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QUARTERLY ESTIMATE OF PRODUCTION OF AIRCRAFT IN THE SINO-SOVIET BLOC JANUARY - MARCH 1959

Office of Research and Reports

CENTRAL INTELLIGENCE AGENCY

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FOREWORD

This publication is the sixteenth 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 ORR publications. 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 coordination has been attempted,

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QUARTERLY ESTIMATE OF PRODUCTION OF AIRCRAFT IN THE SINO-SOVIET BLOC* JANUARY - MARCH 1959

1. Trends in Production.

The most notable aspect of production of aircraft in the Sino-Soviet Bloc during the first quarter of 1959 continues to be the probable phase-out of production of known heavy and medium bombers in the USSR.** Production of the Bison (M-4) heavy jet bomber is believed to be ending at Moscow/Fili Airframe Plant No. 23.*** The Bear (Tu-95) heavy turboprop bomber is estimated to have been produced only in small quantities, with production probably ceasing in late 1956 or early 1957.**** Of the three Soviet airframe plants which have produced the Badger (Tu-16) medium jet bomber, only one is believed still to be involved with the program. Production at this remaining plant, Kuybyshev Airframe Plant No. 1, is estimated to be phasing out and probably will cease entirely during the second quarter of 1959. Although at least one new type of bomber, the Bounder, is known to have been developed in the USSR, as yet there is no firm evidence to clarify just what types of aircraft may replace the Bison and Badger in series production at Moscow/Fili Airframe Plant No. 23, Kazan' Airframe Plant No. 22, and Kuybyshev Airframe Plant No. 1. Production of the Badger at

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

** Estimated production of aircraft in the Sino-Soviet Bloc from 1955 through the first quarter of 1959 is given by number in Table 1, p. 9, below, and by airframe weight in Table 2, p. 10, below. Estimated production of aircraft in the USSR from 1955 through the first quarter of 1959 is given by number in Table 3, p. 11, below, and by airframe weight in Table 4, p. 12, below. For comparative purposes, US military acceptance figures from 1955 through the first quarter of 1959 are given by number in Table 6, p. 14, below, and by airframe weight in Table 7, p. 15, below. For additional comparison, production of combat aircraft in the USSR from 1955 through the first quarter of 1959 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 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 Badger, through the first quarter of 1959 is given in Table 5, p. 13, below. Estimates of monthly, quarterly, and cumulative production at selected plants in the Sino-Soviet Bloc are given in Table 10, p. 20, below.

Voronezh Airframe Plant No. 64 has been replaced with that of the Cat (An-10) four-engine turboprop transport.

Since 1957, when the Beagle (Il-28) light jet bomber was phased out of production in Soviet airframe plants, no light jet bombers appear to have entered series production in the Sino-Soviet Bloc. Prototypes of two possible replacements for the Beagle, the Backfin and the Blowlamp, have appeared since 1956, but there still is no firm evidence to suggest that either of these aircraft is in production.

During the past several years, increased emphasis has been placed by the USSR on the development and production of new turbojet and turboprop transport aircraft. After several delays noted in the initiation of series production of some of the new transports and in spite of recurring reports of flight difficulties encountered with at least two of the aircraft types, series production of some of the models now is well under way. Although Czechoslovakia and East Germany continue to produce the Crate (Il-14) twin-engine piston transport, series production of this aircraft in the USSR ceased by mid-1958. It is probable that production of the Crate in East Germany will be phased out in mid-1959.

Although five Soviet airframe plants are believed to be involved with production of new types of jet fighter aircraft, the output from these plants has been low. Three years after the initial display of most of these fighters, none can be identified firmly as being in operational service. In view of the information currently available on production sites, however, it is probable that some of the newer fighters designed by A. I. Mikoyan and P. O. Sukhoy soon should be appearing in operation. Production of fighter aircraft in the European Satellites and in Communist China continues to be confined to the older Fresco (MIG-17) and Farmer (MIG-19) jet fighters.

2. Production in the USSR.

a. Bombers.

The complete phase-out of production of the Bison (M-4) heavy jet bomber at Moscow/Fili Airframe Plant No. 23 may have been accomplished during the first quarter of 1959. On the basis of observations of the plant area during the past quarter, it is estimated that two aircraft were completed in January, none in February, and one in March. As of 1 April 1959, cumulative production of the Bison is estimated to be about 100 aircraft.

Although six Bison aircraft were sighted on the plant airfield on 31 January 1959, 1/* it is believed that these aircraft represented an accumulation of production of several months. No Bison aircraft are known to have left the plant airfield between 9 September 1958 and 31 January 1959. Four of the heavy bombers are believed to have been flown away from the plant between 31 January 1959 and 20 February 1959. The length of time these four aircraft remained on the ramp before being

* For serially numbered source references, see the Appendix.

flown away varied from 100 to 150 days. This extremely long ramp time is considered to be another indication that production of the Bison at Moscow/Fili Airframe Plant No. 23 is being phased out.

No new information concerning the Bounder aircraft originally sighted at Moscow/Fili Airframe Plant No. 23 has become available during the first quarter of 1959.

there has been no sign of Bounder aircraft at the plant since September 1958 and that there appears to be little activity in the immediate area where the Bounder originally was sighted.

In spite of the recent increased operational activity of Bear (Tu-95) turboprop bombers , it still is believed that production of this aircraft ceased in late 1956 or early 1957. Only one Soviet airframe plant ever has been involved with this production -- Kuybyshev Airframe Plant No. 18. It should be noted that although a few delivery flights still are being recorded from Kuybyshev to Uzin/Chepelevka, a Long Range Air Force (LRAF) base equipped with Bear and Badger aircraft, it is impossible to identify the specific type of aircraft involved. Because the bulk of evidence suggests that Bear aircraft were produced only in limited quantities and because delivery flights of high-performance aircraft from Kuybyshev to Uzin/Chepelevka could as easily have involved deliveries of Badger aircraft from Kuybyshev Airframe Plant No. 1, it still is considered probable that production of the Bear ceased some time ago.

