

Trolleybus

Vol. 61 No. 726

January 2022



The Magazine of the British Trolleybus Society



John Zebedee
Platinum Jubilee 1952 - 2022
London: Buses for Trolleybuses - Stage 13
Index to 2021

TROLLEYBUS

The magazine of the
British Trolleybus Society

No. 726 January 2022

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B T S NOTICE BOARD

Reading Meetings

Held at the Reading District Oddfellows' Hall, 118b
Oxford Road, Reading RG1 7NQ. Admission: Adults
£2.50, Juniors £1.50. Non-members £3.50. Meetings
commence at 19.30. Organised by the BTS. NTA
members welcome.

Friday 4 February Graham Bilbé on Athens
Trolleybuses, following his recent visit.

Meetings Organiser Graham Bilbé, 12 Belle Avenue,
Reading RG6 7BL. Email
grahamebilbe@btinternet.com

London Meetings

Held at The Model Railway Club, 4 Calshot Street,
London N1 9DA (nearest Underground station: King's
Cross). Organised by the NTA. BTS members
welcome. Start 19.00 – doors open 18.30.

Wednesday 19 January Closed Trolleybus Systems of
the World, a presentation by Alan Murray.

Meetings Organiser John Parkin, 59 Beechwood Court,
West Street Lane, Carshalton SM5 2QA. Email
trolleybus654@aol.com

Bradford Meetings

Meetings are not being held at present.

West Midlands Transport Circle

BTS members are invited to attend WMTC meetings,
which are held on the second Wednesday of every
month at Bradmore Community Centre (Main Hall) in
Wolverhampton. There's a half-time break with tea &
coffee & (usually) biscuits!

If you are thinking of attending please email Mike
Richardes for the latest information on timings.

michael.richardes64@btinternet.com

MONTHLY PRIZE DRAW

The winners in the December Prize Draw were:

£140	Chris Spencer, Reading
£105	Martin Harvey, Reading
£70	Paul Weal, Leighton Buzzard, Beds

*On the front cover: After a gap of twelve years,
Solingen has rigid (non-articulated) trolleybuses
again. When member André Corteil visited the
German city on 18 November five of the 16 Solaris
Trollino 12s on order had been delivered, including
201, seen here in the depot yard.*

[Noa Dauby]



John Zebedee

We are sorry to record the passing on 26 November of BTS member John Zebedee, following a lengthy battle with cancer.

John was born in 1950 and brought up in Lyndhurst, close enough to the Bournemouth system of which he retained many memories. He moved to Reading, later Witham then Crawley, having a career in insurance.

John's support for the BTS included helping out on the sales stand, assisting with Trolleybooks distribution and many other tasks and at one time he was this magazine's Museum & Preservation News Editor. John retired in 2003 when diagnosed with cancer and given a prognosis of 5 years. In the end, he managed a further 13 years thanks in part to various medical trials he was offered. In his retirement as before, John was a keen and active supporter with financial and physical assistance at many enthusiast bodies in the trolleybus, tram, bus and railway fields. He drove or conducted trolleybuses at Sandtoft and Carlton Colville, and in the winter he attended track laying gangs on Volks Electric Railway at Brighton, to name just a few.

Several trolleybuses, including Mexborough & Swinton 34 and Bournemouth 301 received valuable financial support from John. He was also a generous supporter of the Society's Sponsortrolley scheme. Despite his health taking a sudden turn for the worse in late August, John was still keen to visit Sandtoft over the Bank Holiday and then to see the progress on Rotherham 73, though it was clear that he was in considerable pain and

discomfort. Thereafter John was first hospitalised at Redhill, before moving to a care home near to his son and family in Reading. John was a giver rather than a taker; his friendship and help will be sorely missed by those who knew him.

Alan Murray

The BTS Chairman adds:

At John's funeral on 15 December there was affectionate laughter when the Celebrant described him as having been "loud". You certainly knew when John was in the vicinity and I cannot think of him without remembering his booming laugh.

Alan's description of John as being a giver rather than a taker sums him up very well. He was always there for friends who were in need. John's positive approach to life was inspirational. When I visited him in hospital in October he told me that he felt lucky to have enjoyed many good years since his cancer diagnosis 18 years ago.

