

BAGGERMODELLE

Baumaschinenmodelle, Krane und Schwerlast

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Mit Wettbewerb



English text

Überraschung von NZG in 1:50

Sennebogen 860 R-HD

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Casagrande B360XP

Sammlerportrait
Krane und Prangl in 1:50

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Caterpillar D9L & 637E



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Editorial

A question of price

I would like to wish all readers a happy New Year, health and success and to continue having fun collecting the “small” machines. Our Year, also known as the Model year starts always about a month later than the calendar year, with the opening of the International Toy Fair in Nuremberg.

When I look at the information that I have at the publication deadline, and compare it to the previous year, and make a calculation, then I think we can look forward to an interesting year.

Price and detailing of the new models will again give grounds for lively discussions. I have been asked regularly to include prices when looking closely at a model in our publication. Despite this I prefer not to comment on prices in detail.

Of course, we are disappointed when a long wished for model is in a price category that is outside out hobby budget and therefore has to remain a dream. On the other hand collecting is a hobby and we pay collectors prices that have to

be justified emotionally and fit in to our collecting ideology. If a model is “worth” its price that is a decision everybody has to make themselves.

For myself for example, I am always disappointed when important details have been sacrificed to save money. I would rather pay a few more Francs or Euros to get it right, because these omissions keep on bothering me still years later. I hardly remember the price I paid for a model in the past, if I really liked it.

In conclusion I think that the manufacturers of our models seek out the optimal balance between adherence to the prototype of the model and the price point. Their major goal is of course to sell the models they produce

But now I would like to wish you all a lot of fun when reading this issue



Daniel Wietlisbach

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New on the market

Conrad 1:50 scale

The Terex AC1000 in the colour scheme of “Steil” comes updated with new window wipers for the cab and nuts on the cylinder of the outrigger arm. The Liebherr LTR 1100 is now newly available in white and the “Prangl “fleet has a MAN TGS with extendable flat deck with a Palfinger PK100002 with Fly Jib as a new member. Additionally, there is a Mercedes-Benz Sprinter BF3 painted for “Daher-Transkem”. For civic duties there are the Bucher Schörfling CityFant 6000 lettered for “Tiefbauamt des Kantons Bern” with Maennlichen advertisement logo, and the orange MAN HAK 19.241 with a plow and scatter material container, both of which are removable.

Himobo 1:50 scale

This detailed model of the mighty hulk from Hendrickson weighs over three kilograms.

Wiking 1:87 scale

With three new oldies, Wiking shows once again its clever choice of lettering and paint schemes. In grey and lettered for “Heitkamp” comes the Krupp truck and trailer set, and in the yellow paint scheme of “Bölling”, the Magirus Saturn dump truck. The “dream of the charming house in the country” (Der Traum vom schmucken Landhaus) set contains the parts for the pre-fab house and both a VW T1 with double cabin and a Demag crane. A true charming dream of a set!

NZG 1:50 scale

Numerous colour variations from Nuremberg appeared at year’s end. Up front, the Komatsu PC 3000-6 “Miller Argent” backhoe, used in soil reclamation work on a former mine site in south Wales. Three excavators from Liebherr join the line-up in attractive paint schemes: the black R 936C “HMT”, the A 918 compact in orange from “Drinkuth” and in white from “Hentschke”. Three new colour variations appeared on wheeled loaders: the Liebherr L 586 2plus2 for “WRM Reese”, the Atlas AR95 for “Schnorpfel” and also for “Rathkamp” with a yellow engine cowl that we found very pleasing. Equipped for road construction for the firm of “Kutter” comes the finely detailed Wirtgen W 250i cold milling machine in red and also a “Colas” Vögle Super 1900-2 in orange.

Herpa 1:87

The maker from Dietenhofen doesn’t skimp when it comes to new models for the year end. Especially interesting and attractive, from a Swiss view point, is the Scania M04 roll-off container tractor-trailer set, “Dornbierer”, from Lake Constance. The MAN TGX XLX round bin tractor trailer set is an addition to the “Trost” fleet of models. Also, another new tractor-trailer set sports the newest Kempf Stöffel high volume dumping bin lettered for “Thöling”. The Mercedes-Benz Actros 8x4 dumper, “Max Wild”, will certainly be very popular among collectors as will the MAN TGX XXL

with a Goldhofer THP-SL “Bohnet” and further, the MAN TGS LX, a new form! With the Schmitz Cargobull dumping attachment the series of machines in orange colours expands. The two track units from the Liebherr LR 1600/2 from “Felbermayr” can be had loaded individually on board low-boy tractor-trailer sets with either Scania R or a MAN TGX XXL as tractor units.

Motorart 1:50 scale

For Volvo fans comes a set comprised of the EC 220DL loaded on a low boy trailer with a Volvo FH12 as a tractor. As a nod to the Asiatic market is the L105 wheeled loader in a specially detailed version. In addition to the New Holland W300C introduced in this issue, the E215C as well as the dainty C238 & L218 compact loaders were delivered to dealers and finally, the JCB JS220 has been re-released and we noted especially the updated lettering.

Tekno 1:50 scale

Painted in the colours of the Keil Austrian earth moving company comes a set comprised of the MAN TGX XXL 8x4 with a Hiab truck crane and a Goldhofer deep well lowboy trailer. The company is mainly active in the tunnel and power station construction segment of the industry. The Hiab Loglift 96S is now available separately as a rear mount model in black or red, equipped with two different grappling hooks. Although the dainty attachment tools do not function, the supports and the arm telescope very

easily, and the cabin of the crane is height adjustable, as per the prototype. The screw with the holding clip can be purchased separately from the supplier.

CCM 1:24

In the usual highly-detailed, hand crafted version comes a brass model of the Caterpillar #12 moto-

rized grader. Once again, this is a very limited series.

Collector's guide

So that you do not miss any of the new model announcements, the latest releases are listed here in short form.

