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SPECIAL

INFORMATIONAL INTELLIGENCE

REPORT NO. 44-202

SOVIET UNION AIRCRAFT AND ARMAMENT

OFFICE OF THE
ASSISTANT CHIEF OF AIR STAFF, INTELLIGENCE
WASHINGTON, D. C.

UNITED STATES

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REPORT No. 44-202

SEPTEMBER 1944

NOT TO BE TAKEN INTO THE AIR ON COMBAT MISSIONS

Distribution: SPECIAL

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Washington, D. C., September 1944

Soviet Union Aircraft and Armament

INTRODUCTION

This publication is intended primarily for the use and information of Army Air Force units and personnel who may be associated with or operating in conjunction with the Soviet Union Air Forces.

This booklet is compiled to present in tabular form technical information at present available concerning operational types of Soviet Union aircraft and the armament they carry. It is not designed as a recognition manual although silhouettes of aircraft have been included along with the best available photographs or drawings to supplement a brief description of each aircraft.

Individual aircraft are classified according to general use. A standardized form is used to tabulate technical aircraft data. New features may be inscribed on current pages and blank forms are provided at the end of each classification group in order that the booklet may be kept up-to-date. Numbering pages in allotments of 100 to each group makes provision for adding new types at the end of the proper classification in the general index.

THE AIRCRAFT SHOWN ON THE FRONT COVER IS THE ***STORMOVI K (IL-3)***.

UNITED STATES
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Index

The following U. S. and British aircraft are employed by the Soviet Union Air Force.

P–39	B–25
P–40	AT–6
P–47	AT–19
P–51	Hurricane
P–63	Spitfire
A–20	Mosquito

Calculation of Ranges and Speeds

1. The method of assessing "RANGES" is based on the following convention:

a. Ranges given are ideal still-air ranges. No reduction is made for operational tactics or allowance made for navigational errors, head winds, etc.

b. Allowance is made for warming up and take-off equivalent to five minutes running at take-off power.

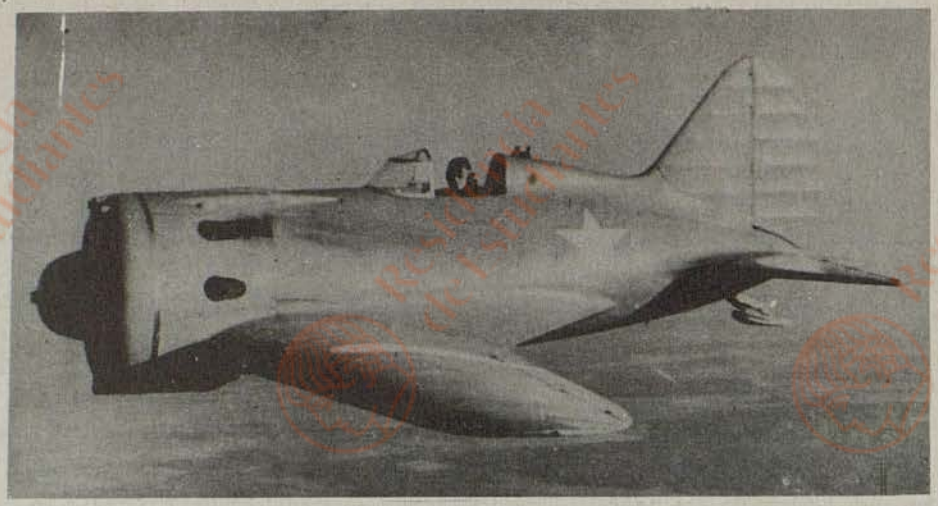
c. A further allowance is made for the fuel used during climb to the operational altitude at the maximum rate of climb.

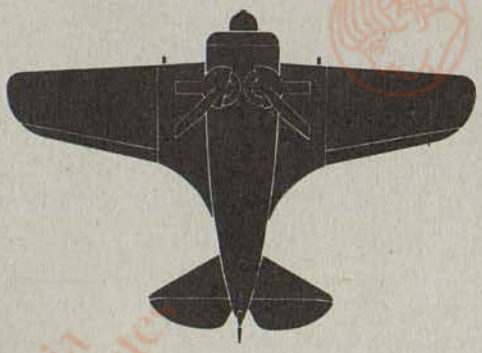
d. The distance covered during the climb is credited to the range but no credit is given for gliding in at the end of the journey.

2. Ranges given opposite the heading "Typical tactical speeds" in the range tables are included to supply idealized estimates of the approximate ranges which may be expected of each aircraft in tactical service under varying conditions of load and fuel. These ranges are based on a set of assumed factors approximating favorable operational conditions: warm-up, taxiing, run-up, take-off and landing equal to ten minutes at maximum rated power; time to climb to rated altitude at maximum continuous power, with allowance for distance covered in climb; time at economical cruising power to within 100 miles of the target, which may be taken as the point of optimum operational distance from base, and 150 miles returning; fifteen minutes of combat at maximum rated power; plus remainder of time and distance available at maximum continuous power under the specified bomb and fuel load. It is emphasized that figures submitted opposite this heading apply only to the one set of typical conditions assumed above. Any variation in conditions would necessitate recalculation of the tactical ranges to meet the specific problem.

3. Speeds shown under "PERFORMANCE" are those with normal fuel load and bombs, if any.

4. Cruising speeds given are average speeds.





I - 16

DESCRIPTION

The I-16, sometimes called "Rata", is one of the older types of U.S.S.R. fighters. It played a prominent role in the Spanish Civil War.

It is a single-engine, low-wing monoplane. Wing leading edge is straight, trailing edge tapered with large fillets that extend well back toward the tail. Fuselage is short and stubby, the cockpit has a head fairing that extends to the fin. Landing gear retracts inward into wing.

SEPT. 1944 .

SOVIET UNION 101

I - 16

SINGLE-ENGINE FIGHTER

Mfr. _____ Crew ONE

Duty FIGHTING. GROUND ATTACK.

PERFORMANCE

Max. emergency speeds 260 m. p. h. @ S. L.; 300 m. p. h. @ 17,000 ft. alt.; 290 m. p. h. @ 8,000 ft.alt.

Max. continuous speeds _____ m. p. h. @ S. L.; _____ m. p. h. @ _____ ft. alt.; _____ m. p. h. @ _____ ft. alt.

Cruising speeds: Normal 245 m. p. h.; _____ economical 180 m. p. h.; _____ each at 16,000 ft. altitude.

Climb: To 16,000 ft. alt. in 5.6 min.; rate _____ ft./min. at _____ ft. altitude.

Service ceilings: Normal load 29,000 ft.; max. bomb/fuel load _____ ft.; min. fuel/no bombs 30,700 ft.

Fuel: {U. S. gal.: Normal 70 ; max. _____ Take-off, in calm air _____ ft.
{Imp. gal.: Normal 58 ; max. _____ Take-off, over 50 ft. obstacle 1860 ft.

RANGES

Speeds	With Normal Fuel/Bomb Load 70 U. S. gal. and _____ lb. bombs	With Max. Bomb Load and _____ U. S. gal.	With Max. Fuel Load and _____ lb. Bombs
Economical cruising speed	370 miles	_____ miles	_____ miles
Normal cruising speed	290 miles	_____ miles	_____ miles
Maximum continuous speed	_____ miles	_____ miles	_____ miles
*Typical tactical speeds	_____ miles	_____ miles	_____ miles

*Ref.: p. 4. Pars. 2.

POWER PLANT

No. engines 1, rated 950 hp., each at 14,800 ft. alt., with _____ r. p. m. and _____ in. Hg.

Description M-63, 9-cylinder, air-cooled radial.

Specifications		Supercharger	Propeller	Fuel
Bore _____ in.	Dry Wgt. _____ lbs.	No. Speeds _____	Mfr. _____	Rating _____ octane
Stroke _____ in.	Red. Gear _____ : _____	No. Stages _____	No. Blades 2 + 3	Inlet System: _____
Displ. _____ cu. in.	Eng. Diam. _____ in.	Ratios _____	Diam. ___ ft., ___ in.	
Comp. Ratio ___ : _____	Eng. Length _____ in.	Impeller Diam. _____ in.	Pitch Control _____	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage 2 x 7.6mm (F) 650 r.p.g.

For'd wings 2 x 7.6mm (900 rpg) + 2 x 12.7/20mm (150 rpg)

Through hub _____

Dorsal _____

Lateral _____

Ventral _____

Tail _____

BOMB/FREIGHT LOAD

Normal load _____ kg., _____ lb.

Max. load 138 kg., 343 lb.

Typical stowage _____

Carriers for light or rocket bombs can be fitted under wings.

Alternate stowage _____

Rocket bombs, 6 x 23 Kg. (50.7 lb)

Freight _____ lb.

Troops _____

ARMOR

Frontal _____

Windshield _____

Pilot's seat 8 mm.

Dorsal _____

Lateral _____

Ventral _____

Bulkhead _____

Engine _____

SPECIFICATIONS

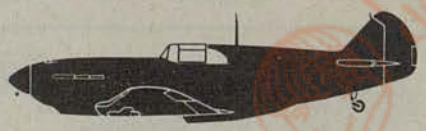
Materials Metal wing, wooden fuselage.

Span 29'-2" Length 20'-4" Height 12' Gross wing area 125 sq.ft. Tail span _____

Weights: Landing 4,700 lb.; normal load 5,200 lb.; max. load _____ lb.

ADDITIONAL TECHNICAL DATA

There is a two-seat version for training, designated UT-4. The I-16C is said to have a 1000 hp. engine, increasing the performance, and 20mm cannon in the wings.



LAGG-3

DESCRIPTION

The LAGG-3 is one of the U.S.S.R.'s currently-operational fighters.

It is a single-engine, low-wing monoplane. Wing has a pronounced taper to rounded tips. Nose is pointed and cockpit is faired into the fuselage. There is a single fin and rounded full-length rudder. Coolant radiator is placed under fuselage at wing's trailing edge; oil radiator is under front of engine; air intakes are in the wing roots. Landing gear retracts inward into wing; tailwheel also retracts.

SEPT. 1944	LAGG-3	SOVIET UNION 102

SINGLE-ENGINE FIGHTER

Mfr. DESIGNERS: LAVOCHKIN, GARBUNOV, GUDKOV. Crew ONE

Duty FIGHTING. GROUND ATTACK.

PERFORMANCE

Max. emergency speeds 280 m. p. h. @ S. L.; 348 m. p. h. @ 16,400 ft. alt.; 332 m. p. h. @ 20,000 ft.alt.
Max. continuous speeds ____ m. p. h. @ S. L.; ____ m. p. h. @ ____ ft. alt.; ____ m. p. h. @ ____ ft. alt.
Cruising speeds: Normal 295 m. p. h.; economical 225 m. p. h.; each at 16,400 ft. altitude.
Climb: To 10,000 ft. alt. in 4.8 min.; rate ____ ft./min. at ____ ft. altitude.
Service ceilings: Normal load 27,200 ft.; max. bomb/fuel load ____ ft.; min. fuel/no bombs 30,500 ft.
Fuel: {U. S. gal.: Normal 128 ; max. 154 Take-off, in calm air ____ ft.
{Imp. gal.: Normal 106 ; max. 128 Take-off, over 50 ft. obstacle ____ ft.

RANGES

Speeds	With Normal Fuel/Bomb Load ____ U. S. gal. and ____ lb. bombs	With Max. Bomb Load and ____ U. S. gal.	With Max. Fuel Load and ____ lb. Bombs
Economical cruising speed	____ miles	____ miles	680 miles
Normal cruising speed	____ miles	____ miles	300 miles
Maximum continuous speed	____ miles	____ miles	____ miles
*Typical tactical speeds	____ miles	____ miles	____ miles

*Ref.: p. 4. Para. 2.

POWER PLANT

No. engines 1, rated 1030 hp., each at 14,800 ft. alt., with ____ r. p. m. and ____ in. Hg.

Description M-105P, 12-cylinder, liquid-cooled, inverted "V".

Specifications			Supercharger	Propeller	Fuel
Bore ____ in.	Dry Wgt. ____ lbs.		No. Speeds 2	Mfr. ____	Rating 94-95 octane
Stroke ____ in.	Red. Gear 59 : ____		No. Stages ____	No. Blades 3	Inlet System: 6 carbs.
Displ. 2400 cu. in.	Eng. Diam. 40 in.		Ratios 7.8, 10	Diam. 11 ft., 10 in.	
Comp. Ratio 7 : 1	Eng. Length 79 in.		Impeller Diam. ____ in.	Pitch Control Hydraulic.	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage 2 x 7.6 + 1 x 12.7mm 220 r.p.g. (F)
For'd wings Poss. 2 x 12.7mm (F)
Through hub 1 x 20/23 mm (F)
Dorsal 120 rounds.
Lateral
Ventral
Tail

BOMB/FREIGHT LOAD

Normal load ____ kg., ____ lb.
Max. load 138 kg., 343 lb.
Typical stowage 6 x 23 Kg. (50.7 lb) rocket bombs under wing.
Alternate stowage
Freight ____ lb.
Troops

ARMOR

Frontal
Windshield
Pilot's seat 9 mm.
Dorsal
Lateral
Ventral
Bulkhead
Fuel tanks protected.
Engine

SPECIFICATIONS

Materials Wooden wing and fuselage, fabric-covering.

Span 32'-2" Length 28'-11" Height 13' Gross wing area 188 sq. ft. Tail span ____

Weights: Landing 5900 lb.; normal load 7,050 lb.; max. load ____ lb.

ADDITIONAL TECHNICAL DATA

Landing gear and flaps hydraulically-operated. Cooled and filtered exhaust gases are led into fuel tanks to reduce fire hazard. A version is reported with an engine intended for low altitude fighting and ground attack. This can have 1 x 37mm gun and may be powered with the AM-38 engine rated at 1300 hp. at S.L. which would give max. speed at S.L. of about 315 mph.

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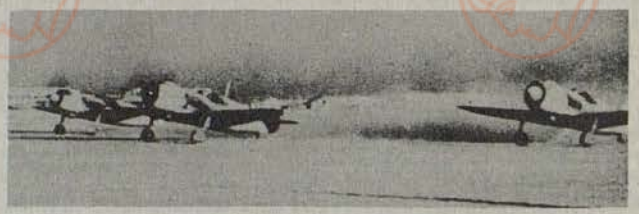
SOVIET UNION	LA-5	SEPT.
103		1944



LA-5

DESCRIPTION

The LA-5 is one of the newest fighters of the U.S.S.R. and is in constant operational use. It has been said to be U.S.S.R's answer to the German FW 190.

It is a single-engine, low-wing monoplane. Wing has pronounced taper to rounded tips. Fuselage is of oval section. There is a single fin and rounded, full-length rudder. The landing gear retracts inward into wing; tailwheel also retracts. A large spinner is a distinguishing feature.

LA-5

SINGLE-ENGINE FIGHTER

Mfr. DESIGNER: LAVOCHKIN Crew ONE

Duty FIGHTING. BOMBING.

PERFORMANCE

Max. emergency speeds ____ m. p. h. @ S. L.; 385 m. p. h. @ 19,000 ft. alt.; ____ m. p. h. @ ____ ft.alt.
Max. continuous speeds ____ m. p. h. @ S. L.; ____ m. p. h. @ ____ ft. alt.; ____ m. p. h. @ ____ ft. alt.
Cruising speeds: Normal 330 m. p. h.; economical 220 m. p. h.; each at 18,000 ft. altitude.
Climb: To 18,000 ft. alt. in 6.2 min.; rate ____ ft./min. at ____ ft. altitude.
Service ceilings: Normal load 36,000 ft.; max. bomb/fuel load 32,000 ft.; min. fuel/no bombs 38,000 ft.
Fuel: U. S. gal.: Normal 143 ; max. ____ Take-off, in calm air ____ ft.
Imp. gal.: Normal 119 ; max. ____ Take-off, over 50 ft. obstacle 1800 ft.

RANGES

Speeds	With Normal Fuel/Bomb Load 143 U. S. gal. and ____ lb. bombs	With Max. Bomb Load and 143 U. S. gal.	With Max. Fuel Load and ____ lb. Bombs
Economical cruising speed	530 miles	470 miles	____ miles
Normal cruising speed	450 miles	410 miles	____ miles
Maximum continuous speed	____ miles	____ miles	____ miles
*Typical tactical speeds	____ miles	____ miles	____ miles

*Ref.: p. 4. Para. 2.