We also talked at length about the development plan for Sandtoft, which he was very enthusiastic about although he knew that he would not be able to visit again. When I saw him for the last time, eight days before he died, John was sitting up in bed uploading to Flickr the photos he had taken on his last visit to Sandtoft. He was proud of the fact that he had more trolleybus photographs on Flickr than anyone else.

It was a privilege to have known John. On behalf of all members I send condolences to John's family.

DGC

Platinum Jubilee: The Trolleybus scene in 1952

2022 will be (yet again) a Jubilee year, but this time it is a Platinum one – 70 years. The Queen's accession took place in 1952 and so throughout 2022

be noted in due course. There were also deliveries of rebodied wartime vehicles, although the classic rebodied trolleybus, where similar Roe bodies



Portsmouth 252, one of the large batch of Craven-bodied AEC 661Ts delivered in 1936/7, is seen at the end of the wiring in Madeira Road in September 1961. This terminus had been in use since January 1952. [BTS Library]

Trolleybus will look at various events in 1952 from the trolleybus perspective.

Occurring only seven years after the end of the second world war, the United Kingdom was still struggling to shake off the problems of post-war austerity. For some foodstuffs and goods rationing was still in place and some consumer goods were in short supply. In this year new trolleybuses were delivered, including the completion of some large orders, as will

were placed in service in half a dozen towns, was yet to take place. And there were also some interesting second-hand sales. New routes were being opened or extended across the country and some systems were still seeing extensive expansion, although on the downside one system closed and there were route abandonments in other places.

The year started well, for before the first week was out, Portsmouth

extended services 7/8 and 11/12 from their terminus at Copnor Bridge, which had been in use since November

BUT 9611T trolleybuses with Brush bodywork, the first of which had entered service in December 1949.



Seen at the junction of St Ann's Road and Huntingdon Street in May 1965, Nottingham 569 was delivered in January 1952. [R F Mack, copyright NTA]

1936, to Green Lane, this new facility being introduced on Sunday 6 January. The new terminal at Green Lane was an interesting one. After travelling along Copnor Road from Copnor Bridge trolleybuses on the extended services turned left into Madeira Road and then reversed into Compton Road. It is believed that the reversing triangle in the overhead was a re-used one from the Floating Bridge terminal, which had been discontinued the previous year.

Within a few months, as will be seen later in the year, the trolleybus service was further extended along Copnor Road to Hilsea.

In Nottingham, deliveries continued of the large order for 102

Only three BUTs appear to have been delivered during the month (nos 566, 569 and 570) although none actually entered service during January. Delivery of this large group of trolleybuses was finally completed in July of this year.

Article by Bob Rowe

The photograph of Portsmouth 252 was scanned recently but a computer failure erased details of the photographer. If you know the attribution for this photograph please advise the Editor and acknowledgement will be made in a future issue.

Buses for Trolleybuses Stage 13

Tony Belton wrote the article and took all the photographs

3 January 2021 was the sixtieth anniversary of Stage 13 of London Transport's "Buses for Trolleybuses" conversion programme.

Three depots were involved: Colindale (CE), Finchley (FY) and Stonebridge (SE). Colindale (CE) was the one and only conversion with the depot losing its two routes in one go: the 645 and 666

When the final trolleybus entered the depot it became non-operational and replacement services were transferred to local bus garages.

Finchley (FY) was the second and final conversion with the loss of routes 645 and 660.

Stonebridge (SE) was the one and only conversion losing all its routes in one go: 660, 662 and 666.

The following four routes were involved in stage 13:

- 645: jointly operated by FY and CE from Canons Park to Barnet via Cricklewood
- 660 jointly operated by FY and SE from North Finchley to Hammersmith
- 662: operated by SE from Sudbury to Paddington
- 666: jointly operated by CE and SE from Edgware to Hammersmith

NB: The final six photographs in the article were taken on the last day of service on 2 January 1962

Number one in the charts on 3 January 1962 was Moon River by Danny Williams.



