

THE SOVIET PROBLEM WITH TWO “UNKNOWNNS”

commercial trucks similar to the Ford Model ‘AA’ with all improvements which may be embodied therein by the Ford Company during the term of this agreement.”

The contract also granted VSNKh the right to use all present and future Ford patents and inventions for materials, component parts, and methods of production for these models. It also granted VSNKh the full rights to make, sell, and use Ford units throughout the U.S.S.R. and to make and use all River Rouge plant tools and machinery. Further, Ford agreed to permit access to his plants in Detroit and Dearborn to up to fifty Soviet engineers, foreman and other employees of VSNKh per year, “for the purpose of learning the methods and practice of manufacture and assembly in the Company’s plants,” and to send his own “experienced and competent technical personnel” to Russia to help install the equipment and train the working force.³⁸

Nizhny Novgorod: “Where Russian Fords are produced”

In the beginning Ford “A” cars and “AA” trucks were assembled, using parts shipped from Detroit, at two smaller prototype plants (assembly plants No. 1 and 2): a conversion of the old Gudok Oktyabrya (“Whistle of October”) factory in Kanavino near Nizhny Novgorod for assembling 12,000 vehicles a year, and a new KIM plant in Moscow for assembling 24,000 thousand vehicles. Both plants would be designed by the Albert Kahn firm. In mid-August 1929 the firm mailed detailed drawings of the KIM plant from Detroit to Russia so that construction could start before the cold weather. As was done for the tractor plant in Stalingrad, the structural steel elements were prefabricated in the U.S. by McClintic-Marshall Products and disassembled down to nuts and bolts for shipment to Moscow. On February 1, 1930, the first Soviet Ford “AA” truck, a 1.5-ton *polu-torka*, rolled off the conveyor belt of the Assembly Plant No. 1 (Gudok Oktyabrya) in Kanavino. (figure 5) On November 6 of that year Assembly Plant No. 2 (KIM) in Moscow began delivering the same model.³⁹ (figure 6)

Meanwhile, the Ford company provided complete sets of working drawings and specifications for the cars and trucks, furnished a general layout and technological project of the main plant in Nizhny Novgorod, and shipped 72,000 knocked-down Fords for assembly during the first four years of the plant’s operation, after

which it would gradually switch to Soviet-made components.⁴⁰ The architectural and engineering design and on-site construction supervision of the main plant in Nizhny Novgorod, as well as of a nearby city to house 35,000 workers and their families, was done by the Austin Company of Cleveland, Ohio.

Following a visit by Austin engineers to the proposed site, the company signed the initial contract with Avtostroi on August 23, 1929.⁴¹ This contract was supplemented by the typical three-way Amtorg contract signed



Figure 5. First Soviet Ford AA truck leaving Assembly Plant No. 1 “Gudok Oktyabrya” in Nizhni Novgorod, 1930. Photo by Max Alpert, courtesy of RIA Novosti.

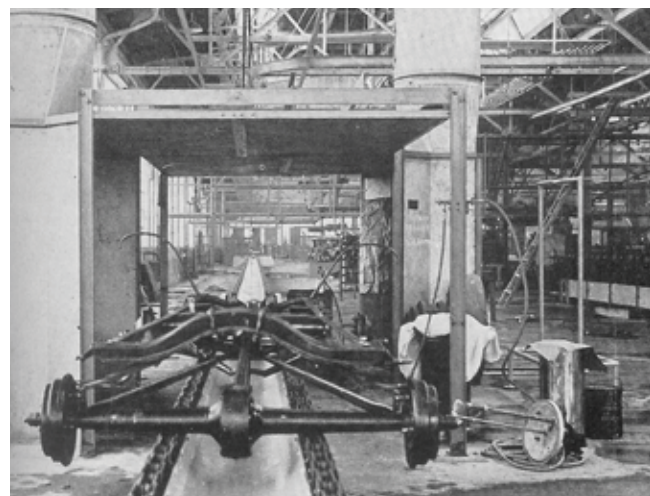


Figure 6. Conveyor belt at Assembly Plant No. 2 (KIM) in Moscow, 1931. *Economic Review of the Soviet Union* 6, no. 4 (15 February 1931).

