3482

Dissemination Authorized
Assistant Director
Office of Current Intelligence
CIA/SC/RR IP 59-27

No. Pages 30

12 August 1959

QUARTERLY ESTIMATE OF THE PRODUCTION OF AIRCRAFT IN THE SINO-SOVIET BLOC

APRIL JUNE 1959

CIA HISTORICAL REVIEW PROCESS:
RELEASE AS SAMITIZED
1999

Office of Research and Reports

CENTRAL INTELLIGENCE AGENCY

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## FOREWORD

This publication is the seventeenth in a series issued on a quarterly basis summarizing production of aircraft in the Sino-Soviet Bloc. The estimates presented are issued to satisfy the request of consumers for the most recent estimates of production of aircraft in the Bloc and are intended to supersede those estimates contained in previous publications of this Office. Differences between the present estimates and past estimates result from revised estimates of airframe weight and plant floorspace and from more recent intelligence information

. No interagency coordi-

nation has been attempted,

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# QUARTERLY ESTIMATE OF PRODUCTION OF AIRCRAFT IN THE SINO-SOVIET BLOC\* APRIL - JUNE 1959

#### 1. Trends in Production

Since 1955 one of the most important trends in Soviet production of aircraft has been the reduction in number of airframe plants in production of combat aircraft. Of eight plants in production of bombers in 1955, only Moscow/Fili Airframe Plant No. 23 retains its former role.\*\*

Production of Bison (M-4) decreased to a rate of approximately one aircraft per month during 1958 and was suspected of being phased out. During 1959, however, production of Bison has increased to a rate of almost two aircraft per month. \*\*\* The Bison is the only known Soviet bomber in series production, for production of the Badger (Tu-16) medium jet bomber is believed to have ceased. \*\*\*\* Of the three airframe plants which formerly produced the Badger, two are known to be producing transports, and the production activity of the third is obscure.

Recently received intelligence information indicates that of the three versions of the Camel (Tu-104, Tu-104A, and Tu-104B), two are no longer in series production in the USSR. The Tu-104 and the Tu-104A probably were phased out of production late in the first quarter of 1959. Analysis indicates that Kazan' Airframe Plant No. 22, formerly a producer of the Badger, entered production of the Tu-104B in 1958.

\* The estimates and conclusions in this publication represent the best judgment of this Office as of 1 July 1959.

<sup>\*\*</sup> Estimated production of aircraft in the Sino-Soviet Bloc from 1955 through the second quarter of 1959 is given by number in Table 1, p. 7, below, and by airframe weight in Table 2, p. 8, below. Estimated production of aircraft in the USSR from 1955 through the second quarter of 1959 is given by number in Table 3, p. 9, below, and by airframe weight in Table 4, p. 10, below. For comparative purposes, US military acceptance figures from 1955 through the second quarter of 1959 are given by number in Table 6, p. 12, below, and by airframe weight in Table 7, p. 13, below. For additional comparison, production of combat aircraft in the USSR from 1955 through mid-1959, by number, is compared with that in the US in the chartrinside back cover. \*\*\* For descriptions and illustrations of all Soviet aircraft mentioned in this publication, see the Characteristics and Performance Handbook, USSR Aircraft, issued in January 1958 by the Assistant Chief of Staff/ Intelligence and the Office of Naval Intelligence, US Navy, SECRET. Supplementary updating sheets have been added to this handbook. \*\*\*\* Estimated cumulative production of selected Soviet aircraft, including the Bison, through the second quarter of 1959 is given in Table 5, p. 11, below. Estimates of monthly, quarterly, and cumulative production at selected plants in the Sino-Soviet Bloc are given in Table 10, p. 18, below.

Among turboprop transports, the Cleat (Tu-114) four-engine transport apparently has entered series production. It is believed that the large turboprop transport entered series production at Kuybyshev Airframe Plant No. 18. Tashkent Airframe Plant No. 84 recently was identified as the production site for the Antonov-designed Camp (An-8). This turboprop assault transport now is believed to be in series production. Along with the Camp, series production of the Coot (II-18) and the Cat (An-10) turboprop transports is continuing. It is now apparent that, after initial delays, production of these new turboprop transports designed by S. I. Il'yushin and O. K. Antonov is well under way.

As of 1 July 1959, there was no firm evidence as to which of the new jet fighters will enter quantity production in the USSR. The output of all five of the airframe plants involved in production of the new jet fighters is relatively low. Of the new fighters, only the Fitter, designed by P.O. Sukhoy, is believed to have been produced in sizable quantities.

It is believed that production of the Horse (Yak-24) helicopter has been resumed in the USSR. The Yakolev-designed helicopter first was sighted in 1955 but probably was not produced in quantity until late 1957 or early 1958. Production of the Horse is believed to take place at Leningrad Airframe Plant No. 272.

