

Railtalk Magazine Xtra

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Railtalk Magazine *Xtra*

Welcome to the Railtalk Magazine Xtra, which compliments the main Railtalk Magazine and means that we can put even more pages together every month. As always in Xtra, we focus on life outside the UK, and once again we have some excellent shots from around the world. Our "From the UK" section this month has a look back at some of the events of 2012. Overall not a bad year for the railways, but a terrible one for photography with far too many grey days and a total lack of decent sunshine.

Well a Happy New Year to all our readers, I hope that you have all had a marvellous time and although in the UK the weather has been pretty miserable, it surely can only get better. Unusually I haven't got any plans for the forthcoming year yet, normally by now I would be excited about going to see some snow in Austria, but the problem is there doesn't seem to have been much of the white stuff falling. Although winter started early and there were some snowfalls as early as October, since then it has got considerably warmer. I will be keeping an eye on things, and as always the webcams dotted around Europe these days are an absolute must.

Once again thanks to everyone who have sent us photos this month, and as I have said many times before, please do keep sending the photos in to us wherever you are and if you are going on holiday, don't forget to pack the camera.

David

Once again many thanks to the many people who have contributed, it really makes our task of putting this magazine together a joy when we see so many great photos. This issue wouldn't be possible without: Colin Gildersleve, Steve Madden, Brian Battersby, Paul Godding, Richard Hargreaves, Pavel Kopec, Tomáš Kubovec, Martin Grill, Martin Válek, Mark Pichowicz, Richard Weber, Filip Štajner, Pavel Šturm, Bea Želtvayová, Petr Holub, Pavel Martoch, Honza Štofaňak, BVT, Ivo Rušák, Zdeněk, Mirko, Libor Hyžák, Keith Hookham, Jaroslav Charvát, Matouš Vinš, Martin Hill, Steve Dennison, Ian Leech, Anton Kendall, Laurence Sly, Colin Hart, John Coleman, Steamsounds, David Mead, Piotr Kozlowski, Derek Neesham, Roger Williams, Mark Bearton and Andy Pratt.

Front Cover: On December 17th, DB Class 218.464 and 218.326 stand at Immenstadt ready to depart with IC2012 to Stuttgart. [Mark Pichowicz](#)

This Page: Class 480.017 is seen working a passenger service to Budapest Keleti at Ferihegy, Budapest on October 15th. [Steve Madden](#)

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Submissions

Pictures, articles and news can be entered through the forum, or by email to us at:

entries@railtalk.net

Please include a detailed description and credits.

Railtalk Magazine Xtra

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SBB Re 4/4 No. 11364, one of the few remaining examples still in green livery, brings an Antwerp-bound empty rake of tanks through Pratteln, Switzerland on July 6th. [Anton Kendall](#)



Nos. 2062.104 and 2062.116 pass Prgomet
whilst working freight train No. 60309, the 01:25
Ogulin - Solin on November 21st.



Laurence Sly



Trenitalia Cargo Class E655.521 (recently repainted in XMPR livery) is seen outside the shed at Bologna San Donato on November 9th.

Laurence Sly



A Wengenalpbahn EMU is seen climbing
the last section from Lauterbrunnen to
Kleine Scheidegg on September 18th.



Stearnsounds



Vitznau Rigi Bahn EMU No. 2 is seen at
Rigi Kulm on September 21st.



Steamsounds



Class 2062.104 and 2062.116 pass Parati whilst
working freight train No. 60309, the 01:25
Ogulin - Solin on November 21st. [Laurence Sly](#)



FS locos Nos. E652.002, E655.076, E655.271 and E655.233 are seen stabled around the turntable at Milano Smistamento on November 5th. [Laurence Sly](#)



Top Right: EMU Class 460.079 and 460.080 is seen working stopping train No. Os3204 working between Usti and Vsetin carrying the historical (nostalgic) socialist "unified" livery as was used in the '80s and early '90s. On the cab ends there would have originally been small red stars, however these have been replaced with a small red CD logos.

Ivo Rušák

Bottom Right: Carrying rather dirty Coca-Cola livery, Slovakian Class 362.015 is seen heading the EC272 'Jaroslav Hasek' service from Budapest-Keleti to Prague as it nears Brno crossing the River Svatka on July 9th. *Ivo Rušák*

Below: CD Class 151.020 is seen working Ex126 'Fatra' from Zilina - Praha between Vsetin and Jablunka on August 7th passing Class 380.007. *Ivo Rušák*



Class V63, No. 630.025 has just arrived into
Ferencvaros Yard with a train of empty Cartics,
October 15th. [Steve Madden](#)



Hz Class 2062.114 waits to depart with the 21:18
Spilt - Zagreb sleeper service on November 21st.



Laurence Sly



On October 15th, Class M44 No. 448.431 is seen shunting the yard at Soroksani in Budapest. This is the yard where Floyd stable their Class 56s and 86s, however there weren't any there at this time (typical!).

Steve Madden



Schynigge Platte Bahn No. 5 is pictured at the summit
after working a special charter service on
September 19th. [Steamsounds](#)





On September 20th, Brienz Rothorn
Bahn No. 15 is seen at Rothorn Kulm.
[Steamsounds](#)





Gornergrat Bahn EMUs
are seen at the summit station
on September 23rd. [Steamsounds](#)



Top Right: OBB DMU Class 5020.046 is seen arriving into Wien Meidling on August 18th. [Brian Battersby](#)



Bottom Right: Wien Lokalbahn tram No. 4120 passes by Wien Meidling with a service to Wiener Neudorf on August 18th. [Brian Battersby](#)



Below: The magnificent Eigergletscher station on the Jungfraubahn as seen from the train on September 16th. [Steamsounds](#)



SBB Re 4/4 No. 11233 brings a rake of
Holcim-owned Fals cement hoppers through
Pratteln, Switzerland on July 6th. [Anton Kendall](#)



FS Class E632.043 is seen stabled alongside
two D245 shunt engines outside the
roundhouse at Torino Smistamento on November 6th.



Laurence Sly



Soon to be replaced by brand new EMUs,
Zentralbahn De No. 110.021-3 is seen arriving
at Interlaken Ost. with train No. IR2224 from Luzern
on September 16th. [Steamsounds](#)



Class M28 No. 628.096 is seen stabled on
Debrecen Depot, October 14th.



Steve Madden



GJW Praha liveried Class 721.540-3
is seen in the yard at Ceske Budejovice
on October 15th. [Class47](#)



Bernese Oberland Bahn EMU
with Abt driving trailer No. 424 leading
is seen arriving at Interlaken Ost on September 16th.



Respecter de l'heure d'attente
attendre le train au quai
attendre le train au quai
Do not cross the railway line

Top Right: The Slovak "twins" Class 131.091 and 131.092 of ZSSK Cargo are seen working a heavy cargo from Slovakia, carrying among others 6 fresh new, red flat cars from the car manufacturing factory in Poprad (Vagonka Poprad) for the German DB. Interesting is that the flat cars are coupled alternately with old tank cars. *Ivo Rušák*



Bottom Right: The small gauge Tatra Electric Railways (TEŽ) now use only these Class 425 electric units made in the Slovak town of Vrútky under Swiss licence. Here Class 425.956 and another are seen at Tatranska Lomnica, waiting for a train coming from Strbske Pleso (the highest situated rail station in Slovakia, 1,325 m above sea level), which then continues to Poprad-Tatry. This small gauge railway carries tourists along the whole High Tatra mountain range and connect it with the main backbone Slovak railway (Bratislava - Kosice), the main connection point being in Poprad-Tatry station. The small gauge railway was completely reconstructed (including some of these historical buildings) after November 2004, when it was badly damaged by a hurricane, which chopped down all (pine) forests along the whole mountain range!.

Ivo Rušák



Below: On August 18th, Class 183.001 is seen at Poprad-Tatry on the rear of a freight heading up towards Strba. *Ivo Rušák*



FS Class E656.577 is seen stabled outside the shed at Ancona alongside withdrawn E645.084. [Laurence Sly](#)





1922

(B)

SIEMENS

SIEMENS

On November 17th, SNCB No. 1922 is seen departing Brussels with a service from Oostend to Essen. *Class47*



CD Class 704.013-2 shunts some Class 810 units in Tabor on October 15th.

[Class47](#)



In a small patch of half sun at 4:45 in the afternoon, Class V43 No. 431.002 slows for the station stop at Debrecen on October 14th. [Steve Madden](#)



Top Right: The smoke trail in the middle of this photo was drawn by a Boeing 737 of Blue Air (Romanian airlines) en route from Bacau to London Luton, as Class 380.012 is seen working Ex521 'Vsacan' from Prague to Vsetin at Jablunka. *Ivo Rušák*



Bottom Right: Cesky Drahy DMU Class 854.222 is seen working fast-train No. Sp1728 Cimburk Uherske Hradiste - Brno Nesovice on July 22nd. *Ivo Rušák*



Below: This Class 380 carries a temporary livery for the occasion of the European Football Championships in Poland. Class 380.011 is seen working service R624 'Portas' from Vsetin - Prague between Vsetin and Jablunka on August 5th. *Ivo Rušák*



Top Right: OBB Class 1144.237 is seen stabled on Wien Meidling depot, August 18th. [Brian Battersby](#)



Bottom Right: Adria Transport Class 1216.921 is seen stabled at Bratislava Petržalka on August 18th. [Brian Battersby](#)



Below: OBB Class 4124.016 is seen at a sunny Wien Sudbahnhof on August 18th. [Brian Battersby](#)



Top Right: A Class 842 DMU is seen hauling a couple of Class 954 trailers working between Brno Hln. and Brno Horni Herspice on July 7th. *Ivo Rušák*



Bottom Right: Class 460 EMU is pictured working stopping service No. Os3203 as it runs along the Bečva river between Vsetin and Usti on August 12th. *Ivo Rušák*



Below: An OBB Class 1216 Taurus locomotive hauls the EC172 'Vindobona' from Wien - Prague - Berlin seen between Babice and Adamov on July 20th. *Ivo Rušák*



Trenitalia Nos. E655.521 & E655.490
are seen outside the maintenance shed at
Bologna San Donato on November 9th.

