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COMNAVAIRSTYSCOM

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Public Information Officer  
By direction of the Commander



# STANDARD AIRCRAFT CHARACTERISTICS

## AD-5Q "SKYRAIDER"

DOUGLAS

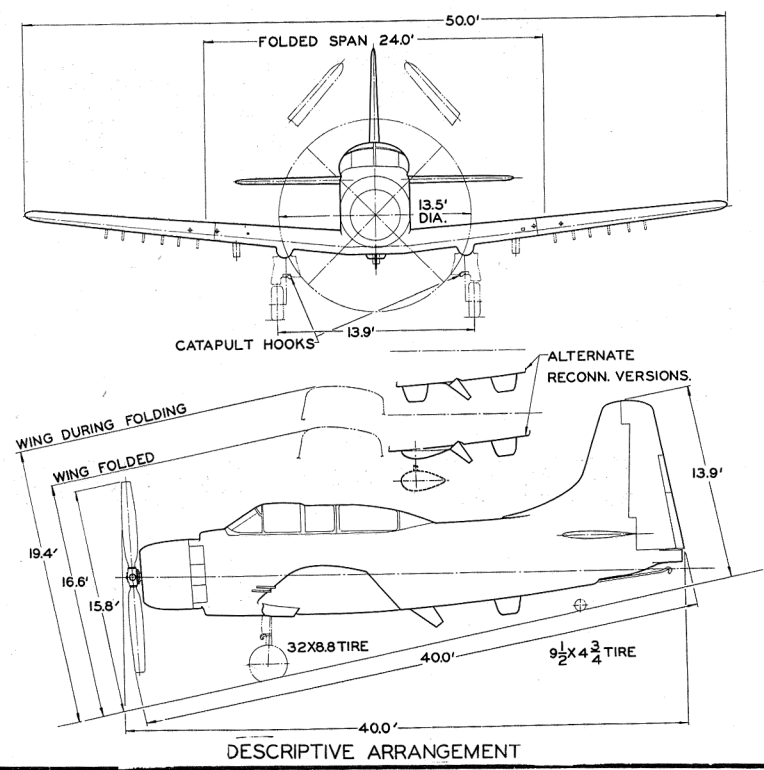
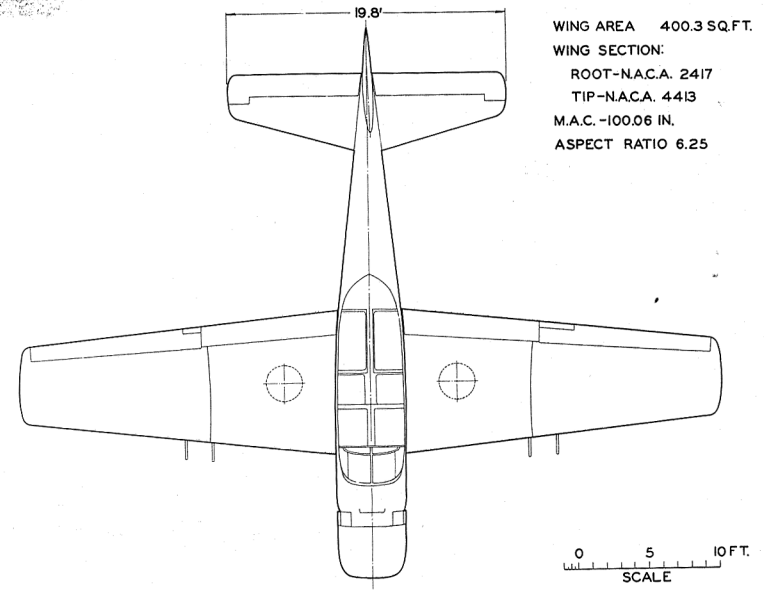
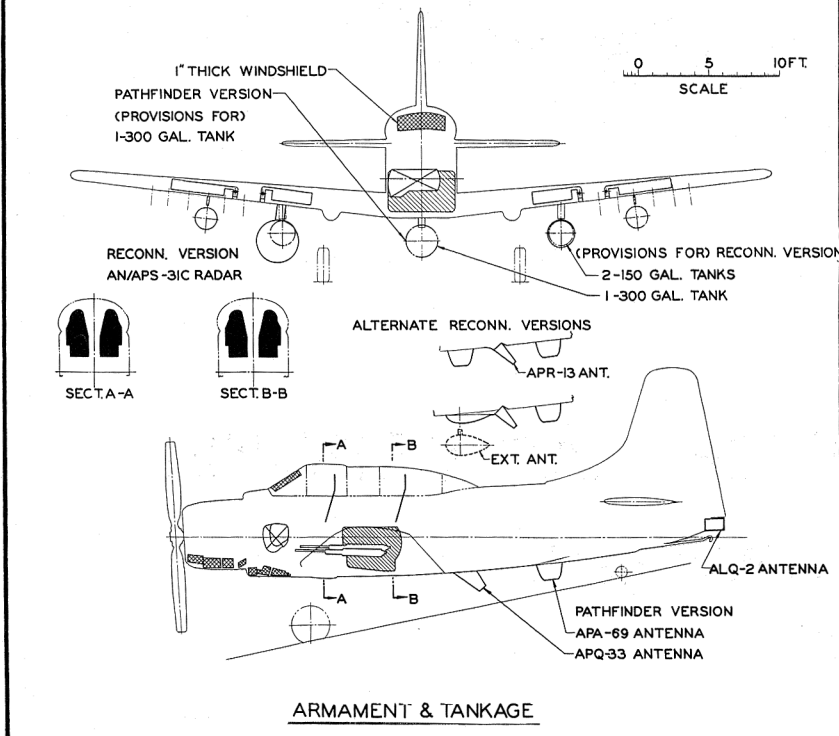
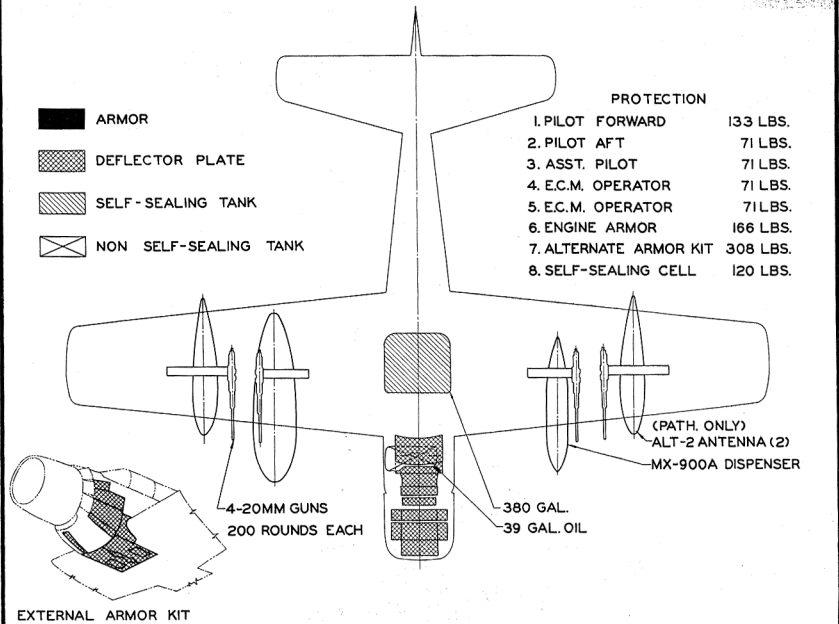
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Standard Aircraft Characteristics NAVAER 1335A (REV. 1-55)

