

ISSUE OF 6 PAGES
AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		1	2	3	4
LOADING CONDITION		COMBAT *	COMBAT *	BOMBER 1-1000#	BOMBER 1-2000#
		No AN/APS-4	No AN/APS-4	AN/APS-4	AN/APS-4
GROSS WEIGHT	LBS.	15975	15975	17118	18118
EMPTY WEIGHT - CALCULATED -	LBS.	12268			
FUEL / OIL	GALS.	410/23	410/23	410/23	410/23
FIXED GUNS/AMMUNITION		2-20mm/400 rds.			
FLEXIBLE GUNS/AMMUNITION		None			
ENGINE POWER USED FOR PERFORMANCE		MILITARY	NORMAL	NORMAL	NORMAL
WING LOADING	LBS./SQ.FT.	38.5	38.5	41.2	43.7
POWER LOADING ①	LBS./BHP.	8.4	8.9	9.5	10.1
V-MAX. SEA LEVEL	MPH.	328	306	297	296
V-MAX./CRITICAL ALT.	MPH./FT.	349/17100	342/17200	330/17000	328/17000
V-STALL GROSS WEIGHT ②	MPH.	89.5	89.5	92.7	95.3
V-STALL WITHOUT FUEL ②	MPH.	82.3	82.3	85.8	88.2
TIME-TO-CLIMB -10000FT-	MIN.	4.3	5.1	5.7	6.2
TIME-TO-CLIMB -20000FT-	MIN.	10.9	12.4	14.1	15.3
SERVICE CEILING	FT.	28100	27400	26300	25400
TAKE-OFF DISTANCE -CALM-	FT.		639	778	951
TAKE-OFF DISTANCE -15 KN-	FT.		410	510	637
TAKE-OFF DISTANCE -25 KN-	FT.		284	361	461
TAKE-OFF DISTANCE -50 FT. OBST.	FT.				
TAKE-OFF TIME	SECONDS				
RATE OF CLIMB -SL-	FT./MIN.	2590	2090	1890	1760
MAX. RANGE / V-AV. ③	ST. MI. / MPH.		1440/175	1310/176	1240/179
RANGE / V-AV. -60%NSP-③-	ST. MI. / MPH.				
SEARCH RADIUS / V-AV. -20%R-	NMI. / KN.				
A.S.W. RADIUS / V-AV. -20%R-	NMI. / KN.				
SCOUT RADIUS	N MI.				
COMBAT RADIUS B-1	N MI.		305	285	275
ENGINE / PROP GEAR RATIO		W.A.C R-3350-24 (,4375)			
ENGINE RATING BHP/RPM/ALT.	MILITARY	NORMAL		TAKE-OFF	
	2500/2800/S.L.-3500	2100/2400/S.L.-5500			
	1900/2600/11000-14800	1800/2400/9750 - 15000		2500/2900/S.L.	
TANKAGE IN GALLONS		OIL	FUEL	OFFENSIVE ARMAMENT	
AUX. FIXED	PROTECTED		410	FUSELAGE BOMB-BAY:	
	UNPROTECTED	35		Bombs-1-2000#,1-1600#,1-1000#,2-500# 4-250#,or 4-100#	
	TOTAL-FIXED INTERNAL	35	410	Depth Bombs - 1-650#, or 2-325#	
	DROPPABLE - Bomb-bay (4)		100	Mines - 1-2000#, or 1-1000#	
	DROPPABLE - Wings - 2 @ 100 (Alternate - 2 @ 150)		200	Rockets - 1-11.75" A.R.	
TOTAL	35	710	WINGS: (external) alternate with radar,droppable tanks.		
NOTE	STATUTE MILES USED-EXCEPT-RADIUS IS GIVEN IN NAUTICAL MILES & KNOTS		Bombs-2-1000#,2-500#,2-250#, or 6-100#		
	① BHP AT MAX. CRIT. ALT.		Depth Bombs; 2-650#, or 2-325#		
	② STALL-WITHOUT POWER		Mines: 2-1000#		
	③ AT 1500' ALTITUDE		Rockets: - 2-11.75" A.R.		
	(4) Streamlined 100 gal. std. tank		WINGS: on MK-9 rocket launchers Rockets: 8-5" HVAR, or 8-5" A.R.		