POWER PLANT

No. engines 1, rated 1600 hp., each at 17,000 ft. alt., with ____ r. p. m. and ____ in. Hg.

Description M-82, 14-cylinder, twin-row, air-cooled radial.

Specifications		Supercharger	Propeller	Fuel
Bore ____ in.	Dry Wgt. ____ lbs.	No. Speeds 2	Mfr. ____	Rating ____ octane
Stroke ____ in.	Red. Gear ____ : ____	No. Stages ____	No. Blades 3	Inlet System: ____
Displ. ____ cu. in.	Eng. Diam. ____ in.	Ratios ____	Diam. ____ ft., ____ in.	
Comp. Ratio ____ : ____	Eng. Length ____ in.	Impeller Diam. ____ in.	Pitch Control ____	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage 2 x 20mm (F) 200 rpg.
For'd wings Poss. 2 x 12.7mm (F)
Through hub ____
Dorsal ____
Lateral ____
Ventral ____
Tail ____

BOMB/FREIGHT LOAD

Normal load ____ kg., ____ lb.
Max. load 200 kg., 440 lb.
Typical stowage Bomb racks under wing.
Alternate stowage ____
Freight ____ lb.
Troops ____

ARMOR

Frontal ____
Windshield 3" bulletproof glass.
Pilot's seat 10mm.
Dorsal ____
Lateral ____
Ventral ____
Bulkhead ____
Engine ____

SPECIFICATIONS

Materials Mostly wood with plywood and aluminum alloy covering.

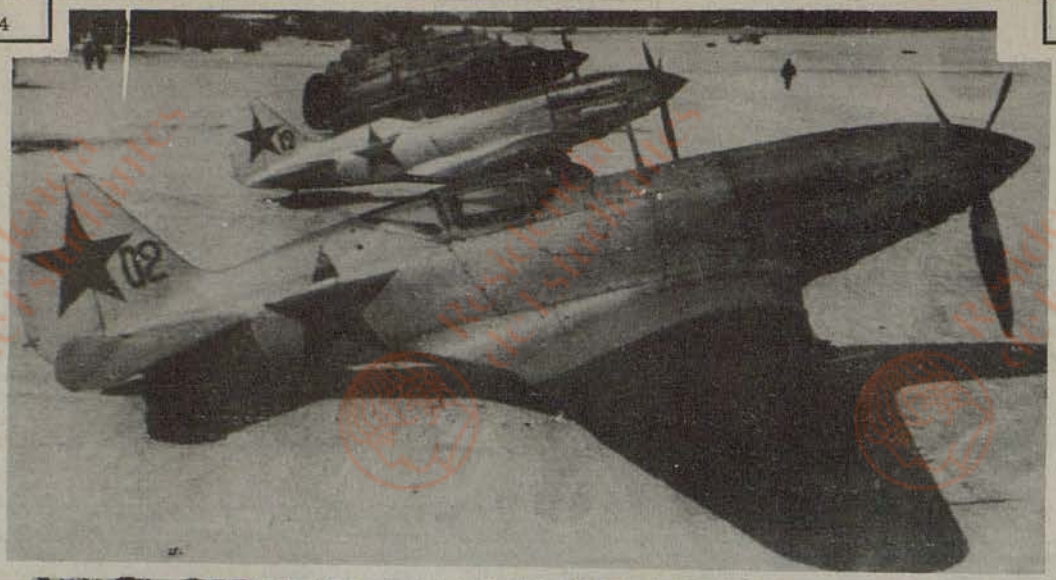
Span (est.) 32'-2" Length (est.) 28'-11" Height (est.) 13' Gross wing area (est) 190 sq. ft. Tail span ____

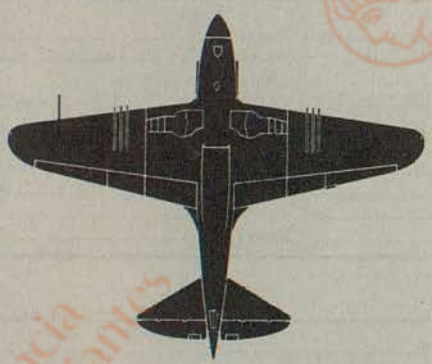
Weights: Landing 7500 lb.; normal load 8500 lb.; max. load 9000 lb.

ADDITIONAL TECHNICAL DATA

No cowl flaps; pilot controls cooling by regulating vertical plates placed just to rear of engine cowling. New version of engine said to have direct fuel injection. Starting dog located at tip of spinner for winter starting; small 1 gal. tank of high octane fuel used for this also. An improved version with increased performance, designated the LA-7, has been reported.

SOVIET UNION	MIG-3	SEPT.
104		1944





MIG-3

DESCRIPTION

The MIG-3 is one of U.S.S.R' operational fighters and has seen extensive service.

It is a single-engine, low-wing monoplane. Wing tapers to rounded tips. Cockpit fairs into fuselage. There is a single fin and rounded, full-length rudder. Nose is pointed. Landing gear retracts inward into wing. Ventral radiator is under the cockpit.

SEPT. 1944	MIG-3	SOVIET UNION 104

SINGLE-ENGINE FIGHTER

Mfr. DESIGNERS: MIKOYAN, GUREVICH. Crew ONE

Duty FIGHTING. GROUND ATTACK.

PERFORMANCE

Max. emergency speeds 313 m. p. h. @ S. L.; 378 m. p. h. @ 22,000 ft. alt.; 370 m. p. h. @ 25,000 ft.alt.

Max. continuous speeds ____ m. p. h. @ S. L.; ____ m. p. h. @ ____ ft. alt.; ____ m. p. h. @ ____ ft. alt.

Cruising speeds: Normal 312 m. p. h.; economical 204 m. p. h.; each at 21,000 ft. altitude.

Climb: To 21,000 ft. alt. in 9.1 min.; rate ____ ft./min. at ____ ft. altitude.

Service ceilings: Normal load 33,000 ft.; max. bomb/fuel load 30,000 ft.; min. fuel/no bombs 35,000 ft.

Fuel: (U. S. gal.: Normal 106; max. 187) Take-off, in calm air ____ ft.

(Imp. gal.: Normal 88; max. 155) Take-off, over 50 ft. obstacle 1800 ft.

RANGES

Speeds	With Normal Fuel/Bomb Load 106 U. S. gal. and ____ lb. bombs	With Max. Bomb Load and 106 U. S. gal.	With Max. Fuel Load and ____ lb. Bombs
Economical cruising speed	420 miles	370 miles	830 miles
Normal cruising speed	345 miles	320 miles	700 miles
Maximum continuous speed	____ miles	____ miles	____ miles
*Typical tactical speeds	____ miles	____ miles	____ miles

*Ref.: p. 4. Para. 2.

POWER PLANT

No. engines 1, rated 1200 hp., each at 19,700 ft. alt., with ____ r. p. m. and ____ in. Hg.

Description M-35A, 12-cylinder, liquid-cooled, inverted "V".

Specifications		Supercharger	Propeller	Fuel
Bore ____ in.	Dry Wgt. ____ lbs.	No. Speeds ____	Mfr. ____	Rating ____ octane
Stroke ____ in.	Red. Gear ____ : ____	No. Stages ____	No. Blades 3	Inlet System: ____
Displ. ____ cu. in.	Eng. Diam. ____ in.	Ratios ____	Diam. ____ ft., ____ in.	
Comp. Ratio ____ : ____	Eng. Length ____ in.	Impeller Diam. ____ in.	Pitch Control ____	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage 1 x 12.7/20/23mm + 2 x 7.6mm (F)

For'd wings Optional, 2/4 x 12.7mm (F)

Through hub ____

Dorsal ____

Lateral ____

Ventral ____

Tail ____

BOMB/FREIGHT LOAD

Normal load ____ kg., ____ lb.

Max. load ____ kg., (est) 300 lb.

Typical stowage 2 x 42 Kg. (93 lbs.)

Alternate stowage 4 - 8 rocket bombs.

Freight ____ lb.

Troops ____

ARMOR

Frontal ____

Windshield ____

Pilot's seat 9 mm

Dorsal ____

Lateral ____

Ventral ____

Bulkhead ____

Engine ____

SPECIFICATIONS

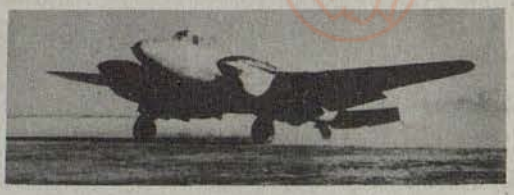
Materials Metal, wood, fabric.

Span 34'-6" Length 26'-8" Height 14' Gross wing area 200 sq. ft. Tail span ____

Weights: Landing 5700 lb.; normal load 6650 lb.; max. load 7,200 lb.

ADDITIONAL TECHNICAL DATA

A more powerfully-engined version is reported to be fitted with a M-38 engine rated at about 1600 h.p. at 6,600'.



PE-3

DESCRIPTION

The PE-3 is a long range fighter developed from the PE-2 dive-bomber and is similar in appearance except for its inclosed nose.

It is a twin-engine, low-wing monoplane. Wing has parallel center section and sharply-tapered outer sections, with elliptical tips. The fuselage is slim, and the cockpit is placed forward of the leading edge. The stabilizer has pronounced dihedral and there are twin fins and rudders. Landing gear retracts into nacelles; tailwheel also retracts.

PE-3

TWIN-ENGINE FIGHTER

Mfr. DESIGNER: PETLYAKOV Crew TWO

Duty FIGHTING ALTERNATE DESIGNATION: PE-2B

PERFORMANCE

Max. emergency speeds 276 m. p. h. @ S. L.; 315 m. p. h. @ 16,000 ft. alt.; 309 m. p. h. @ 20,000 ft.alt.
Max. continuous speeds ____ m. p. h. @ S. L.; ____ m. p. h. @ ____ ft. alt.; ____ m. p. h. @ ____ ft. alt.
Cruising speeds: Normal 266 m. p. h.; ____ economical 173 m. p. h.; ____ each at 16,000 ft. altitude.
Climb: To 16,000 ft. alt. in 8.2 min.; rate ____ ft./min. at ____ ft. altitude.
Service ceilings: Normal load 27,500 ft.; max. bomb/fuel load ____ ft.; min. fuel/no bombs 31,500 ft.
Fuel: U. S. gal.: Normal 380 ; max. ____ Take-off, in calm air ____ ft.
Imp. gal.: Normal 315 ; max. ____ Take-off, over 50 ft. obstacle 1800 ft.

RANGES

Speeds	With Normal Fuel/Bomb Load 380 U. S. gal. and 440 lb. bombs	With Max. Bomb Load and ____ U. S. gal.	With Max. Fuel Load and ____ lb. Bombs
Economical cruising speed	960 miles	____ miles	____ miles
Normal cruising speed	750 miles	____ miles	____ miles
Maximum continuous speed	____ miles	____ miles	____ miles
*Typical tactical speeds	____ miles	____ miles	____ miles

*Ref.: p. 4. Para. 2.

POWER PLANT

No. engines 2, rated 1030 hp., each at 14,800 ft. alt., with ____ r. p. m. and ____ in. Hg.

Description M-105, 12-cylinder, liquid-cooled, inverted "V".

Specifications		Supercharger	Propeller	Fuel
Bore ____ in.	Dry Wgt. ____ lbs.	No. Speeds ____	Mfr. ____	Rating ____ octane
Stroke ____ in.	Red. Gear ____ : ____	No. Stages ____	No. Blades 3	Inlet System: ____
Displ. ____ cu. in.	Eng. Diam. ____ in.	Ratios ____	Diam. ____ ft., ____ in.	
Comp. Ratio ____ : ____	Eng. Length ____ in.	Impeller Diam. ____ in.	Pitch Control ____	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage 2 x 12.7mm (F)
For'd wings ____
Through hub ____
Dorsal 1 x 7.6mm (M)
Lateral 1 x 7.6mm (M)
Ventral ____
Tail ____

BOMB/FREIGHT LOAD

Normal load ____ kg., ____ lb.
Max. load 200 kg., 440 lb.
Typical stowage 2 x 110 lb. + 8 rocket bombs.
Alternate stowage ____
Freight ____ lb.
Troops ____

ARMOR

Frontal ____
Windshield ____
Pilot's seat 9mm
Dorsal ____
Lateral ____
Ventral ____
Bulkhead ____
Engine ____

SPECIFICATIONS

Materials Metal, stressed skin, fabric-covering.

Span 56'-1" Length 41'-5" Height 13'-10" Gross wing area 465 sq.ft. Tail span ____

Weights: Landing 11,300 lb.; normal load 15,000 lb.; max. load ____ lb.

ADDITIONAL TECHNICAL DATA

Bombs are carried beneath wing between nacelle and fuselage. An incendiary bomb carrier is in each nacelle and four rocket-bomb carriers outside each nacelle. Armament may be heavier than that shown above. One version may have M-87 radial engines.

YAK-1

DESCRIPTION

The YAK-1 is one of U.S.S.R's currently-operational fighters.

It is a single-engine, low-wing monoplane. Wing tapers to rounded tips. Nose is pointed. Cockpit fairs into fuselage. There is a single fin and rounded, full-length rudder. Stabilizer has an elliptical trailing edge and a V cut out. Landing gear retracts; tailwheel is fixed.

SEPT. 1944	YAK-1	SOVIET UNION 106

SINGLE-ENGINE FIGHTER

Mfr. DESIGNER: YAKOLEV Crew ONE

Duty FIGHTING. GROUND ATTACK. ALTERNATE DESIGNATION: I-26.

PERFORMANCE

Max. emergency speeds 290 m. p. h. @ S. L.; 330 m. p. h. @ 16,000 ft. alt.; _____ m. p. h. @ _____ ft.alt.
Max. continuous speeds _____ m. p. h. @ S. L.; _____ m. p. h. @ _____ ft. alt.; _____ m. p. h. @ _____ ft. alt.
Cruising speeds: Normal 263 m. p. h.; economical 180 m. p. h.; each at 16,000 ft. altitude.
Climb: To 16,000 ft. alt. in 5.8 min.; rate _____ ft./min. at _____ ft. altitude.
Service ceilings: Normal load 31,000 ft.; max. bomb/fuel load _____ ft.; min. fuel/no bombs 33,800 ft.
Fuel: U. S. gal.: Normal 108 ; max. _____ Take-off, in calm air _____ ft.
Imp. gal.: Normal 90 ; max. _____ Take-off, over 50 ft. obstacle 1560 ft.

RANGES

Speeds	With Normal Fuel/Bomb Load 108 U. S. gal. and _____ lb. bombs	With Max. Bomb Load and _____ U. S. gal.	With Max. Fuel Load and _____ lb. Bombs
Economical cruising speed	530 miles	_____ miles	_____ miles
Normal cruising speed	425 miles	_____ miles	_____ miles
Maximum continuous speed	_____ miles	_____ miles	_____ miles
*Typical tactical speeds	_____ miles	_____ miles	_____ miles

*Ref.: p. 4. Para. 2.

POWER PLANT

No. engines 1, rated 1030 bp., each at 14,800 ft. alt., with _____ r. p. m. and _____ in. Hg.

Description M-105, 12-cylinder, liquid-cooled, inverted "V".

Specifications		Supercharger	Propeller	Fuel
Bore _____ in.	Dry Wgt. _____ lbs.	No. Speeds _____	Mfr. _____	Rating _____ octane
Stroke _____ in.	Red. Gear ____ : ____	No. Stages _____	No. Blades 3	Inlet System: _____
Displ. _____ cu. in.	Eng. Diam. _____ in.	Ratios _____	Diam. ____ ft., ____ in.	
Comp. Ratio ____ : ____	Eng. Length _____ in.	Impeller Diam. _____ in.	Pitch Control _____	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage 2 x 7.6/12.7mm (F)
For'd wings 2 x 12.7mm (F)
Through hub 1 x 12.7/20mm (F)
Dorsal _____
Lateral _____
Ventral _____
Tail _____

BOMB/FREIGHT LOAD

Normal load 100 kg., 220 lb.
Max. load 138 kg., 300 lb.
Typical stowage 2 x 110 lbs.
Alternate stowage 6 x 51 lb. rocket bombs.
Freight _____ lb.
Troops _____

ARMOR

Frontal _____
Windshield _____
Pilot's seat 9 mm.
Dorsal _____
Lateral _____
Ventral _____
Bulkhead _____
Engine _____

SPECIFICATIONS

Materials Metal, wood, fabric covering.