Production of the Badger medium jet bomber in Soviet airframe plants is believed virtually to have stopped. Of the three plants which have produced Badger aircraft, only Kuybyshev Airframe Plant No. 1 possibly still is continuing this production. The Kuybyshev plant is estimated to have begun phasing out this production in the spring of 1958, and production probably will cease entirely during the second quarter of 1959 if, indeed, it has not ceased already. Delivery flights of possible Badger aircraft from Kuybyshev to operational units continue to be very low, with only one Badger 2/ noted in January 1959, one in February 1959, 3/ and none in March 1959. A limited observation of the plant airfield on 25 February 1959 revealed seven or more Badger/Camel (Tu-104, Tu-104A) aircraft tails. 4/ The conditions of the sighting and the tentative nature of the aircraft identification preclude any firm conclusions. In view of the recent low number of delivery flights, however, a great many more aircraft should have been sighted on the airfield if the plant were not phasing out production of the Badger. *

* Estimated cumulative production of the Badger at Kazan' Airframe Plant No. 22 has been changed from approximately 1,000 aircraft to about 920 as of the end of production in December 1958.

. With this change, estimated cumulative production of the Badger at all three Soviet plants, as of the first quarter of 1959, becomes approximately 1,700 aircraft.

Kazan' Airframe Plant No. 22 has not been seen by Western observers for several months, and no firm information is available which might clarify current activity at the plant. The estimated cessation of production of the Badger at this facility is based largely on the reduced number of delivery and test flights of possible Badger aircraft from Kazan'. Only two probable delivery flights from this location have been noted during the first quarter of 1959, 5/ and both of these flights were in January.

With the probable phasing out of production of both known heavy bombers and medium bombers in Soviet airframe plants, the question of current and future activities at these plants becomes of paramount importance. The intelligence currently available on this subject is inconclusive. After the forthcoming May Day Air Show at Tushino, it is hoped that the future of bomber aircraft in Soviet planning, and hence in airframe production sites, will become clear. Although the new Bounder aircraft originally was sighted at Moscow/Fili Airframe Plant No. 23, there has been no information to prove that if the aircraft is scheduled for series production, it will be at this facility. There have been some indications that Kazan' Airframe Plant No. 22 may be involved with the development and possibly with future production of a new heavy bomber. Since late 1958, however, there have been unexplained test flights of Tu-104 aircraft from Kazan'. The future role of the airframe production complex formed by Kuybyshev Airframe Plants No. 1 and No. 18 also remains obscure. It is probable that the latter plant was involved in the development of the Cleat (Tu-114) four-engine turboprop transport and the construction, whether by modification of existing Bear aircraft or by new construction, of the Tu-114D. If the Tu-114 is to be series produced, as is claimed by the USSR, Kuybyshev Airframe Plant No. 18 would be a likely site for this production. It is not known whether Kuybyshev Airframe Plant No. 1 will aid its neighboring plant with production of the Cleat, will be utilized for a time as an overhaul or modification site for Badger aircraft, or will engage in series production of some new aircraft as yet unobserved by Westerners.

b. Transports.

After some delays, production of new turboprop transports designed by O. K. Antonov and S. I. Il'yushin appears to be well under way in Soviet airframe plants. Moscow Airframe Plant No. 30 is estimated to have reached its peak rate of production of six Coot (Il-18) four-engine turboprop transports per month in December 1958 and to have produced a total of about 78 aircraft as of 1 April 1959

Although several sources have reported that problems in stability have been encountered with the Cat (An-10) four-engine turboprop civil transport, production of this transport at Voronezh Airframe Plant No. 64 appears to be progressing.

a minimum of

11, to possibly 16, of these aircraft had been produced at Voronezh before November 1958. 6/ Twelve Cat aircraft were sighted on the airfield of the Voronezh plant on 4 December 1958, 7/ and several Cat aircraft recently were sighted on various occasions on the civil airfield at Kiev.

The production status of the An-12, believed to be the military counterpart of the Cat, at Irkutsk Airframe Plant No. 39 is more difficult to determine. the first aircraft fitted with the AI-20 turboprop engine had undergone engine trials and that engine trials of the second aircraft were starting. 8/ A total of 12 aircraft center sections are known to have been produced at Plant No. 39 by February 1958. 9/ On the basis of the above information, there has been made an estimated production schedule, which yields a total of approximately 50 An-12 aircraft completed at Plant No. 39 by April 1959. Although at least 11 An-12 aircraft are believed to have been delivered from the plant between 1 October 1958 and 31 December 1958. 10/

11/ could mean that production may have been slowed down slightly as a result of necessary modifications. It is more likely, however, that these modifications have affected only the length of time before the aircraft can go into regular service.

A new Antonov-designed turboprop transport currently is believed to be in production at Tashkent Airframe Plant No. 84. Analysis suggests that the aircraft involved may be the Camp (An-8) twin-engine transport. Because, however, several collateral reports refer to the new aircraft as a four-engine transport, it still is not possible to identify the new activity with certainty.

