



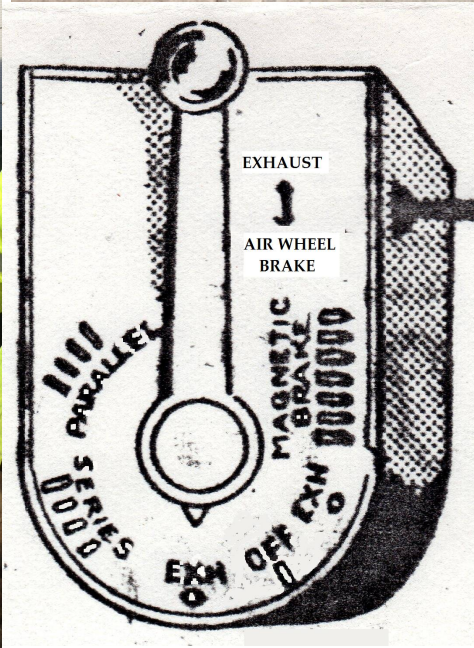
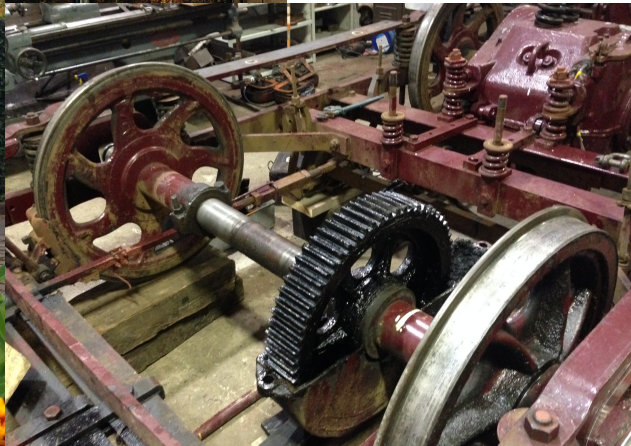
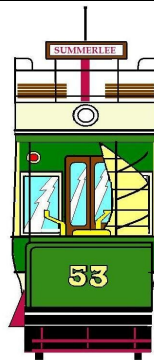
S.T.G

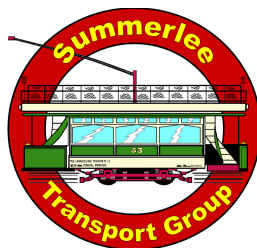
TROLLEY

November 2015



The Magazine of Summerlee Transport Group





SUMMERLEE TRANSPORT GROUP

OFFICE BEARERS 2015-2016

President.

Bob Connors

Committee Members

Chair.

David Craig

Secretary.

George Murray

Treasurer.

Harvie Milligan

Membership Secretary.

Ronnie Maclean

Restoration Group.

Charles McAloon

Members Nomination.

George Drain

Members Nomination.

John Kennedy

Other non committee office bearers

Trolley Editor.

Ross Fulton

Depot Supervisor.

Alexander Craig

Workshop Co-ordinator.

David Craig (Chair)

Message from the Chair

It's been a busy six months for the group since you received your last edition of the Trolley. In addition to taking forward the items raised at the AGM in March and other ongoing group issues, several meetings have been held with the museum management team, to highlight these and to take forward options to support both the group and the museum in providing the tram service.

Of these the main issue of discussion has been the repairs and return to operational service of Glasgow tram 1017 after it was found that one of the axle box had been damaged in service. The museum has offered, in addition to workshop facilities and the heritage technicians service, to provide funds to have new axle boxes and brake shoes manufactured and to re-profile the tyres on both axles. This along with the services provided by the restoration team members and some additional funds from the group to undertake other works on the tram should, hopefully, have the tram back in service by early next year.



Charlie prepares 1017s bogie for lifting off the tracks

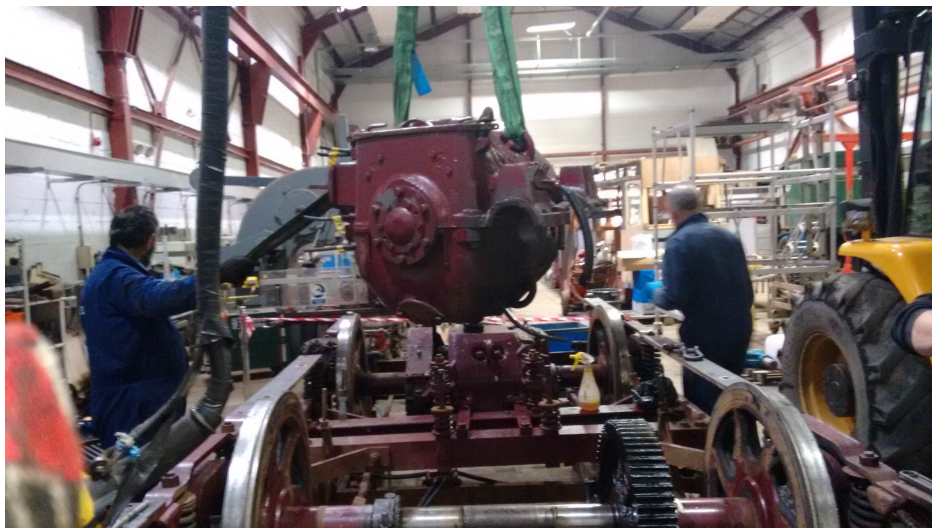
In addition to this work the restoration of 1245 is still making progress, however slower than planned, as a result of the above work, more about both of these in the workshop report further on in this issue.

It was with regret that the group were advised of the death of Duncan White a longstanding member of the group and past editor of the Trolley the groups magazine. I am certain that his presence at group events and in particular during special event days in the museum will be missed by his friends and members who knew him.