Span 32'-10" Length 27'-11" Height 14' Gross wing area 165 sq.ft. Tail span _____

Weights: Lapding 5,000 lb.; normal load 5,800 lb.; max. load _____ lb.

ADDITIONAL TECHNICAL DATA

It is reported M-100, M-102 or M-107 engines may be used. Ventral coolant radiator is under cockpit; oil cooler apparently under engine.

YAK-9

DESCRIPTION

The YAK-9 is one of the U.S.S.R.'s best interceptor fighters developed from the YAK-1. The aircraft is said to be very maneuverable.

It is a single-engine, low-wing monoplane. Wing is sharply-tapered to rounded tips. Nose is long and pointed. Cockpit sits on top of fuselage. There is a single fin and rounded, full-length rudder. Landing gear retracts inward into wing; tailwheel also retracts.

SEPT. 1944	YAK-9	SOVIET UNION 107

SINGLE-ENGINE FIGHTER

Mfr. DESIGNER: YAKOLEV Crew ONE

Duty FIGHTING

PERFORMANCE

Max. emergency speeds ____ m. p. h. @ S. L.; 368 m. p. h. @ 19,640 ft. alt.; ____ m. p. h. @ ____ ft.alt.

Max. continuous speeds ____ m. p. h. @ S. L.; ____ m. p. h. @ ____ ft. alt.; ____ m. p. h. @ ____ ft. alt.

Cruising speeds: Normal ____ m. p. h.; ____ economical ____ m. p. h.; ____ each at ____ ft. altitude.

Climb: To 16,400 ft. alt. in 5.5 min.; rate ____ ft./min. at ____ ft. altitude.

Service ceilings: Normal load (est) 35,000 ft.; max. bomb/fuel load ____ ft.; min. fuel/no bombs ____ ft.

Fuel: U. S. gal.: Normal 125 ; max. ____ Take-off, in calm air ____ ft.

Imp. gal.: Normal 104 ; max. ____ Take-off, over 50 ft. obstacle ____ ft.

RANGES

Speeds	With Normal Fuel/Bomb Load 125 U. S. gal. and ____ lb. bombs	With Max. Bomb Load and ____ U. S. gal.	With Max. Fuel Load and ____ lb. Bombs
Economical cruising speed	530 miles	____ miles	____ miles
Normal cruising speed	____ miles	____ miles	____ miles
Maximum continuous speed	____ miles	____ miles	____ miles
*Typical tactical speeds	____ miles	____ miles	____ miles

*Ref.: p. 4. Para. 2.

POWER PLANT

No. engines 1 , rated 1260 hp., each at Take-off ft. alt., with ____ r. p. m. and ____ in. Hg.

Description M-105R, 12-cylinder, liquid-cooled, inverted "V".

Specifications		Supercharger	Propeller	Fuel
Bore ____ in.	Dry Wgt. ____ lbs.	No. Speeds 1	Mfr. ____	Rating ____ octane
Stroke ____ in.	Red. Gear ____ : ____	No. Stages ____	No. Blades 3	Inlet System: ____
Displ. ____ cu. in.	Eng. Diam. ____ in.	Ratios ____	Diam. ____ ft., ____ in.	
Comp. Ratio ____ : ____	Eng. Length ____ in.	Impeller Diam. ____ in.	Pitch Control Electric	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage 2 x 12.7mm (F) 250 rpg.

For'd wings ____

Through hub 1 x 20mm (F)

Dorsal /120 rds.

Lateral ____

Ventral ____

Tail ____

BOMB/FREIGHT LOAD

Normal load ____ kg., ____ lb.

Max. load ____ kg., ____ lb.

Typical stowage ____

Alternate stowage ____

Freight ____ lb.

Troops ____

ARMOR

Frontal ____

Windshield Bulletproof glass.

Pilot's seat Back, 9 mm, Head, shoulders, bulletproof glass.

Dorsal ____

Lateral ____

Ventral ____

Bulkhead ____

Engine ____

SPECIFICATIONS

Materials Wings mostly wooden, fuselage steel tubing; fin, stabilizer and control surfaces of aluminum /alloy.

Span 36' Length 30' Height ____ Gross wing area ____ Tail span ____

Weights: Landing ____ lb.; normal load 6300 lb.; max. load ____ lb.

ADDITIONAL TECHNICAL DATA

May have 37mm cannon in place of 20mm. Muzzle velocity 20mm as high as 3000 ft/sec., rate of fire 900-1100 per minute. One leakproof fuel tank in each wing. Version known as YAK-7 practically same except for different internal wing construction. Coolant radiators placed under wing at trailing edge. Landing speed reported to be 93 mph, and a 360° turn accomplished in 14 seconds.

DESCRIPTION

Mfr. _____ Crew _____

Duty _____

PERFORMANCE

Max. emergency speeds _____ m. p. h. @ S. L.; _____ m. p. h. @ _____ ft. alt.; _____ m. p. h. @ _____ ft.alt.
Max. continuous speeds _____ m. p. h. @ S. L.; _____ m. p. h. @ _____ ft. alt.; _____ m. p. h. @ _____ ft. alt.
Cruising speeds: Normal _____ m. p. h.; _____ economical _____ m. p. h.; _____ each at _____ ft. altitude.
Climb: To _____ ft. alt. in _____ min.; rate _____ ft./min. at _____ ft. altitude.
Service ceilings: Normal load _____ ft.; max. bomb/fuel load _____ ft.; min. fuel/no bombs _____ ft.
Fuel: {U. S. gal.: Normal _____ ; max. _____ Take-off, in calm air _____ ft.
Imp. gal.: Normal _____ ; max. _____ Take-off, over 50 ft. obstacle _____ ft.

RANGES

Speeds	With Normal Fuel/Bomb Load _____ U. S. gal. and _____ lb. bombs	With Max. Bomb Load and _____ U. S. gal.	With Max. Fuel Load and _____ lb. Bombs
Economical cruising speed	_____ miles	_____ miles	_____ miles
Normal cruising speed	_____ miles	_____ miles	_____ miles
Maximum continuous speed	_____ miles	_____ miles	_____ miles
*Typical tactical speeds	_____ miles	_____ miles	_____ miles

*Ref.: p. 4. Para. 2.

POWER PLANT

No. engines _____ , rated _____ hp., each at _____ ft. alt., with _____ r. p. m. and _____ in. Hg.

Description _____

Specifications		Supercharger	Propeller	Fuel
Bore _____ in.	Dry Wgt. _____ lbs.	No. Speeds _____	Mfr. _____	Rating _____ octane
Stroke _____ in.	Red. Gear ____ : ____	No. Stages _____	No. Blades _____	Inlet System: _____
Displ. _____ cu. in.	Eng. Diam. _____ in.	Ratios _____	Diam. ____ ft., ____ in.	
Comp. Ratio ____ : ____	Eng. Length _____ in.	Impeller Diam. _____ in.	Pitch Control _____	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage _____
_____
For'd wings _____
_____
Through hub _____
Dorsal _____
Lateral _____
Ventral _____
Tail _____

BOMB/FREIGHT LOAD

Normal load _____ kg., _____ lb.
Max. load _____ kg., _____ lb.
Typical stowage _____
_____
_____
Alternate stowage _____
_____
_____
Freight _____ lb.
Troops _____

ARMOR

Frontal _____
Windshield _____
Pilot's seat _____
_____
Dorsal _____
Lateral _____
Ventral _____
Bulkhead _____
_____
Engine _____

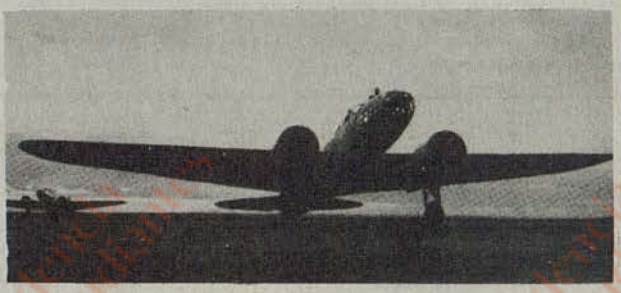
SPECIFICATIONS

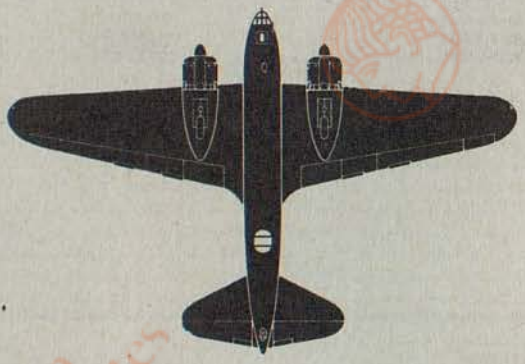
Materials _____

Span _____ Length _____ Height _____ Gross wing area _____ Tail span _____

Weights: Landing _____ lb.; normal load _____ lb.; max. load _____ lb.

ADDITIONAL TECHNICAL DATA





DB-3F

DESCRIPTION

The DB-3F is one of the U.S.S.R.'s best bombers. Although it is commonly referred to as a medium bomber, the "DB" stands for "long distance bomber."

It is a twin-engine, low-wing monoplane. Wing tapers, more so on trailing than leading edge; tips are rounded. Fuselage is of comparatively deep oval section, with pointed transparent nose. Long chord cowlings have small frontal inlets. A dorsal turret is placed just to the rear of trailing edge. There is a single fin and rudder. Landing gear retracts rearward into nacelles. Tailwheel is fixed.

SEPT. 1944	DB-3F	SOVIET UNION 201

TWIN-ENGINE BOMBER

Mfr. DESIGNER: ILYUSHIN Crew THREE-FOUR

Duty BOMBING. RECONNAISSANCE. TORPEDO-DROPPING.

PERFORMANCE

Max. emergency speeds 245 m. p. h. @ S. L.; 300 m. p. h. @ 21,000 ft. alt.; 285 m. p. h. @ 25,000 ft.alt.
Max. continuous speeds ____ m. p. h. @ S. L.; ____ m. p. h. @ ____ ft. alt.; ____ m. p. h. @ ____ ft. alt.
Cruising speeds: Normal 265 m. p. h.; ____ economical 240 m. p. h.; ____ each at 21,000 ft. altitude.
Climb: To 21,000 ft. alt. in 14 min.; rate ____ ft./min. at ____ ft. altitude.
Service ceilings: Normal load 30,700 ft.; max. bomb/fuel load 35,000 ft.; min. fuel/no bombs 28,000 ft.
Fuel: U. S. gal.: Normal 422 ; max. 1024 Take-off, in calm air ____ ft.
Imp. gal.: Normal 350 ; max. 850 Take-off, over 50 ft. obstacle 1710 ft.

RANGES

Speeds	With Normal Fuel/Bomb Load 422 U. S. gal. and 2200 lb. bombs	With Max. Bomb Load and 422 U. S. gal.	With Max. Fuel Load and 1700 lb. Bombs
Economical cruising speed	@ 240 mph - 885 miles	@ 245 mph-760 miles	@ 255 mph-1970 miles
Normal cruising speed	@ 265 mph - 785 miles	@ 250 mph-730 miles	____ miles
Maximum continuous speed	____ miles	____ miles	____ miles
*Typical tactical speeds	____ miles	____ miles	____ miles

*Ref.: p. 4. Para. 2.

POWER PLANT

No. engines 2 , rated 1100 hp., each at 19,700 ft. alt., with ____ r. p. m. and ____ in. Hg.

Description M-88, 14-cylinder, twin-row, air-cooled radial.

Specifications		Supercharger	Propeller	Fuel
Bore ____ in.	Dry Wgt. ____ lbs.	No. Speeds ____	Mfr. ____	Rating ____ octane
Stroke ____ in.	Red. Gear ____ : ____	No. Stages ____	No. Blades 3	Inlet System: ____
Displ. ____ cu. in.	Eng. Diam. ____ in.	Ratios ____	Diam. ____ ft., ____ in.	
Comp. Ratio ____ : ____	Eng. Length ____ in.	Impeller Diam. ____ in.	Pitch Control ____	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage 1 x 7.6/12.7mm (M)
For'd wings ____
Through hub ____
Dorsal 1 x 7.6/12.7mm (M)
Lateral ____
Ventral 1 x 7.6/12.7mm (M)
Tail ____

BOMB/FREIGHT LOAD

Normal load 1000 kg., 2200 lb.
Max. load 2500 kg., 5500 lb.
Typical stowage ____
14 x 110 lb.
Alternate stowage Torpedo, 1 x 2072 lb.
3 x 550/1100 + 1 x 2200 lb.
10 x 220 + 1 x 2200 lb.
Freight ____ lb.
Troops ____

ARMOR

Frontal ____
Windshield ____
Pilot's seat 9 mm.
Dorsal ____
Lateral ____
Ventral ____
Bulkhead ____
Engine ____

SPECIFICATIONS

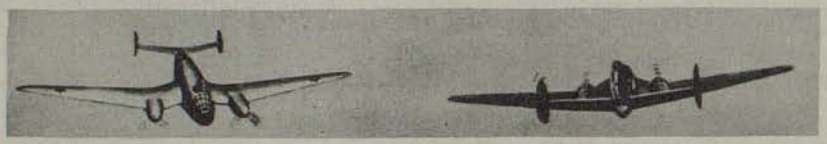
Materials Metal, stressed skin construction, flush-riveting. Fabric covering.

Span 70'-2" Length 47'-7" Height 14'-1" Gross wing area 710 sq. ft. Tail span ____

Weights: Landing 13,200 lb.; normal load 18,600 lb.; max. load 22,000 lb.

ADDITIONAL TECHNICAL DATA

Alternate designation: IL-4. Oil coolers under nacelles. Dorsal turret gun is manually-operated. Nose gun mounting is of single ring type mounted in vertical plane as on German He 111. A float-plane version exists. Earlier versions had M-87B engines and slightly lower performance. The earlier DB-3 model had a deeper and shorter nose with a gun turret.



ER-2

DESCRIPTION

The ER-2 is one of the less known U.S.S.R. bombers.

It is a twin-engine, inverted gull-wing monoplane. Wing tapers sharply to rounded tips; center section has negative dihedral, outer sections positive. Fuselage is of streamline section, with the nose mainly transparent. Cockpit is offset to port, forward of leading edge. Stabilizer has dihedral; there are twin fins and rudders. Landing gear retracts rearward into nacelles; tailwheel also retracts.

SEPT. 1944	ER-2	SOVIET UNION 202

TWIN-ENGINE BOMBER

Mfr. DESIGNER: YAKOLEV Crew PROBABLY FOUR OR FIVE.

Duty BOMBING. RECONNAISSANCE. ALTERNATE DESIGNATION: DB-240.

PERFORMANCE

Max. emergency speeds 229 m. p. h. @ S. L.; 260 m. p. h. @ 16,000 ft. alt.; 252 m. p. h. @ 20,000 ft.alt.
Max. continuous speeds ____ m. p. h. @ S. L.; ____ m. p. h. @ ____ ft. alt.; ____ m. p. h. @ ____ ft. alt.
Cruising speeds: Normal 203 m. p. h.; economical 175 m. p. h.; each at 16,000 ft. altitude.
Climb: To 16,000 ft. alt. in 17 min.; rate ____ ft./min. at ____ ft. altitude.
Service ceilings: Normal load 32,500 ft.; max. bomb/fuel load ____ ft.; min. fuel/no bombs 25,000 ft.
Fuel: U. S. gal.: Normal 928 ; max. ____ Take-off, in calm air ____ ft.
Imp. gal.: Normal 770 ; max. ____ Take-off, over 50 ft. obstacle ____ ft.

RANGES

Speeds	With Normal Fuel/Bomb-Load ____ U. S. gal. and ____ lb. bombs	With Max. Bomb Load and 928 U. S. gal.	With Max. Fuel Load and ____ lb. Bombs
Economical cruising speed	____ miles	1630 miles	____ miles
Normal cruising speed	____ miles	1600 miles	____ miles
Maximum continuous speed	____ miles	____ miles	____ miles
*Typical tactical speeds	____ miles	____ miles	____ miles

*Ref.: p. 4. Para. 2.

