TO NAVIGATE
CLICK ON THE BOOKMARKS AND
CLICK ON THE (+) SYMBOLS, THEN
CLICK ON SUBJECT LINKS TO GO TO
SPECIFIC VIEWS IN THIS SEGMENT.

TO CONTINUE TO THE TECHNICAL ORDER,
CLICK ON THE CONTINUE BUTTON.

TO SEE THE SEGMENT INFORMATION CHANGE NOTICE,
CLICK ON THE NOTICE BUTTON.

TO CONTACT THE TECHNICAL CONTENT MANAGER,
CLICK ON THE CONTACT BUTTON.
WRITTEN CORRESPONDENCE:

HQ AFCESA/CEXF
ATTN: Fire and Emergency Services Egress Manager
139 Barnes Drive Suite 1
Tyndall AFB, Florida 32403-5319

E-MAIL: HQAFCESA.CEXF@tyndall.af.mil

INTERNET: HQ AFCESA Fire and Emergency Services PUBLIC WEB PAGE:

PHONE: (850) 283-6150
DSN 523-6150

FAX: (850) 283-6383
DSN 523-6383

For technical order improvements, correcting procedures, and other inquiries, please use the above media most convenient.
This page is provided to notify the user of any informational changes made to Technical Order 00-105E-9 in this Segment and the current Revision. Informational changes will be referenced in the Adobe Reader’s Bookmark tool as a designator symbol illustrated as a <[C]> for quick reference to the right of the affected aircraft. The user shall insure the most current information contained in this TO is used for his operation. Retaining out of date rescue information can negatively affect the user’s operability and outcome of emergencies. If the user prints out pages his unit requires, the user shall print the affected page(s), remove and destroy the existing page(s), and insert the newly printed page(s) in the binder provided for that purpose. A Master of this TO shall be retained in the unit’s library for reference, future printing requirements and inspections.

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>AIRCRAFT</th>
<th>PAGE</th>
<th>EXPLANATION OF CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>None.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
NOTE

Chapter 19 contains emergency rescue and mishap response information for the following aircraft:

USCG
USCG
USCG
NOAA
NOAA
NOAA
NOAA
NOAA
NOAA
USFS
USFS
USFS
USFS
USFS
USFS
USFS
USFS
USFS
USFS
USFS
USFS
USFS
USFS
USFS
USFS
USFS
USFS
USFS
USFS
* Aircraft information pending
** See like aircraft in manual

Chapter 19 Cover
NOTE

Chapter 19 contains emergency rescue and mishap response information for the following aircraft:

- USFS  Aerospatiale AS 350
- USFS  Bell 204B/UH-1A,B,C**
- USFS  Bell 204/UH-1D,H**
- USFS  Bell 206B/OH-58**
- USFS  Bell 206L-3/OH-58**
- USFS  Bell 212/412**
- USFS  Bell 214
- USFS  Bell 222
- USFS  Boeing/Vertol 234
- USFS  Eurocopter BK-117
- USFS  Eurocopter BO-105**
- USFS  Fairchild Hiller FH-1100
- USFS  McDonnell Douglas 500-C,D
- USFS  Sikorsky S-58T

* Aircraft information pending
** See like aircraft in manual
19-1. INTRODUCTION AND USE.

19-2. This section contains emergency rescue and mishap response information illustrations in alphabetical order relative to type and model of aircraft. This arrangement of illustrations is maintained from Chapter 4 throughout the remainder of the publication.

19-3. GENERAL ARRANGEMENT.

19-4. Aircraft type designation has been positioned in the upper right corner of the horizontal illustration for rapid identification. Additional aids to rapid orientation are:

a. Recent technological advances in aviation have caused concern for the modern firefighter. Aircraft hazards, cabin configurations, airframe materials, and any other information that would be helpful in fighting fires, the locating and rescue of personnel will be added as the information becomes available.

b. Suggested special tools/equipment are listed in the upper left corner, on the Aircraft/Entry page of each listed aircraft.

c. Procedural steps covering emergency/normal entrances, cut-ins, engine/APU shutdown, safetying ejection/escape systems, and aircrew extraction are outlined on the left side of each page with coordinated illustrations on the right.

d. Illustrations located on right side of pages are coordinated with text by numerals and small letters depicting both paragraph and subparagraph on the page.

e. Each illustration is consistently colored and/or pattern keyed to highlight essential emergency rescue information.

f. Details are pulled directly from the illustration to highlight an area, thus eliminating unnecessary searching for desired information.