Laurence Sly





A pair of M41s, Nos. 418.135 and 418.130 are seen at Fuzasbony on October 15th. No. 418.135 had just arrived from Debrecen and 418.130 was just about to depart for Eger. [Steve Madden](#)





ZB Class 101.961 is seen departing Engelberg on November 30th with the 11:00 IR3667 Engelberg - Luzern. [Keith Hookham](#)



Wengenalpbahn BDhe 4/4 No. 121
is seen at Kleine Scheidegg ready to depart for
Lauterbrunnen on September 16th.



Steamsounds



Top Right: CD Class 380.008 is seen working train R624 'Portas' from Vsetin - Prague whilst Class 460.001 is seen working Os3427 at Vsetin on September 7th.

Ivo Rušák



Bottom Right: 1916 built steam loco No. U45.9 is seen working at the Narrow Gauge saw mill museum in Vychylovka-skansen on August 26th. *Ivo Rušák*



Below: Regionova Class 814.237 is seen at Nedvedice Vezna with Pernstejn Castle in the background on September 9th. *Ivo Rušák*



Hz Class 2044.004 waits to depart Perković
with train No. 5507 the 17:09 Perković - Split
on November 21st. [Laurence Sly](#)





SBB Re 4/4 No. 11332 slams on the anchors
as it leads 3 other locos into Pratteln,
Switzerland on a HUPAC intermodal service on July 5th.

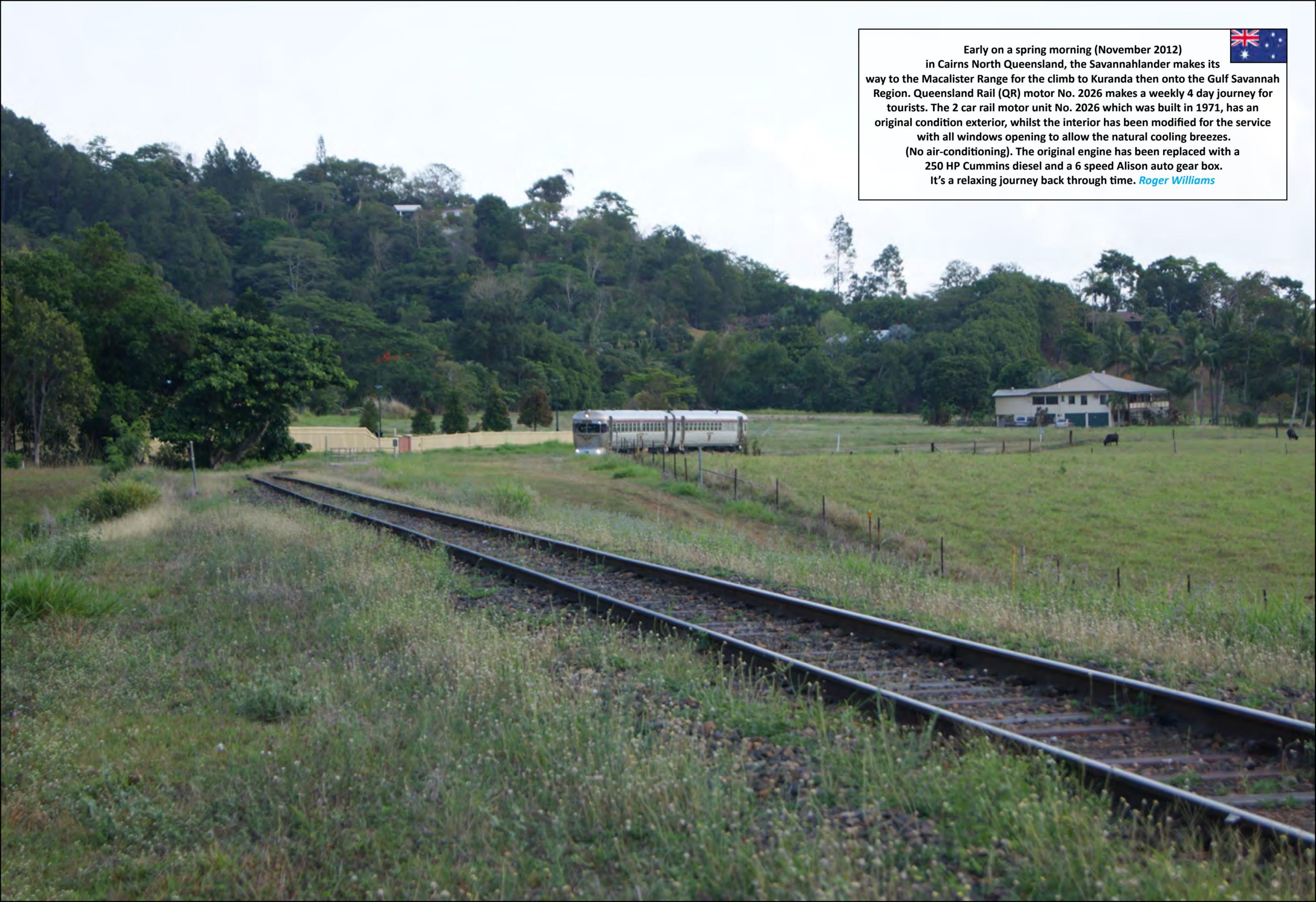
Anton Kendall





Not a cloud in sight as these Pacific National (as of December 1st, Pacific National changed name to AURIZON) Nos. 8333, 8309 and 8328 are seen on the spur line from Abbot Point export coal loading facility. These 2008/2009 built Clyde/GM GT42CU-ACe 8300 Class diesel engines haul coal on the Blackwater System in Central Queensland and were built 2008/09. [Roger Williams](#)





Early on a spring morning (November 2012) in Cairns North Queensland, the Savannahlander makes its way to the Macalister Range for the climb to Kuranda then onto the Gulf Savannah Region. Queensland Rail (QR) motor No. 2026 makes a weekly 4 day journey for tourists. The 2 car rail motor unit No. 2026 which was built in 1971, has an original condition exterior, whilst the interior has been modified for the service with all windows opening to allow the natural cooling breezes. (No air-conditioning). The original engine has been replaced with a 250 HP Cummins diesel and a 6 speed Alison auto gear box. It's a relaxing journey back through time. [Roger Williams](#)

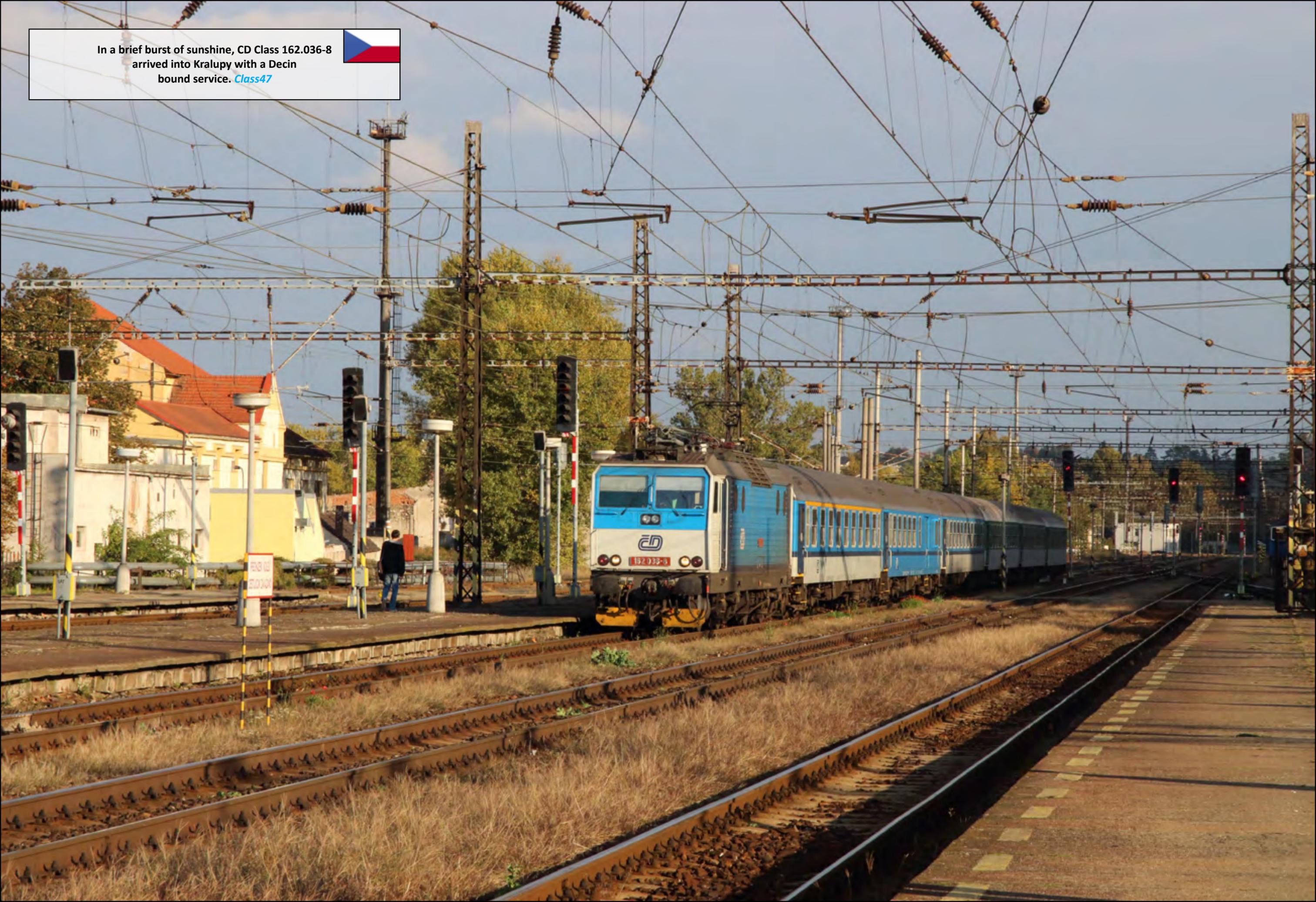


QR National Freight diesel engines
Nos. 2212 and 2261 on a hot sunny
November day are seen hauling coal from the massive Bowen
Basin coal deposits to Townsville in North Queensland.