In the area of transport aircraft designed by A. N. Tupolev, production of the Camel (Tu-104, Tu-104A) twin-engine jet transport is believed to be continuing at both Khar'kov Airframe Plant No. 135 and Omsk Airframe Plant No. 166. Information regarding Plant No. 135 is fairly current, but it must be admitted that such is not true for Plant No. 166. It is possible that production at Plant No. 166 was at a higher rate than has been estimated and that production may have ceased by now. No change is being made in the current estimate, however, pending receipt of additional information. At least one of the newer model of Camel aircraft, the Tu-104B, has been produced, and it is probable that production of the newer model will replace that of the Tu-104A. Another Tupolev-designed transport, the Cooker (Tu-110) four-engine jet transport, may be entering series production at some as yet unidentified Soviet airframe plant. Although it has appeared that this aircraft, which was first displayed 2 years ago, was not destined for production, recent statements by Soviet officials suggest that it still may be scheduled for series production.

The estimate of seven Cleat four-engine turboprop transports completed at Kuybyshev Airframe Plant No. 18 represents a very tentative conclusion. As in the case of the Cooker, recent statements by

Soviet officials suggest that series production of the Tu-114 either is under way or is planned for the near future. Until confirmatory intelligence becomes available, however, it is estimated that two prototypes of the Tu-114 aircraft may have been completed and 5 Tu-114D transports may be in existence. It is possible that the latter actually represent modified Bear aircraft rather than new production of Tu-114D models.

c. Fighters.

It is estimated that production of the Farmer (MIG-19) jet fighter is being phased out at Novosibirsk Airframe Plant No. 153 and that series production of a modified Fishpot jet fighter has started. Of the new type of jet fighters which first were displayed at the Tushino Air Show in June 1956, two, the swept-wing Fitter and the delta-wing Fishpot, are believed to have been designed by P.O. Sukhoy. The Fitter is now in production at Komsomol'sk Airframe Plant No. 126.

Because it is most unlikely that an entirely new Sukhoy-designed aircraft could have been developed since the initial appearances of the Fitter and the Fishpot, it is probable that the new production at Novosibirsk Airframe Plant No. 153 involves the Fishpot aircraft. Confirmation that the aircraft probably has been scheduled for series production in some Soviet airframe plant can be found in open-source literature. In October 1957 a Soviet publication contained a photograph of the Fishpot and glowingly described the aircraft as a dream realized. 17/

d. Others.

A significant change in estimated production of the Hound (Mi-4) helicopter has been incorporated in this publication. Analysis suggests that a minimum of approximately 800 Hounds had been produced at Kazan' Airframe Plant No. 387 by mid-1958

.. It is estimated tentatively that cumulative production of the Hound had reached 1,100 aircraft as of 1 April 1959.

Recent intelligence information indicates that the USSR has resumed, or is preparing to resume, production of the Horse (Yak-24) helicopter. This helicopter first was sighted in 1955 but apparently was not produced beyond a test series in 1954 and 1955, because of technical difficulties. From 1955 through late 1958 the Horse failed to appear in sizable quantities. A version of the helicopter sighted in mid-1958, however, showed a progressive development of the earlier model and revealed a revised tail configuration. Information available during the first quarter of 1959 indicates that the USSR is preparing to place the Horse in commercial passenger service with a 30-seat cabin configuration. It is considered probable that after 5 years of testing, the USSR is introducing the Horse into series production.

3. Production in the European Satellites.*

Several changes have been made in this publication from previous estimates of production of aircraft in Czechoslovakia. A reevaluation of sightings and requirements for floorspace of the Prague/Vodochody Airframe Plant indicates that production of the Fagot (MIG-15) jet fighter at this facility probably ceased in 1955. Small numbers of Fagot aircraft subsequently observed in the plant area are believed to have been operational aircraft which had returned to the plant for repair. Production of the Midget (U-MIG-15) jet trainer at the same plant now is estimated to have started in mid-1954 and probably currently is being phased out. Production of the Midget during 1958 may be lower than estimated, inasmuch as, for several months in mid-1958, considerably fewer Midget aircraft were seen in the plant area than normally would be expected if production had remained at 20 aircraft per month.

The first Farmer (MIG-19) jet fighter observed at the Prague/Vodochody Airframe Plant in February 1958 probably was assembled from parts supplied by the USSR. The establishment of domestic production of this aircraft is estimated to require somewhat more than 1 year. The time requirement, coupled with the recent downward trend in the number of Midget aircraft observed in the plant area, suggests that series-produced Farmer aircraft will be seen at Vodochody in the near future.

* Estimated production of aircraft in the European Satellites and in Communist China from 1955 through the first quarter of 1959 is given by number in Table 8, p. 16, below, and by airframe weight in Table 9, p. 18, below.

The other changes noted in the estimated production of aircraft in Czechoslovakia are the result of a regrouping of categories of aircraft types. The only aircraft now listed in the piston trainer category is the Moose (Czechoslovak C-11). Other aircraft formerly listed under piston trainers now are noted in the miscellaneous grouping of other aircraft.

A major revision also has been made in the estimated production of jet fighter aircraft in Poland. This revision is the result of changes made in the estimated starting dates of production of both the Fagot and Fresco (MIG-17) aircraft at the Mielec Airframe Plant. Recent reports indicate that a new jet fighter, possibly the Farmer, is being produced at Mielec. [redacted] because it is considered unlikely that a model changeover would occur simultaneously in Poland and Czechoslovakia, it still is estimated that the Mielec Airframe Plant currently is involved with production of Fresco aircraft.

