

~~S-E-C-R-E-T~~

52

3890

CIA HISTORICAL REVIEW PROGRAM
RELEASE AS SANITIZED
1999

QUARTERLY ESTIMATE OF THE PRODUCTION OF AIRCRAFT
IN THE SINO-SOVIET BLOC
APRIL-JUNE 1957

CIA/RR IP-545

31 July 1957

CENTRAL INTELLIGENCE AGENCY

Office of Research and Reports

~~S-E-C-R-E-T~~

WARNING

THIS MATERIAL CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF THE ESPIONAGE LAWS, TITLE 18, USC, SECS. 793 AND 794, THE TRANSMISSION OR REVELATION OF WHICH IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW.

~~S-E-C-R-E-T~~

FOREWORD

This report is the ninth in a series to be issued on a quarterly basis summarizing production of aircraft in the Sino-Soviet Bloc. The estimates presented are issued to satisfy the requests of consumers for the most recent estimates of production of aircraft in the Bloc and are intended to supersede those contained in previous ORR publications. Changes in the present estimate from past estimates are the results of more recent intelligence information.

- iii -

~~S-E-C-R-E-T~~

CONTENTS

	<u>Page</u>
1. Trends in Production	1
2. Production in the USSR	1
3. Production in the European Satellites and in Communist China	3

Tables

1. Estimated Production of Aircraft in the Sino-Soviet Bloc, by Number, 1954 Through the Second Quarter of 1957	5
2. Estimated Production of Aircraft in the Sino-Soviet Bloc, by Weight, 1954 Through the Second Quarter of 1957	6
3. Estimated Production of Aircraft in the USSR, by Number, 1954 Through the Second Quarter of 1957	7
4. Estimated Production of Aircraft in the USSR, by Weight, 1954 Through the Second Quarter of 1957	8
5. Estimated Cumulative Production of Selected Aircraft in the USSR, Through the Second Quarter of 1957	9
6. US Military Aircraft Acceptances, by Number, 1954 Through the Second Quarter of 1957	10
7. US Military Aircraft Acceptances, by Weight, 1954 Through the Second Quarter of 1957	11
8. Estimated Production of Aircraft in the European Satellites and in Communist China, by Number, 1954 Through the Second Quarter of 1957	12
9. Estimated Production of Aircraft in the European Satellites and in Communist China, by Weight, 1954 Through the Second Quarter of 1957	13

~~S-E-C-R-E-T~~

Charts

- Figure 1. US and USSR: Production of Military Aircraft,
by Number, 1954 Through the Second Quarter
of 1957 Inside
Back Cover
- Figure 2. US and USSR: Production of Military Aircraft,
by Weight, 1954 Through the Second Quarter
of 1957 Inside
Back Cover

~~S-E-C-R-E-T~~

QUARTERLY ESTIMATE OF THE PRODUCTION OF AIRCRAFT
IN THE SINO-SOVIET BLOC
APRIL-JUNE 1957*

1. Trends in Production.

In the second quarter of 1957, estimated total production of aircraft, by number and by weight, in the Sino-Soviet Bloc remained essentially the same as the estimated total production in the previous quarter.** Approximately 52 percent of the aircraft produced by the Bloc during the second quarter of 1957 are believed to have been combat types.***

2. Production in the USSR.

The Soviet share of estimated total production of aircraft by the Sino-Soviet Bloc during the second quarter of 1957 decreased about 2 percent from that of the previous quarter.*** Of the 2,300 aircraft estimated to have been produced by the Bloc in the second quarter of 1957, about 1,800 aircraft, or approximately 78 percent, were produced in the USSR. As an indication that the satellites still are producing relatively lighter aircraft than the USSR, about 91 percent of the estimated total production of aircraft in the Bloc, by airframe weight, took place in the USSR. Approximately 86 percent of the estimated total production of combat aircraft in the Bloc during the second quarter of 1957 is believed to have taken place in the USSR.

* The estimates and conclusions contained in this report represent the best judgment of ORR as of 1 July 1957.

** Estimated production of aircraft in the Sino-Soviet Bloc from 1954 through the second quarter of 1957 is given by number in Table 1, p. 5, below, and by airframe weight in Table 2, p. 6, below.