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AD-5Q



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Standard Aircraft Characteristics NAVAER 1332B (Rev. 1-55)

**POWER PLANT**

NO. & MODEL.....(1)R-3350-26-WA  
 MFR.....Wright Aero  
 SUPERCHG.....Single Stage Two Speed  
 REDUCT.GEAR RATIO......4375:1  
 PROP. MFR.....Aero Products  
 BLADE DES. NO.....M20A2-162-0  
 NO. BLD./DIA.....4/13'6"

**RATINGS**

	BHP	@ RPM	@ ALT.
T.O.	2,700	2,900	S.L.
MIL.	2,700	2,900	3,700
	2,100	2,600	14,500
NORM.	2,300	2,600	6,200
	1,900	2,600	17,000

Spec. No.....N836-D

**MISSION AND DESCRIPTION**

The AD-5Q is a dual purpose airplane, capable of two distinct missions; one, that of a radar reconnaissance airplane, detecting enemy radar installations and, secondly, that of a radar countermeasures airplane that jams enemy radar during an attack mission by a group of bombers.

The AD-5Q is a kit-modification to the AD-5N airplane. Crew consists of four: a pilot and navigator in the cockpit and two ECM operators in a rear compartment. The airplane is designed to operate from all classes of aircraft carriers or land bases.

The airplane is conventional in design and structure incorporating a single reciprocating engine, folding wings, conventional landing gear and catapult and arrested landing equipment. Provisions are incorporated for the carrying of fuel tanks and various stores required for the missions on the bomb racks, and for installation of 4-20mm guns in the inner wings.

**DEVELOPMENT**

First Flight.....October 1956  
 Service Use.....July 1957

**WEIGHTS**

LOADINGS	LBS.	L.F.
EMPTY.....	12,097	.....
BASIC.....	15,932	.....
DESIGN.....	17,000	6.4
COMBAT.....	19,395	5.6
MAX.T.O.(FIELD).....	25,000	.....
(CAT.).....	25,000	.....
MAX.LDG.(FIELD).....	21,000	.....
(ARREST).....	17,500	.....

ALL WEIGHTS ARE CALCULATED

**FUEL AND OIL**

GALS.	NO. TANKS	LOCATION
380*	1	Fuselage
150 or 300	1	Ctr. Drop
150 or 300	2	Wing Drop
Fuel Grade.....	115/145	
Fuel Spec.....	MIL-F-5572	
*Self Sealing Tank		
Max. useable fuel 980 gal. (limited by oil cap.)		

**OIL**

CAPACITY.....39 gals.  
 SPEC.....AN-0-8  
 GRADE.....1120

**ELECTRONICS**

UHF Trans.-Rec.....AN/ARC-27A  
 MHF Trans.-Rec.....AN/ARC-2  
 Radio Altimeter.....AN/APN-22  
 Marker Beacon.....AN/ARN-12  
 IFF.....AN/APX-6  
 IFF Coder.....AN/APA-89  
 LF ADF.....AN/ARN-6  
 UHF ADF.....AN/ARA-25  
 Interphone.....AN/AIC-4  
 Radar Search.....AN/APS-31C  
 LAB Radar Bombsight.....AN/APA-16  
 LAB R-R Adapter.....MX-476/APA-16  
 Sonobuoy Rec.....AN/ARR-26  
 Searchlight.....AN/AVQ-2A  
 ECM Rec.....AN/APR-9B  
 ECM DF.....AN/APA-69A  
 ECM Rec.....AN/APR-13

Provisions  
 VHF Trans.-Rec.....AN/ARC-1  
 Bomb Director.....MK-3 MOD-5

**DIMENSIONS**

WING  
 AREA.....400.3 sq.ft.  
 SPAN.....50 ft.  
 MAC.....8.4 ft.  
 LENGTH.....40.0 ft.  
 HEIGHT.....15.8 ft.  
 TREAD.....13.9 ft.  
 PROP. GRD. CLEARANCE.....6 in.

**ORDNANCE**

Does not normally carry ordnance.

Provisions for a total of 12 Aero 14 1/2" bomb racks on outer wings and 4-20mm wing guns with 200 rounds of ammunition each.

Standard Aircraft Characteristics NAVAEF-1335C (Rev. 1-55)