Table 1

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

Units

Type of Aircraft	1955		1956		1957		1958		4th Quarter of 1958		1st Quarter of 1959
Jet bomber											
Heavy	21		25		33		14		3		3
Medium	380	(390) b/	500		460		230		27		12
Light	790		330		130		0		0		0
Turboprop bomber											
Heavy	17		35		0		0		0		0
Jet fighter	2,900	(3,100)	2,400	(2,500)	1,900	(2,000)	1,300	(1,200)	290	(270)	290
Transport											
Jet	5		17		30		37		9		9
Turboprop	0		3		18		120		46	(47)	57
Piston	610		1,100	(1,100)	1,200		750	(690)	140		160
Trainer											
Jet	1,100	(1,200)	550	(620)	420	(430)	370	(340)	89	(75)	56
Piston	560	(580)	600	(630)	520	(660)	520	(570)	130		130
Other c/	520	(350)	670	(470)	900	(610)	1,100	(850)	260	(220)	240
Total	6,900	(7,100)	6,100	(6,200)	5,600		4,500	(4,100)	980	(920)	950

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.
c. Helicopters, gliders, seaplanes, and utility aircraft.

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Table 2

Estimated Production of Aircraft in the Sino-Soviet Bloc, by Weight a/
1955 Through the First Quarter of 1959

Thousand Pounds of Airframe Weight

Type of Aircraft	1955		1956		1957		1958		4th Quarter of 1958		1st Quarter of 1959
Jet bomber											
Heavy	2,300		2,800		3,700		1,600		340		340
Medium	19,000	(20,000) b/	25,000		23,000		12,000		1,400		610
Light	14,000		6,000		2,300		0		0		0
Turboprop bomber											
Heavy	1,500		3,100		0		0		0		0
Jet fighter	23,000	(24,000)	21,000	(22,000)	17,000	(18,000)	12,000	(11,000)	2,500	(2,400)	2,500
Transport											
Jet	280		940		1,700		2,100		500		500
Turboprop	0		94		890	(970) c/	5,400	(5,900) c/	2,000	(2,200) c/	2,500
Piston	2,600		9,700	(10,000)	10,000	(12,000)	4,900	(3,900)	680	(720)	780
Trainer											
Jet	8,100	(8,600)	3,400	(3,900)	2,600		2,300	(2,100)	550	(460)	340
Piston	640	(660)	680	(720)	590	(740)	590	(650)	140		150
Other d/	3,900	(2,700)	4,600	(3,200)	5,000	(3,000)	4,500	(3,100)	840	(730)	760
Total	76,000	(77,000)	78,000		67,000	(68,000)	45,000	(42,000)	8,900		8,500

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. Unless otherwise indicated, changes in the present weight estimates from past weight estimates reflect changes in the estimated number of aircraft produced.
c. This difference represents a change in the estimated weight of the Cleat transport.
d. Helicopters, gliders, seaplanes, and utility aircraft.

Table 3

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

Units

Type of Aircraft	1955		1956		1957		1958		4th Quarter of 1958		1st Quarter of 1959
Jet bomber											
Heavy	21		25		33		14		3		3
Medium	380	(390) b/	500		460		230		27		12
Light	790		330		130		0		0		0
Turboprop bomber											
Heavy	17		35		0		0		0		0
Jet fighter	2,600		2,000		1,600		850	(740)	160	(140)	150
Transport											
Jet	5		17		30		36		9		9
Turboprop	0		3		18		120		46	(47)	57
Piston	610		1,000		1,100	(1,200)	600	(540)	93		110
Trainer											
Jet	840		310		180		140		30		30
Piston	340		360		360		360		90		90
Other c/	450	(330)	530	(380)	640	(420)	700	(550)	150	(140)	150
Total	6,000	(5,900)	5,200	(5,000)	4,600	(4,400)	3,000	(2,700)	600	(580)	610

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.
c. Helicopters, gliders, and seaplanes.

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Table 3

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

Units

Type of Aircraft	1955		1956		1957		1958		4th Quarter of 1958		1st Quarter of 1959
Jet bomber											
Heavy	21		25		33		14		3		3
Medium	380	(390) b/	500		460		230		27		12
Light	790		330		130		0		0		0
Turboprop bomber											
Heavy	17		35		0		0		0		0
Jet fighter	2,600		2,000		1,600		850	(740)	160	(140)	150
Transport											
Jet	5		17		30		36		9		9
Turboprop	0		3		18		120		46	(47)	57
Piston	610		1,000		1,100	(1,200)	600	(540)	93		110
Trainer											
Jet	840		310		180		140		30		30
Piston	340		360		360		360		90		90
Other c/	450	(330)	530	(380)	640	(420)	700	(550)	150	(140)	150
Total	6,000	(5,900)	5,200	(5,000)	4,600	(4,400)	3,000	(2,700)	600	(580)	610

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.
c. Helicopters, gliders, and seaplanes.

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Table 3

Estimated Production of Aircraft in the USSR, by Number [a]
1955 Through the First Quarter of 1959

Units

Type of Aircraft	1955		1956		1957		1958		4th Quarter of 1958		1st Quarter of 1959
Jet bomber											
Heavy	21		25		33		14		3		3
Medium	380	(390) [b]	500		460		230		27		12
Light	790		330		130		0		0		0
Turboprop bomber											
Heavy	17		35		0		0		0		0
Jet fighter	2,600		2,000		1,600		850	(740)	160	(140)	150
Transport											
Jet	5		17		30		36		9		9
Turboprop	0		3		18		120		46	(47)	57
Piston	610		1,000		1,100	(1,200)	600	(540)	93		110
Trainer											
Jet	840		310		180		140		30		30
Piston	340		360		360		360		90		90
Other [c]	450	(330)	530	(380)	640	(420)	700	(550)	150	(140)	150
Total	6,000	(5,900)	5,200	(5,000)	4,600	(4,400)	3,000	(2,700)	600	(580)	610

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.
c. Helicopters, gliders, and seaplanes.

