Russian truck ZIS – 5

ZIS – 5

In 1916 AMO company (Awtomobilnoje Moskowskoje Obszcziestwo) was created in Moscow, where based on Italian parts a few dozens of trucks FIAT 15 ter were assembled. After the industrial revolution in AMO trucks were renovated and single copies of radiators and engines were built. Soon AMO became the most important Russian engines manufacturer. The Company constructional office began to work on the first Russian truck. The new vehicles were first shown in public in 1924 to the anniversary of November Revolution. AMO F-15 was resembled to Italian FIAT 15 ter. Amo F – 15 were built in variety of versions e.g. buses, armored cars, army staff cars, ambulances, fire engines, mail vans. Continuing production of the car model the company started to design new car models.
AMO – 2 was created and in 1931 AMO – 3. In 1933 the expedition on the route Moscow – Kara-kum – Moscow was organized in order to test new cars. 4 cars AMO- 3 took place in expedition. Based on new experiences the cars were redesigned and improved. In this way ZIS – 5 was created.
ZIS – 5 became an excellent vehicle, the engine could work even with the worst fuel, and the car mechanisms were simple, durable and insensible on brutal service. The car could cope with Russian unbitten trucks. ZIS was produced in different versions: 3-axles ZIS – 6, semi trailer truck ZIS – 10, half – tracked tractors ZIS – 22, 33, 44; buses ZIS – 8, 16; fire engines ZIS – 11, versions with gas generators ZIS – 21; versions with gas cylinders ZIS – 30; version 4X4 was also available. Based on ZIS chassis were available ambulances, tanks, cranes and lots of different vehicles. During the World War II the simplified version of ZIS was produced named ZIS – 5W (wojennyj). ZIS – 5 was fundamental vehicle for the Red Army.

Technical data:
Weight – 31000 kg
Length – 6060mm
Width – 2150 mm
Wheelbase – 3810 mm
Capacity – 3000 kg
Max. Speed with charge – 60 km/h
Fuel consumption – 34l/100 km

Engine:
Carburetor 6 – cylinders, four – stroke with 5,55 l capacity max power – 73 HP, torque – 28,5 KGm, compression ratio – 4,6

The model presents a junior staff sergeant F.F. Protopopoow's vehicle with which he drove 20 000 km on front roads without any serious problems.

CKM MAXIM wz. 1910

It was the most prevalent heavy machine-guns system. Maxim was introduced to Russian Army in 1905. From 1943 it was equipment for the LWP (Polish People's Army). It was replaced only after the World War II by CKM SG wz. 43

Technical parameters:
Calibre – 7, 62 mm

Weight with base and shield – 65 kg
Weight of machine – gun – 18 kg
Length (on base) - 1375 mm
Height (on base) – 675 mm
Theoretical speed of shot - 600 pieces/min
Practical speed of shot - 300 pieces/min
Cooling – water
Feeding – cartridge belt with 250 belts.

In this copy are placed two complete sets of CKMs with bullets that can be placed on loading chest of ZIS.

Description of the construction

GENERAL REMARKS

Before gluing acquaint yourself with the general model and installation drawings. Use the method of fitting without the glue first. Check twice and then glue. Not – printed places, margins of the cutting, scratches etc, should be painted with the suitable colour. Finished model can be painted with a transparent matt varnish. Parts which should be cambered suitably or which should be tightly rolled can be easily moistened (e.g. with spit) on not – printed side and after that profiled (refers to for example the fenders and the roof). Before using this method you should practise it on parts of cardboard first. After practising you may have perfect results.

SYMBOLS

Cut
Roll tightly
Bend in half and glue
Bend in half and in the middle glue cardboard in adequate thickness.

Parts marked with a star should be glued on the bottom side with the 0, 5 mm cardboard and the parts marked with plus glued with thin paperboard. The combinations of Plus and star is also used with meaning:

*……..card brick
*……..0, 5 mm
*+……1x card brick, 1x 0,5 mm
**…….2x 0, 5 mm
***+…….1x card brick, 3x 0, 5 mm
Next to some parts the way of shaping is shown. In red are numbered places where appropriate parts should be glued.

