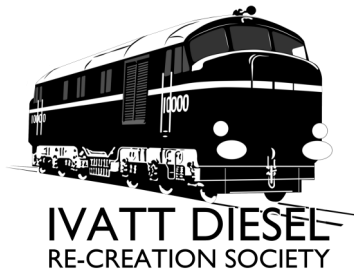


# ICON



## Welcome to Issue 13 of ICON.

One thing that stands out to me is the growth of talented and willing volunteers. Take for instance the last weekend in September when, not only did we have a full team of mechanical and electrical team members on site at Centenary Works, but we also had a variety of members operating our information stand at the Severn Valley Railway's diesel gala. Thank you to everyone who gets involved!

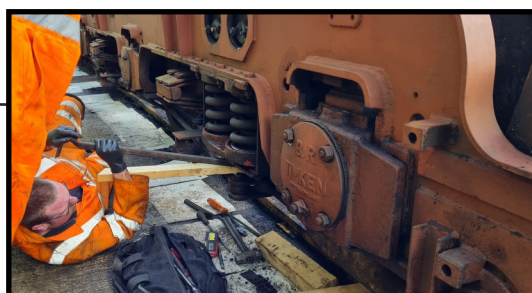
Within this magazine you will find a request for supporters who have financial and fundraising experience. Please do get in contact, if you can assist, as we continue to advance.

You will also find an appeal for warm dry storage space. This could even be a garage. This will become our greatest need. Can you help?

ICON has settled into a bi-annually magazine, supported by monthly summaries of progress sent by email. In this issue we look back over the last six months and also forward to the wide variety of expensive work waiting to be undertaken. In that regard, after the AGM we retired to the Alexander pub and I enjoyed listening to the knowledgeable conversations of our engineering folk who itemised each stage of the work ahead, along with which specialists we have approached, or will do. For me, as a non-engineer, it was fascinating. I am gradually learning about the work involved. I have to tip my hat to those among us, for the time they are investing in solidly planning the future of this project. Likewise, to those renown railway traction engineers who assist but are happy to remain anonymous Thank you everyone.

Andrew Hoseason — Secretary

Photo above 10000 at Crewe 1952. IDRS/Michael Prince.  
Below: Working on dismantling the brakes and suspension on bogie 139.





# ELECTRICAL

By Graham Clarke

Following completion of the first phase of finish painting of the cubicle, it's necessary to remove the wiring loom and the terminal blocks to facilitate cleaning and painting the remainder of the cubicle.

The terminal blocks occupy one corner of the cubicle. As installed in the class 58, the terminal blocks are on the engine room side of the cubicle on the drivers side.

In order to facilitate the removal of the wiring loom and terminal blocks, it's necessary to identify where all the wires and cables go and mark the identification numbers/letters on them.

If this isn't done before removal, putting everything back together would be even more difficult to accomplish and more time consuming than needed.



Time is of the essence of course.

The original identification markings are in very poor condition, are falling off or are often illegible.

At the moment, the wiring loom has been roughly refitted. This is making the job of identifying everything and re-marking it easier, because it's enabled us to identify which relay or piece of equipment the various branches of the wiring loom go to.

This reduces the amount of time taken, because there are fewer tests needed to find the other end of a cable from a given terminal, on a given terminal



block. There are 26 terminals per terminal block and circa 20 terminal blocks to deal with. There are also some cables in the loom that go directly between pieces of equipment and not via the terminal blocks. Traction power is not distributed via the cubicle wiring loom, which is devoted to controlling the locos traction and auxiliary systems.

Traction power is distributed by heavy duty switching equipment and thick copper bars that are called bus bars. That's another story, for another article, for another time.

Before the wiring loom was temporarily put back in place, quite a number of wires were found cut off. Unfortunately, now the wiring loom's in place, it's revealed that these appear to go to the circuit breaker and switch panel. This was missing on receipt of the cubicle and was obviously cut out during removal. Perhaps it was needed for another 58 and the donor was designated as a scrapper? Whatever, it's a pain and it may involve taking the loom apart to replace the cut wiring. We'll see.

To sum all that up, the cubicle refurbishment team is around 25% of the way through the job of identifying and marking up the wiring and terminal blocks, prior to their removal to allow the painting to be finished.

Thank you to all involved. Personally, I've joined the team recently. I'm enjoying the experience and I'm grateful for the generous welcome I've received.



In late spring we put an appeal out to members and supporters with the aim of collecting enough money to bid for an original large print of 10000 signed by Mr Ivatt. It was part of a set of prints, the others being of LMS steam locos.

Fortunately our bid was successful. It used every pound donated and so everyone can count their sum donated as being absolutely essential.

Here we see trustee Michael Prince with the print. We may, in time, sell small copies of this original image.





## CHASSIS



Since the locomotive chassis was inverted and placed on our Sturgeon wagon, we have continue to clean it and create a safe working environment for our volunteers.

Next steps focus around design approval, which is not photogenetic, but essential for progress. So, no visible progress is likely in the immediate future in regard to the chassis.