by Saul G. Bron with the Austin vice president, George A. Bryant, and the head of Avtostroï, S.S. Dybets, on October 30, 1929.⁴² It was the largest single foreign contract awarded by the U.S.S.R., for which the Austin Company was to receive \$40,000,000 in gold. If the work was finished in fifteen months, as the company promised (the Soviet preliminary calculation was four years), it would receive a bonus. The Soviet organizations Avtostroï and Metallostroï were to supply construction materials, equipment, and the workforce.

Over 100 Austin staff in Cleveland worked on the drawings during the winter of 1929–1930, while 120 Soviet engineers and technicians, stationed in Dearborn and assisted by Ford engineers, were preparing specifications for equipment. The Soviet workers occupied offices on the second floor of a building on Miller Road, within the River Rouge complex, and had access to everything that went on there during the next six years, until 1935. So much a part of the Ford organization had they become that they even had stationery printed with the Ford Motor Company address. Ironically, in 1932, in the midst of the Great Depression, when Communist “hunger marchers” stormed the plant, the Soviet engineers, whose number had grown from fifty a year to almost four times that number, watched the demonstration from their office windows and stayed on to continue their study of Ford methods.⁴³

On May 1, 1930, the first Austin engineers, including George A. Bryant and Allan Austin, son of the company president, Wilbert J. Austin, arrived on the site of the future “Ford” plant, a deserted stretch of land between the rivers Volga and Oka, near the village of Monastyrka, twelve kilometers from Nizhny Novgorod. The company aimed at having as much work done as possible during the summer months, when the days in the area are long and the climate is very much like the northeastern United States. Winter conditions are quite different. (figure 7) From November until April the sun is up for only six hours and the temperature is always below freezing, reaching 22 degrees below zero Fahrenheit, with frost up to six feet deep, presenting many construction problems not encountered in milder climates. The construction process was also ridden with problems caused by the lack of skilled workers and conflicts between the Austin Company and its Soviet counterparts, and between the counterparts themselves.⁴⁴ But despite all these difficulties, by November 1, 1931, just a few days before the fifteen-month deadline, the automobile plant in Nizhny Novgorod was mostly completed. The



Figure 7. Building of Nizhnii Novgorod (Gorky) Automobile Plant. *USSR in Construction*, no. 1 (1933).

last Austin engineer left the site on December 1, 1931, and on January 1, 1932, the manufacture of automobile parts began, supervised by American machine operators. (figures 8–10)

Originally called Nizhny Novgorod Automobile Plant (NAZ), in 1933 it was renamed Gorky Automobile Plant (GAZ), and from 1935 to 1957, the Molotov Automobile Plant (ZIM). It was the largest automobile plant in Europe, second only to Ford’s River Rouge plant, designed by Albert Kahn, after which it was modeled (as had been stipulated by Ford). It consisted of twenty completely equipped structures with steel or reinforced concrete frames, masonry and steel sash walls, insulated wood roofs, and wood block floors. It covered an area of 600 acres, with approximately 3,000,000 square feet of floor space, and was surrounded by a modern system of reinforced concrete highways. The dimensions of the largest structure, the assembly building, all steel and glass, which included six assembly lines, was 1,800-ft. long and 350-ft. wide. The cost of the plant with equipment was \$120 million. Its projected capacity was 94,000 1.5-ton trucks and 50,000 cars a year. (This goal, though, was never fully achieved.)⁴⁵

The first truck rolled off the NAZ assembly line on January 29, 1932. (figure 11) By the time the construction and equipment of the plant were completed, a total of 102 American firms had supplied tools and machinery. A later memo by the Austin company, describing the Nizhny Novgorod project and listing all the machinery, equipment, and their manufacturers, stated: