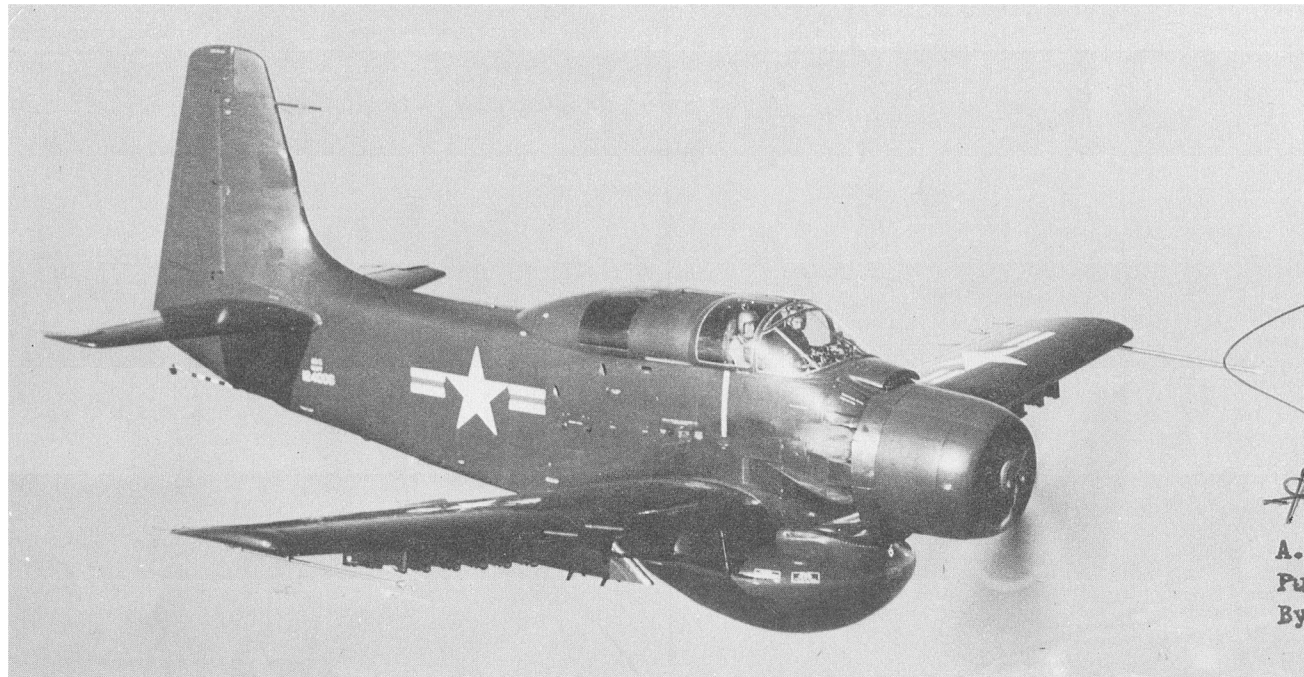


~~CONFIDENTIAL~~

SERVICE



CLEARED  
FOR OPEN PUBLICATION  
DEC 2 1984  
COMNAVAIRSYSCOM

*[Signature]*  
A. W. Frascella  
Public Information Officer  
By direction of the Commander

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Standard Aircraft Characteristics NAVAER 1335A (REV. 1-49)

# STANDARD AIRCRAFT CHARACTERISTICS

## AD-5W "SKYRAIDER"

DOUGLAS CLASSIFICATION (CANCELED) (~~SECRET~~) BY AUTHORITY OF

AIR-7203  
ON 12-27-84 *A. H. Persons* Security Spec'l.  
(DATE) (SIGNATURE) (RANK)