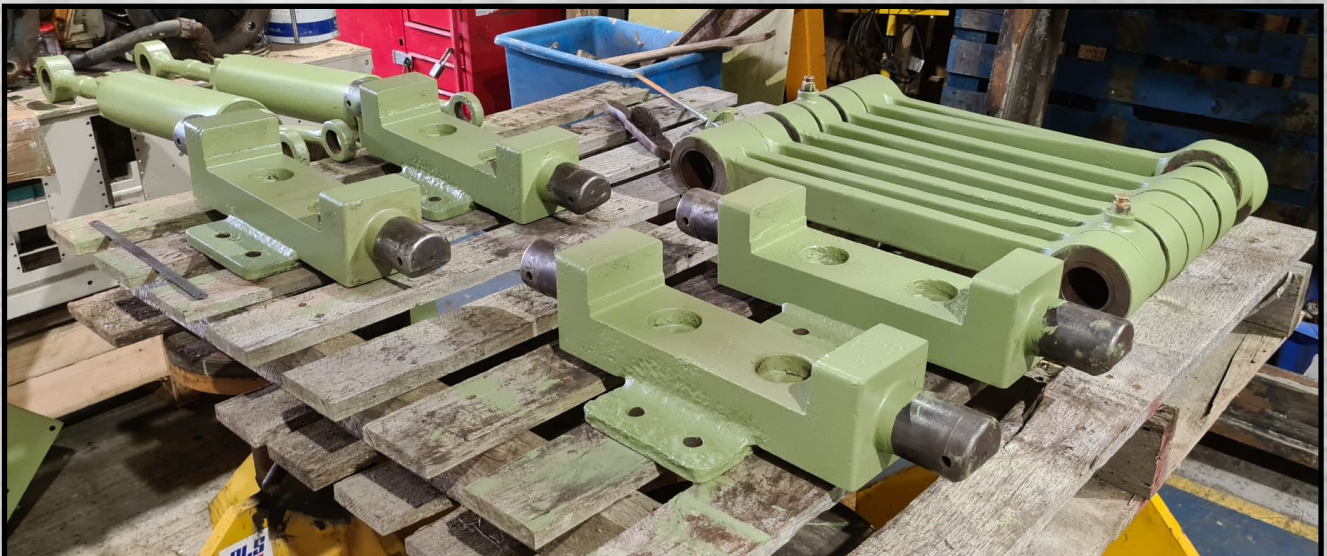
# ENGINEERING

There has been a lot of visible progress this year. Our eventual aim is the rolling chassis, though, as you can imagine, there are many stages to accomplish before that happens.

Since 2018 we have been applying lubricant to every part. That has paid off well, with parts coming off reasonably easily despite the years in open storage.

Our current work has centred around releasing and testing all the braking system. Refurbishment of parts aside, our aim is to send three axles for tyre turning and that is on track. Upon their return we will aim to send the other three. This will release the bogie frames to be placed on stands so we can better access parts for refurbishment.

*Below: Painting in progress. Traction motor blower covers at the rear, with suspension links in the foreground on the stands.*



It gives us the greatest pleasure to know that all our wheelsets have passed ultrasound examination for heritage line use. Many thanks to all involved whom have been working very hard on our bogies to get them to the best standard possible. Many thanks also to Tony Thompson and Luke Calladine for taking time out during their working week to organise and assist the Independent UAT examination company employed to undertake the massively important study.

If we were to require new axles/wheels/tyres it would have dramatically increased overhaul timescale and cost of the bogie overhaul.

It is indeed most excellent news and a real morale boost to all the volunteers that are currently overhauling the ex EM2 bogies to exacting standards.



## Leaf Springs & Spring Supports.

The bogies' suspension system features both leaf and coil springs. These can be seen in situ, in this picture to the right.

The leaf springs came apart well. We used the gantry crane to pull them apart along with strop straps and crowbars. Lifting the bottom half of the springs on to the bogie top we reunited the spring tops then the whole lot onto the floor.

On Bogie 139 we removed the bolts securing the axle box horn bottom plates. A simple enough task in itself, but due to many years of corrosion, there were barely any flats left on any of the bolt heads to get a spanner onto and access was as always difficult.

We always make every attempt possible to remove any component as sympathetically as possible to try and prevent damage to what maybe an irreplaceable item.

But there comes a time when you just have to get the grinder and cutting disc out, such as this occasion. The nuts on the bolts had to be split by cutting



lengthways through both bolt and nut, then a hammer and cold chisel were used to drive the split nut off. Again, due to close proximity to the brake rods and the ground, it became a challenging task with a few casualty discs along the way. But eventually all the plates along one side of the bogie were liberated.

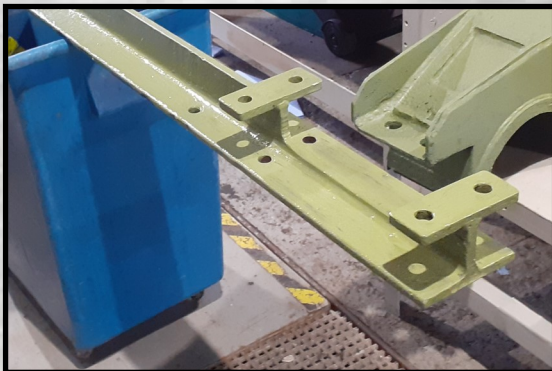




*Left: The two spring supports in the workshop, seen in their original condition.*



*Right: Almost ready for painting.*



*Below: After a coat of preservative paint.*

*Bottom: With the leaf springs and the spring supports removed, a large space was revealed.*







Refurbishment of brake slack adjusters.