The most noteworthy development in production of aircraft in the Sino-Soviet Bloc outside the USSR occurred in Czechoslovakia where the anticipated production of Farmer (MIG-19) jet fighters failed to materialize. The Farmer did not appear in the expected numbers during the second quarter of 1959.

#### 2. Production in the USSR

#### a. Bombers

Analysis of information received after publication of the last estimate in this series indicates that five rather than three Bison heavy jet bombers were produced at Moscow/Fili Airframe Plant No. 23 during the first quarter of 1959. Analysis of Plant No. 23 during the second quarter of 1959 indicates that two Bison aircraft were produced in March, two in April, and one in June. Cumulative production of Bison aircraft at Plant No. 23 therefore is estimated to be 105 aircraft, as of 1 July 1959. This estimate is believed to be reliable within plus or minus six aircraft.

Production of the Badger medium jet bomber is believed to have ceased. Of the three plants which produced Badger aircraft, Kazan' Airframe Plant No. 22 and Voronezh Airframe Plant No. 64 are known to be producing transport aircraft. The current production, if any, at the third plant, Kuybyshev Airframe Plant No. 1, is unknown. Both Kuybyshev Airframe Plant No. 1 and Kazan' Airframe Plant No. 22 still are believed to be overhauling Badger aircraft.

With the phasing out of production of medium bombers, Moscow/Fili Airframe Plant No. 23 is the only Soviet plant known to

be engaged in the production of bomber aircraft. Plant No. 23 has been suspected for some time of phasing the Bison out of production, but production continues at the low level of one aircraft per month. The only known developmental medium or heavy bomber aircraft is the Bounder. No new information concerning the Bounder has become available during the second quarter of 1959.

#### b. Transports

Aeroflot registration numbers from the Camel (Tu-104, Tu-104A, and Tu-104B) twin-jet transport indicate that the Tu-104 and Tu-104A versions are no longer in production. Both the 50-passenger Tu-104 and 70-passenger Tu-104A had been produced at Khar'kov Airframe Plant No. 135 and Omsk Airframe Plant No. 166. It is estimated that production of the Tu-104 and Tu-104A aircraft at these plants probably phased out by the second quarter of 1959. Current production at these plants is not known.

Kazan' Airframe Plant No. 22 as the producer of the 100-passenger version of the Camel. Production of the Tu-104B at Plant No. 22, which previously produced the Badger medium bomber, is believed to have begun during the third quarter of 1958. A total of 39 Tu-104B aircraft are estimated to have been completed at this plant by 1 July 1959.

The Cleat (Tu-114) four-engine turboprop transport long has been expected to go into series production. A Tu-114 prototype

s first observed in November
1957 at the October Revolution Air Show in Moscow. This prototype, which is the only Tu-114 known to exist, was not active before the spring of 1959 but since that time has made several long-distance flights, the most notable being the recent nonstop flight from Moscow to New York on 28 June. Two Tu-114D's, which are believed to be transport versions of the Bear (Tu-95) bomber aircraft, are also known to exist. They have been observed in flight traffic and Soviet publications since May 1958.

It now appears that the Tu-114 is in series production. The designer, Andrey N. Tupolev, who was one of the passengers aboard the Trans-Atlantic flight to New York, announced that series production of the Tu-114 had begun and that a total of 12 to 15 aircraft already have been built. Visitors to the annual meeting of the Federation Aeronautique Internationale, held in Moscow 24 May through 5 June 1959, were told that Aeroflot had four Tu-114's and two Tu-114D's.

It is tentatively estimated on the basis of this information that, as of 1 July 1959, 12 Cleat (10 Tu-114 and 2 Tu-114D) have been produced at Kuybyshev Airframe Plant No. 18.

As previously anticipated, Tashkent Airframe Plant No. 84 was identified during the second quarter of 1959 as the production site of the Camp. The Antonov-designed turboprop assault transport

probably entered series production in late 1958. The number of aircraft sighted and the relatively small size of the airframe plant indicate that the Camp is being produced on a two-shift basis.

the previous estimate of Coot production at Moscow Airframe Plant No. 30 was too high. Analysis indicates that this plant reached a peak rate of four Coot aircraft per month rather than six per month as was previously estimated. A total of 69 Coot aircraft is estimated to have been produced at Moscow Airframe Plant No. 30 as of 1 July 1959.