Finally as we are nearing that time of year when working in the tram depot is restricted due to weather conditions I have arranged for the group to work in the main workshop on a Thursday evening until we break for the winter. There they can help with the work being undertaken on 1017 and the restoration of

1245 and some other smaller museum related items. However the continuation of this access is dependent on the number of members turning up on the night, so once again can I ask that any member who can come along on a Thursday evening to lend a hand does so.

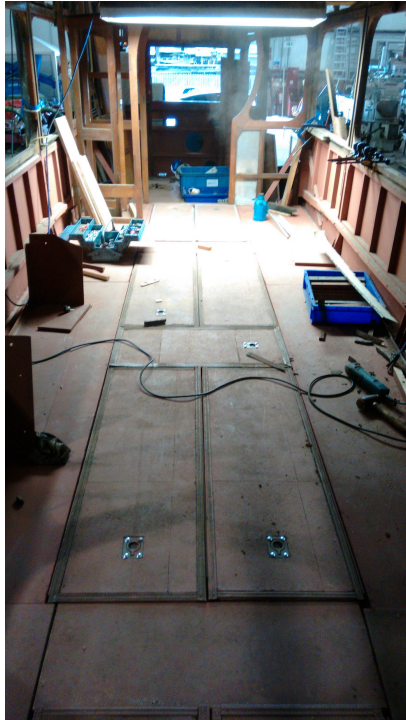
David Craig
Chair



1017s motors being removed for inspection

Workshop News

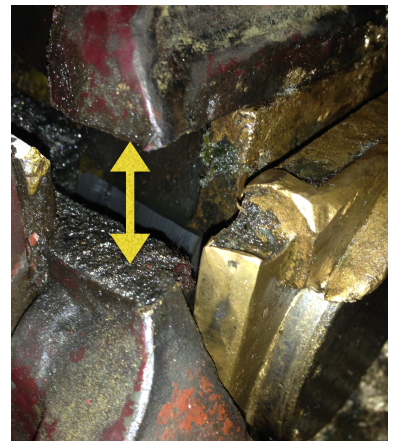
The weekday workshop team undertaking the restoration of 1245 and other tram related work have been very busy over the summer months.



1245 re floored

Glasgow 1245

On the restoration project work on the four motors has been completed and initial tests have been carried out to ensure that they will operate satisfactorily when installed. Work on the second bogie is progressing, the first having been completed earlier in the year, with the final fitting of the motors and brake shoes to be completed. Work has also continued on replacing the lower and upper flooring along with reinforcing of the body frame after the repairs and reinforcing of the main frame were completed earlier in the summer. As a result of the unplanned removal from service of 1017 work on the restoration has slowed down but is still ongoing.

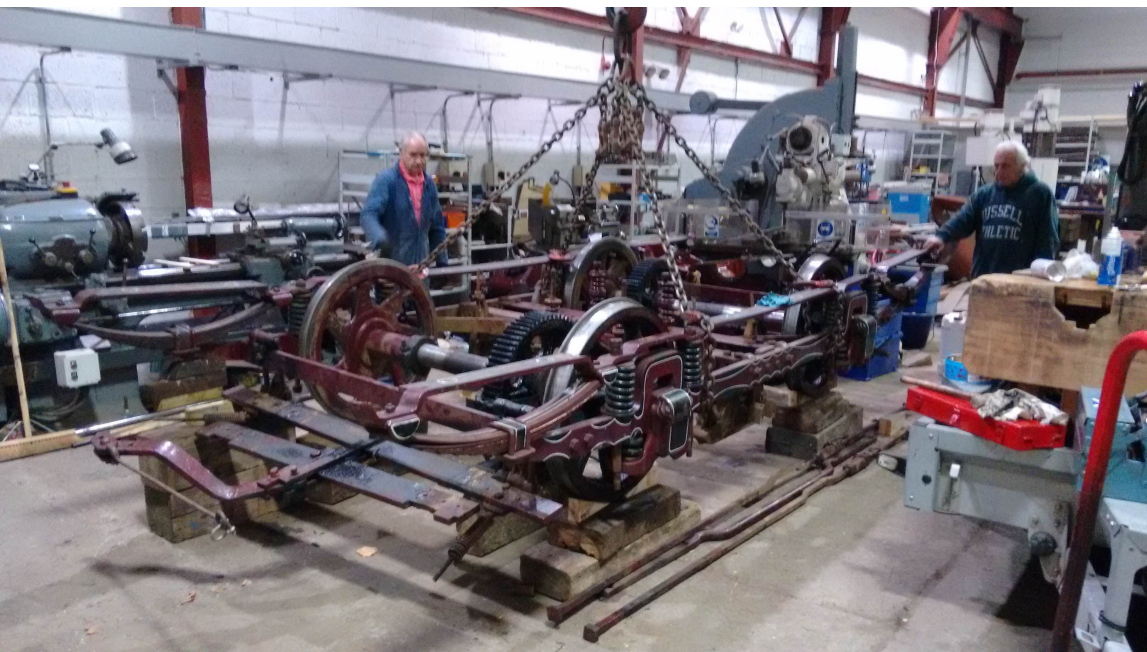


Close up of fracture in 1017s axle box

Glasgow 1017

After it was found on inspection that 1017 had suffered damage to one of its axle boxes it was removed from service. On further detailed inspection other issues were identified by the heritage technician which necessitated the removal of the tram body from its bogie and removal of it to the workshop for further investigation. Without going into too much detail the workshop inspection highlighted issues with the drive motor and on removal from the bogies the motor was found to

have suffered bearing failure and housing damage. In addition internal damage to the coils and cable connections was identified. Along with these issues other items requiring attention were found and repairs are being undertaken by STG members along with the heritage technicians. As it became obvious that the repairs would take several months to complete it was decided



to remove the axles from the bogie and to have them sent out to a specialist contractor for re-profiling. While this work is ongoing the group will undertake to carry out work on the tram body interior to freshen it up for its return to service. Work will also be undertaken along with the heritage technician to try to resolve the long standing inefficiency of the sanders and some external water ingress problems.