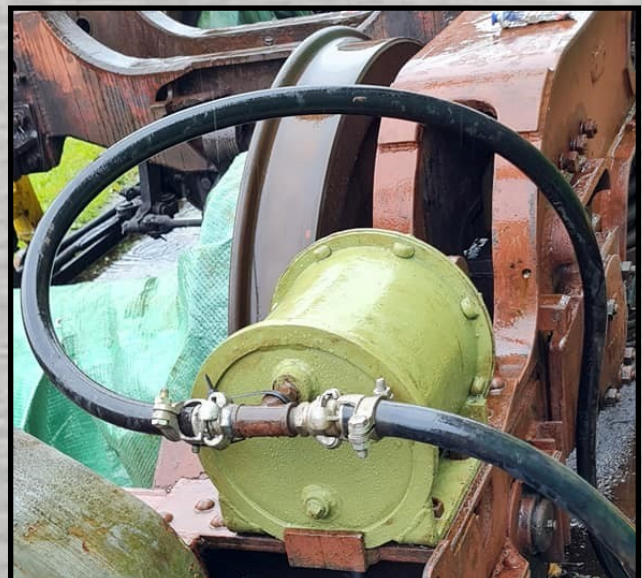




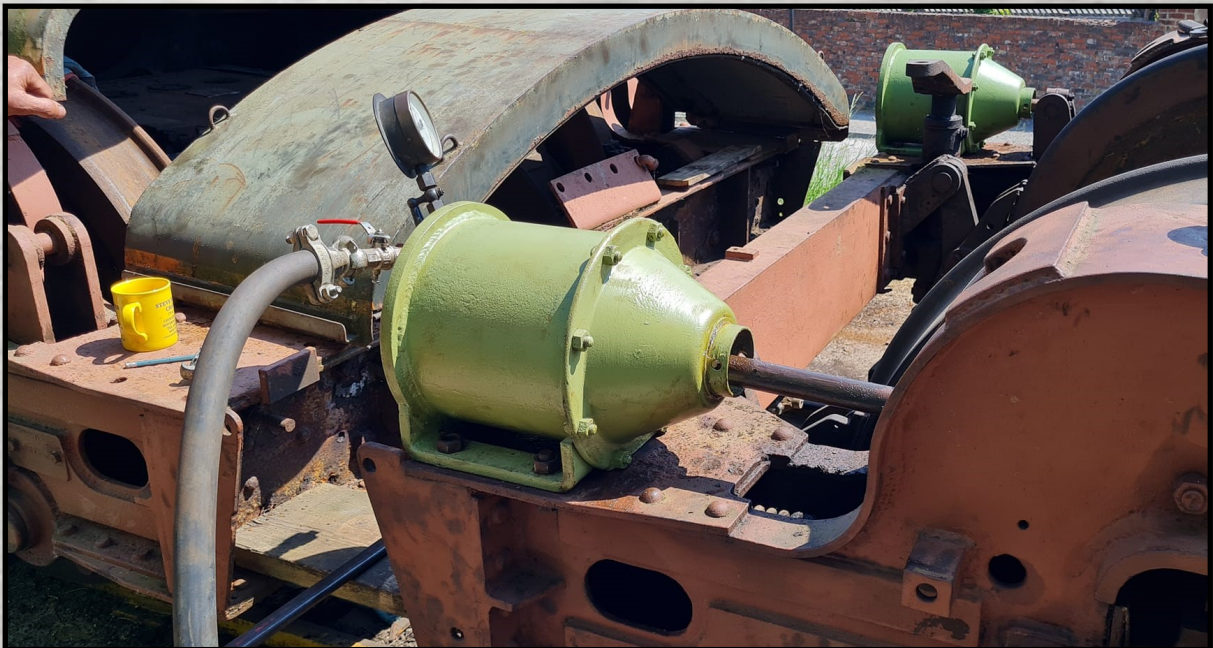
## Braking system

Much work has concentrated on the bogies. First of all, the air system was refurbished and tested. It was found that it released and set the brakes acceptably, using the air supply from Centenary Works to test it.

We obtained a very good minimum psi on them for their age, about 12 psi on the first one tried! The second on bogie 139 was tested to 50 psi which did require the use of the big lever to reset it.









## Braking system continued....

We have mastered the process of brake rigging strip down, clean up, inspection and replacement.

Having been tested, the braking system was removed from the bogies. This is necessary in order to prepare the wheelsets to be removed for tyre turning.

Tyre turning itself is a process which we had hoped to have completed by now, but was delayed by the arrival of so many components over the last year, all at virtually the same time. This took up a lot of our available time.