17-5. AGENCY PLATFORMS.

17-6. Most aircraft in these active inventories are included in this manual. Those aircraft not yet included will be added in the near future.

a. FAA Platforms are: Boeing 727-25C, Convair CV-580, Beech King Air BE-200, Aero Commander AC-680E, and Sikorsky S-76A.

b. Dept of Energy Platforms are intensively modified to perform their specialized missions and many are inherently unavailable for other applications. DOE uses a Gulfstream 159 for airborne atmospheric research and, for climate research, a Cessna-172N and various Unmanned Aerospace Vehicles (UAVs) and a DeHavilland DCH-6 Twin Otter chase plane in support of DOE’s Atmospheric Radiation Measurements program.

c. Federal Research aircraft available for oceanographic research, helps to promote interagency cooperation, coordination, and scheduling of assets. The National Oceanographic Partnership Program (NOPP) is a collaboration of fifteen Federal agencies to provide leadership and coordination of national oceanographic research and education programs.

NOPP Agencies with Participating Aircraft
DOE, National Science Foundation, FAA*, Office of Naval Research, NASA, U.S.C.G. and NOAA.

*Not a member of NOPP

Other NOPP Agencies

d. The U.S. Immigrations and Customs Enforcement (ICE) aircraft are PC-12, UH-60A, Eurocopter AS-350 and Cessna Citation II.
The aircraft information is located in Chapter 6 containing USAF aircraft.
The aircraft information is located in Chapter 13 containing USAF aircraft.
AIRCRAFT DIMENSIONS

AIRCRAFT WITH BLADES FOLDED: LENGTH - 38 FT 2 IN
WIDTH (AT STABILIZER) - 10 FT 6 IN

AIRCRAFT DISASSEMBLED FOR SHIPMENT: LENGTH - 21 FT 5 IN
WIDTH (STABILIZER REMOVED) - 6 FT 8 IN
HEIGHT (ROTOR HEAD AND LANDING GEAR REMOVED) - 8 FT 4 IN

MINIMUM GROUND CLEARANCE WITH CYCLIC DISPLACED TO LIMIT LIGHT ILLUMINATION (100% NR) - 7 FT 7.2 IN

OVERALL LENGTH 44 FT 5 IN (W/ STATIC ROTOR)
44 FT 10 IN (ROTATING)
1 RADOME
2 INSTRUMENT PANEL
3 CYCLIC (2)
4 FREE AIR TEMPERATURE PROBE
5 VHF/FM RADIO ANTENNA
6 RESCUE HOIST
7 ALTERNATOR (2)
8 ROTOR HEAD
9 OMNIDIRECTIONAL AIR DATA PROBE
10 ROTATING SMASHPLATE
11 MAIN GEARBOX
12 GSP ANTENNA
13 DRIVE COUPLING SHAFT
14 STARTER/GENERATOR (2)
15 ENGINE (2)
16 ROTOR BLADE
17 AIRCONDITIONER HEAT EXCHANGER
18 ECS AIR INTAKE
19 ECS AIR EXHAUST
20 HF RADIO ANTENNA
21 TAIL ROTOR
22 VERTICAL STABILIZER
23 UHF/VHF COMM 1 & TCAS ANTENNA
24 ANTICOLLISION LIGHT
25 POSITION LIGHT
26 TAIL SKID
27 UHF/VHF COMM 2 RADIO ANTENNA
28 VOR/ILS ANTENNA
29 RADAR ALTIMETER ANTENNAS
30 UHF/DF ANTENNA
31 FLOTATION Equipment BAY (2 SHOWN)
32 FUEL DUMP FAIRING (OUT OF VIEW)
33 GRAVITY REFUELING RECEPTACLES (2)
34 EXTERNAL AIR CONDITIONING RECEPTACLES
35 MAIN LANDING GEAR
36 AVIONICS EQUIPMENT RACK (SEE RT VIEW)
37 SEARCH LIGHT
38 CARGO HOOK
39 MARKER BEACON ANTENNA
40 TACAN ANTENNA
41 LOUD HAILER (NOT PERMANENTLY INSTALLED)
42 CREW SEATS (3)
43 ADF LOOP ANTENNA (LT) TCAS ANTENNA (RT)
44 COLLECTIVE (2)
45 HOVER LIGHT (LT) LANDING LIGHT (RT)
46 NOSE LANDING GEAR
47 BATTERY
48 SEARCH/WEATHER RADAR
49 PILOT PROBES (2)
50 DIRECTIONAL CONTROL PANELS