Type	Scale	Producer	Available at	Additional information
Caterpillar 6020B	1:48	CCM	Dealers	www.ccmmodels.com
Liebherr LTR 1100 «Franz Bracht»	1:50	Conrad	Dealers	www.conrad-modelle.de
Liebherr R924 «Vinci»	1:50	Conrad	Vinci Shop	www.webshop-vinci.com
Case CX250C with concrete shear «Cardem»	1:50	Conrad	Vinci Shop	www.webshop-vinci.com
Actros 4x2 dump semitrailer «Elbekies», «Steinbruch Oberottendorf», «Lausitzer»	1:50	Conrad	Vinci Shop	www.webshop-vinci.com
Bucher Schörling Cityfant Mercedes «Lefebvre»	1:50	Conrad	Vinci Shop	www.webshop-vinci.com
Set welding tractor and pipelayer «Spiecepag»	1:50	NZG / Conrad	Vinci Shop	www.webshop-vinci.com
Terex AT20-3 australian colour versions	1:50	Conrad	Quarry Diecast	www.quarrydiecastmodels.com.au
Liebherr LTM 11200-9.1 «Hartinger»	1:50	NZG	Dealers	www.nzg.de
Liebherr R 916 Classic «Brodbeck»	1:50	NZG	Dealers	www.nzg.de
Liebherr A918 compact «Eurovia»	1:50	NZG	Vinci Shop	www.webshop-vinci.com
Kleemann Mobicat MC110Z Evo «Eurovia»	1:50	NZG	Vinci Shop	www.webshop-vinci.com
Wirtgen W250i «Emulithe» and «Eurovia»	1:50	NZG	Vinci Shop	www.webshop-vinci.com
Vögele Super 1900-2 «Emulithe»	1:50	NZG	Vinci Shop	www.webshop-vinci.com
VW Crafter «Freyssinet»	1:50	WSI	Vinci Shop	www.webshop-vinci.com
Scania R / dump semitrailer «Viktor Weber»	1:50	Tekno	Dealers	www.tekno.nl
Scania R 8x4 blue	1:50	Tekno	Dealers	www.tekno.nl
Scania R 10x4 dump truck «von Arx»	1:50	Tekno	Dealers	www.tekno.nl
Scania 141 / flatbed semitrailer «Borlängeortens»	1:50	Tekno	Dealers	www.tekno.nl
Volvo FH04 8x4 / lowloader «Haegens»	1:50	Tekno	Dealers	www.tekno.nl
MAN TGX XXL / semi lowloader «AB Crush»	1:50	Tekno	Dealers	www.tekno.nl
MAN / dump semitrailer «Wolters»	1:50	Tekno	Dealers	www.tekno.nl
Daf Tropco 6x6 / lowloader 7 axles or 4 axles army	1:50	Tekno	Dealers	www.tekno.nl
Mercedes Actros 8x4 dump truck white	1:50	Tekno	Dealers	www.tekno.nl
Liebherr LTM 1500-8.1 «Kanson»	1:50	WSI	Dealers	www.wsi-models.com
Liebherr LTF 1060-4.1 «Trost»	1:50	WSI	Dealers	www.wsi-models.com
Scania R 143 8x4 / Fassi F1300 «Bolt»	1:50	WSI	Dealers	www.wsi-models.com
Scania R / Nooteboom semilow loader «Klappenecker»	1:50	WSI	Dealers	www.wsi-models.com
Scania R / flatbed semitrailer «Mauersberger»	1:50	WSI	Dealers	www.wsi-models.com
Volvo FH3 / Palfinger / semi low loader «Van Grinsven»	1:50	WSI	Dealers	www.wsi-models.com
Volvo FH2 / semi lowloader «TIS Group»	1:50	WSI	Dealers	www.wsi-models.com
FTF FD Serie with ballast box «E. Lafeber»	1:50	WSI	Dealers	www.wsi-models.com
MAN TGX XXL / Scheuerle Intercombi «Koch»	1:50	WSI	Dealers	www.wsi-models.com
Mercedes Actros with ballast box «Kahl»	1:50	WSI	Dealers	www.wsi-models.com
Volvo FM 6x4, semi lowloader «Christen»	1:50	WSI	HTM	www.heavy-transport-models.de
Faun ATF 70G4 «KIBAG»	1:50	WSI	HTM	www.heavy-transport-models.de
MAN TGX 8x8, Fassi F1300 «Spiegl»	1:50	WSI	HTM	www.heavy-transport-models.de
Link-Belt ATC3275, RTC8080, TCC750	1:50		Dealers	
Caterpillar 789D	1:87	CCM	Dealers	www.ccmmodels.com
Mercedes Actros roll-off multibucket trailer «Nehlsen»	1:87	Herpa	Dealers	www.herpa.de
MAN TGS M 8x4 dump truck orange	1:87	Herpa	Dealers	www.herpa.de
Mercedes Actros stake semitrailer orange	1:87	Herpa	Dealers	www.herpa.de
Mercedes Actros lowboy semitrailer with load «Kübler»	1:87	Herpa	Dealers	www.herpa.de
MAN TGX / semi lowloader / LR 1600/2 part «Felbermayr»	1:87	Herpa	Dealers	www.herpa.de
Mercedes Actros / LR 1600/2 ballast «Felbermayr»	1:87	Herpa	Dealers	www.herpa.de
MAN TGX / flatbed semitrailer / LR 1600/2 part «Wasel»	1:87	Herpa	Dealers	www.herpa.de
Two transport containers blue	1:87	Herpa	Dealers	www.herpa.de

Michael Mainardy collects and builds cranes Prangl in 1:50 scale

by Daniel Wietlisbach

When he was 11 years old, Michael Mainardy remembers spending a whole day watching a tower crane being erected in the down town area of Vienna. And of course on his model railroad, the theme crane was also present. From Kibri the Liebherr 63C tower crane and from Herpa the LTM 1045/1 were available. Unfortunately, the successive erecting work he observed could not be duplicated with those models. His moment of enlightenment happened two years later at the “Wiener Modelbau Messe” (Vienna Model exposition) when Michael discovered the LTM 1200-5.1 “Mammoet” (Conrad 2101) and purchased it on the spot. Once at home, he spent several days imitating all possible erecting variations of the original, and was finally happy: “finally, a crane model that functions like the original!” To help with the erecting work, a smaller crane had to be purchased, while the exposition was still ongoing. The young collector was allowed to choose a LTC 1055-3.1, which then appeared under the Christmas tree. As transport vehicles for pieces of the lattice tower and counter weight segments, old models from Joal were on hand. Shortly thereafter, the pair was augmented with an AC 500 (Conrad 2098/05) in the paint

Michael Mainardy has been collecting models for seven years now. Not a short time, especially if one is only 21 years old! His theme is: “Prangl crane and heavy duty transport in Austria” ...

scheme for Prangl. Unfortunately, black clouds gathered and Michael felt like the end of his world had arrived when the lifting cylinder on the LTM 1200-5.1 broke and on the smaller LTM 1055 other flaws were discovered. A very compassionate dealer sent both models to the manufacturer in Kalchreuth and at the exposition the following year, the young modeller could retrieve his repaired models. The joy was great and the collecting fever had struck permanently and manifested itself with four new models: From Conrad a Terex-Demag AC 100/4 (2104), the Liebherr LTR 1100/1 (2738) and the LTM 1160/2 (2090) and from NZG the AC 200-1 “Wiesbauer” (730-1).

Show models in action

But how can a school boy finance his passion? Michael Mainardy had the fortune that he could increase his pocket money by working in his father’s restaurant. On top of that he soon sold off his model trains and finally his wishes for Birthdays

and Christmas was for money only so he could purchase new models. Even at that time he started to build models. After careful observation close by, he used brass shapes, ACC glue and solder to make a portal for a tower crane. On this the model of a Wolff crane was supposed to go, a model that was not available. The gap filled the Liebherr 630 EC-H 40 from Conrad (2050). Michael Mainardy was very inventive to find a space saving construction site for his models at home. On the lid of the aquarium he affixed a concreted flat surface. This was to simulate the roof of a high rise apartment block. Underneath it, the fish swam around undisturbed. From a collector that he had befriended, he received further lattice tower pieces for the 630 EC-H 40, so that the crane could reach the height suitable for a high rise.

Having his own Prangl Dealership

It had always being important to Michael, that the models did

not gather dust in display cabinets but were shown off in a realistic fashion. As the room in his book shelf for his models ran out of space, a first construction yard on a 1 x 2 m board decorated with glued-on asphalt sheets. The decision to dedicate his yard completely to Prangl was reasoned as follows: on the one hand there were many cranes operating in the inner city of Vienna from Prangl, and on the other hand, Conrad offered several models in this firm's colour schemes and finally, the design of the Liebherr cranes are identical to the ones from Prangl. The only difference was the logo found in different sizes on the model, this he had to have custom made for him to adapt a part of the fleet. Later on he gave spraying his models with lacquer a try, and encourage by its success on the first truck, more and more trucks were re-spray painted and later on also cranes from other makers using the RAL 1007 model paint spray cans. The spraying was done first with an open window and also in the hall way.

That there are some blue models in the competitors "Felbermayr" enriching his collection is due to an encounter. Michael Mainardy met the driver of a beautifully maintained Liebherr LTM 1250/1 in person. This inspired him to build a model of the crane with parts from Conrad LTM 1200-5.1 and LTM1300/1. And, exactly as the original, using parts created on a 3 D printer. The project is not yet completed; the collection within a collection has grown to include a few more Felbermayr models like the Liebherr LG 1750 from Conrad.

