
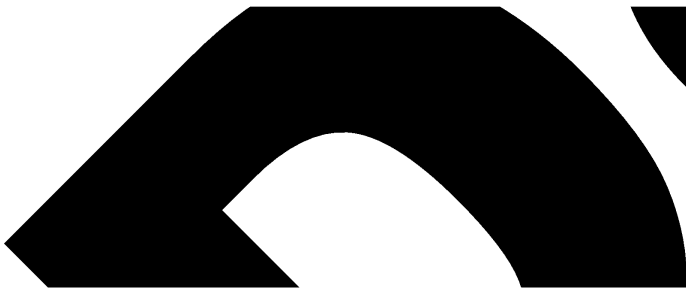
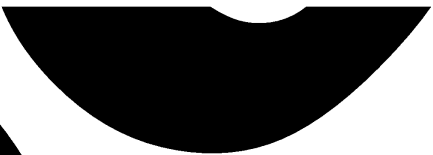



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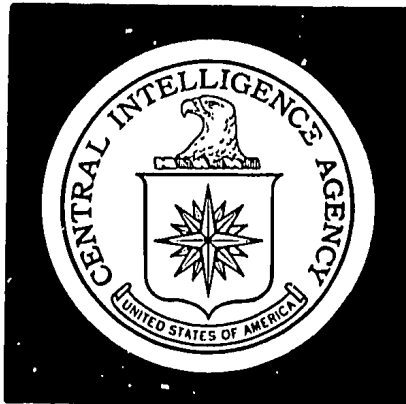

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Intelligence Memorandum

The Soviet FIAT Makes Its Appearance

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CENTRAL INTELLIGENCE AGENCY
Directorate of Intelligence
April 1971

INTELLIGENCE MEMORANDUM

The Soviet FIAT Makes Its Appearance

Introduction

1. The USSR, which traditionally has produced relatively few passenger cars, launched a priority program in 1966 designed to boost their production by 1975 to a level of about five times the 1966 output, or 1.2 million cars. The keystone of this program is the Volga Motor Vehicle Plant (VAZ) at Tol'yatti on the Volga, being built and equipped as a joint effort of the USSR and FIAT of Italy. This plant, the largest cooperative undertaking between a Western firm and a Communist country, will have cost about \$1.5 billion at completion -- nearly double the original estimate. Of the total, about \$500 million has been spent in Western Europe, mainly Italy, and about \$50 million in the United States.

2. This memorandum describes the status of the VAZ plant, current problems in bringing it into full production, and its significance for the Soviet passenger car program.

Discussion

Goals and Achievements

3. The original construction schedule for VAZ provided for initial production by the end of 1969, 200,000 cars in 1970, and output at full capacity of 600,000 cars per year by 1972. Despite the project's high priority and strenuous efforts by

Note: This memorandum was prepared by the Office of Economic Research.

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both Soviets and Italians, there was a slippage of about ten months (from December 1969 to September 1970) in the initial startup time. Among the difficulties which the builders had to surmount were unusually severe winter weather, lack of housing, and difficulty in attracting and holding labor. Much work remains to be done, and full capacity production may be as far away as 1974 or 1975. Meanwhile, Soviet officials have expressed satisfaction with FIAT performance and have accepted the responsibility for delays in completing and equipping the plant.

4. When the initial startup date could not be met, a special effort was made to ready the plant for a spectacular opening on Lenin's 100th birthday in April 1970. When this date also proved impossible to meet, formal dedication of the plant was indefinitely deferred until it is completely finished, which will probably be in late 1971 or early 1972.

5. Of the three assembly lines provided for, only one line is operating at the present time. From startup in September 1970 until the end of the year, it produced 22,000 cars (designated model VAZ-2101, or "Zhiguli"), reaching a daily rate of about 250 by December. Plant officials expect to reach a daily rate of about 400 cars by April 1971 and to produce 160,000 cars in 1971. These goals seem realistic in view of current performance. A recently announced goal of 320,000 cars for 1972 implies that the plan is for the second assembly line to be in operation early that year, the full capacity of each line being 200,000 cars per year. The third assembly line, to be equipped with machinery manufactured in the USSR and Eastern Europe, is not likely to operate before 1973. FIAT has not contracted any obligations for this line, and little is known about plans for setting it up.

