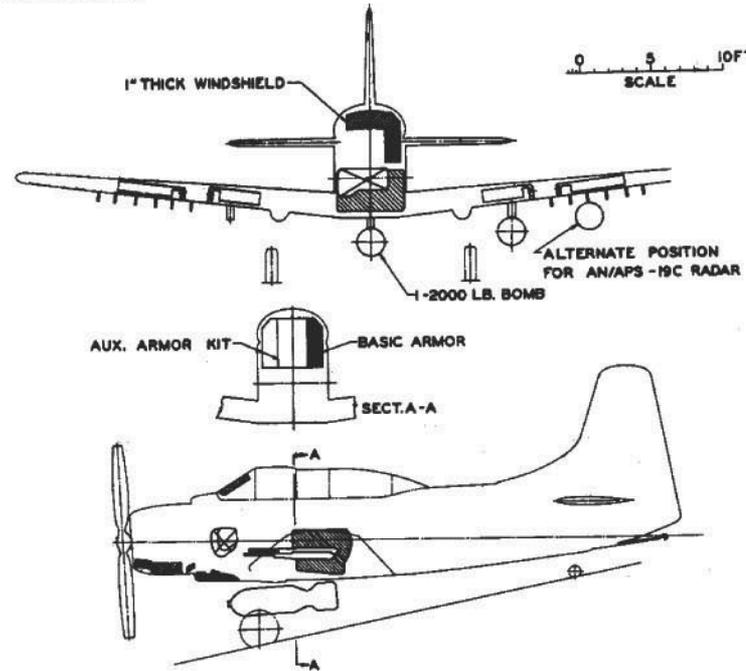
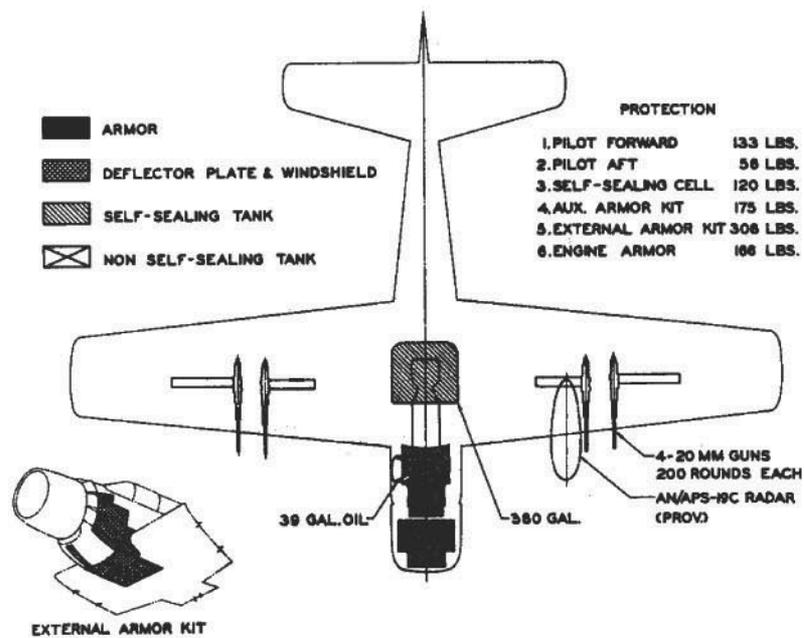
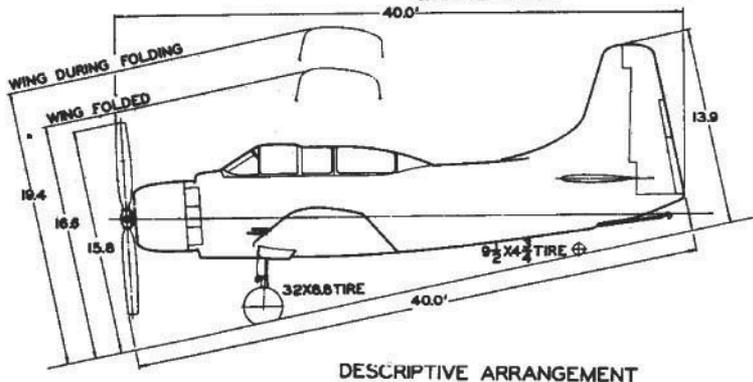