The Collector

Michael Mainardy, 21, went to a high school equivalent for nine years, where he graduated with a diploma, and also, at the same time, finished a carpenter's apprenticeship. He has a driver's licence that allows him to drive heavy trucks and dreams about being able to work for a crane manufacturer, this is what he feels is his "calling". He is also busy taking pictures of prototypes of cranes in action, is interested in the rescue service and the history of Vienna and in subway construction. He lives in the inner city of Vienna and always looks forward to getting in touch with like-minded collectors and fans. The best way of contacting him is via mail-mp-mainardy@gmx.at or terex-demag@gmx.at

Scratch built items

But back to the tower cranes. When the Wolff crane that was working in front of his house was dismantled, Michael Mainardy decided to build a Wolff 5015 as a model. Using prospectus material, he then drew up some plans and made the required parts from Evergreen Styrene profiles glued together. Two challenges had to be surmounted, on the one hand the plug in connector pieces and on the other hand the slewing ring. This was because on the top of his list of important features was always functionality and ease of assembly. But both problems were solved in short order and so a Wolff 7532 was made in model form. Even during the construction of this crane, he was able to get from the afore-mentioned collector friend a Wolff 500B under construction. The luffing tip crane was already so much advanced that Michael Mainardy finished it first. The third crane, a Wolff 4517 City Flattop, was after two months almost ready, and then he got most of the

sub-assemblies down to a routine. All three new cranes were to be displayed on a diorama featuring the building of a house. During the moving of the diorama, when he just had finished trial positioning of the cranes, an accident happened. The Wolff 5015 tipped over and sustained heavy damage. However, the crane constructor was not disheartened and used the opportunity to re-work his first attempt at crane building completely and equip it with a new tower. Since then, three new scratch-built cranes have been made: the Wolff 6071XXL, a further luffing jib crane, the Wolff 355B as well as a Liebherr 71EC. For this crane model he built the prototypically correct 45 m long outrigger arm, 90 cm in model form, and with this Michael commented from his experience: "I pushed the boundary of what is doable in Polystyrol to the limit."

He has been working on a very large project now for quite a while, one that will keep Michael Mainardy busy for a bit longer. It is a scale model of the Terex Demag CC2800

tracked crane. The construction of the lower and upper carriages are a new challenge, however for the bottom floor plates he was able to use parts of the CC8800 from Conrad. As far as the outrigger arm is concerned, it was “old hat” for him, so it is already finished. At the

same time some smaller projects are also in progress, for example the working platform from Ruthmann (it can reach a height of 45 m) built on a MAN TGM chassis is under construction. The upper carriage and the outrigger arm of the T460 are manufactured complete-

ly with a 3D printer and the lower carriage is milled on a CNC milling machine out of Polystyrol. The milling machine was purchased by Michael Mainardy from the wages at his first, fully paid job after he successfully completed his apprenticeship.



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Sennebogen 860R-HD from NZG in 1:50 scale

Multi-talented

by Daniel Wietlisbach

Material Handling Machine is not a completely accurate description of the 860R-HD, because it really is a universally usable machine. The machine, equipped with an extra wide under carriage (HD for Heavy Duty), a long arm and jib and with a height-extendable cabin, is ideal for demolition work. For example, in 2011, Eberhard used their machine for a demolition project in Basle; today the machine is working as a material handling machine. The power plant for the 80t machine, without regard to attachments, is a Cummins six-cylinder QSM11-C360 engine producing 365 hp (268 kW).

Sennebogen and NZG were successful in surprising modellers as their model arrived in shops without any pre-release announcements. The model leaves an overall pleasing impression and radiates value for money due to its high metal content. All major measurements correspond to the original. The very ornate and conspicuously wide undercarriages with their two driving sets have been faithfully reproduced. The finely engraved driving wheels, the two support wheels and the 10 running wheels on each side are, as per prototype, correctly modeled and fully moveable. Because of the heavy springing of the tracks, it is difficult to move them. They are made up

The excavator model equipped with XMB 5000 concrete shears from LST looks extremely powerful. The model of NZG's multi-purpose 860R-HD that appeared unexpectedly in the Sennebogen shop is very appealing ...

from 55 segments (original has 60) of flat-bottom plates, optional on the original, that suit the model well despite the fact that the distance between them is exaggerated when they are turning over the driving and guiding wheels. The two NZG article numbers visible on the lower carriage point to a further new model in the wings.

Upper carriage

The upper carriage is made of finely engraved metal castings; for example, the Sennebogen logo on the counter-weight is modeled as a raised item. Separately-applied parts are exhaust, air filters and rear view camera and on the right side, the small platform, including ladder. The safety railing is made from a fine metal casting that has to be inserted into pre-drilled holes by the modeller. The hydraulically liftable maXcab cabin reaches the prototypical height and the attached hydraulic and supply lines follow the lifting process without any problems. The cabin is nicely

detailed with rear view mirrors, window wipers and stone chip protection cage. Looking through the windows that have been applied from the inside, the two-tone interior can be made out.

Equipment

The model comes equipped with a 9.5 m arm and a 7.0 m (scale) jib and so is fully-equipped for demolition work. All hydraulic lines are applied separately; only on a short stretch of the jib are they cast on. The hydraulic cylinders are rather simple affairs but hold the equipment at any desired position.

The three tool attachments included with the model are a spe-

The model at a glance

- + True to scale
- + Functionality
- + High metal content
- Sorting grappling hook

cial treat. These can be attached with a simple bolt. First of all, and most impressively modeled is the LST XMB 5000 concrete shear attachment with its four hydraulic cylinders. Unfortunately, the ribs of the otherwise very nice sorting grappling hook attachment, were not modeled pierced as on the original, but are solid.

Rounding out the trio of attachments is a large-dimension tipping shovel, but unfortunately, due to the missing hydraulic cylinder, it does not stay up and always falls back into the horizontal position.

As expected from NZG, the paint job with its satin gloss is excellent; the lettering is sharp and legible. On top of that there are

some detail parts that have been color-enhanced and so greatly improve the overall look of the model.

A limited series of models lettered for Eberhard has been delivered to the firm. These models will not be available from dealers nor are they for sale in the Eberhard shop.

BAGGERMODELLE

The magazine for collectors of construction machine models, cranes and heavy haulage



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Cat 637E / 631E and D9L from CCM in 1:48 scale

Top marks

by Daniel Wietlisbach

The “old” yellow and the Pac-man logo from Caterpillar are high on the desirability index for collectors. This is especially so because the 70s and 80s were years that heralded great innovations and a high degree of technical advances that were easily recognizable on the machines. One thinks of the Delta drive as an example. With these new models, CCM presents two series of machines that complement each other wonderfully on earth-moving construction sites.

Caterpillar 613E and 637E

The scrapers of the E series were presented to the world in 1982. The single engine 631E and the double engine 637E had a capacity of 23.7 m³ for a heaped load or 16.1 m³ for a level load. Further information may be gleaned from the size-reduced original sales brochures that are included with the models. Powered by a Cat 3408 V8 Turbo Diesel with 450 hp in the scraper head, the machines reached a top speed of 48 km/h; for the Cat 637E an additional Cat 3306 six cylinder engine housed in the rear unit added 250 hp. If two Cat 637Es were used in a push-pull combination, a total force of 1400 hp was brought to bear upon the cutting blade during the scraping process. During the filling of the front unit, the rear unit gave push support

CCM conducts an “earth-moving campaign” with several versions of its new scraper and bulldozer models ...

and when the rear unit was filled the front one pulled, a truly impressive spectacle!

The models from CCM

The models, in a limited series of only 750 pieces, come to the collector in the usual “Egg carton” packaging that is less prone to “flake off” than earlier packages. The danger that models can fall out of the bottom of the flimsy packages is still there, therefore keep a tight grip with both hands when opening the package!

Both models feel pleasantly heavy when held. All major measurements correspond correctly with the original. The wheel rims are nicely engraved, even on the inner side, and the tires are excellent in all dimensions, the correct threads are decorated with the “Good Year” logo. Both front units are identical, however the 637E is equipped with a functioning Push-Pull accessory. The service hatch on the right side opens to reveal a replica of the V8 engine; the radiator grille is modeled using a photo-etched piece of metal. The cabin door opens showing the multi-coloured, lavish interior with its

many printed-on gauges. The flush fitted windows have been inserted from the outside and look first class! That impression is helped along with the painted-on, black window gaskets and the window wipers. Many separately-added parts including metal hand holds, ladders and a real working-scale rear view mirror complete the driving units of the scrapers. The flood lights on the D9L are modeled better than the other, but that is nit picking.

The gooseneck must have been the most elaborate piece to make. Not only must the two guide cylinders be shown but also the many supply lines. In addition, moving parts must be made exactly to pull this off. CCM has even modeled the “Cushion Hitch” with the vertically-aligned hydraulic cylinder and the Parallelogram Kinematic being fully functional! It is equal to a springing action for smoother drives.