Track and overhead

The museum and the group have undertaken work on resolving the longstanding problem associated with the track alignment at the set of points nearest the cottages. This work should reduce the problems associated with the trams passing over the points. Work was also undertaken by the heritage technician during the summer months on the overhead system ensuring that clamps and cable were free from damage and secure.

Ongoing works

As we move into the winter months work will continue on returning 1017 into service and progressing the works of restoration of 1245 in the main workshop during the museums normal winter opening hours. Any members who can and are able to assist in any way the work of the group on these projects are more than welcome to come along particularly on a Tuesday or Friday (10 to 3pm winter hours) and join the other members who are undertaking this work.

David Craig
Workshop Coordinator

Depot News

Since the start of this years Thursday evening work programme a regular group of members have been able to come along to the work nights although more members being involved would always be welcomed.

The programme of cleaning and minor servicing work on the running trams along with the cleaning of the tracks and points has been maintained with some work being deferred to being carried out either at weekends or during the weekdays when other members are in the museum.

During some of the museums special event weekends the tram depot was open to visitors and on one weekend more than 400 museum visitors took advantage of this and visited the depot to view the trams and hear about the work of the group. This shows that there is an interest in the groups work and if more members were able to assist on these days this could help bring the work of the group to a larger number of visitors to the museum.

We are now entering that time of year when work in the depot in the evenings becomes more difficult and limited and will shortly transfer to the main workshop for the remaining sessions until the winter break. I wish to thank all those members who have been able to come along on a Thursday evening to help with this important aspect of the groups involvement in maintaining the tram service in the museum.

Alexander Craig, Depot Supervisor

Looking up through 1017s floor.
The sandbox can be seen just below the floor



Dunfermline and District Tramways Co.

The neatly uniformed young conductor in the picture was employed by the Dunfermline system prior to WW1 and the picture dates from around 1912 when he was about 22 years old. His name was David Piggott and he was born in 1890 and lived till 1979, served in the First War and latterly was in railway service in the Forfar area. His immaculate uniform was typical of the period featuring a choker collar and peaked hat.

The Dunfermline system dated from 1909 and was the last tramway to operate in Scotland other than the four main city systems, finally closing in 1937. It was built to 1067mm gauge (3ft6in) and stretched from Rosyth Dock Gates in the south to Lochore and Kelty in the north. The management were forward thinking building the Rosyth extension in 1919 and transferring middle of road tracks of single track and loops to roadside reservation double track which was provided progressively from the 1920's to 1930. However the inevitable competition suffered from motor buses was not helped by the rolling stock of traditional open topped unvestibuled single truck double deckers of Edwardian design. They did acquire two long bogie single deckers from the then closed Wemyss system in 1932 but like many such purchases in many systems they were often relegated to extra services such as school extras. The inevitable abandonment was in June 1937 with replacement services provided by Alexanders using mainly new Leyland Titans which looked very modern in comparison to the traditional trams.

G P M 2015



Scottish Fire and Rescue Service Demonstration: Tram Rescue Techniques

by Richard Hastings, Fire and Rescue Division, Scottish Government

January 26 2015 was a bright, sunny but very cold day, when the Fire and Rescue Division (FRD) of the Scottish Government arrived at the Edinburgh Tram Depot. We were there to observe the Scottish Fire and Rescue Service (SFRS) practice rescue techniques specific to working with, and around trams, and to gain a greater understanding of the challenges faced by fire crews working around the Edinburgh tram system.

Our visit began with Station Manager Richie Hall giving a presentation in which he described the excellent working relationship that has developed between the SFRS and Edinburgh Trams Ltd, the operator of the tramway in Edinburgh. This close relationship has proved invaluable in the development of a suite of SFRS Standard Operating Plans which are designed to deal with issues that may arise across the tram network. This could include incidents involving pedestrians or other road users. Because of the partnership approach adopted during the development process, each organisation is clear of its role in any given situation.

Richie then discussed the new challenges faced by the SFRS which do not directly involve trams, but which can arise because of the presence of the tram network in the city. These included additional hazards caused by the overhead power lines and the need to disrupt the tram system, for example by switching off



Edinburgh tram is jacked up

tram, weighing 6 tonnes, up off the rails. This scenario simulated the recovery of a casualty from beneath the vehicle.

power to a section of the tram network when fire-fighters are working in the vicinity of the tram lines and especially when using high rescue ladders at a building close to the tram route. Richie explained that Standard Operating Plans had had to be developed to cover all such eventualities. He further outlined how the two organisations communicate and work with each other, and the other emergency services, in a range of situations such as a traffic accidents close to the tram lines through to contingency planning around major events.