Roger Williams



In a brief burst of sunshine, CD Class 162.036-8 arrived into Kralupy with a Decin bound service. [Class47](#)



SBB Re 4/4 No. 11182 leads a rake of empty tanks through Pratteln, Switzerland on July 6th. [Anton Kendall](#)



On October 15th, Plzen trams Nos. 282 and 283 pass by the entrance to the station. *Class47*





Capdenac to Cahors railway line

Cajarc is roughly half-way along the amazing Lot Valley railway. It closed to passengers under SNCF control in 1980, and to freight in 1989. It is 70 kms long! Since then the track has remained in situ, although many of the sleepers are in a poor condition. Attempts have been made to run a tourist service along part of the line, but nothing has happened recently due to lack of finance. Enthusiasts have set up an interesting museum in the old goods shed at Cajarc and are trying to restore a dmu and other stock. The station at Cajarc is in very good condition and used by local community groups.

It would take a miracle and a huge amount of money to restore the line, but it would be one of the great railway journeys of Europe as it crosses the River Lot several times on impressive bridges, passes through several tunnels and winds its way through the spectacular scenery of the Lot Gorge.

Photos and Text: Martin Hill



ÖBB: the timetable changed successfully



- Successful start to the future

- Faster journey times for travellers through the commissioning of high-speed routes

- More comfort with the partial opening of the Wien Hbf

The long-distance passenger traffic is now directed to and from Wien Westbahnhof and to the new high-capacity line, where freight trains roll through already. The first long-distance trains are also using the Lainzer tunnel (until now only freight) and the Hbf. stop. Also put into use is the 40 km long high-speed route in the Inn Valley.

Between Wien and St. Pölten, 55 commuter trains will also run on the high-performance route from or to the Westbahnhof, ten of them during rush hour, as up to 200 km/h fast REX commuter trains (Wien - Amstetten). Most commuters from the district will benefit from the fast-REX trains especially with journey time reductions. The new station at Tullnerfeld will be served during rush hour with new REX-hourly trains and long distance trains.

In the Tyrolean Inn Valley between Kundl/Radfeld and Baumkirchen, 40 km of high-speed line is now in operation. Together with the Wien - St. Pölten route this gives 100 km of new high-speed route - a milestone in the recent history of trains.

The fastest trains cover the 300 km distance between Salzburg and Vienna's Westbahnhof with speeds up to 230 km/h in just 2 hours and 22 minutes and to Innsbruck it takes only 4 hours 15 minutes. The fastest travel time between Wien and St. Pölten is 25 minutes and is thus shortened by 15 minutes, and those to Salzburg 23 minutes. The future average speed of the fastest trains from Wien to Salzburg is 132 km/h (currently 114 km/h), from West to Linz 151 km/h (currently 120 km/h), well above the legal speed limit on the West Motorway.

High speed on high-speed routes - Must be ETCS

The high-performance lines were fitted by ÖBB infrastructure with the most advanced train control system ETCS Level 2 (European Train Control System). A major advantage of this security system is that the engineer does not have to read the license of light signals, but the actual maximum speed gets transferred directly to the cab. This system is brought to the Europe important main axis. It ensures consistency of cross-border traffic and ensures maximum safety.

"Now we have successfully run on the new high speed lines with the ETCS Level 2, the most advanced European Train Control System in use. Ours is the first railway in Europe that has adopted this implementation on time and within the planned budget. At the result, we can be very proud" said Peter Klein Schuster, manager ÖBB Infrastruktur AG.

The high-speed routes are navigable only by vehicles with ETCS Level 2 equipment. Currently, some ICEs are missing the appropriate equipment, they will therefore continue to be run on the existing route, and therefore can not yet fully integrate new timetable until all ICEs are equipped with the necessary facilities.

Photo: Robert Deopito - The New high-speed route between Wien and St. Polten.



Two new contract awards to CAF in Brazil for the Belo Horizonte and Porto Alegre cities



The FROTA BH consortium headed by CAF, has been awarded with a contract to supply 10 trains, 4-car each, to CBTU (Companhia Brasileira de Trens Urbanos) for the Brazilian city Belo Horizonte, capital of the Minas Gerais state.

These are state-of-the-art EMUs that will run on 1600 mm track gauge with 3000 V power supply, for the Superintendency of Urban Trains of the city. The vehicle is bidirectional with a capacity of 1300 passengers, and provides easy access for Persons with Reduced Mobility and is able to run at service speeds of 90 km/h.

The Belo Horizonte city has a population of 2.3 million inhabitants and is one of the 12 host cities designated for the FIFA World Cup 2014, as well as a sub-host city for the Summer Olympic Games 2016.

In addition, CAF will also supply all the bogies of the 15 new trains, 4-cars each which are part of the procurement contract undertaken by the City of Porto Alegre, Capital of the Rio Grande do Sul state for TRENSURB (Empresa de Trens Urbanos de Porto Alegre).

The aggregate of both contracts amounts to a turnover in excess of €80 million for CAF. Both projects will be implemented at CAF's plant in Brazil, in the Sao Paulo state, which has become one of the most modern railway stock plans in Latin-America.

With these two new contracts, CAF consolidates its leadership in this market and the expansion of the CAF Group into the various Brazilian states where the company has currently contracts for Sao Paulo, Recife and Cuiabá.

Internet gets fitted into other express trains of the Czech Railways



Czech Railways has extended WiFi Internet access to other trains. The internet test operations were on the newly introduced Eurocity trains Nos. 274/275 'Jaroslav Hasek' operating between Prague - Brno - Bratislava - Budapest and back and Express Nos. 144/145 'Landek' between Prague - Olomouc - Ostrava - Žilina and back. Both trains operated the test with secure WiFi in the vehicles first class section. The connection to WiFi is informed by pictograms in the carriage.

Czech Railways plans to introduce WiFi in the coming years, to up to several hundreds of cars in long-distance and regional transport. The introduction of WiFi to other long-haul routes could start at the end of 2013.

Internet connection would then become another commonly available service on express trains and selected regional and fast train lines.

In the case of regional passenger trains, WiFi will be made available on modern and comfortable units such as RegioPanter and RegioShark, which have been gradually put into operation since the autumn.

Alstom will supply 7 new Coradia Lint regional trains to Hessische Landesbahn and modernize 25 Lint already in operation



Alstom has been awarded two contracts by Hessische Landesbahn (HLB), one for the supply of seven Coradia Lint regional trains and the other for the modernisation of 25 Coradia Lint already in service. Together, the contracts are worth around 40 million Euros. Both the new and the modernized trains will enter service in 2015.



The seven new trains and the 25 modernized ones will circulate in the Eifel - Westerwald - Sieg network in Germany and will cover a distance of 3.6 million kilometres each year. By placing this order, HLB wanted to increase network transport capacity and also to enhance passenger comfort.

Veit Salzmann, Managing Director of Hessische Landesbahn said: "With these trains from Alstom, our long-term experience and the extraordinarily high service spirit of our employees, we offer our regional passengers very modern and attractive mass transit. We have paid special attention to equipping the new and old trains with comfortable seats and providing a modern ambience".

Martin Lange, Member of the Board of Alstom Deutschland AG and Managing Director of Alstom Transport Germany added: "These new orders follow a long and successful partnership between Alstom and HLB. The award of both the supply of new trains and the refitting of existing ones demonstrates Alstom's leadership and expertise in manufacturing state-of-the-art regional trains and in providing fleet renovation, modernisation and complete overhaul services".

The new Coradia Lint is a two-car Diesel Multiple Unit that can run at a speed of 120 km per hour with a high acceleration rate. The new trains provide large seating capacities and can accommodate around 240 passengers. They are equipped with comfortable seats, spacious aisles, air conditioning systems and low-floor entrances to meet passengers' requirements with respect to comfort and access. Coradia Lint is particularly adapted to passengers with reduced mobility thanks to wheelchair spaces, an intercom and a step for bridging the gap between the train and the platform. The trains will be manufactured in the Alstom plant in Salzgitter, Germany.



Class 810.587 'Barnabas' is seen working between Ledec-nad-Sazavou and Ledec-n-S-zastavka on November 4th. [Ivo Rušák](#)



Bombardier Signalling Technology for Poland Boosts European Mobility



Rail technology leader Bombardier Transportation will deliver its globally proven ERTMS solution for the 340 km Warsaw to Gdynia section of Poland's E65 line, linking the capital with the Baltic Sea. With Bombardier's second major delivery of ERTMS technology in Poland the entire northern section of the Pan-European Rail Corridor VI will be interoperable, allowing trains from other countries to travel between Gdynia and the Czech border.

Bombardier Transportation (ZWUS) Polska Sp. z o.o is leading a consortium including Thales Polska Sp. z o.o. and Nokia Siemens Networks to deliver the state-of-the-art upgrade for the Polish National Railway, PKP Polskie Linie Kolejowe S.A. The contract is valued at approximately 470 million PLN (115 million euro, \$153 million US), with Bombardier's share valued at approximately 216 million

PLN (53 million euro, \$70 million US). Bombardier and Thales are responsible for the design and development of ERTMS/ETCS Level 2. They will also deliver conventional signalling for eight local control centres and upgrade existing conventional signalling equipment to the ERTMS Level 2 standard. Nokia Siemens Networks is providing the ERTMS/GSM-R systems on this highly complex 35-station line for passenger and freight traffic. The project will be delivered in 28 months.

Andrzej Wolski, Project Director at PKP Polskie Linie Kolejowe S.A., said that the installation of the system was highly significant. He added: "This ERTMS/ETCS project is the last stage of the upgrade of the main line linking Warsaw and the three cities of Gdansk, Sopot and Gdynia. Upon completion, the standard of safety ensured on the line will be higher than it has been to date, while also allowing us to increase the maximum speed of modern trains up to 200km/h on selected sections."

Bombardier's scope comprises its state-of-the-art BOMBARDIER INTERFLO 450 ERTMS technology including four BOMBARDIER EBI Com radio block centre and EBI Link balise systems. For the conventional signalling, Bombardier

will deliver its INTERFLO 200 mainline technology comprising EBI Screen 300 central traffic control solutions, as well as an EBI Lock 950 computer-based interlocking (CBI) system for Gdynia Chylonia station.