It is possible to position the scraper bin in all prototypical ways. This is achieved with the nicely modeled hydraulic cylinders and the exact replica of the expulsion mechanism on the apron. The bucket of the 637E is equipped with an overflow protection fence to protect the rear engine.

The rear of the 631E has been modeled just as rather plain prototype but it is finely detailed. On the 637E the mock-up of the rear engine is visible from all four sides as on the original. It goes without saying that the radiator screen is a photo etching. The hitch with a radiator protection fence for the pull-push operation is very noticeable. Exhaust pipe, air intakes, fuel lines, rear lights and metal hand rails complete the rear engine. The paint job and the finish are faultless. The lettering is sharp, legible and complete. Some of the very small warning labels have been a bit simplified, a fact that is barely possible to spot with the naked eye.

Caterpillar D9L

Even today, the D9L is the largest dozer of the D9s. When the D11N was developed from the D10 the D9N was created the D8L. The D9L appeared in 1980 on earth removal construction sites. It is equipped with a Cat 3412 V12 Turbo Diesel and is capable of delivering 460 hp; this engine was also built into the D10N after 1987. Since the engineers could not foresee how the customers would accept the new Delta propulsion system, the D9H was offered alongside for a few years, but Caterpillar was on the right track with the Delta system.

The D9L from CCM

The D9L is offered in two versions: the 750 series is equipped with a 9U blade, Impact Ripper and cabin, and the 500 with push blade, push block and roll-over protection. Both undercarriages have an oscillating axle as on the prototype. The drive wheels are exactly engraved and the

guide wheels are plain, just like on the original. The only diversion from the original measurements is that the rear drive wheel is mounted 2 mm too far back. This causes the tracks to be guided up the back part of the sides a bit too steeply. The front guide wheel together with the first two running wheels are contained in a frame and, as per the original, used as suspension and to keep the track tightened. Unfortunately, the guiding system for the tracks is not precise resulting in the tracks having a tendency to be pulled inwards or outwards by 1 mm at the front. The running wheels are modeled as on the original, however they are not mounted in pairs and do not oscillate. The track joints can be counted and all 47 are present, correct to the original. To get a really low centre of gravity, the engineers designed the V12 engine to be built in so low that when the engine room door opens almost only the air filter and an exhaust pipe elbow are visible; this is seen as an impressive detail on the model. The radiator grill is a photo- etching. The flood lights are made from a clear plastic casting on which the rear has been painted silver thus making them look very realistic. The cabin has the same level of detailing as on the scrapers, so we do not need to repeat it here. A fire extinguisher is mounted on the massive roll-over protection cage that both versions have.

Equipment

Both the 9U and the pushing blade are made from some precise cast and engraved metal parts. The movable earth moving blade has no equal in a model. The pushing blade developed especially to make it possible to push scrapers can be lifted and lowered as on the original but is not sprung. So that the Push Dozer can also be used in a pair configuration it has a sprung push block mounted at the rear, similar to the ones on the scrapers.

An attention-getting innovation in the 80s was the Impact Ripper offered for large dozers. A hydraulic hammer hit a bolt on the moveable mounted ripping attachment. In theory this would increase the power of that implement by 250% when working on rocky ground. In practice, the vibrations of the hammer were transmitted to the dozer reducing the life-span of the machine in such a way that the Impact ripper disappeared quickly from the optional attachment offerings. As an exactly functional (!) model, the tool gets it fully deserved recognition. A detailed hydraulic cylinder with flexible hydraulic lines as well as the hammer housing with further supply lines and the whole of the parallel kinematic works fulfill all wishes as far as detailing is concerned. Colouring and finish are as on the scraper models.

In conclusion: CCM has been successful in achieving the same quality as their earlier D10 and 992C models and have surpassed these in some points. A combination of both models is the D9L with trailing scraper. These we will document in the next issue.

The models at a glance

- + True to scale
- + Detailing
- + Functionality
- + High metal content
- Driving wheel on the D9L is mounted too far back

Tinplate

Haking front shovel

by Robert Bretscher

This front scooping excavator with a fixed lattice jib from the 40s introduced here, was built by Haking from old tin pieces after the war. Even though not much is known about this maker from Germany and its models, we do know that for the time, it was able to produce an extraordinary, technically-advanced excavator model using only very basic tools.

The model has seven different pressing and pulling springs, two rope dolly wheels and only one crank. Haking succeeded in producing a realistic, easy-to-operate excavator model which was able to reproduce all the functions of the real, rope-controlled excavators of the period in play mode. For the operation of the shovel, there was a pulling chain attached to the rear wall of the cabin. When the pull chain was released, it closed automatically due to a built-in spring in

The 1948 front shovel excavator from Haking had only one crank but it could be operated like the original ...

the shovel. The very simple lower carriage is equipped with four tin plate wheels with two black rubber tracks fitted on. This unit is connected to the upper carriage with a riveted bolt. It is hard to believe that the over 70-year-old rubber tracks are still the original ones and are in perfect condition. With the detachable roof removed we have a clear view of the cleverly engineered single crank system that is supported with various springs. We also note that the maker has added a metal plate as a counterweight. Other than that, there is no interior detail such as a driver or driver's seat to be seen. The windows have been die cut with the simplest of tools. The edges and corners are not very well cleaned

up and hardly any flash was removed. When looking at the cabin in detail, one sees right away that the windows and access openings are not in line and on top of that, some of them have been die cut crookedly. But it is these small discrepancies and hand-made mistakes that make these models from long ago so charming and unique. Also, one does not know under what kind of condition these models were made. It is very well possible that such toys were made in back yard or basement shops with limited lighting. On the same basis as the front shovel excavator, Haking also offered a rope-controlled excavator with clam shell bucket. Such beautiful and fully functional models are hard to find today.

Eye Candy

Wabco 3200

by Albert Schmid

It was the competing Unit Rig which won the 1968 race in the 200 sht loading capacity category with the Lectra Haul M200. The 200 US short ton (sht) equivalent is 181.4 metric tons.

The engineers of Wabco (Westinghouse Air Brake Company) of Peoria, Illinois, choose a three-axle construction as a base. The unit introduced in 1972 was a 148.6 t heavy colossus that drove on 10 tires and had a diesel-electric propulsion system. As a power plant, it had a 12 cylinder EMD 12-645-E4 engine throttled down to 1800 hp with a displacement of 128 litres. The locomotive engine including generator and wheel hub motors, now running at only 900 U/min, was delivered by the General Motors Electro Motive Division. Fully loaded, and so up to 330 t, it was possible for the machine to cruise at 48 km/h. For a high degree of stability, especially in curves, the

The Wabco 3200 rigid frame dump truck crossed the finish line in the race of the 200 sht segment of the market as only “second best” ...

patented suspension of the tandem axle assembly gave good results. Using pressurized reservoirs with a mix of oil and nitrogen in the cylinders, it was possible to distribute the weight exactly over both rear axles. In 1975 the re-engineered Wabco 3200B with maximized pay load was introduced. A total of 48 units of those two versions were built with Australia taking the mammoth share of 22 units. The 3200B was in the sales line-up until the 80s.

Announced in 2000 and so new in the sales program of A.T.M. (Art, Technique et Machines), the Wabco 3200 was produced again, this time in 1:50 scale with the production designation of N 70. Because

of the involvement of Francis Pierre, a very highly detailed model with a steerable front axle appeared. The two four-step dumping cylinders are made from brass but because they are not able to hold the dumping bin by themselves, an additional leveling bolt takes over that function. The model has very delicate railings, mounting ladders and an opening door to the driver's cabin. The rear view mirrors are adjustable and round off the impressive appearance of the model.

By the way, this phase in the dump truck construction race for the highest capacity load, which began in the 60s, would later be coined the age of the “Gigant Haulers”!