6. At the present time, a number of expedients are being used to keep the final assembly line operating. Many of the subsidiary lines are not functioning yet, and various makeshift systems are delivering components to final assembly. Almost all parts except body parts were supplied by FIAT from its plants during the first months of operation,

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but parts made in the USSR and Eastern Europe have gradually become available. Suppliers in Eastern Europe began making deliveries of parts during 1970. Soviet suppliers have been less successful in meeting their commitments.

Factors Affecting Goal Achievement

7. Successful operation of the Tol'yatti plant and its progress toward full capacity output depend in large part on Soviet ability to master the process technology in six major shops, all of which now are in partial operation. The experience of Western technicians, who are assisting and training the Soviet workers during the period of installation and startup of the shops, indicates that production problems are likely to persist for some time. Most of the production workers have had little prior experience in the use of machinery and tend to be careless in operating and maintaining the lines. they persist in obstructive practices such as shutting down conveyors unnecessarily in order to make manual adjustments.

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8. Some shops have been brought into production sooner and more completely than others. The body-stamping shop, equipped with heavy presses built in Italy, was one of the first shops in successful operation and has supplied most, if not all, of the stamped body parts. The grey iron foundry, on the other hand, has been slowest in getting started and has been a serious limitation on operations. The four US-built foundry lines were ready for operation in September, but molding boxes* ordered from Poland were not delivered. For a period of six months, castings had to be supplied by FIAT, causing an unexpected strain on their foundry facilities in Italy. Eventually the Soviets acquired enough molding boxes from domestic production to equip one of the foundry lines.

9. A serious problem has developed in scheduling the flow of components because the computer system of production control is not in operation.

* A molding box contains the sand mold into which molten metal is poured to form a casting.

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The building designed to house the computer center is not finished, and the Italian-built equipment is in storage. As a temporary measure, small US computers have been bought to use in inventory control, and Italian specialists, working with the Soviets on programming, anticipate serious problems later on in combining the temporary and permanent systems.

Vendor Plants in the USSR

10. Steadiness in the operation of the assembly lines at Tol'yatti depends on the timely receipt of many parts and components supplied by vendor plants that, like the VAZ plant, are newly constructed for this purpose. Many of these plants have been late getting started, and defects in their early products have seriously slowed assembly rates at VAZ and have contributed to the need to import more Italian FIAT parts than was originally anticipated. For example, the Balakovo plant for rubber parts and fittings, which was built with the technical assistance of the Pirelli rubber company of Italy is not in operation, and the Volzhskiy Plant has been delivering rubber fittings to VAZ which are exceptionally difficult to bond to steel. A new plant in Kursk delivers oil seals that break during installation. The new antifric-tion-bearing plant at Vologda, designed and built by the USSR, is not yet finished, and it has been necessary to obtain bearings from other plants or to import them. Other new Soviet vendor plants on which VAZ is dependent are an oil and air filter plant and an upholstery plant, both bought from Japan, and a seat plant from West Germany.

11. The problem of mass-producing good-quality tires for the VAZ car has not been solved. Long negotiations with Pirelli for a modern tire plant evidently have come to naught, and at present the necessary tires are being obtained from the Yaroslavl and Dnepropetrovsk Tire Plants. For the foreseeable future, the USSR will supply tires to the VAZ plant from domestic production and from imports. A new plant is under construction at Nizhnekamsk, and the capacities of the Yaroslavl and Dnepropetrovsk plants are to be increased. Pirelli is also expanding its facilities in Italy to produce tires for VAZ.

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12. Compared with the performance of the newly established domestic suppliers, vendors in Eastern Europe, working under five-year cooperative agreements with VAZ, are proving to be reliable. Large numbers of parts and components are being delivered to the Tol'yatti plant from Poland, Bulgaria, Hungary, and Yugoslavia, and smaller numbers from Czechoslovakia. Deliveries from these suppliers apparently have been on schedule and in 1970 considerably exceeded the rate of assembly of cars.