POWER PLANT

No. engines 2, rated 1030 hp., each at 14,800 ft. alt., with ____ r. p. m. and ____ in. Hg.

Description M-105, 12-cylinder, liquid-cooled, inverted "V".

Specifications		Supercharger	Propeller	Fuel
Bore ____ in.	Dry Wgt. ____ lbs.	No. Speeds ____	Mfr. ____	Rating ____ octane
Stroke ____ in.	Red. Gear ____ : ____	No. Stages ____	No. Blades 3	Inlet System: ____
Displ. ____ cu. in.	Eng. Diam. ____ in.	Ratios ____	Diam. ____ ft., ____ in.	
Comp. Ratio ____ : ____	Eng. Length ____ in.	Impeller Diam. ____ in.	Pitch Control ____	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage 1 x 12.7mm (M) (est.)
For'd wings ____
Through hub ____
Dorsal 1 x 12.7 + 1 x 20mm (M)
Lateral ____
Ventral 1 x 12.7mm (M)
Tail ____

BOMB/FREIGHT LOAD

Normal load ____ kg., ____ lb.
Max. load 1000 kg., 2200 lb.
Typical stowage ____
Alternate stowage ____
Freight ____ lb.
Troops ____

ARMOR

Unknown

Frontal ____
Windshield ____
Pilot's seat ____
Dorsal ____
Lateral ____
Ventral ____
Bulkhead ____
Engine ____

SPECIFICATIONS

Materials ____

Span 65'-7" Length 50'-10" Height 15' Gross wing area 825 sq.ft. Tail span ____

Weights: Landing 15,500 lb.; normal load 24,500 lb.; max. load ____ lb.

ADDITIONAL TECHNICAL DATA

Dorsal turret is probably manually-operated. Radiators possibly are in the wings.

IL-2

IL-3

IL-2 & 3

DESCRIPTION

The Stormovik is the best-known of all U.S.S.R. aircraft. It is used effectively against ground targets with its heavy armament and armor. The single seat version is the IL-2, the twoseater the IL-3.

It is a single-engine, low-wing monoplane. Wing tapers to rounded tips. Fuselage is of small cross section and is plywood-covered behind pilot. Nose is pointed. There is a single fin and rudder. Landing gear retracts rearward into large fairings beneath wing; tailwheel is fixed.

"STORMOVIK" SINGLE-ENGINE ATTACK BOMBER.

Mfr. DESIGNER: ILYUSHIN Crew ONE OR TWO

Duty GROUND ATTACK. BOMBING.

PERFORMANCE

Max. emergency speeds ____ m. p. h. @ S. L.; 280 m. p. h. @ 8,000 ft. alt.; ____ m. p. h. @ ____ ft.alt.
Max. continuous speeds ____ m. p. h. @ S. L.; ____ m. p. h. @ ____ ft. alt.; ____ m. p. h. @ ____ ft. alt.
Cruising speeds: Normal 235 m. p. h.; ____ economical 155 m. p. h.; ____ each at 7,000 ft. altitude.
Climb: To 7,000 ft. alt. in 3.6 min.; rate ____ ft./min. at ____ ft. altitude.
Service ceilings: Normal load 23,500 ft.; max. bomb/fuel load ____ ft.; min. fuel/no bombs 25,700 ft.
Fuel: {U. S. gal.: Normal 145 ; max. ____ Take-off, in calm air ____ ft.
Imp. gal.: Normal 120 ; max. ____ Take-off, over 50 ft. obstacle ____ ft.

RANGES

Speeds	With Normal Fuel/Bomb Load 145 U. S. gal. and 220 lb. bombs	With Max. Bomb Load and 145 U. S. gal.	With Max. Fuel Load and ____ lb. Bombs
Economical cruising speed	430 miles	440 miles	____ miles
Normal cruising speed	350 miles	360 miles	____ miles
Maximum continuous speed	____ miles	____ miles	____ miles
*Typical tactical speeds	____ miles	____ miles	____ miles

*Ref.: p. 4. Para. 2.

POWER PLANT

No. engines 1, rated 1600 hp., each at 6,600 ft. alt., with ____ r. p. m. and ____ in. Hg.

Description M-38B, 12-cylinder, liquid-cooled, inverted "V".

Specifications		Supercharger	Propeller	Fuel
Bore ____ in.	Dry Wgt. ____ lbs.	No. Speeds ____	Mfr. ____	Rating ____ octane
Stroke ____ in.	Red. Gear ____ : ____	No. Stages ____	No. Blades 3	Inlet System: ____
Displ. ____ cu. in.	Eng. Diam. ____ in.	Ratios ____	Diam. ____ ft., ____ in.	
Comp. Ratio ____ : ____	Eng. Length ____ in.	Impeller Diam. ____ in.	Pitch Control ____	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage ____
For'd wings 2 x 7.6/12.7mm + 2 x 20/23mm (F)
Through hub ____
Dorsal 1 x 7.6/12.7mm (M)
Lateral ____
Ventral ____
Tail ____

BOMB FREIGHT LOAD

Normal load 400 kg., 880 lb.
Max. load 500 kg., 1100 lb.
Typical stowage ____
4 x 220 lbs.
2 x 550 lbs.
Alternate stowage 6-8 x 50 lb. rockets
4-36 x 15 lb. rockets
400 x 2.2 lbs.
Freight ____ lb.
Troops ____

ARMOR

Frontal 5-6.5 mm.
Windshield 62mm bulletproof glass
Pilot's seat 13mm.
Dorsal ____
Lateral 6.5mm.
Ventral 6.5mm.
Bulkhead ____
Engine 5-6mm.

SPECIFICATIONS

Materials Metal, wood, plywood and fabric covering.

Span 47'-11" Length 38' Height 13' Gross wing area 380 sq.ft. Tail span ____

Weights: Landing 10,300 lb.; normal load 11,700 lb.; max. load 12,300 lb.

ADDITIONAL TECHNICAL DATA

The whole nose and cockpit is armored; engine cowling is also of armor plate; other plates protect radiator, oil cooler and fuel tanks. Experimental installation of 2 x 37mm is reported. The 23mm guns have 310 rpg, 20mm guns 400 rpg, 12.7mm guns 500 rpg, and the 7.62mm guns 750 rpg. There are two internal bomb bays in each wing root for up to 4 x 220 lbs. maximum. When 2 x 550 lb. bombs are carried, they are slung externally. Dual control trainer version is known as UIL-2.

PE-2

DESCRIPTION

The PE-2 is one of U.S.S.R's operational light bombers.

It is a twin-engine, low-wing monoplane. Wing center section is parallel, outer sections tapering to rounded tips. "Venetian blind" dive brakes are attached to under-surface of wing. Fuselage is slim. The lower section of nose has transparent panelling. Transparent cockpit inclosure is placed forward of leading edge. There are twin fins and rudders; stabilizer has dihedral. Engine nacelles extend aft of trailing edge. Landing gear retracts into nacelles; tailwheel also retracts.

PE-2

TWIN-ENGINE BOMBER

Mfr. DESIGNER: PETLYAKOV Crew THREE

Duty DIVE BOMBING.

PERFORMANCE

Max. emergency speeds 275 m. p. h. @ S. L.; 315 m. p. h. @ 15,000 ft. alt.; 304 m. p. h. @ 20,000 ft. alt.

Max. continuous speeds ____ m. p. h. @ S. L.; ____ m. p. h. @ ____ ft. alt.; ____ m. p. h. @ ____ ft. alt.

Cruising speeds: Normal 265 m. p. h.; ____ economical 170 m. p. h.; ____ each at 14,000 ft. altitude.

Climb: To 14,000 ft. alt. in 7.5 min.; rate ____ ft./min. at ____ ft. altitude.

Service ceilings: Normal load 27,000 ft.; max. bomb/fuel load ____ ft.; min. fuel/no bombs 30,000 ft.

Fuel: {U. S. gal.: Normal 380 ; max. ____ Take-off, in calm air ____ ft.
{Imp. gal.: Normal 315 ; max. ____ Take-off, over 50 ft. obstacle 2130 ft.

RANGES

Speeds	With Normal Fuel/Bomb Load 380 U. S. gal. and 1400 lb. bombs	With Max. Bomb Load and 228 U. S. gal.	With Max. Fuel Load and ____ lb. Bombs
Economical cruising speed	1030 miles	570 miles	____ miles
Normal cruising speed	720 miles	400 miles	____ miles
Maximum continuous speed	____ miles	____ miles	____ miles
*Typical tactical speeds	____ miles	____ miles	____ miles

*Ref.: p. 4. Para. 2.

POWER PLANT

No. engines 2, rated 1150 hp., each at 13,100 ft. alt., with ____ r. p. m. and ____ in. Hg.

Description M-107, 12-cylinder, liquid-cooled, inverted "V".

Specifications		Supercharger	Propeller	Fuel
Bore ____ in.	Dry Wgt. ____ lbs.	No. Speeds ____	Mfr. ____	Rating ____ octane
Stroke ____ in.	Red. Gear ____ : ____	No. Stages ____	No. Blades ____	Inlet System: ____
Displ. ____ cu. in.	Eng. Diam. ____ in.	Ratios ____	Diam. ____ ft., ____ in.	
Comp. Ratio ____ : ____	Eng. Length ____ in.	Impeller Diam. ____ in.	Pitch Control ____	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage 1 x 7.6 + 1 x 12.7mm (F)

For'd wings ____

Through hub ____

Dorsal 1 x 7.6mm (M)

Lateral occ. 2 x 7.6mm (M)

Ventral 1 x 12.7mm (M)

Tail ____

BOMB/FREIGHT LOAD

(Est.)

Normal load 635 kg., 1400 lb.

Max. load 1000 kg., 2200 lb.

Typical stowage 6 x 220 lb.

Alternate stowage 4 x 550 lb.; 2 x 1100 lb.; 6 x 110 + 2 x 550 lb.

Freight ____ lb.

Troops ____

ARMOR

Frontal ____

Windshield ____

Pilot's seat 9mm

Dorsal ____

Lateral ____

Ventral ____

Bulkhead ____

Engine ____

SPECIFICATIONS

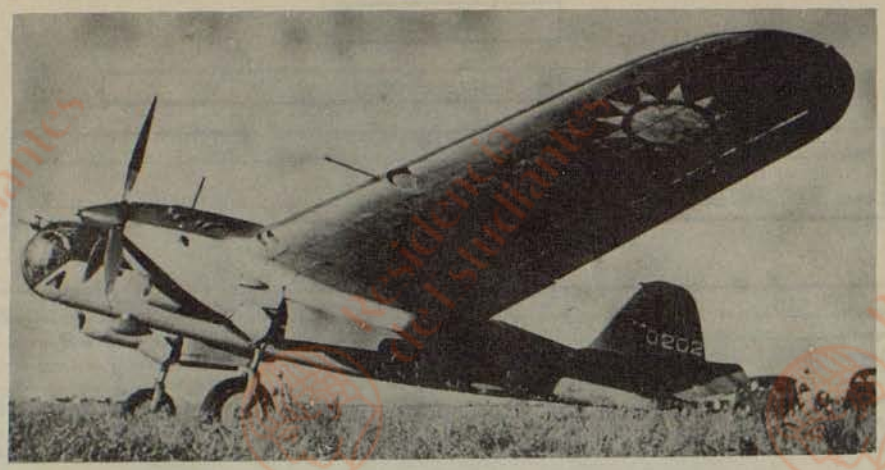
Materials Metal, stressed skin, flush riveting. Control surfaces fabric-covered.

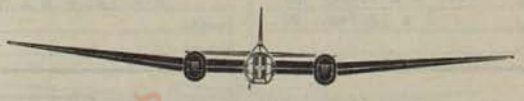
Span 56'-1" Length 41'-5" Height 13'-10" Gross wing area 465 sq. ft. Tail span ____

Weights: Landing 12,000 lb.; normal load 16,000 lb.; max. load 18,800 lb.

ADDITIONAL TECHNICAL DATA

Radiators under nacelles; adjustable flaps to the rear of each radiator housing. Oil coolers in leading edge inboard of nacelles. Muffs over exhaust pipes; exhausts apparently discharge over wing. All heavy bombs carried externally. Stowage in rear of engine nacelles for 2 x 220 lbs. There may be a newer version fitted with M-87 radial engines.





SB-3

DESCRIPTION

The SB-3 is one of the newest U.S.S.R. bombers and is in constant use.

It is a twin-engine, mid-wing monoplane. Wing tapers to rounded tips except for leading edge of inner section. Flaps are fitted both inboard and outboard of nacelles. There is a large single fin and full-length rudder. Nose is rounded. Landing gear retracts rearward into nacelles; tailwheel is fixed..

SEPT. 1944

SB-3

SOVIET UNION 205

TWIN-ENGINE BOMBER

Mfr. SB = MEDIUM BOMBER Crew THREE

Duty BOMBING. RECONNAISSANCE.

PERFORMANCE

Max. emergency speeds 240 m. p. h. @ S. L.; 275 m. p. h. @ 16,000 ft. alt.; 264 m. p. h. @ 20,000 ft.alt.
Max. continuous speeds ____ m. p. h. @ S. L.; ____ m. p. h. @ ____ ft. alt.; ____ m. p. h. @ ____ ft. alt.
Cruising speeds: Normal 235 m. p. h.; ____ economical 145 m. p. h.; ____ each at 16,000 ft. altitude.
Climb: To 16,000 ft. alt. in 8 min.; rate ____ ft./min. at ____ ft. altitude.
Service ceilings: Normal load 28,000 ft.; max. bomb/fuel load 26,500 ft.; min. fuel/no bombs 31,000 ft.
Fuel: {U. S. gal.: Normal 410 ; max. ____ Take-off, in calm air ____ ft.
{Imp. gal.: Normal 340 ; max. ____ Take-off, over 50 ft. obstacle 1200 ft.

RANGES

Speeds	With Normal Fuel/Bomb Load 410 U. S. gal. and 1320 lb. bombs	With Max. Bomb Load and 410 U. S. gal.	With Max. Fuel Load and ____ lb. Bombs
Economical cruising speed	925 miles	875 miles	____ miles
Normal cruising speed	710 miles	700 miles	____ miles
Maximum continuous speed	____ miles	____ miles	____ miles
*Typical tactical speeds	____ miles	____ miles	____ miles

*Ref.: p. 4. Para. 2.

POWER PLANT

No. engines 2, rated 1030 hp., each at 14,800 ft. alt., with ____ r. p. m. and ____ in. Hg.

Description M-105, 12-cylinder, liquid-cooled, inverted "V".

Specifications		Supercharger	Propeller	Fuel
Bore ____ in.	Dry Wgt. ____ lbs.	No. Speeds ____	Mfr. ____	Rating ____ octane
Stroke ____ in.	Red. Gear ____ : ____	No. Stages ____	No. Blades ____	Inlet System: ____
Displ. ____ cu. in.	Eng. Diam. ____ in.	Ratios ____	Diam. ____ ft., ____ in.	
Comp. Ratio ____ : ____	Eng. Length ____ in.	Impeller Diam. ____ in.	Pitch Control ____	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage Twin 7.6mm (M) 950 rpg.
For'd wings ____
Through hub ____
Dorsal 1/2 x 7.6mm (M) 1050 rds.
Lateral ____
Ventral 1 x 7.6mm (M) 700 rds.
Tail ____

BOMB/FREIGHT LOAD

Normal load 600 kg., 1320 lb.
Max. load 1000 kg., 2200 lb.
Typical stowage 6 x 220 lbs.
Alternate stowage 2 x 550 + 6 x 220 lbs.
Freight ____ lb.
Troops ____

ARMOR

Frontal ____
Windshield ____
Pilot's seat 8 mm.
Dorsal ____
Lateral ____
Ventral ____
Bulkhead ____
Engine ____

SPECIFICATIONS

Materials Metal, stressed skin.

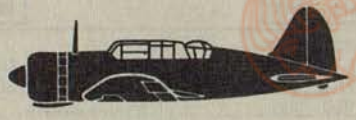
Span 66'-11" Length 41' Height 14' Gross wing area 615 sq. ft. Tail span ____

Weights: Landing 11,200 lb.; normal load 15,500 lb.; max. load 16,400 lb.

ADDITIONAL TECHNICAL DATA

SB-1 sub-type has M-100 engines with frontal radiators and maximum speed of about 250 mph @ 15,000'.