Our group then made its way outside to witness a training exercise involving a fire crew using airbags and jacks to lift a

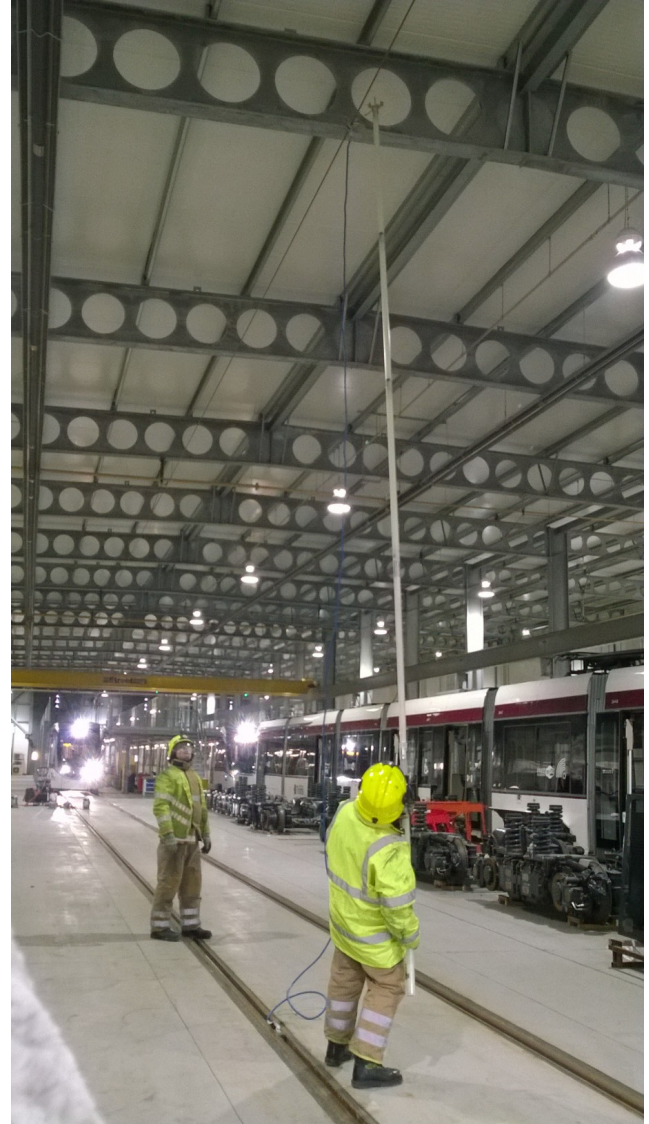
The group was then led into the workshops where two of the fire service training crew demonstrated how the overhead power lines are earthed by fire crews after the power has been isolated by Edinburgh Trams.



It was explained that this is done as an additional safety precaution before dealing with any incident relating to or close to the tram system.

Next was a tour of the Tram Depot facility starting off with the workshops where the group viewed some of the facilities and equipment used to keep the trams running smoothly. Tram operations and maintenance schedules were also explained.

In the Control Room, Sarah Thompson, the Service Delivery Manager, explained the layout of the room and its various functions, describing how these ensure the system operates efficiently. She also described how staff based in the control room could assist fire crews by isolating sections of the overhead line system remotely, allowing crews to work safely at an incident involving, or close to, the tram system.



Isolating the overhead line



The tour concluded with the group expressing their gratitude to both Edinburgh Trams for hosting the visit and the SFRS for facilitating it and putting on the demonstrations. It was felt by the group that the visit had been a great success and that all parties had benefited and learned from it.

We all really enjoyed our visit to witness how fire-fighters dealt with emergencies involving trams and it had been fascinating to see how quickly and professionally fire-fighters were able to deal with a number of different emergency situations. As the FRD is the 'sponsor' of the SFRS it was extremely beneficial to see first-hand how frontline fire-fighters deliver a world-class fire and rescue service to all communities in Scotland. Our sincere thanks go to Edinburgh Trams and the SFRS for jointly hosting such a fascinating visit.

Richard Hastings

How to drive a tram car

Step up in front with Robin Brewster at the controls
(Glasgow Evening Times article September 1957)

Hurray along please- ting- ting we're off to the Glasgow Corporation Motor School to learn how to drive a tram. No wonder you have often wondered how the tram driver can control the whole vehicle by that single handle on the control column. The sketch shows that the ingenious piece of mechanism: so keep your eye on it as we drive off.

To start the driver puts the pointer to the first notch in the four marked series. Series means that the two motors are dividing the amount of power between them

When the pointer is here, the power runs first through the rheostat, which absorbs three

quarters of it, so the motors only get a small boost to start them.

Now we move up to notch 2 and travel a little faster because the rheostat is now only holding back half the power then up to notch 3, and then notch four. The rheostat is now cut out and the motors are dividing the power (575v) between them.

The rheostat by the way is that black box under the stairs, generally incorrectly thought to be a heater used by the conductor on cold days!.

Now we are running along at about 12 miles an hour. To speed up we move the pointer up to notch one in the parallel group. The motors are now getting independent supplies of power, but again the rheostat is keeping back 3/4s of it to allow slow build up. Moving up the notched again slowly cuts out the rheostat until

we are travelling on full power at 25

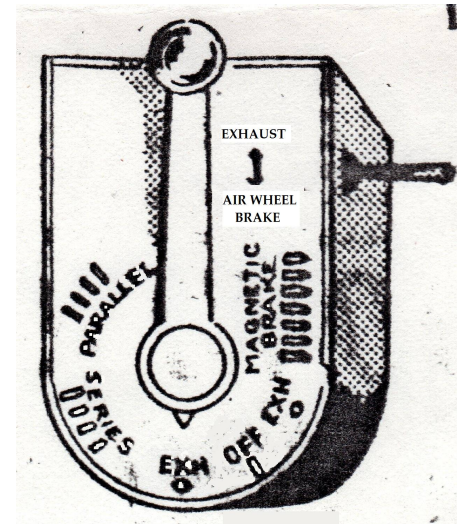
miles an hour. If the driver is in too much of a hurry and does not move up slowly from notch to notch you will hear a big bang as the switch on the platform blows and he cannot get power back until it has been reset.

