

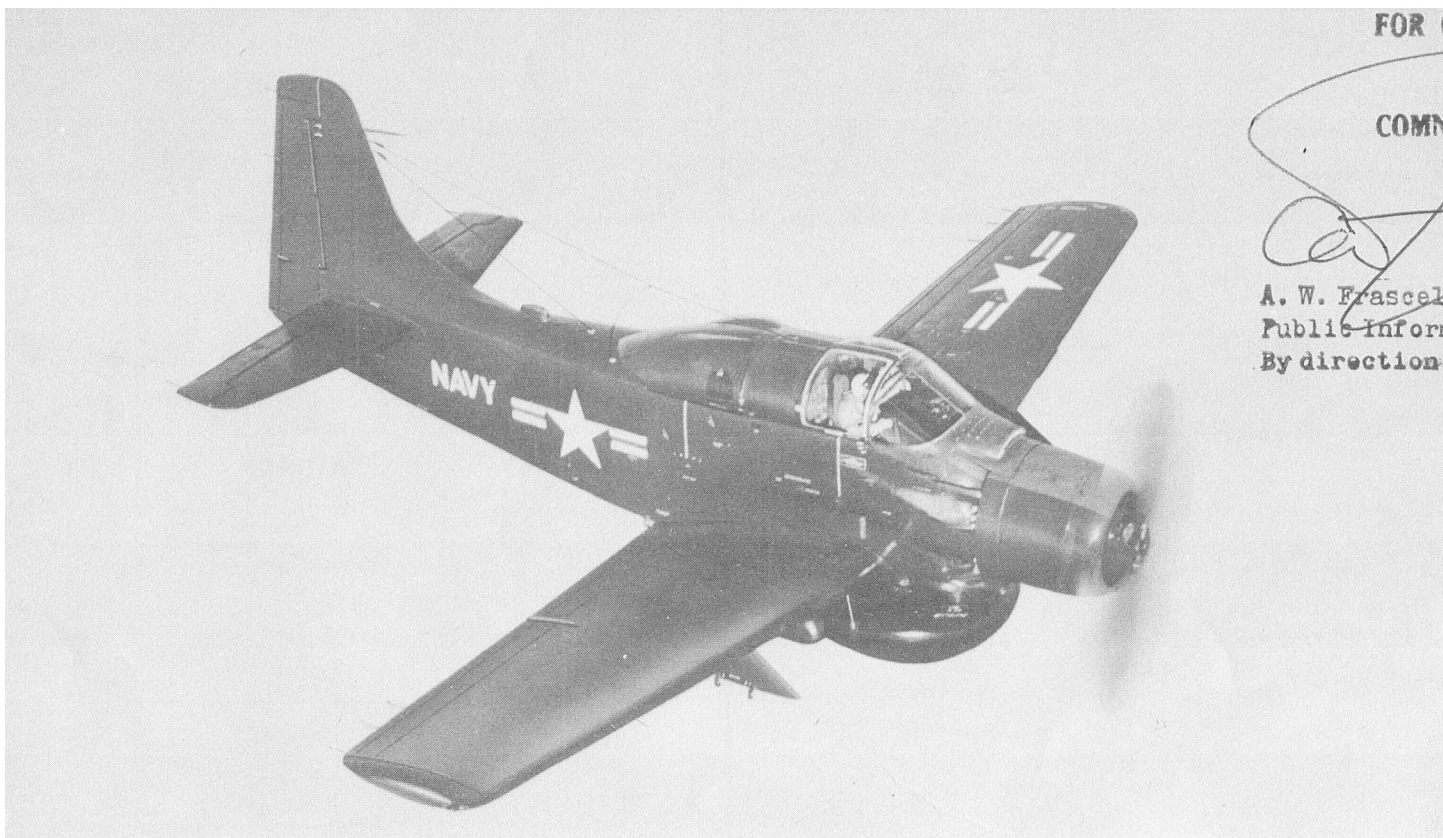
UNCLASSIFIED

SERVICE

CLEARED  
FOR OPEN PUBLICATION

COMNAVMARSTYSCOM

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



# STANDARD AIRCRAFT CHARACTERISTICS

## AD-5W "SKYRAIDER"

DOUGLAS

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




30 APRIL 1956

UNCLASSIFIED

AD-5W

