

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		1	2	3	4
LOADING CONDITION		PATROL 8-325# D. B.	PATROL 8-325# D. B.	OVERLOAD PATROL 4-1000# BOMBS INTERNAL	OVERLOAD PATROL 4-2000# BOMBS EXTERNAL
GROSS WEIGHT	LBS.	123500	123500	136374	140374
EMPTY WEIGHT - ESTIMATED	LBS.	71824			
FUEL/OIL	GALS.	6768/41	6768/41	8680/60	8680/60
FIXED GUNS/AMMUNITION		NONE			
FLEXIBLE GUNS/AMMUNITION		10 x 20 mm/3400 Rds.			
ENGINE POWER USED FOR PERFORMANCE		MILITARY	NORMAL	NORMAL	NORMAL
WING LOADING	LBS./SQ.FT.	58.8	58.8	64.9	66.8
POWER LOADING ①	LBS./BHP.				
V-MAX. SEA LEVEL	KN.	323	308	307	293
V-MAX./10,000'	KN./FT.	337	322	321	306
V-STALL GROSS WEIGHT ②	KN.	85.8	85.8	90.2	91.5
V-STALL WITHOUT FUEL ②	KN.	70.3	70.3	70.9	72.6
TIME-TO-CLIMB -10000FT-	MIN.	3.4	3.9	4.5	4.9
TIME-TO-CLIMB -20000FT-	MIN.	8.0	9.2	10.8	12.1
SERVICE CEILING	FT.	39700	38300	36400	34300
TAKE-OFF DISTANCE -CALM-	FT.				
TAKE-OFF DISTANCE -15 KN-	FT.				
TAKE-OFF DISTANCE -25 KN-	FT.				
TAKE-OFF DISTANCE -50 FT. OBST.	FT.				
TAKE-OFF TIME	SECONDS	26.4	26.4	46.5	57.8
RATE OF CLIMB -SL-	FT./MIN.	3310	2900	2560	2360
MAX. RANGE /V-AV. ③	N MI./KN.		2420/196	3000/199	2680/192
RANGE /V-AV. -60% NSP-③-	N MI./KN.				
PATROL RADIUS /V-AV. -10 % R-	N MI./KN.		855/197	1060/200	945/193
A.S.W. RADIUS/V-AV. -20 % R-	N MI./KN.				
SCOUT RADIUS	N MI.				
COMBAT RADIUS	N MI.				
ENGINE / PROP GEAR RATIO 4 Allison XT40-A-4 Turbo-Prop Engines/15.668:1					
ENGINE RATING BHP/RPM/ALT.	MILITARY, SEA LEVEL STATIC		NORMAL, SEA LEVEL STATIC		
	5100 SHP + 830# Jet Thrust/13620 RPM/2160° R		4500 SHP + 800# Jet Thrust/13620 RPM/2060° R		
	TAKE-OFF, SEA LEVEL STATIC				
	5100 SHP + 830# Jet Thrust/13620 RPM/2160° R				
TANKAGE IN GALLONS		OIL FUEL		OFFENSIVE ARMAMENT	
AUX. FIXED	PROTECTED	95	8700	Wing Bomb Bays:	
	UNPROTECTED			4-1000# bombs or 8-500# bombs or 8-325# depth bombs	
	TOTAL - FIXED INTERNAL	95	8700	Wing Racks:	
	DROPPABLE			4-2000# bombs	
	DROPPABLE				
TOTAL		95	8700		
NOTE	① BHP AT MAX. CRIT. ALT.				
	② STALL - WITH POWER				
	③ AT 10,000' ALTITUDE with one unit in-operative in each nacelle				

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Performance is based on calculations. Range and radius are based on engine specification fuel consumption data increased by 7.5% to conform with past experience.

Patrol Radius: - Conditions Nos. (2), (3), (4). Climb + Cruise-out = Cruise back.

Allowance of 10% of initial fuel load for warm-up, take-off and reserve is carried the entire distance. Climb to 10,000 ft. altitude using all engines at normal shaft horsepower. Cruise at 10,000 ft. at speed for maximum range with one unit inoperative in each nacelle.

