

CONFIDENTIAL

YB-36 ^{A1}
(Y) B-26/CH

TYPE Very Heavy Bomber PROJECT No. MX-149
Contractor Consolidated Vultee No. on Contract 1
Contract Number W535-AC-22352 Estimated Flight Date July 1946

I. POWER PLANT

Pratt & Whitney
R-4360-25

- (1) Number of Engines 6 (Mfr. & Type Engine) Pratt & Whitney R-4360-25
(2) Supercharger Type BH Dual Installation.
(3) Propeller Curtiss 19'0" Diameter, 3 Blades.
Red. Gear Ratio .381

(4) Engine Ratings:	THRUST	B. H. P.	R. P. M. (Eng.)	FT. ALT.
a. Take Off		3000	2700	S.L.
b. Military		3000	2700	S.L. 35,000'
c. Normal		2500	2550	S.L. 40,000'
d. War Emergency				

II. PERFORMANCE

- (1) Speed in Level Flight
- | | M. P. H. | ALT. FEET | THRUST OR B. H. P. |
|------------------------------|----------|-----------|--------------------|
| a. High Speed - critical alt | * 340 | 30,000 | 3000/Eng. |
| b. High Speed - sea level | 280 | S.L. | 3000/Eng. |
- (2) Rate of Climb
- | | FT/MIN | ALT. FEET | WEIGHT |
|---|--------|-----------|----------|
| a. War Emergency Power <u>Normal Rated</u> | 790 | S.L. | 278,000# |
| b. Military Power | | | |
- (3) Time to Climb
- | | MIN. | ALT. FEET | WEIGHT |
|---|------|-----------|----------|
| a. War Emergency Power <u>Normal Rated</u> | 42 | 25,000 | 278,000# |
| b. Military Power | | | |
- (4) Range
- | | MILES | M. P. H. | FUEL GALS. | CARGO OR BOMBS LBS. |
|-----------------------------------|-------|----------|------------|---------------------|
| a. Design Gr. Wt. <u>278,000#</u> | *9398 | | 20,090 | 10,000# |
| b. Design Gr. Wt. | | | | |
| c. Alt. Gr. Wt. | | | | |
| d. Alt. Gr. Wt. <u>265,000#</u> | 3960 | | 8,400 | 70,400# |
- (5) Service Ceiling
- | | FT. ALT. | B. H. P. | WEIGHT |
|---------------------|----------|----------|----------|
| a. With all Engines | *35,200 | NRP | 278,000# |
| b. With 1/2 Engines | 18,700 | NRP | 204,250# |
- (6) Take-Off & Land Over 50' Obs.
- | | TAKE-OFF | LANDING | WEIGHT |
|-------------------------------------|----------|---------|----------|
| a. Design Gross Wt. <u>278,000#</u> | 7030' | 3,650' | 268,000# |
| b. Alt. Gross Wt. <u>265,000#</u> | 6080' | | |

CLASSIFICATION CANCELLED
(OR CHANGED TO Unclassified)
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(INDIVIDUAL OR WRITTEN AUTHORITY)
BY a. R. Johnston 31 Dec 68
(GRADE OF INDIVIDUAL MAKING CHANGE)

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MODEL DESIGNATION YB-36 TYPE Very Heavy Bomber

III. CHARACTERISTICS

(1) Weight Empty	130,586 lbs.	(4) Length	162' 1/4"
(2) Design Gr. Wt.	278,000 lbs.	(5) Span	230' 0"
(3) Alt. Gross Wt.	265,000 lbs.	(6) Wing Area	4772 Sq. Ft.
(7) Wing Loading (#/Sq. Ft.)		Design Gr. Wt.	58.3
(8) Power Loading (#/BHP) at Mil. Power		Alt. Gr. Wt.	55.5
			15.4
			14.7

IV. ARMAMENT

(1) Guns and Cannons:	No.	Cal.	Type or Position	Rds per Gun
a. Normal	2	20MM	Nose - Remotely Controlled	400
	4	20MM	Forward Upper-Rem. Controlled	600
	2	20MM	Forward Lower - " "	600
	4	20MM	Aft Upper - " "	600
	2	20MM	Aft Lower - " "	600
	2	20MM	Tail - AGL	600
b. Alternate	2	20MM	Nose - Remotely Controlled	400
	4	20MM	Fwd. Upper-Remotely Controlled	600
	4	20MM	Fwd. Lower - " "	600
	4	20MM	Aft. Upper - " "	600
	4	20MM	Aft Lower - " "	600
	2	20MM	Tail - AGL	600
(2) Bombs, Rockets:	No.	Size		
	12	4000#		
	28	2000#		
	44	1600#		
	72	1000#		
	132	500#		

V. CREW Normal 13 Alternate 17

VI. SPECIAL FEATURES: 1332# to be allocated for flak protection for crew and engines. Self-sealing panels to be installed on all sides of the fuel tanks with the exception of the top. The two inboard tanks will be unprotected.

An exhaust gas purging system is to be provided for the two inboard tanks.

There will be an individual gunner for each turret. Airplane will be pressurized, and the crew layout in the forward crew compartment is excellent insofar as crew arrangement and space and visibility are concerned.

VII. NOTES * Due to inability of P & W to develop a two speed reduction gear (.29 & .50) the following loss in performance has resulted for the D.G.W. condition: Hi-speed-21 mph, service ceiling-600 feet; range-300 miles. In addition, 270 miles in range are lost due to higher engine specific fuel consumption (original s.f.c. valves were based on manual leaning and spark adjustment)

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