Wirtgen 4200SM from NZG in 1:50 scale

One for all

by Daniel Wietlisbach

Oberflächen Bergbaumaschine is the somewhat cumbersome translation in German from the English Surface Miner. The 4200SM looks like a surface cold milling machine and, on principle, works like one. The machine's versatility is praised in the Wirtgen's sales brochure, since it combines a plethora of different jobs in the mining industry. It can drill, blast, load and pre-crush mined material. The 4200SM is offered in two different versions, one for middle-hard and one for soft rock. The difference between the two is in the diameter of the cutting cylinder drum of 1500 mm and 1860 mm. After the Surface Miner mines the material it pre-crushes it and then it is taken to a conveyor belt that can be swung out to either side and so loaded into a dump truck driving beside the machine. With the optional 16 m conveyor belt (Standard is 12 m) the 4200SM is designed for dump trucks of the 220 t class. The working weight of the machine is noted to be 210 t in the prospectus and the propulsion system, using a Cummins V16 engine, produces 1600hp/ 1194 KW. With only one person operating the machine, up to 3000 t of material can be mined per hour.

The 4200SM Surface Miner from Wirtgen is a very impressive machine. NZG has produced a lavishly detailed model of it ...

The model from NZG

The model from NZG is true to scale in all major measurements. It is made mostly from metal parts. The four identical drive units are modeled with much attention to detail. The track segments are all metal but, unfortunately, they cannot be turned because the guide wheels, used as springs, keep them much too tight. As on the original, all of the drive units are height-adjustable, the hydraulic cylinders responsible for this action can be fixed in two pre-set positions by inserting a bolt. Understandably, the delicate cylinders could not cope with the whole weight of the model. The finely detailed, movable cutting cylinder has a diameter

of (when transposed to the prototype) of 1500 mm, which makes it a machine designed for the medium hard rock mining. As on the original, the two doors on the left side open allowing glances onto the belt drive of the cutting cylinder. The engine is visible also, as it has been built crosswise in the machine. It is visible from above thru the photo-etched grates. Only the grille on the large, white door has not been modeled as pierced. The material is transported along the 16m long conveyor belt. This path has been modeled as per prototype and is very visible on the model. The conveyor belts are made from a flexible rubber product with a profile and run on the upper side, like per original, to an open bottom hopper. The expelling conveyor can be swivelled prototypically 90° to both sides and the very delicate height adjuster is also fully functional as is the kinematic for the retractable counterweight mechanism. This makes it possible for the machine to operate at the edge of the mining pit, however,

The model at a glance

- + True to scale
- + Functionality
- + High metal content

for security reasons, the conveyor can than only be swiveled 45° to both sides.

The upper deck is further enhanced with many countless details like running boards, fine handrails, air filters, exhausts and other auxiliary machine clusters.

The driver reaches his working place with a foldable set of stairs;

this feature has been included on the model. The fully glassed-in cabin is very fine and can be turned in both directions by about 40° (original 45°). The window separations are only printed on but the window wipers, hand rails and flood lights are individually-applied parts that come very close to the original ones.

Over all it can be said that the model is covered almost everywhere with hundreds of steering and supply lines. NZG has found a good compromise in detailing that being functionality and affordability of the model. Thanks to the long conveyor belt, large dump trucks can be placed beside the model. This makes it even more attractive.

Casagrande B360XP from Ros in 1:50 scale

Misprint

by Daniel Wietlisbach

The Casagrande B360XP mobile large drill attachment can lower piles without metal covering of up to a diameter of 3000 mm to a depth of 89.4 m. As is customary for specialized machines used in civic engineering projects, this machine can be configured for different requirements. It can also be used for the installation of diaphragm or slurry walls. The roughly 100 t unit is driven by a Caterpillar C15 Acert TA engine, producing 403kW, and is compliant with today's emission control regulations.

Many have been waiting with baited breath for the new models of Casagrande. A B360XP model was made available to us to have a closer look ...

B360XP in 1:50 scale

The same model is offered by Ros as a B300XP, but is this possible? The main difference between the two versions differs by 10 t. It is possible because the measurements of the upper carriage are identical, and it is not possible because the

lower carriage and the equipment is different for each of the variations. When checking the measurements and comparing them to the prototype, the fact emerges that the measurements are close to the smaller machine. The lower carriage can be telescoped, as per original, and is very stable, even when fully

extended. The frames with the 12 running wheels are a single, nicely engraved casting; the driving and guide wheels, as well as the three support dolly wheels, rotate. The tracks, made of 51 single segments, have three-part plates but turning them is difficult because the springing is very strong.

Upper carriage

The upper carriage looks very chunky and has a large overhang at the rear. It is made almost exclusively from metal and the engraved details are very nicely done. Especially worth mentioning are the individual air intake screens painted black that support the nicely detailed look. Separately mounted parts include the air filter screens and exhaust pipe, a ladder on the right hand side of the model as well as spot lights, a rear view camera and the Casagrande logo on the rear. The photo-etched heat protection shield on the exhaust pipe is a special treat. The two winches are amply supplied with scale cable and can be operated with a key that is hidden in a compartment at the side. The rear winch holds and stabilizes the Kelly bar at any desired height. The front winch is necessa-

ry to operate the Kelly Diaphragm wall grappler, however when using the Kelly Bar drill, it is not used. Especially nicely executed in model form is the cabin of the machine. Flush mounted windows, etched protection grates, individually mounted window wipers, rear view mirrors, construction site spot lights, an all-around light and, of course, the functioning sliding door leave no wishes unfulfilled. Naturally, the multi-colored interior is minutely detailed.

Equipment

The mast is an exactly engraved cast metal part and has a length, in the original, of 21.5 m. It is kept stable by the cylinders in any desired position up to the maximum height (for the B300) of a scale 24.5 m; however on the B360 it would have to be 26.8 m! The key-

operated winch that controls the feed rate is mounted on the lower third of the mast. For this action, the lateral aperture that contains the winch can be tilted forwards. On the tip of the mast, an auxiliary winch is simulated. Unfortunately, the cable is too short to hold the hook in the latch designed for it. The latch has been modeled as on the original. Many supply and hydraulic lines connect the mast with the turning mechanism. This and the Kelly Bar are made from an injected plastic casting and are true to the prototype however, the bucket auger with a diameter of 1500 mm is a metal casting. As per original, the twin cutter bottom opens to discharge any spoil.

The paint has been applied cleanly and covers the model well. The many warning and security notifications have been applied neatly and are legible. In addition to the original paint scheme, the models are available painted in a blue/yellow combination.

In conclusion, it can be said that with the model of the Casagrande B300XP, Ros has constructed an excellent model. However, the lettering variation for the B360XP was not necessary as that model would have been significantly larger.

The model at a glance

- + Detailing
- + Functionality
- + High metal content
- The measurements are for the much smaller B300XP

New Holland W300C from Motorart in 1:50

Functional

by Daniel Wietlisbach

The W300C is the largest of the seven New Holland loaders available. As the designation hints at, the loader competes in the 30 t class with a working weight of 27 t. The shovel capacity is around 5 m³ and the six cylinder F2C-FE614B turbo engine from Fiat Industrial produces 347 hp (259kW) and conforms to the stage IIIB and tier 4 interim exhaust protocols.

The model from Motorart

Since Sweden did deliver quite a few Volvo models during the year, the New Holland models had to wait till year's end. But in comparison, the model of the W300C has some features that were missing on the earlier wheeled loaders from Motorart. Firstly, the model has full functionality! But let's start, as usual with a comparison of the model measurements against the original, a test that the model passes very well. What jumps out when comparing the model with pictures of the prototype is that the front fenders are mounted crookedly and too far back. The wheels are exactly engraved and the somewhat narrow tires have the original profiles. The oscillating rear axle and the rigid front axle assemblies are very detailed making the model a good looker even when the lifting mechanism is up at the front. The very beefy rear

Shortly before year's end, we received four new New Holland machine models from Motorart. The wheeled loader W300C was among them ...

section of the model is made mostly from metal castings. The very delicate looking air intake grilles are modeled as dark grey surfaces. The engine hood opens showing off the "Cooling Box" that is responsible for an effective engine cooling system. The cabin can be reached from both sides by a fine ladder that has very delicate steps and thin wire hand railings. The knobbed surface running boards are protected with a metal safety railing. All windows are mounted very flush and even with the cabin surface giving an excellent effect. More wire hand grips, a rear view mirror and plastic window wipers are separately attached. The two-color interior furnishings of the cabin are visible. The articulated joint has been modeled with the cylinders but without the supply lines. The 40° turning radius of the joint is

almost possible on the model. The frame of the front part of the model, except the afore-mentioned fenders, is as per prototype. The very thin metal of the lifting arms and the Z-kinematic makes them look especially realistic. The high degree of functionality of the lifting mechanism deserves mention as it makes it possible to reach the maximum lifting height as well as the full degree of discharge with bravado. Additionally, it is possible to stow the shovel with the lifting mechanism lowered, so the model can be shown in all its prototypical 'at work' settings. The hydraulic cylinders are shown without any screw connections; the hydraulic lines of the lifting cylinder, on the other hand, are modeled. The shovel, including the new top teeth is modelled as one complete die-cast piece. The metal spot lights mounted single on each side are "glassed in". A little dab of orange color on the indicator lights would be nice.