Bombs and ammunition carried entire distance.

Radius equals 40% of maximum cruise range plus one half distance of climb.

Patrol radius is reduced approximately 6 nautical miles for each minute of maximum power operation of all engines

External bomb racks carried only in Condition (4).

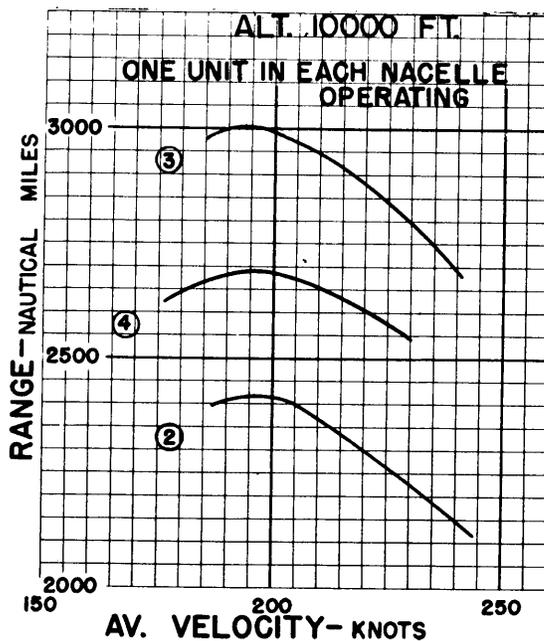
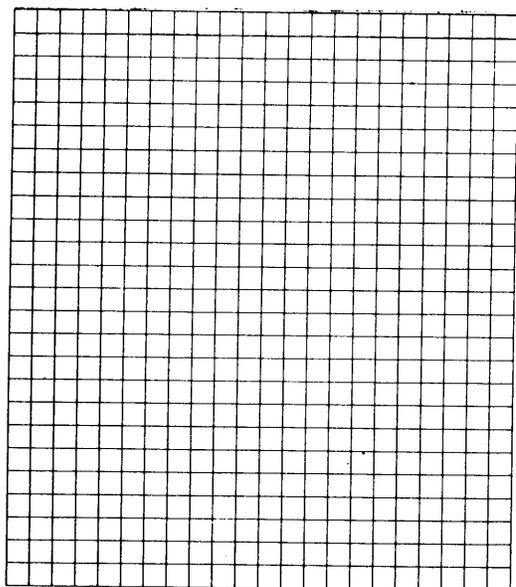
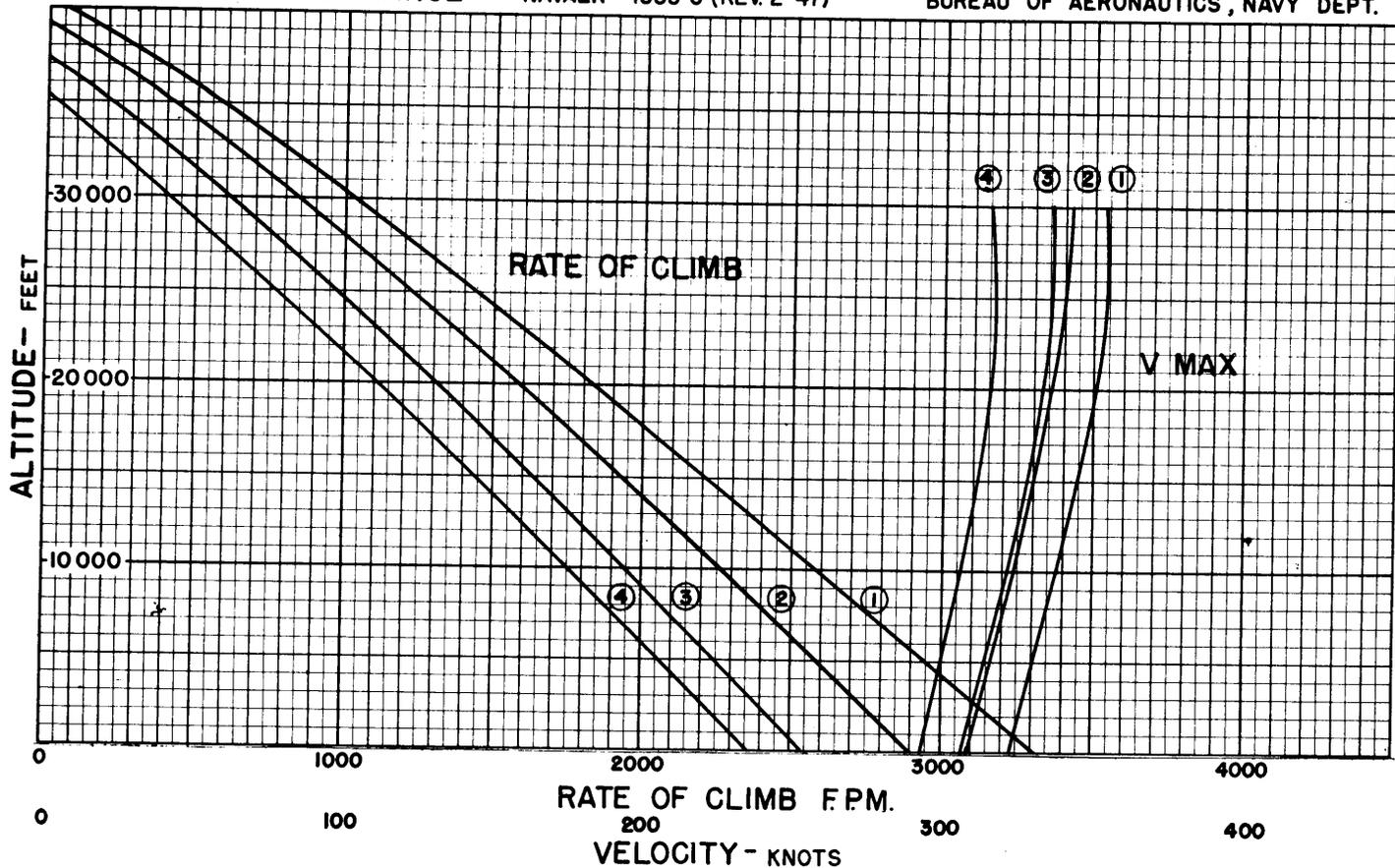
Tail turret - Martin 220-CH-3: 1000 Rds/turret.