SB-2 sub-type has M-100A engines and maximum speed of about 260 mph @ 16,000'.



SU-2

DESCRIPTION

The SU-2 is one of U.S.S.R's currently-operational ground attack bombers.

It is a single-engine, low-wing monoplane. Wing tapers to rounded tips. The fuselage is short and apparently of oval or round section. The transparent cockpit inclosure terminates in the rear gunner's turret. Fuselage tail cone extends beyond the rudder. Landing gear retracts inward into wing.

SEPT.	SU-2	SOVIET UNION
1944		206

SINGLE-ENGINE BOMBER

Mfr. DESIGNER: SUKHOI Crew TWO

Duty GROUND ATTACK. BOMBING. RECONNAISSANCE.

PERFORMANCE

Max. emergency speeds 235 m. p. h. @ S. L.; 300 m. p. h. @ 21,000 ft. alt.; 250 m. p. h. @ 25,000 ft.alt.

Max. continuous speeds ____ m. p. h. @ S. L.; ____ m. p. h. @ ____ ft. alt.; ____ m. p. h. @ ____ ft. alt.

Cruising speeds: Normal 245 m. p. h.; economical 220 m. p. h.; each at 21,000 ft. altitude.

Climb: To 21,000 ft. alt. in 16.8 min.; rate ____ ft./min. at ____ ft. altitude.

Service ceilings: Normal load 30,200 ft.; max. bomb/fuel load ____ ft.; min. fuel/no bombs 34,000 ft.

Fuel: U. S. gal.: Normal 188 ; max. ____ Take-off, in calm air ____ ft.

Imp. gal.: Normal 156 ; max. ____ Take-off, over 50 ft. obstacle 2580 ft.

RANGES

Speeds	With Normal Fuel/Bomb Load 188 U. S. gal. and 660 lb. bombs	With Max. Bomb Load and ____ U. S. gal.	With Max. Fuel Load and ____ lb. Bombs
Economical cruising speed	750 miles	____ miles	____ miles
Normal cruising speed	690 miles	____ miles	____ miles
Maximum continuous speed	____ miles	____ miles	____ miles
*Typical tactical speeds	____ miles	____ miles	____ miles

*Ref.: p. 4. Para. 2.

POWER PLANT

No. engines 1 , rated 1100 hp., each at 19,700 ft. alt., with ____ r. p. m. and ____ in. Hg.

Description M-88B, 14-cylinder, twin-row, air-cooled radial.

Specifications		Supercharger	Propeller	Fuel
Bore ____ in.	Dry Wgt. ____ lbs.	No. Speeds ____	Mfr. ____	Rating ____ octane
Stroke ____ in.	Red. Gear ____ : ____	No. Stages ____	No. Blades 3	Inlet System: ____
Displ. ____ cu. in.	Eng. Diam. ____ in.	Ratios ____	Diam. ____ ft., ____ in.	
Comp. Ratio ____ : ____	Eng. Length ____ in.	Impeller Diam. ____ in.	Pitch Control ____	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage ____

For'd wings 4 x 7.6mm (F)

Through hub ____

Dorsal 1 x 7.6mm (M)

Lateral ____

Ventral ____

Tail ____

BOMB/FREIGHT LOAD

Normal load 227 kg., 500 lb.

Max. load 300 kg., 660 lb.

Typical stowage 30 x 22 lb.

Alternate stowage 4 x 110 lb + external 2 x 110 lbs.

Freight ____ lb.

Troops ____

ARMOR

Frontal ____

Windshield ____

Pilot's seat 9 mm.

Dorsal 9 mm.

Lateral 9 mm.

Ventral ____

Bulkhead ____

Engine ____

SPECIFICATIONS

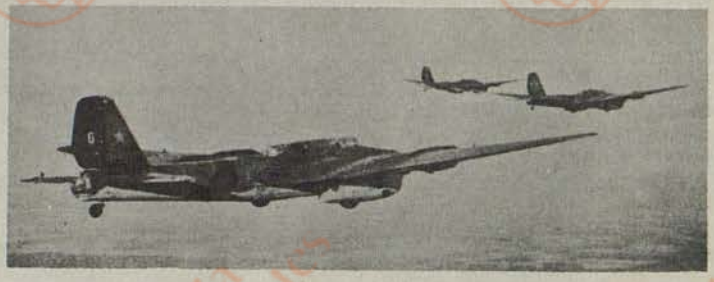
Materials Metal, stressed skin.

Span 47'-2" Length 31'-10" Height 13' Gross wing area 310 sq. ft. Tail span ____

Weights: Landing 7,500 lb.; normal load 9,500 lb.; max. load ____ lb.

ADDITIONAL TECHNICAL DATA

Alternate designation: BB-1. Oil cooler and air intake beneath engine. Long chord cowling with controllable gills and small annular inlet. Main bomb stowage internal. External carrier fitted under wing. An improved version may be known as SU-3.



TB-7

DESCRIPTION

The TB-7 is the best U.S.S.R. heavy bomber and is widely used.

It is a four-engine, mid-wing monoplane. Wing tapers to rounded tips. Long chord split flaps are placed between ailerons and fuselage. The fuselage is of oval section. Cockpit inclosure is over leading edge, faired by a long superstructure extending to dorsal turret. There is transparent panelling in bottom and sides of nose. Landing gear retracts rearward into inboard engine nacelles, a section of each wheel protruding below bottom line of nacelle when retracted.

FOUR-ENGINE BOMBER

Mfr. DESIGNER: TUPOLEV Crew SEVEN TO TEN

Duty BOMBING. TB = HEAVY BOMBER

PERFORMANCE

Max. emergency speeds 235 m. p. h. @ S. L.; 276 m. p. h. @ 21,000 ft. alt.; 262 m. p. h. @ 25,000 ft.alt.
Max. continuous speeds ____ m. p. h. @ S. L.; ____ m. p. h. @ ____ ft. alt.; ____ m. p. h. @ ____ ft. alt.
Cruising speeds: Normal 232 m. p. h.; economical 175 m. p. h.; each at 20,000 ft. altitude.
Climb: To 20,000 ft. alt. in 21.1 min.; rate ____ ft./min. at ____ ft. altitude.
Service ceilings: Normal load 26,000 ft.; max. bomb/fuel load 23,000 ft.; min. fuel/no bombs 33,000 ft.
Fuel: {U. S. gal.: Normal 2651; max. 3977 Take-off, in calm air ____ ft.
{Imp. gal.: Normal 2200; max. 3300 Take-off, over 50 ft. obstacle 3600 ft.

RANGES

Speeds	With Normal Fuel/Bomb Load 2651 U. S. gal. and 4400 lb. bombs	With Max. Bomb Load and 2651 U. S. gal.	With Max. Fuel Load and 4400 lb. Bombs
Economical cruising speed	2360 miles	2320 miles	3380 miles
Normal cruising speed	2050 miles	2000 miles	3000 miles
Maximum continuous speed	____ miles	____ miles	____ miles
*Typical tactical speeds	____ miles	____ miles	____ miles

*Ref.: p. 4. Para. 2.

POWER PLANT

No. engines 4, rated 1200 hp., each at 19,500 ft. alt., with ____ r. p. m. and ____ in. Hg.

Description M-35A, 12-cylinder, liquid-cooled, inverted "V".

Specifications		Supercharger	Propeller	Fuel
Bore ____ in.	Dry Wgt. ____ lbs.	No. Speeds ____	Mfr. ____	Rating ____ octane
Stroke ____ in.	Red. Gear ____ : ____	No. Stages ____	No. Blades 3	Inlet System: ____
Displ. ____ cu. in.	Eng. Diam. ____ in.	Ratios ____	Diam. ____ ft., ____ in.	
Comp. Ratio ____ : ____	Eng. Length ____ in.	Impeller Diam. ____ in.	Pitch Control ____	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage 2 x 7.6mm (M)
Nacelles: 2 x 12.7mm (M)
For'd wings ____
Through hub ____
Dorsal 1 x 20mm (M)
Lateral ____
Ventral ____
Tail 1 x 20mm (M)

BOMB/FREIGHT LOAD

Normal load 2000 kg., 4400 lb.
Max. load 4000 kg., 8800 lb.
Typical stowage ____
Alternate stowage ____
Freight ____ lb.
Troops ____

ARMOR

Frontal ____
Windshield ____
Pilot's seat Armored.
Dorsal ____
Lateral ____
Ventral ____
Bulkhead ____
Engine ____

SPECIFICATIONS

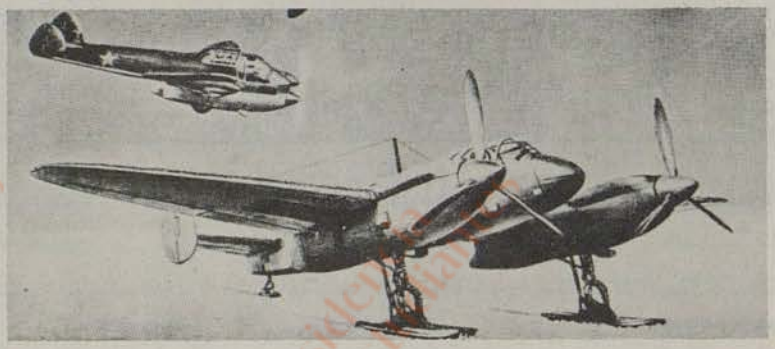
Materials Metal, stressed skin.

Span 131'-2" Length 73'-10" Height 20' Gross wing area 2050 sq. ft. (est.) Tail span ____

Weights: Landing 40,500 lb.; normal load 63,000 lb.; max. load 73,400 lb.

ADDITIONAL TECHNICAL DATA

Inboard nacelles project beyond outboard nacelles. Radiators in inboard nacelles only, each serving 2 engines. Nose and dorsal turrets are manually-operated. A manually-operated turret is fitted in the tail of each inboard nacelle; a small passageway is provided through the wing from fuselage to each turret. Tail turret is electrically-operated. Main bomb stowage is internal. Two or four bomb carriers may be fitted under the wing inboard of the nacelles. M-34, M-35 and M-40 engines have been reported.



YAK-4

DESCRIPTION

The YAK-4 is one of U.S.S.R's currently-operational reconnaissance bombers.

It is a twin-engine, low-wing monoplane. Wing tapers sharply to rounded tips. Fuselage has short nose. There are twin fins and rudders; stabilizer has dihedral. Landing gear retracts rearward into nacelles; tailwheel retracts.

SEPT. 1944	YAK-4	SOVIET UNION 208

TWIN-ENGINE BOMBER

Mfr. DESIGNER: YAKOLEV Crew TWO TO THREE

Duty BOMBING. RECONNAISSANCE.

PERFORMANCE

Max. emergency speeds 285 m. p. h. @ S. L.; 325 m. p. h. @ 16,000 ft. alt.; ____ m. p. h. @ ____ ft.alt.
Max. continuous speeds ____ m. p. h. @ S. L.; ____ m. p. h. @ ____ ft. alt.; ____ m. p. h. @ ____ ft. alt.
Cruising speeds: Normal 259 m. p. h.; economical 196 m. p. h.; each at 16,000 ft. altitude.
Climb: To 16,000 ft. alt. in 8.2 min.; rate ____ ft./min. at ____ ft. altitude.
Service ceilings: Normal load 27,700 ft.; max. bomb/fuel load ____ ft.; min. fuel/no bombs 31,600 ft.
Fuel: {U. S. gal.: Normal 265 ; max. (est.) 398 Take-off, in calm air ____ ft.
{Imp. gal.: Normal 220 ; max. (est.) 330 Take-off, over 50 ft. obstacle 2400 ft.

RANGES

Speeds	With Normal Fuel/Bomb Load ____ U. S. gal. and ____ lb. bombs	With Max. Bomb Load and ____ U. S. gal.	With Max. Fuel Load and 880 lb. Bombs
Economical cruising speed	____ miles	____ miles	850 miles
Normal cruising speed	____ miles	____ miles	800 miles
Maximum continuous speed	____ miles	____ miles	____ miles
*Typical tactical speeds	____ miles	____ miles	____ miles

*Ref.: p. 4, Para. 2.

POWER PLANT

No. engines 2 , rated 1030 hp., each at 14,800 ft. alt., with ____ r. p. m. and ____ in. Hg.

Description M-105, 12-cylinder, liquid-cooled, inverted "V"

Specifications		Supercharger	Propeller	Fuel
Bore ____ in.	Dry Wgt. ____ lbs.	No. Speeds ____	Mfr. ____	Rating ____ octane
Stroke ____ in.	Red. Gear ____ : ____	No. Stages ____	No. Blades 3	Inlet System: ____
Displ. ____ cu. in.	Eng. Diam. ____ in.	Ratios ____	Diam. ____ ft., ____ in.	
Comp. Ratio ____ : ____	Eng. Length ____ in.	Impeller Diam. ____ in.	Pitch Control ____	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage 1 x 7.6mm (F)
For'd wings ____
Through hub ____
Dorsal 1 x 7.6mm (M)
Lateral ____
Ventral 1 x 7.6mm (F)
Tail ____

BOMB/FREIGHT LOAD

Normal load 400 kg., 880 lb.
Max. load 500 kg., 1100 lb.
Typical stowage ____
Alternate stowage ____
Freight ____ lb.
Troops ____

ARMOR

Unknown

Frontal ____
Windshield ____
Pilot's seat ____
Dorsal ____
Lateral ____
Ventral ____
Bulkhead ____
Engine ____

SPECIFICATIONS

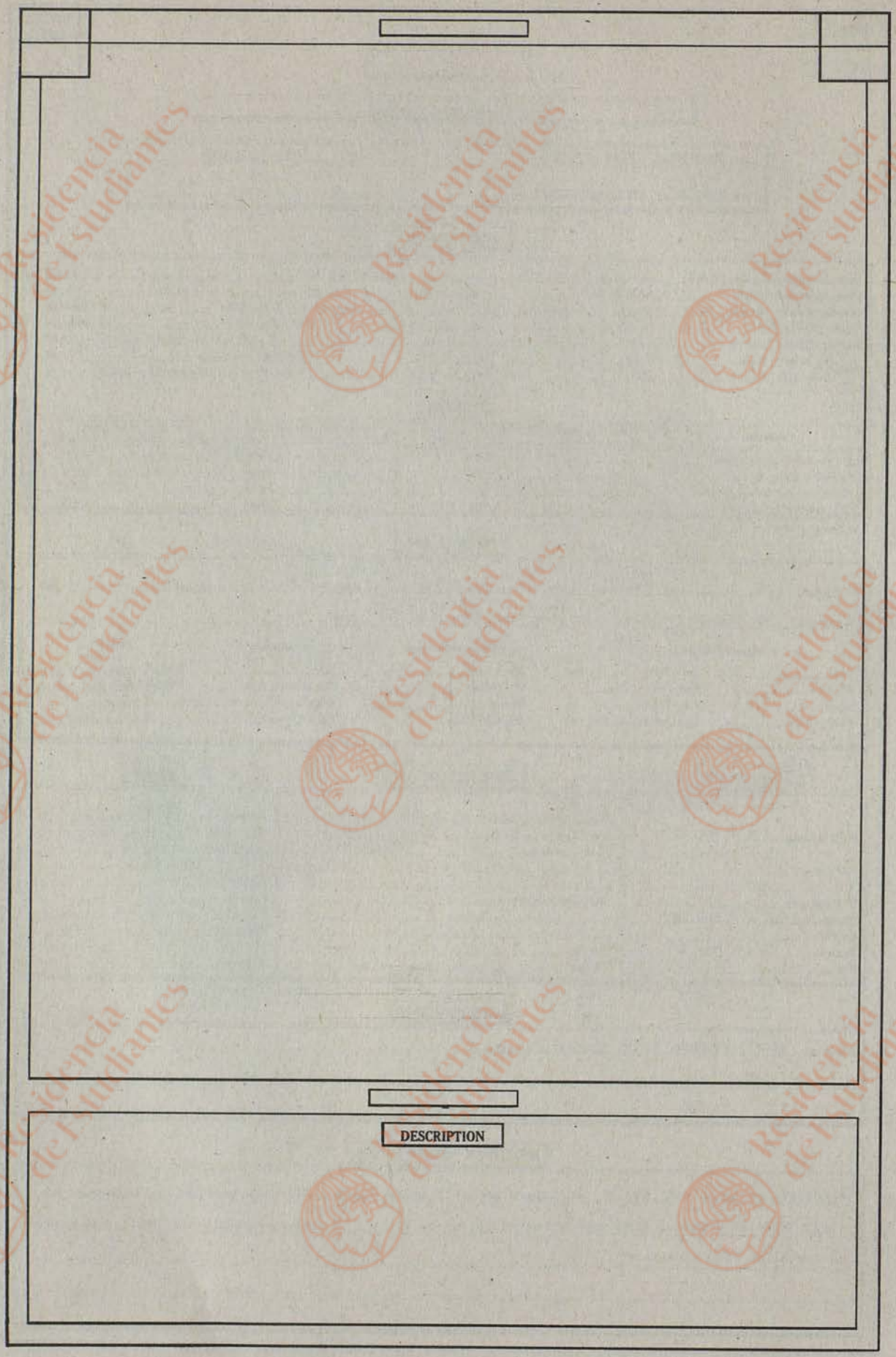
Materials Metal, stressed skin, fabric covering.