NAVAL AIR SYSTEMS COMMAND  
DEPARTMENT OF THE NAVY

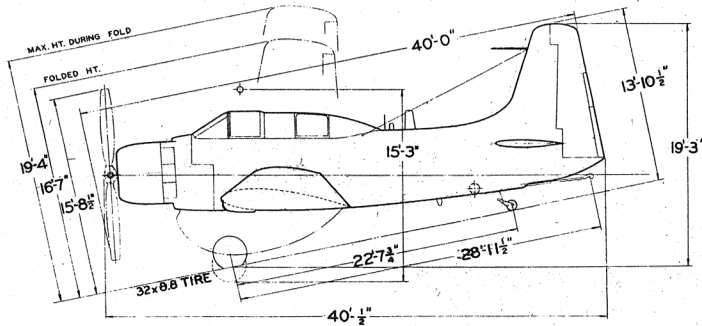
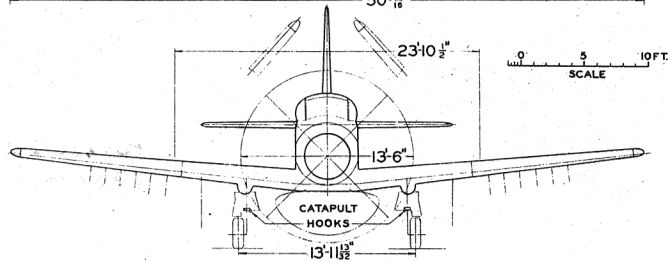
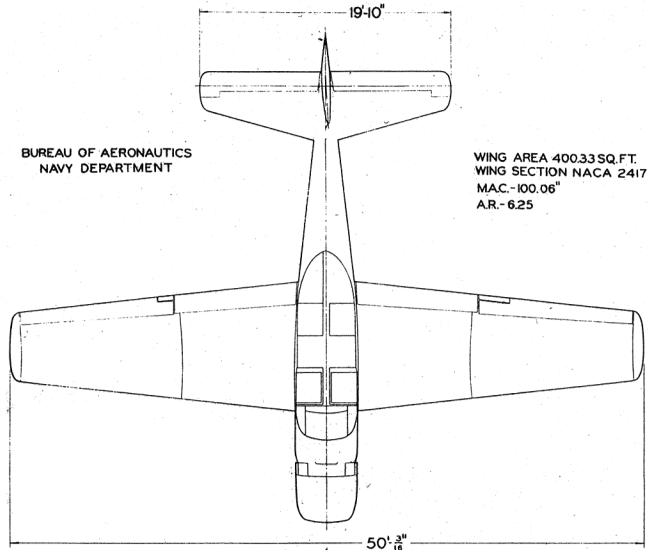
AD-5W

1 MAY 1952




~~CONFIDENTIAL~~

BUREAU OF AERONAUTICS  
NAVY DEPARTMENT

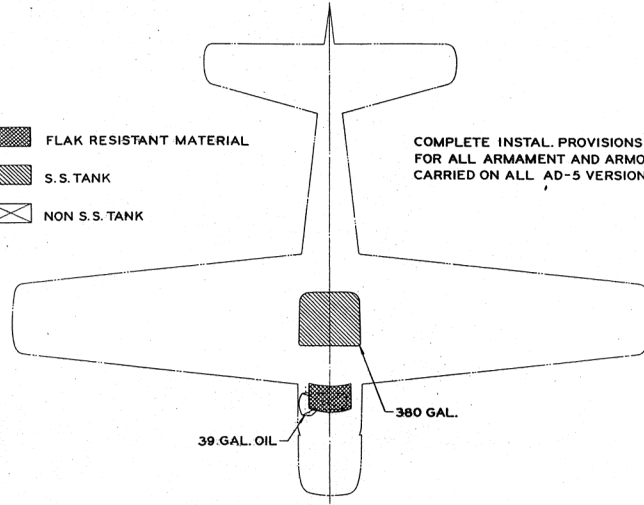
WING AREA 400.33 SQ. FT.  
WING SECTION NACA 2417-4413  
MAC-100.06"  
A.R.-6.25



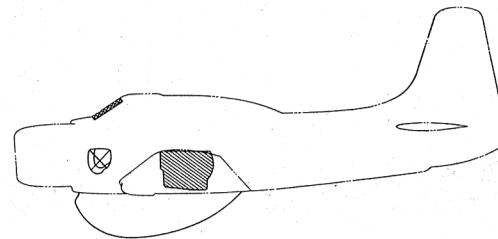
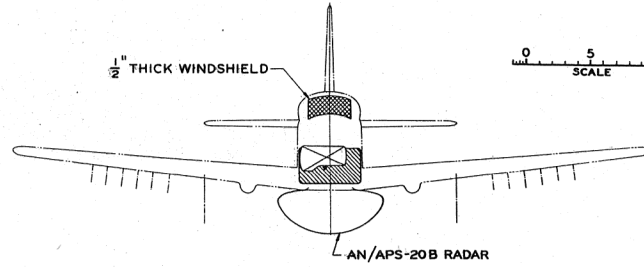
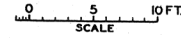
DESCRIPTIVE ARRANGEMENT

-  FLAK RESISTANT MATERIAL
-  S. S. TANK
-  NON S. S. TANK

COMPLETE INSTAL. PROVISIONS  
FOR ALL ARMAMENT AND ARMOR  
CARRIED ON ALL AD-5 VERSIONS



1/2" THICK WINDSHIELD



ARMAMENT & TANKS

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Standard Aircraft Characteristics NAVAER 13358 (REV. 3-49)

**POWER PLANT**

NO. & MODEL....(1) R-3350-26W  
 MFR.....Wright  
 SUPERCH.....1 Stage, 2 Speed  
 PROP. GEAR RATIO.....0.4375  
 PROP. MFR.....Aero. Prod.  
 PROP. DES. NO.....M20A-162-0  
 NO. BLA./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 | S. L.   |
|                 | 1,900 | 2,600 | 17,100' |
| SPEC. NO. N-836 |       |       |         |

**ORDNANCE**

NONE

**MISSION AND DESCRIPTION**

The principal mission of the AD-5W is that of airborne early warning and anti-submarine search from carrier or land bases. In addition, the airplane can function as a Combat Information Control plane. The AD-5W is a development of the AD series and incorporates improvements in equipment, arrangement, and performance and stability. Installation provisions for all armor and armament carried on other AD-5 models are retained. The AD-5W is equipped with a single dive brake for maneuvering control.

The side-by-side seating arrangement of pilot and assistant pilot-CIC operator facilitates all weather operation. The unified cockpit arrangement with the radar operator aft of the pilot provides interchange of crew positions and maintenance of electronic equipment in flight. AN/APS-20B radar and complete countermeasures equipment are installed for search operations. Appropriate radar and communications relay equipment also are installed. Since the structural and armament provisions of all AD-5 series airplanes are identical, the AD-5W may be rapidly converted to a general purpose attack by removal of specific AEW equipment, including the radome and AN/APS-20B scanner, and installation of a center bomb rack.  
 First flight -- March 1953  
 Service use to start -- August 1953

**DIMENSIONS**

|                  |             |
|------------------|-------------|
| WING AREA.....   | 400 sq. ft. |
| SPAN.....        | 50' - 0"    |
| LENGTH.....      | 40' - 0"    |
| HEIGHT.....      | 15' - 9"    |
| TREAD.....       | 13' - 11"   |
| M.A.C.....       | 8' - 4"     |
| PROP. CLEAR..... | 6"          |

**WEIGHTS**

| Loadings          | Lbs.        | L.F. |
|-------------------|-------------|------|
| EMPTY.....        | 12,110..... |      |
| BASIC.....        | 15,101..... |      |
| DESIGN.....       | 17,800..... | 5.1  |
| COMBAT.....       | 17,519..... | 5.1  |
| MAX.T.O..(Field), | 23,400*     | 3.7  |
| (Cat.),           | 23,400..... |      |
| MAX.LAND.(Field), | 21,000..... |      |
| (Arrest),         | 17,000..... |      |

All weights are calculated.