The paint has been applied cleanly with good colour separations. The lettering is crisp and very legible; these are restricted to the New Holland Logo and the machine type.

The model at a glance

- + Functionality
- + Detailing
- + High metal content
- Front fenders mounted incorrectly

Fassi F1300 and Palfinger PK 65002 from WSI

Loading crane news

by Carsten Bengs

The measurements of the models are correct. For example, the reach of the arm of 39 cm is 19.6 m on the Fassi prototype. The most eye-catching features are the realistic proportions of the models. The telescoping arms are not made from plastic and a closer look at them reveals a wafer-thin cross section that makes it look so realistic.

The support struts are made completely from metal castings. On the F1300 there are three supports and on the Palfinger there are two supports that stabilize the models. During the road transport of the cranes, the supports can be folded upwards to save space. Small bolts secure the supports during transport mode. The threads, of course, are on the inside and are invisible and the supporting discs are very nicely done, true to the WSI high detail standards, with little crane mattresses including hand grips. On the Fassi crane there are even hand grips on the supporting discs.

Out rigger arms

The Fassi model feels solid and almost chunky. After all the prototype is able to lift up to 22 t. The two hydraulic oil tanks, capacity of 260 l on the original, are easily re-

WSI presents two highly detailed loading cranes: the Fassi F1300 and the Palfinger PK 65002, two models that are guaranteed to excite collectors ...

cognizable. Small hydraulic lines run from the tanks up to the turning mechanism and even the mechanism itself has a small hydraulic line. An additional cooling aggregate is hinted at. The PK65002 also has an oil tank, including auxiliary cooling tank, but the lines have not been modeled. The massive arm of the F1300 is controlled by two hydraulic cylinders; these are heavy enough to support the arm in any position, even when fully extended. With its 8 telescoping segments, the model reaches the aforementioned 39 cm. The PK65002 has a reach of 30 cm, using 6 hydraulic cylinders. Here also the cylinders are able to

hold the arm in any desired position and do not have any give. The telescoping cylinders on both models are made completely from metal; this is one of the reasons why, after assembling the model, the weight of the outrigger arm is so great. When all segments of the arms are telescoped out, the correct proportions of the segments are easily recognizable. On the Fassi crane, an additional jib that has a further three telescoping pieces is included. With this it is possible to extend the reach of the model to 50 cm. On the prototype that would correspond to 25 m, where the maximum load capacity is still a very impressive 1.7 t. The prototype can be equipped with an optional rope winch; this is only hinted at on the model. On both models the fascination is with the realistically operating kinematic that it is fully functioning in miniature.

The model at a glance

- + Proportions of telescoping segments
- + Kinematic of out rigger arm
- + Detailing
- Rope winch on Fassi F1300 only hinted at

Equipment

Directly beside the support struts on the PK65002 is a control desk for

the stationary operation of the crane, on the prototype this would most likely be done by remote control. Just above the tiny levers are tiny printed-on instruction signs.

The lettering on the models by WSI is also perfect. Warning labels are on all telescoping segments of the support system on the Fassi F1300. On the PK65002 the front supports show a small load bearing diagram in 1:50 scale, almost

impossible to read, but it scores in the true-to detail-department. The decals on the rear for the highlights are printed on and recognizable. For example, the first yellow symbol “KTL” for (kathodische Tauchlackierung) cathodic dip coating-to achieve a long lasting surface protection coating. On the Fassi F1300 there are also detailed lettering and warning labels, for example, at the hydraulic tank where detailed operation instructions are printed on just before the platform.

WSI has set new high standards with the models of the F1300 and PK65002. Future models should take notice. The realistic cross-sections of the telescoping arms are very impressive. And with all that, the functionality of the models has been maintained all the while keeping up the high degree expected from the maker.

WSI has set new high standards with the models of the F1300 and PK65002. Future models should take notice. The realistic cross-sections of the telescoping arms are very impressive. And with all that, the functionality of the models has been maintained all the while keeping up the high degree expected from the maker.

Translation of page 30

Specialized trailers from HiMoBo in 1:50 scale

Trailer heaven

by Daniel Wietlisbach

Many have waited a long time for these special trailer models, one a concrete element transporter trailer and the other a tar “cooker” trailer, both of which will complement the numerous tractor truck models available from many well-known manufacturers.

Both models are metal castings and accordingly, are quite heavy. Each is equipped with the same kind of rubber-tired wheels. The axles of the tar “cooker” oscillate. Unfortunately, due to the construction of the concrete element flatbed trailer, its single axle is not height

HiMoBo responds to demand and closes a market gap with its two new trailer models ...

adjustable. Kingpins are included with the models so that the modeler may attach the trailers to tractor trucks from NZG, Conrad, WSI or Tekno. The three-axle flat deck is loosely based on a prototype from Langendorf and is offered without the floor pallet and the six load supports. The missing parts are available in a separate set and so it is possible to simulate both an empty load and one with loaded concrete elements prototypically.

The tar “cooker”, with a holding capacity of 11 m³, looks like a RGTK 11.000 made by the firm of Grün. The actual tank is wrapped with a chrome foil, which makes it closely resemble the original. A number of power units as well as the engine that powers the mixing arm are all arranged on the front part of the trailer. Handrails and ladder are made from milled aluminium. The armatures, number plates and rear lights are simulated with applied stickers.

Faun HZ 70.80/50W 8x8 from FanKit in 1:87

A power house

by Michael Compensis

The small series maker, FanKit, offers r-t-r Resin models in both 1:50 and 1:87 scales. Their offerings concentrate on historical construction machines. Recently they released three heavy-duty models of the chunky Faun trucks from the 70s and 80s: the yellow tractor unit HZ46.40/49 8x8, the sand coloured HZ40.45/45 6x6 for desert use, and the red HZ 70.80/50W 8x8. It is the latter machine that we want to introduce here as they are all similar in detail. Only two units of the prototype for the gigantic FAUN HZ 70.80/50W 1988 were built. Beneath the hood hides a V16 Detroit-Diesel, type 71 TA that produces 812 hp at 2400 rev/min. giving a towing capacity of 500 t. The tractor measures 2.8 m in width, 3.8 m in height and 10.62 m in length. The working weight of the unit is 70 t.

Patience is a requirement when ordering a model from FanKit in Romania because delivery takes a few weeks. But the long wait is rewarded with a highly-detailed, handmade model ...

Many small, fine detail parts such as hand rails, side markers and the exhaust system adorn the very cleanly built resin model. The satin gloss finish is very neatly applied. However, the resin surface does show on some spots clearly indicating that this is a limited series model. The castings, for example the radiator grille and the safety thread at the rear wheel covers, are very convincing. Sharp, legible decals provide the lettering on the hood and truck bed. Only the logo of the maker was applied, no lettering for the firm employing the truck. When checking the measurements with a set of calipers we found that the entire model is to scale, and

the proportions of the model are in order. The finely detailed rims are as per original but are cast in one piece with the tires. On the plus side, they are very cleanly painted in two colours. When comparing the model with the prototype, one notices that on the front hand rail, the cross bars are missing and also the exhaust system does not continue to the engine; two details that are missing, surprisingly, with this level of detailing. Despite this, the model has been detailed to a degree that is only a dream for large series models; the asking price for it is therefore justified.

(These models can be ordered directly at: www.fankitmodels.com)

Remo's old Iron



Here you can challenge your expertise. Recognize the machine and win a model ...

by Remo Stoll

In the past they were very popular with small construction companies. Today, they are found mainly on farms. Not this machine however, as it still performs some valuable services around the compound of this tiny construction company; sometimes it can even be found on construction sites. The machine is rusted in many places but is still road worthy.