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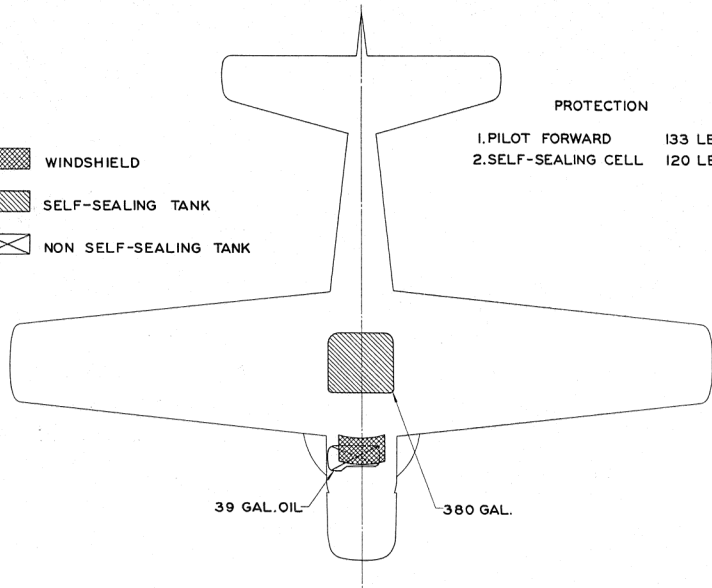
SERVICE

-  WINDSHIELD
-  SELF-SEALING TANK
-  NON SELF-SEALING TANK

PROTECTION

1. PILOT FORWARD 133 LBS.

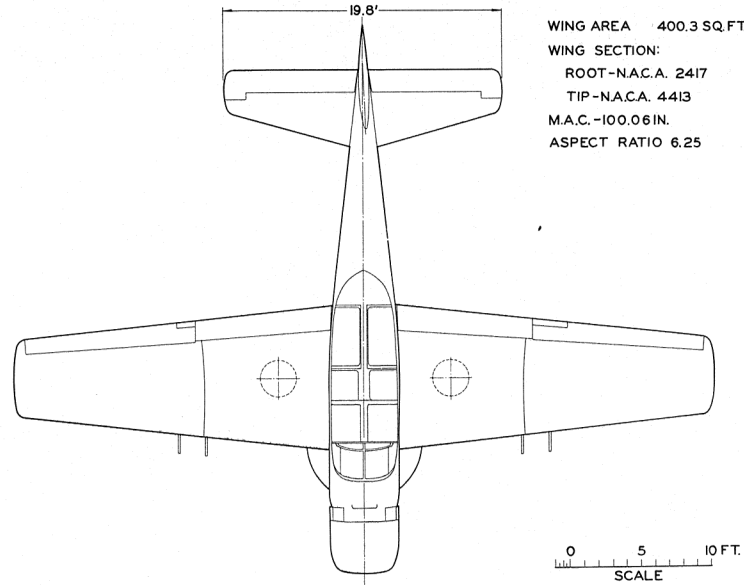
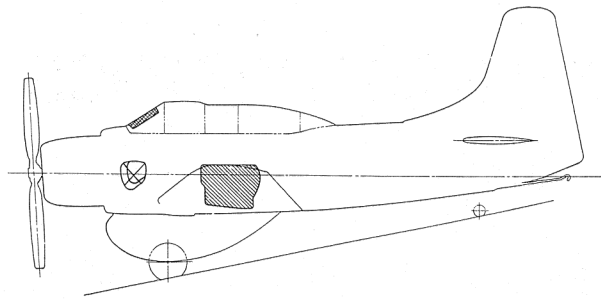
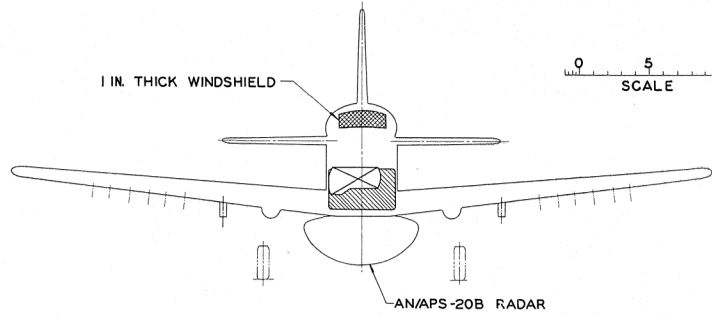
2. SELF-SEALING CELL 120 LBS.