13. The plants in Eastern Europe are supplying parts and components for which they have an established production capability. Poland and Yugoslavia produce FIAT cars and thus are able to supply FIAT parts. Hungary traditionally produces radios and electrical equipment, and Bulgaria specializes in manufacturing and exporting batteries. Thus, in supplying VAZ, the East European plants are able to benefit from increases in scale of production, while the USSR, for its part, economizes on labor force and investment in plants and technology.

14. Payment for the parts and components will be made mainly in finished cars. Hungary and Bulgaria will receive VAZ cars, and Poland and Yugoslavia will receive Soviet cars of other models -- Moskviches or Volgas -- or parts and components for their domestic production of FIAT vehicles.

Labor Supply

15. When operating at capacity on two shifts a day, VAZ will employ about 50,000 workers. The vast amount of trained labor required to form this large staff is not readily available in the USSR, and much effort is being expended on a training program which is progressing only slowly. Scores of engineers and technicians have been trained at the FIAT facilities in Italy since 1966, and many hundreds of workers have undergone training at other plants of the Soviet automotive industry, in particular at the GAZ plant in Gor'kiy. A large training facility is in operation at VAZ that is staffed with personnel from technical schools in the area and with technicians from the VAZ cadre.

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A major contribution to training also has been made by Western technicians who have been engaged in setting up and adjusting machinery at the plant and who at peak periods numbered as many as 1,000 persons.

16. The total labor force at the plant at present ranges between 30,000 and 40,000, but this figure includes construction and installation workers as well as the production force. As the various stages of construction are phased out, many construction workers are transferring to the production labor force and entering the plant's training program.

Prospects for Private Ownership of Passenger Cars

17. By 1975 the plan is for the Soviet passenger car industry to reach a production level of 1.2 million cars, half of which are to be built at VAZ. The other half will be produced at existing plants now being modernized and expanded, as shown in the table. The USSR is significantly expanding three of its other four passenger car plants -- the Moskvich plant in Moscow (AZLK), the Moskvich plant in Izhevsk (ZIMA), and the Zaporozhets plant in Zaporozhye (ZAZ). At Gor'kiy, capacity to build the Volga is increasing by only about 15%. Most important of these programs is the expansion of the Moskvich facilities under contract with Renault of France for technical assistance and equipment. The Moscow plant is being retooled and expanded to a capacity of 200,000 Moskvich cars a year from its 1966 capacity of 80,000. Operation at full capacity was scheduled for 1970, but only 107,000 cars were produced that year. An annex, being built several miles from the main plant, is behind schedule partly because the Moskvich project has had to compete with the FIAT project for construction resources. Renault also has assisted in the expansion of the Izhevsk plant which assembles Moskviches from parts furnished by the Moscow plant and its suppliers. The Izhevsk plant assembled 20,400 Moskvich cars in 1970 and will have the capacity to assembly 200,000 per year when it is completed. The ZAZ plant in Zaporozhye, which produces the smallest and least expensive car, was scheduled to produce at the new capacity of 150,000 cars per year by 1970 but turned out only 87,000.

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USSR: Passenger Car Output

Thousand Units

Model	Plant	Announced Output			Expected Output				Planned Capacity
		1968	1969	1970	1971 ^{a/}	1972 ^{a/}	1973 ^{a/}	1974 ^{a/}	1975
Volga	GAZ	68 ^{a/}	72 ^{a/}	68 ^{a/}	73	75	75	75	75
Moskvich	AZLK	86	88	107	110	150	200	200	200
Moskvich	ZIMA	8	14	20	30	75	100	125	200
Zhiguli	VAZ	0	0	22	160	320	400	500	600
Zaporozhets	ZAZ	78	80	87	100	120	130	140	150
GAZ-69 (Jeep)	UAZ	40 ^{a/}	40 ^{a/}	40 ^{a/}	40	40	40	40	40
Total		280	294	344	513 ^{b/}	780	945	1,080	1,265
									1,210 ^{b/}

a. Estimated.

b. Planned output.

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18. Soviet consumers are beginning to see some payoff from the long-awaited opening of VAZ. About one-fourth of the Zhigulis built in 1970 were sold to private citizens but only in Moscow (where nearly 4,000 had been delivered by the end of December) and in the Tol'yatti area. In 1971, small numbers are to be delivered to retail outlets throughout the country. No waiting lists have been established for the Zhiguli; instead, they are being offered to and purchased by persons who have registered on lists to buy Volgas, the highest priced Soviet car that is sold to the public.

