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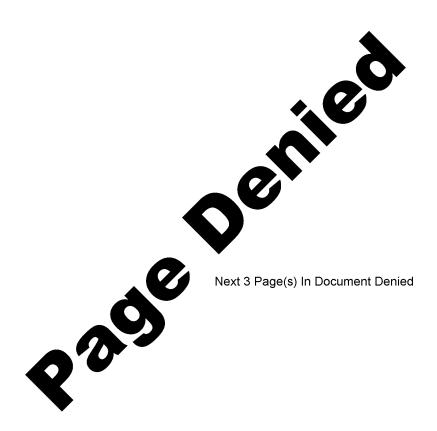
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COUNTRY	USSR Development of Aircraft Kuybyshev and Kimry-Save	Engines at	REPORT  DATE DISTR.	17 March 1955	25 <b>X</b> 1
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PART II - REPORT	
Activities at Experimental Works II - KUNBYSHEV	
	057/4
1. Experimental Works II, KUJBYSHEV, development of the OO4 engine. At least one complete engine had been	25X1 25X1
brought from DESSAU as well as a sufficient quantity of components to	
enable other engines to be built at KUIBYSHEV, so that the designers had little to do at this period beyond working on certain minor improvements.	
the 004 Engines he saw at KUTSYSHEV had	25X1
eight compressor stages and one turbine stage as had the original DESSAU engines, and developed a thrust of 1,000 kg. on the test bed.	
ongride, and developed a unitary of 7,500 kg, on the table and the second	
The 012 B Engine	
2. Like the 004, the 012 engine was a JUNKERS development but the	
Russians were determined to increase its performance to give a static thrust of 3,600 kg. Successful works runs were made during 1948 and the	
official acceptance tests were carried out successfully at the end of the	
year. So far as Informant was aware, efforts made to reduce the weight of this power unit were not over-successful and in its final form it weighed,	
with accessories, just over 1,400 kg.	
3. Development on the 012 'B' continued after the appearance of the 0224	
which was designed later, or rather after modifications had been made to an	
original German design (JUMO 109). The later development work on the 012 engine was apparently carried out entirely on the initiative of KUZNETSOV	
and against the orders of TSIAM in MOSCOW. Much later, in SAVELOVO,	0.5344
KUZNETSOV had championed the 012 engine against the recommendations of V. KLIMOV, who at that time was working on	25X1
an improved version of the None. In the end, KLIMOV's recommendations	
that the development of the Nene should continue at the expense of the 012 were accepted by TSIAM. Nevertheless, KUZNETSOV was reluctant to accept	
lefeat and persevered with the 012 until definitely ordered from a high	
level to drop all work on the engine.	
The 022A Engine	
it appears that KLIMOV was at first	25X1
against the switchover from pure jet engines to the development of turbo-	
orop designs. However, once work was started on the 022A, considerable interest was shown by TSIAM in the engine KIZMETSOV	25X1
submitted regular reports on the progress made besides paying frequent visits	207(1
to TSIAM in MOSCOW. The O22A engine was an axial-flow turbo-prop engine with twelve compressor and three turbine stages mounted on a single shaft.	
In its final form, as tested in the Spring of 1951, the engine developed	
over 4,500 B.H.P. plus a thrust of approximately 500 kg.	
When the original drawings were made for the 022A engine and submitted	
to the Russians for approval, they were rejected because the reduction gearing was too heavy. In spite of German protests, The Russians insisted that a	
new design be submitted since they considered the weight penalties involved in the original gearing were too great. Considerable trouble was experienced	
with the gear-box eventually produced at KUJBYSHEV and fitted to the O22A.	,
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modifications were made in the reduction gear (7.5:1)	25X1
which enabled the engine to pass its works test and final acceptance tests	
in 1951.	
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the German specialists had completed the original designs which had been proved by the Russians with only slight modifications. In its standard proved by the Russians with only slight modifications. In its standard proved by the Russians with only slight modifications. In its standard proved by the Russians with only slight modifications. In its standard proved by the design model of a standard on a summon shaft.  2 the standard to the "K" engine were its length of just over \$\frac{1}{2}\$ metres and seveloped of 1,800 kg with auxiliary equipment. Probably because of those reflectors an alternative project employing a supersonic compressor was recloped. The testing of this variation on the "K" was entirely in Russian ands though German specialists had worked on the description of the compressor. The engine had in in what was referred to as its "supersonic" form on the test had see the supersonic stages equipped with steel blades compared with the standard "K", ich had light alloy blades, sign of the "K" had not been fixed the "would go into series production as first tested at KUMPYSHEV, namely with curteen compressor and five turbine stages mounted on a single sheft the Russian factories would be unable in their rest tested.			25
The 'K' engine was regarded from the first as a Russian project though the German specialists had completed the original designs which had been approved by the Russians with only slight modifications. In its standard form the 'K' had fourteen compressor and five turbine stages mounted on a summon shaft.  The main the 'K' had fourteen compressor and five turbine stages mounted on a summon shaft.  The main the 'K' engine were its length of just over \$\frac{1}{2}\$ metres and so wought of 1,800 kg with auxiliary equipment. Probably because of these to factors an alternative project employing a supersonic compressor was weloped. The testing of this variation on the 'K' was entirely in Russian and though German specialists had worked on the domain of the compressor. The engine had in in what was referred to as its "supersonic" form on the test had the engine had the interessor stages equipped with steel blades compared with the standard 'K' eight alloy blades, and the final sign of the 'K' had not been fixed the final the fina			
proved by the Russians with only slight modifications. In its standard print the 'K' had fourteen compressor and five turbine stages mounted on a summon shaft.  the main specialists had compressor and five turbine stages mounted on a summon shaft.  the nigine produced 10,000 B.H.P. at 7.600 r.p.m.  the main standard of the 'K' engine were its length of just over 42 metres and seady and the search of 1,800 kg with auxiliary equipment. Probably because of these refactors an alternative project employing a supersonic compressor was reloped. The testing of this variation on the 'K' was entirely in Russian ands though German specialists had worked on the download on the compressor. The engine had an in what was referred to as its "supersonic" form on the test had  Yet another variant on the standard 'K' engine was a design with all the mpressor stages equipped with steel blades compared with the standard 'K', ich had light alloy blades, mpressor stages at least.  Sign of the 'K' had not been fixed the 'would go into series production as first tested at KUMPYSHEV, namely with urteen compressor and five turbine stages mounted on a single shaft the rest tested of	The 'K' Engine		
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