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Table 4

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

Thousand Pounds of Airframe Weight

Type of Aircraft	1955		1956		1957		1958		4th Quarter of 1958		1st Quarter of 1959
Jet bomber											
Heavy	2,300		2,800		3,700		1,600		340		340
Medium	19,000	(20,000) b/	25,000		23,000		12,000		1,400		610
Light	14,000		6,000		2,300		0		0		0
Turboprop bomber											
Heavy	1,500		3,100		0		0		0		0
Jet fighter	21,000		19,000		15,000		8,100	(7,200)	1,500	(1,400)	1,400
Transport											
Jet	280		940		1,700		2,000		500		500
Turboprop	0		94		890	(970) c/	5,400	(5,900) c/	2,000	(2,200) c/	2,500
Piston	2,600		9,400	(9,600)	9,400	(11,000)	3,000	(2,000)	190		270
Trainer											
Jet	6,700		2,000		1,100		830		180		180
Piston	400		430		430		430		110		110
Other d/	3,800	(2,700)	4,500	(3,100)	4,700	(2,700)	3,900	(2,600)	690	(610)	630
Total	72,000		73,000	(72,000)	62,000		37,000	(34,000)	6,900	(7,000)	6,600

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. Unless otherwise indicated, changes in the present weight estimates from past weight estimates reflect changes in the estimated number of aircraft produced.
c. This difference represents a change in the estimated weight of the Cleat transport.
d. Helicopters, gliders, and seaplanes.

Table 5

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

Units

Model	Type of Aircraft	Production to 1 April 1959
Badger	Jet medium bomber	1,700
Beagle b/	Jet light bomber	6,000
Bear b/	Turboprop heavy bomber	55
Bison	Jet heavy bomber	98
Camel	Jet transport	97
Coot	Turboprop transport	78
Crate b/	Piston transport	1,100
Clod	Piston transport	63
Farmer	Jet fighter	3,600
Flashlight b/	Jet all-weather interceptor	670
Fresco b/	Jet fighter	8,400
Fishbed	Jet fighter	57
Fitter	Jet fighter	170
Horse b/	Helicopter	45
Hound	Helicopter	1,500
New fighters	Jet fighter	140
New transports	Turboprop transport	120

a. Totals given in this table are rounded to two significant digits.
b. Denotes aircraft no longer in production.

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Table 6

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

Units

Type of Aircraft	1955	1956	1957	1958	4th Quarter of 1958	1st Quarter of 1959 b/
Bomber						
Heavy	34	75	173	156	37	21
Medium	530	505	199	31	4	6
Light	155	105	14	0	0	0
Ground attack	631	469	339	400	90	92
Fighter	4,017	2,656	2,569	1,574	303	202
Transport	536	362	223	337	74	44
Trainer	1,439	843	784	567	145	163
Other c/	701	1,098	1,316	1,174	314	246
Total	8,043	6,113	5,617	4,239	967	774

a. 18/
b. Including preliminary data for March 1959.
c. Tankers; helicopters; flying boats; and antisubmarine warfare, warning, liaison, utility, amphibian, and lighter-than-air aircraft.

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Table 7

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

Thousand Pounds of Airframe Weight

Type of Aircraft	1955	1956	1957	1958	4th Quarter of 1958	1st Quarter of 1959 b/
Bomber						
Heavy	3,853	8,442	19,462	17,638	4,159	2,315
Medium	26,377	22,525	7,340	1,250	128	192
Light	2,724	1,975	268	0	0	0
Ground attack	6,034	4,803	3,720	3,680	680	777
Fighter	43,161	30,588	30,427	18,562	3,531	2,590
Transport	20,697	13,104	9,319	8,134	1,268	814
Trainer	7,453	3,283	4,050	3,107	763	914
Other c/	4,397	5,292	4,853	13,758	4,296	4,357
Total	114,696	90,012	79,439	66,129	14,825	11,959

a. 19/
b. Including preliminary data for March 1959.
c. Tankers; helicopters; flying boats; and antisubmarine warfare, warning, liaison, utility, amphibian, and lighter-than-air aircraft.

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Table 8

Estimated Production of Aircraft in the European Satellites and in Communist China, by Number a/*
1955 Through the First Quarter of 1959

Units

Country	Type of Aircraft	1955		1956		1957		1958		4th Quarter of 1958		1st Quarter of 1959
Czechoslovakia	Jet fighter	130	(240) b/	0	(220)	0	(220)	10		0		3
	Jet trainer	240	(310)	240	(310)	240	(250)	230	(210)	59	(45)	26
	Piston trainer	120	(140)	120	(140)	6	(140)	0	(54)	0		0
	Piston transport	0		17		46		60		15		15
	Helicopter	0		0		0		7		3		5
	Other	68	(22)	140	(96)	220	(150)	290	(180)	73	(48)	56
Total		560	(720)	510	(790)	520	(810)	600	(530)	150	(110)	100
Poland	Jet fighter	240	(330)	340	(260)	240	(190)	360		90		90
	Piston trainer	36		36		36		34		6		12
	Light helicopter	0		0		40		110		30		30
Total		280	(370)	380	(290)	310	(270)	500		130		130
Rumania	Piston trainer	24		24		45		69		18		18
Bulgaria	Piston trainer	20		36		36		20		2		0
Hungary	Piston trainer	24		30		36		37		10		9
East Germany	Piston transport	0		2		19		39		9	(11)	9
	Jet transport	0		0		0		1		0		0
Total		0		2		19		40		9	(11)	9
Communist China	Jet fighter	0		0		1		120		41		46
	Piston transport	0		0		1		56		21		24
Total		0		0		2		180		62		70
Grand total		900	(1,200)	980	(1,200)	970	(1,200)	1,400		380	(340)	340

* Footnotes for Table 8 follow on p. 17.