19. The Zhiguli, for sale at 5,500 rubles (\$6,105),* is a medium-priced car in the Soviet Union. It is priced considerably below the expensive new model Volga, GAZ-24, which costs 9,000 rubles (\$9,990). Although the Zhiguli is slightly smaller than the popular Moskvich, which is priced at 4,936 rubles (\$5,479), it commands a higher price because it is Western designed and is technically superior. These are formidable prices for Soviet workers and employees whose average cash income in 1970 was 122 rubles a month. The price of a Zhiguli is equal to about two years' earnings for an average Soviet family with two incomes, and thus out of reach for the majority of families. Prospective buyers for the most part represent, as they have in the past, the highly paid professional and managerial elite who have accumulated enough savings to make cash payments for the car.

20. Despite high prices, there continues to be a ready market for cars. Waiting lists are long, containing up to 300,000 names for the whole country in 1971, of which 60,000 were in Moscow. Moscow lists were closed in early 1970 and will remain closed during 1971. However, the demand reflected by waiting lists at the beginning of 1970 could be satisfied by current production in 1971 and 1972 even if the usual share of output to retail sales is not increased. In view of annual plans and the progress being made in all of the passenger car plants, it is possible that the combined output (excluding jeeps) in 1971 and 1972

* At the official exchange rate of 1 ruble equals US \$1.11.

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could reach 1.2 million cars, of which 300,000 or more could be sold at retail. Historically, about one-fourth of new passenger car output has been sold to the population, about one-fourth has been exported, and the rest retained by the state for government use and taxi service. By 1975 the distribution pattern can be expected to be more favorable to the consumer. The question then will be whether there are enough customers with savings to buy 300,000 cars, two-thirds of total output, which have been promised for sale at retail in 1975 according to recent official statements.

21. In view of the provisions of the Ninth Five-Year Plan to continue to increase incomes, and considering the poor record of the Soviet economy in fulfilling goals for the production of consumer goods in sufficient quantity, quality, and assortment, a continuing increase in personal savings can be expected. By 1975, savings will probably exceed 70 billion rubles, compared with about 46 billion in 1970. Assuming that present car prices are valid in 1975, sales of 800,000 cars would drain off no more than 4 billion rubles. The number of savings accounts in 1975 will undoubtedly exceed the number in 1970 (about 80 million). It seems likely that 800,000 of these accounts will belong to families with the money and desire to buy new cars. However, these sales will do little to improve the average quality of Soviet life in 1975 and may do much to deepen general dissatisfaction by further distinguishing the elite from the ordinary person in the Soviet "classless" society.

Conclusions

22. The Volga passenger car plant, a joint effort of the USSR and FIAT of Italy, began assembling cars in September 1970, about ten months later than scheduled by the contract. The plant still is not complete, however, and full production of 600,000 cars a year on three parallel assembly lines probably will not be achieved before 1974 or 1975 -- two to three years later than scheduled. Planned output of 160,000 cars in 1971 can be achieved on the one assembly line now operating, but the second

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line must be operative in early 1972 in order to reach the annual goal of 320,000 cars in that year. Little is known about the third line which the Soviets are to equip without FIAT assistance.

23. Production at VAZ is dependent on a new vendor system of questionable reliability, which includes new Soviet plants and suppliers in five countries of Eastern Europe. Output at VAZ also will be affected by the skill level of the labor force. The USSR does not have available the experienced labor needed, and a vast amount of training is needed for a full labor force of 50,000.

24. In concurrent programs, other passenger car plants are being expanded to more than double the former total capacity, but all of these projects are behind schedule. Renault has assisted substantially in the modernization of the Moskvich facilities designed to bring the Moscow and the Izhevsk plants each to the capacity of 200,000 cars a year. As production of passenger cars increases, more of the affluent private citizens will be buying cars, but the population will receive between one-fourth and one-half the total for at least the next two years. Because of export commitments and expanding official needs, changes in the distribution pattern favorable to the population must come slowly, a fact that brings into question the official promises that by 1975 private citizens will receive two-thirds of the output.

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