Power Boxes

Perhaps you have noticed that going full speed down a stretch the driver will switch off the power for no apparent reason, pause then switch power back on. This is because he has reached a section junction.

To ensure that every part of the overhead cable gets exactly the same voltage, the line is divided into sections, powered separately. Section junctions are indicated by a white painted pole with a power box beside it.

In the cable at that point is the break between sections and the tram must pass this section with power off the bow collector (that's the apparatus on the roof which contacts the line) will join the sections and may burn out the insulator and cause hold ups!



Controller diagram



53's rheostat opened.



Summerlee's section box

On the lower right hand side of the control column you'll see seven notches marked with the words magnetic brake. To apply this, the driver swings the pointer right down through the off position and onto the first notch in the magnetic brake section.

Shuddering to halt

In this case no power is going through the motors. Instead the electricity generated by the turning wheels is put to magnetising the brake shoe just behind the the wheels and bringing it down on the rail. Again the power passes through the rheostat box that notch one only exerts dragging pressure. But going to notch 7 brings the trams to a shuddering halt which pitches the poor passengers about!

To illustrate how the wheels power the magnetic brake, imagine a tram standing in Renfield Street with brake on. As the wheels are not turning the magnetising current decreases until the shoe lifts off and the tram begins to run down hill. But it has hardly gone far before the turning wheels have generated enough power to magnetise the shoe and bring it down again to stop the tram. So it would go on until the tram has reached the level.

If you have a bike, you'll see that the principle is the same as that of the dynamo which keeps your light going.

The handle jutting out the side of the control box is the air brake control. When the tram is at a stand still on the air brake you'll hear the motor running to generate the air pressure. A twist of this lever also applies sand to the greasy rails..

The larger handle on the right is the wheel brake and this lock is generally only applied when the tram driver leaves the tram.



392's track brake. Photo taken from in the inspection pit



Summerlee's maximum speed restriction notice on overhead line.

Tram drivers must keep their eyes open for their own road signs. For instance the black speed restriction notices. The black oval discs with white figures hand on the overhead wire, and indicate the maximum speed allowed on the section.

His road book gives him special details for certain parts of the line but generally the limits are 15mph in the city and 25 mph in the suburbs. City centre sections are generally negotiated at 5mph

Electric points

Finally there are electric points to be negotiated. The driver is warned of these by an overhead white disc bearing the red letters E.P.

Shortly after that he sees before him between the rails a round steel stud, a triangular stud and then an arrow.

The round stud is a be prepared stud, but over the triangular stud the bow collector touches a special contact in the overhead wire which as you might say 'alerts' the points mechanism.

Whichever direction the arrow points indicates that to go that way the driver must pass over the arrow with one notch of power applied. If he wishes to go the other way he must switch off the power after passing the triangular stud and coast over the arrow.

So there you are. To drive a tram is not such an easy job as many folk imagine is it? The low accident record of the Glasgow trams is a tribute to the men and women who drive them.



Trolley Quiz November 2015

By George Murray



Lye 1:

Tramway Knowledge:

- 1) What is the significance of 1416 and 1435 to Summerlee Trams
- 2) What is the link between 1017 and Leicester 76?
- 3) Which light railway was the first public electric railway in Britain opened in 1886 and still running now? (Blackpool street electric trams were 1 year earlier and still going)
- 4) Aubrey Llewellyn Coventry Fell, when I ride on your trams I feel quite unwell, they pitch and they sway and I get quite excited, I'd much rather go on the London United! To which system is this poem referring?
- 5) Apart from Glasgow which system had "Coronations"?

Lye 2:

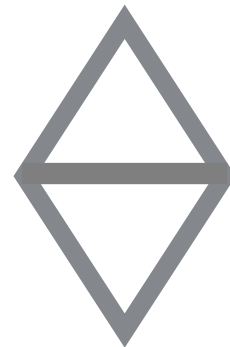
Name the extreme termini for the following routes (as at withdrawal):

- 1) Edinburgh route 1
- 2) Aberdeen route 1
- 3) Blackpool route 1
- 4) London route 7
- 5) Glasgow route 9

Lye 3

Motorman knowledge

- 1) what, would you do when you see this sign?
- 2) where can this sign be seen at Summerlee?
- 3) what are the 3 braking methods available on Paisley 1017?
- 4) the motorman signals with one gong. What does this indicate and what is the reply?
- 5) Every so often on 1017 a generator can be heard to operate without warning. What is happening for this to occur?
- 6) the rails are greasy and the trams wheels are sliding when the brakes are applied. What should you do to improve the brake operation?



Three Special Tram Routes

By Bill Aitken

All photographs courtesy of RJS Wiseman

Nominally Edinburgh had 28 tram routes. In reality because some short workings had separate numbers, the 20, 22, 25 and 28 and the two-numbered figure of eight route 13/14, there were only 23 main ones. Most of the main routes were cross-city and were so arranged that there were two routes to the outer termini, such as the 1 and 12 to Corstorphine, the 11 and 15 to Fairmilehead, and the 1 and 7 to Liberton.



Route no 6. Car 232 of 1936 climbing Marchmont Road

Road and each car would continue round the other half of its circle. Cars would sit at the south end of Marchmont Road to give the crew a short break. This would only be for five minutes as this was a five minute service. The whole circle took 25 minutes to complete. A lady I knew told me that when she was courting she worked in Nairns bakery shop at Tollcross, which was at the south end of the now rebuilt east side of Earl Grey Street, and she watched the clock so that every 25 minutes she could rush out as her husband-to-be, who was a conductor, would wave to her from his platform as the no. 6 tram went by.