*** For the purposes of this report, combat types include bomber, fighter, and ground attack aircraft. Other aircraft such as helicopters and transports have uses under both combat and noncombat conditions.

**** Estimated production of aircraft in the USSR from 1954 through the second quarter of 1957 is given by number in Table 3, p. 7, below, and by airframe weight in Table 4, p. 8, below.

~~S-E-C-R-E-T~~

It is estimated that total Soviet production of combat aircraft during the second quarter of 1957 exceeded that of the US by approximately 14 percent in terms of numbers and by approximately 11 percent in terms of airframe weight.*

As a result of recent intelligence information, several major changes have been made in previously published estimates of Soviet production of aircraft. Observations of the plant area at Moscow Airframe Plant No. 23, production site of the Bison heavy jet bomber, indicate a production rate of probably 8 Bisons during the second quarter of 1957. Because 9 Bisons are believed to have been produced during the first quarter of 1957, the cumulative production of the Bison through the second quarter of 1957 is estimated to be 65 aircraft.** Estimated figures for production of the Beagle (Il-28) jet light bomber have been lowered since recent information established that Omsk Airframe Plant No. 166, previously believed to be producing the Beagle, actually has been engaged in production of the Camel (Tu-104) jet transport probably since mid-1955. Cumulative production of the Camel is estimated to have reached 51 aircraft, some of which are believed to be military versions of the transport.

It has become obvious in the past year that the USSR is placing a great deal of emphasis on the development of transport aircraft. A total of 9 turboprop transports of the types Camp, a 2-engine military transport, and Sat, a 4-engine civil transport, are estimated to have been constructed by the USSR at Kiev Airframe Plant No. 473 in conjunction with the Antonov's Special Design Bureau (Osoboye Konstruktor'skoye Byuro, OSOKB). It is believed that these models are prototypes and that 1 or 2 other plants are engaged in series production of the transports, with the first series-produced aircraft probably scheduled for completion late in the summer of 1957. A recent sighting of unidentified aircraft at Kazan' Airframe Plant No. 22 might mean that still another aircraft plant may be entering the transport program.

* Production of combat aircraft in the USSR from 1954 through the second quarter of 1957 is compared with that in the US by number in Figure 1, inside back cover, and by airframe weight in Figure 2, inside back cover. For additional comparison, US military acceptances from 1954 through the second quarter of 1957 are given by number in Table 6, p. 10, below, and by airframe weight in Table 7, p. 11, below.

** Estimated cumulative production of selected Soviet aircraft through the second quarter of 1957 is given in Table 5, p. 9, below.

- 2 -

~~S-E-C-R-E-T~~

~~S-E-C-R-E-T~~

Plant No. 22, currently believed to be producing the Badger medium jet bomber. was viewed recently from a distance of 4 miles

10
or 12 large aircraft, which were seen on the runway, had high tails and unusually fat fuselages. Because this description could well apply to one of the unidentified transport aircraft seen in the eighth rehearsal for the 1957 Tushino Air Show, it is possible that Plant No. 22 is producing an experimental series of transports along with its production of medium bombers or that the plant is starting series production of transports.* No estimate has been made regarding the unidentified aircraft at this plant pending additional information.

Recent information indicates that Moscow Airframe Plant No. 82, contrary to previous estimates, probably never has been engaged in production of the Horse (Yak-24) helicopter. It is believed that a plant in Leningrad, possibly Leningrad Airframe Plant No. 272, may have been responsible at least for initial production of the large helicopter. The estimated cumulative production figure for the Horse has been lowered to correspond with the smaller floor area of Plant No. 272 and with the small number of sightings of this aircraft.

Estimated figures for production of Soviet fighter aircraft have been changed from the previously published estimate. Analysis of recent intelligence has indicated that none of the new jet fighters seen in the 1956 Tushino Air Show as yet have been series produced, although some plants are believed almost ready for series production of the new fighters. First production models of still unidentified new jet fighters are expected to be completed some time during the third quarter of 1957. at Rostov Airframe Plant No. 168, it is believed now that this plant has never been engaged in series production of a new fighter. It is considered probable that a few prototypes, possibly of the Faceplate, were constructed at the plant.