Side turrets - 4-Martin Aero X12A: 600 Rds/turret.

AIRPLANE PERFORMANCE

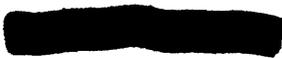
NAVAER - 1335 C (REV. 2-47)

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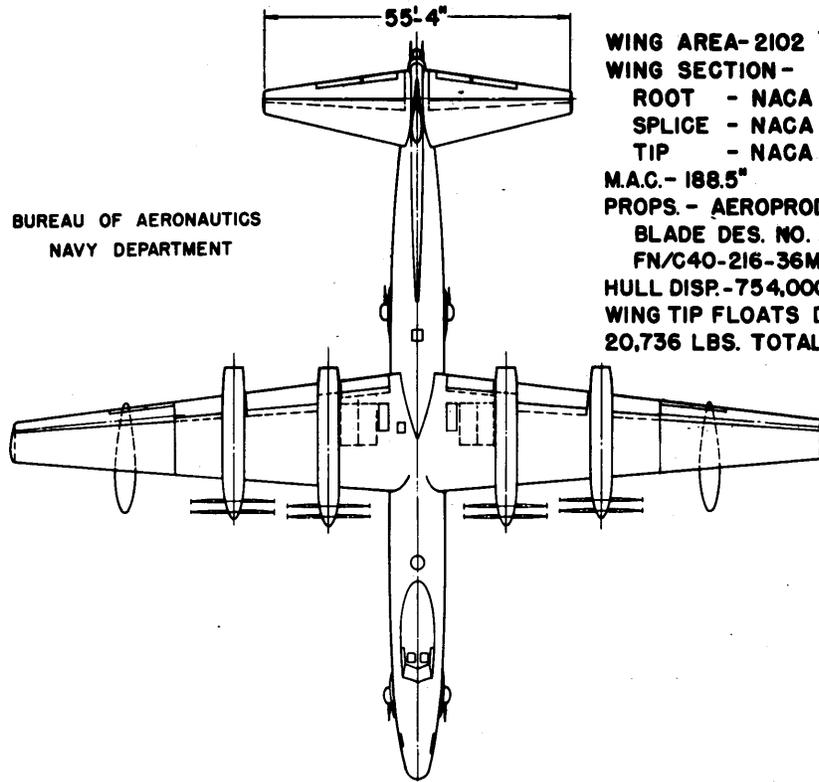