Marchmont was one of Edinburgh's most respectable areas and the no.6 was worked from Tollcross depot almost exclusively by modern domed roof standard cars. They looked really splendid in the open green spaces of the Meadows. This stretch and Marchmont itself did not provide a great deal of traffic but the no.6 was a useful shuttle for city centre shoppers, freeing up space in other cars for passengers going to the further suburbs. In 1956 as the system was run down and there weren't sufficient buses to deal with the crowds, the

This route organisation was splendid in that even on the outskirts there was a choice of trams going to different destinations. However it meant that for the enthusiast there were few routes with totally individual appeal. They did exist, however, and I wish to look at three of them.

First no. 6. Trams on this route did not have a destination. Instead the screen read 'Marchmont Circle'. This was a circular which ran along Princes Street, westbound cars turning up Lothian Road to Tollcross and then along the Meadows to Marchmont Road while eastbound cars turned up the Bridges as far as Salisbury Place, then west to Marchmont

Car 204 of 1935 in the Grange, Marchmont.



management would put out extra trams on the no.6 so that cars were running at busy times every two or three minutes.

For a number of years after replacement the no.6 became part of bus 24/29 which covered the same route but had a long extension to the northern suburbs . This may have brought a little extra traffic but with the general decline in inner city traffic this service didn't survive bus deregulation in 1986. The idea of an inner circle service to encourage shoppers to use public transport was attractive and a little 'Shoppabus' was tried with a number 6 but only survived for a few years.

Musselburgh interlace track, car 175 of 1934



I think if we had kept the trams it would have survived as a circle, single-deck of course, probably one-way only with single track between Tollcross and Salisbury Place.

My next special service was the no.21 with its short working no.20. This, of course, was the Musselburgh tram, the only service to go outside the city boundary. Originally the route the Musselburgh District trams were allowed to use in the city and, though Corporation trams took over in 1928, the route was never extended or varied.

The terminus in Waterloo Place, and the Regent Road line to it, were only used by this service. In practice though there was a connecting line to Princes Street. As operated this was the only stub terminus in the city centre. It was very busy, so to speed up passenger loading the outbound track had a long passenger island and there were two crossovers.

The route ran down through Abbeyhill and Portobello Road to the King's Road junction where Portobello Depot was located. The depot was small and, to utilise all space, was built right up to the road so that the fan extended into the running track. Trams then continued through the centre of Portobello and Joppa, where the no.20 terminated. The 21 continued for another five miles, going through Fisherrow where the tracks crossed the railway line to the harbour, turning sharp left at the bridge into Musselburgh High Street and eventually running single line with passing loops past the race course to Levenhall.

Pilcher at Piershill place.car 407 ex Manchester 389 of 1931. Behind car 338 of 1925



The route was quite straight for most of its length and after 1947 became the home of the 11 ex-Manchester 'Pilcher' cars. They were longer than the Edinburgh cars and this was the safest route on which to use them. Though straight, the trackwork was not plain sailing for the drivers. There was a steep slope at Abbeymount, the depot fan and the sharp turn at the Esk bridge, then half way long its High Street, the ancient Musselburgh Town Hall which projected into the roadway and the tracks at this point were interlaced. Many cars terminated at the town hall but those which ventured past

Fisherow Ship Inn Car 370 of 1929.



the race course had to negotiate a stretch of single track with passing places which, as I remember, was in dreadful condition and had to be taken slowly.

Scenically this route was very interesting. On Regent Road there was the (now Old) Royal High School, the fine Regent cinema, then the 'colony' housing at Abbeyhill. Then there was the Meadowbank Stadium, home of Leith Athletic FC and the Edinburgh Monarchs Speedway, just before the St. Margaret's loco depot. At the King's Road junction was the grand W M Ramsay institute (now converted to flats) and of course the power station

with its chimney which would have been in view all the way from Meadowbank as would the Firth of Forth. Portobello and Joppa are pleasant seaside resorts and the trams ran along the east end of the beach. In Musselburgh there is the River Esk with its green banks and finally the race course. This is still a very pleasant journey.

On Musselburgh race days an intensive service as possible was run. Trams were sent from all Edinburgh depots, though at other times all were run from Portobello. As well as the 'Manchesters' the main cars were wooden standards and the service 20 in particular seemed to have quite a few elderly cars. The depot had some modern domed roof standards which occasionally ran on the 21 but were mostly used on the 15 to Morningside. If you knew where to look you could find the old Musselburgh depot opposite the town hall up a lane under an arch next to the famous Luca's café (still there). The tracks were visible till recent years when there has been some building. The site is no longer accessible to the public.

The bodywork of the Manchester cars was in poor condition and in the winter of 1953/4 there were lots of complaints about wind and rain getting in, so they were replaced a few months before closure in November 1954. To compensate for the inconvenience the replacements were the modern cars. Unfortunately they included the all-steel streamliners and with their weight they made the most horrendous noise on any curved stretch of the worn track. I remember sitting in class in school and every tram that passed drowned out lessons.

I don't want to make the common mistake of remembering the old trams as they were at the end, after years of neglect. In 1946 I lived in a mining village and we had a Saturday only bus service which took us to Musselburgh. The little single deck bus was run, I think, by Dunn's of Wallyford. The seats were like curved wooden park benches and it was very uncomfortable. It was a relief to change to a smooth, comfortable fast tram up town.

The Manchester Pilchers were in fact excellent cars, though of course we in Edinburgh didn't think them quite as good as our own, and they did sway quite a bit. However, they were only 15 years old and had useful larger capacity. They had been badly neglected and Shrubhill works overhauled them mechanically but bodywork refurbishment was uneconomic for their short intended life. If they had been rebuilt they could have lasted another decade or two. It is a pity that, though some lasted in service elsewhere till at least 1958, none has been preserved but maybe, after completing their Manchester Standard replica, Crich will consider resurrecting a Pilcher.