1 IN. THICK WINDSHIELD

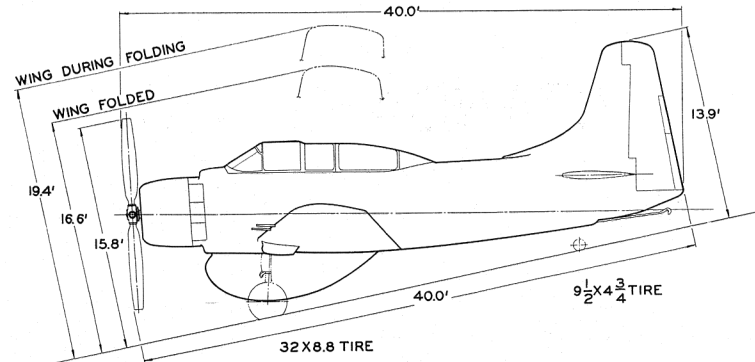
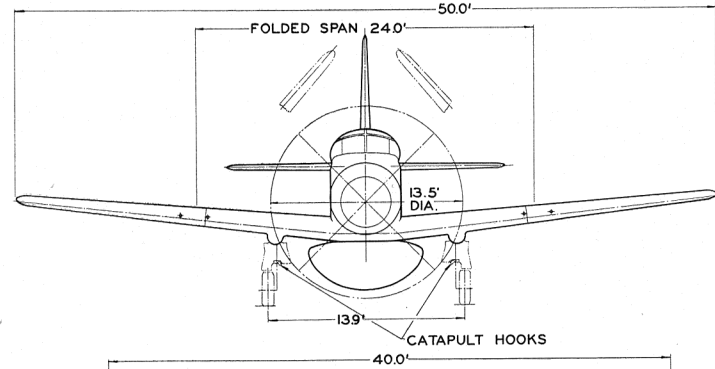
0 5 10 FT.

SCALE



0 5 10 FT.

SCALE



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Standard Aircraft Characteristics NAVAR 1335B (Rev. 1-55)

AD-5W

30 APRIL 1956

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### 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.
M.L.	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

### 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

### 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. 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 crew consists of pilot, assistant pilot-navigator and radar operator. The main distinction between this airplane and other AD-5 series aircraft is the incorporation of the AN/APS-20B radar.

### DEVELOPMENT

First Flight.....April 1954  
 Service Use.....November 1954

### WEIGHTS

LOADINGS	LBS.	L.F.
EMPTY.....	12,092.....	
BASIC.....	14,802.....	
DESIGN.....	17,000.....	6.4
COMBAT.....	17,125.....	6.4
MAX.T.O.(FIELD).....	25,000.....	23,500
(CAT).....	25,000.....	23,500
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.....	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-O-8  
 GRADE.....1120

### 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

Equipped with inner wing bomb racks as on other AD-5 models and can carry the same stores.

Provisions for 12 Aero 14 racks in outer wings and 4-20mm guns in wing fold with 200 rds. of ammunition per gun.

PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION	(1) SEARCH	(3) SEARCH 2-300 gal. Aero 1A Fuel Tanks	(4) SEARCH 2-150 gal. Aero 1A Fuel Tanks
TAKE-OFF WEIGHT lb.	18,037	22,047	20,041
Fuel lb.	2,280	5,880	4,080
Fayload lb.			
Wing loading lb./sq.ft.	45.1	55.1	50.1
Stall speed - power-off kn.	87.9	97.2	92.7
Take-off run at S.L. - calm ft.	1,025	1,730	1,330
Take-off run at S.L. 25 kn. wind ft.	540	970	720
Take-off to clear 50 ft. - calm ft.	1,830	3,150	2,385
Max. speed/altitude (A) kn./ft.	264/17,370	250/17,200	257/17,300
Rate of climb at S.L. (A) fpm.	2,070	1,320	1,640
Time: S.L. to 10,000 ft. (A) min.	5.2	8.3	6.5
Time: S.L. to 20,000 ft. (A) min.	12.8	24.2	17.1
Service ceiling (100 fpm) (A) ft.	26,500	21,200	23,800
Combat range n.mi.	685	1,810	1,295
Average cruising speed kn.	160	160	160
Cruising altitude(s) ft.	1,500	1,500	1,500
Combat radius n.mi.	275	720	520
Average cruising speed kn.	160	160	160
Mission time hrs.	4.4	11.1	8.1
<b>COMBAT LOADING CONDITION</b>	(2) 60% Fuel		
COMBAT WEIGHT lb.	17,125		
Engine power	Military		
Fuel lb.	1,368		
Combat speed/combat altitude kn./ft.	253/1,500		
Rate of climb/combat altitude fpm/ft.	2,700/1,500		
Combat ceiling (500 fpm) ft.	24,400		
Rate of climb at S.L. fpm.	2,740		
Max. speed at S.L. kn.	250		
Max. speed/altitude kn./ft.	267/15,000		
LANDING WEIGHT lb.	15,989		
Fuel lb.	232		
Stall speed - power-off kn.	82.8		
Stall speed - with approach power kn.	77.1		