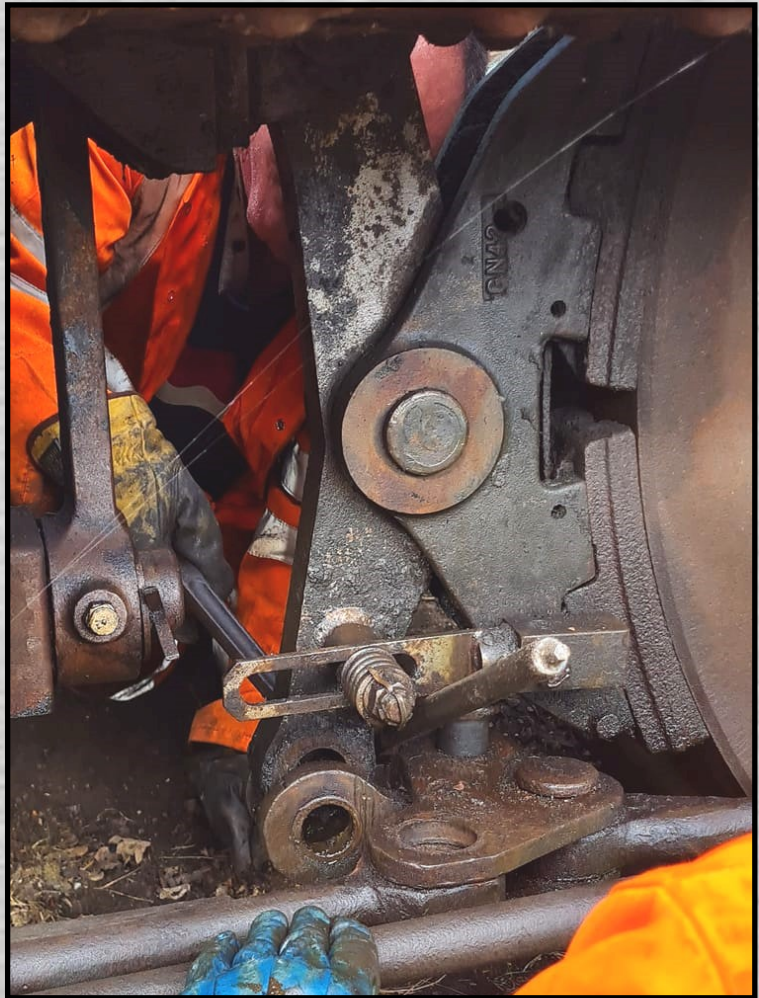
Stripping components will also permit the bogie frames to be cleaned and refurbished as necessary. The basic structure is in good condition and we do not anticipate any major work.

One bonus was that the handbrake lever freed off easily. This is because of the constant cleaning and oiling of all components for two years.

Bogie 140 is more weathered and seized up than 139. We had to use heat and different forceful ways with hammers and jacks at the connecting pins!

Several really stiff or seized pivots points that make up the brake actuating mechanisms, were cycled throughout their full travel, with the aid of applying a controlled force, namely crowbars, pull lifts and slings, hydraulic jacks and rams with various packers and lots of release oil and brute force.

As on 139, we have removed from bogie 140 the braking rods, connecting pins, slack adjusters and brake shoes. We had to work around the traction motors which are still in situ, so it was laborious, but not impossible.





# Legacies for LMS 10000

Bernard Caddy

Your support can live on after your passing.

One way that you can help and support the development and operation of LMS 10000 is through a legacy. When making or updating your will, you can choose to make a gift to the Ivatt Diesel Re-creation Society (IDRS), a registered charity.

There are two main forms of gift that you can make to IDRS by directions in your will. You can donate funds, either for general purposes or for a specific purpose; and you can donate relevant objects, with the intent that those items can be sold to give income to support the charity, or put on display to raise interest in the project.

If you donate funds to the charity, we recommend that you donate them for the general purposes of the trust. You can designate a donation to be used for a particular purpose, however there is a risk that purpose may no longer be relevant by the time your legacy is enacted, and so the value of your gift is restricted. Therefore we recommend that a legacy gift to the charity is unrestricted, to allow the funds to be spent where the need is greatest at that time.

Donating objects can be of benefit both to the charity and to your family and friends. We know that in some cases collections of books, models, and other railway-related ephemera are actually a worry to others, being unsure of how to handle them. If donated to the charity, we have the knowledge to assess the value of relevant objects and ensure they are sold appropriately to give the maximum benefit.

When you construct your will and consider beneficiaries, you will consider different types of gift. A pecuniary gift is a fixed sum of money; a specific gift is an object or group of objects, and a residuary gift is a share of the residual value of your estate once all debts are settled and other gifts made. Any of these types of gift are appropriate gifts for the IDRS.

As the IDRS is a registered charity, any gifts bequeathed in wills are free from Inheritance Tax. The donation is taken off the value of your estate before inheritance tax is calculated. An additional benefit can be that if your total donations to charity are at least 10% of your net estate, the rate at which inheritance tax is levied on the remainder of the estate is reduced.

We cannot give you specific advice on the preparation of your will and any tax implications. You should seek professional advice as appropriate.

If you do decide to include IDRS as a beneficiary of your will, and you feel comfortable to share your intentions with us, then we would greatly appreciate the chance to thank you for your planned gifts. Please contact the Secretary of the Ivatt Diesel Re-creation Society.



## Looking to the future

With our most optimistic imagination, we believe, that we could finish the locomotive in 4 years— IF—we had a sum of £450,000 in place, in addition to current monthly donations. That would enable us to employ an engineer and pursue a greatly speeded track.

However, until that happens, we continue as is, and, as ICON goes to print, we will be having discussions with a structural engineer. We would aim to engaging him to draw and certify the design. We have someone in mind. We also need approvals for chassis alterations. We will shortly decide where and by whom this will be carried out.

A fresh QA needs to be produced to include accurate weight calculations and distribution [The last QA was produced around 2 years ago and with each edition, the details become clearer and more concrete.]