Musselburgh Town Council ran an unsuccessful campaign to keep the trams. They knew they would be replaced by SMT buses, many with utility bodies and all with their famous low wattage lighting which made reading impossible in the winter. In the city the 20 was merged with the 26 to give the inhabitants of Portobello a cross-town route at last. The new 26 grew to be the busiest bus route in Edinburgh, so much so that it was duplicated by a limited stop no.86. In the 1980's Bruce Skivington wrote an influential article headed 'Track the 86' in which he argued that the city needed trams and should start by converting its busiest bus routes to make use of the extra capacity. The suggestion was ignored but it added to growing pressure which has led to the new trams today.

My third special route was the no.24 which linked Comely Bank to the city centre via Raeburn Place, Stockbridge and Howe Street, and was an electrified cable line. Unlike the 21 it was short and unlike any other route it did not share its tracks once past George Street. This was probably why it was chosen in 1952 as the first casualty of the abandonment programme, because there was an immediate saving on track maintenance.

A peculiarity of the 24 is that although double tracks were available for all of its city centre length and though a crossover was available where cars waited in St. Andrew Square, it operated as a one-way circle, turning left from North Frederick Street into George Street, turning right on to the south side of St. Andrew Square and back to Frederick Street via South St. Andrew Street and Princes Street. As with the 21 no attempt was made to extend it across town till bus replacement. The lesson of this, new tramway planners please note, is that the tramway as built is not necessarily the same as the tramway as operated. This service had two outstanding features. One was the steep slope down from Frederick Street to Stockbridge. Although there were no accidents one has to wonder whether this was a safe route for a tramway. Just a couple of years ago Howe Street was blocked all day by a bus stuck on the frozen roadway which it was deemed too dangerous to move and smooth rails would be even more slippery. Edinburgh tramway did chance their hand here, and there were other stretches such as Bank Street, Liberton Brae and Craighall Road where today the HSE would not permit a tramway.

Its other feature was the frequency of service. Friends who lived on the route insist there was a car every three minutes. One says he never had to run for a car because if a tram was at the stop he was heading for, when he looked behind he could see the next car coming. The 24 was certainly a very busy service. Today it is replaced by three bus services, the 24, 29 and 42, which between them run eight buses per hour. Till recently all were run by single deckers and were painfully crammed. Recently the 29 acquired double deckers to great relief all round. The authorities seem always to have been blind to the loadings on the old tram route as when buses took over in 1952 at first they were single deckers, but of course they couldn't handle the traffic.

One huge benefit of the bus replacement was to extend the service to the northern suburbs of Drylaw, Muirhouse and Silverknowes. The Western General Hospital is also served. Since it is scarcely half a mile from the Comely Bank terminus I don't know why no one thought of extending the trams to the hospital. Because of the requirement for high powered motors and good brakes the 24 always had modern cars. The only cars I remember seeing at the St. Andrew square terminus were domed roof standards. As the square was also at this time the city's stand-in for a bus station the surface was one of the few stretches of tram track which were in tar macadam. Tarred roads replaced cobbled streets as the tram tracks were lifted but the Frederick Street to Stockbridge section of route 24 was an exception and you can still see where they replaced the rails with a slightly different pattern of cobbles, possibly to maintain the ambience of the New Town.

Well, this is my choice of special routes. What about yours?

Bill Aitken, June 2015

Duncan White 1929 –2015

Duncan had been a member of Summerlee for the past 25 years and was a regular motorman for many years on a Wednesday, and was a committee member for over 15 years.

Having his own printing firm it was natural that he produced and edited the Trolley magazine with a little help from myself for 15 years. He served his national service in the RAF but the first time he flew was 20 years ago when going to the Isle of Man with a party from Summerlee to drive their trams, a nice long round trip of 34 miles. He also did the tramway experience over 2 days at Crich with myself and 2 others on a Glasgow Standard and Coronation. The best tram driving he said he experienced was 15 years ago at Blackpool where a Summerlee party spent 4 days driving all types of trams from the depot to Fleetwood and back.

He was a keen railway modeller and developed an interest in trams in 00 and 0 gauge. This led to the setting up of the tram model club within the group and for many years a portacabin, near the mine entrance, was opened with both scales of model trams running on layouts which the public were charged 10p to visit. Duncan

was a good modeller and built a lot of the trams from scratch and this included the motors. Eventually a large exhibition layout some 26 feet in length was built and called 20th Century Trams (his name for it) and it was exhibited at the transport museum and many local model railway shows. He also exhibited his Hornby 0 gauge railway at Model Rail at the SECC and other shows.

He was an active member of his church in Milngavie and as well as being a Boys Brigade officer was an elder for 50 years. Naturally he produced the magazine and church directory. He was a very honest man and did not hold any grudges or talk ill of people. He had an interest in photography and took lots of cine film on local transport before changing over to video and transferring his film to DVD.

Unfortunately he had not been very well for the past year and died in hospital. He will be sadly missed by those who had the pleasure of knowing him.

Ronnie Maclean



Duncan White

Soller to Port de Soller Tramway, Mallorca

This very picturesque tramway in the north of the island of Mallorca is operated by a private company “Ferrocarril de Soller” who built the railway between Palma and Soller in 1912. To reach the port (just under 5 km away) they added this traditional tramway in 1913. The gauge chosen was 3ft or 914mm due to British influence in the construction of the other rail lines on the island at an earlier date. The trams were the first electric trams on the island as the capital Palma only electrified their 1891 horse tramway in 1914 until trams in the capital were abandoned in 1958.