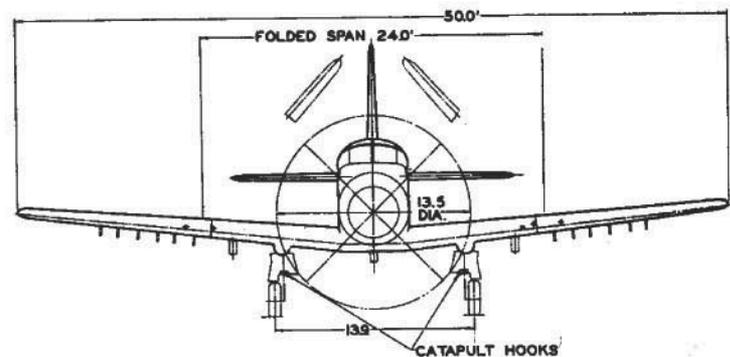
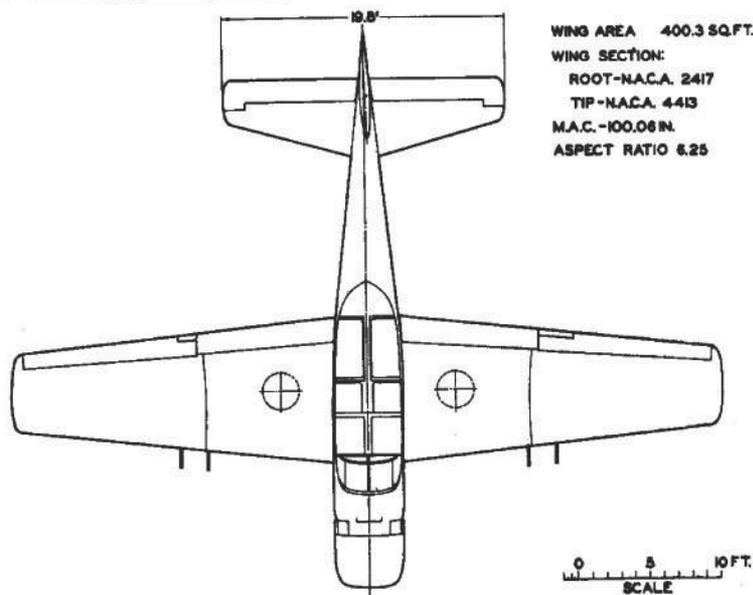