Recognized? Then send us the exact manufacturer's name and model number on a post card by mail. Of course, we also accept email submissions (contact information is on page 42). The contest ends 15th February, 2014. We will hold a draw if there be more correct answers than prizes.

This time the winners will receive one of the following prizes: a Wirtgen W250i cold milling machine "Kutter" from NZG, a MAN TGS with Palfinger PK100002 truck crane and extendable low boy trailer "Prangl" from Conrad, and a New Holland E215C tracked excavator from Motorart.

Solution from BAGGERMODELLE 6-2013

The Japanese excavator in question is a Komatsu PC300LC-3. Again, a draw decided the winners from among the many correct entries. The winners are Franz-Jakob Kolbeck from Furth im Wald, Germany who won the Tadano Faun ATF 70G-4 "Mammoet" from WSI, Tino Wilde from Crimmitschau, Germany, whose prize is the Wirtgen WR 240 Cold Recycler and surface stabilizer from NZG, and Christian Kertscher from Hartmannsdorf, Germany who won the Caterpillar PM200 Cold Milling Machine from Norscot.

Our heartfelt congratulations to all winners!

Modifying a Liebherr R 914B FS

Small shovel

by Urs Peyer

The idea behind this modification comes from the DVD “Massive Earthmoving Machines Part 4 – Mountain Movers” (www.oldpond.com). The film shows a Liebherr R 900 and an R 924 with front shovel and tipping shovel at work in a talcum quarry in the French part of the Pyrenees. The dimensions of the outrigger were taken from a static picture directly from the film.

Dismantling

The under carriage of the base model has to be taken off by unscrewing the upper part. The two press fit connections and the two pins are carefully removed with a pin puncher, using alternating left and right strikes until the upper carriage separates into bottom cover and engine housing pieces. The glued-on cabin can be loosened by careful sideways pressure, if the screw holding the interior has been removed beforehand. The rivet on the outrigger foot has to be drilled out and removed using the pin punch tool. The rivets on the two lifting cylinders can be replaced using appropriate metal rod (\varnothing 1.6 mm). All cylinders on the arm have to be dismantled. On the Atlas excavator the front shovel has to be taken off including the redirection

When we talk about front shovel excavators we quickly think about the huge machines employed in the surface mining industry. But there are smaller examples, as the article that follows shows how to modify a smaller excavator ...

rods (see picture 4). From the four plate holders, the outer and the smaller one have to cut off with a jewelers saw and sanded smooth. (see picture 5).

Building the new outrigger arm

The foot piece of the adjustable outrigger arm from Refo-Tech is now added with the included milling pieces and the round stock (optional a tube with \varnothing of 3.2 mm) for the cylinder footings. (See pictures 2 and 5). The new arm has a total length of 72 mm, its width at the front is 9.5 mm and at the rear 7.5 mm wide and the maximum height is 17 mm. It is made from two 1 mm pieces of ABS plastic sheet. The two pieces are cut out according to drawing made from the frozen picture from the DVD and drilled out while holding both pieces together so that the holes match exactly. The foremost and rear-most holes have a \varnothing of 2 mm, the three remaining ones have a \varnothing of 1.6 mm. The space between the pieces is filled with 4.8

mm wide ABS strip stock. Before that, the openings for the cylinders and the space for the re-directing rods have to be drawn on the inside of the 1 mm ABS sheet stock and kept free from obstructions. On the tip of the arm a piece of \varnothing 0.5 mm round strip stock is glued on. After gluing on the second 1 mm thick piece the strip stock pieces that protrude now need to be trimmed back flush and every seam has to be sanded smooth. The arm, in the place the re-direction rods will go, has to be extended using pieces from a 1 mm thick ABS sheet. (see picture 1). Since the distance between the two plate-holders on the tipping shovel is too large, a filler piece between the arm and shovel is needed. This is made using again two pieces of 1 mm ABS stock and a piece of 3.2 x 10 mm strip stock between the two 1 mm sheet pieces. (Picture 3). The two lifting cylinders can be used as is; arm and shovel cylinders have to be shortened according to the measurements given in the box below. The more-or-less triangular piece between

the re-directing mechanism and the tipping shovel has to be reduced in thickness by 3 mm. This is best done by milling the material off on both sides of the piece (picture 5). Both halves of the re-directing mechanism are glued together before spray painting. Attention: When re-assembling the mechanism, make sure it is assembled the right way around (picture 5).

Cabin

The stone chip protection fence is glued to the cabin with two component epoxy glue and both then are spray painted together. Because of a small notch on the wider side the interior is exchangeable between the R 914B and R 916.

List of materials used

Basis model	Liebherr R914 (Conrad 2838) or Liebherr R 916 (NZG 685)
Lower carriage	from Liebherr R 916 (NZG 685)
Stone chip protection fence	Jan Hildebrand (www.janhildebrand.de)
Articulated arm	Foot set for Liebherr R 916 articulated arm (www.refo-tech.de)
Sheet stock	ABS 1 mm
Strip stock	ABS 1.0 x 4.8, 2.0 x 4.8 and 3.2 x 10 mm
Round strip stock	ABS ø 0.5 mm
Metal tubing	Aluminium or Brass of ø 1.6 and 2.0 mm
Cylinder	Lifting cylinder 32 mm, arm cylinder 27 mm, shovel cylinder 23 mm

A scrap yard as a diorama part 1

Transshipment point

by Markus Lindner

The separating walls of the scrap bins have already been covered; now comes the material necessary to fill them. In one bin we put cable remnants using a selection of the smallest pieces of insulated wires, from old computers and similar electronic devices. The wires are preformed into coils. Black wiring mimics rubber-covered wiring while grey is ideal for the industrial wiring waste of PVC-clad, four-string wiring. These are heaped together and attached with ACC. In the nearby compartments are aluminium scraps made of silver decorative sand from a craft shop. To fix this in place we use a technique that is especially well suited for the display of materials like gravel, sand, ballast or construction spoil. First, heap up the material in question as realistically as possible. Then, using a paint brush shape it into the final form. In the next step, carefully mist the heap with a white primer mixed with a dash of dish detergent and water.

Deep primer or first primer is a paint product made from alkaline or acryl base for interior decorating, applied as a base coat. For us, in thinned down form, it makes for a perfect binder because it dries without leaving a distracting shine. The addition of dish detergent “sof-

In the last issue we talked in detail about, among other things, the construction of the hall and the scrap heaps. In this installment we look at further detailing and the exterior lighting ...

tens” the water in the mix and makes it flow more easily. This kind of primer is available in any hardware or home improvement store.

Wrecked car under a tarp

The compartment on the very left is designed to attract the viewer’s attention as it contains the wrecked remains of a car. In my scrap box I found a damaged model of the Düsseldorfer Transporter from Mercedes Benz (a Conrad Model). To separate the floor from the upper part seemed to be unrealistic, so I put the rear up on wooden blocks created from balsa wood. Then I covered two-thirds with a tarp that I made using common household aluminium foil which I folded as realistically as possible. I spray-painted the tarp using a spray can of primer from the car repair section of the automotive store. The aging was done with paint pigments in black, brown and also green shades. As a last detail, two old car tires (important detail: the

running surfaces have to be worn down) that are suitably aged with earth tones are used to keep the tarp from flying away.

Alternative to rust

An alternative method of achieving a realistic rust patina is the process commonly known as “sweet and sour” method. To start off we need some fine iron powder like filings or sawing waste, steel wool, as long it has not been treated to be rust proof. The finer the particles the better to make the mix. This mixture is now put into a glass jar and vinegar is added. In a few days the acid in the mix transforms the iron filings or steel wool into rust. The resulting rust liquid can now be applied with a brush where desired. If one mixes the fine pieces with slightly larger waste from drilling or grinding metal, the result is some very realistic iron pieces perfectly suited for modeling scrap heaps or scrap loads for trucks.

Office interior detailing.