3. Production in the European Satellites and in Communist China.

In the second quarter of 1957 the European Satellites produced an estimated total of about 430 aircraft, or approximately 19 percent of the total production of aircraft in the Sino-Soviet Bloc. During this same period, Communist China is estimated to have produced 73 aircraft, all piston-engine trainers, accounting for about 3 percent of the

*

also possible that they actually were Badgers.

it is

- 3 -

~~S-E-C-R-E-T~~

~~S-E-C-R-E-T~~

estimated total production by the Bloc.* Czechoslovakia and Poland remain the largest producers among the Satellites, accounting for about 59 percent and 21 percent, respectively, or a combined total of about 80 percent of Satellite production of aircraft by number.

significant numbers of Fagot (MIG-15) and Midget (U-MIG-15) aircraft at the Vodochody plant indicate continuing relatively high production of these aircraft. Although production of more modern aircraft is anticipated, available information reveals no clear indication of plans to introduce production of other aircraft at this plant in the immediate future.

Crate (IL-14) transports at the Prague Letnany plant airfield for the Avia plant reveal a gradually accelerating schedule of production for Crates. It is believed that a majority of Czechoslovak-produced Crates are delivered to the USSR.

Production of the Fagot continues at the Mielec plant in Poland. production of the Fresco (MIG 17) or of possibly another jet fighter was initiated in late 1956. No reliable reports, however, are available to confirm such production. sightings of only Fagot types of aircraft at the Mielec plant airfield.

In East Germany the rate of production of Crate transports increased during the second quarter. Delays in the delivery of supplies and other difficulties in production are believed to be retarding a planned increase in the production schedule.

Hungarian production of Max (Yak-18) trainers is estimated to have been resumed during the second quarter of 1957 after an interruption in production occasioned by the Hungarian uprising in October 1956.

It is believed that during the second quarter of 1957 the Chinese Communists at a Mukden plant assembled Fresco jet fighters from Soviet-manufactured parts. Available information indicates that the Chinese may enter series production of a MIG type of fighter in late 1957. Information also indicates that the Chinese Communists possibly may be producing jet engines at a Mukden plant.

* Estimated production of aircraft in the European Satellites and Communist China from 1954 through the second quarter of 1957 is given by number in Table 8, p. 12, below, and by airframe weight in Table 9, p. 13, below.

- 4 -

~~S-E-C-R-E-T~~

~~S-E-C-R-E-T~~

Table 1

Estimated Production of Aircraft in the Sino-Soviet Bloc, by Number a/
1954 Through the Second Quarter of 1957

Type of Aircraft	Units				
	1954	1955	1956	1st Quarter of 1957	2d Quarter of 1957
Jet bomber					
Heavy	1	21	25	9	8
Medium	140	350	470	120	120
Light	1,200	790	330	64	44
Turboprop bomber					
Heavy	0	8	24	6	6
Jet fighter	4,300	3,800	3,600	1,000	1,000
Ground attack	210	0	0	0	0
Transport					
Jet	0	6	27	9	9
Turboprop	0	0	3	3	3
Piston	1,700	740	1,100	340	340
Trainer					
Jet	1,200	1,200	800	200	210
Piston	1,100	1,300	1,500	380	400
Other b/	640	400	500	130	140
Total	10,000	8,700	8,400	2,300	2,300

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. Helicopters, gliders, seaplanes, and utility aircraft.

~~S-E-C-R-E-T~~

Table 2

Estimated Production of Aircraft in the Sino-Soviet Bloc, by Weight a/
1954 Through the Second Quarter of 1957

Type of Aircraft	Thousand Pounds of Airframe Weight			
	1954	1955	1956	1st quarter of 1957
Jet bomber				2d quarter of 1957
Heavy	110	2,300	2,800	1,000
Medium	7,100	18,000	24,000	5,900
Light	22,000	14,000	6,000	1,200
Turbo-prop bomber				890
Heavy	0	720	2,200	540
Jet fighter	30,000	29,000	32,000	9,400
Ground attack	1,700	0	0	0
Transport				9,200
Jet	0	370	1,700	560
Turbo-prop	0	0	94	120
Piston	9,700	3,100	9,600	3,400
Trainer				3,500
Jet	8,600	9,100	5,000	1,300
Piston	1,600	2,200	2,400	610
Other b/	6,300	4,000	3,900	900
Total	87,000	83,000	90,000	25,000
				25,000

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. Helicopters, gliders, seaplanes, and utility aircraft.