STANDARD AIRCRAFT CHARACTERISTICS
A-1E SKYRAIDER

SERVICE



ARMAMENT & TANKAGE

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-O
 NO. BLD./DIA......4/13'6"

RATINGS

| | <u>BHP</u> | <u>@ RPM</u> | <u>@ ALT</u> |
|-------|------------|--------------|--------------|
| 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.....NE36-D

ORDNANCE

Maximum Bomb Load.....8,000 lbs.
 Centerline (1-Aero 3A Ejector)

| | | |
|--------------|--------------------------|------------|
| Bombs | 1-2000 lb. | 1-500 lb. |
| | 1-1600 lb. | 1-250 lb. |
| | 1-1000 lb. | 1-100 lb. |
| Depth Bomb | 1-350 lb. | |
| Mines | 1-2000 lb. | 1-500 lb. |
| | 1-1000 lb. | |
| Torpedoes | One | |
| Frag. Clust. | 1-500 lb. | 1-100 lb. |
| Incend. Cl. | 1-500 lb. | 1-100 lb. |
| Chem. Tanks | 1-Aero 14A | |
| Fuel Tanks | 1-300 gal. | 1-150 gal. |
| Prac. Bombs | 1-Aero 4A Container | |
| (Mk.47 Rack) | 1-Aero 5A Container | |
| Misc. Stores | 1-Mk. 7 | 1-Mk. 91 |
| | 1-Mk. 8 | 1-BOAR |
| | 1-Mk. 12 | 1-Mk. 90 |
| | 1-APS-16 Radar Store | |
| | 1-Aero 2A Sono/fl. disp. | |
| Inner Wing | (2-Mk. 51 Bomb Racks) | |
| Bombs | 2-2000 lb. | 2-500 lb. |
| | 2-1600 lb. | 2-250 lb. |
| | 2-1000 lb. | 2-100 lb. |
| Depth Bomb | 2-350 lb. | |
| Mines | 2-2000 lb. | 2-500 lb. |
| | 2-1000 lb. | |

(Continued on NOTES page)

MISSION AND DESCRIPTION

The principal mission of the AD-5 is that of general purpose attack and ground support. It is also a torpedo, mine layer or scout airplane capable of operating from all classes of carriers or from land bases. The AD-5 is a development of the AD series and incorporates side by side seating for an assistant pilot. The revised crew arrangement facilitates all-weather operation and permits utilization for long range navigation, radar search, spotting and observation, air support coordination, instrument training, pilot familiarization and other operations requiring a second crew member. Controls, armament, and tactical equipment are located for single pilot operation. A single dive brake is provided for dive bombing and maneuvering control.

The AD-5 can be converted rapidly aboard a carrier for operation as a passenger, cargo, ambulance or long range airplanes by installation of appropriate conversion kits supplied as alternate equipment.

DEVELOPMENT

First Flight.....August 1951
 Service Use.....April 1953

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.

WEIGHTS

| <u>LOADINGS</u> | <u>LEB.</u> | <u>L.F.</u> |
|---------------------|-------------|-------------|
| EMPTY..... | 12,293..... | |
| BASIC..... | 14,309..... | |
| DESIGN..... | 17,000..... | 6.4 |
| COMBAT..... | 16,760..... | 6.5 |
| MAX.TO (FIELD)..... | 25,000..... | |
| (CAT.)..... | 25,000..... | |
| MAX.LDG(FIELD)..... | 21,000..... | |
| (ARREST)..... | 17,500..... | |

ALL WEIGHTS ARE CALCULATED.

FUEL AND OIL

| <u>GALS.</u> | <u>NO.TANKS</u> | <u>LOCATION</u> |
|-----------------|-----------------|-----------------|
| 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 COMM.....AN/ARC-27A
 UHF DIR. FINDER.....AN/ARA-25
 RADIO ALTIMETER.....AN/APN-22
 NAV RECEIVER.....AN/ARR-2A
 MARKER BEACON.....AN/ARN-12
 LF ADF.....AN/ARN-6
 IFF.....AN/APX-6
 SEARCH RADAR.....AN/APS-19C
 INTERPHONE.....AN/AIC-4
 TACAN.....AN/ARN-2
 (Alternate to AN/ARN-6)