We will have to look at creating teams for key components (there is room for you to get involved) — cooling, chassis, braking, bogies, bodywork. These teams should look at who is going to lead, budgeting each project, the approvals process, consider what we can do in house and what we can't.

In regard to the chassis, the best option will be to take it an outside location for work to be done there. If costs and income permit. We have a clear location in mind for this.

There is much to be done. Not all of it is photographically evident, but is definitely necessary. We look forward to further progress with confidence and a certain helping of excitement!

---

## Proposed Constitution Variation

The Trustees propose that clause 12.2.b should be deleted from the Constitution. The reason for this is that, as we continue to be successful in attracting an increasingly large membership, then getting and attendance of 10% of that membership becomes harder to achieve.

12.2. A quorum is

- a) five members entitled to vote upon the business to be conducted at the meeting; or
- b) one tenth of the total membership at the time, whichever is the greater.

The proposed wording is:

12.2. A quorum is five members entitled to vote upon the business to be conducted at the meeting.

Such changes must be made in a General Meeting (which can be in some online form). Please watch out for further notifications via emails from the Society. If you would like a postal vote by proxy, please contact the Secretary. 07551621685 or [info@LMS10000.co.uk](mailto:info@LMS10000.co.uk)



## Axle box cover appeal

One of 10000's original axle box covers is available at auction on November 11th. Should the Ivatt Diesel Re-creation Society should be custodians of this genuine piece of 10000 ?

If you'd like to ensure that this piece of 10000 is securely in our possession, please consider donating toward our appeal.

All our existing finances are focussed on constructing the new locomotive. And so, we are appealing for special donations to obtain this piece of the loco. Every penny donated for this appeal will be important! We will bid to the maximum amount that our members and supporters donate specifically for this appeal.



### Ways to donate:

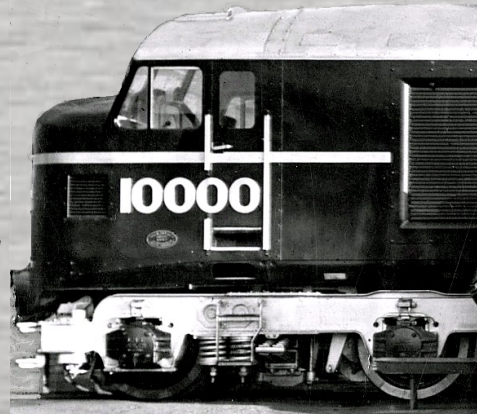
**Paypal** - <https://www.paypal.com/gb/fundraiser/charity/139996>

**Banking** - Please donate to this dedicated account for this appeal:

Sort code 30-94-77 Account 17362863 'Ivatt Diesel Recreation Society'

Thank you for supporting this unique opportunity!

*Photo: 10000 outside Derby Works. The axle box cap is clearly seen on the right hand axle, though blurry. Used with the kind permission of Mrs. Jean Harrington".*



If, however, we are not successful, we will use donations to further the charity's key objective - to re-create 10000. But, if you would like your donation returning to you, please notify us at the time you make the donation, by replying to this email.

Luke has started the underpinning documents that will balloon into the logbook for both bogies and all the parts contained on them, that will be supported and will support the WOSS\* document that is required for EM2 bogies. Unfortunately they left these shores before Gorton were ordered to write it. With Luke's mainline bogie overhaul experience and help, were heading in the right direction at the right time! Thank you Luke!

\*WOSS - Workshop Overhaul Standard Specification.



## WARM DRY STORAGE REQUIRED

We are looking for covered accommodation for the three traction motors currently in the Netherlands. One is pictured below. They are in refurbished ex-works condition. It is essential that they are kept in a warm environment once in the UK.

Do you have a garage or factory space available?



If you can offer space,  
please get in touch on

0755 162 1685

or

[info@LMS10000.co.uk](mailto:info@LMS10000.co.uk)

## PARTS REQUIRED

Our Engineering team are on the lookout for the following parts:



### Class 37/86 parts

Westinghouse dual brake equipment



### Class 20 parts

2 sets of inlet / outlet manifolds



4 Napier turbochargers for retro tuning of the 56 PU



**Please contact us if you are aware of such parts being available.**

*Photo credits: Ruairidh MacVeigh (37, 86, 20 cab) and Roger Marks (cl20 bonnet front).*





## FINANCIALLY EXPERIENCED MEMBERS REQUIRED

Are you looking for some way to help LMS10000 but you can't get involved in engineering?

These are the areas we need help with:

Do you have experience handling finances? We have the opportunity for you!

As the construction part of the project looms ahead, we want to strengthen our team, particularly in regard to fundraising and accountancy.

- ⇒ Focussed fundraising
- ⇒ VAT registration
- ⇒ Ongoing VAT management
- ⇒ Trustee

It's easy to think "*They are doing ok. They don't need any help*" But that isn't so. Because our project is continually expanding and has greater targets and needs ahead. With expansion comes the need for strength in depth. We want to attract experienced volunteers to reinforce the team into the future.

Please contact the Society Secretary, Andrew Hoseason, by email to [info@LMS10000.co.uk](mailto:info@LMS10000.co.uk)

Tony Brown, Treasurer

Tony Ellershaw, Chairman

---

We would also benefit from an **Advertising Designer**. If you have experience in graphic design or feel artistic, please get in touch!