Span 45'-11" Length 32'-10" Height 14' Gross wing area 340 sq. ft. Tail span ____

Weights: Landing 11,000 lb.; normal load 14,500 lb.; max. load ____ lb.

ADDITIONAL TECHNICAL DATA

Alternate designation: BB-22. Radiators possibly under wings. Exhausts apparently discharge over wing.. Heavier armament than that given above may be fitted. A semi-retractable ski landing gear may be installed when necessary.


DESCRIPTION

Mfr. _____ Crew _____

Duty _____

PERFORMANCE

Max. emergency speeds _____ m. p. h. @ S. L.; _____ m. p. h. @ _____ ft. alt.; _____ m. p. h. @ _____ ft.alt.
Max. continuous speeds _____ m. p. h. @ S. L.; _____ m. p. h. @ _____ ft. alt.; _____ m. p. h. @ _____ ft. alt.
Cruising speeds: Normal _____ m. p. h.; ____ economical _____ m. p. h.; ____ each at _____ ft. altitude.
Climb: To _____ ft. alt. in _____ min.; rate _____ ft./min. at _____ ft. altitude.
Service ceilings: Normal load _____ ft.; max. bomb/fuel load _____ ft.; min. fuel/no bombs _____ ft.
Fuel: {U. S. gal.: Normal _____ ; max. _____ Take-off, in calm air _____ ft.
{Imp. gal.: Normal _____ ; max. _____ Take-off, over 50 ft. obstacle _____ ft.

RANGES

Speeds	With Normal Fuel/Bomb Load _____ U. S. gal. and _____ lb. bombs	With Max. Bomb Load and _____ U. S. gal.	With Max. Fuel Load and _____ lb. Bombs
Economical cruising speed	_____ miles	_____ miles	_____ miles
Normal cruising speed	_____ miles	_____ miles	_____ miles
Maximum continuous speed	_____ miles	_____ miles	_____ miles
*Typical tactical speeds	_____ miles	_____ miles	_____ miles

*Ref.: p. 4. Para. 2.

POWER PLANT

No. engines _____ , rated _____ hp., each at _____ ft. alt., with _____ r. p. m. and _____ in. Hg.

Description _____

Specifications		Supercharger	Propeller	Fuel
Bore _____ in.	Dry Wgt. _____ lbs.	No. Speeds _____	Mfr. _____	Rating _____ octane
Stroke _____ in.	Red. Gear ____ : ____	No. Stages _____	No. Blades _____	Inlet System: _____
Displ. _____ cu. in.	Eng. Diam. _____ in.	Ratios _____	Diam. ____ ft., ____ in.	
Comp. Ratio ____ : _____	Eng. Length _____ in.	Impeller Diam. _____ in.	Pitch Control _____	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage _____
_____
For'd wings _____
_____
Through hub _____
Dorsal _____
Lateral _____
Ventral _____
Tail _____

BOMB/FREIGHT LOAD

Normal load _____ kg., _____ lb.
Max. load _____ kg., _____ lb.
Typical stowage _____
_____
_____
Alternate stowage _____
_____
_____
Freight _____ lb.
Troops _____

ARMOR

Frontal _____
Windshield _____
Pilot's seat _____
_____
Dorsal _____
Lateral _____
Ventral _____
Bulkhead _____
_____
Engine _____

SPECIFICATIONS

Materials _____

Span _____ Length _____ Height _____ Gross wing area _____ Tail span _____

Weights: Landing _____ lb.; normal load _____ lb.; max. load _____ lb.

ADDITIONAL TECHNICAL DATA

_____
_____
_____
_____

SOVIET UNION	U-2	AT SEPT.
301		1944

U-2

DESCRIPTION

The U-2 was originally a trainer but is sometimes used for Army cooperation, reconnaissance and night bombing. Alternate designation is PO-2.

It is a single-engine biplane. Wings are of unequal span and parallel chord; tips are rounded. Main bracing is by single interplane struts with wire cross bracing. No cowling is fitted over the radial engine. There is a single fin and rudder and braced stabilizer. The fixed landing gear is of the braced, single-leg type.

SEPT. 1944	U-2	SOVIET UNION 301

SINGLE-ENGINE ARMY COOPERATION

Mfr. DESIGNER: N. N. POLIKARPOV Crew ONE OR TWO

Duty ARMY COOPERATION. RECONNAISSANCE. NIGHT BOMBING.

PERFORMANCE

Max. emergency speeds 93 m. p. h. @ S. L.; ____ m. p. h. @ ____ ft. alt.; ____ m. p. h. @ ____ ft.alt.
Max. continuous speeds ____ m. p. h. @ S. L.; ____ m. p. h. @ ____ ft. alt.; ____ m. p. h. @ ____ ft. alt.
Cruising speeds: Normal 75 m. p. h.; ____ economical 63 m. p. h.; ____ each at ____ ft. altitude.
Climb: To 5000 ft. alt. in 10 min.; rate ____ ft./min. at ____ ft. altitude.
Service ceilings: Normal load 12000 ft.; max. bomb/fuel load 10,000 ft.; min. fuel/no bombs 15,000 ft.
Fuel: {U. S. gal.: Normal (est.) 29 ; max. ____ Take-off, in calm air ____ ft.
{Imp. gal.: Normal (est.) 24 ; max. ____ Take-off, over 50 ft. obstacle 1260 ft.

RANGES

Speeds	With Normal Fuel/Bomb Load 29 U. S. gal. and ____ lb. bombs	With Max. Bomb Load and 29 U. S. gal.	With Max. Fuel Load and ____ lb. Bombs
Economical cruising speed	420 miles	____ miles	____ miles
Normal cruising speed	330 miles	320 miles	____ miles
Maximum continuous speed	____ miles	____ miles	____ miles
*Typical tactical speeds	____ miles	____ miles	____ miles

*Ref.: p. 4. Para. 2.

POWER PLANT

No. engines 1, rated 100 hp., each at S.L. ft. alt., with ____ r. p. m. and ____ in. Hg.

Description M-11, 5-cylinder, air-cooled radial.

Specifications		Supercharger	Propeller	Fuel
Bore ____ in.	Dry Wgt. ____ lbs.	No. Speeds ____	Mfr. ____	Rating ____ octane
Stroke ____ in.	Red. Gear ____ : ____	No. Stages ____	No. Blades 2	Inlet System: ____
Displ. ____ cu. in.	Eng. Diam. ____ in.	Ratios ____	Diam. ____ ft., ____ in.	
Comp. Ratio ____ : ____	Eng. Length ____ in.	Impeller Diam. ____ in.	Pitch Control ____	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage 2 x 7.6mm (F)
For'd wings ____
Through hub ____
Dorsal 2 x 7.6mm (M)
Lateral ____
Ventral ____
Tail ____

BOMB/FREIGHT LOAD

Normal load ____ kg., ____ lb.
Max. load 400 kg., (est.) 880 lb.
Typical stowage ____
4 x 55 lbs.
Alternate stowage ____
Freight ____ lb.
Troops ____

ARMOR

None

Frontal ____
Windshield ____
Pilot's seat ____
Dorsal ____
Lateral ____
Ventral ____
Bulkhead ____
Engine ____

SPECIFICATIONS

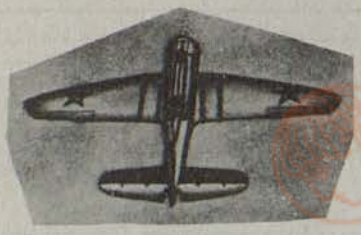
Materials Metal, fabric-covering.

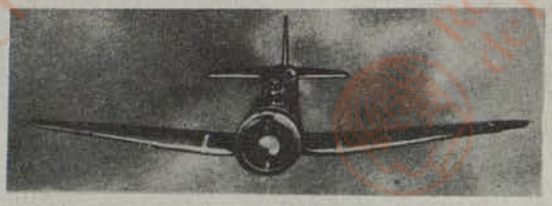
Span Upper, 37'-6" Lower, 34'-8" Length 26'-4" Height 10' Gross wing area 394 sq. ft. Tail span ____

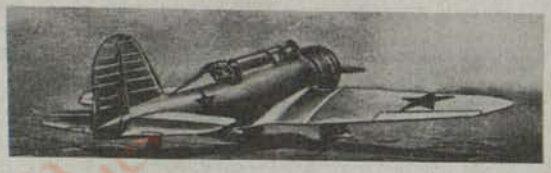
Weights: Landing 2000 lb.; normal load 2260 lb.; max. load 2640 lb.

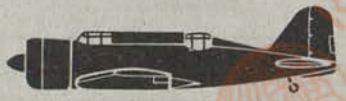
ADDITIONAL TECHNICAL DATA

Originally a trainer, but sometimes employed as a light bomber for night strafing and nuisance raids. No armament is carried with bomb load. A version has been reported with an in-line engine probably the M-5, an 8-cylinder liquid-cooled "V" of about 400 hp at S.L. This would have a maximum speed of about 130 mph at S.L. with a service ceiling of 18,500' with normal load and 23,000 at finish. Cruising at about 110 mph at S.L., the range might be 350 miles without bombs, or at an economical speed of about 72 mph 580 miles without bombs.









R-10

DESCRIPTION

The R-10 is one of U.S.S.R's currently-operational reconnaissance bombers.

It is a single-engine, low-wing monoplane. Center section is almost parallel. Leading edges of outer panels are sharply tapered; tips are angular. Fuselage is of round or oval section. Cockpit is placed over leading edge; there is a long fairing extending from the cockpit to aft of dorsal turret. Landing gear retracts inward into wing; tailwheel is fixed.

SINGLE-ENGINE RECONNAISSANCE

Mfr. DESIGN POSSIBLY FOLLOWED VULTEE OR NORTHROP Crew TWO

Duty RECONNAISSANCE. BOMBING.

PERFORMANCE

Max. emergency speeds 246 m. p. h. @ S. L.; 272 m. p. h. @ 16,000 ft. alt.; 258 m. p. h. @ 20,000 ft.alt.
Max. continuous speeds ____ m. p. h. @ S. L.; ____ m. p. h. @ ____ ft. alt.; ____ m. p. h. @ ____ ft. alt.
Cruising speeds: Normal 225 m. p. h.; ____ economical 165 m. p. h.; ____ each at 16,000 ft. altitude.
Climb: To 16,000 ft. alt. in 10.5 min.; rate ____ ft./min. at ____ ft. altitude.
Service ceilings: Normal load 25,000 ft.; max. bomb/fuel load ____ ft.; min. fuel/no bombs 27,000 ft.
Fuel: U. S. gal.: Normal 169 ; max. ____ Take-off, in calm air ____ ft.
Imp. gal.: Normal 140 ; max. ____ Take-off, over 50 ft. obstacle 1560 ft.

RANGES

Speeds	With Normal Fuel/Bomb Load 169 U. S. gal. and 660 lb. bombs	With Max. Bomb Load and ____ U. S. gal.	With Max. Fuel Load and ____ lb. Bombs
Economical cruising speed	720 miles	____ miles	____ miles
Normal cruising speed	600 miles	____ miles	____ miles
Maximum continuous speed	____ miles	____ miles	____ miles
*Typical tactical speeds	____ miles	____ miles	____ miles

*Ref.: p. 4. Para. 2.

POWER PLANT

No. engines 1, rated 950 hp., each at 14,800 ft. alt., with ____ r. p. m. and ____ in. Hg.

Description M-63, 9-cylinder, air-cooled radial.

Specifications		Supercharger	Propeller	Fuel
Bore ____ in.	Dry Wgt. ____ lbs.	No. Speeds ____	Mfr. ____	Rating ____ octane
Stroke ____ in.	Red. Gear ____ : ____	No. Stages ____	No. Blades ____	Inlet System: ____
Displ. ____ cu. in.	Eng. Diam. ____ in.	Ratios ____	Diam. ____ ft., ____ in.	
Comp. Ratio ____ : ____	Eng. Length ____ in.	Impeller Diam. ____ in.	Pitch Control ____	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage ____
For'd wings 2 x 7.6mm (F)
Through hub ____
Dorsal 1 x 7.6mm (M)
Lateral ____
Ventral ____
Tail ____

BOMB/FREIGHT LOAD

Normal load ____ kg., ____ lb.
Max. load 300 kg., 660 lb.
Typical stowage ____
Alternate stowage ____
Freight ____ lb.
Troops ____

ARMOR

Frontal ____
Windshield ____
Pilot's seat 9mm.
Dorsal 9mm.
Lateral 9mm.
Ventral ____
Bulkhead ____
Engine ____

SPECIFICATIONS

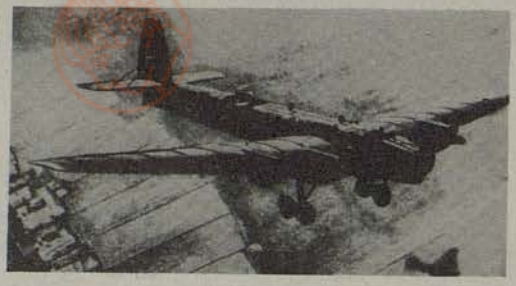
Materials ____

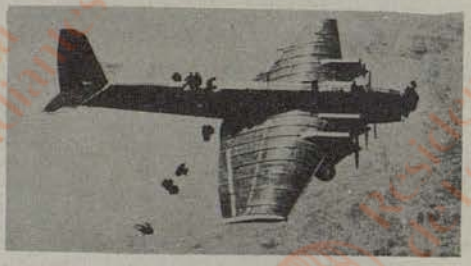
Span 42'-4" Length 28'-11" Height 11'-7" Gross wing area 312 sq. ft. Tail span ____

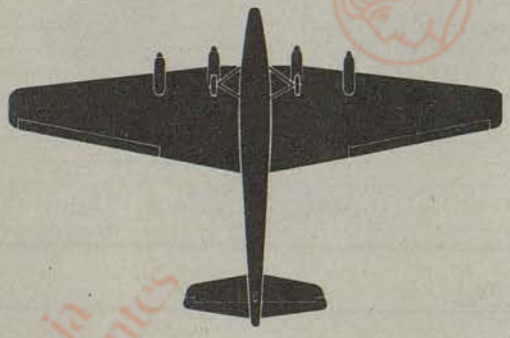
Weights: Landing 6,600 lb.; normal load 8,400 lb.; max. load ____ lb.

ADDITIONAL TECHNICAL DATA

An older version with M-62 engine has a maximun speed of about 250 mph at 15,000'.







TB-3

DESCRIPTION

The TB-3 is an obsolete bomber that appears to be employed mainly as a transport.

It is a four-engine, mid-wing monoplane. Wing tapers to square-cut tips; there are external chordwise corrugations. Apparently no flaps are fitted. Fuselage is straight-sided and of comparatively small cross-section. Stabilizer is braced. Early models had 4-wheeled main landing gear (tandem pair of wheels); more recent versions have normal fixed divided landing gear consisting of two wheels.