SERVICE

PERFORMANCE SUMMARY

| TAKE-OFF LOADING CONDITION | (1) | ATTACK | |
|-----------------------------------|------------|-------------------|---|
| | | 1-2000 lb. Bomb | (3) ATTACK 1-2000 lb. Bomb 2-150 gal. Tanks 12-5" HVAR |
| TAKE-OFF WEIGHT | lb. | 19,672 | 23,356 |
| Fuel | lb. | 2,280 | 4,080 |
| Fayload | lb. | 2,000 | 3,680 |
| Wing loading | lb./sq.ft. | 49.2 | 58.4 |
| Stall speed - power-off | kn. | 87.8 | 95.7 |
| Take-off run at S.L. - calm | ft. | 1,070 | 1,660 |
| Take-off run at S.L. 25 kn. wind | ft. | 535 | 880 |
| Take-off to clear 50 ft. - calm | ft. | 1,820 | 2,870 |
| Max. speed/altitude (A) | kn./ft. | 271/17,400 | 246/7,500 |
| Rate of climb at S.L. (A) | fpm. | 1,840 | 1,240 |
| Time: S.L. to 10,000 ft. (A) | min. | 5.7 | 9.0 |
| Time: S.L. to 20,000 ft. (A) | min. | 14.1 | 25.3 |
| Service ceiling (100 fpm) (A) | ft. | 26,400 | 21,200 |
| Combat range | n.mi. | 655 | 1,045 |
| Average cruising speed | kn. | 170 | 170 |
| Cruising altitude(s) | ft. | 5,000 | 5,000 |
| Combat radius | n.mi. | 235 | 510 |
| Average cruising speed | kn. | 170 | 170 |
| Mission time | hrs. | 3.1 | 6.4 |
| COMBAT LOADING CONDITION | | (2) | |
| | | CLEAN 60% Fuel | |
| COMBAT WEIGHT | lb. | 16,760 | |
| Engine power | | Military | |
| Fuel | lb. | 1,368 | |
| Combat speed/combat altitude (B) | kn./ft. | 269/Sea Level | |
| Rate of climb/combat altitude (B) | fpm/ft. | 2,990/Sea Level | |
| Combat ceiling (500 fpm) | ft. | 26,800 | |
| Rate of climb at S.L. | fpm. | 2,990 | |
| Max. speed at S.L. | kn. | 269 | |
| Max. speed/altitude | kn./ft. | 286/15,200 | |
| LANDING WEIGHT | lb. | 15,610 | |
| Fuel | lb. | 218 | |
| Stall speed - power-off | kn. | 78.2 | |
| Stall speed - with approach power | kn. | 73.6 | |