Peter Cedervall, President Rail Control Solutions, Bombardier Transportation, said: "Smart transportation networks that offer interconnected mobility are a key driver of economic growth and sustainability. Our innovative ERTMS technology will enable faster and more efficient passenger and freight transportation through Poland and across Europe. As the leader in the Polish signalling market, Bombardier has cooperated many times with PKP on rail infrastructure modernisation projects. We've delivered many INTERFLO 200 solutions and the ERTMS pilot project in Poland."

With a strong involvement in the development of ERTMS/ETCS technology, Bombardier's solutions are operating or being delivered on more than 2,500 vehicles and 15,000 km of track in 16 countries. The INTERFLO 450 Level 2 solution has been running on the highest speed lines in China since 2009. It has permission for commercial operation on the Amsterdam - Utrecht line in the

Netherlands, one of the busiest mainlines in Europe, and was inaugurated on Sweden's first high speed ERTMS Level 2 line, the Botnia line, in 2010.

Bombardier ERTMS technology is also installed in Croatia, Germany, Korea, Switzerland, Spain and Taiwan and first-in-market projects are being delivered in Algeria and Poland, in addition to extensive framework agreements in Sweden and Norway. Bombardier is also at the heart of innovation, having delivered the world's first ERTMS Regional system, its INTERFLO 550 solution, on the Västerdal Line in Sweden.

The future success of urban centres rests on re-defining the way people move within and between these expanding social and economic hubs. Bombardier's portfolio of rail control solutions reduces the constraints of current networks. It covers the whole range of BOMBARDIER CITYFLO mass transit solutions, from manual to fully automatic, as well as communications-based systems. It also provides INTERFLO mainline solutions, from conventional to ERTMS Level 2 systems. Bombardier also provides a complete palette of wayside and onboard signalling products.

Alstom to supply 20 Coradia Continental regional trains to ZGB in Germany



Alstom has received an order from Zweckverband Großraum Braunschweig GmbH (ZGB), through its subsidiary Regionalbahnfahrzeuge Großraum Braunschweig GmbH (RGB), for 20 Coradia Continental regional trains. This contract, which includes an option for 13 additional trains, is worth over €100 million. The contract was signed in the presence of German Federal Minister of Transport Dr. Peter Ramsauer and Prime Minister of Lower Saxony, David McAllister. Alstom has also been awarded a 20-year maintenance contract for the 20 trains.

The new Coradia Continental regional trains are due to enter service in December 2015. They will be manufactured in Alstom's plant in Salzgitter (Germany), where a total of 189 trains of this type have already been ordered. The fleet will be maintained by the Alstom Train Life Service competence center specialized in maintenance and modernization operations of commuter and tram-trains in Braunschweig.

"This is a very special day for Salzgitter and the metropolitan area of Braunschweig", says David McAllister, Prime Minister of Lower Saxony. "Zweckverband Großraum Braunschweig orders 20 new trains for Elektronetz Niedersachsen Ost-network from Alstom Transport. The federal state government of Lower Saxony has supported the purchase of these vehicles with 100 million Euros from regionalization funding. The award of the contract strengthens the industrial site Salzgitter and contributes to a good workload."

In placing this order, ZGB is seeking to obtain a modern, comfortable and reliable regional trains to circulate in the Elektronetz Niedersachsen Ost network (ENNO), from Hannover to Wolfsburg and from Wolfsburg to Hildesheim via Braunschweig.

The Coradia Continental is a four-car EMU (Electric Multiple Unit) train with a capacity of 450 passengers. The train can run at maximum speed of 160 km/h with a high acceleration rate. It will be equipped with the LZB system, a signalling and train control system used on high speed trains to circulate on the ENNO network. Environmentally friendly, the train will be equipped with electrodynamic braking which can recover up to 30% of electricity for the grid.

To increase passenger safety, monitoring cameras and crash protection elements will be installed on the train. Alstom will implement a series of measures according to the European Standard for Collision Safety of Rail Vehicles (EN 15227



Coradia Continental can operate in double traction, increasing passenger capacity to 900 persons. Particular attention has been given to providing acoustic signals, handrails, signs and lighting for reduced mobility and visually impaired persons. In addition, the train features areas for wheelchairs, bicycles and strollers. To facilitate and smooth out passenger flow, the train will be equipped with movable steps to bridge the gap between the platform and the train.

The 20-year maintenance contract for the 20 Coradia Continental covers the full maintenance of the trains and includes state-of-the-art Information Technology support. Electronic handheld devices for drivers, automated health and fault reporting, IT-based hand-over processes and a central information platform will provide precise information to all parties involved and deliver the highest operational availability.

Hennig Brandes, Director of the Zweckverband Großraum Braunschweig GmbH Association and Managing Director of Regionalbahnfahrzeuge Großraum Braunschweig GmbH, noted: "The new trains will offer passengers modern and attractive mass transit with maximum comfort and will make a decisive contribution to the further development of mass transit in the region."

The train service by Alstom as manufacturer of the trains will guarantee the best possible and most economical use of all resources. This is a trendsetting model for the future".

Martin Lange, Member of the Board of Alstom Deutschland AG and Managing Director of Alstom Transport Germany said: " It is the biggest order which combines the supply of new trains with a long-term maintenance service contract for Alstom in Germany. It testifies to Alstom's expertise and leadership on the growing, dynamic service market for trains".

Alstom awarded contract extensions for Dublin tram infrastructure and tram maintenance



Alstom has been awarded two contract extensions by Ireland's Railway Procurement Agency (RPA), one for maintenance on the Dublin's Luas tram system infrastructure, the second for maintenance of Citadis trams on the Luas Green Line. The two contracts are worth €53 million together.

The €30m infrastructure contract relates to the entire Luas system and extends an existing maintenance contract from 2014 to 2019. Alstom is responsible for the maintenance of track, the overhead catenary system, power supply, control systems (including signalling, telecommunications and CCTV) and some aspects of the cleaning. The company is working in partnership with energy services provider Dalkia on the infrastructure contract.

The vehicle maintenance contract, worth €23m, relates to the 26 Alstom-supplied Citadis trams based at the Sandyford depot, which run on the Green Line in the city, and also extends the existing contract five years to 2019.

Terence Watson, Managing Director of Alstom UK and Ireland, said: "These contract extensions are a reflection of the excellent service and value for money that we have offered both the client and the travelling public on Dublin's Luas network."

Alstom has supplied a total of 66 Citadis trams for Dublin in two batches of 40 and 26 meters. The company also extended 26 of the original trams from 30 metres to 40 metres with the addition of an extra 10 metre car.

Inauguration of Casablanca's first tram line in Morocco



On 12 December, 2012, His Majesty the King of Morocco, Mohammed VI, inaugurated the Casablanca tramway. Attending the event were the Moroccan and French Prime Ministers, Abdelilah Benkirane and Jean-Marc Ayrault, Wali of the Casablanca Region, Mohamed Bousaid, Mayor of Casablanca, Mohamed Sajid as well as Casa Transports Managing Director, Youssef Draiss, RATP Chairman, Pierre Mongin, and Alstom Chairman and CEO, Patrick Kron.

In 2009, Casa Transports - a public company in charge of Casablanca's public transport - awarded a contract to Alstom for the supply of 74 Citadis trams. In 2010, Casa Transports awarded Alstom two additional contracts for the installation of the line's rail signalling and power supply systems.

This 31-km line, the longest line ever to be built in one project, links Casablanca's East and South-West districts via the city centre, and calls at 48 stations. The Citadis trams are 65 metre-long double units and can accommodate up to 606 passengers. They will carry up to 250,000 passengers daily. With its 12 side doors and its full low-floor concept, the Casablanca Citadis will provide easy access for everyone and make for a smooth flow of passengers. The design of Citadis was customised in order to achieve perfect integration into Casablanca's architecture. Its modern exterior appearance features a harmonious, rounded shape end-to-end. Its metallic orange colour provides a contrast to the city's brightness. The interior features Moroccan style motifs and colours. The air-conditioning, large tinted bay windows, wide aisles and information displays in French and Arabic were designed to provide optimal travel conditions.

Service will be provided from 5:30 a.m. to 11:30 p.m. at intervals of 4 minutes 45 seconds during peak hours and 8 minutes 30 seconds during off-peak hours. The planned transit time for the line running from Ennassim to Facultés is 63 minutes 30 seconds,



and 69 minutes from Ennassim to Hay Hassani. Once technical adjustments are completed, traffic signals ensured and full compliance of the tram platform guaranteed, the average speed will reach 18.8 km per hour with a 75% priority rate at intersections. The signalling system supplied and installed by Alstom ensures safety at line intersections. It also manages road crossings and gives the tramway priority, for a higher speed and greater safety. Casa Tram, a group headed by RATP Dev in partnership with the Moroccan Deposit and Management Fund (Caisse de Dépôt et de Gestion) and the holding company, Transinvest, is responsible for operating and maintaining the line for a period of five years. Casa Tram outsourced the contract to Alstom in July 2012 for maintenance of the fleet and infrastructure. Forty or so Alstom employees will carry out preventive and corrective maintenance operations on the trams on a day-to-day basis, as well as performing their interior and exterior cleaning at a brand new 13,800-m² facility located in Casablanca.

RATP Dev has drawn up the timetable and operating procedures, regulations and maintenance policy. It has carried out all the technical operating tests and managed the installation of fixed equipment, energy supply equipment, signalling systems and rolling stock. Traffic management will be provided by the Central Command Post (PCC) located in Sidi Moumen at the eastern end of the line. This seven-hectare operations and maintenance centre is one of the largest in the world. Casablanca's Citadis tramways were manufactured and assembled in France at the Reichshoffen plant. Other facilities involved in the project were La Rochelle (engineering), Le Creusot (bogies), Ornans (motors), Villeurbanne (onboard electronics) and Tarbes (traction system).

Alstom's Citadis Dualis tram-train now in service on Western Lyon's second line



On December 8th, 2012, Rhône-Alpes Regional Council Chairman Jean-Jack Queyranne, SNCF Regional Director Josiane Beaud, RFF Regional Director Anne Lambusson, as well as Gérard Collomb, Senator, Mayor of Lyon and Chairman of Greater Lyon, Michel Mercier, Senator and Chairman of Rhone County Council, and Jérôme Wallut, Managing Director of Alstom Transport France, were all on hand to attend the official commissioning of Alstom's Citadis Dualis tram-train for the second line in the Western Lyon Area. The new trams will travel on a line linking Lyon's Saint-Paul Station to Brignais. This event happened two months after the inauguration of the first Citadis Dualis tramway route in Western Lyon, linking Saint-Paul train station to Saint-Bel.