Table 8

Estimated Production of Aircraft in the European Satellites and in Communist China, by Number a/
1955 Through the First Quarter of 1959
(Continued)

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 9

Estimated Production of Aircraft in the European Satellites and in Communist China, by Weight a/*
1955 Through the First Quarter of 1959

Thousand Pounds of Airframe Weight

Country	Type of Aircraft	1955		1956		1957		1958		4th Quarter of 1958		1st Quarter of 1959
Czechoslovakia	Jet fighter	760	(1,400) b/	0	(1,300)	0	(1,200)	96		0		29
	Jet trainer	1,500	(1,900)	1,500	(1,900)	1,500		1,400	(1,300)	360	(280)	160
	Piston trainer	130	(160)	120		6	(160)	0	(58)	0		0
	Piston transport	0		290		800	(790)	1,000		260		260
	Helicopter	0		0		0		7		3		5
	Other	73	(24)	150	(100)	240	(160)	320	(200)	79	(52)	60
Total		2,400	(3,500)	2,000	(3,700)	2,500	(3,900)	2,900	(2,700)	700	(590)	510
Poland	Jet fighter	1,400	(2,000)	2,000	(1,500)	1,700	(1,400)	2,700		670		670
	Piston trainer	35		35		35		33		6		12
	Light helicopter	0		0		92		260		69		69
Total		1,500	(2,000)	2,100	(1,600)	1,800	(1,600)	3,000		750		750
Rumania	Piston trainer	23		23		43		66		17		17
Bulgaria	Piston trainer	19		34		34		19		2		0
Hungary	Piston trainer	26	(29)	32	(36)	39	(36)	40	(44)	11	(12)	10
East Germany	Piston transport	0		35	(34)	330		670		160	(190)	160
	Jet transport	0		0		0		68		0		0
Total		0		35	(34)	330		740		160	(190)	160
Communist China	Jet fighter	0		0		7		890		310		340
	Piston transport	0		0		4		210		79		90
Total		0		0		11		1,100		380		430
Grand total		4,000	(5,500)	4,200	(5,400)	4,800	(5,900)	7,800	(7,600)	2,000	(1,900)	1,900

* Footnotes for Table 9 follow on p. 19.

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Table 9

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

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. Unless otherwise indicated, 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 First Quarter of 1959

Country	Type of Aircraft	Model	Airframe Plant	Units: March Production	Units: Quarterly Production	Units: Cumulative Production [a]	Remarks
USSR	Bombers						
	Heavy jet	Bison (M-4)	Moscow No. 23	1	3	98	Production may have ceased during this quarter.
		Bounder	Moscow No. 23	0	0	2	Prototypes. Only one Bounder is known positively to exist, but it is possible that two have been constructed.
	Heavy turboprop	Bear (Tu-95)	Kuybyshev No. 18	0	0	55	Series production is believed to have ceased during the fourth quarter of 1956.
	Medium jet	Badger (Tu-16)	Kuybyshev No. 1	3	12	650	Phasing out.
		Badger (Tu-16)	Kazan' No. 22	0	0	920	Production ceased in December 1958.
		Badger (Tu-16)	Voronezh No. 64	0	0	170	Production ceased in late 1957 or early 1958.
	Jet fighters	Farmer (MIG-19)	Gor'kiy No. 21	0	0	1,400	Production ceased in May 1958.
		New fighters	Gor'kiy No. 21	5	15	59	Involved in production of Article E-6. Current new fighter is phasing out.
		Fresco (MIG-17)	Tbilisi No. 31	0	0	1,700	Production is believed to have ceased in August 1958.

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

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Table 10

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

Country	Type of Aircraft	Model	Airframe Plant	Units: March Production	Units: Quarterly Production	Units: Cumulative Production	Remarks
USSR (Continued)	Jet fighters (Continued)	Fishbed	Tbilisi No. 31	5	5	57	Series production is believed to have started in November 1957. Probably tooling for production of Article E-6.
		Fitter	Komsomol'sk No. 126	19	55	170	
		Farmer (MIG-19)	Novosibirsk No. 153	0	25	2,100	Production is believed to have ceased in February 1959.
		Fishpot	Novosibirsk No. 153	14	27	29	Production is believed to have started in October 1958.
		Yak-27	Saratov No. 292	5	15	47	Series production is believed to have started in February 1958.
	Transports						
	Jet	Camel (Tu-104 and Tu-104A)	Khar'kov No. 135	2	6	45	
		Camel (Tu-104 and Tu-104A)	Omsk No. 166	1	3	49	
	Turboprop	Military Cat (An-12)	Irkutsk No. 39	6	16	50	
		Civil Cat (An-10)	Voronezh No. 64	6	16	41	
		Coot (Il-18)	Moscow No. 30	6	18	78	
		Cleat(Tu-114 and Tu-114D)	Kuybyshev No. 18	0	1	7	Preseries production. The Tu-114D aircraft possibly are modified Tu-95 aircraft rather than new production.