~~S-E-C-R-E-T~~

Table 3

Estimated Production of Aircraft in the USSR, by Number a/
1954 Through the Second Quarter of 1957

Type of Aircraft	Units				
	1954	1955	1956	1957	
Jet bomber			1st Quarter of 1957	2d Quarter of 1957	
Heavy	1	21	25	9	8
Medium	140	350	470	120	120
Light	1,200	790	330	64	44
Turboprop bomber					
Heavy	0	8	24	6	6
Jet fighter transport	3,800	3,200	3,000	880	840
Jet trainer	0	6	27	9	9
Turboprop	0	0	3	3	3
Piston	1,700	740	1,100	320	320
Other b/	640	380	390	96	96
Total	9,300	7,300	6,700	1,800	1,800

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. Helicopters, gliders, and seaplanes.

~~S-E-C-R-E-T~~

Table 4

Estimated Production of Aircraft in the USSR, by Weight a/
1954 through the Second Quarter of 1957

Type of Aircraft	Thousand Pounds of Airframe Weight					
	1954	1955	1956	1957		
Jet bomber	Heavy	110	2,300	2,800	1,000	890
	Medium	7,100	18,000	24,000	5,900	6,100
	Light	22,000	14,000	6,000	1,200	800
Turboprop bomber	Heavy	0	720	2,200	540	540
	Jet fighter Transport	27,000	26,000	29,000	8,500	8,300
Trainer	Jet	0	370	1,700	560	560
	Turboprop	0	0	94	120	120
Other b/	Jet	8,100	7,100	3,200	830	860
	Piston	920	990	990	250	250
Total	81,000	77,000	83,000	23,000	22,000	

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. Helicopters, gliders, and seaplanes.

~~S-E-O-R-E-T~~

Table 5

Estimated Cumulative Production of Selected Aircraft in the USSR a/
Through the Second Quarter of 1957

Model	Type of Aircraft	Production to 1 July 1957	Units
Badger	Jet medium bomber	1,200	
Beagle	Jet light bomber	6,000	
Bear	Turbo-prop heavy bomber	51 b/	
Bison	Jet heavy bomber	65	
Camel	Jet transport	51	
Crabe	Platon transport	830	
Farmer	Jet fighter	2,500	
Flashlight	Jet all-weather interceptor	1,500	
Fresco	Jet fighter	10,000	
Horse	Helicopter	37	
Hound	Helicopter	560	

- a. The totals given in this table are rounded to two significant digits.
- b. This figure includes seven prototypes seen in July 1955.

~~S-E-O-R-E-T~~

Table 6

US Military Aircraft Acceptances, by Number a/
1954 Through the Second Quarter of 1957

Type of Aircraft	1st Quarter		2d Quarter	
	1954	1955	1956	1957 b/
Bomber				
Heavy	28	34	75	33
Medium	767	530	505	51
Light	106	155	105	0
Ground attack				
Fighter	860	631	469	94
Transport	3,518	4,017	2,656	717
Trainer	634	536	362	54
Other c/	1,602	1,439	843	197
Total	15,235	701	1,098	316
	8,750	8,043	6,113	1,361
				1,462

a. The source of these figures is the Office of the Assistant Secretary of Defense (Supply and Logistics), Statistics Branch, US Military Aircraft Acceptances, 1953-June 1957, Number and Airframe Weight, June 1957, CONFIDENTIAL.

b. Includes preliminary data for June 1957.

c. Helicopters, flying boats, amphibians, and lighter-than-air.