#### c. Fighters

Significant changes from the previously estimated production of jet fighter aircraft have been incorporated within this estimate. A reevaluation of earlier intelligence information

indicates that Komsomol'sk Airframe Plant No. 126 was taking part in series production of the Fresco (MIG-17) at least into 1958 and that production or modification and overhaul of the aircraft is continuing at this plant. This continued association with the Fresco suggests that the new Sukhoy-designed jet fighter, the Fitter, has not entered full series production, and estimates of production of the Fitter have been lowered accordingly.

During 1959, both Gor'kiy Airframe Plant No. 21 1/\* and Tbilisi Airframe No. 31 2/ are participating in production of a new Mikoyan aircraft designated Article E-6. The plants had been associated since 1956 with production of test quantities of Mikoyan aircraft designated Articles E-2, E-2A, and E-5. The association of both plants with Article E-6 suggests that Article E-6 is the Mikoyan-designed jet fighter scheduled for series production. Accordingly, it is estimated that production of Articles E-2 and E-5 in both plants was phased out by mid-1959 in favor of production of Article E-6. This estimate is substantiated by statements recently made by Soviet Marshal Malinovskiy. 3/ The Marshal stated that the MIG-21, not positively identified but believed to be a new Mikoyan jet fighter, had not stood up under field tests and had been withdrawn from production. It appears probable that the designation MIG-21 may have equated with Article E-2 or Article E-5, both of which were replaced in production by Article E-6.

As of 1 July 1959, there is no firm evidence as to which of the new jet fighters observed in 1956 will enter quantity production. It is not believed that more than two of the aircraft of the Faceplate/Fishbed, Fitter/Fishpot series, or the Yak-27/29 will enter quantity production. Only the Fitter is believed to have been produced in significant numbers. Although more Sukhoy aircraft appear to have been produced than new Mikoyan fighters, it is probable that only service tests lots have been completed. Neither Komsomol'sk Airframe Plant No. 126, production site of the Fitter, nor Novosibirsk

<sup>\*</sup> For serially numbered source references, see the Appendix.

Airframe Plant No. 153, possibly the production site of the Fishpot, appears to be under pressure to produce large numbers of the new fighters quickly. It is believed that Novosibirsk Airframe Plant No. 153 still may be producing the Farmer, although firm evidence of this production is lacking. As yet there is no evidence of the Soviet decision as to which of the new fighters is to be placed in large-scale production.

#### d. Others

As was suggested in earlier publications in this series, it is now believed that the USSR has resumed production of the Horse helicopter. This helicopter first was sighted in 1955 but was not produced beyond a test series in that year. From 1955 through early 1958 the Horse failed to appear in significant numbers. A version of the Yakolev-designed helicopter sighted in 1958, however, showed improvement in comparison with the earlier model and included a revised tail configuration. 4/ It is believed that the Horse entered series production at Leningrad Airframe Plant No. 272 in late 1957. It is estimated that cumulative production of the Horse had reached 32 helicopters as of 1 July 1959.

During the second quarter of 1959 a new helicopter, possibly designed by Antonov, was sighted at Lyubertsy airfield. 5/ Described as having two 4-blade rotors similar to the Hound (Mi-4), this helicopter has not been identified. 6/

#### 3. Production in the European Satellites\*

Several changes have been made in this publication from previous estimates of production of aircraft in the European Satellites. Production of the Midget (U-MIG-15) at Prague/Vodochody Airframe Plant have been revised for 1958 and the first quarter of 1959. It was estimated previously that production of the Midget was declining and that it would be replaced in production by the Farmer twin-jet fighter. It is now suspected that the Farmer is not to be series produced and that the Midget will remain in production longer than formerly anticipated. Pending the receipt of clarifying reports, production of both the Midget and the Farmer are carried at moderate rates.

In late 1957 and early 1958 the trend in the number of Midget aircraft sighted at the plant was downward, and in the summer of 1958 only a few Midget aircraft were observed. Intelligence reports and occasional sightings of Farmer aircraft suggested that production of the Midget was being replaced by production of the Farmer. In early 1959, however, the number of Midget aircraft observed at the plant increased; passenger buses, possibly manufactured at the plant, were observed in the area; and Farmer aircraft failed to appear in the expected numbers.

<sup>\*</sup> Estimated production of aircraft in the European Satellites and in Communist China from 1955 through the second quarter of 1959 is given by number in Table 8, p. 14, below, and by airframe weight in Table 9, p. 16, below.

Two other items may be of significance concerning production at Prague/Vodochody Airframe Plant. First, on 24 August 1948, reference was made in a Czechoslovak newspaper to "... changes it will be necessary to make very soon in the structure of the engineering sector of the economy." 7/

Second, in February 1959 it was reported in a Czechoslovak newspaper that Vysocany Aero, which formerly had produced aircraft parts, was to manufacture electronic instruments. 8/ Because Vysocany Aero has been a major subcontracting plant for Prague/Vodochody Airframe Plant, withdrawal of this plant from production of aircraft parts would greatly reduce output at the airframe plant.