Citadis Dualis contributes in boosting the economy of France's regions, for it is designed and assembled in Alstom Transport's French facilities, including the site in Villeurbanne (on-board electronic and signalling systems) which employs close to 700 employees. Other facilities taking part in its manufacture are Valenciennes (Nord-Pas de Calais Region) for engineering and tram assembly, Le Creusot (Burgundy) for bogies, Ornans (Franche-Comté) for motors and Tarbes (Midi-Pyrénées) for the traction systems. Designed to bridge city center and its suburb, Citadis Dualis is able to penetrate the city core as a tram and travel along regional railway tracks, thanks to special features involving power, safety and comfort. This kind of configuration makes it a versatile, innovative and efficient mode of transport which can go some way towards fostering a modal transfer from private cars towards public transport. Compared with a standard Regional Express Train (TER), Citadis Dualis' acceleration capacity gives it the means to provide better segmented service within suburban areas, calling at more stations without increasing travel time from one end of the line. As a result, pursuing the development of this kind of tram throughout the Paris Region and across the railway networks surrounding France's major and medium metropolitan areas is clearly a crucial issue in improving commuter travel.

Alstom Transport France Managing Director Jérôme Wallut stated that "Citadis Dualis is the result of Alstom's know-how, shared with its partners in France's rail industry sector. It was designed for and with the regions. Using a French solution that is both technically and economically efficient, it contributes in meeting the new needs in suburban mobility which are emerging all over the country."

In May 2007, SNCF who was acting on behalf of the regions, signed a €650m framework order with Alstom Transport to design and manufacture 200 Citadis Dualis tram-trains, including a firm batch for 31 trams: 7 for the Pays de la Loire region, and 24 for the Rhône-Alpes region. Since then, the Pays de la Loire region has exercised options on 17 additional trams. In all, 48 Citadis Dualis trams were ordered. In the Pays de la Loire region, Citadis Dualis tram-trains have been travelling on the Nantes-Clisson line since June 2011, showing very good results in reliability, availability and passenger satisfaction.

Alstom will supply 80 Metropolis metro cars to SuperVia in Rio de Janeiro and set-up a new assembly plant in Brazil



Alstom has signed a contract worth around €105 million with SuperVia - the main railway operator of the Rio de Janeiro state, in Brazil - for the supply of 80 Metropolis metro cars. The new cars will be produced by Alstom's Lapa plant, which is currently employing 450 people in São Paulo state, but the final

assembly of the cars and the tests will take place in a new plant located in Deodoro, a neighborhood of the city of Rio de Janeiro. SuperVia will provide the development site and Alstom will build the factory. Each partner will make an initial investment of 6 million euros for this new facility. The plant is expected to be ready to operate from mid-2013 onwards with 50 employees.

With this order, SuperVia will reinforce its urban transport offer and improve Rio de Janeiro's Metropolitan Region transport system – an area that counts more than 11 million inhabitants. Additionally, SuperVia, a company of the Odebrecht TransPort(1) Group, plans to upgrade its fleet up to 2020 and to purchase 480 new passenger cars.

SuperVia's total railway network is 270 km long and links the city of Rio de Janeiro to 11 other municipalities in the surrounding area. The network includes

five lines with 99 stations and transports around 540,000 people per day, a figure estimated to reach 1 million by 2015.

The metro cars ordered by SuperVia are part of the Alstom Metropolis range. Each train set is composed of 4 or 8 stainless steel cars. Each car is able to accommodate up to 250 passengers. To facilitate the passenger flow, the train features large gangways and wide aisles from end to end and 4 automatic doors per side. The trains are equipped with digital line-map display, LCD screen for video broadcast, CCTV and air conditioning (two units per car). The trains are also fitted with an Automatic Train Operator (ATO) driving system which ensures smooth accelerations and brakings, as well as speed regularity

23 new electric locomotives for DB Schenker Rail Polska



DB and Siemens sign contract for the supply of Vectron locomotives

The German Bahn AG has concluded a contract with Siemens AG for the supply of 23 electric locomotives for freight. These vehicles will be used by DB Schenker Rail Polska SA. With total investment in the high double-digit millions this will be the first time that DB has operated a Siemens Vectron locomotive. The locomotives can be operated in Polish DC power and are equipped with the relevant train control. Deliveries are scheduled to begin by the end of 2012 and be completed by early 2015. The contract also includes an option to purchase a further 13 vehicles.



Transmashholding and Alstom deliver the first series production EP20 passenger locomotive to the Russian Railways



Transmashholding and Alstom have handed over the first series production EP20 electric passenger locomotive to the Russian Railways at NovoCherkassk Plant (NEVZ)1 in the Rostov region (Russia), where they are being manufactured. The ceremony was chaired by Dmitry Medvedev, Russian Prime Minister and attended by Valentin Gapanovich, Senior Vice President of Russian Railways, Vasily Golubev, Governor of Rostov region, Andrey Bokarev, CEO of Transmashholding and Patrick Kron, Chairman and CEO of Alstom.

The EP20 locomotive is the first in the series of the new Alstom-TMH joint product range developed by engineers from both companies within the TRTrans engineering centre. Held by Alstom Transport and TMH on a parity basis, TRTrans employs 150 engineers and develops railway rolling stock. TRTrans was created in December 2011.

The EP20 is the first Russian electric passenger locomotive which can run at a maximum speed of 200 km/h and the first of this kind to be produced in Russia. The main advantage of the EP20 is its dual-system (3kV and 25 kV) allowing it to operate on tracks, which are electrified both with direct and alternative current. The locomotive is equipped with asynchronous traction drive which allows a significant reduction in life cycle costs, with longer intervals between maintenance operations and significant energy savings.

In 2012–2013, the locomotives will be delivered at a rhythm of three units per month to the Russian Railways which plan to operate the fleet on the Moscow-Sochi route for the 2014 Winter Olympic Games.

The contract for the delivery of the 200 EP20 dual-system new generation passenger electric locomotives was signed by Vladimir Yakunin, President

of Russian Railways OJSC, and Andrey Bokarev, Chairman of the Board of Directors of Transmashholding CJSC, in May 2010 in Sochi, as part of the 5th International Business Forum "Strategic Partnership 1520."



The second product jointly developed by TMH and Alstom is a freight AC locomotive with asynchronous traction drives, 2ES5. Such locomotives have never been produced in Russia before and the first 2ES5 was presented to Prime Minister during his visit to NEVZ.

DB Schenker expands its lead logistics operations



With immediate effect, DB Schenker Logistics is expanding its tailored transport and logistics services to include the new DB SCHENKERleadlogistics service. As a "Lead Logistics Provider" or "Fourth Party Logistics" (4PL) service provider, DB Schenker will now carry out management and integration of various service providers, particularly freight carriers, on behalf of the customer along the customer's supply chain. These services include coordinating transport by lorry and rail as well as logistical services.

"We have noticed that demand for this special service is increasing across Europe and thus wish to make our expertise accessible to a broad spectrum of customers" stated Karl Nutzinger, member of the Schenker AG Board of Management responsible for Land Transport at DB Schenker. "We offer efficient cost controls and monitor the entire supply chain."

DB Schenker has been active in this market for the past 15 years with its Schenker Dedicated Services AB in Sweden. A team of roughly 100 international specialists provides services for company such as ESAB, the market leader for consumables and equipment for welding and cutting processes, as well as for packaging manufacturer Tetra Laval and float glass manufacturer NSG Pilkington.

Every customer is assigned its own "control tower," which is similar to an out sourced freight forwarding department. Customers benefit from lower capital commitment, increased flexibility, consolidated figures and invoicing processing at a single interface.

A team of experts is being established in Essen to further expand DB Schenker Logistics' services in this area.

Vossloh España wins a contract to supply 22 trams to Brazil worth €90 m



The Metropolitan Urban Transport Company of Sao Paulo (STM / EMTU) chosen by public tender to the consortium "Tremvia Santos", formed by Vossloh Spain and T'Trans Brazilian company, for the acquisition of 22 new trams Tramlink V4 model, which serve in the lines between the municipalities of Porto and Barreiros and the city of Santos. The vehicles will be delivered in 2014 and 2015.

Specifically, the order consists of 22 units of the new bidirectional Tramlink, tram designed entirely in the factory in Albuixech Vossloh Spain (Valencia), 44 meters long each and can accommodate 400 passengers. The vehicles, which can travel at a speed of 70 km / h, will enter service in a stretch of 11 km between Porto Barreiros and line will be extended later to Conselherio-Nebias and Valongo.

The Vossloh Tramlink is a modular vehicle 5 or 7 cars 100% low floor. These vehicles have high performance and technology that enable better gait dynamics and optimal conditions of comfort and safety to passengers. Fruit of innovation and engineering work of Vossloh Spain, Tramlink has been sold in countries like Spain, Germany and now Brazil.

Vossloh Spain specializes in the development of railway vehicles. In its technology center in Albuixech (Valencia) are designed and manufactured locomotives, passenger cars, subways, trams and trains-tram. T'Trans Brazilian company, founded in 1997, develops solutions for the rehabilitation and construction of passenger and freight trains, including design, manufacture, supply, installation, testing and maintenance.

First FLIRT trains for Estonia officially presented by Elektriraudtee and Stadler



Estonian passenger transport operator Elektriraudtee AS and Swiss rolling stock manufacturer Stadler Bussnang AG recently celebrated the official roll-in of the first electric and diesel FLIRT trains to Estonia. The roll in ceremony took place in the depot of the railway company in Tallinn, where Mr. Juhan Parts, Minister of Economic Affairs and Communications, Ms. Kaida Kauler, Chairman of Elektriraudtee, and Mr. Peter Jenelten, Executive Vice President of Stadler Rail Group presented the first vehicles to the public. The delivery of the trains is part of the tender that Elektriraudtee closed successfully in 2010, within the frames of which Stadler will hand over 18 electric and 20 diesel multiple units to Elektriraudtee until the summer of 2014.