1 AVIONICS RACK FAN
2 AUXILLARY AUDIO CONTROL PANEL
3 ALTITUDE CONTROLLER
4 LOUDHAILER AMPLIFIER
5 NO.1 SYSTEM COUPLER COMPUTER (SCC)
6 COMM 1 UHF/VHF
7 TACAN
8 OMNIDIRECTIONAL AIR DATA SYSTEM (OADS)
9 AUDIO MIXER
10 NO.2 SYSTEM COUPLER COMPUTER (SCC)
11 IFF
12 VOICE FLIGHT DATA RECORDER (VFDR)
13 IFF KIT 1C (PROVISIONAL) OR TCAS TRC79
14 VHF/FM
15 AVIONICS RACK CIRCUIT BREAKER PANEL
16 GPS RECEIVER
17 SIGNAL INTERFACE UNIT (SIU)
18 MISSION COMPUTER UNIT (MCU)
19 COPILOT'S DISPLAY DRIVER UNIT (DDU)
20 RATE GYROS AND ACCELEROMETERS
21 FLIGHT DIRECTOR COMPUTER (FDC)
22 COMM 2 VHF/UHF
23 PILOT'S DISPLAY DRIVER UNIT (DDU)
24 AFCS COMPUTER
25 ADF
26 AIRSPEED SENOR
27 NO 1 VOR/ILS NAV RECEIVER
AIRFRAME MATERIALS

1. AIRFRAME MATERIALS

The cockpit, cabin and baggage compartment is constructed primarily of longitudinal, alluminum alloy beams and non-metallic honeycomb laminated with fiberglass with a metal covering that supports the vertical fin and a fixed horizontal stabilizer. Graphic illustrates the 9° Frame and basic interior of the HH-65A.
AIRCRAFT FUEL SYSTEM AND CAPACITIES

1. AIRCRAFT FUEL SYSTEM

a. The fuel system has 5 cells, located beneath the floor panel in seal compartments. The 5 cells are divided into 2 systems. The #1 system has 3 cells and #2 has 2 cells. This arrangement minimizes lateral and longitudinal center of gravity changes as fuel is consumed. Each system has a feeder tank located in its center tank for it's respective engine. Each system is vented to an expansion tank mounted in the baggage compartment.

2. FUEL CAPACITY CHART

<table>
<thead>
<tr>
<th></th>
<th>LEFT SYSTEM (#1)</th>
<th>RIGHT SYSTEM (#2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PRESSURE FUELING</td>
<td>PRESSURE FUELING</td>
</tr>
<tr>
<td></td>
<td>GALS</td>
<td>POUNDS</td>
</tr>
<tr>
<td>Tanks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RIGHT FWD</td>
<td>39.6</td>
<td>257</td>
</tr>
<tr>
<td>LEFT FWD</td>
<td>37.0</td>
<td>241</td>
</tr>
<tr>
<td>LEFT CTR</td>
<td>59.6</td>
<td>387</td>
</tr>
<tr>
<td>RIGHT CTR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AFT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>136.2</td>
<td>885</td>
</tr>
</tbody>
</table>
FUEL AND STATIC SYSTEMS

1. DRAINING/BLEEDING POINTS

NOTE:
Servicing also includes the use of aircraft draining and bleeding points. These are provided for the pitot-static system and fuel sump draining as well as the hydraulic system. The points may be a source of flammable hazards.

2. GRAVITY REFUELING PANEL

NOTE:
The gravity refueling panel is located above the left main landing gear. The location of the panel and components are illustrated to the right.

3. SINGLE POINT REFUELING (SPR) PANEL

NOTE:
The pressure refueling receptacle is on a panel located above the right main landing gear.
1. EMERGENCY EXITS AND LOCATIONS

NOTE:
An important item concerning helicopter ditching over water is the aircraft, almost always, turns upside down. This will complicate egress by the crew and passengers from the helicopter as well as rescue crews attempting to enter and extract personnel. Knowing where and how to operate these emergency exits become a matter of life and death.