\* Maximum anticipated loading

**FUEL AND OIL**

| Gals.                   | No. Tanks | Location    |
|-------------------------|-----------|-------------|
| 380                     | 1         | Fuse., S.S. |
| 150 (or 300)            | 1         | Ctr., Drop  |
| 150 (or 300)            | 2         | Wing, Drop  |
| FUEL GRADE.....115/145  |           |             |
| FUEL SPEC....MIL-F-5572 |           |             |

**OIL**

|                       |            |
|-----------------------|------------|
| CAPACITY (Gals.)..... | 39         |
| GRADE.....            | 1120       |
| SPEC.....             | MIL-O-6082 |

**ELECTRONICS**

UHF TRANS-REC &  
 RELAY.....AN/ARC-27A  
 VHF RELAY SYS.....AN/ARC-28  
 (Alter. Prov. to AN/ARC-27A)  
 HF TRANS.-REC.....AN/ARC-2  
 (Alter. Prov. to (1) ARC-27A)  
 NAV. REC.....AN/ARR-2A  
 MARKER BEACON.....AN/ARN-12  
 IFF.....AN/APX-6  
 INTERPHONE.....AN/AIC-4A  
 RADAR RELAY TRANS...AN/ART-28  
 RADAR SEARCH.....AN/APS-20B  
 (Continued on NOTES)

Standard Aircraft Characteristics NAVAER-1335C

**IDENTIFIED**

### PERFORMANCE SUMMARY

| TAKE-OFF LOADING CONDITION        | (1) SEARCH<br>AN/APS-20 Radar<br>2-Mk. 51 Racks<br>2-150 Gal. Tanks | (3) SEARCH<br>AN/APS-20 Radar<br>2-300 Gal. Tanks<br>(B) | (4) SEARCH<br>AN/APS-20 Radar |            |  |
|-----------------------------------|---|--|-------------------------------|------------|--|
| TAKE-OFF WEIGHT                   | lb.   | 19,587   | 21,529                        | 17,409     |  |
| Fuel (Fixed/Drop)                 | lb.   | 2,280/1,800  | 2,280/3,600                   | 2,280/-    |  |
| Payload                           | lb.   | None   | None                          | None       |  |
| Wing loading                      | lb./sq.ft.  | 49.0   | 53.9                          | 43.5       |  |
| Stall speed - power-off           | kn.   | 83.9   | 88.0                          | 79.0       |  |
| Take-off run at S.L. - calm       | ft.   | 980  | 1,450                         | 725        |  |
| Take-off run at S.L. 25 km. wind  | ft.   | 470  | 725                           | 325        |  |
| Take-off to clear 50 ft. - calm   | ft.   | ---  | ---                           | ---        |  |
| Max. speed/altitude               | (A) kn./ft.   | 251/18,900   | 246/18,500                    | 266/19,300 |  |
| Rate of climb at S.L.             | (A) fpm   | 1,730  | 1,470                         | 2,190      |  |
| Time: S.L. to 10,000 ft.          | (A) min.  | 6.4  | 7.8                           | 5.0        |  |
| Time: S.L. to 20,000 ft.          | (A) min.  | 16.9   | 21.9                          | 12.1       |  |
| Service ceiling (100 fpm)         | (A) ft.   | 25,300   | 23,100                        | 28,800     |  |
| Combat range                      | n.mi.   | 1,055  | 1,650                         | 645        |  |
| Average cruising speed            | kn.   | 151  | 154                           | 152        |  |
| Cruising altitude(s)              | ft.   | 1,500  | 1,500                         | 1,500      |  |
| Combat radius                     | n.mi.   | 420  | 660                           | 260        |  |
| Average cruising speed            | kn.   | 151  | 154                           | 152        |  |
| COMBAT LOADING CONDITION          | (2) COMBAT<br>2-Mk. 51 Racks  |  |                               |            |  |
| COMBAT WEIGHT                     | lb.   | 17,519   |                               |            |  |
| Engine power                      |   | Military   |                               |            |  |
| Fuel                              | lb.   | 2,280  |                               |            |  |
| Combat speed/combat altitude      | kn./ft.   | 246/1,500  |                               |            |  |
| Rate of climb/combat altitude     | fpm/ft.   | 2,590/1,500  |                               |            |  |
| Combat ceiling (500 fpm)          | ft.   | 23,900   |                               |            |  |
| Rate of climb at S.L.             | fpm   | 2,610  |                               |            |  |
| Max. speed at S.L.                | kn.   | 242  |                               |            |  |
| Max. speed/altitude               | kn./ft.   | 266/19,300   |                               |            |  |
| LANDING WEIGHT                    | lb.   | 15,566   |                               |            |  |
| Fuel                              | lb.   | 327  |                               |            |  |
| Stall speed - power-off           | kn.   | 74.8   |                               |            |  |
| Stall speed - with approach power | kn.   | 69.1   |                               |            |  |

#### NOTES

(A) Normal Power

(B) 300 gallon drop tanks are Douglas high speed stores, carried on Aero-61A racks.