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## PERFORMANCE SUMMARY

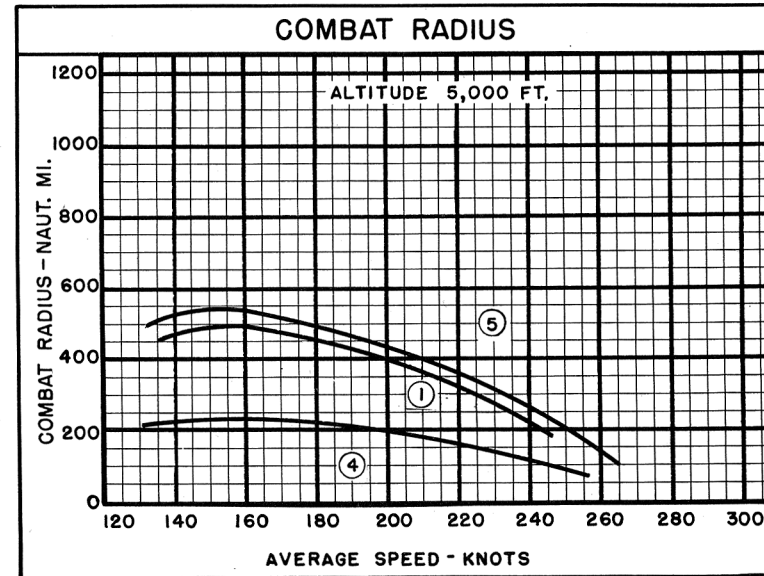
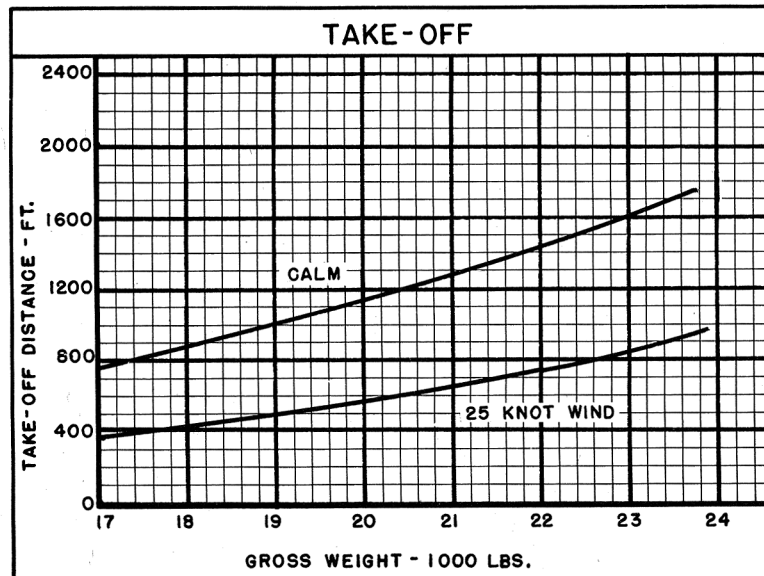
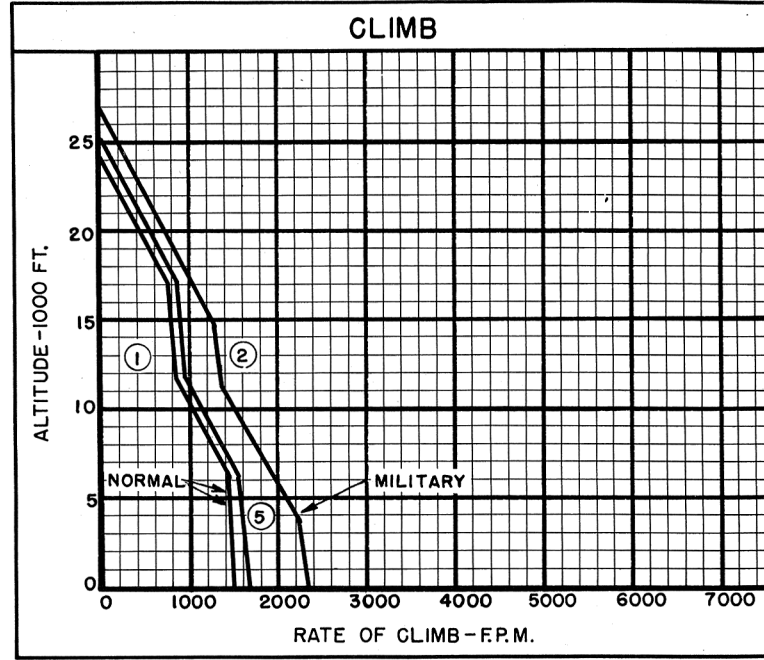
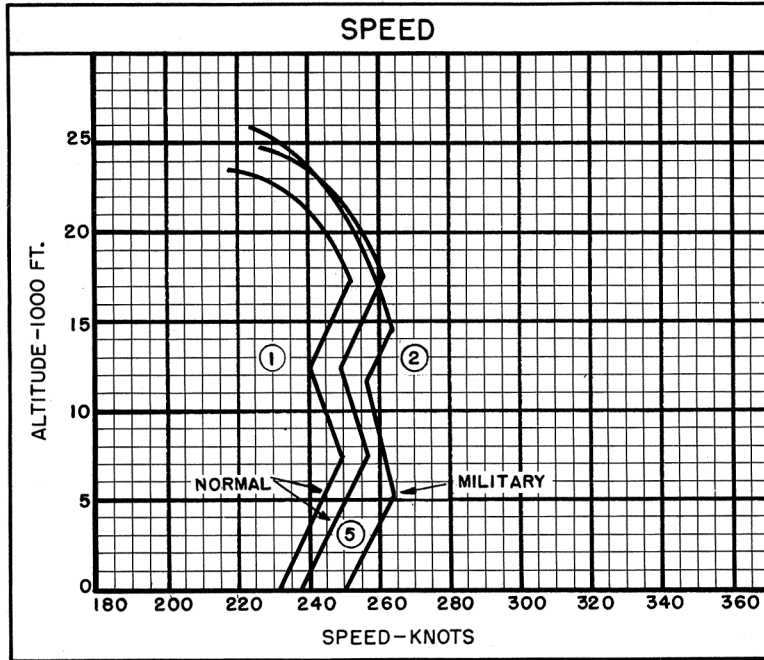
TAKE-OFF LOADING CONDITION	(1) PATHFINDER 1-300 gal. Aero 1A Fuel Tank (B) and (F)	(3) PATHFINDER 2-300 gal. Aero 1A Fuel Tanks (B) and (G)	(4) RECONNAISSANCE (C)	(5) RECONNAISSANCE 1-300 gal. Aero 1A Fuel Tank (C)	(6) RECONNAISSANCE 1-300 gal. Aero 1A 2-150 gal. Aero 1A Fuel Tanks (C)
TAKE-OFF WEIGHT	lb. 21,351	23,142	18,598	20,590	22,596
Fuel	lb. 4,080	5,880	2,280	4,080	5,880
Fayload	lb. None	None	None	None	None
Wing loading	lb./sq.ft. 53.4	57.9	46.5	51.5	56.5
Stall speed - power-off	kn. 91.5	95.2	85.4	89.8	94.1
Take-off run at S.L. - calm	ft. 1,320	1,620	930	1,200	1,530
Take-off run at S.L. 25 kn. wind	ft. 690	875	455	615	800
Take-off to clear 50 ft. - calm	ft. 2,240	2,820	1,590	2,040	2,620
Max. speed/altitude (A)	kn./ft. 252/17,200	247/17,200	268/17,400	261/17,300	252/17,200