SEPT.	TB-3	SOVIET UNION
1944		303

FOUR-ENGINE TRANSPORT

Mfr. EARLIER DESIGNATION: ANT-14 Crew SIX TO EIGHT

Duty TRANSPORT. POSSIBLY OCCASIONAL BOMBING. TB = HEAVY BOMBER

PERFORMANCE

Max. emergency speeds ____ m. p. h. @ S. L.; 180 m. p. h. @ 14,000 ft. alt.; ____ m. p. h. @ ____ ft.alt.
Max. continuous speeds ____ m. p. h. @ S. L.; ____ m. p. h. @ ____ ft. alt.; ____ m. p. h. @ ____ ft. alt.
Cruising speeds: Normal 155 m. p. h.; ____ economical 100 m. p. h.; ____ each at 14,000 ft. altitude.
Climb: To 14,000 ft. alt. in 6.1 min.; rate ____ ft./min. at ____ ft. altitude.
Service ceilings: Normal load 26,600 ft.; max. bomb/fuel load 25,200 ft.; min. fuel/no bombs 33,000 ft.
Fuel: {U. S. gal.: Normal 1060 ; max. (est.) 2121 Take-off, in calm air ____ ft.
{Imp. gal.: Normal 880 ; max. (est.) 1760 Take-off, over 50 ft. obstacle 1350 ft.

RANGES

Speeds	With Normal Fuel/Bomb Load 1060 U. S. gal. and 3,300 lb. fgt.	With Max. Bomb Load and ____ U. S. gal.	With Max. Fuel Load and 4,400 lb. Fgt.
Economical cruising speed	575 miles	____ miles	1260 miles
Normal cruising speed	425 miles	____ miles	1160 miles
Maximum continuous speed	____ miles	____ miles	____ miles
*Typical tactical speeds	____ miles	____ miles	____ miles

*Ref.: p. 4. Para. 2.

POWER PLANT

No. engines 4, rated 1250 hp., each at 13,000 ft. alt., with ____ r. p. m. and ____ in. Hg.

Description M-34RN, 12-cylinder, liquid-cooled, inverted "V".

Specifications			Supercharger	Propeller	Fuel
Bore ____ in.	Dry Wgt. ____ lbs.		No. Speeds ____	Mfr. ____	Rating ____ octane
Stroke ____ in.	Red. Gear ____ : ____		No. Stages ____	No. Blades 3	Inlet System: ____
Displ. ____ cu. in.	Eng. Diam. ____ in.		Ratios ____	Diam. ____ ft., ____ in.	
Comp. Ratio ____ : ____	Eng. Length ____ in.		Impeller Diam. ____ in.	Pitch Control ____	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage Twin 7.6mm (M)
For'd wings ____
Through hub ____
Dorsal 2 x Twin 7.6mm (M)
Lateral ____
Ventral Twin 7.6mm (M)
Tail 1/Twin 7.6mm (M)

BOMB/FREIGHT LOAD

Normal load ____ kg., ____ lb.
Max. load 2000 kg., 4400 lb.
Typical stowage 4 x 550 lbs.
Alternate stowage 4 x 550 + 1 x 2200 lbs.
Freight 3,300 lb.
Troops 30 men.

ARMOR

Frontal ____
Windshield ____
Pilot's seat ____
Dorsal ____
Lateral ____
Ventral ____
Bulkhead ____
Engine ____

SPECIFICATIONS

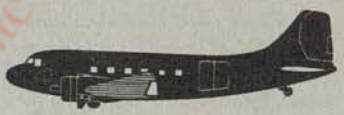
Materials Metal, stressed skin.

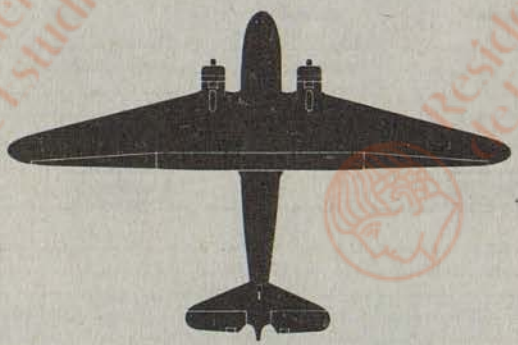
Span 129'-7" Length 80' Height 13' Gross wing area 2048 sq. ft. Tail span ____

Weights: Landing 25,000 lb.; normal load 33,000 lb.; max. load 43,500 lb.

ADDITIONAL TECHNICAL DATA

Turrets are reported to be power-driven.





PS-84

DESCRIPTION

The PS-84 is the U.S.S.R. version of the U.S. DC-3 transport.

It is a twin-engined, low-wing monoplane. Wing tapers to rounded tips; trailing edge flaps are hydraulically-operated. There is a single fin and rudder. Landing gear and tailwheel retract.

SEPT. 1944	PS-84	SOVIET UNION 304

TWIN-ENGINE TRANSPORT

Mfr. U. S. DC-3 BASIC DESIGN Crew THREE

Duty TRANSPORT

PERFORMANCE

Max. emergency speeds 204 m. p. h. @ S. L.; 223 m. p. h. @ 16,000 ft. alt.; 214 m. p. h. @ 20,000 ft.alt.

Max. continuous speeds ____ m. p. h. @ S. L.; ____ m. p. h. @ ____ ft. alt.; ____ m. p. h. @ ____ ft. alt.

Cruising speeds: Normal 203 m. p. h.; economical 168 m. p. h.; each at 16,000 ft. altitude.

Climb: To 16,000 ft. alt. in 16.9 min.; rate ____ ft./min. at ____ ft. altitude.

Service ceilings: Normal load 25,200 ft.; max. bomb/fuel load 24,000 ft.; min. fuel/no bombs 27,900 ft.

Fuel: [U. S. gal.: Normal 487 ; max. 825 Take-off, in calm air ____ ft.

[Imp. gal.: Normal 404 ; max. 685 Take-off, over 50 ft. obstacle 1650 ft.

RANGES

Speeds	With Normal Fuel/Bomb Load 487 U. S. gal. and 4600 lb. fgt	With Max. Bomb Load and ____ U. S. gal.	With Max. Fuel Load and 5,200 lb. fgt
Economical cruising speed	990 miles	____ miles	1,600 miles
Normal cruising speed	840 miles	____ miles	1,450 miles
Maximum continuous speed	____ miles	____ miles	____ miles
*Typical tactical speeds	____ miles	____ miles	____ miles

*Ref.: p. 4. Para. 2.

POWER PLANT

No. engines 2, rated 950 hp., each at 14,800 ft. alt., with ____ r. p. m. and ____ in. Hg.

Description M-63, 9-cylinder, air-cooled radial

Specifications		Supercharger	Propeller	Fuel
Bore ____ in.	Dry Wgt. ____ lbs.	No. Speeds ____	Mfr. ____	Rating ____ octane
Stroke ____ in.	Red. Gear ____ : ____	No. Stages ____	No. Blades 3	Inlet System: ____
Displ. ____ cu. in.	Eng. Diam. ____ in.	Ratios ____	Diam. ____ ft., ____ in.	
Comp. Ratio ____ : ____	Eng. Length ____ in.	Impeller Diam. ____ in.	Pitch Control ____	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage ____

For'd wings ____

Through hub ____

Dorsal 1 x 7.6mm (M)

Lateral 2 x 7.6mm (M)

Ventral ____

Tail ____

BOMB/FREIGHT LOAD

Normal load ____ kg., ____ lb.

Max. load ____ kg., ____ lb.

Typical stowage ____

Alternate stowage ____

Freight 5,200 lb.

Troops 30 men

ARMOR

Frontal ____

Windshield ____

Pilot's seat ____

Dorsal ____

Lateral ____

Ventral ____

Bulkhead ____

Engine ____

SPECIFICATIONS

Materials Metal, stressed skin. Fabric-covered rudder and elevator.

Span 94'-10" Length 63' Height 17' Gross wing area 987 sq. ft. Tail span ____

Weights: Landing 22,000 lb.; normal load 25,200 lb.; max. load 28,000 lb.

ADDITIONAL TECHNICAL DATA

DESCRIPTION

Mfr. _____ Crew _____

Duty _____

PERFORMANCE

Max. emergency speeds _____ m. p. h. @ S. L.; _____ m. p. h. @ _____ ft. alt.; _____ m. p. h. @ _____ ft.alt.
Max. continuous speeds _____ m. p. h. @ S. L.; _____ m. p. h. @ _____ ft. alt.; _____ m. p. h. @ _____ ft. alt.
Cruising speeds: Normal _____ m. p. h.; _____ economical _____ m. p. h.; _____ each at _____ ft. altitude.
Climb: To _____ ft. alt. in _____ min.; rate _____ ft./min. at _____ ft. altitude.
Service ceilings: Normal load _____ ft.; max. bomb/fuel load _____ ft.; min. fuel/no bombs _____ ft.
Fuel: {U. S. gal.: Normal _____ ; max. _____ Take-off, in calm air _____ ft.
{Imp. gal.: Normal _____ ; max. _____ Take-off, over 50 ft. obstacle _____ ft.

RANGES

Speeds	With Normal Fuel/Bomb Load _____ U. S. gal. and _____ lb. bombs	With Max. Bomb Load and _____ U. S. gal.	With Max. Fuel Load and _____ lb. Bombs
Economical cruising speed	_____ miles	_____ miles	_____ miles
Normal cruising speed	_____ miles	_____ miles	_____ miles
Maximum continuous speed	_____ miles	_____ miles	_____ miles
*Typical tactical speeds	_____ miles	_____ miles	_____ miles

*Ref.: p. 4. Para. 2.

POWER PLANT

No. engines _____ , rated _____ hp., each at _____ ft. alt., with _____ r. p. m. and _____ in. Hg.

Description _____

Specifications		Supercharger	Propeller	Fuel
Bore _____ in.	Dry Wgt. _____ lbs.	No. Speeds _____	Mfr. _____	Rating _____ octane
Stroke _____ in.	Red. Gear ____ : ____	No. Stages _____	No. Blades _____	Inlet System: _____
Displ. _____ cu. in.	Eng. Diam. _____ in.	Ratios _____	Diam. ____ ft., ____ in.	
Comp. Ratio ____ : ____	Eng. Length _____ in.	Impeller Diam. _____ in.	Pitch Control _____	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage _____
_____
For'd wings _____
_____
Through hub _____
Dorsal _____
Lateral _____
Ventral _____
Tail _____

BOMB/FREIGHT LOAD

Normal load _____ kg., _____ lb.
Max. load _____ kg., _____ lb.
Typical stowage _____
_____
_____
Alternate stowage _____
_____
_____
Freight _____ lb.
Troops _____

ARMOR

Frontal _____
Windshield _____
Pilot's seat _____
_____
Dorsal _____
Lateral _____
Ventral _____
Bulkhead _____
_____
Engine _____

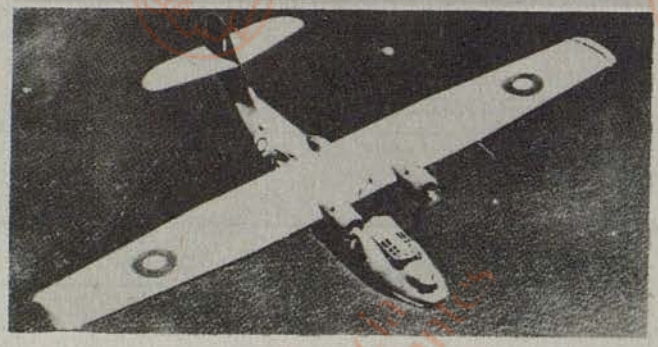
SPECIFICATIONS

Materials _____

Span _____ Length _____ Height _____ Gross wing area _____ Tail span _____

Weights: Landing _____ lb.; normal load _____ lb.; max. load _____ lb.

ADDITIONAL TECHNICAL DATA



G S T

DESCRIPTION

The GST is the U.S. PBY "Catalina" built under license in the U.S.S.R.

It is a twin-engine, parasol-wing flying boat. Wing center section is parallel in chord and supported above hull on a streamlined superstructure, and braced to hull by parallel struts. Outer panels have slight taper to square tips. Lateral stabilizing floats retract outward to form end caps at wing tips. Hull is of 2-step type with semi-circular top. Stabilizer is carried high on the single fin.

SEPT.		SOVIET UNION
1944	G S T	401

TWIN-ENGINE FLYING BOAT.

Mfr. U.S. PBY BUILT UNDER LICENSE Crew FIVE TO SEVEN.

Duty RECONNAISSANCE. BOMBING.

PERFORMANCE

Max. emergency speeds 158 m. p. h. @ S. L.; 178 m. p. h. @ 9000 ft. alt.; _____ m. p. h. @ _____ ft.alt.
Max. continuous speeds _____ m. p. h. @ S. L.; _____ m. p. h. @ _____ ft. alt.; _____ m. p. h. @ _____ ft. alt.
Cruising speeds: Normal 152 m. p. h.; economical 110 m. p. h.; each at 9000 ft. altitude.
Climb: To 9000 ft. alt. in 16 min.; rate _____ ft./min. at _____ ft. altitude.
Service ceilings: Normal load 20,000 ft.; max. bomb/fuel load 14,000 ft.; min. fuel/no bombs 27,000 ft.
Fuel: {U. S. gal.: Normal (est.) 1205 ; max. (est.) 1800 Take-off, in calm air _____ ft.
{Imp. gal.: Normal (est.) 1000 ; max. (est.) 1500 Take-off, over 50 ft. obstacle _____ ft.

RANGES

Speeds	With Normal Fuel/Bomb Load 1205 U. S. gal. and _____ lb. bombs	With Max. Bomb Load and 1205 U. S. gal.	With Max. Fuel Load and _____ lb. Bombs
Economical cruising speed	2520 miles	2000 miles	3250 miles
Normal cruising speed	2000 miles	1800 miles	2930 miles
Maximum continuous speed	_____ miles	_____ miles	_____ miles
*Typical tactical speeds	_____ miles	_____ miles	_____ miles

*Ref.: p. 4. Para. 2.

POWER PLANT

No. engines 2, rated 850 hp., each at 7500 ft. alt., with _____ r. p. m. and _____ in. Hg.

Description M-25, 9-cylinder, air-cooled radial.

Specifications		Supercharger	Propeller	Fuel
Bore _____ in.	Dry Wgt. _____ lbs.	No. Speeds _____	Mfr. _____	Rating _____ octane
Stroke _____ in.	Red. Gear ___ : ___	No. Stages _____	No. Blades 3	Inlet System: _____
Displ. _____ cu. in.	Eng. Diam. _____ in.	Ratios _____	Diam. ___ ft., ___ in.	
Comp. Ratio ___ : ___	Eng. Length _____ in.	Impeller Diam. _____ in.	Pitch Control _____	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage 1 x 7.6mm (M)
For'd wings _____
Through hub _____
Dorsal 2 x 7.6mm (M)
Lateral _____
Ventral 1 x 7.6mm (M)
Tail _____

BOMB/FREIGHT LOAD

Normal load _____ kg., _____ lb.
Max. load (est.) 1745 kg., (est.) 3850 lb.
Typical stowage _____
Alternate stowage _____
Freight _____ lb.
Troops _____

ARMOR

None

Frontal _____
Windshield _____
Pilot's seat _____
Dorsal _____
Lateral _____
Ventral _____
Bulkhead _____
Engine _____

SPECIFICATIONS

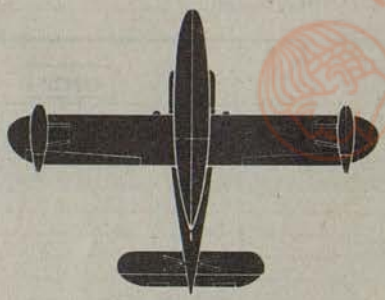
Materials Metal, stressed skin. Fabric covering.

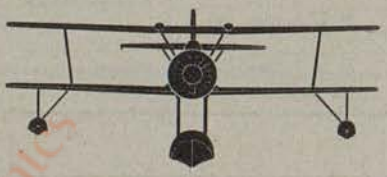
Span 104' Length 65' Height 18'-6" Gross wing area 1400 sq. ft. Tail span _____

Weights: Landing 17,500 lb.; normal load 25,000 lb.; max. load 32,000 lb.

ADDITIONAL TECHNICAL DATA

Nose and dorsal mountings are probably manually-operated. External bomb stowage under wing.





KOR-1

DESCRIPTION

The KOR-1 is one of U.S.S.R's operational reconnaissance floatplanes.

It is a single-engine biplane with a central float. Wings are of equal span and parallel chord, the center section "cut-out", with rounded tips. Single-strut interplane bracing is used; ailerons are on both wings. Cockpits are either open or semi-closed. The braced stabilizer is mounted on the fin. Central, single step float is carried on four struts. Wing tip floats are fitted.