2. PORTABLE FIRE EXTINGUISHER

a. A portable fire extinguisher is located between the pilot and co-pilot seats in the cockpit.
SPECIAL TOOLS/EQUIPMENT
Power Rescue Saw
Fire Drill II

AIRCRAFT ENTRY

1. NORMAL ENTRY

a. Opening the pilot or co-pilot door or any door is accomplished by rotating the door handle downward.

b. The left side door is a hinged door.

c. The right side door is a sliding door.

2. EMERGENCY ENTRY

a. Emergency entry through any door is accomplished through the door release to jettison the door.

b. Opening the cabin window by pulling outward on the red-tabbed lanyard and pushing inward on the window.

c. Accessing the cabin can be made through the baggage compartment door.

3. CUT-IN

a. Cut-in to aircraft as needed.
ENGINE SHUTDOWN AND FIRE WARNING

1. ENGINE SHUTDOWN

NOTE:
There are two Fuel Flow Control Levers, one for each engine, are located on the overhead control quadrant. There are three detent positions on the 100 degree range: SHUTOFF, IDLE AND FLIGHT. The detents can be passed by pulling the lever to the right and moving it beyond the detent. A mechanical interlock prevents the levers from being moved forward of the IDLE position when the rotor brake is applied.

a. Pull the Fuel Flow Control Levers to the SHUTOFF position.

2. EMERGENCY SHUTDOWN

NOTE:
There are two emergency Fuel Shutoff Control Levers, one for each engine, are located on the overhead control quadrant. Each lever is used for emergency shutdown of the respective engine in the event of a fire within the engine compartment or in case of malfunction in the engine gas generator speed control system. The levers are breakaway wired in the OPEN (forward) position.

a. Pull the Fuel Shutoff Control Levers to the AFT position to shut off all fuel flow.

3. ENGINE FIRE WARNING CONTROL PANEL

NOTE:
The Engine Fire Warning Control Panel is located at the center of the instrument panel.

a. In case of fire, the Fire/Fail Lights will illuminate.

b. Push the appropriate Fire Extinguisher push button, located just above the Fire/Fail lights.
1. ENGINE FIRE EXTINGUISHER BOTTLES

a. The engine fire extinguisher system is designed to extinguish fires in the engine compartment and is comprised of:
   - Two spherical bottles
   - Distribution system
   - Engine fire warning/control panel
   - Low pressure warning system

b. The characteristics of the fire extinguisher bottles are:
   - Each bottle is mounted aft of its respective engine bay in a fire protected area
   - Equipped with dual discharge heads
   - Extinguishing agent is released by explosive squibs
   - Contains the agent Bromotrifluoromethane
   - Pressurized to 600 - 626 PSI at 21.1 ° Celsius.
   - Each equipped with a pressure gage

c. The engine fire extinguisher distribution system mainly consists of distribution lines connected to the explosive squibs that route the extinguishing agent to the selected engine.
NOTE:
The operation of the landing gear system can be beneficial to a rescue team in stabilizing aircraft movement.

a. The illustration at the right shows the control handles located on the pilot's side of the center console.
1. MAIN LANDING GEAR WHEEL BRAKE SYSTEM

NOTE:
The brake can be useful during rescue operations to prevent the aircraft from movement.

a. The illustration to the right shows the location and operation of the parking brake handle and brake control cable to the brake control valve of the secondary hydraulic system.
TOWING PROCEDURES

1. TOWING PROCEDURES
   a. Connect tow bar to the ends of the nose landing gear tow bar adapter.

   NOTE:
   While connecting the tow bar, ensure that the nose landing gear centering lock is in the unlocked position.

   b. Connect tow bar to tow tractor.

   c. Station required towing team members.

   d. Release parking brake and remove main landing gear chocks.

   CAUTION
   Avoid sudden acceleration or deceleration. Do not turn nose landing gear before rolling to prevent tire distortion and slipping on rims.

   e. Tow the aircraft.

   NOTE:
   Turn radius: Limited to a 90 degree turn of the nose landing gear. Allow 23 feet minimum turning radius for clearance of the tailboom.
GENERAL INFORMATION
NATIONAL OCEANIC AND ATMOSPHERE ADMINISTRATION
(NOAA) ACTIVE AIRCRAFT INVENTORY

NOTE:
These aircraft will be cross referenced with other similar aircraft where appropriate.