We start the building of the model by making a frame from element 1a and 1b. we make two stringers left and right. Next, according to assembly drawings we glue crossbeams 2, 3, 4 and 5. Finished crossbeams we glue first to the firs stringer and than we glue to it the second stringer. A tow fastener with shock absorption we glue according to picture 6. Parts made from elements 6j – 6l we glue only after assembling it to the frame. The way of gluing the front crossbeam 7 was also shown on pictures. Firs we make "blocks" from elements 7a – e, finished ones we glue to the stringers at theirs front parts. Between two blocks we glue an element 7f tightly rolled on template S2. Crossbeam nr 8 we glue as shown on the picture, after that we glue it to the bottom side of the front frame. It will be used to assembly the front part of the drive unit. The front axle we glue to parts 9a and 9b after gluing them together. On their top we glue part 9c and on their bottom part 9d. Element 9e we roll tightly on template S3 but we don't glue it to the template. The wire should be easily turned in part 9e. Glue part 9e to the sides of axles and plaster it with sticking out parts of 9b. From components 9f – I we glue switches. Next we glue them at the top and bottom of template S3. (In components 9f – i openings should be drilled to match template S3, openings shouldn't be drilled straight through but to the depth needed to setting wire S3).To the sides of the switches we glue disks which are used to assembly wheels part 9j. The front hubs we are executing in the following way: First two components 10b we wind tightly on templates S4. Finished parts we glue to the component 10a, in a way that the wire is placed exactly in an axle 10a. Now, component 10c should be plastered with part 10d. Previously made part (10a+10b+S4) we are tucking to the interior part of component 10c+10d, blocking it to avoid falling out, by using disk 10e. (Disk 10a shouldn't be glued to part 10d). We finish the hub gluing to it components 10f, g, h. The finished hubs glue to part 9j. From components 11a, b, c and templates S5 and S6 glue a crosswise bar of the wheel. To the switches, in marked places, glue parts 11d and 11e. finished bar should be assembled now to component 11d, as it is shown on the pictures, and protected against its disconnecting with use of disks 11f. Glue frontal suspension springs with part 12. First, blades 12a – i should be slicked and from the top glue to it part 12j of which ends should be tightly rolled. On part 12j we glue previously lined part 12k. To the back of the spring we glue part 12l. The spring should be clipped with, made from parts 12ł and the wire S7, buckles. To the middle of the spring we glue fixings made of parts 12n, m and S8. Finished springs assembly to the front axle. From part 13 make back fixing of the spring and glue it from the inside to the frame stringers in marked places. Finished suspension should be assembled to the frame. Front parts of the springs we glue into the fixing 7 and the back of the spring assembly using part 13. The corps of the back rear axle glue with the parts 14 – c. at the back glue to the corps a case of differential made of part 14d and 14e. From parts 14f- o make the front part of rear axle and glue it to the corpse. When gluing the spring pay attention to assembly each blade. E.g. part 15h line with card brick, part 15j with 0, 5 cardboard and endings of part 15i tightly roll. Of part 15k – g make auxiliary springs. Both springs clip with buckles made of part 15d and templates S9. Next, auxiliary springs should be glued on to the main springs and both parts assembly to the rear axle by using components 16a –c and templates S10. The front attachments of the springs should be made of parts 16d – i and then we glue it to the frame. Back attachments make of components 16j – l and glue it to the back parts of the springs. Glue slippers of auxiliary springs of components 17a – d and then glue it to the frame. Front parts of the main springs should be glued to the fixing and than the back parts of springs glue to the frame. The endings of the auxiliary springs we glue to the slippers element 17. Back hubs make of part 18a – i. First, the part 18a plaster with part 18b. Next, from the inside to the part 18a we glue part 18c tightly rolled on template S11. Block the wire in part 18a with couple of drops of cyan acrylic glue. Glue part 18d to rear axles at both sides (pay attention to have places for brakes at the bottom). Next, the component made of parts