Rate of climb at S.L. (A)	fpm. 1,510	1,270	2,010	1,660	1,370
Time: S.L. to 10,000 ft. (A)	min. 7.1	8.7	5.3	6.4	8.1
Time: S.L. to 20,000 ft. (A)	min. 18.3	24.0	12.8	16.2	21.4
Service ceiling (100 fpm) (A)	ft. 23,100	21,700	27,500	24,500	22,300
Combat range	n.mi. 1,180	1,685	680	1,285	1,800
Average cruising speed	kn. 165	165	165	165	165
Cruising altitude(s)	ft. 5,000	5,000	5,000	5,000	5,000
Combat radius	n.mi. 485	480	225	530 (D)	795 (E)
Average cruising speed	kn. 165	165	165	165	165
Mission time	hrs. 6.2	6.0	3.0	6.7	9.8
COMBAT LOADING CONDITION	(2) CLEAN Full Internal Fuel				
COMBAT WEIGHT	lb. 19,359				
Engine power	Military				
Fuel	lb. 2,280				
Combat speed/altitude	kn./ft. 251/Sea Level				
Rate of climb/altitude	fpm/ft. 2,320/Sea Level				
Combat ceiling (500 fpm)	ft. 22,000				
Rate of climb at S.L.	fpm. 2,320				
Max. speed at S.L.	kn. 251				
Max. speed/altitude	kn./ft. 264/5,100				
LANDING WEIGHT	lb. 17,416				
Fuel	lb. 337				
Stall speed - power-off	kn. 82.6				
Stall speed - with approach power	kn. 77.6				