~~S-E-C-R-E-T~~

Table 7

US Military Aircraft Acceptances, by Weight ^{a/}
1954 Through the Second Quarter of 1957

Type of Aircraft	Thousand Pounds of Airframe Weight				
	1954	1955	1956	1st Quarter of 1957	2d Quarter of 1957 ^{b/}
Bomber					
Heavy	3,304	3,853	8,442	3,598	3,726
Medium	37,296	26,377	22,525	2,649	1,757
Light	1,834	2,724	1,975	268	0
Ground attack					
Fighter	7,793	6,034	4,803	985	1,073
Transport	35,390	43,161	30,588	7,143	8,408
Trainer	30,614	20,697	13,104	1,703	2,284
Other ^{c/}	9,633	7,453	3,283	867	948
	4,831	4,397	5,292	1,113	1,186
Total	<u>130,695</u>	<u>114,696</u>	<u>90,012</u>	<u>18,326</u>	<u>19,372</u>

- a. The source of these figures is the Office of the Assistant Secretary of Defense (Supply and Logistics), Statistics Branch, US Military Aircraft Acceptances, 1953-June 1957, Number and Airframe Weight, June 1957, CONFIDENTIAL.
- b. Includes preliminary data for June 1957.
- c. Helicopters, flying boats, amphibians, and lighter-than-air.

Estimated Production of Aircraft in the European Satellites and in Communist China
by Number a/
1954 through the Second Quarter of 1957

Country	Type of Aircraft	Units				1st Quarter of 1957		2d Quarter of 1957	
		1954	1955	1956	1957	1957	1957		
Czechoslovakia	Jet fighter	390	240	220	75	75	75	75	
	Ground attack	210	0	0	0	0	0	0	
	Jet trainer	89	310	310	75	75	75	75	
	Piston trainer	190	360	360	91	91	91	91	
	Transport b/	0	0	13	12	12	15	15	
	Other	0	22	95	30	30	40	40	
Total		880	940	1,000	280	280	300	300	
Poland	Jet fighter	160	360	360	90	90	90	90	
	Piston trainer	60	35	35	9	9	9	9	
	Light helicopter	0	0	10	6	6	8	8	
Total		220	400	410	100	100	110	110	
Romania	Piston trainer	24	24	24	9	9	12	12	
Hungary	Piston trainer	24	24	20	0	0	10	10	
East Germany	Transport	0	0	5	3	3	6	6	
Communist China	Piston trainer	0	20	220	69	69	73	73	
Grand total		1,200	1,400	1,700	470	470	500	500	

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. Estimates of Aero-45 production in Czechoslovakia, previously listed in the Transport category, are now listed in the Other category for all periods given in this table.

~~S-E-C-R-E-T~~

Table 9

Estimated Production of Aircraft in the European Satellites and in Communist China
by Weight a/
1954 Through the Second Quarter of 1957

Country	Type of Aircraft	Thousand Pounds of Airframe Weight				
		1954	1955	1956	1st Quarter of 1957	2d Quarter of 1957
Czechoslovakia	Jet fighter	2,300	1,400	1,300	440	440
	Ground attack	1,700	0	0	0	0
	Jet trainer	550	1,900	1,800	460	460
	Piston trainer	580	1,100	1,100	270	270
	Transport b/	0	0	220	210	260
	Other	0	33	140	41	51
	Total		5,200	4,500	4,600	1,400
Poland	Jet fighter	950	2,200	2,200	540	540
	Piston trainer	60	37	37	9	9
	Light helicopter	0	0	28	17	22
Total		1,000	2,200	2,200	570	570
Rumania	Piston trainer	22	22	22	8	11
Hungary	Piston trainer	17	17	20	0	10
East Germany	Transport	0	0	86	52	100
Communist China	Piston trainer	0	20	220	70	74
Grand total		6,200	6,700	7,200	2,100	2,300