SEPT. 1944	KOR-1	SOVIET UNION 402

SINGLE-ENGINE FLOATPLANE

Mfr. SIMILAR TO U.S. VOUGHT DESIGN Crew TWO

Duty RECONNAISSANCE.

PERFORMANCE

Max. emergency speeds 175 m. p. h. @ S. L.; 190 m. p. h. @ 10,000 ft. alt.; _____ m. p. h. @ _____ ft.alt.

Max. continuous speeds _____ m. p. h. @ S. L.; _____ m. p. h. @ _____ ft. alt.; _____ m. p. h. @ _____ ft. alt.

Cruising speeds: Normal 155 m. p. h.; economical 145 m. p. h.; each at 10,000 ft. altitude.

Climb: To 10,000 ft. alt. in 7.1 min.; rate _____ ft./min. at _____ ft. altitude.

Service ceilings: Normal load 22,400 ft.; max. bomb/fuel load _____ ft.; min. fuel/no bombs 31,000 ft.

Fuel: {U. S. gal.: Normal (est.) 212 ; max. _____ Take-off, in calm air _____ ft.
{Imp. gal.: Normal (est.) 176 ; max. _____ Take-off, over 50 ft. obstacle _____ ft.

RANGES

Speeds	With Normal Fuel/Bomb Load 212 U. S. gal. and _____ lb. bombs	With Max. Bomb Load and _____ U. S. gal.	With Max. Fuel Load and _____ lb. Bombs
Economical cruising speed	660 miles	_____ miles	_____ miles
Normal cruising speed	630 miles	_____ miles	_____ miles
Maximum continuous speed	_____ miles	_____ miles	_____ miles
*Typical tactical speeds	_____ miles	_____ miles	_____ miles

*Ref.: p. 4. Para. 2.

POWER PLANT

No. engines 1, rated 750 hp., each at 9,500 ft. alt., with _____ r. p. m. and _____ in. Hg.

Description M-25, 9-cylinder, air-cooled radial.

Specifications		Supercharger	Propeller	Fuel
Bore _____ in.	Dry Wgt. _____ lbs.	No. Speeds _____	Mfr. _____	Rating _____ octane
Stroke _____ in.	Red. Gear _____ : _____	No. Stages _____	No. Blades _____	Inlet System: _____
Displ. _____ cu. in.	Eng. Diam. _____ in.	Ratios _____	Diam. _____ ft., _____ in.	
Comp. Ratio _____ : _____	Eng. Length _____ in.	Impeller Diam. _____ in.	Pitch Control _____	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage 1 x 7.6mm (F)

For'd wings _____

Through hub _____

Dorsal 1 x 7.6mm (M)

Lateral _____

Ventral _____

Tail _____

BOMB/FREIGHT LOAD

Normal load _____ kg., _____ lb.

Max. load _____ kg., _____ lb.

Typical stowage _____

Alternate stowage _____

Freight _____ lb.

Troops _____

ARMOR

Frontal _____

Windshield _____

Pilot's seat _____

Dorsal _____

Lateral _____

Ventral _____

Bulkhead _____

Engine _____

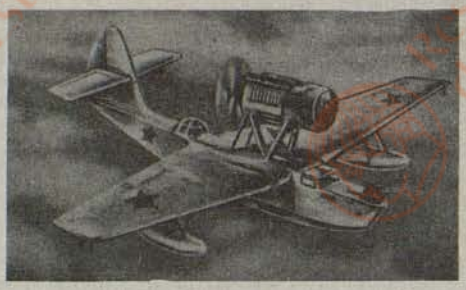
SPECIFICATIONS

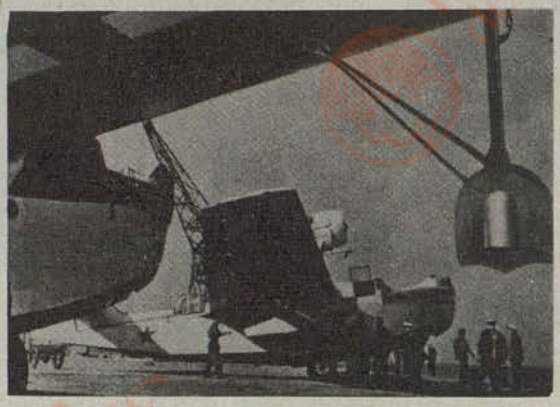
Materials _____

Span (est.) 35' Length _____ Height _____ Gross wing area (est.) 320 sq. ft. Tail span _____

Weights: Landing 5,500 lb.; normal load 7,000 lb.; max. load _____ lb.

ADDITIONAL TECHNICAL DATA





MBR-2

DESCRIPTION

The MBR-2 is an operational U.S.S.R. flying boat.

It is a single-engine monoplane flying boat. Wing is tapered moderately to square tips. Hull is of the 2-step type. The strut-braced stabilizer is mounted on the single fin. Cockpit is placed forward of wing. Engine nacelle is carried above the wing on "N" struts. Lateral stabilizing floats are fitted on struts under wing. Engine drives a pusher propeller.

SEPT.	MBR-2	SOVIET UNION
1944		403

SINGLE-ENGINE FLYING BOAT

Mfr. BASED ON ITALIAN MACCHI DESIGN. Crew PROBABLY FOUR

Duty RECONNAISSANCE. PROBABLY BOMBING.

PERFORMANCE

Max. emergency speeds 158 m. p. h. @ S. L.; 183 m. p. h. @ 14,000 ft. alt.; 173 m. p. h. @ 20,000 ft.alt.
Max. continuous speeds ____ m. p. h. @ S. L.; ____ m. p. h. @ ____ ft. alt.; ____ m. p. h. @ ____ ft. alt.
Cruising speeds: Normal 153 m. p. h.; economical 114 m. p. h.; each at 13,000 ft. altitude.
Climb: To 13,000 ft. alt. in 8.6 min.; rate ____ ft./min. at ____ ft. altitude.
Service ceilings: Normal load 21,500 ft.; max. bomb/fuel load ____ ft.; min. fuel/no bombs 25,500 ft.
Fuel: U. S. gal.: Normal 265 ; max. ____ Take-off, in calm air ____ ft.
Imp. gal.: Normal 220 ; max. ____ Take-off, over 50 ft. obstacle ____ ft.

RANGES

Speeds	With Normal Fuel/Bomb Load 265 U. S. gal. and 440 lb. bombs	With Max. Bomb Load and ____ U. S. gal.	With Max. Fuel Load and ____ lb. Bombs
Economical cruising speed	570 miles	____ miles	____ miles
Normal cruising speed	500 miles	____ miles	____ miles
Maximum continuous speed	____ miles	____ miles	____ miles
*Typical tactical speeds	____ miles	____ miles	____ miles

*Ref.: p. 4. Para. 2.

POWER PLANT

No. engines 1, rated 1250 hp., each at 13,000 ft. alt., with ____ r. p. m. and ____ in. Hg.

Description M-34 RN, 12-cylinder, liquid-cooled, inverted "V".

Specifications		Supercharger	Propeller	Fuel
Bore ____ in.	Dry Wgt. ____ lbs.	No. Speeds ____	Mfr. ____	Rating ____ octane
Stroke ____ in.	Red. Gear ____ : ____	No. Stages ____	No. Blades ____	Inlet System: ____
Displ. ____ cu. in.	Eng. Diam. ____ in.	Ratios ____	Diam. ____ ft., ____ in.	
Comp. Ratio ____ : ____	Eng. Length ____ in.	Impeller Diam. ____ in.	Pitch Control ____	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage 1/2 x 7.6mm (M)
For'd wings ____
Through hub ____
Dorsal 1 x 7.6mm (M)
Lateral ____
Ventral ____
Tail ____

BOMB/FREIGHT LOAD

Normal load 200 kg., 440 lb.
Max. load 600 kg., 1320 lb.
Typical stowage ____
Alternate stowage ____
Freight ____ lb.
Troops ____

ARMOR

None

Frontal ____
Windshield ____
Pilot's seat ____
Dorsal ____
Lateral ____
Ventral ____
Bulkhead ____
Engine ____

SPECIFICATIONS

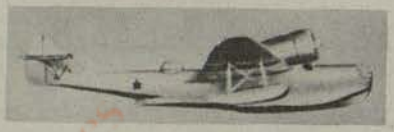
Materials ____

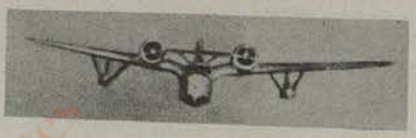
Span 53'-11" Length 32'-10" Height 7'-6" Gross wing area 538 sq. ft. Tail span ____

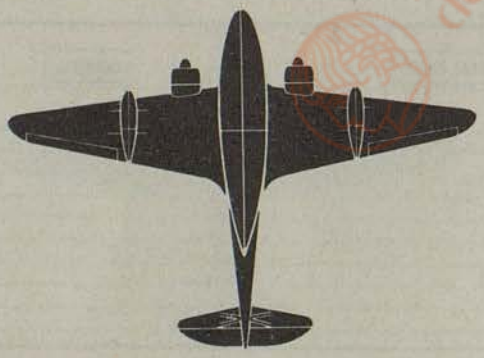
Weights: Landing 6,700 lb.; normal load 9,000 lb.; max. load ____ lb.

ADDITIONAL TECHNICAL DATA

Annular radiator forward of engine nacelle. Bow gun ring and dorsal turret are probably manually-operated.







MDR-6

DESCRIPTION

The MDR-6 is a currently-operational U.S.S.R. flying boat.

It is a twin-engine, gull wing flying boat. Wing tapers sharply to elliptical tips. Inboard of ailerons, wing is "gulled" into hull. Nacelles are mounted at junction of "gulled" portions and outer panels. Lateral stabilizing floats braced with struts and wires are mounted outboard of nacelles. The hull is of the 2-step type. Braced stabilizer is placed on the single fin. Inclosed cockpit is forward of wing.

SEPT. 1944

SOVIET UNION 404

MDR-6

TWIN-ENGINE FLYING BOAT

Mfr. _____ Crew PROBABLY FIVE OR SEVEN

Duty RECONNAISSANCE.

PERFORMANCE

Max. emergency speeds 200 m. p. h. @ S. L.; 220 m. p. h. @ 10,000 ft. alt.; _____ m. p. h. @ _____ ft.alt.
Max. continuous speeds _____ m. p. h. @ S. L.; _____ m. p. h. @ _____ ft. alt.; _____ m. p. h. @ _____ ft. alt.
Cruising speeds: Normal 180 m. p. h.; economical 155 m. p. h.; each at 10,000 ft. altitude.
Climb: To 10,000 ft. alt. in 6.2 min.; rate _____ ft./min. at _____ ft. altitude.
Service ceilings: Normal load 27,200 ft.; max. bomb/fuel load _____ ft.; min. fuel/no bombs 30,600 ft.
Fuel: (U. S. gal.: Normal (est.) 530 ; max. _____ Take-off, in calm air _____ ft.
(Imp. gal.: Normal (est.) 440 ; max. _____ Take-off, over 50 ft. obstacle _____ ft.

RANGES

Speeds	With Normal Fuel/Bomb Load 530 U. S. gal. and _____ lb. bombs	With Max. Bomb Load and _____ U. S. gal.	With Max. Fuel Load and _____ lb. Bombs
Economical cruising speed	1190 miles	_____ miles	_____ miles
Normal cruising speed	985 miles	_____ miles	_____ miles
Maximum continuous speed	_____ miles	_____ miles	_____ miles
*Typical tactical speeds	_____ miles	_____ miles	_____ miles

*Ref.: p. 4. Para. 2.

POWER PLANT

No. engines 2, rated 750 hp., each at 9,500 ft. alt., with _____ r. p. m. and _____ in. Hg.

Description Probably M-25, 9-cylinder, air-cooled radial.

Specifications		Supercharger	Propeller	Fuel
Bore _____ in.	Dry Wgt. _____ lbs.	No. Speeds _____	Mfr. _____	Rating _____ octane
Stroke _____ in.	Red. Gear _____ : _____	No. Stages _____	No. Blades 3	Inlet System: _____
Displ. _____ cu. in.	Eng. Diam. _____ in.	Ratios _____	Diam. _____ ft., _____ in.	
Comp. Ratio _____ : _____	Eng. Length _____ in.	Impeller Diam. _____ in.	Pitch Control _____	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage 1 x 7.6mm (M)
For'd wings _____
Through hub _____
Dorsal 1/2 x 7.6mm (M)
Lateral _____
Ventral 1 x 7.6mm (M)
Tail _____

BOMB/FREIGHT LOAD

Normal load _____ kg., _____ lb.
Max. load _____ kg., _____ lb.
Typical stowage _____
Alternate stowage _____
Freight _____ lb.
Troops _____

ARMOR

Frontal _____
Windshield _____
Pilot's seat _____
Dorsal _____
Lateral _____
Ventral _____
Bulkhead _____
Engine _____

SPECIFICATIONS

Materials _____

Span (est.) 75' Length _____ Height _____ Gross wing area (est.) 700 sq. ft. Tail span _____

Weights: Landing 12,000 lb.; normal load 15,000 lb.; max. load _____ lb.

ADDITIONAL TECHNICAL DATA

Bow and dorsal turrets are probably manually-operated.

DESCRIPTION

Mfr. _____ Crew _____

Duty _____

PERFORMANCE

Max. emergency speeds _____ m. p. h. @ S. L.; _____ m. p. h. @ _____ ft. alt.; _____ m. p. h. @ _____ ft.alt.
Max. continuous speeds _____ m. p. h. @ S. L.; _____ m. p. h. @ _____ ft. alt.; _____ m. p. h. @ _____ ft. alt.
Cruising speeds: Normal _____ m. p. h.; _____ economical _____ m. p. h.; _____ each at _____ ft. altitude.
Climb: To _____ ft. alt. in _____ min.; rate _____ ft./min. at _____ ft. altitude.*
Service ceilings: Normal load _____ ft.; max. bomb/fuel load _____ ft.; min. fuel/no bombs _____ ft.
Fuel: {U. S. gal.: Normal _____ ; max. _____ Take-off, in calm air _____ ft.
Imp. gal.: Normal _____ ; max. _____ Take-off, over 50 ft. obstacle _____ ft.

RANGES

Speeds	With Normal Fuel/Bomb Load _____ U. S. gal. and _____ lb. bombs	With Max. Bomb Load and _____ U. S. gal.	With Max. Fuel Load and _____ lb. Bombs
Economical cruising speed	_____ miles	_____ miles	_____ miles
Normal cruising speed	_____ miles	_____ miles	_____ miles
Maximum continuous speed	_____ miles	_____ miles	_____ miles
*Typical tactical speeds	_____ miles	_____ miles	_____ miles

*Ref.: p. 4. Para. 2.

POWER PLANT

No. engines _____ , rated _____ hp., each at _____ ft. alt., with _____ r. p. m. and _____ in. Hg.

Description _____

Specifications		Supercharger	Propeller	Fuel
Bore _____ in.	Dry Wgt. _____ lbs.	No. Speeds _____	Mfr. _____	Rating _____ octane
Stroke _____ in.	Red. Gear ____ : ____	No. Stages _____	No. Blades _____	Inlet System: _____
Displ. _____ cu. in.	Eng. Diam. _____ in.	Ratios _____	Diam. ____ ft., ____ in.	
Comp. Ratio ____ : ____	Eng. Length _____ in.	Impeller Diam. _____ in.	Pitch Control _____	

ARMAMENT

(F—fixed. M—free.)

For'd fuselage _____
_____
For'd wings _____
_____
Through hub _____
Dorsal _____
Lateral _____
Ventral _____
Tail _____

BOMB/FREIGHT LOAD

Normal load _____ kg., _____ lb.
Max. load _____ kg., _____ lb.
Typical stowage _____
_____
_____
Alternate stowage _____
_____
_____
Freight _____ lb.
Troops _____

ARMOR

Frontal _____
Windshield _____
Pilot's seat _____
_____
Dorsal _____
Lateral _____
Ventral _____
Bulkhead _____
_____
Engine _____

SPECIFICATIONS

Materials _____

Span _____ Length _____ Height _____ Gross wing area _____ Tail span _____

Weights: Landing _____ lb.; normal load _____ lb.; max. load _____ lb.

ADDITIONAL TECHNICAL DATA

U. S. GOVERNMENT PRINTING OFFICE: 1944 O - 607026