in the social side and by organising more trips now that Clem is running well.

## VVMC Report to the CSB – Autumn 2012

### Introduction

VVMC is the club responsible for maintaining and driving the two motorised mascots Derrick and Bo'. Bo' is a 1902 James and Browne car and Derrick a 1926 Neracar motorbike. Bo' has been owned by the CGCU since 1934 and is one of, if not the most exercised veteran cars on the road.

### Activities and Achievements

The highlight of our year is the London to Brighton run which takes place on the first Sunday of every November. The run was a success, and Bo' made it, though a little late due to certain issues with the car's oiling and cooling systems. Despite a rather damp start, all club members and our guests, which included Deputy Rector Stephen Richardson, thoroughly enjoyed the somewhat eventful day. Sadly Derrick, who also joined Bo' at the start, was unable to make it to Brighton, as the abundant supply of rain quickly found its way into the electrics.



A surprised co-driver and smiling Deputy Rector (now that the rain had stopped!)

Over summer, the club was busy making new cylinders to replace the old ones. A severe water leak had rendered the car undrivable for much of last year, with same problem having been fixed several times in recent years and before. The originals are 110 years old, but with metal fatigue repeatedly causing similar leaks, the club decided it was time to cast new ones. Two club members, with the support of Dr. Shaun Crofton (Imperial College, Mechanical Engineering Dept.) and Gordon Addy (Royal College of Art, Workshop Manager) kindly donated almost 2 months of their time to create tooling for a new casting, and in the process saved the club from considerable expense. The new parts were delivered with little time to spare, leaving club members the task of hastily performing some final machining and rebuilding of the engine, just in time for Commemoration day. Bo's attendance, together with Jezabel (RCSMC) and Clem (RSM) left many graduates with memorable photos with and in the car, as well as transport between the Royal Albert Hall and College. Bo' also attended the CGCA Decade Reunion, and together with the Guild's mascots received much of the usual interest.

Following the gremlins during the Brighton run, the club has repaired a leaking radiator and overhauled the oiling system – both of which were cause for concern on the run. A lamp bracket which fractured on the run is yet to be repaired (luckily the cracking bracket was spotted before it fully fractured, avoiding the embarrassment of running over our own lamp). This unfortunately means Bo' is currently 'one eyed', as can be seen from the picture above.

Derrick, who is generally very reliable, was given some time to dry out, but has required little more mechanical attention since. He is running strongly, particularly after a service by club members.

The club generally meets up on Wednesday afternoons, with 4-5 members normally attending to carry out the necessary maintenance required by a car of such age, often followed by a well deserved outing around London. It's always surprising how many people recognise the car and its place at Imperial. Derrick is also often ridden alongside Bo' and recently was pulled over in Hyde Park by an enthusiast, who took a video interview that has since been placed on Youtube!

<http://www.youtube.com/watch?v=mkzIBn7I3bE>

## **Membership**

The club currently has thirty three student members and four life/associate members, exceeding the set target. We generally have 3-5 people attending garage session every week.

Bo's presence is for the benefit of everyone in college and not just the club members. Hopefully, with the major repairs carried out over summer, Bo' should be running strongly this year, and be able to attend many events, to offer rides, photos etc.

## **Equipment**

The lathe has proved a very valuable tool for the club in the past, allowing us to manufacture parts in house, saving the expense and time of outsourcing. Currently however, the lathe's top slide has fractured (probably due to metal fatigue). The club is investigating the best way to fix or replace this component, though some expense is expected.

## **Finances**

The club has used about 50% of its awarded grant, with about £690 remaining. This expenditure is almost exclusively on the car itself, as day-to-day club activities are funded by the driver. Grant however is used throughout the financial year, as costs are generally spread fairly evenly from August to August. Other funds have been raised from donations for attending events such as Commemoration Day and from alumni. Once invoices currently in progress have been settled, the club's SGI will hold about £1000, having increased from about £650 at the start of the year.

The club also managed to secure a donation from the Old Centralians' Trust to train two club members to tow a trailer. A support vehicle and trailer is required on club tours or the London to Brighton run, and it will help the club greatly to have its own members who are able to drive the combination.

The new castings made over summer were paid in part by the motor club reserve as well as SGI. Hopefully, new cylinders should avoid major breakdowns and associated costs in the near future, and provide another 110 years of service!

## **Future events**

Along with continuing sessions on Wednesday afternoons, upcoming events that Bo' is likely to attend are the:

- CGCA Annual dinner – A very prestigious dinner that along with the Guild's Mascots, Bo' is likely to attend.
- Miglia Quadrato – A very memorable midnight car treasure hunt that the club normally attends in Bo'.
- Postgraduate Commemoration Day and Imperial Festival – Bo' is always happy to attend these events, which tend to reflect how popular he is, along with the other Mascot Vehicles.