Above: The scene is Cricklewood Broadway where a smartly turned out 1564 is about to turn right from Cricklewood Lane whilst on its journey to Canons Park on route 645. The condition of 1564 proves that CE depot really looked after their trolleybuses right up to the end.

Overleaf, top: A storm is brewing, and the driver of 1609 must be grateful that the rain hasn't started yet as he transfers the booms from the main line on to the North Acton short working turning circle. FY and SE both had duties on route 660; the illustrated 1609 is from SE.



Above: It's Christmas Day 1961 and the crew of 1647 have finished their spell of duty on the 662 and are arriving back at SE depot. It was a lovely day and at the time it would have been hard to imagine that six days later London would be covered in heavy snow.



CE and SE jointly ran route 666; examples of both allocations are photographed together at Edgware terminus. 1620 from SE is the front vehicle with 1588 from CE taking up the rear.



RT843 on route 16 to Victoria is changing crews on Edgware Road opposite Cricklewood bus garage (W) giving me the opportunity to photograph CE's 1583 overtaking on its way to Hammersmith on the 666. RTs had the luxury of indicator signals whereas trolleybus drivers had to use hand signals.



As mentioned earlier heavy snow fell in London on New Year's Eve 1961. It was impossible to distinguish which routes the trolleybuses were on. However, more helpful crews assisted the public by marking the route number on the front lower panels. This example shows an unknown SE vehicle on route 660 bearing left from Kingsway into Ballards Lane departing North Finchley



Two days later and 1457 on route 645 to Canons Park is changing crews on Ballards Lane whilst a driver is pulling the frog to allow 1466 also on route 645 to turn left into Woodberry Grove to reach FY depot after the morning peak. Note the difference between 1466 that hadn't been out during the snow and 1457 which had.

**London Transport “Buses for Trolleybuses”
Stage 13: 3 January 1962
Route 645 Canons Park to Barnet
Route 660 North Finchley to Hammersmith
Route 662 Sudbury to Paddington
Route 666 Edgware to Hammersmith**



Above:

Later the same day and a crew change is taking place on Edgware Road opposite CE depot. It was the final time that the alighting crew would work on a trolleybus; 1580 however had a few more journeys to complete on route 645 before retiring.

Bottom right:

The driver of FY's 1449 has just realised the trolleybus has de-wired; the 660 has turned left from Finchley Road onto the turning circle at Golders Green short working and will shortly return to North Finchley.

Page 12, top:

New to SE in November 1961 was L3 1485: the trolleybus photographed on route 666 to Hammersmith is passing under the railway bridge in Victoria Road whilst approaching North Acton. A train passing overhead enhances the view.



Above: SE's allocation of route 660 is demonstrated by N1 number 1604 on a journey to Hammersmith overtaking out of service L3 number 1529 at Craven Park. 1529 had only been at SE for two months replacing a vehicle that had fallen by the wayside; the trolleybus was one of five L3s fitted with sliding windows rather than the normal half-drop windows.





Above: CE's 1595 is in King Street at Acton and about to turn left into High Street on an Acton Market Place short working. The driver has already changed the destination to Edgware ready for its return journey on route 666.

MUSEUM & PRESERVATION NEWS

Edited by Jody White



Cardiff & South Wales Trolleybus Project August to early November

Bearing in mind that it's been nearly two years since the fire, our relocation to the bus depot in nearby Barry still impacts on the small group of active members as we settle in, juggling vehicle work against sorting through what equipment and tools we can keep in the limited space we have.

News at the end of July added more pressure, as the lease on the nearby dockside storage facility (in which we have all sorts of fundraising items and equipment), is to close in January 2022. Additionally we have a shipping container at the farm still needing disposal. But on to our restoration work...



[Keith Walker]

262 with almost 90% of the timber framing in place.

Cardiff 262 A decision was made to continue our efforts there, with more timber body framing. The lower saloon was completed and a start was made on the upper deck. John Webb continued his



[Keith Walker]

John marks out the first window pan profile.

wood working skills and the other team members supplied him with machined sections around the window recesses, body pillars and seat rails. Attention also turned to the final offside bay at the rear stairs, which had suffered more from the intensity of the blaze. At the stair turning point the inner skin panel was so distorted it will need renewing; and once removed, the steelwork above it, that forms the window sill support, had been attacked by the "metal moth"; so that was cut out. With all restorations, in this case seven decades old, we ran into a problem as the steel was 'T' bar in section.