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Table 10

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

Country	Type of Aircraft	Model	Airframe Plant	Units			Remarks
				March Production	Quarterly Production	Cumulative Production	
USSR (Continued)	Turboprop (Continued)	Antonov transport	Tashkent No. 84	2	6	11	The type of aircraft is not known. It may be the An-8, but information is conflicting.
	Piston	Creek (Yak-12)	Leningrad No. 458	24	72	1,100	
		Colt (An-2)	Kiev No. 473	0	0	1,700	Production is believed to have ceased during the third quarter of 1958.
		Clod (An-14)	Kiev No. 473	13	36	63	
	Trainers						
	Jet	Midget (U-MIG-15)	Ulan-Ude No. 99	10	30	2,400	
	Piston	Max (Yak-18)	Semenovka No. 116	30	90	5,300	
	Helicopters	Hare (Mi-3)	Rostov No. 168	16	48	230	
		Hare (Mi-1)	Chkalov No. 47	15	45	830	
		Hen (Ka-15)	Ulan-Ude No. 99	6	18	130	
		Hound (Mi-4)	Kazan' No. 387	10	32	1,100	
		Horse (Yak-24)	Leningrad No. 272	0	0	45	Only a small quantity was series produced. Production ceased in 1956.
	Seaplanes	Madge (Be-6)	Taganrog No. 49/86	1	3	320	

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Table 10

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

Country	Type of Aircraft	Model	Airframe Plant	Units: March Production	Units: Quarterly Production	Units: Cumulative Production	Remarks
Czechoslovakia	Jet fighters	Farmer (MIG-19) type	Vodochody	3	3	13	Domestic production is believed to be starting.
	Piston transports	Crate (Il-14)	Cakovice	5	15	140	
	Jet trainers	Midget (U-MIG-15)	Vodochody	2	26	1,100	Phasing out. Cumulative production may be overestimated.
	Helicopters	HC-2	Otrokovice	2	5	12	
	Others	Aero-145 and Aero-45	Kunovice	4	20	520	
		L-200	Kunovice	2	4	8	
		L-60	Chocen "Orlican"	2	10	200	
		L-40	Chocen "Orlican"	4	10	31	
		ZLIN series	Otrokovice	4	12	570	
Poland	Jet fighters	Fresco (MIG-17)	Mielec	30	90	640	
	Piston trainers	TS-8	Mielec	6	12	22	
	Helicopters	SM-1	Lublin/Swidnik	10	30	180	
Rumania	Piston trainers	IAR-811, IAR-812, IAR-817	Stalin	4	12	140	
		RG-6	Reghin	2	6	26	

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Table 10

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

Country	Type of Aircraft	Model	Airframe Plant	Units			Remarks
				March Production	Quarterly Production	Cumulative Production	
Bulgaria	Piston trainers	LAZ series	Lovech			110	Production is believed to have ceased during the fourth quarter of 1958.
Hungary	Piston trainers	Max (Yak-18)	Esztergom	3	9	120	Production may be considerably overestimated.
East Germany	Transports						
	Piston	Crate (Il-14)	Dresden/Klotzsche	3	9	69	Production probably will cease by mid-1959.
	Jet	"Type 152"	Dresden/Klotzsche			1	Prototype.
Communist China	Jet fighters	Fresco (MIG-17)	Shenyang No. 112	16	46	170	
	Piston transports	Colt (An-2)	Nanchang No. 320	8	24	81	

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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	1 - Confirmed by other sources
A - Completely reliable	2 - Probably true
B - Usually reliable	3 - Possibly true
C - Fairly reliable	4 - Doubtful
D - Not usually reliable	5 - Probably false
E - Not reliable	6 - Cannot be judged
F - Cannot be judged	

"Documentary" refers to original documents of foreign governments and organizations; copies 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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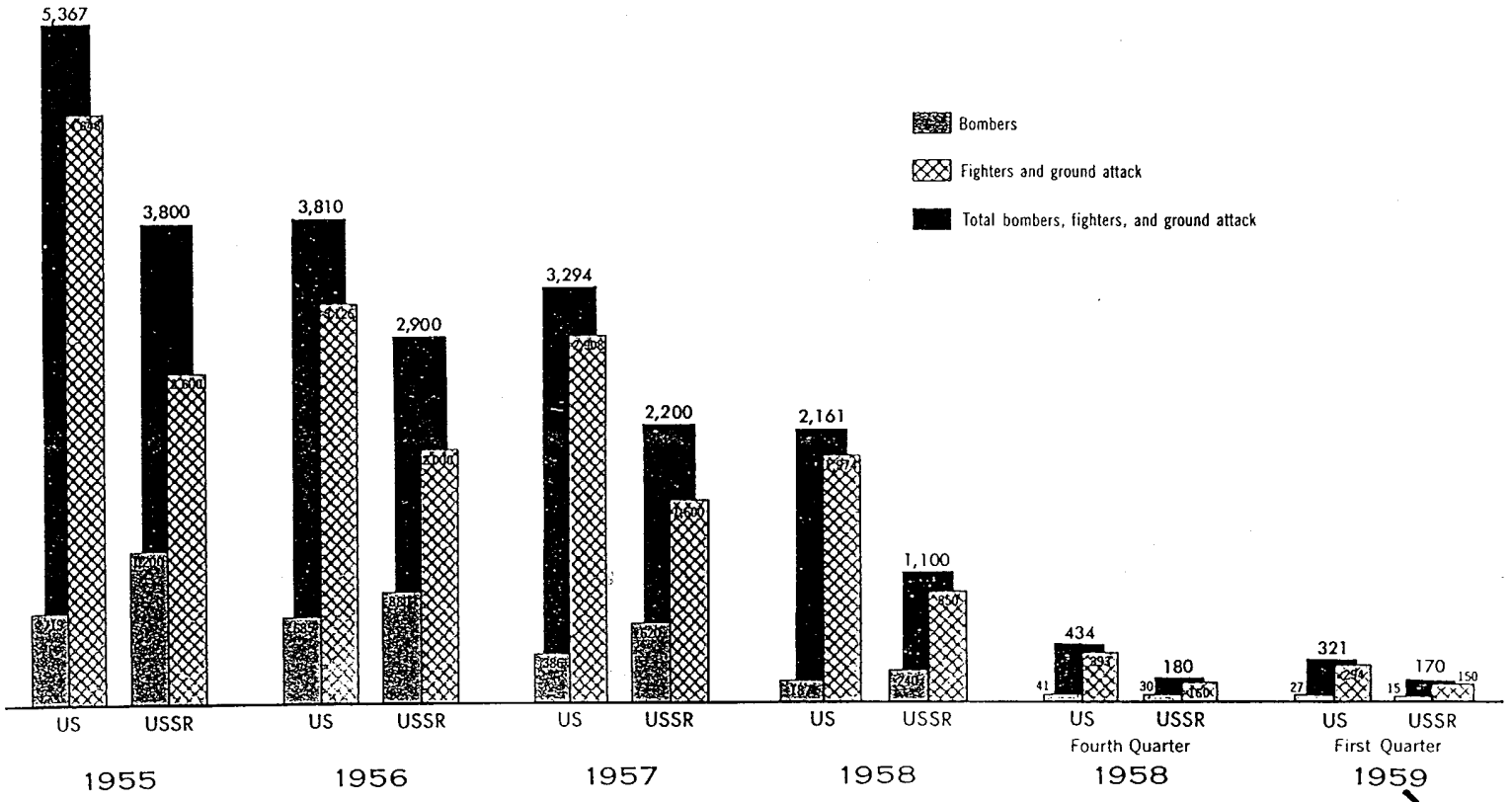
US[a] and USSR[b]