Analysis of the foregoing information suggests that the Farmer originally was scheduled to replace the Midget in production but that this decision was revised in mid-1958. It is anticipated that production of the Midget will continue at the plant at least through the third quarter of 1959, although at a lower rate than before the preparations to produce the Farmer were undertaken.

Table 1

Estimated Production of Aircraft in the Sino-Soviet Bloc, by Number a/ 1955 Through the Second Quarter of 1959 3

											Units
Type of Aircraft		1955		1956	τ.	1957		1958	lst	1st Quarter of 1959	2d Quarter of 1959
Heavy Medium Light	21 450 790	/4 (088)	25 530 330	(500)	33 460 130	( <i>0.</i> )	14 230 0		12	(3)	\ \ \ \ \ \ \
Turboprop bomber											
Heavy	17		35		0		0		0		C
Jet fighter Transport	2,800	2,800 (2,900)	2,900	(5,400)	2,400	(1,900)	1,400	1,400 (1,300)	570		270
Jet Turboprop Piston	009	(5)	1 <sup>4</sup> 3 1,000 (1	(17) (1,100)	32 17 1,300	(30)	73 100 780	(37) (120) (750)	17 59 160	(6)	14 70
Trainer											<del>)</del>
Jet Piston	1,100.		550		420 520		340 520	(370)	75	(95)	75
Other c/	900	(520)	0η9	(029)	006		1,100		240		540
Total	6,800	(6,900)	6,700	(6,100)	6,200	(5,600)	4,500		) 096	(620)	980
Eight or are rounded to two	anded to	c) cm) to	Cant digite	10+0H	1						

a. Figures are rounded to two significant digits. Totals are derived from unrounded figures and do not always agree with the sum of the rounded components.

b. Numbers in parentheses represent estimates presented in the last publication of this series. Reasons for changes in the present estimates from past estimates are explained in the text of this publication.

Table 2

Estimated Production of Aircraft in the Sino-Soviet Bloc, by Weight a/

								The	wsand Por	unds of Air	Thousand Pounds of Airframe Weight
									lst 6	1st Quarter	2d Quarter
Type of Aircraft	1955	1	61	1956.		1957		1958	4	of 1959	of 1959
Jet bomber					•						
Heavy Medium Light	2,300 23,000 (19,000) b/ 14,000		2,800 27,000 6,000	(25,000)	3,700 23,000 2,300	w.	1,600 12,000 0		560 610	(340)	560
Turboprop bomber											•
Heavy	1,500	· . ·	3,100		0		0		0		0
Jet fighter Transport	22,000 (23,000)		25,000 (	(27,000)	21,000	(17,000)	12,000		2,200		2,300
Jet: Turboprop Piston	220 (280) 0 2,400 (2,600)		770 94 9,500	(940) (0,700)	1,800 840 11,000	(1,700) (890) (10,000)	4,100 4,600 5,400	(2,100) (5,400) (4,900)	2,600 780	(500) (2,500)	840 3,200 840
Trainer											
Jet Piston	8,100 640	(,)	3,400 680		2,600 590		2,100	(2,300)	460 150	(340)	160 160
Other $c/$	3,700 (3,900)		4,300	(009,4)	5,100	(2,000)	7,600	(4,500)	830	(160)	. 420
Total	78,000 (76,000)		83,000 (78,000)	78,000)	72,000	72,000 (67,000)	146,000	(45,000)	9,200	(8,500)	9,100

Totals are derived from unrounded figures Changes in the present weight a. Figures include production of spare parts and are rounded to two significant digits. Totals a and do not always agree with the sum of the rounded components.

b. Numbers in parentheses represent estimates presented in the last publication of this series. (estimates from past weight estimates reflect changes in the estimated number of aircraft produced.

c. Helicopters, seaplanes, and utility aircraft.

Table 3

Estimated Production of Aircraft in the USSR, by Number a/ 1955 Through the Second Quarter of 1959

:

											Units
Type of Aircraft		1955		1956	15	1957	19	1958	1st 6	lst Quarter of 1959	2d Quarter of 1952
Jet bomber Heavy Medium Light	12 1450 790	/4 (386)	25 530 330	(500)	33 460 130	<b></b>	14 230 0		0 25.55	(3)	
Turboprop bomber											
Heavy	17		35		0		Ο,		.0		0
Jet fighter Transport	2,400	(2,600)	2,500	(2,000)	2,200	(1,600)	880.	(850)	130		120
Jet Turboprop Piston	009	(5) (6 <u>1</u> 0)	1,000	(11)	32 17 1,200	(30) (18) (1,100)	72 100 620	(36) (120) (600)	17 59 110	(6)	13 70 120
Trainer										٠	
Jet Piston	840 340	•	310		180		140 360		88		8 8
Other c/	044	(054)	510	(530)	049		710	(00)	150		150
Total	5,900	(6,000)	5,700	(5,200)	5,200	(4,600)	3,100 (	(3,000)	5 009	(019)	009

a. Figures are rounded to two significant digits. Totals are derived from unrounded figures and do not always agree with the sum of the rounded components.