With no local suppliers in South Wales, and another shop in Kent which could supply only six metre lengths (we only needed four foot!), a little thought and elbow grease, and the two pieces of angle iron were fabricated. Problem solved.

The area at the top of the stairs, to the rear corner, has seen a large addition

of new timber framing and we have made savings by using tannalised timber including garden decking, which along with the inner body panels, will receive a coat of black bitumastic paint.

As October dawned we welcomed additional members who attend when they are able, as there are always jobs to



Trolleybooms on the wires at Barry.

do. During our stay at the barn we had erected a set of steel wires twenty five metres long to simulate overhead and illustrate to visitors the difference between a trolleybus and a tram. From the ashes of the barn we salvaged the overhead; and with proper permission and the aid of a scissor lift were able to erect a shorter section. So with the overhead in place we put 262/243 booms on the wires. Unfortunately, the bamboo pole hadn't



Jeff de-rivetting 243's internal roof trim.

been so fortunate in the fire, and with no knowledge of a ready supply, it was

thinking caps on and, for under a tenner, we put together two lengths of drain water pipe, attached the salvaged hook, and got the trolleyheads on the first overhead wires erected in Wales for over fifty years! We do recognise that the substitute "bamboo" pole is a work in progress. Due to the extensive amount of timberwork, the month of October saw this area of work advanced to near completion, and as we entered November, the first aluminium sheet was cut, with the first small mid deck panels and window pans made.

Cardiff 243. With work on 262 at an advanced stage and welcoming member Jeff White who visited us from Chatham for a day, we set him to work on 243, our "Doodlebug".

During the fire 243 had been protected to a certain extent, but we needed to determine if the offside internal lighting wiring had been affected; so the first task was for Jeff to carefully remove the glass jelly moulds and bases, unscrew a number of trim strips and then remove two longitudinal aluminium mouldings. Finally, to prepare for inspection, a multitude of small rivets had to be drilled out.

See our Facebook page where bi-weekly photographs are published.

Keighley in Motion

The major transport festival which was postponed from 2020 will take place across Keighley on the Jubilee bank holiday dates of Thursday 3 and Friday 4 June 2022.

The Trolleybus Museum's replica of Keighley 0 will be attending, paying its first visit to the home of the original.

Long Shop Museum, Leiston

Ipswich 26 A major milestone was reached on 9 November when the body and chassis were separated ready for the chassis to be media cleaned. The team built a body support from strongbacks and gently raised the body from the chassis. Once free, the chassis was pulled clear.

Some additional struts were fitted to support the front cab area once clear of the chassis. The body has been lowered

to around 10-11 inches from the floor to make restoration work much easier and safer.

Two weeks later the chassis and some of the tinware were taken to the Museum steam yard ready for media cleaning (sand blasting). After waiting for favourable weather to limit any carryover



[Garrett Trolleybus No. 26 Group]

Sliding out Ipswich 26's chassis on 9 November.

of airborne grit, the chassis was media cleaned on 14 December. Considering the chassis is 95 years old and spent at least 50 of those years in a field, it is in very good condition and requires little remedial work other than the top hoop of the rear axle frame that was cut off during the summer house conversion. The chassis is now back in the workshop ready for the next stage; a thorough inspection followed by primer and undercoat.

From Garrett Trolleybus No. 26 Facebook page.

NOTE: Long Shop Museum is closed for normal business until 27 March 2022.

Germany Solingen

According to Trolley:motion, the 70th anniversary of trolleybus operation will be celebrated with an open day on 19 June 2022. Operator SWS has formed a committee with Obus-Museum (Trolleybus

Museum) Solingen. It is expected that some guest vehicles will operate and that there will be a commemorative publication.