"This two trains are the first ones of our park, which would allow Elektriraudtee to make travelling by train a backbone of the Estonian public transportation system," Chairman of Elektriraudtee Kaida Kauler said. "It is a very unique opportunity for a railway producer to take part in the renewal of the whole train fleet of a railway operator. We are very proud to be part of it, and we very happily present today the first trains to the public. The FLIRT is Stadler's bestseller train, which due to this contract will be available now in diesel type too", added Peter Jelenten, Executive Vice President of Stadler Rail Group.



Elektriraudtee issued the public procurement back in 2009 separately for the purchase of 18 electric (EMU) and 20 diesel (DMU) multiple units. The procurement ended successfully with the victory of Stadler, the contracts were signed in August 2010. The value of the contract for the purchase of electric trains is around EUR 80 m, out of which 85% is financed from the cohesion fund of the European Union. The purchase of diesel units trains is valued at EUR 96 m, and is financed by a capital lease. According to the terms of the agreement, the Swiss producer will have to hand over the first train for operations by June 2013, by which time the train will also have to receive the homologation that is required to enter commercial service. In order to obtain this, the trains are to be tested by the Estonian Technical Surveillance Authority, in cooperation with Elektriraudtee and Stadler. Elektriraudtee plans to launch regular service with passengers on 28 June 2013, right after the final homologation of the vehicles. The last EMU is expected to be handed over by January, while the last DMU by June 2014. Diesel passenger service operations will be launched on the 1st of January 2014.

Elektriraudtee ordered altogether 12 three-car and 6 four-car EMUs, as well as 6 two-car, 8 three-car and 6 four-car DMUs from Stadler. The broad gauge (1520 mm) trains have been designed and manufactured to easily endure the harsh weather conditions typical in Estonia, which expertise Stadler gained through its earlier deliveries to Finland and Norway.

Due to the lightweight aluminium structure and the modern energy saving system, the new trains will also mean a great cost-saving for the operator Elektriraudtee. The vehicles will be able to transform the accumulated energy deriving from braking, and recuperate it back to the electricity network through the overhead cables. The electric trains will have a top speed of 160 km/h, coupled with an accelerating ability of 1.2 m/s², which is a remarkable value in this train segment. The diesel trains will also have outstanding accelerating abilities with a top speed of 160 km/h as well. The high top speed and the admirable accelerating make the drivers capable to catch up even significant leeways between two stops.

The driver's cabin received an ergonomic and modern design, which significantly improves the current working conditions of the drivers, and thanks to modern control system, the safe control of the trains is possible with a staff of only one person. The passengers will also observe a great improvement in comfort, as all trains will be equipped with a state-of-the art information system, air-condition, free wireless internet, power plugs for the charging of notebooks or cell phones, video surveillance and multipurpose areas appropriate for the transport of wheelchairs, baby trolleys or bicycles. Free and fast passenger flow will be secured by the wide doors available on each side.

Bombardier Awarded Fleet Operations and Maintenance Extension with GO Transit in Toronto



Commuter rail system one of most popular in North America

Long-lasting customer relationship to continue

Services expertise adds value to customers

Rail technology leader Bombardier Transportation has announced that Ontario's Metrolinx/GO Transit has exercised options for 10 years of fleet operations and maintenance services for its commuter rail system serving the city of Toronto and surrounding regions. The total value of these two contracts, which are extended to 2023, is approximately \$927 million CDN (\$937 million US, 707 million euro).

A division of Metrolinx, GO Transit is the regional public transit service for the Greater Toronto and

Hamilton area, carrying 62 million passengers a year. GO runs 187 train trips and 2,075 bus trips daily, transporting about 226,300 passengers on a typical weekday – 175,300 on the trains and 51,000 by bus. Since service began in the late 1960s, more than a billion riders have taken the GO Train or Bus – to work or school, to go home, or for leisure activities.

“GO Transit is one of the most vibrant commuter rail operators in North America and has been a huge success story for more than 40 years. For Bombardier, being part of this success is more than gratifying,” said Raymond Bachant, President, Bombardier Transportation North America. “This extension confirms once more Bombardier’s leadership position as a services provider for passenger rail fleets in North America and worldwide. Our strong services portfolio complements our innovative products and technologies, allowing us to form a true partnership with our customers throughout the entire product life cycle.”

Bombardier has provided fleet maintenance services to GO Transit since 1997 and operations since 2008 and has also supplied more than 600 BOMBARDIER BiLevel rail coaches that make up the transit authority’s commuter rail fleet. BiLevel coaches are manufactured at production facilities in Thunder Bay, Ontario. The BiLevel car is the most popular multi-level commuter rail car in North America, with operations in 14 major cities across Canada and the United States.



ÖBB: surf and make phone calls undisturbed at up to 230 km/h



Together with A1 and T-Mobile ÖBB offers another service for its customers

Simultaneously with the start of the high-speed route Vienna - St. Pölten on December 9th. ÖBB offers passengers an additional service - uninterrupted Internet and phone service, even at speeds up to 230 km / h

“60 km of new high-speed route between Vienna and St. Pölten is now equipped with the latest mobile technology, and has been made available to our passengers to make mobile and data transfers in the best quality, thanks to A1 and T-Mobile” said Christian Kern, CEO of ÖBB-Holding AG. “From December 9th our customers can not only get to their destination quicker, but it can also make calls and be undisturbed in the Web browsing.”

“For high-speed trains also includes powerful Internet. This was made possible through the cooperation of the ÖBB with T-Mobile and A1 Telekom Austria. It shows that through meaningful collaborations complex projects cost and therefore can be customized for the benefit of all customers,” said Andreas Bierwirth, CEO of T-Mobile Austria.

“On the new ÖBB high-speed route you may now also use the information highway. With mobile penetration of the tunnel, we ensure that mobile working, surfing and telephoning is possible throughout the journey” said Hannes Ametsreiter, CEO A1 Telekom Austria Group.

High Tech “below ground”: for mobile high-speed route

The 60 km long high-speed route between Vienna and St. Pölten

Meidling was equipped with both GSM and UMTS. More than half of the 60 kilometre long high-speed route runs in a total of eight tunnels. UMTS enables not only telephony but also surf the internet in the frequency range 2100 MHz. The tunnel radio system was equipped with 234 repeaters, 82 switching networks, 27 master units and approximately 37.5 kilometres of emitter cable.

The cost for the construction of public mobile telephony amounted to around EUR 3.4 million.

Further optimization of mobile communication services on the web

In the next step, the equipment of the new line in the Inn valley is planned. Here, too, GSM and UMTS are used. In addition, coordination with the operators for common strategy to equip further distance areas of priority in the next step along the Südtrecke and along major commuter rail lines in and around Wien.



Photo: ©ÖBB - ÖBB together with A1 and T-Mobile have upgraded the new high-capacity line to mobile and data, from left Hannes Ametsreiter, CEO A1 Telekom Austria Group, Christian Kern, CEO of ÖBB-Holding AG and Andreas Bierwirth, CEO of T-Mobile Austria.

Bombardier Helps to Prepare Swedish Rail Sector for Winter Freeze



De-icing is as critical to keeping railways operational as it is for air travel

Rail technology leader Bombardier Transportation is on standby to meet the challenges of the coming months' severe winter weather in Sweden. Its maintenance depots across the country contribute significantly to the rail sector's readiness for handling possible network disruptions.

Operating trains in cold Nordic winters is a challenging task. When humidity is high and temperatures are low, several tons of ice can accumulate underneath a train in just one day. Removing ice from vehicles as quickly as possible is as important in the rail industry as it is at airports during the winter.

De-icing is carried out with warm water hosing, powerful hot air fan systems or by spraying the train with antifreeze fluid. Bombardier's de-icing facilities are on high readiness but even at modern service depots, it may take up to four hours to de-ice an iced-over train. This means normal maintenance can take up to seven hours, more than twice as long as usual.

Under the leadership of the National Transport Administration, the Swedish rail sector has carried out a major program to minimize possible impact of snow, ice and cold weather. At its services terminals in Stockholm, Gothenburg, Västerås, Gävle and Nässjö, Bombardier has made preparations in a number of areas, often in cooperation with train operators and facility managers.

Maria Swedin, Head of Fleet Management at Bombardier Transportation Services in Sweden, said: "These preparations range from reviewing service agreements to making sure we have snow clearance and ice removal at the depots and to preventive maintenance such as lubricating train windscreen wipers, changing the flush fluid mix and checking heating systems."

Close cooperation between Swedish rail sector partners is an overall priority to ensure reliable service in wintertime. The National Transport Administration has scheduled longer intervals in train separation while SJ and other operators have adapted their timetables to make it easier to run at higher speeds to compensate for possible delays.

Bombardier's maintenance organization is in close contact with the group's specialist team for winterization design, which is based in Västerås, Sweden. Erik Wik is in charge of a 25-person strong group of experts tasked in part with developing solutions for adapting trains to Nordic winter conditions. One example is SJ's new high speed train SJ 3000, manufactured by Bombardier, which entered service in February 2012 and operates at almost 100 per cent reliability. The train underwent extensive testing in arctic temperatures of -30°C to ensure operational performance during the severe conditions that exist in Sweden during the winter.

"Snow penetrates, sticks to the equipment, melts and produces humidity," Wik said. "This affects doors, windscreen wipers, propulsion and cooling systems and other electronic equipment. Snow also sticks underneath the trains and accumulates on the power car. Up to one ton of ice and snow can stick to a carriage."

The challenge for train designers is not only that material and electronic equipment must perform well at low temperatures. Exposed components must stand up to snow, ice, cold and humidity – and to combinations of these. Another problem is condensation, with vapor becoming water when the air temperature drops. The high technology trains of today are packed with electronics. Experts have to predict which situations may develop during extreme weather.

Electrically heated footsteps with powerful motors are one example of the winterization team's work. These have been installed on BOMBARDIER REGINA regional trains operating all over Sweden. Their patterned metal surfaces crush ice and densely packed snow.

The team is in charge not only of winterization projects for trains built for the Nordic market. "We have a global responsibility and run projects also in North America, in China and in other European countries which have cold winters," Wik added. "In Sweden, we have a lot of experience in this area, and other countries would like to learn from us."