18a – c with the wire S11 reeve through the rear axle. To the second end of S11 skewer and glue a component made of parts 18a – c. Now, to both hubs glue theirs outside parts made of components 18e –i. Brake levers make from parts 19a – c, and templates S12. First, glue part 19a, tuck to it templates S12 with glued brake levers 19c. (Remember that endings of levers should be bent in the opposite direction as it is shown on the pictures). Glue the whole to the bottom of the rear axle by using part 19b. The wheels -component 20. To the inside part of 20a glue a ring made of component 20b, and then glue the other part 20a and the whole glue with tire tread 20c. Glue to the inner ring 20b on its inner place component 20d. Now, glue the both sides of tires made from component 20e. Parts 20f and 20g glue together with unprinted sides, roll and glue on but. To the inner part of such made an element glue part 20h. Depend on which wheel we glue first (front, back or spare) glue part 20h:

- front wheels (colour outside)
- double back wheels (colour inside)
- Spare wheel (glue the second unglue part 20h to gain two – side colour result.

Remember not to line with cardboard parts 20h which will be used for front wheels.
Element 21 - gear wheel:
The endings of the template S13 plaster with tightly rolled parts 21a. From components 21b, c and d glue a roller, to its cut glue part 21e tightly rolled on the wire S14.
On the sticking out ending of S14 thread part 21f and secure against falling out with a drop of glue. The second ending of part 21f, glue to the part 21a (as in the picture). On the other side of the gear wheel S13 glue on part 11e from the top. If you want to build working steering system you should glue all joints with small amount of “Butapren” glue, which is flexible enough to make the movement of the elements possible.
Drive unit:
From parts 22a and 22bglue an engine pulley. To the finished detail from the bottom glue part 22c. From components 22d and 22e glue an oil pan, which we glue to the part 22c. The oil pan complete with elements 22f, g, and h. the rest of elements this is 22i, j, k, l glue to the engine with use of the pictures. Casing of the clutch glue from elements 23a, b, and c. to the part 23b glue part 23d to which glue the engine. In marked places on part 23c glue fastens made of parts 24a, b, and c. Parts 25a and 25b glue together in unprinted sides. To the part 25a glue part 25e plastered with a belt 25d. Glue the disk 25e on part 25c (in marked place). Glue the finished element to the front of the engine. Parts 26a and 26b glue together on unprinted sides, next plaster to it a belt 26c. To the right sides glue part 26d and 26e. At the top glue part 26f placed on the template S15. Of parts 27a glued together and plastered with a belt 27d make a pulley to which glue from the front side part 27c and from the back side part 27b. To part 27c glue a fan 27e with right bended spades. Glue the finished wheel to the part 26e with use of component 27b. Of parts 28a – c make the second pulley which will be glued to the part 25c with use of the disk 28e. The both pulleys band with a belt 28e which should be cut to the right length during the gluing. The part 29a glue with the part 29b, next plaster it with part 29c. From the front glue tightly rolled 29a. Finished element fit to the engine with use of the disk 29d. Glue part 30 as it is shown on the picture. First, glued together parts 30a and b plaster with part 30c, next glue to them with use of part 30 d a roller made of parts 30e – h. Glue the finished component in marked place to part 25b. The starter 31 glue in this way: parts 31a and 31c plaster with part 31b, next, glue to part 31c two rollers made of parts 31d-h. Glue the finished starter to the clutch casing part 23. Suction and exhausting system parts 32 and 33. Both parts 32a glue in the marked place on the engine pulley. Glue to them part 32b. Stick part 32c and glue to it previously glued together 32d and e. To the part 32e glue stacked in pipe part 32f and to it 32g. The whole unit glue to the 32b part. Glue the part 32h to the engine pulley, next, glue parts 32i, j, k. part 32i glue to the part 32l. The air filter part 33 glue