*3see page 2

NAVAER-15198 (Rev. 9-44)

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS NAVY DEPT.

COLUMN NUMBER		5	6	7	8
LOADING CONDITION		BOMBER 1-2000# One 100 gal. Tank External	TORPEDO 1MK13-3 One 100 gal. Tank External	ROCKET 8-5" HVAR 1-1000# 100g.tank Ext.	FERRY 1-100 gal.tank internal 2-100g.tank Ext.
GROSS WEIGHT	LBS.	18834	19022	18980	17385
EMPTY WEIGHT - CALCULATED -	LBS.		12268		12106
FUEL/OIL	GALS.	510/29	510/29	510/29	710/35
FIXED GUNS/AMMUNITION		2-20mm/400 rds.			None
FLEXIBLE GUNS/AMMUNITION		None			None
ENGINE POWER USED FOR PERFORMANCE		NORMAL	NORMAL	NORMAL	NORMAL
WING LOADING	LBS./SQ.FT.	45.4	45.8	45.	41.9
POWER LOADING ①	LBS./BHP	10.5	10.6	10.6	
V-MAX. SEA LEVEL	MPH.	286	285	274	
V-MAX./ CRITICAL ALT.	MPH./ FT.	314/16800	313/16800	301/16700	
V-STALL GROSS WEIGHT ②	MPH.	97.2	97.7	100.2	
V-STALL WITHOUT FUEL ②	MPH.	89.0	89.6	91.8	
TIME-TO-CLIMB -10000FT.-	MIN.	6.8	7.0	7.1	
TIME-TO-CLIMB -20000FT.-	MIN.	17.5	18.0	18.8	
SERVICE CEILING	FT.	24500	24300	23200	
TAKE-OFF DISTANCE -CALM-	FT.	1116	1152	1171	
TAKE-OFF DISTANCE -15 KN.-	FT.	762	788	802	
TAKE-OFF DISTANCE -25KN.-	FT.	560	582	591	
TAKE-OFF DISTANCE -50 FT. OBST.	FT.				
TAKE-OFF DISTANCE	SECONDS				
RATE OF CLIMB -SL-	FT./ MIN.	1630	1600	1570	
MAX. RANGE / V-AV. ③	ST. MI. / MPH.	1455/174	1435/175	1365/171	2220/168
RANGE / V-AV. -60%NSP-③-	ST. MI. / MPH.				
SEARCH RADIUS/V-AV. -20%R-	NMI./KN.				
A. S. W. RADIUS/V-AV. -20%R-	NMI./KN.				
SCOUT RADIUS	NMI.				
COMBAT RADIUS - B-1 -	NMI.	385	380	365	

PERFORMANCE IS BASED ON - CALCULATIONS

RANGE & RADIUS ARE BASED ON ENGINE REQUIREMENTS

FUEL CONSUMPTION DATA INCREASED

BY 15 PERCENT TO CONFORM WITH PAST EXPERIENCE.

*COMBAT CONDITION: Two paired wing-bomb-racks and sway-bracing aboard - Rocket launchers not aboard. At Military Power Combat Condition plus 8 MK9 launchers; Vmax/S.L. = 323, Vmax = 344/17100

CLEAN CONDITION: Combat condition with all bomb-racks and sway-bracing removed, at military power - Vmax (S.L. = 333; Vmax = 355/17100.

ROCKET CONDITION: Rockets suspended from MK9 launchers.

RADAR: AN/APS-4 radar carried on right wing bomb-rack for conditions 3 through 7.

CREW: Crew of one in all conditions. Addition of 2nd crew member and equipment (radar operator) increases gross weight 255# and has the following effect on performance condition 3.

Rate of Climb - S.L. decreased 35 fpm.
Take-off Distance 25 Kn. increased 15 ft.
Max. Range/Vave - 1500ft. 1290/177

NOTES: Two paired wing bomb-racks and sway-bracing in all conditions except "CLEAN"
Rocket launchers carried in rocket condition only
Bombs and Torpedoes carried in bomb-bay conditions 3 through 7
Fuel transfer system (droppable to main tanks) not incorporated.