b. Numbers in parentheses represent estimates presented in the last publication of this series. Reasons for changes in present estimates from past estimates are explained in the text of this publication.

c. Helicopters and seaplanes.

Table 4

Estimated Production of Aircraft in the USSR, by Weight a/ 1955 Through the Second Quarter of 1959

;

								Thousa	und Pound	ls of Airf	Thousand Pounds of Airframe Weight
Type of Aircraft		1955	1	1956	1	1957	T)	1958	1st G	lst Quarter of 1959	2d Quarter of 1959
Jet bomber Heavy Medium Light	2,300 23,000 14,000	(19,000) ½	2,800 27,000 6,000	(25,000)	3,700 23,000 2,300	Artif	1,600		560 610 0	(340)	999 0 0
Turboprop bomber											
Heavy	1,500		3,100		0		0		0		0
Jet fighter Transport	20,000	20,000 (21,000)	23,000	(19,000)	19,000	(15,000)	8,200	(8,100)	1,200	1,200 (1,400)	1,200
Jet Turboprop Piston	220	(2,600)	770 94 9,200	(940)	1,800 840 10,000	(1,700) (890) (9,400)	4,000 4,600 3,400	(2,000) (5,400) (3,000)	2,600 270	(500) (2,500)	770 3,200 320
Trainer											
Jet Piston	6,700 400		2,000 430		1,100		830 430		180 110		180
-Other c/	3,600	(3,800)	4,200	(4,500)	4,700		000,4	(3,900)	069	(630)	099
Total	74,000	74,000 (72,000)	78,000	78,000 (73,000)	68,000	(62,000)	39,000	(37,000)	7,200	(6,600)	7,000

a. Figures include production of spare parts and are rounded to two significant digits. Totals are derived from unrounded figures and do not always agree with the sum of the rounded components.

b. Numbers in parentheses represent estimates presented in the last publication of this series. Changes in the present weight estimates from past weight estimates reflect changes in the estimated number of aircraft produced.

c. Helicopters and seaplanes.

Estimated Cumulative Production of Selected Aircraft in the USSR a/ Through the Second Quarter of 1959

		Units
Model	Type of Aircraft	Production to 1 July 1959
Badger b/ Beagle b/ Bear b/ Bison Camel (Tu-lO4, Tu-lO4A) b/ Tu-lO4B Cat Camp Cleat (Tu-l14) Coot Crate b/ Clod Farmer Flashlight b/ Fresco b/ Flishbed Fitter Horse Hound New fighters	Jet medium bomber Jet light bomber Turboprop heavy bomber Jet heavy bomber Jet transport Turboprop transport Turboprop transport Turboprop transport Turboprop transport Turboprop transport Turboprop transport Fiston transport Piston transport Jet fighter	1,800 6,000 55 100 120 130 37 10 c/ 69 1,200 65 130 1,500
		770

a. Totals given in this table are rounded to two significant digits. b. Denotes aircraft no longer in production. c. This figure does not include two Tu-114D's.

Table 6

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US Military Aircraft Acceptances, by Number a/ 1955 Through the Second Quarter of 1959

						Units
Type of Aircraft	1955	1956	1957	1958	lst Quarter of 1959	2d Quarter of 1959 <u>b</u> /
romoer		٠		· v.		
Heavy Medium Light	34 530 155	75 505 105	173 199 14	156 31 0	19	. K9 0
Ground attack Fighter Transport	631 4,017 536	2,656 362 362	339 2,569 223	400 1,574 337	95 202 46	98 270 148
Other c/	701	1,098	784 1,316	567 1,174	160 241	17 <sup>1</sup> 4 1 <i>9</i> 7
Total	8,043	6,113	5,617	4,239	<u>768</u>	828

a. 9/b. Including preliminary data for June 1959. c. Tankers; helicopters; flying boats; and antisubmarine warfare, warning, liaison, utility, amphibian, and lighter-than-air aircraft.