in a way: to the part 33a glue a roller made of parts 33b and 33c. To the top glue parts d and 33e, the whole unit glue to the engine. Now using the template S16 connect the filter with the 32g part. After forming and gluing of part 34 glue in the marked place to the engine. Glue a roller from parts 35a and 35b. To it glue the part 35c and to part 35c glue a roller made of parts 35d, e, f. next, glue together parts 35g and 35h and plaster it with35i. To the finished element glue parts 35j, k, l. tightly roll on a template S17 parts 35ł and 35m. Drill an opening in parts 35g and h. unit made of parts 35a-f glue to the engine. Next, in the opening in part 35f tuck a wire S17. Thread on the S17 a pump made of parts 35g – l and glue it in marked place to the engine pulley. On the sticking out part of the S17 wind tightly part 35n. next, glue part 35o to its inner part glue the stacked in pipe part 35p.We end the part 35p from the top by part 35q and plastered on it part 35r. There are printed 2 different parts 35r; first glue from leaves, the second should be spinned. Everyone can choose the method it suits him. Glue the whole unit to the part 35b. The part 35s glue in a pipe, on it from the top glue a roller made of parts 35t, u, w. the whole component glue to the element 35e. The component 36 glue as it is shown on the picture. Glue the finished element to the engine pulley. Roll the 37a part in a pipe, glue on the contact and assembly to the engine with use of fixings 37b. If you want to make an ignition wiring system you should cut out the black parts in component 37a, through which the system will be taken. Sparking plugs make in accordance to the template S22, the wiring make of thin wire or thread and lead it as it is shown on the pictures. The wire which goes to the back (part 37a) make longer as it is needed. It will be connected to the ignition coil and without any problems it can be shorten during assembling the coil.
A gearbox.
Make a roller of parts 38a, b, c which glue on part 38d. Part 38d glue to the part 23a. Glue a framework of the gearbox of elements A, B, C, and D. finished framework plaster with sheating 39a. To the sheating glue elements 39b, c, d, e, f, g, h. next, an element 40b plaster with 40a, finished unit glue to the gearbox. In the same way make parts 40c, d which glue to the 40b. Glue handbrake disk (40e). Glue disk 40f between both of disks . The whole unit glue to the part 40d. Remember that the place of brake shoes should be on the right side. To the disk glue tightly rolled part 40g, and to 40g glue 40h. Brake shoes (41a) glue at both sides in marked place to the brake disk. The brake shoes plaster with a clip 41b. Glue 41c between the clip and the gearbox. An axis of handbrake make of tightly rolled part 41d and glue it to the gearbox. To the axis glue right bended lever glued of parts 41e and 41f. The lever connect with a clip by using wires S19 and S20. The base of gearbox lever make of parts 42a and 42b. In the middle assembly a jack made of template S21. The whole unit glue to the part 39e. Now, fasten the gearbox with the engine. The back fitting of driving unit make of parts 43a, b, c. Glue the engine with the gearbox to the frame. At the front the engine rest with fitting on the cross-bar 8. At the back the engine is assembled: part 24 is glued in to the fitted at both sides of the frame ‘pockets” 43. Intentionally, on the frame weren’t marked places of glue part 43. Assign it by yourself fitting the finished engine. The right glued unit should fall lightly to the back. The depth of the “pocket” in part 43 lets to regulate the falling angle.
The braking unit and steering clutch unit.

On the tightly rolled part 44a thread a lever 44c and glue it in the marked place. Part 44a can also be made of a wire with diameter 1,2 – 1,3 mm. thread part 44b on the endings of part 44a, and with use of them fit it to the frame cross – bar(part 5). To the both sides of part 44a glue the lever units as it is shown on the pictures with parts 44d, e, f. the levers 44d and 44f fasten with levers the 19c using templates S24 and S25 and part A. Roll tightly part 44g glue to it part 44h, i, j the whole unit glue between the gearbox (in marked place) and the internal part of the frame (1b). Next, join part 44j with a lever 39h with use of the S23 wire. Connect the part 44i with 44c using template S26 and part A.

The Drive shaft. – 45
First glue two joints using parts 45a – d, next on a wire S27 roll tightly part 45e. Draw both joints to the endings of part 45e (not glue them) and glue the unit between the gearbox and back driving axle. Now, block (with a drop of glue) part 45e in joints.