## NOTES

- (A) Normal rated power.
- (B) Pathfinder configuration includes following external antennae: AS-776/APA-69 radome, AT-321/APQ-33 blade, AS-694/AIQ-2, ARN-6, APX-6, and ARN-21.
- (C) Reconnaissance configuration includes following external antennae: AS-776/APA-69 radome, AS-435/APA-69 radome, AS-694/AIQ-2, APR-13 blade, ARN-C, APX-6 and ARN-21.
- (D) The combat radius with the extendable APA-69 is 513 n.mi. if the radome is extended for two hours and the 300-gallon fuel tank is retained.

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Standard Aircraft Characteristics NAVAER 1335E (Rev. 1-55)

○ LOADING CONDITION COLUMN NUMBER

NOTES

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(E) The combat radius shown is based on retaining the external fuel tanks during the combat period. If the tanks and 1539 lbs. of fuel are dropped prior to the combat period, the combat radius is 526 n.mi. and the mission time is 6.6 hours.

(F) Includes two AN/ALT-2 Stores, MX-900A and AN/APS-31P.

(G) Includes two AN/ALT-2 Stores, AN/APS-31P.

PERFORMANCE BASIS: Performance is calculated and is based on estimates and contractor's flight tests of models AD-4B, AD-5 and AD-6.

COMBAT RADIUS AND RANGE is based on fuel consumption data from AD-4B, AD-5 and AD-6 flight tests and is increased 5%.

All loadings include centerline and inner wing bomb racks, 12 Aero 14 racks and no guns.

SPOTTING: A total of 83 airplanes can be accommodated in a landing spot on the flight and hangar decks of a CVA-19 class angled deck carrier.

LOW ALTITUDE ATTACK AND GROUND SUPPORT BOMBER MISSION-COMBAT RADIUS PROBLEM

WARM-UP, TAXI, TAKE-OFF: 10 minutes at normal power.

CLIMB: On course to 5,000 feet with normal power.

CRUISE-OUT: At 5,000 feet at velocity for long range. (Drop external fuel tank when empty)

DESCEND: To sea level. (No fuel used - no distance gained)

DROP BOMBS, FIRE ROCKETS.

COMBAT: 15 minutes at sea level (5 minutes at military power and 10 minutes at normal power).

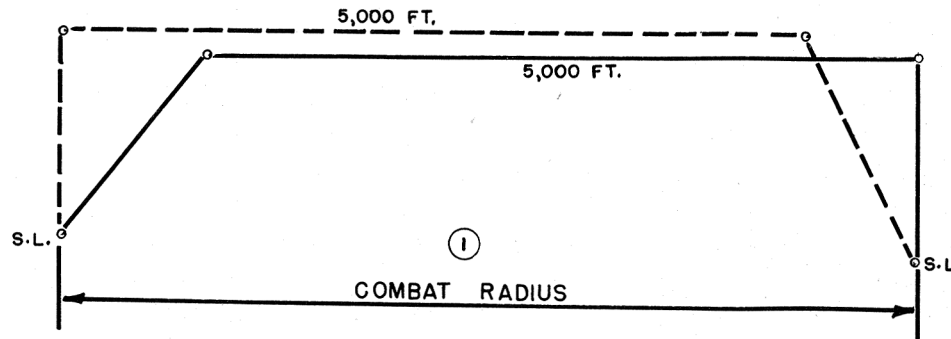
CLIMB: On course to 5,000 feet with normal power.

CRUISE-BACK: At 5,000 feet at velocity for long range.

RESERVE: 20 minutes at velocity for long range at sea level plus 5% of initial fuel load.

$$\text{COMBAT RADIUS} = \text{CLIMB} \div \text{CRUISE-OUT} = \text{CLIMB} \div \text{CRUISE-BACK}$$

$$\text{MISSION TIME} = \text{TIME REQUIRED FOR CLIMB} \div \text{CRUISE-OUT} \div \text{COMBAT} \div \text{CLIMB} \div \text{CRUISE-BACK}$$



○ LOADING CONDITION COLUMN NUMBER

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Standard Aircraft Characteristics NAVAIR 1395F (Rev. 1-55)