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

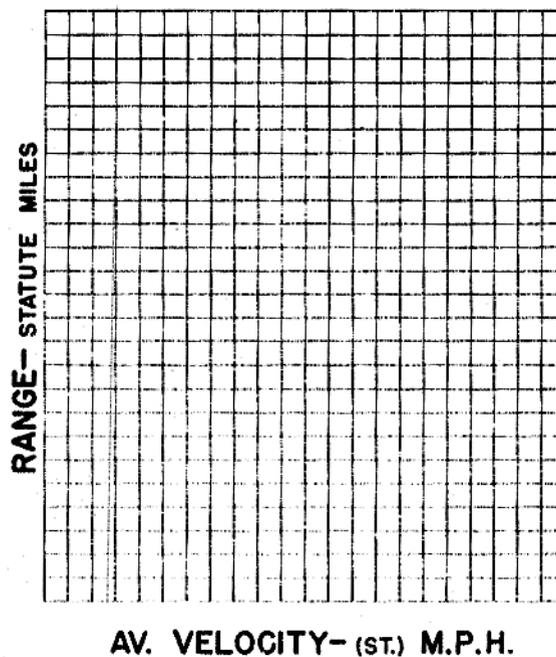
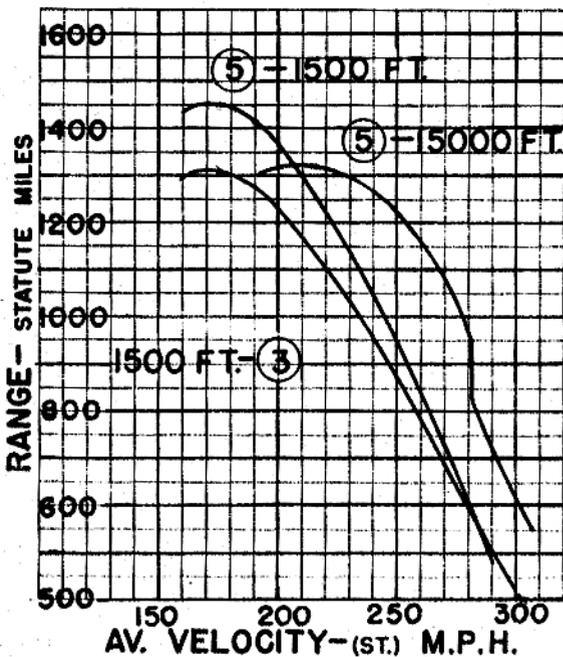
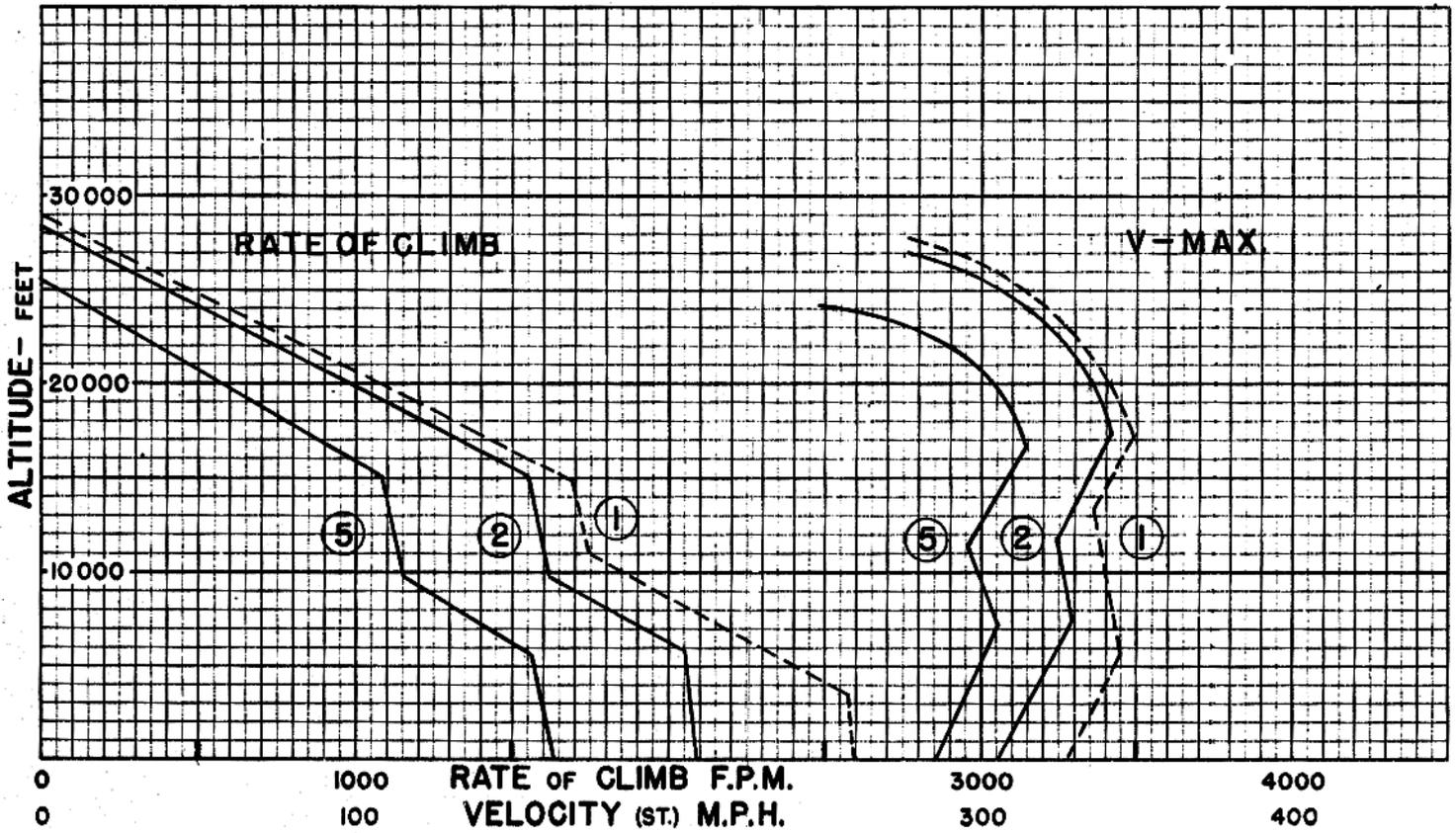
188 feet length is required to spot 20 airplanes on the 96 foot wide deck immediately aft of the forward ramp on CV_9 class carriers.