Table 7

US Military Aircraft Acceptances, by Weight a/ 1955 Through the Second Quarter of 1959

;

Quarter	of 1959 b/		3,752	192	0	7,000	3,624	1,465	987	3,891	116,4	
	of 1959 1		2,101	160	0	855	,578	925	891	4,193	<u>502, tu</u>	
lst	7		N				2			4	킈	
	1958		17,638	1,250	0	3,680	18,562	8,134	3,107	13,758	66,129	
	1957		19,462	7,340	268	3,720	30,427	9,319	4,050	4,853	79,439	
	1956		8,442	22,525	1,975	4,803	30,588	13,104	3,283	5,292	90,012	
	1955		3,853	26,377	2,724	6,034	43,161	20,697	7,453	4,397	114,696	
	Type of Aircraft	Bomber	Heavy	Medium	Light	Ground attack	Fighter	Transport	Trainer	Other $c/$	Total	

a. 10/ b. Including preliminary data for June 1959. c. Tankers; helicopters; flying boats; and antisubmarine warfare, warning, liaison, utility, amphibian, and lighter-than-air aircraft.

Table 8

Estimated Production of Aircraft in the European Satellites and in Communist China, by Number a/\*

								Units
Country	Type of Aircraft	1955	1956	1957	1,0	1958	lst Quarter of 1959	2d Quarter of 1959
Czechoslovakia	Jet fighter Jet trainer Piston trainer Piston transport Helicopter Other	130 120 0 68	240 120 17 17 0	240 240 46 250	200 500 600 7	(230) 🗹	3 45 (26) 0 15 5 56	. 45 0 0 15 8
Total		260	210	. 520	570	(009)	120 (100)	130
Poland	Jet fighter Fiston trainer Light helicopter	240 36 0	340 36 0	240 36 40	360 34 110	i 4 5	8218	848
Total		<u>280</u>	380	310	200		130	740
Rumania Bulgaria Hungary	Piston trainer Piston trainer Piston trainer	l처임통	4288	36/3/6/3/6/3/6/3/6/3/6/3/6/3/6/3/6/3/6/	8일 전 전		810184	<u>18</u> 2005
East Germany	Piston transport Jet transport	00	(10	19	4,1 1,	(39)	60	6 1
Total		01	∾ા	129	<del>21</del>	(04)	<b>6</b> /	이

<sup>\*</sup> Footnotes for Table 8 follow on p. 15.

Table 8

Estimated Production of Aircraft in the European Satellites and in Communist China, by Number  $\frac{1}{2}$ 1955 Through the Second Quarter of 1959 (Continued) ;

							Units
Country	Type of Aircraft	1955	1956	1957	1958	lst Quarter of 1959	2d Quarter of 1959
Communist China	Jet fighter Piston transport	00	00	٦. ا	120 56	94 5	847
Total		01	01	ત્યા	180	202	75
Grand total		006	88	<u>270</u>	7,400	360 (340)	380

a. Figures are rounded to two significant digits. Totals are derived from unrounded figures and do not always b. Numbers in parentheses represent estimates presented in the last publication of this series. Reasons for changes in the present estimates from past estimates are explained in the text of this publication. agree with the sum of the rounded components.

Table 9

Estimated Production of Aircraft in the European Satellites and in Communist China, by Weight a/\*

Thousand Pounds of Airframe Weight	2d Quarter of 1959	67 280 260 260 8 8	019	670 21 69	091	71001 1001	160	550
nds of A1	Quarter of 1959	(160)	(510)					
usand Pou	lst Quarter of 1959	280 280 260 260 5	630	670 12 69	750	71001	160	160
Tho	1958	(1,400) 5/	(2,900)	; • •			(670)	(07/2)
		96 1,300 1,000 1,000	2,700	2,700 33 260	3,000	178	710 68	780
	1957	0 1,500 6 800 0 240	2,500	1,700 35 92	1,800	334	33ġ 0	330
	1956	0 1,500 120 290 0 1,50	2,000	2,000 35 0	2,100	123 123 135 135 135 135 135 135 135 135 135 13	35	35
	1955	760 1,500 130 0 0	2,400	1,400	1,500	129	00	01
	Type of Aircraft	Jet fighter Jet trainer Piston trainer Piston transport Helicopter Other		Jet fighter Piston trainer Light helicopter		Piston trainer Piston trainer Piston trainer	Piston transport Jet transport	
	Country	Czechoslovakia	Total	Polend	Total	Rumania Bulgaria Hungary	East Germany	Total

<sup>\*</sup> Footnotes for Table 9 follow on p. 17.