The exhaust. – 46

The exhaust silencer glue of parts 46a – c. next, glues both fixings 46d and finished draw on the exhaust silencer. The back part of the exhaust pipe make according to the template S28. At the proper height of S28 wire part 46e. The whole tuck in to the exhaust silencer and glue. The front part of exhausting pipe make according to the template S29. Experimentally match the exhaust length (pull out and tuck the template S29) matching it to the finished chassis. After matching wind part 46e at the right height and glue it into the chassis. (Part S29 glue to the engine, part 46 to the frame. The right shaping of part 46d and the way of assembling the exhaust silencer to the frame is shown on the picture.

Assembling the cab – 47

Glue an angle bar of parts 47a and 47b. Assembly it to the frame with use of part 47c. Glue a shock absorber of parts d, e, and f and assemble it to the part 47b in marked place.

Mudguards – 48
Cut and form part 48a. Glue formed part 48b. To the bottom of part 48a Glue a foot-plate of parts 48c and 48d. Next, to the formed part 48g glue at the top formed and scored part 48h. Parts 48g and 48h connect to the foot – plate (48c + 48d). Glued in this way part stick to the part 48a. Suitably formed part 48i glue between part 48g (from the inside with teeth) and part 48a. parts 48g, h, and 48i should be lined with parts 48g', h' and 48i' to receive two – sided colours. After lining those parts are difficult to form that is why it is advisable not to line them but after forming painting. The way of making these parts depends on a modeler. Don't glue at the moment the finished mudguards to the frame. Do it after finishing the cab and fitting both elements (the back of the mudguards should be even to the back wall of the cab.

The cub.
After cutting and gluing of part 49a glue in the marked places which are on not printed side "glass" made of templates F1 – F4, next, the whole element plaster starting from the back with the outward part 49b. On the front part of the element 49b from the inside glue part 49c. Parts 49d and 49e stick together in unprinted sides (after forming). Finished element glue from the bottom in the front part of the cab. Now do the floor of the cab. On unprinted side of part 49f (after lining and forming) draw bending lines marking them from printed side. Next, in bending places cut with a sharp knife a small wedge along the marked lines. The element prepared this way can be now bended. Glue of parts 49g and 49h the base of sitting the finished part glue to the part 49f. To the top of part 49f glue an internal sheating of the floor part 49j. Make an internal and outward sheating of the sitting base of parts 49k and 49l. Finished element (49f – l) glue from the bottom to the cab starting with the back. On the internal walls of the cab is marked place of gluing. Parts 49ł glue from the front of the cab to the parts 49f and 49e. Make the door handles and window winder handles of parts 50 and 51 and finished glue in the right places. Make the instrument panel of parts 52a, b, and c and glue it in marked place to the dashboard. Make a sitting of parts 54a – d and glue it to the cab. The tank should be made of parts 55a – c and finished glued from the bottom to the cab. Before gluing the tank make an element 56 (the cab fixing) and glue it in the marked place. (The

element 56 move at the most back and glue to the internal sheating of the cab 9part 49f) The tank glue in such a way to adjoin the front edge of the tank with the front part of element 49l. Now, fit the cab and mudguards to the frame. After fitting glue first the mudguards and to them (and to mountings 47e) the cab. Gluing the cab remember to insert in the right slots the gear- change lever, brake lever and the foot levers. A steering gear make of parts 53a – e and templates S30 and S31. The finished steering gear glue into the cab. First, glue to the dashboard only fixing – part 53e. Then, glue the steering gear, sticking it to the element 21 first, and then to the fixing. Make the foot levers of parts 57a and 57b. Glue the 57a to the parts 44h and 44i. Part 57b glue to the 49j in the marked place. To the glass F5 glue parts58a and 58b (glue the part 58c from the top to the foil F2) and a windscreen wiper – 58d. Next, glue a frame 60a to the cab and to it glue made previously drop window. The window can be glued in opened position. The windscreen wiper engine and the switch – key part 58e glue into the cab. Now make a roof. The component 59a lined with 59a' cut and form. The part 59a should be bent gently in two marked place (central cuts). Correct longitudinal profile of the roof with the visible bents is seen on the picture with the cab intersection. The finished element glue butt to the frame 59b. The whole roof glue from the top butt to the cab. Similarly to the mudguards 59a glue with 59a' to receive two – sided colour element. Unfortunately, this method hinders a little forming the roof. Lining can be omitted and after gluing the inside part of the roof can be painted in the right colour. We finishing the cab by gluing part 60b (roof) part 60c (heater cover), part 60f (hinges) and 60g (the cover of the back glass). An ignition coil with fixing make of parts 61a – d, and finished glue to the cab. To the coil glue the right cut wire/ thread left in this purpose during the building of the engine.