BOMBER COMBAT RADIUS FORMULA NO. B-1-CONDITIONS NOS.- 2 - 7				RADIUS = CLIMB + CRUISE-OUT + CRUISE BACK			
<u>WARM-UP</u>	<u>RENDEZVOUS</u>	<u>CLIMB</u>	<u>CRUISE OUT</u>	<u>DROP TANKS</u>	<u>COMBAT</u>	<u>CRUISE BACK</u>	<u>RESERVE</u>
20 min.	20 min. at	to		<u>DESCEND</u>	15 min.		60 min.
	sea level	15000 ft.	at 15000 ft.	to 1500 ft.	at 1500 ft.	at 1500 ft.	at
<u>TAKE-OFF</u>	at	at	180 kts.TAS	<u>DROP BOMBS</u>	5 min. WEP.	170 kts.TAS	Vel. for
1 min.	60% N.S.P.	60% N.S.P.	<u>Auto Lean.</u>	<u>FIRE</u>	10 min. Nor.Pr.		Max. Range
	<u>Auto Lean.</u>	<u>Auto Rich.</u>	<u>Auto Lean.</u>	<u>ROCKETS</u>		<u>Auto Lean.</u>	<u>Auto Lean.</u>

AIRPLANE PERFORMANCE

NAVAER-1335 D

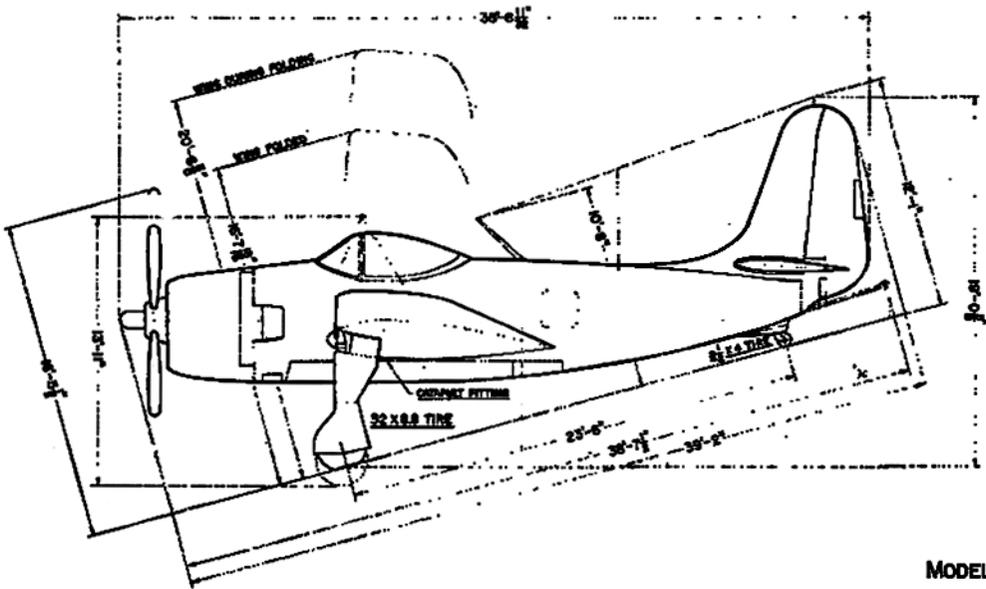
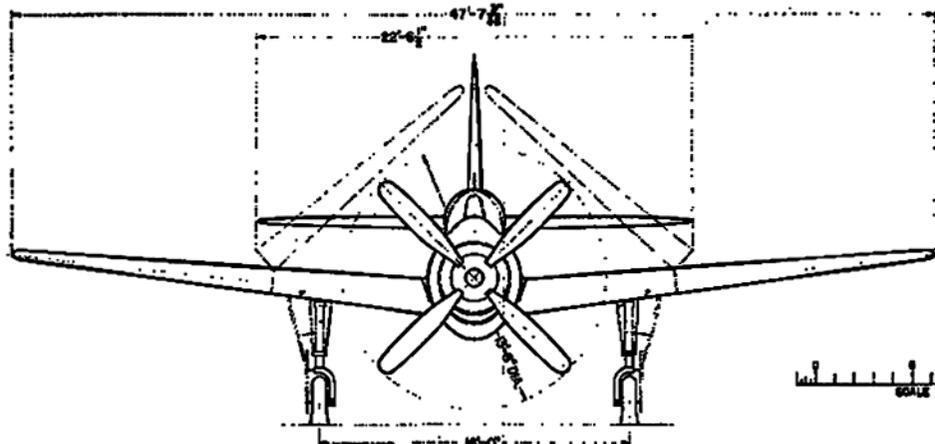
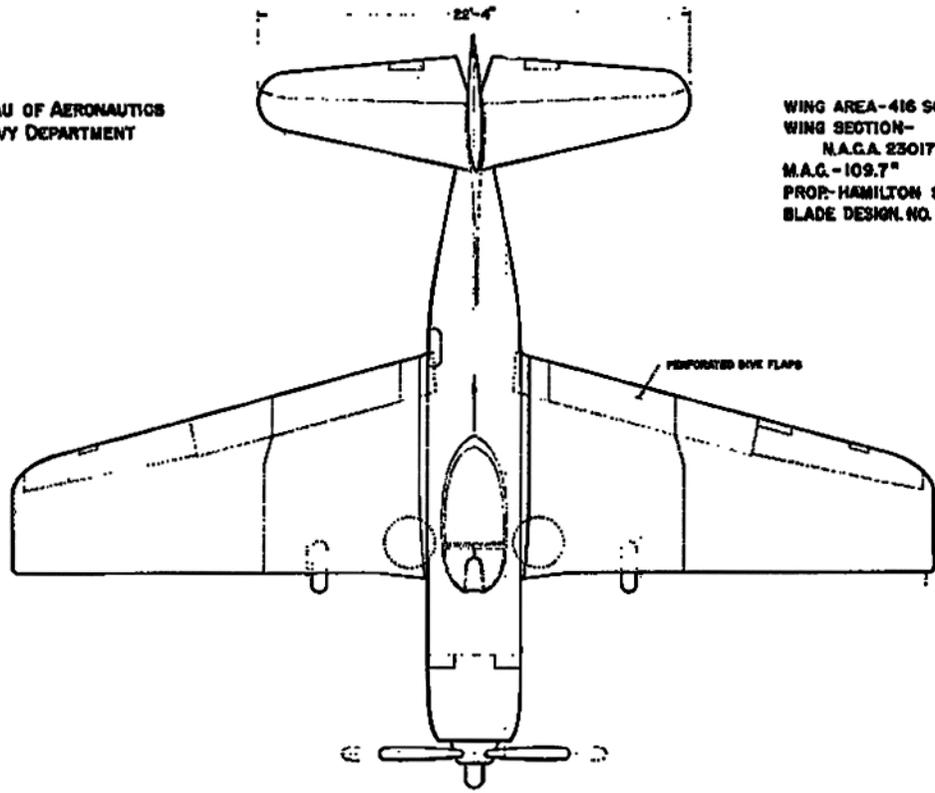
BUREAU OF AERONAUTICS, NAVY DEPT.