Stadler Polska will deliver 20 FLIRT EMUs to the Łódź Agglomeration Railway



Stadler Polska, a Polish subsidiary of Stadler Rail Group, a leading system supplier of customer-specific solutions for rail vehicle construction, has signed an agreement for the delivery of 20 FLIRT EMUs with the Łódź Agglomeration Railway (ŁKA). The agreement also covers 15 years of maintenance from the time the trains are delivered to the operator. The total value of the contract amounts to over PLN 510 million gross (PLN 382.6 million for the delivery of 20 vehicles and PLN 128.1 million for the technical maintenance). Stadler will deliver to the Łódź operator the latest generation of FLIRT trains, which ensure low operating costs, especially in terms of energy usage. The trains for ŁKA will be produced in the Stadler Polska facility located in Siedlce, in the Mazovia region. As a result of the contract signed with the Łódź operator, the number of FLIRT trains sold worldwide by the Stadler Rail Group will exceed 800 vehicles.

The first 6 FLIRT trains will be delivered to ŁKA by the end of April 2014. The next 10 vehicles will arrive in Łódź by the end of October 2014 and the remaining 4 units will be handed over to the railway operator at the end of February 2015. The investment is part of the "Construction of the Łódź Agglomeration Railway System" project co-financed by the European Union, aimed at creating a rail network covering the Łódź agglomeration. EMUs from the FLIRT family have been providing passenger services in the Mazovia and Silesia provinces in Poland since 2008.

"The Łódź Agglomeration Railway signifies a new quality of travelling in the Łódź province. It is a significant part of the transport network in the region, benefiting all the residents. The railway will connect the capital with other cities in the Łódź province, which will be convenient for employees and students, and advantageous for business, trade, services and cultural institutions," said Witold Stępień, Marshal of the Łódź province.

"Winning the tender for the delivery of trains for the Łódź Agglomeration Railway is very important for Stadler Polska. This is the first contract for the delivery of trains signed by Stadler's Polish subsidiary, which in only five years of operation has gained competence in rail vehicle production allowing the company to take part in tenders on its own. We are happy to once again be able to offer passengers in Poland our reliable, innovative and comfortable FLIRT vehicles. The order will be carried out by our facility in Siedlce, in the Mazovia region," said Christian Spichiger, CEO of Stadler Polska.

"The tender organized by the Łódź operator is very important to us also because for the first time in Poland not only the price of the vehicles has been taken into account in the tender criteria but also their long term operational costs. Looking at the tender's results, we can pride ourselves on our huge competitive advantage in this area. We hope that operational costs will be taken into consideration also in other tenders, as in the whole life cycle of a train they often exceed the purchasing price," said Stanisław Skalski, Member of the Management Board of Stadler Polska and Sales Director of Stadler Rail Group.

Technical parameters of FLIRT trains ordered by ŁKA

FLIRT trains for ŁKA are well sound-proofed ensuring comfort of travel even on longer distances. They are constructed from modern and light aluminum alloys. It is the latest generation of vehicles from the FLIRT family, which meet the highest travelling safety and environmental protection standards. Stadler Polska has offered ŁKA 20 45.7-metre long two-unit FLIRT trains weighing approximately 90 tons, which will travel at top speeds of 160 kph. These modern vehicles will accommodate 254 passengers and will be equipped with 120 seats, air-conditioning and an interior monitoring system, which will assure high levels of comfort to the passengers. As part of the passenger information system the vehicles will have LCD screens and a loud speaking system allowing the driver to make announcements from his cabin. Additionally, this will be the first series of trains in Poland equipped with the European Train Control System 2 (ETCS 2) (including signaling

in the driver's cabin), which assures higher safety.

The vehicles will meet all the requirements of ŁKA concerning accessibility for the disabled. This will be possible thanks to functional solutions in the construction of the train's interior which ensure ample space and comfort to passengers and the option to transport big pieces of luggage as well as bikes.

A significant advantage of these environment friendly vehicles is their efficient energy consumption which translates to lower running costs. The trains will use less energy per passenger than previous versions of FLIRT. Łódzka Kolej Aglomeracyjna values this aspect as it was looking for reliable trains which guarantee low operating costs in the long term.



About Stadler Polska

The Stadler Polska plant in Siedlce was set up in 2007 after Stadler Bussnang AG had received in June 2006 its first order from Poland for the delivery of fourteen FLIRT trains for the Mazovia and Silesia provinces (ten for Mazovia and four for Silesia). The company rented and modernised a facility in Siedlce owned by the Polish railway company PKP. As a result, all of the fleet ordered by Stadler's Polish clients was produced in Siedlce. The official opening of Stadler's rail vehicle assembly plant in Siedlce took place on 5 September 2007. FLIRT and GTW trains for European railway operators are now being produced in Siedlce and the company's staff totals over 500 well-qualified employees. So far 71 trains have been produced in Stadler's plant in Siedlce. Current orders include articulated multiple-unit GTW trains for the Dutch operators Arriva Netherlands and Connexion, as well as Sistemi Territoriali from Italy, and FLIRT trains of higher standard for LEO Express, a Czech railway operator, and broad-gauge FLIRT vehicles for Elektriraudtee from Estonia.

SCOTTY special features for the iPad

The new iPad app provides SCOTTY alongside the proven services, a permanent visualization on a map. This allows the start and finish to be chosen simply on the map. Furthermore the SCOTTY iPad app shows train movements on the ÖBB rail and intercity bus network on a map.

1.2 million mobile phones with SCOTTY mobil

SCOTTY mobil is already installed on approximately 1.2 million mobile phones and smartphones. Per day ÖBB have recorded half a million hits on its Öffi-directions. Besides timetable data, users get real-time information on trains, current train information about train stations and much more. SCOTTY is available on oebb.at or SCOTTY mobil, on most phone models, as well as Android and Apple smartphones.

In addition, there has recently introduced a SCOTTY App for Windows 8

Timetable information can also be obtained via SMS to the number 0828 20 200 (eg, query on the next train departures at the station Linz: send SMS with the code "at Linz" to 0828 20 200).

SCOTTY contains data on all ÖBB rail links and numerous other rail connections at home and abroad. There are also all Postbus connections and information about public transport in all Austrian provinces and 90% of the Swiss bus traffic.

Photo: ÖBB - The new Scotty iPad app in use



KTZ, Alstom and Transmashholding inaugurate their newly built locomotive plant in Astana, Kazakhstan



The Kazakh railways (KTZ), Alstom and Transmashholding (TMH) inaugurated on December 4th their joint new plant for the production of electric locomotives in Astana (Kazakhstan). The ceremony was held in the presence of the President of Kazakhstan, Nursultan Nazarbaev, KTZ President Askar Mamin, TMH President Andrey Bokarev, Alstom Chairman and CEO Patrick Kron as well as Alstom Transport President Henri Poupart-Lafarge.

The plant is operated by EKZ, a joint venture held by KTZ (50% of the shares), Alstom and TMH (25% of the shares respectively). It represents an investment of around 50 million. In June 2010, Alstom and its partners had announced their decision to invest in a manufacturing unit to address the renewal of the railway fleet of Kazakhstan.

With a total surface area of 27,522 square metres and a capacity of up to 100 locomotives per year, the plant matches the best standards of the industry. The number of employees will grow from 47 employees today to 650 people by the end of 2016.

Production at EKZ will start in January 2013 with the €1.3 billion order placed by KTZ in 2010 for 200 freight locomotives (KZ8A) and 95 passenger locomotives (KZ4AT). EKZ ambition is to expand its activities to the railway transport markets in neighboring countries.

The 10 pre-series locomotives are being produced in Alstom's manufacturing facility in Belfort. As part of the program for transferring skills, EKZ employees will undergo a training program in Belfort and at TMH's production premises in Novocherkassk, Russia

"We have been closely following the industrial policy implemented in Kazakhstan", said Andrey Bokarev.

"We regard President Nazarbaev's commitment to create a national industrial base as a wise strategic step. It's an honor for TMH to be chosen by the Kazakhstan government as a technology partner. I would like to assure the government and the people of Kazakhstan that our specialists will do their best to help the Republic create its own local full-scale production of rolling stock".

"With this plant, which is a tangible result of our recent partnership with KTZ, Alstom has established a strong footprint in Kazakhstan", said Patrick Kron. "It is our first joint international project with TMH and I am positive that it is a milestone on the way to future development of the partnership and new projects in a promising dynamic market".

The first KZ8A freight locomotive, manufactured at the Alstom Transport plant in Belfort, France, was delivered to the Astana plant for the ceremony. KZ8A is one of the most powerful freight locomotives in the world, capable of hauling up to 9,000 tons and running at 120 kph. It can operate in extreme weather conditions with temperatures ranging from -50°C to +50°C.

This locomotive offers drivers comfort over long distances with its large cabin equipped with a microwave, refrigerator, floor heating, comfortable heated seats and foot rests. The KZ8A locomotive is now undergoing Russian certification and will enter into dynamic tests in Kazakhstan in January 2013. Both the KZ8A and the KZ4A locomotives incorporate Alstom technology, such as the traction system, as well as number of other components manufactured by Alstom and TMH in Russia.

Czech Railways - the current economic situation in the relevant subsidiary ČD Cargo, as



Expected results of ČD Cargo, as, from continuing operations for 2012 remain at this point for more accurate income and expense items presented at approximately -230 million CZK. The expected loss is primarily affected by decreased sales in connection with the decrease construction and industrial production in the Czech Republic and the lower profitability of each segment wagonload. Beyond this result the company plans in 2012 to realize two extraordinary financial operations. These according to the current expectations of the company would increase costs, but will not affect the company's cash flow in 2012. These extra costs were not part of the originally planned or expected profit:

This is an extraordinary depreciation of the revaluation difference, when the company decided to accede to the impairment of assets based on the current valuation and age of the fleet and also in connection with the assumption that in the coming years will be to sell unwanted vehicles.

Management of the Company currently expects that these financial transactions will have a negative impact on the profit in 2012 of approximately CZK 1.3 billion, but reduced fixed assets of the company and will be in the coming years to generate savings in depreciation had a positive impact on the Company's .