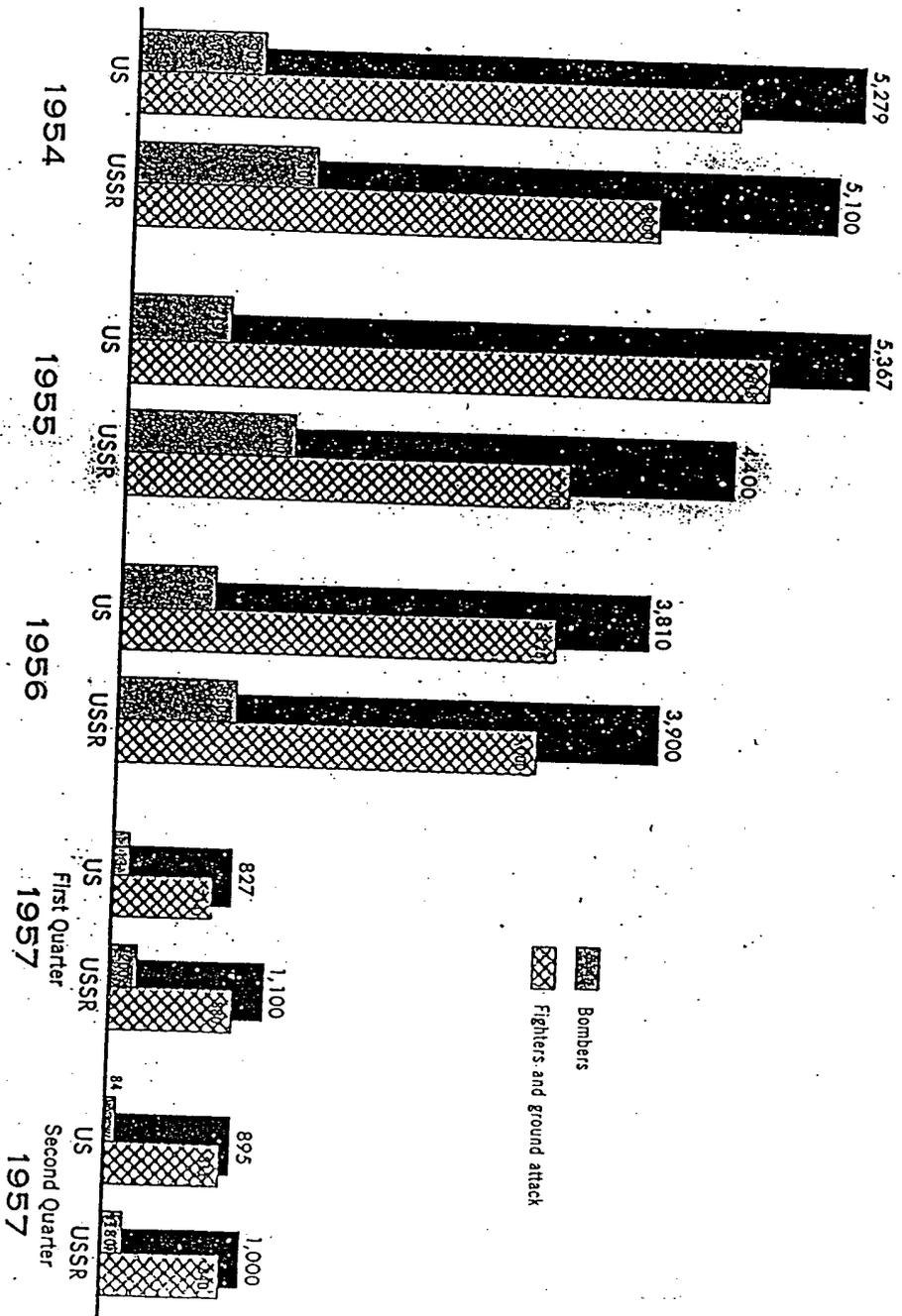
a. Figures include production of spare parts and are rounded to two significant digits. Totals are derived from unrounded figures and do not always agree with the sum of the rounded components.
b. Estimates of Aero-1's production in Czechoslovakia, previously listed in the Transport category, are now listed in the Other category for all periods given in this table.

~~S-E-C-R-E-T~~

~~SECRET~~

US^a and USSR^b PRODUCTION OF MILITARY AIRCRAFT,^c BY NUMBER 1954 Through the Second Quarter of 1957

Figure 1



^a US totals include preliminary data for June 1957.
^b USSR totals are rounded.
^c Bombers and fighters.