Russia St Petersburg

From Trolley:motion The restoration of trolleybus No. 118, a Yaroslavl YATB-2 built in 1938, was completed in time for the 85th anniversary of trolleybus operation on 21 October. It was discovered by chance in 2007 near Lake Zerkalnoye in the Vyborg district of the Leningrad region. 83 years after its construction, the trolleybus can again run on the network. The Yaroslavl automobile plant built 75 YATB-1 units and 18 examples of the successor YATB-2 type for St. Petersburg. One of each is now preserved.

According to St-Petersburg Essential Guide.com, St. Petersburg's first trolleybus was created by P.A. Freze in 1902, although regular service did not begin until October of 1936. Initially, the majority of the trolleybuses were built locally, but later St. Petersburg began purchasing buses from Yaroslavl, a city on the Volga River. By 1941, Leningrad had 130 trolleybuses around the city. During the Siege of Leningrad all trolleys stopped running and didn't return to service until May 1944.

Corrections:

Museum & Preservation News

North West Museum of Road Transport

Last month's photograph of St Helens 387 and the RT was wrongly credited to Clive Arnold, who wrote the article. It was taken by member Geoff Sandford and Clive obtained permission to use it. Apologies to Geoff for this error.

Pizeň Celebrations

Zdeněk Kresa has kindly provided some corrections to last month's article. The events were jointly organised by operator PMDP and trolleybus manufacturer Škoda Electric, not just by PMDP. Božkov is the terminus of line 12, not 15 as shown.

The evening tour comprised seven trolleybuses, with a 21 Tr as backup which was not visible in the photo.

World News

Edited by Bruce Lake



BULGARIA Sliven

In addition to the planned purchase of six new trolleybuses, the selection process for which is under way, the municipality is starting to modernise the overhead line. Eight out of ten sections of the network, totalling more than 43 km, as well as two rectifier stations, will be completely rebuilt or renewed.

Of the four trolleybus lines (3, 7, 18 and 201) only line 201 is currently operated, using four refurbished Škoda 14 Trs built in 1986. The six new vehicles will be sufficient for operation on line 201.

CZECH REPUBLIC Brno

The first thirteen new Škoda 27 Trs entered service on 13 December. Another seven were expected before Christmas, leaving twenty to be delivered in 2022. The operator is seeking to order up to 46 new 12m trolleybuses.

Dopravní podnik Ústí nad Labem has expressed interest in purchasing the nine Škoda 25 Trs (3609 – 3617).

CZECH REPUBLIC Jihlava

On Friday 12 November 12 the official foundation stone was laid for the construction of new overhead lines. The contract for the construction of 5.7 km of new double-track overhead was awarded to Elektrolina. The work includes the installation of 290 traction poles, the construction of two substations and the 4.6 km underground power supply at a cost of almost CZK 130 million (around £4.35 million).

Completion is expected at the end of 2022, when 75% of public transport passengers will be transported emission-free.

Motor bus lines 3 and 12 will be replaced and the new trolleybus lines are expected to be designated G and H. The current terminus of bus line 12 Antonínův Důl in the north of the city will then be reached with about 3.5 km of battery travel. In addition to the existing seven battery trolleybuses, six new vehicles

have been ordered for delivery in 2022 from Tram For Envi s.r.o.

CZECH REPUBLIC Mariánské Lázně

Škoda 24 Trs 54 – 56 have been sold for further service in Ternopil, Ukraine.

CZECH REPUBLIC Plzeň

The first two new Škoda 26 Trs to enter service were 597 and 600 on 15 November.

CZECH REPUBLIC Ústí nad Labem

In August, the Czech Competition Office ordered the City's Transport Authority to cancel the tender for the procurement of 33 battery-equipped articulated trolleybuses following legal challenges by Cegelec and SOR. After the appeal procedure had been exhausted, the official announcement was published on 23 November.

The operator has expressed interest in purchasing Brno's nine Škoda 25 Trs which are soon to be displaced.