## The Sanderson Teleporter — Bernard Caddy

We've had our Sanderson Teleporter for around 18 months now and it has proven a superb tool for jobs around the Centenary Works. After a bit of TLC and servicing by our skilled volunteers it has been reliable, functional, and flexible. The lifting capacity is around 2 tonnes maximum, which is sufficient for moving pieces around the works. It has four wheel drive and four wheel steer which with a good long reach means we can get into tight corners and orientate successfully. It has rough ground capabilities and so can get if needed get round to the containers behind the workshop.

Colloquially called a tele handler, the Sanderson Teleporter design predates the widely-seen JCB tele handlers, which have copied the same basic concepts and layout. Sanderson were based at Croft, near Skegness in Lincolnshire, and specialised in rough-terrain handlers. The business closed in the 1990s, with rights to the teleporter range being acquired by Aveling Barford. Ours, a Teleporter 7-25, was registered in November 1988.

The machine is easy to use - a simple forward or reverse control, throttle pedal, footbrakes and handbrake. The steering can be set to one of three modes - four-wheel, front wheel only, or crab-walk (front and rear wheels set to the same angle). Three controls for the jib cover lifting, extending the arm, and tilting the forks.

When we acquired it we agreed with EVR that they could also use it, as it has a greater reach than their equivalent machines. They also cover it under their safety case. They've acquired a suitable bucket to use for coaling steam locos, as well as just using it for lifting. Recently they borrowed it for maintenance work on 33 103, which has had engine oil/water contamination issues.







Above: Our information stand at the SVR diesel gala, inside Engine House at Highley. Below: the cab of 58022 has been given a spruce up and now forms an attractive gate guardian for the Wirksworth station site. Each are examples of how members can get involved to help the Society. Thank you everyone who was involved.



## LMS 10000 Co-Co Club

Do you want to help raise funds for the re-creation of LMS 10000 with the chance of winning back some of your money?

**Join the Co-Co Club**

### How it works

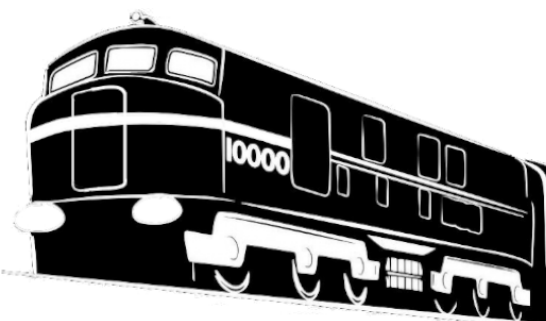
You purchase as many £5 virtual tickets as you like during each Quarter, and all the ticket monies go into a dedicated fund.

At the end of the Quarter we draw the first, second and third prizes. First prize winner gets 35% of the total, second prize gets 10%, and third prize gets 5%.

The remaining 50% becomes additional funds for the re-creation of LMS 10000.

**Help accelerate LMS 10000**  
**Join the Co-Co Club**

For more details, visit [LMS10000.co.uk/downloads](http://LMS10000.co.uk/downloads) or email to [idrscococlub@gmail.com](mailto:idrscococlub@gmail.com)



[www.lms10000.co.uk](http://www.lms10000.co.uk)

Gambling for the good cause that **you** have chosen.



# Getting involved

We are grateful for the help provided by members to man our information stand at the G&WSR Diesel Gala. There are more such opportunities, together with a range of jobs within the workshop. To get involved, please email us [info@lms10000.co.uk](mailto:info@lms10000.co.uk) or call 0755 162 1685