The cooler – 62

Glue a cross – bar of parts 2a, a', b, b' to assembly the cooler. Glue the cross – bar from the bottom to the frame. Lined part 62d plaster (the top part) with part 62e (colour outside). Now, to the part 62e on the unprinted side glue part 62f. Parts 62c and 62d plaster with part 62g. To the front part of 62c glue 62h. Make a plug of parts 62i, j, and k and glue it from the top to the cooler. The "sockets" which will hold the bonnet up open make of parts 62l, łand glue to both sides of part 62d in marked place. The finished cooler glue in such a way that distance between its back edge and front edge of the cab was 39,5 – 39,6 mm. (the best way of gluing the cooler is after forming and fitting the bonnet). Join the cooler with the bonnet with use of templates S32 (with part 35l) and S33 (with part 22j). On the template S33 tightly roll part 62m and clip it with buckles 62n. Between the cooler and the cab glue a wire S34. Make a motor horn of parts 63a – f and finished glue to the left side of the engine head in a place which is shown on one of the pictures. Not every car had a motor – horn so making this part is not necessary.

The bonnet.

The bonnet can be made in one of three versions. Version I - the bonnet glued permanently as closed. Version II – The bonnet glued permanently as opened (in one or both sides). Version III – the mobile bonnet. The ways of building of versions are shown on the pictures.

Version I.

Glue two angle bars of parts 64a and 64b and stick it to the mudguards. Next, formed part 64c line with formed part 64d. In part 64c is possible to cut and bent with a pin the cooling holes placed on its side. The finished bonnet glue to the parts 49d and62e and the angle bars 64b. Glue to the bonnet grips – 64e. The bonnet catch make of part 64f and finished glue to the mudguards opposite to its strikers.

Version II.

Making a bonnet in the 2 version is possible to make it opened in 1 or 2 sides. Glue part 64a and 64b as previously. Cut only middle part from parts 64c and 64d. cutting out the sides. The place of cutting is marked in red dashes. Part 64c line with 64d and bent it depends on which

side you want to be opened. Part64i line with part 64jand the whole join with a hinge 64k with the part 64d. Grips 64e and catches 64f glue as in previous version.

Version III

The Version III differs between version II only with the way of making the middle part of the bonnet, which make of parts 64g, 64hL, 64hP and a wire S35 (steel). The middle part of the element 64g (hinge) form in a way it will be possible to plaster it on the wire S35 in a way shown on the picture (intersection). To the bottom side of part 64g glue parts 64hL, 64hP. The sides of the bonnet assembly as in the previous version. The finished bonnet glues the bottom parts of the wire (only wire) at both sides to the parts 49d and 62e. The rest of details glue as in the previous versions. Building the mobile bonnet take into consideration the shortcoming of this method. During the exhibition of the truck with an opened bonnet, the bonnet may not border with the cab. It is caused by the lack of holding the bonnet in this position. (As in the original). The problem can be solved by gluing gently the bonnet to the cab and the cooler putting some glue on the back part of the cooler and the cab (on the thickness of the paper in joining places) or glue the bonnet pointiest in several places to the parts 49d and 62e.

Head – lights - 65

Both parts 65a join with a wire S36. Part 65b glue into a dome. The front of the part 65b glue with disks – 65c. The finished head – lights glue to both sides of part 65a and the whole assembly between the mudguards. Parts 65c can be gently spinned, moreover the head – lights can be “glassed “by grooving with a pin on a foil, and a cone made of an aluminium foil can be glued to the inside.

The frame under the open load carrying body.

Glue frame side members of parts 66a – c. at the top glue crossbars – 67a – 70d to it. Pay attention to glue the cross bar 70 with a white side directed to the back. To the front cross bar glue furniture - 71 (which can’t be glued in the future). At both sides to the cross bars in marked places glue tow hooks – 72. The finished frame glue to the car. Finnish the whole with part 73 and the template S37.