Table 9

Estimated Production of Aircraft in the European Satellites and in Communist China, by Weight <u>a/</u> 1955 Through the Second Quarter of 1959 (Continued)

Weight	2d Quarter of 1959	360	094	2,100
rframe	2d Q		71	22.
Thousand Pounds of Airframe Weight	lst Quarter of 1959	340	· 430	2,000 (1,900)
III.	1958	890	1,100	7,700 (7,800)
	1957	4	킈	1,800
	1956	0,0	01	4,200
	1955	0.0	01	4,000
	Type of Aircraft	Jet fighter Piston transport		,
	Country	Communist China	Total	Grand total

a. Figures include production of spare parts and are rounded to two significant digits. Totals are derived from unrounded figures and do not always agree with the sum of the rounded components.

b. Numbers in parentheses represent estimates presented in the last publication of this series. Changes in the present weight estimates from past weight estimates reflect changes in the estimated number of aircraft produced.

Table 10

Estimated Production of Aircraft in the Sino-Soviet Bloc, by Number in Selected Plants as of the Second Quarter of 1959

	Remarks		It was believed that Bison	production would have	phased out during the last	quarter, but production bas continued at a higher	rate than in 1958.	Prototypes, Only one	Bounder is known to exist,	but it is probable that	another was constructed	for static tests.	Series production is be-	lieved to have ceased dur-	ing the fourth quarter of	1956.	fourtion ceased in the	ilrst quarter of 1959. Production ceased in pass	caacaton ceased in Decem-	ber 1950. Production ceased in late	1957 or early 1958.		Believed to be entering	production of article E-6.	
	Cumulative Production a/*		100 I				í	N.		•	~		55 Se			690		920 Pr		220 Pr	-		1,400 Be	d	
Units	Quarterly Production		5				c	>					0			0		0		0			0	9	
	June Production	ازري	₁→				C	>		1,		c	>	•		0		0		0			0	٦	
	Airframe Plant		Moscow No. 23				Moscow No. 23					Kurhvehev No 18	or con conferm			Kuybyshev No. 1		Kazan' No. 22		Badger (Tu-16) Voronezh No. 64			Gor'kiy No. 21	Gor'kiy No. 2l	
	Model		Bison (M-4)				Bounder					Bear (Tu-95)				Badger (Tu-16)		Badger (Tu-16)	,	Badger (Tu-16)		Farmer	(MIG-19)	New fighters	p. 21.
	Type of Aircraft	Bombers	Heavy jet									Heavy turboprop Bear (Tu-95)				Medium jet						Jet fighters			Footnote for Table 10 follows on p. 21.
	Country	USSR																			,				* Footnote for

Table 10

Estimated Production of Aircraft in the Sino-Soviet Bloc, by Number in Selected Plants as of the Second Quarter of 1959
(Continued)

	Remarks	Belleyed to be entering	production of Article E-6.	Phasing out.		Entered production in the	third quarter of 1958.	Production of the Tu-104A is believed to have ceased.	Production of the Tu-104A is believed to have ceased.				
	Cumilative Production 8/	1,700	65 130	2,100 63 65		39	wj	4,	70	19	69		
Units	Quarterly Production	0	8 35	25 36 15		££.	0	>	0	17	20 12	, 0 16	
	June	<b>~</b> 0	12	25		5	0 (	>	0	Ø	L-4 (	N O IV	
	Airframe Plant	Tbilisi No. 31	Tbilisi No. 31 Komsomol'sk No. 126	Novosibirsk No. 153 Novosibirsk No. 153 Saratov No. 292		Kazan' No. 22		ALICATOR NO. 137	Omsk No. 166	Irkutsk No. 39	Voronezh No. 64 Moscow No. 30	Kuybyshev No. 18 Tashkent No. $84$	- 19 -
	Model	Fresco (MIG-17)	Fishbed Fitter	(MIG-19) Fishpot Yak-27		Camel (Tu-lO4B)	Camel (Tu-104	(WEOT-NT DIR	Camel (Tu-104 and Tu-104A)	Military Cat (An-12)	(An-lo) (cot (I1-l8)	and fu-114b) camp (An-8)	
	Type of Aircraft	Jet flghters (Continued)			Transports	Jet				Turboprop			
	Country	USSR (Continued)											

Table 10

Estimated Production of Aircraft in the Sino-Soviet Bloc, by Number in Selected Plants
"
(Continued)