26107 7-57

~~SECRET~~

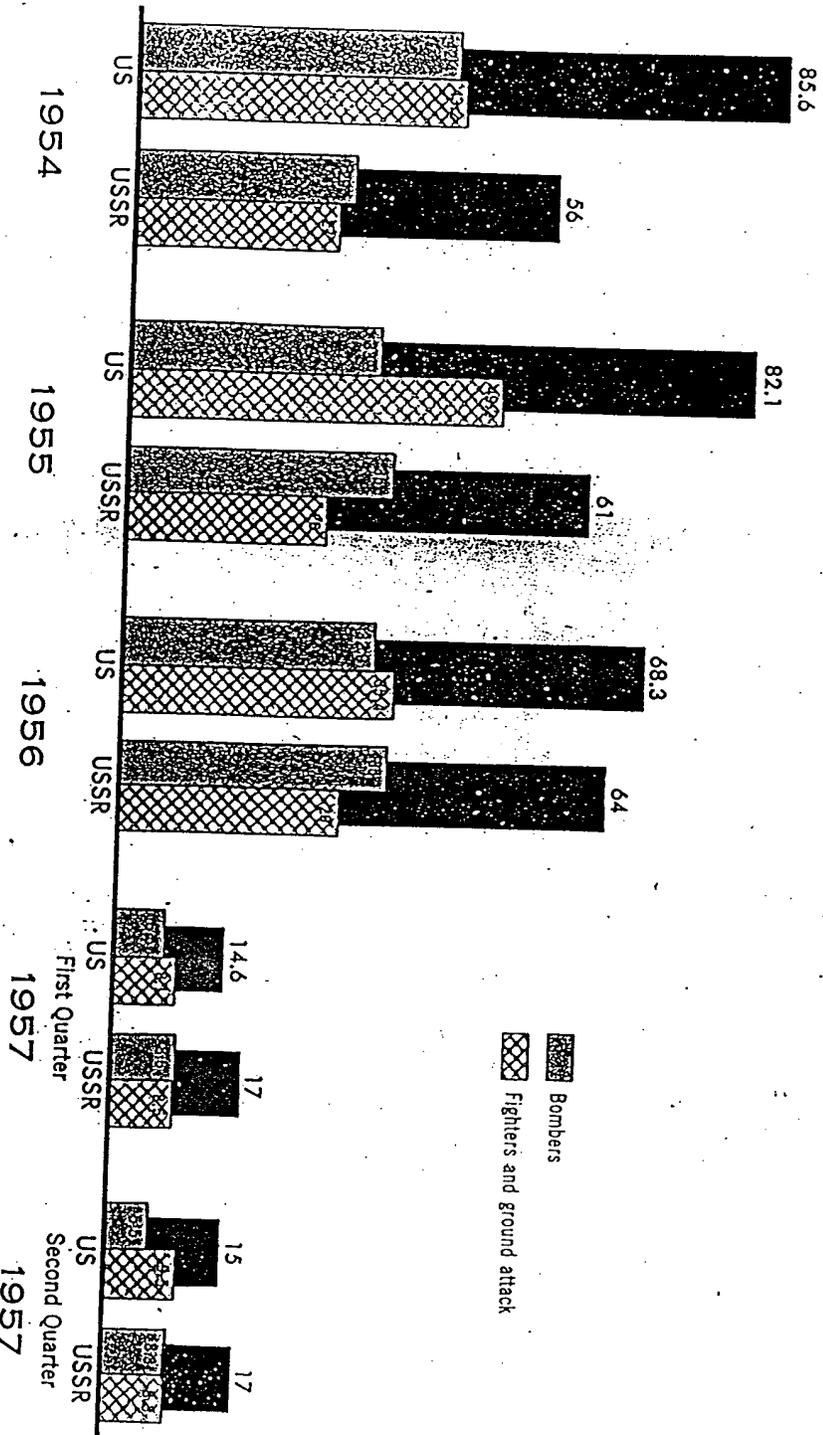
~~SECRET~~

US^a and USSR^b

PRODUCTION OF MILITARY AIRCRAFT, BY WEIGHT^d

1954 Through the Second Quarter of 1957

(Million pounds of airframe weight)



^a US totals include preliminary data for June 1957.

^b USSR totals are rounded.

^c Bombers and fighters.

^d US figures do not include production of spare parts.

26108 7-57

~~SECRET~~

Figure 2

~~S-E-C-R-E-T~~

~~S-E-C-R-E-T~~