Furthermore, the company is currently planning to create in 2012 a provision for restructuring measures related to the company amounting to approximately CZK 0.5 billion. According to the current plan by restructuring the company during 2013 should lead to optimization of the segment of the single wagonload transport and maintain profitability block trains. The restructuring of the company currently intends to reduce employment, which would lead to the growth of labor productivity. The aim of the restructuring is to stabilize the company without any significant impact on the volume of realized transports. Its planned restructuring is subject to approval by the Supervisory Board and the General Meeting of ČD Cargo, as

The company plans while subsequently regularly evaluates its indebtedness and liquidity, and currently does not meet any of the prerequisites for applying for insolvency. ČD Cargo, as an integral part of the Group ČD has the full support of the proposed steps of the parent company ČD, as

Alstom will supply 70 regional trains to Trenitalia



Further to a call for tender, Alstom has been awarded an order from the Italian public railway operator, Trenitalia, to supply 70 new regional trains. These Alstom Coradia Meridian trains will support the strengthening and modernising of Trenitalia's regional services throughout Italy. This contract is worth about €440 million. Deliveries are expected to begin slightly over one year after the signing of the contract.

This award is a tranche of a €3 billion total investment forecast by Trenitalia for regional transport, after €1.5 billion already invested in 2009.

These trains will operate in several Italian regions. They will also service the link between Fiumicino international airport and Roma Termini station. Specially designed for inter-city and extra-urban lines, they have roomy and versatile interiors offering commuters a high-quality travel experience.

"This contract is the result of Alstom's involvement in the development of Italy's railway market" commented Henri Poupart-Lafarge, President of Alstom Transport. "This new supply of regional trains for Trenitalia shows the trust of our long term customer in our state-of-the-art technology as well as our local skills".

The Coradia Meridian product line is designed to meet the needs of regional operators in Southern Europe. Today, more than 250 Coradia Meridian trains are in service throughout Italy, whilst 13 additional train sets are being built.

This five car-train EMU type (electric multiple unit) is 82 metres long. With a total of 292 seats, it can run at a maximum speed of 160 km/h. Its concentrated traction system with two motor bogies, optimises the electrical braking capability of the train, allowing energy consumption and brake wear to be reduced. It has a 95% recyclability rate and its low-floor facilitates access to passengers, especially those with reduced mobility. Each door is equipped with integrated bridging plates to fill the gap between the train and the platform. The train also benefits from an on-board video-surveillance system as well as display screens visible from all parts of the train, audio information, Braille signs, 220 V sockets for mobile phones and laptops, and dedicated luggage space.

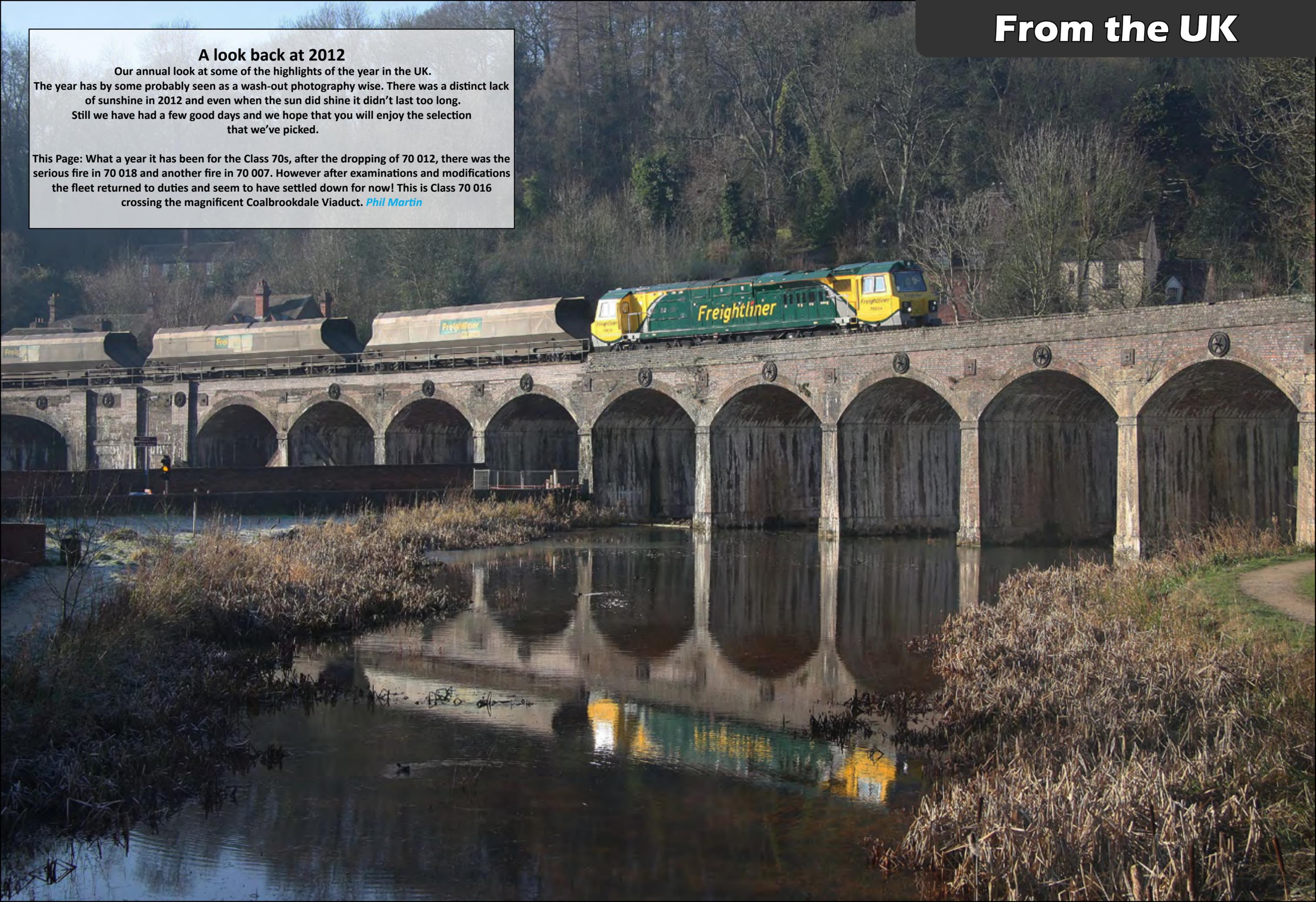
The regional trains for Trenitalia will be designed and manufactured in Italy. Project development, most of the manufacturing as well as the certification, will be done in Savigliano Alstom's site in Cuneo. The plant in Sesto San Giovanni (Milan) will be responsible for the design and manufacturing of the traction systems and auxiliary switchers. Onboard signalling systems will be delivered by the Bologna site

A look back at 2012

Our annual look at some of the highlights of the year in the UK.

The year has by some probably seen as a wash-out photography wise. There was a distinct lack of sunshine in 2012 and even when the sun did shine it didn't last too long. Still we have had a few good days and we hope that you will enjoy the selection that we've picked.

This Page: What a year it has been for the Class 70s, after the dropping of 70 012, there was the serious fire in 70 018 and another fire in 70 007. However after examinations and modifications the fleet returned to duties and seem to have settled down for now! This is Class 70 016 crossing the magnificent Coalbrookdale Viaduct. [Phil Martin](#)



Snow featured heavily in February, with chaos ensuing on the rails.
This is Class 67 005 and 67 028 running through York en route to
Doncaster to help clear some struggling East Coast services.

Class47



The unlikely sight of a Virgin Trains Pendolino working a special along the East Coast main line in the middle of the night. Rumours abound as to why and for who's benefit. Here it is seen pausing at York on March 13th heading south to London Kings Cross from Edinburgh. [Class47](#)



Throughout 2012 the London Underground 'S' type tube stock has been keeping the Class 20's from HNRC and GBRf busy, regularly working between Derby and London. This is Class 20 901 and 20 905 leading the 7X09 to Amersham on April 30th. [Derek Elston](#)



One of our favourite photos of the year was this of LNER A4 No. 4464 "Bittern" seen crossing the Forth Bridge on May 23rd with "The Cathedrals Express" eight day railtour. [Richard Jones](#)



11 car Virgin Trains' Pendolinos became more and more common on the West Coast main line as additional coaches were added to the 9 car sets, This 11 car Pendolino is seen beginning it's climb up Shap at Scout Green in some rare sunshine. [Colin Irwin](#)



The GBRf Charity Charter from Cardiff to Paignton in July, was disastrous for Class 50 044 when on the return working it suffered engine problems which was to result in it needing very expensive repairs. In good form on the outward journey, it is seen here passing through Newton Abbot.

Richard Hargreaves



Not so glorious August, as a lack of decent sunshine spoilt the holiday season. This pair of Northern liveried Class 156 DMUs are seen crossing Ribbleshead Viaduct on one of the better days in the month. *Ben Bucki*



Probably the working of September was when GBRf Class 66 707 working the 6C15 Tyne Dock - Drax, failed just North of Hartlepool blocking the Durham Coast Up line. Fortunately DRS were working the Seaton Flasks so they were called on to come to the rescue. This is Class 57 003 and 57 008 dragging the failed 6C15 into Hartlepool Station so the line could reopen. *Michael J. Alderdice*





70099

FBXU 889082 6
2261

MAX WT. 11400 LBS
TARE WT. 1900 LBS

PAYLOAD 9500 LBS
CAP. 2261

The froth really overflowed in October as Turkish built Class 70 099 arrived into the UK. Rumours abound where and who it was to be working for, but here it is in Crewe Basford Hall Yard on its way to Brush Loughborough, where it remains at the end of the year. [Brian Battersby](#)

The highlight for November had to be the sight of a pair of Great Western Panniers having a run out to Worcester. With No. L94 in London Transport livery, and No. 9600 in BR Black, the pair are seen backing the stock into the sidings at Worcester. [Richard Hargreaves](#)



After another fantastic season in the North East, December marked the end of the RHTTs for another year. The DRS Class 20s had provided much entertainment and enjoyment and hopefully they will return once again in 2013. This is Class 20 302 at Gilberdyke on December 2nd. [Andy](#)



OBB Class 1163.004-3 pauses at Gmunden to receive instructions from the local shunter, having just arrived with the rake of cement wagons seen behind it, June 25th 2004.
Class47



On June 24th 2004, DB Class 139.260-4 passes through Rosenheim with a Munich bound intermodal service. [Class47](#)





Mariazellerbahn electric loco, Class 1099.008-3 arrives into St. Polten Hbf. on June 22nd 2004. The 100 year old Class 1099 locos are believed to be the world's oldest electric locomotives still running on the line for which they were originally built. [Class47](#)