	Romarica	No. of the last of				Possibly phasing out.			Possibly phasing out.					
	Cumulative Production a/		1,200 1,700 110			2,400	280	870 150	1,100 32	330	:	. 20 160	1,100	540 14 210
Inite	Quarterly Production		72 0 145			88	84	45 18	88 9	m		7	45 8	15 6 9
	June	* الربيا	24 0 16			10 30	.91	15 6	<i>0</i> , и	, ,		m 50	45 3	ναώ
	Airframe Plant		Leningrad No. 458 Kiev No. 473 Kiev No. 473			Ulan-Ude No. 99 Semenovka No. 116	Rostov No. 168	Chkalov No. 47 Ulan-Ude No. 99	Kazan' No. 387 Leningrad No. 272	Taganrog No. 49/86		Vodochody Cakovice	Vodochody Otrokovice	Aunovice Kunovice Chocen "Orlican"
	Model		Creek (Yak-12) Colt (An-2) Clod (An-14)		Midget	(U-MIG-15) Max (Yak-18)	Hare:(M1-1)	Hen (Ka-15)	Hound (Mi-4) Horse (Yak-24)	Madge (Be-6)	Farmer	(MIG-19) type Crate (I1-14) Midget	(U-MIG-15) HC-2 Aero-45	L-200 L-60
	Type of Aircraft	Transports (Continued)	Piston	Trainers	Jet .	Piston	Helicopters			Seaplanes	Jet fighters	Piston transports Jet trainers		
	Country	USSR (Continued)							\$ \$\cdot\_1	<i></i>	Czechoslovakia			

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Table 10

Estimated Production of Aircraft in the Sino-Soviet Bloc, by Number in Selected Plants
"
(Continued)

	rks												
	Remarks											•	
	Cumulative Production 8/	<sup>4</sup> 0 580	920	5. 2.4 2.4	N 1	210	140	59	011	130	78 2	5	110
Units	Quarterly Production	9	S	8 8 ,	۰ ٥	30	m	3	0	6	61	gi	21
	June	m±		) r	10	10	H	٦	0	ന	εч	71	6
	Airframe Plant	Chocen "Orlican" Otrokovice	. vo lo l	Mielec	Okecie	Lublin/Swidnik	Stalin	Reghin	Lovech	Esztergom	Dresden/Klotzsche Dresden/Klotzsche	Chenman Mon 110	Nanchang No. 320
	Model	L-40 ZLIN series	Fresco	TS-8	PZL-102	SM-1	IAR-813 IAR-817 (	RG-6	LAZ series	Max (Yak-18)	Crate (I1-14) "Type 152"	Fresco	Colt (An-2)
	Type of Aircraft	Others (Continued)	Jet fighters	Piston trainers		Helicopters	Piston trainers		Piston trainers	Piston trainers	Piston Jet		Piston transports
	Country	Czechoslovakia (Continued)	Poland				Rumania		Bulgaria	Hungary	East Germany	Communist China Jet fighters	

a. Unless otherwise indicated, figures for cumulative production are rounded to two significant digits and include all production through the second quarter of 1959.

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#### APPENDIX

### SOURCE REFERENCES

Evaluations, following the classification entry and designated "Eval.," have the following significance:

Source of Information	Information
Doc Documentary A - Completely reliable B - Usually reliable C - Fairly reliable D - Not usually reliable E - Not reliable F - Cannot be judged	<ol> <li>Confirmed by other sources</li> <li>Probably true</li> <li>Possibly true</li> <li>Doubtful</li> <li>Probably false</li> <li>Cannot be judged</li> </ol>

"Documentary" refers to original documents of foreign governments and organizations; dopies or translations of such documents by a staff officer; or information extracted from such documents by a staff officer, all of which may carry the field evaluation "Documentary."

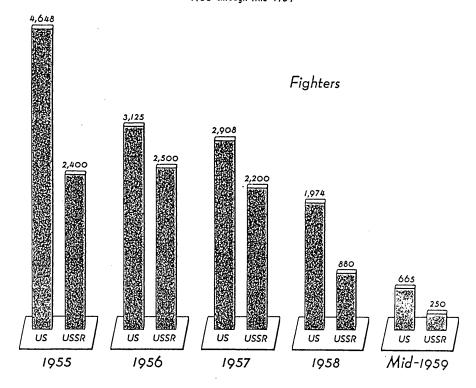
Evaluations not otherwise designated are those appearing on the cited document; those designated "RR" are by the author of this publication. No "RR" evaluation is given when the author agrees with the evaluation on the cited document.

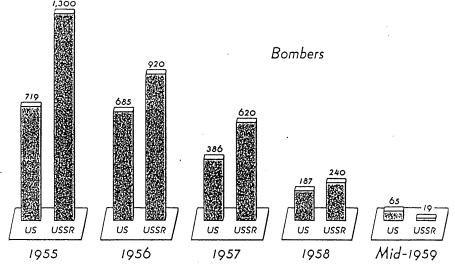
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US\* and USSR\*\*

# PRODUCTION OF COMBAT AIRCRAFT, BY NUMBER

1955 through Mid-1959





<sup>\*</sup> US totals include preliminary data for March 1959.

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<sup>\*\*</sup> USSR totals are rounded.