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NOTES

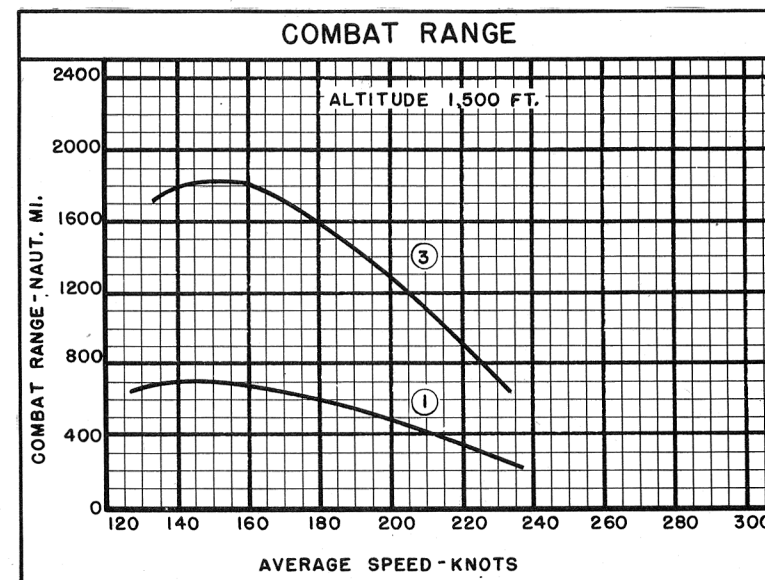
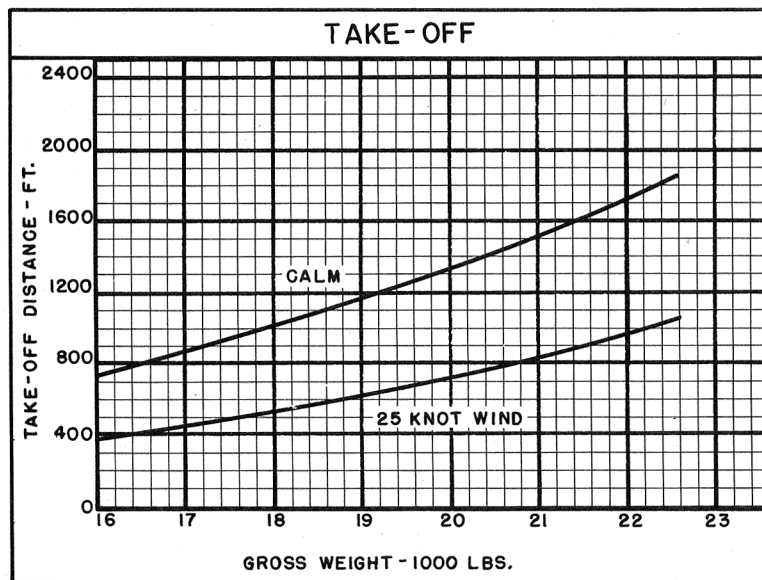
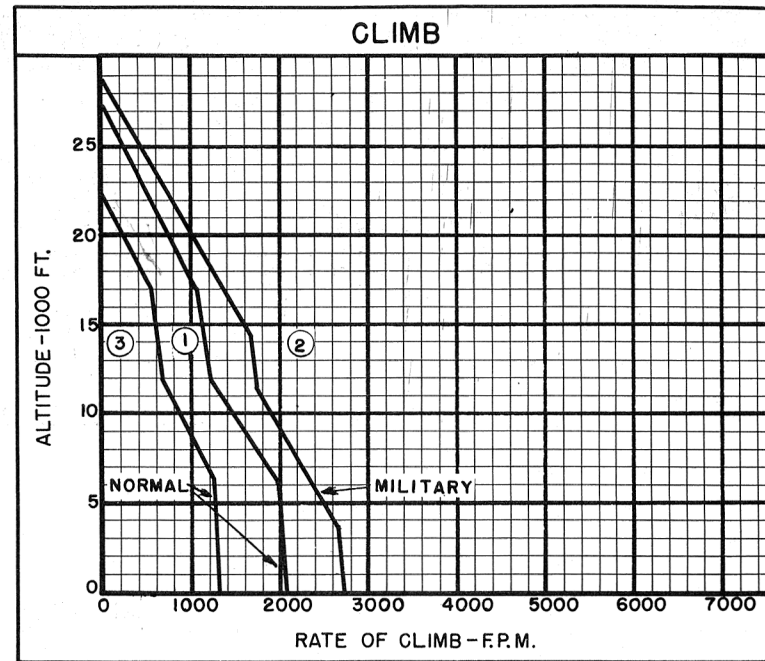
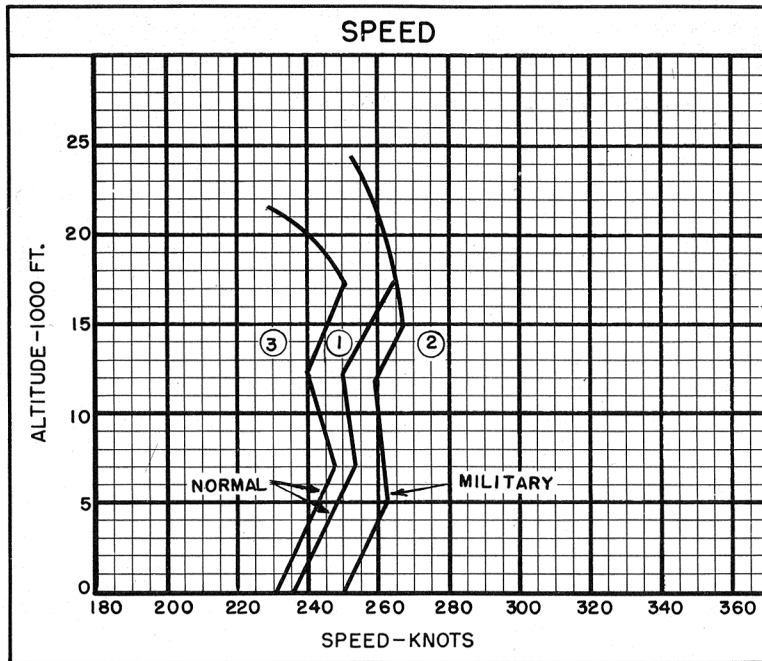
(A) Normal rated power.