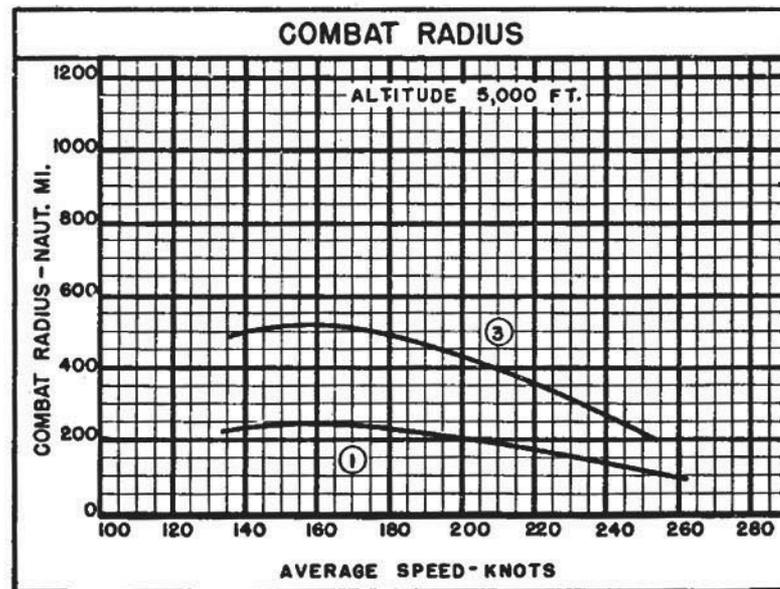
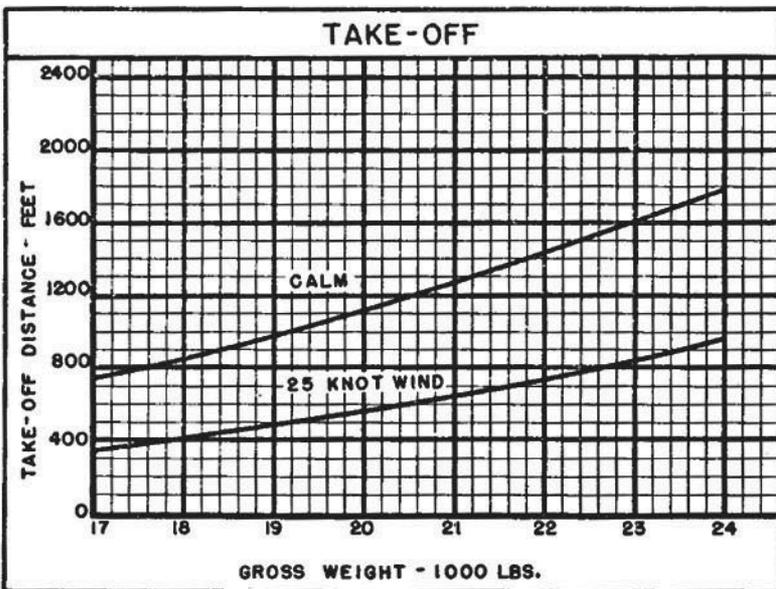
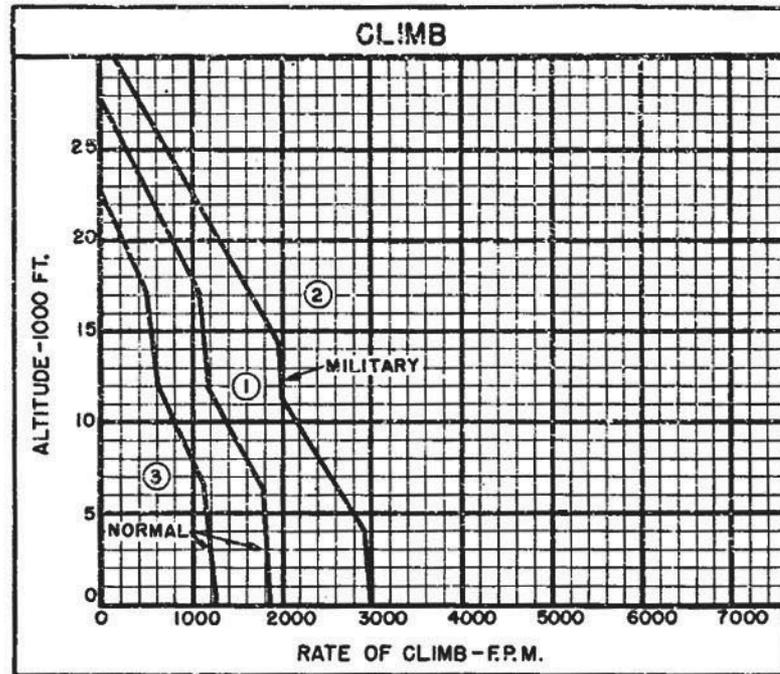
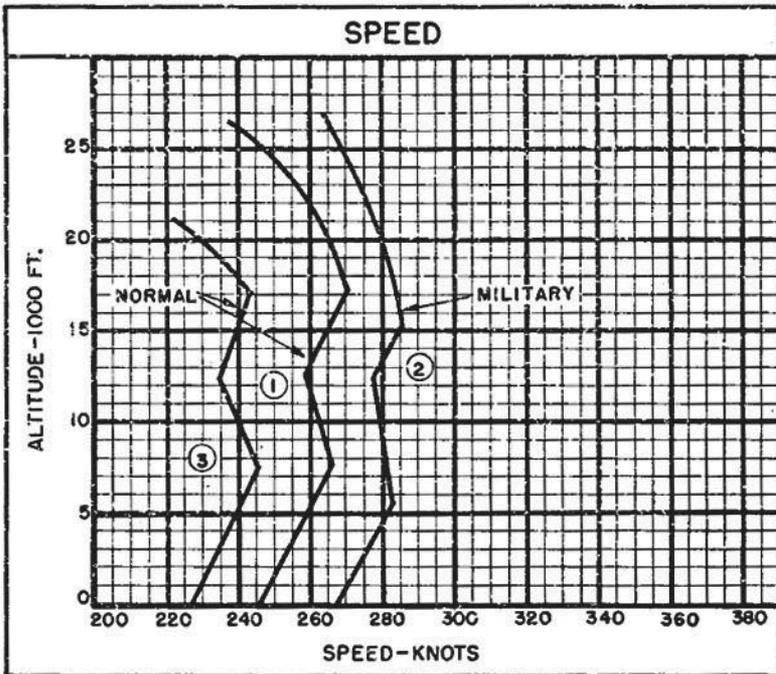
NOTES