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 Performance is based on AD series flight test.  
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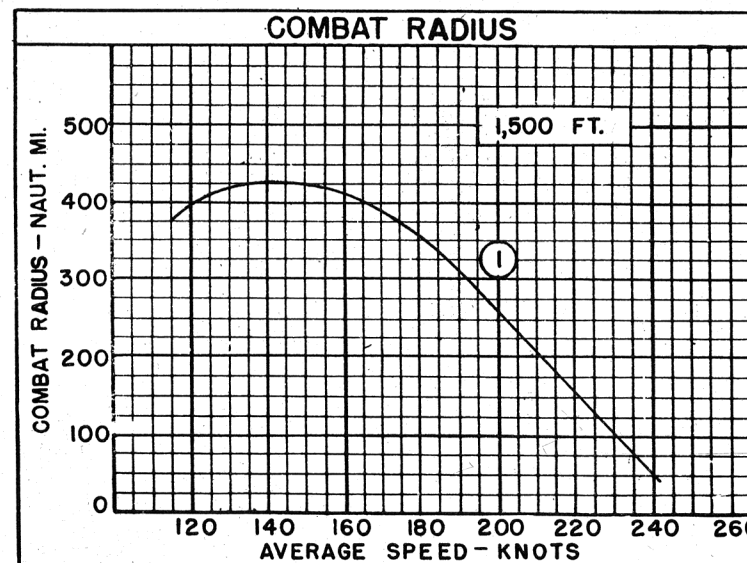
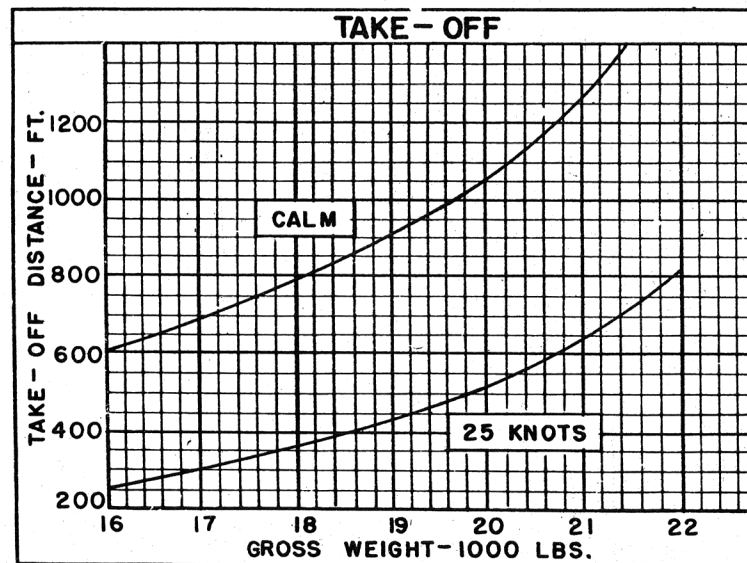
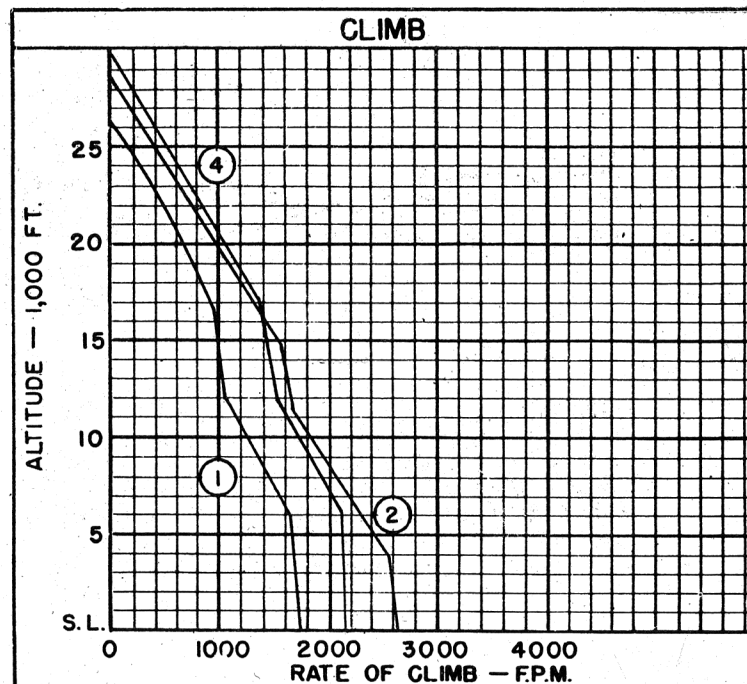
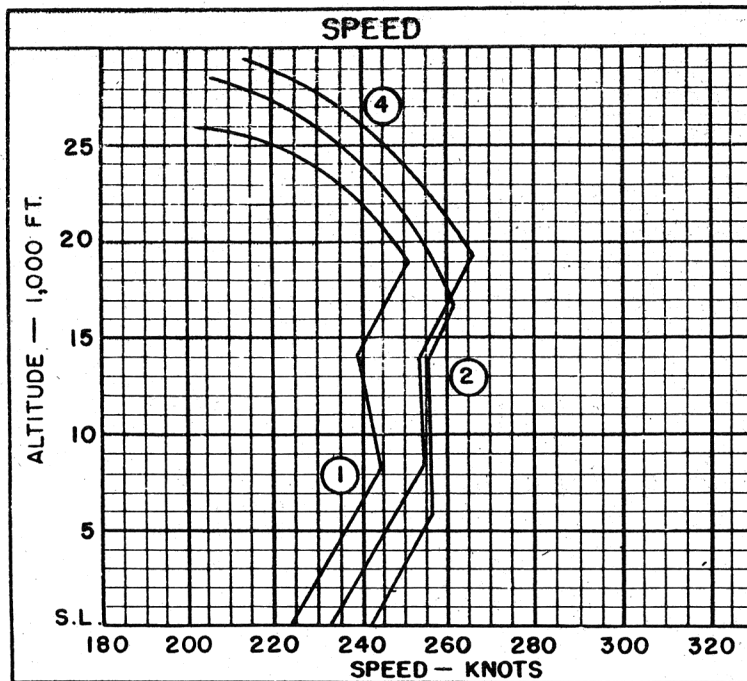
Range and radius are based on AD series flight test fuel consumption data increased 5%.  
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Spotting: 200 ft. length is required to spot 19 airplanes (wings folded) on the 96 ft. wide deck immediately aft of the forward ramp on CV-9 carriers.

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NAVAER-1335D (Rev. 10-51)

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Standard Aircraft Characteristics: ICS, NAVIER 1335E (REV. 2-50)

○ LOADING CONDITION COLUMN NUMBER

# NOTES

## ASW RANGE AND RADIUS PROBLEM

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

CLIMB: On course to 1,500 feet at normal power.

COMBAT RANGE: Cruise at V for long range at 1,500 feet. External fuel tanks dropped when empty.

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

COMBAT RADIUS = 40% OF COMBAT RANGE

### ELECTRONICS (Continued)

RADAR GPI.....AN/APA-57C

NAV. SYS.....AN/ARN-21  
(Planned Service Installation)

ALTIMETER.....AN/APN-22 or -1

RADIO COMPASS.....AN/ARN-6

UHF D.F.....AN/ARA-25

IFF.....AN/APX-7  
(Planned Service Installation)

Provisions only for:

RCM REC.....AN/APR-9B

HOMING REC.....AN/APA-70C

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Standard Aircraft Characteristics NAVAR 1335F (REV. 1-49)