PERFORMANCE BASIS: Performance is calculated and based on contractor's flight tests of the AD-5W.

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

All loadings include inner wing MK-51 bomb racks.

NAVARR-1335D (Rev. 1-55)



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

○ LOADING CONDITION COLUMN NUMBER

# NOTES

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.

## 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.

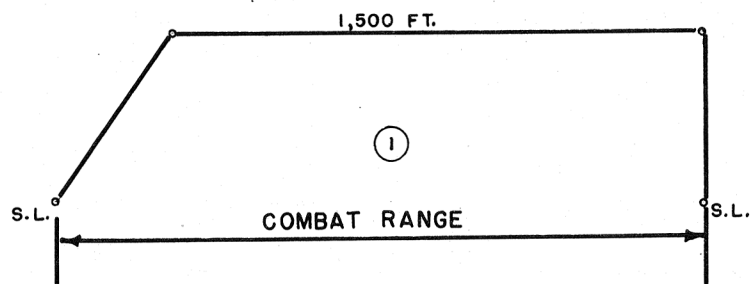
CRUISE: At velocity for long range at 1,500 feet. External fuel tanks dropped when empty.

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

COMBAT RANGE = CLIMB / CRUISE

MISSION TIME = TIME REQUIRED FOR CLIMB / CRUISE

COMBAT RADIUS = 40% COMBAT RANGE



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Standard Aircraft Characteristics NAVAR 1335F (Rev. 1-55)

① LOADING CONDITION COLUMN NUMBER