- (A) Normal rated power.
 (B) Maximum speed and rate of climb at sea level are 283 knots and 3,670 fpm, respectively, with combat power (3150 BHP) installation of water injection system, including 12½ gal. ADI fluid, increases airplane weight by 136 lbs.

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

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

All loadings include centerline and two inner wing racks, 12 Aero 1½ racks, external armor plate, and four 20mm guns.



○ LOADING CONDITION COLUMN NUMBER

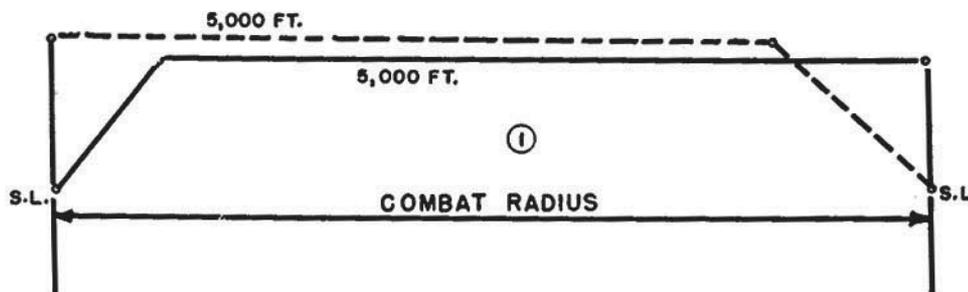
NOTES

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.

LOW ALTITUDE ATTACK COMBAT RADIUS PROBLEM (RECIPROCATING ENGINE)

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. (If external fuel tanks are carried drop 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.

COMBAT RADIUS = CLIMB / CRUISE-OUT = CLIMB / CRUISE-BACK
 MISSION TIME = TIME REQUIRED FOR CLIMB / CRUISE-OUT / COMBAT / CLIMB / CRUISE-BACK



ORDNANCE (Continued)

| | | | | |
|--------------|--------------------------|------------|---|---|
| Torpedoes | Two | | <u>Outer Wing (12-Aero 1 1/2 Racks)</u> | |
| Frag. Cl. | 2-500 lb. | 2-100 lb. | Bombs | 6-500 lb. 12-100 lb. |
| Incend. Cl. | 2-500 lb. | 2-100 lb. | Depth Bombs | 12-350 lb. |
| Chem. Tanks | 2-Aero 1 1/2 A | | Frag. Bombs | 6-500 lb. 12-100 lb. |
| Fuel Tanks | 2-300 gal. | 2-150 gal. | Incend. Cl. | 6-500 lb. 12-100 lb. |
| Prac. Bombs | 2-Aero 1/2 A Container | | Rockets | 12-HPAG 5 in. 12-HVAR 5 in. 12-Aero 3A Packages |
| | 2-Aero 5A Container | | | <u>FIXED GUNS/RDS. AMM.</u> |
| Rockets | 2-11.75 in. | | | 4-20mm type M3/200 rds. per gun |
| Misc. Stores | 2-Aero 2A Sono/fl. disp. | | | Mounted in wing leading edge |
| | 1-APS-31B Radar Store | | | Arm. Cont. Syst. (LABS) Aero 18C |
| | 1-MX-900A Window Disp. | | | |
| | 1-Sono/Searchlight | | | |
| | 1-APS-19 Radar Store | | | |
| | 2-Para. flare Cont. | | | |

○ LOADING CONDITION COLUMN NUMBER