The carrying body.

First, make a floor – 74a, plastered with part 74b. Similarly, make all sides: parts 74c, d – the front, parts 74e, f and 74g, h – sides, parts 74i, and j – back side. During gluing the sides make sure that lay – out of screws and wood pattern on lined parts (internal) match the lay - out of screws (after gluing the brackets and tips) and the wood pattern on external parts. Finished sides glue to the floor. (Except of the back side in mobile version). Glue the tips and brackets – 75a – f to the body. Lower parts of elements 75a, b, and c roll on a wire S38. If the back side will be opened its brackets must be glued as it is shown on the picture: to the one of parts 75b paste the wire S38, draw part 75a on the wire (don’t glue it) and part 75b, which with a drop of glue immobilize on the wire. The finished brackets glue between the sides and the floor of the body (marked places). Form part 75d before gluing. After gluing tuck into wires S39 (in all 4 sides). The finished body glue to the made before frame. Tool boxes - parts 76 and 77 glue as it is shown on the picture and finished glue in marked places from the bottom to the carrying body floor. Mounting of the spare wheel make of part 78. Part 78a plaster with part 78b, to the bottom of part 78b glue part 78c. Parts 78d and 78e glue together and stick to the sections. Glue a spare wheel to the bedstead in a way that its centre was placed directly above the opening in parts 78d,e. tightly roll on a wire S40 part 78g. Glue part 78h to part 78g and the whole tuck in to the opening in parts 78d and 78e and glue it. On the sticking out wire draw and glue part 78f. Of parts 79a, b, c glues the tail lights, which glue from the back to the part 3a. The place of gluing is shown on the picture. The shovel with mountings make of part 80a.parts 80a and 80b glue together, from the top glue to them a template S41 made of a stick. The bottom ending of the stick plaster with suitably formed part

80c. In right places on S41 glue mounting of part 80d and the whole assembly to the carrying body in a place shown on the picture.

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Lined parts m1a and m1b glue together with unprinted sides and drill openings for a wire S42.next, tightly roll partm3a on a template S42. Thread on the finished element glued previously parts m1L and m1P. In the back part between parts m1 glue tightly rolling strut m2. On sticking out edges of S42 wind part m3b. The wheels should be made of glued together parts m4. Finished wheels thread on the wire and secure from falling down with use of discs m5a and m5b. Tightly roll parts m6 on the edges of the wire S43. The back part of the wire S43 plaster with correctly formed part m7 and the whole glue to the part m1. Glue part m8 with part m9 and finished glue to the carriage. Part m10a plaster with part m10b. Glued part m10b should stick out in advance) so the part m11a can be glued=. Part m11b glue in butt from the top to the part m11a, and the whole glue into part m10. Between two parts m12a, in theirs front part glue a cross + bar m12b and in the back part m12c. a bolt for lifting the rifle make of parts m13 a + c and a wire S44. The bolt will be later on glued to the mounting m14f. The body of the ckm glue of parts m14a – d, and the finished complete with elements m14e – i. the backs make of parts m15a and m15b, and glue it to the part m14b. A trigger - m15c glue to the part m14b too. Make a gun sight of parts m16a – d and glue it to the top of part m14a. A cooler with a rifle tube make of parts 17a – d. the rifle tube m17d roll on a wire with 0, 5 mm diameter. The finished cooler glue to the rest of the rifle. To the mounting m14f glue a bolt m13 and the whole assembly on the car gluing the rifle between parts m12a. The disk m18 after bending glue to the part m11b in a place marked with black dashes.
Ammunition boxes make of parts A1, A2 and wires S45 which with the ckm can be placed on the ZIS carrying body. On a carrying body can be placed the second spare wheel (the parts to make it are placed on the sheet with barrels) glued in the same way as a wheel mounted in a body in a cab.

The barrels glue as shown on the picture, and finished can be placed on a carrying body or used for building a mini – diorama. People who want to build a mini – diorama can use a sign glued of parts d1 – d3.

We wish nice moments spent at the construction of the model!