The Soller tramway provides a most interesting route commencing in the depot at the rail station, through the narrow streets of Soller, then private track behind back gardens crossing a main road with traffic lights to pass orange groves down to the seaside at the beautiful bay of Port de Soller passing along the promenade to a terminus at the east end of the resort. Originally there was a short extension into a naval dockyard which was a submarine base but this has been removed and domestic buildings have replaced the military installation. The line is single track with loops one of which is passed on the British (left) track possibly due to the length of the trams and trailer formations. Traditionally a single motor car plus one or two trailers requiring running round at both ends was the normal formation. In the summer the traffic is so busy that the sets are topped and tailed comprising a motor car + two trailers + motor car thus obviating the time consuming shunting movements. There seems to be a means of controlling the rear car from the driving end so both cars are powered. Additionally radio contact between cars is available to prevent conflicting movements between loops.



George Murray pleading for a wee shot



George Murray almost getting his shot

The railway was originally steam powered and the tramway gained power from an installation at the station by Siemens Schuckert at 600 volts. 3 single truck cars were supplied by Carde & Escoriaza of Zaragoza (nos 1 – 3) and 2 trailers. Open trailers were acquired from the Palma system in 1952 as the tramway was becoming very much a tourist attraction. In recent years 5 single truck cars were obtained from Lisbon (nos 20 – 24) and readily re-gauged from Lisbon's 900 mm track. The railway was electrified in 1929 on 1200 volts DC and the tramway supply was modified then from that source.

There were big celebrations in 2013 for the tramway centenary with orchestras and festivities as is the practice by Mallorcans. A visit to this delightful tramway is strongly recommended as is the scenic railway trip from Palma (round trip on both costs 30 euros). If not able to visit in person there are very good clips on U-tube giving a flavour of this very pleasant tramway.

George Murray

Trolley Quiz 2015 - ANSWERS

Answers:

Lye 1:

1) 1416mm was tramway gauge of all tramways in the Clyde valley to allow standard gauge rail wagons to run on their flanges although in practice this only happened in Govan to Fairfields and Linthouse to Stevens. 1435mm is standard gauge thus Summerlee is the first tramway in the area to be truly standard gauge and with dock track used at the points one wonders if that option could have been adopted in these two locations allowing trams to be standard?

2) 1017's truck was acquired by Crich to go under Leicester 76 and 1017's body was used as a meeting place for the early years of the STMS within a garden in Cambuslang thus we had to get another truck for 1017.

3) Volks Electric Railway in Brighton on the coast.

4) London County Council Tramways. (A L C Fell was General Manager)

5) Blackpool (for 1953 Coronation).

Lye 2:

1) Liberton – Stanley Road

2) Bridge of Dee – Bridge of Don

3) North Station (on Dickson Road) – Fleetwood

4) Shepperd 's Bush – Uxbridge

5) Dalmuir West - Auchenshuggle

Lye 3:

1) this is a mandatory stop sign and the tram should be brought to a halt.

2) this sign can be found just before the tram crosses the bridge going down the site

3) the 3 braking methods on 1017 are: air brakes, rheostatic brakes (including the track brake) and mechanical handbrake.

4) a single gong indicates to the conductor that the driver is ready to drive off. After the conductor has checked it is safe to do so the conductor responds with 2 bells. The driver then responds with 2 gongs to indicate the tram is moving off

5) the compressor is used to build up air pressure in the air reservoir. The air is used to operate the air brakes. The air tends to slowly leak from the system. When the air pressure reduces to 60 psi the compressor automatically functions to restore pressure to approx 80 psi.

6) Sand should be applied to the tracks just in front of the wheels. Sand dramatically increases the friction between the wheels and the rails. Each of summerlee's trams has a foot pedal which operates the sand box. It's also part of the motorman's daily checks to make sure there is enough sand.

Tram driving experience

Congratulations to David Griffiths and Dave Kinnaird who were our first participants of Summerlee's tram driving experience.

David and Dave both received instruction on driving all our operational trams plus a tour of the tram shed. Each received a certificate, an STG information booklet and were signed up for membership of the STG.

If you are interested in gifting a tram driving voucher please contact stg.inbox@outlook.com. The recipient of the voucher then gets in touch via the email address to arrange a time to suit. The experiences are done in the lighter late spring summer and early autumn Thursday evenings. Membership of the STG is included in the voucher and is activated when the recipient attends the tram driving experience. All of this is for a suggested minimum donation of £30 to the STG.



David Griffiths receives his certificate from Ronnie



Dave Kinnaird receives his certificate from George



Note for your diary AGM 2016

Please make a note in your diary for Saturday 19th March 2016 for next years AGM start time to be confirmed but likely to be 1.30pm

David Craig, Chair

Glasgows Last Tram.	http://glasgowslasttram.co.uk
Dundee Transport Museum	www.dmoft.co.uk
Culture NL	www.culturenl.co.uk
Danish Tramway museum	www.sporvejsmuseet.dk
Melbourne Tramway	www.yarratrams.com.au/
Edinburgh Trams	www.edinburghtrams.com
Beamish	www.beamish.org.uk
Grampian Transport Museum	www.gtm.org.uk

Looking for a Christmas Gift or Birthday present?

Summerlee Tram Driving Experience

Members should be aware that Summerlee Transport Group can now offer a tram driving experience on Thursday evenings for guests during the light evenings of late Spring, Summer and Early Autumn.

If you know of anyone who would be interested in applying for, or gifting an experience, please email **stg.inbox@outlook.com** for more information.

All profits go toward 1245's restoration.

If you have a story or have some pictures that you would like us to include in a future Trolley please email the editor at **stg.inbox@outlook.com**

All Logos and tram related graphics are copyright of the S.T.G. Unless otherwise stated photos are by R.Fulton.