BELL 212
GULFSTREAM IV (SP) G-IV
LAKE SEAWOLF
LA-27
LOCKHEED WP-3D ORION
GULFSTREAM IV (SP) G-IV

GULFSTREAM TURBO COMMANDER
AC-690
ROCKWELL AERO COMMANDER
AC-500S

CESSNA CITATION II
CE-550
LAKE SEAWOLF
LA-27
DeHAVILLAND TWIN OTTER
DH-6

MD 500D
NOTE:
This aircraft is similar to the UH-1N “Twin Huey”
See Chapter 9 for details.
**GENERAL INFORMATION**

**NOTE:**
This aircraft is a business jet and does not have a similar military designation. Emergency rescue information pending.

The is Cessna Citation (CE-550) a versatile twin-engine jet aircraft modified for acquiring coastal remote sensing imagery. The aircraft can support a wide variety of remote sensing configurations, including largeformat aerial photography as well as data collection for digital cameras, hyperspectral, multispectral, and LIDAR systems. Cessna Citation (CE-550)

**STANDARD AIRCRAFT SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Type:</th>
<th>Cessna Citation II/ Model 550</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crew:</td>
<td>2 Pilots and 2-4 Scientists</td>
</tr>
<tr>
<td>Ceiling:</td>
<td>43,000 feet (without supplemental cabin oxygen)</td>
</tr>
<tr>
<td>Rate of Climb:</td>
<td>2500 ft/min at sea level (20 minutes to climb to 30,000 ft)</td>
</tr>
<tr>
<td>Cruise Airspeed:</td>
<td>350 knots (true)</td>
</tr>
<tr>
<td>Scientific Power:</td>
<td>8 amps @ 115 volts (5 standard outlets) 50 amps @ 28 volts DC</td>
</tr>
<tr>
<td>Max. Gross Weight:</td>
<td>14,600 lbs</td>
</tr>
<tr>
<td>Empty Weight:</td>
<td>7,800 lbs</td>
</tr>
<tr>
<td>Useful Load:</td>
<td>6,800 lbs (fuel, personnel, cargo)</td>
</tr>
<tr>
<td>Fuel Load:</td>
<td>5,008 lbs</td>
</tr>
<tr>
<td>Standard Fuel Burn:</td>
<td>Normal Cruise (98%): Range-1325 nm Duration-4 hrs 15 min, Max. Cruise (104%): Range-1200 nm Duration-3 hrs 40 min, Max. Endurance: Range-1610 nm Duration-5 hrs</td>
</tr>
<tr>
<td>Dimensions:</td>
<td>Wing Span: 51 ft 8.4 in, Total Length: 47 ft 3 in, Fuselage Height: 4.8 ft, Tail Height: 14 ft 9.6 in</td>
</tr>
<tr>
<td>Cabin Doors:</td>
<td>39 in x 21.25 in</td>
</tr>
<tr>
<td>Baggage Doors (rear):</td>
<td>22 in x 27 in</td>
</tr>
<tr>
<td>Cabin Length:</td>
<td>20.9 ft</td>
</tr>
<tr>
<td>Cabin Width:</td>
<td>4.9 ft</td>
</tr>
<tr>
<td>Useable Volume:</td>
<td>491 cu ft</td>
</tr>
<tr>
<td>Nose Baggage:</td>
<td>28 cu ft</td>
</tr>
<tr>
<td>Cabin Baggage:</td>
<td>947 cu ft</td>
</tr>
<tr>
<td>Cockpit:</td>
<td>Color weather radar, radar altimeter, integrated flight director system, HF radio, GPS flight management system</td>
</tr>
<tr>
<td>Cabin:</td>
<td>Dual cameras: Wild RC-30 on the right side/Wild RC-10 on the left side. Applanix POS/AV IMU system and laptop computer</td>
</tr>
</tbody>
</table>
GENERAL INFORMATION

NOTE:
This aircraft is similar to the P-3. See Chapter 21 for details.
The Gulfstream Turbo Commander (AC-690) is a stable high-winged twin, pressurized turboprop aircraft that is suitable for a variety of missions. The standard configuration allows for mission equipment, two pilots, and one photographer. However, with all seats installed, five scientists/technicians may be accommodated in the cabin. NOAA's AC-690 Turbo Commander is utilized by the NGS Remote Sensing Division and the NOHRSC (National Operational Hydrologic Remote Sensing Center).