FRANCE Lyon

The plans for the first BRT line in the SYTRAL "[Destinations 2026](#)" plan are out for consultation. The new 7 km line will run from Part-Dieu via route de Genas to Sept Chemins in the Vaulx En Velin Sud district. Vaulx-en-Verin is a municipality bordering Lyon with 50,823 inhabitants. IMC trolleybuses will be used, running every 7 minutes and with a journey time of 25 minutes. In 2030, 22,000 travellers are expected. Hess The 34th and last Hess LighTram 19DC battery trolleybus was delivered at the end of September. Numbered 2001-2034, since 30 August the vehicles have also been used on line C11. The displaced Cristalis ETB12s are now used by the Vaise depot on line C14, replacing the unrenovated ETB12s, 15 of which have been withdrawn. A fire at the Vaise depot on 12 November destroyed ETB12s Nos. 1831, 1851, 1856, 1862 and 1865. 1802

has been withdrawn after spending some time out of service, leaving only 48 rigid trolleybuses still in use on the C4, C14 and C18 lines.

FRANCE Nancy

Following several months' consultation, on 25 November the city councils of the Greater Nancy area approved the urban mobility plan, which has at its heart the replacement of the current TVRs on line 1 with double-articulated trolleybuses. On 18/19 November, a delegation of about twenty elected officials, representatives of Keolis, technicians and users from the greater Nancy area visited the trolleybus operation in St.Gallen and examined the new Hess LighTram 25DCs, including test drives. After the presentation of the network and the 100% electric double-articulated trolleybuses in the depot in the morning, the delegation undertook test drives in the line network in the afternoon. On the Friday the delegates toured the Hess factory tour and had test drives on the Zurich network.

Two incidents with the TVR cars led to operating restrictions on 3 November. One TVR caught fire and the articulation broke on another. All TVRs were withdrawn immediately and limited operation resumed the next day. Full operation returned after all members of the fleet had been inspected.

GERMANY Solingen

A visitor on 18 November found that five of the 16 Solaris Trollino 12s on order had been delivered. The last rigid trolleybuses to be delivered were MANs in December 1987, and the last of these to operate was when they were replaced by Hess Swisstrolleys on the 683 service in November 2009.

The first of the new vehicles to enter service was 202 on 15 December.

ITALY Milano

An order has been placed for 50 Solaris Trollino 18s, with delivery

to commence at the end of 2022. This is part of the 2018 framework contract under which 30 similar vehicles have already been supplied.

Kiepe will supply the electrical equipment, including In-Motion Charging batteries.

The passenger capacity will be 135 including 31 seated.

All remaining articulated trolleybuses dating from the 1990s will be replaced by the new Solaris, as will the last two-axle Iveco/Socimi 12m trolleybuses, which are still in service on line 93 and have already seen 37-38 years' service! Already withdrawn are the 10 Irisbus Cristalis ETB 18 which were only delivered in 2005 but are very prone to breakdowns.

ITALY Napoli ANM

The city's two trolleybus operators ANM and CTP are modernising CTP's 2.8km route from Piazza Carlo III to Capodichino (Piazza Di Vittorio), which is to be served by the ANM as trolleybus line 205 in the future. ANM trolleybus 9094 and CTP trolleybus 1127 were used for test drives on the route on 18 and 19 November.

LITHUANIA Vilnius

After completing trials in Tallinn the Solaris 24 demonstrator came here on 6 December and is expected to be tested for two months.

Film posted on YouTube on 14 December shows it running on test with VVT insignia, Vilnius fleet number 2762 and decorated with Christmas lights.

ROMANIA Braşov

The entry into service of the latest Solaris Trollino 18Ms, which have Medcom rather than Škoda electrical equipment (2026 – 2050) has led to the withdrawal of secondhand Swiss vehicles.

The last day of operation of the ex-Biel/Bienne Volvo B10 Ms was 4 December, when No. 70 was withdrawn after operating on route 8, Rulmentul-Saturn. The vehicle was manufactured in 1988 and had operated in Braşov since 2008.

On 15 December the ex-Neuchâtel FBW/Hess 91GTS trolleybuses saw service for the last time.

ROMANIA Târgu Jiu

The delivery of eleven Solaris Trollinos from the first order continues, with the next due to

come in 2022. Solaris has submitted the sole bid for another 15 units

SWITZERLAND Genève

With effect from the timetable change on 12 December, trolleybus line 2 was extended by 2.3 km to Crissy and trolleybus line 7 was further extended by 1.3 km to Bout-du-Monde. On both lines trolleybuses will run in battery mode to the new final stops.