○ LOADING CONDITION COLUMN NUMBER

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

WING AREA-416 SQ. FT.
WING SECTION-
N.A.C.A. 23017-23009
M.A.C. - 109.7°
PROP- HAMILTON STD. U.S.
BLADE DESIGN. NO. 65594-18



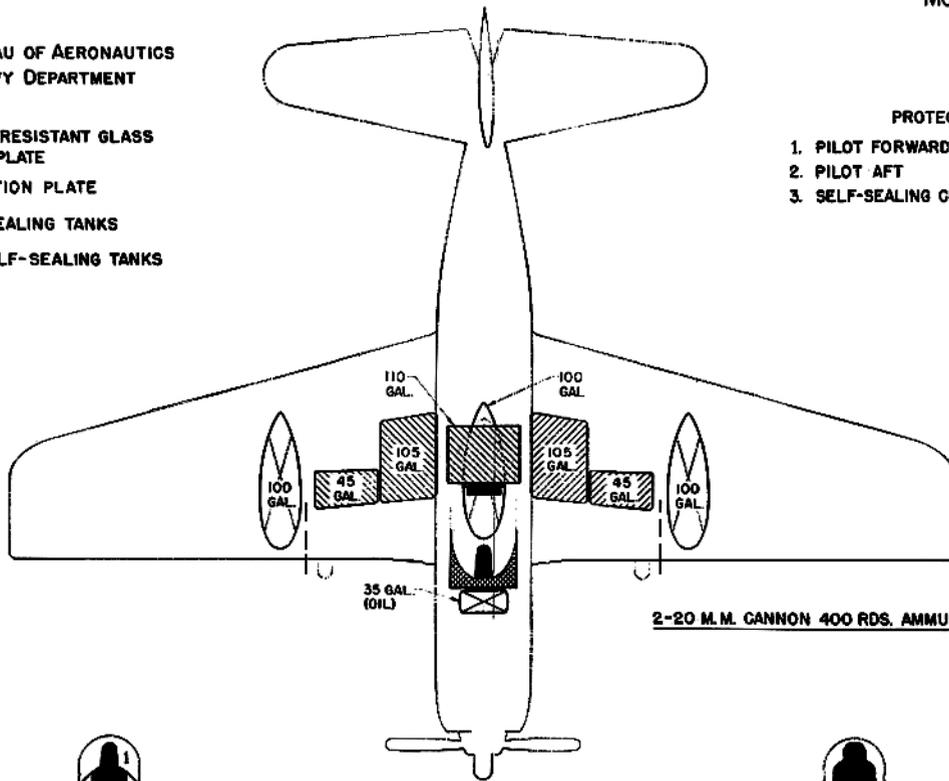
MODEL XBT2C-1

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

-  BULLET RESISTANT GLASS ARMOR PLATE
-  DEFLECTION PLATE
-  SELF-SEALING TANKS
-  NON SELF-SEALING TANKS

PROTECTION

- 1. PILOT FORWARD 87 LBS.
- 2. PILOT AFT 95 LBS.
- 3. SELF-SEALING CELLS 426 LBS.



VIEW A TO B



VIEW B