STANDARD AIRCRAFT SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Rockwell AC690A TurboCommander</td>
</tr>
<tr>
<td>Engines</td>
<td>Garrett TPE 331-5-251K</td>
</tr>
<tr>
<td>Crew</td>
<td>2 Pilots + 5 Scientists</td>
</tr>
<tr>
<td>Ceiling</td>
<td>31,000 feet</td>
</tr>
<tr>
<td>Rate of Climb</td>
<td>3000 feet/minute</td>
</tr>
<tr>
<td>Operational Airspeeds</td>
<td>120 - 250 kts</td>
</tr>
<tr>
<td>Electrical</td>
<td>Two 28 VDC generators, 110 VAC</td>
</tr>
<tr>
<td>Scientific Power</td>
<td>28 VDC, 110 VAC</td>
</tr>
<tr>
<td>Max. Gross Weight</td>
<td>10,250 lbs.</td>
</tr>
<tr>
<td>Empty Weight</td>
<td>6830 lbs.</td>
</tr>
<tr>
<td>Useful Load</td>
<td>3,420 lbs.</td>
</tr>
<tr>
<td>Fuel Load</td>
<td>384 US gallons</td>
</tr>
<tr>
<td>Fuel Type</td>
<td>Jet A,B JP4,5,8</td>
</tr>
<tr>
<td>Standard Fuel Burn</td>
<td>Normal Cruise Speed - 60 to 90 gallons per hour, depending on altitude and mission</td>
</tr>
<tr>
<td>Dimensions (external)</td>
<td>Wing Span: 46 ft. 7 in., Total Length, Length: 44 ft. 5 in., Tail Height: 14 ft. 12 in.</td>
</tr>
<tr>
<td>Dimensions (internal)</td>
<td>Cabin Door: 47 in. X 26.5 in.</td>
</tr>
<tr>
<td></td>
<td>Baggage Door: 31.25 in. X 19.75 in.</td>
</tr>
<tr>
<td></td>
<td>Baggage volume: 45 cubic ft.</td>
</tr>
</tbody>
</table>
GENERAL INFORMATION

NOTE:
This aircraft does not have a similar military designation. Emergency rescue information pending.

The Lake Renegade Seawolf (LA-27) is a rugged, adaptable, single engine amphibious aircraft designed for nearshore low-level surveys. The aircraft is equipped with external fuel tanks, bubble windows, and NATO hardpoints. NOAA operates two of these single turbo-charged piston engine amphibious aircraft. A standard crew consists of one pilot and up to three scientists. The Lake aircraft have been used for biological surveys including red drum, sea turtle and marine mammal surveys, as well as on site terrain observations.

STANDARD AIRCRAFT SPECIFICATIONS

Type Engines: AVCO Lycoming TIO540-AA1AD
Crew: 1 Pilot + 3 Scientists
Ceiling: 12,500 feet (without supplemental cabin oxygen), 20,000 feet (with supplemental cabin oxygen)
Rate of Climb: 800 feet/minute
Operational Airspeeds: 120 knots
Electrical: Two 70 ampere alternators
Max. Gross Weight: 3700 lbs. (weight above 3450 lbs should consist of under wing fuel/ stores)
Empty Weight: 2450 lbs
Useful Load: 1000 lbs (fuel, personnel, cargo)
Fuel Load: 40 U.S. Gals main, 14 U.S. Gals, Auxiliary tanks (7 Gals ea, usable), 34 U.S. Gals wing tanks (17 Gals ea), 34 U.S. Gals ea drop tank
Type Fuel: Aviation Gasoline 100 or 100LL
Maximum Range/Duration: 12 hours/ 1500 NM
Dimensions (external): Length 28'9", Wing Span 39’, Height 11’
Displacement: At rest 18” (17-19), Step taxi 6” (3-6)
Max wave height: 18”

Additional Standard Equipment (Cockpit): GPS/ Loran-C navigation system with scientific data drop, radar altimeter, Dual VHF radios, real-time L1/L2 band differential GPS antenna, Trimble Pro X/R GPS receiver is plugged into this antenna and allows the crew to view moving map displays of the survey area as well as record detailed ancillary data collected during flight.