○ LOADING CONDITION COLUMN NUMBER

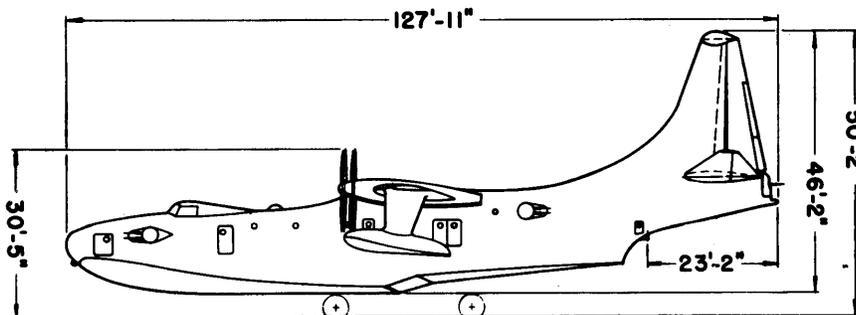
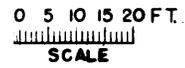
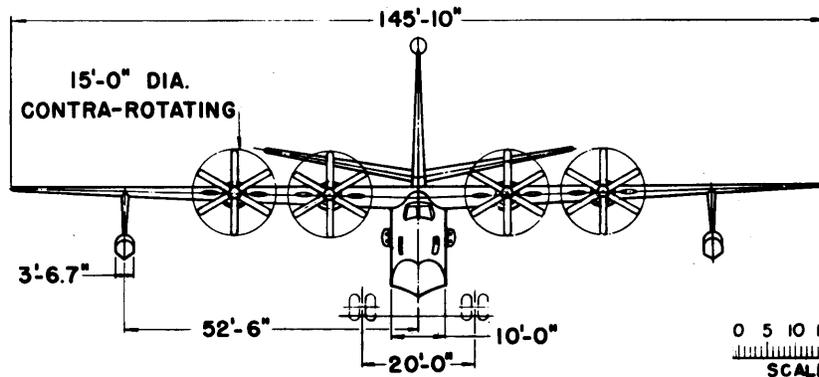
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BUREAU OF AERONAUTICS
NAVY DEPARTMENT



WING AREA-2102 SQ. FT.
WING SECTION -
ROOT - NACA 1420
SPLICE - NACA 4417
TIP - NACA 4412
M.A.C.- 188.5"
PROPS. - AEROPRODUCTS
BLADE DES. NO. AD 8664
FN/C40-216-36M36
HULL DISP.-754,000 LBS.
WING TIP FLOATS DISP.-
20,736 LBS. TOTAL