In the last installment we showed how to build the office room inside the scrap yard hall. The large scale of 1:50 is ideally suited when it comes to furnishing with the necessary details to make it look great. The furniture required can be sourced from architectural model firms, for example: www.schulzc.de from whom the chairs used here came; other items can be adapted or used as is from the O scale model railroad sector. Tables, cupboards and shelving can be scratch-built quite quickly from thin plywood, balsa or Polystyrol. Many of the small details like the newspaper left on the table, the backs of the binders on the shelving unit or maps and the calendar on the wall can be made using drawings or pictures in a graphic program, reduced to the appropriate scale and quickly printed on your home printer. Wall paper, carpet or other floor coverings

are also made reasonably easily. A great source for many suitable textures can be found at www.cgtextures.com.

Lighting

Seldom are lit-up dioramas found in the construction machine modeling sector. Among model railroaders it is more common to light buildings and streets with lamps. This is easy as the transformer used for their trains is equipped with a secondary hook-up (usually 16 V AC) for this purpose. The interior lights for buildings are generally made by using miniature light bulbs and fittings (more recently LED modules). To prevent light from shining through the walls of the buildings, they are lined with black paper leaving only the windows openings free. Streets and squares are lit using the many mo-

del lights available. Even here, the new LED technology has started to make inroads. These details are available for O scale (1:43.5, 1:45 and 1:48) and in the meantime, some interesting lights have appeared in 1:50 scale (Brawa, Viessman, Beli-Beco).

Many HO lamps (1:87) are too big, when the lamp housings are considered. They would look better in 1:50 scale (not taking in consideration the post that is too short). In this model the industrial wall-mounted lights (Viessmann #60892) were used here to light up the yard. The hook-up wire for them runs on the inside of the hall construction along the metal girders and is routed, well hidden, down to the ground and, passing through a drilled hole, leads under the diorama. A model train transformer to power the lights can be found for little money at a train show or on eBay.

New Media

Schwertransporte Folge 2

by Norbert Neuschwander, published by Verlag Podszun, DVD with two films of 30 Min length each. German commentary, ISBN 9783861336518

“Gasifire für Südafrika” (Gasifire for South Africa) shows a transport over snowed-in streets. The 170 t heavy container is transported with a Scheuerle telescoping low deck trailer on 20 axle sets pulled by a MAN TGX XXL 8x4 belonging to the firm of W. Mayer. Pushing support on the rear of the combination was a Mercedes Benz 6x6 from Aug. Alborn. Half of the film shows the loading and tandem lifting of the unit with two Liebherr cranes belonging to the firm of Steil. In “Neuer Portal-kran für die Dillinger Hütte” (New Gantry Crane for the Dillinger Hütte Smelter) a Liebherr LTM 1500-8.1 from Steil plays the main role. Following that, a disassembled gantry crane is shown in transport to its new owners, the Dillinger Hütte Smelter by TAS Logistik taking up the last third of the film. (wie)

Road building Construction Equipment at Work

by Edgar A. Browning, 142 pages, mostly black and white pictures, some colour pictures, English language book, soft bound, ISBN 978-0-578-12826-9

Two years ago Edward Browning published the first book in this series. Now the fourth volume has just hit the market. It details the construction of the Interstate Highway in Virginia between 1930 and 1975. The star of the book for sure is the Caterpillar DD9G Quad Trac working for Oman Construction. Several pictures show the 770 hp strong bulldozer at work on Interstate 64 in July of 1968. Five million cubic metres of earth had to be moved for this part of the contract. Michigan 380 wheeled dozer and 310 Scraper also helped in this gigantic undertaking. Not missing, of course, were the Marion 111-M and Northwest 80-D cable excavators. This book will be popular for lovers of old construction machines. (up)

Jahrbuch Baumaschinen 2014

by Heinz-Herbert Cohrs, Jürgen Flemming, Thomas Wilk and many more, issued by Verlag Podszun, 144 pages, about 280 pictures, soft cover, measuring 24 x 17 cm, ISBN 978-3-86133-698-3

A classic among year-books. For the 13th year the publishing house of Podszun offers this eclectic mix of stories. The items about the Atlas hydraulic excavators and the Caterpillar tracked loader owned by our own author Thomas Wilk are historically interesting. Wilk poses a provocative question: “Are tracked loaders a dying construction machine species or are they uniquely suited, specialized machines for specific requirements on construction sites?”

For those who think that bigger is better there is an article introducing the “Aitik”, one of the largest copper mines in Europe, situated in Sweden. At the mine, some of the largest machines on the continent are in use. (dw)

Excavator stencil book

Published by Verlag Usborne, 16 pages, cardboard, tracing stencils are removable, 28 x 22 cm, ISBN 978-1-78232-026-5

Did you ever have to draw an excavator for your kids? That is not so easy, even though one really should know what an excavator looks like! This children’s book contains pre-cut stencils for construction machines from “A” like Abbruchbagger (demolition excavator) to “T” Teilschnittfräse (1 sectional cutting machine). This makes drawing such machines a snap. It is not for children only. (dw)

Our partner page

Excavating work in the Bärlocher quarry

Permission was received in October of 2013 to construct a small disposal site near the quarry. About 22000 m³ of spoil and top soil were removed from the quarry and deposited in the new disposal site, about 500 m away. Since

we did not have enough machines ourselves, we had to rent two dumpers, a Cat 730 and Cat 725 from Avesco. The management of the deposits in the new fill site was farmed out to the company of Gerschwiler from Goldach. Using

a Hitachi Zaxis 280 and a Cat 953, 1800-2000 m³ of material were distributed at the fill site. The use of these machines was all co-ordinated so that no waiting times at either site occurred.

The rescue salvage of the Caterpillar D9D bulldozers

Several old construction machines were stored in an abandoned quarry situated in the hinterland of the canton Lucerne. Ruedi Eberhard rescued two Caterpillar D8 bulldozer and a 922B wheeled loader from the cutting torches. The two D9D dozers, of the 1958 or 59 model year were still on site. On one of the machines, a sticker with "Gebrüder Eberhard" is still

visible. Gebrüder Eberhard bought two used D9D in 1968. Hansruedi Eberhard and Marcel Hauser made the trip on October 31st to the quarry site. A Liebherr LTM 1130 mobile crane and two heavy duty trailer trucks accompanied them. Shortly after 10:00 a.m. the first "Eberhard-dozer" was on the loading chain. In the area of the right hand driving wheel, a willow bush

had already grown thru the cracks. The loading of the second dozer was accomplished in the afternoon. The wet ground and the tight space availability put the skills of the tractor/trailer drivers to the test. The unloading of the two dozers at Eberhard in Oberglatt took only a few minutes, using the Kalmar Reach Stacker.

News in brief

Caterpillar 770G and 722G dump trucks

The two new dump trucks augment the G series that has now five models on offer. They slot in at the lower capacity of the models on offer. The loading capacity on the 770G is 36.3 t and the larger 722G is capable of handling 11 t more in its bin. Power plants for the machines are the C15 and C18 engines respectively with an output of 356 and 410 kW. The models that are built for the European Market conform to the Exhaust protocol step IV. To reach these values, Caterpillar is betting heavily on the DEF fuel additive (similar to Ad-Blue) and the selective catalytic reduction process (SCR). (up)

Liebherr LB 44-510 giant drill attachment

The first two examples of this attachment are currently in use in Darmstadt where they are employed in the construction of a particle accelerator. The two giant drills are used to stabilize the soil by inserting re-enforced concrete pillars. With a working weight of 160 t, this new attachment expands the series of dedicated drilling rigs upwards. The drill develops a turning force of 510 kNm making a maximum 3 m diameter drilling hole possible. The maximum depth for this new drill is 92 m. (up)

Caterpillar C-Series articulated dump trucks

Just about three years have passed since the 740B model from Caterpillar appeared at the Conexpo 2011 in Las Vegas. Now the C-series has arrived at the starting position. With the 725,730 and 730EJ they jumped the queue going ahead of the B-Series, appearing directly as C-Series models. The smaller 725C has a C9.3 engine producing 234 kW. The D13 engine in the larger 730C produces 40 kW more. Both engines conform to the step IV exhaust control protocol. The carrying capacities are 23.6 and 28 t respectively. 735C and 740C are said to be available with an exhaust control step IV engine beginning in the fall of 2014. (up)

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