With the delivery of the 23 VanHool Exqui.Citys which started in February 2021 and concluded on 29 July, more than 50% of the trolleybus fleet is now equipped with batteries.

Following the withdrawal of the last NAW/Hess/Siemens (SwissTrolley 1) in July, the fleet now consists of 56 Van Hool Exqui.Citys, 38 SwissTrolleys and 10 double-articulated SwissTrolleys (total 104). Three vehicles (760, 766 and 1636) have been retrofitted with an additional seat for driver training.

Line 9 is to be converted to trolleybus operation at the end of 2022, replacing line 6 between Rive and Genève-Plage, with the line 6 section from Rive to the hospital in Champel then being strengthened.

SWITZERLAND La Chaux de Fonds

Genève VanHool Exqui.City 1645 has been on loan to conduct tests in preparation for the resumption of trolleybus operation.

UKRAINE Khmelnytskyi

The trolleybus system is to be modernised following an agreement signed on 4 October between the city administration, the municipal transport company "Elektrotrans" and the European Bank for Reconstruction and Development (EBRD), which will provide a loan to finance the project.

Elektrotrans wants to purchase 50 new trolleybuses, 10 of which will be equipped with batteries to allow the system to be expanded on unwired sections.

Only 35 of the company's 90 trolleybuses are low-floor and below 15 years old. In addition to 31 Bogdan T70117 trolleybuses built in 2015-2019, there are two Bogdan T60111 (YOC 2008) and two Electron T19101 (YOC 2014).

There are also some YMZ trolleybuses (built in 1992-97) with

the rest of the fleet being ZIUs, the oldest of which is 40 years old.

The city currently operates 27 trolleybus services.

UKRAINE Kiyiv

With the delivery of 15 new Bogdan T901.17 articulated trolleybuses the fleet now comprises 634 vehicles, of which around 250 are out of use, operating on the 44 trolleybus lines. The peak trolleybus fleet total was 1156 in 1988, serving 32 lines.

UKRAINE Ternopil

Three Škoda 24 Trs have been purchased from Mariánské Lázně, Czech Republic. The first arrived in late November.

UKRAINE Vinnitsya

Trolleybus line 12A was extended on 28 October by about 3.5 km from the previous Niemirivskie Schose (Niemirivskie Šose) terminus at the Industriální Park stop to Pysarivka village, increasing the length of this line to about 18 km, with the two outer sections being unwired. It is the second line to be introduced which includes battery operation, line 15A having been inaugurated on 24 June 2021. The trolleybuses of line 15A, like line 15, run from Mikroraión Vyschenka (Višenka) to Municipalni Rynok then continue in battery mode for 2.3 km to the final stop of lines 1, 3 and 6A in Miroraion VPZ.

Between April and September 2021, seven PTS-12 battery trolleybuses were produced in the company's own workshop, so that 13 vehicles are now available for the line extensions in battery mode. The fleet total is now more than 170, including almost 100 ZIU 682s built 1984-1993 in regular service.

USA San Francisco

Overhead line was installed on the new trolleybus BRT route in July and test running commenced in November. Passenger service on line 49 is scheduled to commence at the beginning of 2022.

With thanks to: André Corteil Dave Chick, Jan Spousta, *České noviny, Československý Dopravák*, Trolley:motion, sustainable-bus.com, *Urban Transport Magazine*, *zdrojovky.cz*, Internet sources

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On the rear cover, top: This fascinating photograph was taken at Plzeň's Karlov depot on 19 November, when Mariánské Lázně Škoda 24 Tr No. 56 was being prepared to be transported to Ternopil, where it became Ukraine's first 24 Tr seven days later. On the left, Plzeň Škoda 24 Tr Citelis1B No. 513 "wears" a moustache for November, the annual event to raise awareness of men's health issues.

On the rear cover, lower: Plzeň Škoda 27 Tr 590 leaves the Karlov stop in Borská street while one of Brno's brand new 27 Trs out on a test run crosses the Karlov depot overhead junction.



[Zdeněk Kresa]



[Zdeněk Kresa]