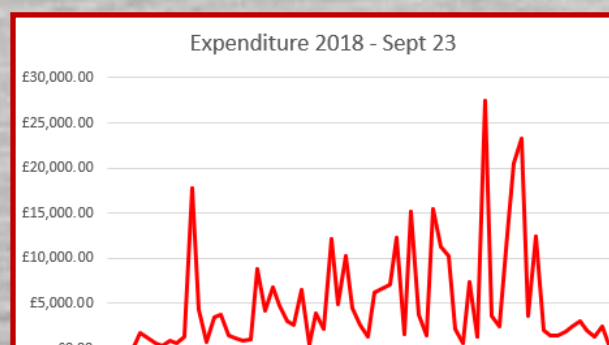
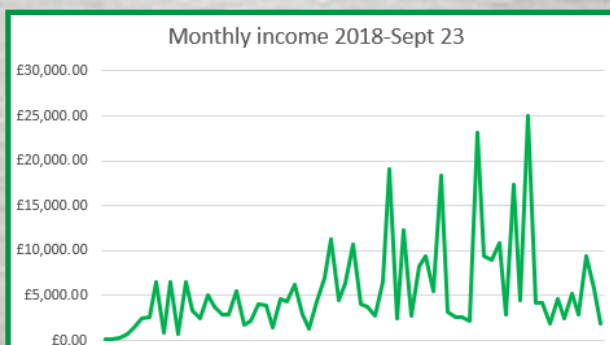
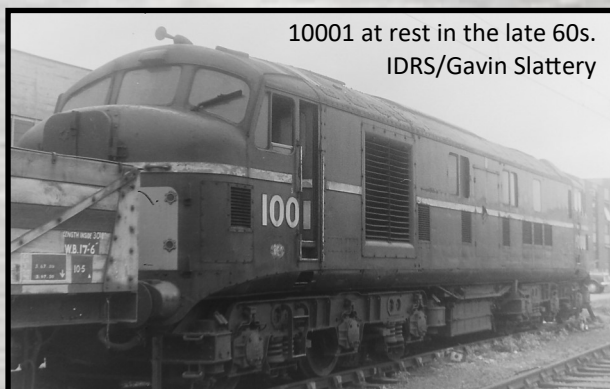
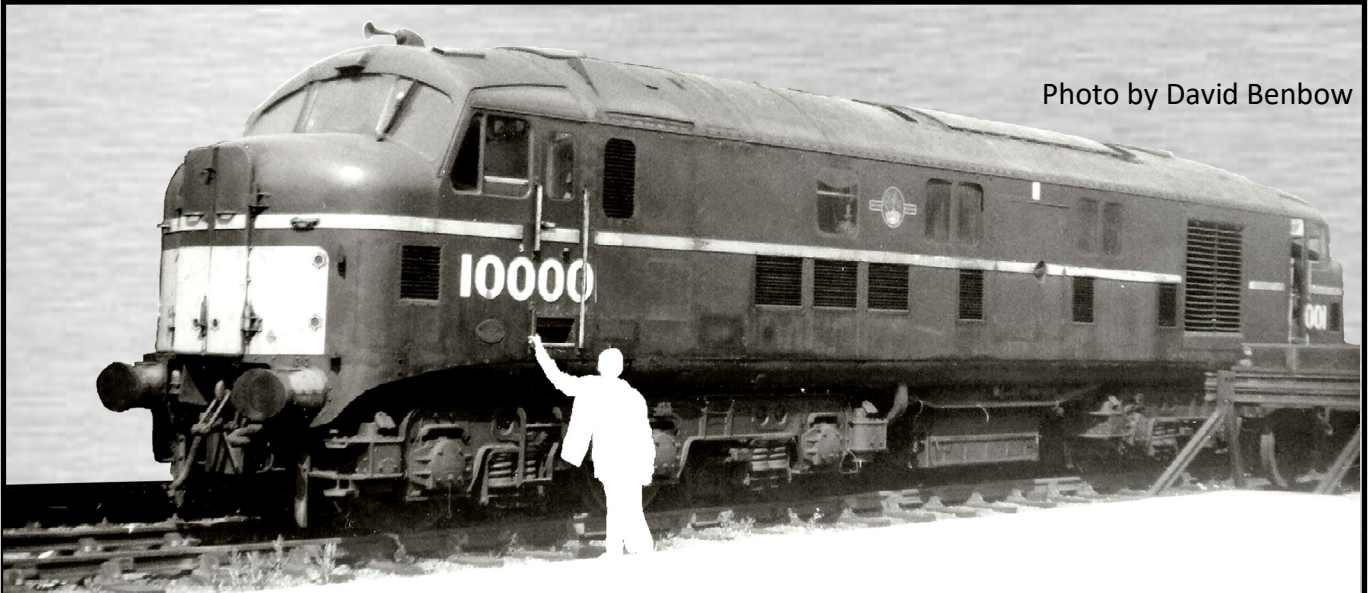




Photo by David Benbow



**You can be part of the big picture—making larger donations**

### **Sponsor the 16SVT—£8,000**

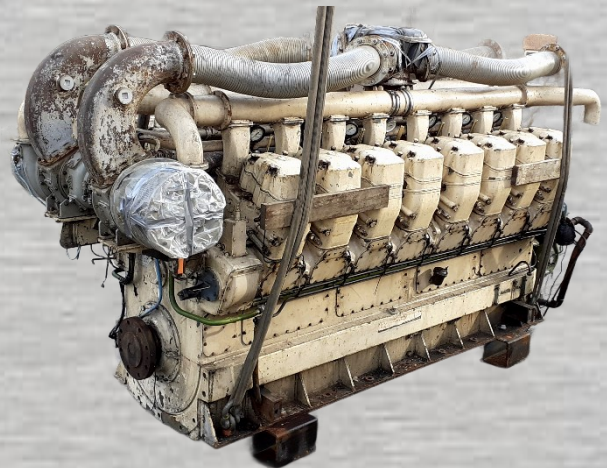
Our power unit is in warm storage with IMPS of Lincoln. We need to convert the English Electric 16SVT from running as a generator at steady rpm, to a railway power unit which has variable rpm.

We would like IMPS to do this conversion and we estimate the cost to be £8,000.

If you would like to make a larger donation for a specific item, then this is for you!.

Your donation will create clear and lasting progress, converting the power unit ready to work within the locomotive.

To focus your donation toward this unique project, please get in touch with us on 0755 162 1685 or [info@LMS10000.co.uk](mailto:info@LMS10000.co.uk)



#### **Previous Fundraising**

President's Centenary Appeal—£49,000—now closed

Electrical Cubicle—£10,000—fully subscribed

Tyre Turning—£4,000—fully subscribed



**Minutes of the Annual General Meeting  
Of the Ivatt Diesel Re-creation Society  
7th October 2023**

**1. Welcome and introductions** (Tony Ellershaw, Chair)

Members attending: 26 Visitors attending: 2

**2. Apologies** (Andrew Hoseason, Secretary) Apologies received from Ian Forsdike, Mark Hambly, Tim Apthorpe, Peter Scott, Robert Harris, Nick Cotton, John Glover, Hanson Haigh

**3. Minutes of the AGM held on 08 October 2022** (Andrew Hoseason) There was one matter arising. The visit to IMPS proposed for long term donors has not taken place yet, due to workload at that site. We hope to be able to arrange this within the next year. Minutes proposed by Phil Stanbridge and seconded by Tony Thompson.