Additional Standard Equipment (Cabin): Bubble windows on each side of cabin (removeable), hardpoints (with jettison capability) for camera pod attachment, wing camera pod, modified ventilation system with individual air ducts for rear seat passengers.
**GENERAL INFORMATION**

**NOTE:**

This aircraft is similar to the C-20/H. See Chapter 6 for details.

**GULFSTREAM IV (SP) G-IV**
### GENERAL INFORMATION

**NOTE:**
This aircraft does not have a similar military designation. Emergency rescue information pending.

The Rockwell Aero Commander (AC-500S) is a versatile and stable high-winged twin piston-engine aircraft that is suitable for a variety of missions. Standard configuration allows for mission equipment and two pilots. However, with the scientific packages removed, seating for five additional passengers may be installed. NOAA’s two aero commanders are utilized primarily as aerial survey platforms for visual verification of aeronautical charts, high-resolution aerial photography, and snow water equivalent and soil moisture content measurements. Additionally, the aircraft has been used in biological investigations, such as algal bloom measurements and sea turtle population assessments, and post-hurricane and severe flood damage assessment photography.

### STANDARD AIRCRAFT SPECIFICATIONS

<table>
<thead>
<tr>
<th>Type: Rockwell AC-500S Aero Commander</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engines: Lycoming IO-540-E1B5 (piston)</td>
</tr>
<tr>
<td>Crew: 2 Pilots + 3 Scientists</td>
</tr>
<tr>
<td>Ceiling: 12,500 feet (without supplemental cabin oxygen) 18,000 feet (with supplemental cabin oxygen)</td>
</tr>
<tr>
<td>Rate of Climb: 1750 feet/minute</td>
</tr>
<tr>
<td>Operational Airspeeds: 90-150 knots</td>
</tr>
<tr>
<td>Electrical: Two 28 VDC 100 ampere alternators</td>
</tr>
<tr>
<td>Max. Gross Weight: 6,750 lbs.</td>
</tr>
<tr>
<td>Empty Weight: 5,341 lbs., (5,621 lbs. including RC-8 Aerial Camera), (5,756 lbs. including Snow System)</td>
</tr>
<tr>
<td>Useful Load: 1,409 lbs. (fuel, personnel, cargo), (1,129 lbs. with camera installed), (994 lbs. with Snow System installed)</td>
</tr>
<tr>
<td>Fuel Load: 958 lbs. (159 gal)</td>
</tr>
<tr>
<td>Type Fuel: 100 LL</td>
</tr>
<tr>
<td>Standard Fuel Burn: Normal Cruise Speed - 164 lbs./hr (27.3 gal/hr) Fuel Burn for specific mission configuration will be calculated during mission planning and will vary with environmental conditions.</td>
</tr>
<tr>
<td>Maximum Range and Duration: @Normal Cruise - 670 nm @Max. Endurance - 860 nm @Normal Cruise - 4 hr 30 min @Max. Endurance - 6 hr 10 min</td>
</tr>
<tr>
<td>Dimensions (external): Wing Span - 49 ft 0.6 in, Total Length - 36 ft 9.7 in, Fuselage Height - 14 ft 3.5 in, Tail Height - 14 ft 8.2 in</td>
</tr>
<tr>
<td>Dimensions (internal): Cabin Length - 10 ft 7.5 in, Cabin Height - 4 ft 5 in, Cabin Width - 4 ft 4 in</td>
</tr>
<tr>
<td>Baggage Doors - 1 ft 11 in x 1 ft 7 in</td>
</tr>
<tr>
<td>Useable Volumes: Cabin - 177 cu ft Baggage compartment - 32 cu ft</td>
</tr>
<tr>
<td>Additional Standard Equipment, Cockpit: Weather radar, radar altimeter, GPS navigation system</td>
</tr>
<tr>
<td>Cabin: Camera ports on bottom of fuselage (approx. 1' x 1'), RC-8 aerial camera GPS data port</td>
</tr>
</tbody>
</table>
GENERAL INFORMATION

NOTE:
This aircraft is similar to the UV-18B. See Chapter 12 for details.
NOTE:
This aircraft is similar to the O/MH-6 “Cayuse”. See Chapter 13 for details.