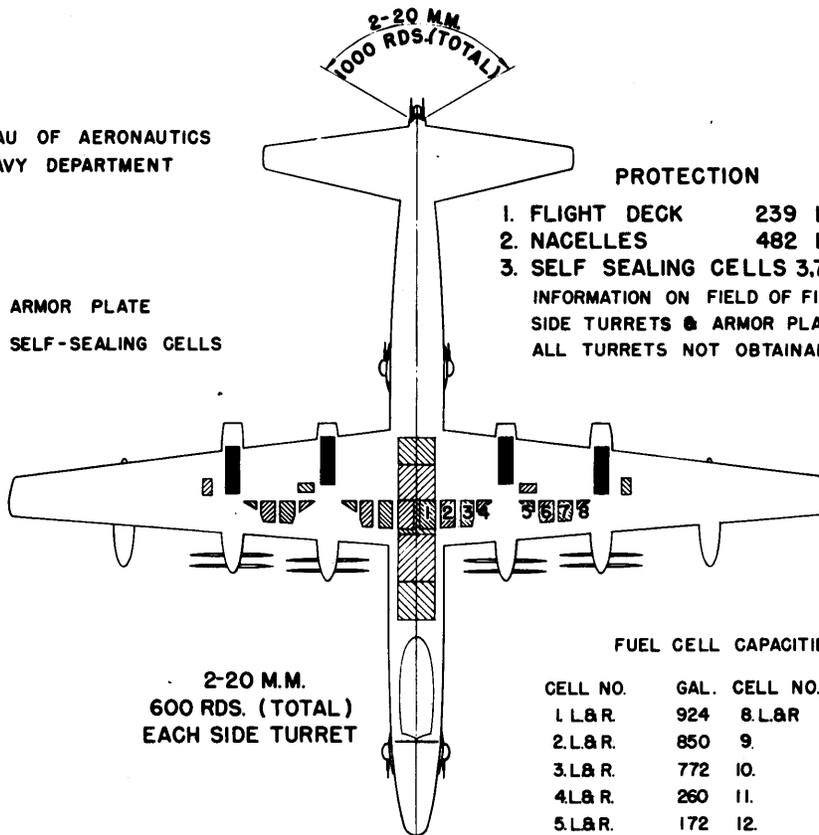


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■ ARMOR PLATE
▨ SELF-SEALING CELLS



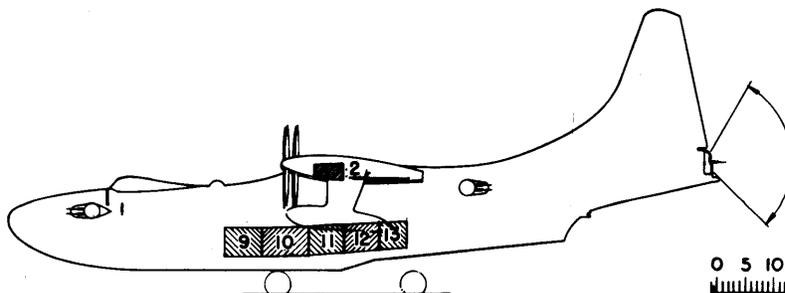
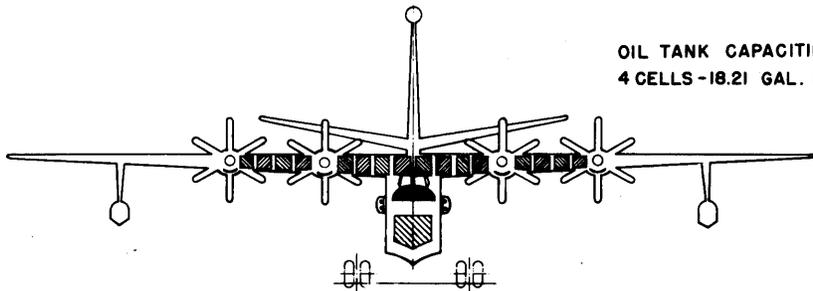
PROTECTION

1. FLIGHT DECK 239 LBS.
 2. NACELLES 482 LBS.
 3. SELF SEALING CELLS 3,787 LBS.
- INFORMATION ON FIELD OF FIRE FOR
SIDE TURRETS & ARMOR PLATE FOR
ALL TURRETS NOT OBTAINABLE

FUEL CELL CAPACITIES

CELL NO.	GAL.	CELL NO.	GAL.
1 L&R.	924	8 L&R	126
2 L&R.	850	9.	1095
3 L&R.	772	10.	1380
4 L&R.	260	11.	945
5 L&R.	172	12.	800
6 L&R.	488	13.	480
7 L&R.	470	TOTAL	8762

OIL TANK CAPACITIES
4 CELLS - 18.21 GAL. EA.



0 5 10 15 20 FT.
SCALE