**4. Annual Report** (Tony Ellershaw) 2022 saw the chassis of 58022 being lifted and inverted onto our Sturgeon wagon. We then prepared it to be safely worked upon. We are now into the process of restoring parts, with the brake and electrical systems seeing attention. There has also been a great deal of attention given to plans and designs, processes which have no photographic appeal, but are very much fundamental. During 2022 we obtained two containers that are now at the rear of the workshop. One was funded by a donation from a member for that purpose, for which we are very grateful.

**5. Treasurer's Report** (Michael Prince). In the absence of Tony Brown, Michael summarised the accounts previously shared. We are in a healthy financial position but need a lot more income to progress the project. Some money in the Treasurer's account is to be banked in a higher interest account. A question was asked why Gift Aid was up only 6% in 2022 compared to the year before. Michael suggested that it was because in 2020/21 we were catching up with processing Gift Aid donations from previous years, whereas the 2022 figure was only for donations received in that year.

**6. Election of officers** (Andrew Hoseason / Tony Ellershaw)

- a) Chair - Tony Ellershaw – all in favour
- b) Secretary - Andrew Hoseason – all in favour
- c) Treasurer - Tony Brown – all in favour

**7. Confirmation of other roles** (Andrew Hoseason) These roles did not need to be approved by vote. The gentlemen listed agreed to continue in the role for another year.

- a) Co-Co Club - Bernard Caddy
- b) Health & Safety - Tony Thompson
- c) Gift Aid - Bernard Caddy

**8. Electrical cubicle report** (Andrew Treves) Drew presented a short powerpoint presentation of progress with the cubicles of class 56 and 58 which we will use parts from to create that for the new locomotive. We have made considerable progress stripping and repainting the cubicle, with that from the 58 being the frame used in the future, due to its shape fitting within the body envelope of a D16/1.

**9. Health & Safety report** (Tony Thompson) Tony Ellershaw read this report and spoke of



emergency lighting being fitted to the workshop, a new pedestrian pathway being defined, new ladders purchased. We have in place a 'buddy' system if working solo. The H&S policy was reworted. We have not had an accident on site. We are considering a rear fire exit.

**10. Engineering Summary (Paul Etherington)**

During 2022 we obtained a lot of equipment, notably items donated to us from GBRF and Progress Rail, for which we are very grateful.

In the immediate future we can look at raising £8k specifically to change the 16SVT power unit, located in warm storage in Lincoln, from setup as a generator to a train engine.

We have latterly had chassis stress calculations approved. Future tasks include checking dimensions of the chassis against the drawings and employing a design engineer to achieve approvals.

We intend to have our electrical team meet a gentleman who is known as an ex-Toton class 58 electrical expert. Paul proposed that chassis amendments be done off site.

Currently the bogies are being stripped and the wheels will be sent for tyre turning, enabling refurbishment of the bogies to take place.

We urgently need to identify an indoor warm location to store traction motors when they arrive from the Netherlands. Please get in contact if you can offer such a facility. Each motor is in the region of 3 feet square in size, on a pallet.

**11. Publicity and Fundraising (Andrew Hoseason)** There has not been as much publicity (although latterly we have had full page adverts in railway magazines). This is due in part to Andrew struggling to find inspiration. He appealed to members who have design or publishing skills to come forward and add to the input. Fundraising is fairly constant. We do receive more donations following publicity and all publicity results in sufficient donations to cover costs. We need to consider fundraising options for the future, with some hundreds of pounds to be raised to complete the project. If you have experience or ideas, please do step forward.

**12. Any other business (Tony Ellershaw)**

a) VAT registration. A question had been sent ahead of the meeting about whether it would be in our interests to register for VAT in order to claim back money. The trustees had considered this briefly before the AGM. While it seems to be a good idea, no trustee feels familiar with the system enough to take it forward. Therefore we encourage anyone with such experience to please to step forward. In regard to registering due to the level of sales, we note that our sales (including membership at £24 per person) falls a great deal short of the £85k figure for compulsory registration. Graham Clarke will talk with a contact about this. John Williamson asked the trustees to keep this under review.

**13. Date of next meeting.** Saturday 5th October 2024 – Aston Court Hotel, Derby.

**14. Open forum**

a) Bernard Caddy gave an introduction to the CoCo Club for those who were not familiar with it. We will seek to publicise this Club more.

b) Bernard also suggested having quarterly Members Days at the Workshop.

c) John Williamson proposed a vote of thanks for all those involved in furthering the charity's work during the previous year.





Here is a still shot from a recent video showing activity and progress at Centenary Works, featuring our lead engineer Paul Etherington. In this clip we see Paul discussing the Ruston power unit generously donated by GBRF and ProgressRail.

This video can be seen at our channel by searching LMS10000 on YouTube. It is also available via our website Gallery.

[www.lms10000.co.uk/video-gallery](http://www.lms10000.co.uk/video-gallery)

*Our ex-EM2 Co-Co bogies outside Centenary Works.  
Photo: by Tainiac Videos*