Figure 1

PRODUCTION OF MILITARY AIRCRAFT,[c] BY NUMBER

1955 through the First Quarter of 1959



a. US totals include preliminary data for March 1959.
b. USSR totals are rounded.
c. Bombers and fighters.

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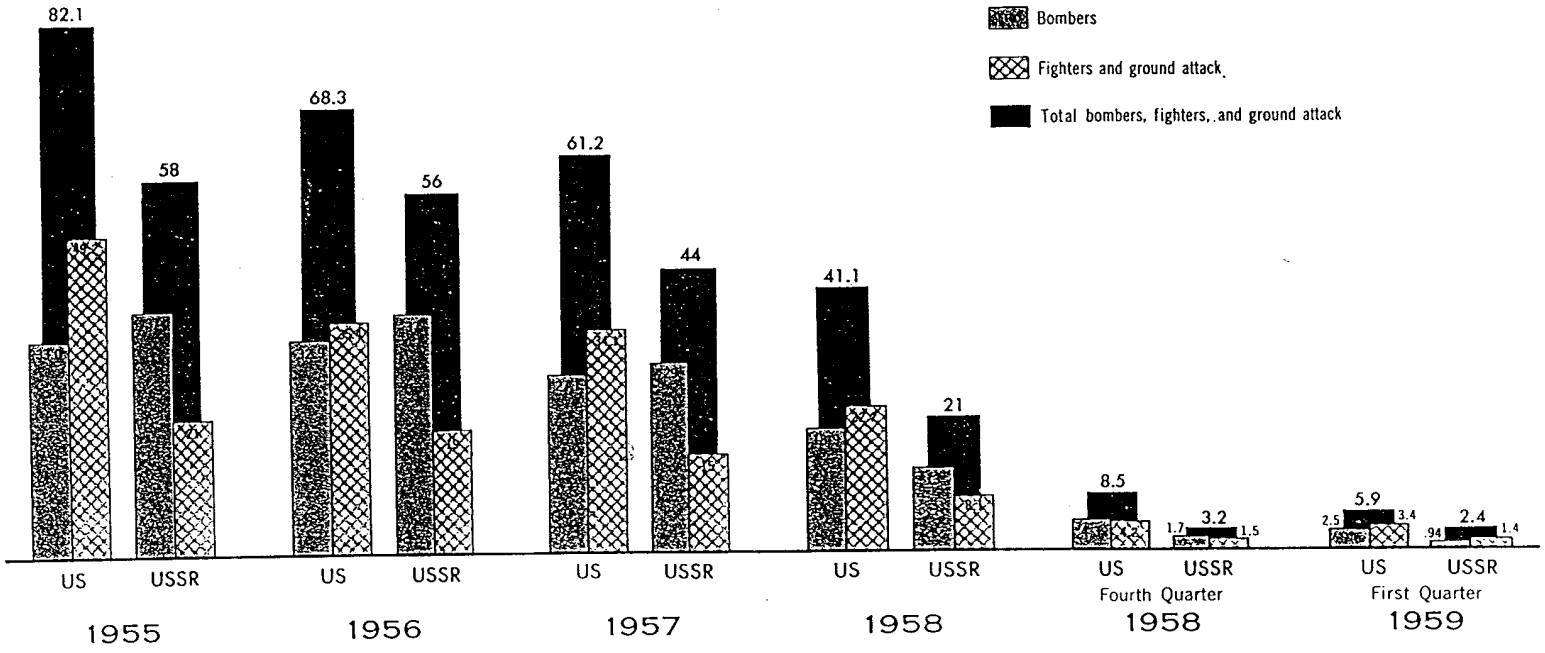
Figure 2

US[a] and USSR[b]

PRODUCTION OF MILITARY AIRCRAFT[c], BY WEIGHT[d]

1955 through the First Quarter of 1959

(Million pounds of airframe weight)



a. *US totals include preliminary data for March 1959.*
b. *USSR totals are rounded.*
c. *Bombers and fighters.*
d. *US figures do not include production of spare parts.*

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