NUMBER OF BLADES (each propeller) ..... Three

PROPELLER DIAMETER ..... 8.5 ft

PROPELLER TYPE ..... Constant speed, Full feathering, Aluminum

PROPELLER ROTATIONAL SPEED at 100% RPM ..... 2000 rpm

LEFT PROPELLER ..... Rotates clockwise

RIGHT PROPELLER ..... Rotates counter-clockwise

APPROVED ENGINE FUELS

COMMERCIAL GRADE ..... Jet A

USABLE FUEL

Main Fuel System ..... 238.6 gallons

Auxiliary Fuel System ..... 120 gallons

Maximum Usable Fuel Quantity ..... 358.6 gallons

ENGINE OIL SPECIFICATION

OIL CAPACITY (EACH ENGINE)

Total ..... 2.25 gallons

Tank Usable Oil ..... 1.25 gallons

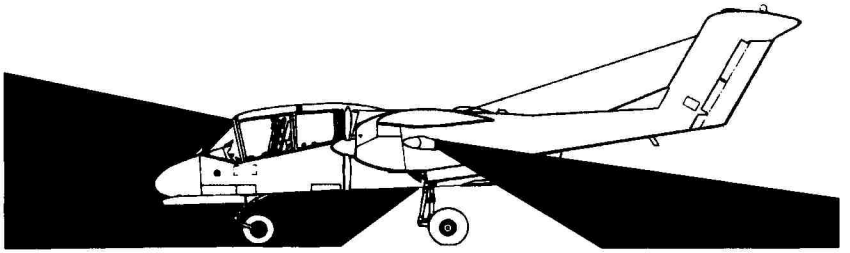
MAXIMUM WEIGHTS

Maximum Takeoff Weight (certification) ..... 11,000 pounds

Maximum Takeoff Weight (air tactical mission) ..... 10,500 pounds

Maximum Landing Weight (certification) ..... 11,000 pounds

Maximum Landing Weight (air tactical mission) 10,500 pounds



DANGER AREAS

Figure I-3

DESCRIPTIVE DATA

ENGINES

NUMBER OF ENGINES ..... TWO (2)

ENGINE MANUFACTURER ..... Garret-Air Research

ENGINE MODEL NUMBER T-76-G

ENGINE TYPE ..... Fixed-shaft turbine propeller

NUMBER OF DRIVE SHAFTS ..... One

COMPRESSOR STAGES AND TYPES ..... Two-stage centrifugal flow

COMBUSTION CHAMBER TYPE ..... Annular

TURBINE STAGES AND TYPE ..... Three-stage axial flow

ENGINE SHAFT-HORSEPOWER RATING ..... 715 shp

ENGINE ROTATIONAL SPEED AT 100% RPM ..... 41,730 rpm

PROPELLERS

NUMBER OF PROPELLERS ..... Two

PROPELLER MANUFACTURER ..... Hamilton Standard

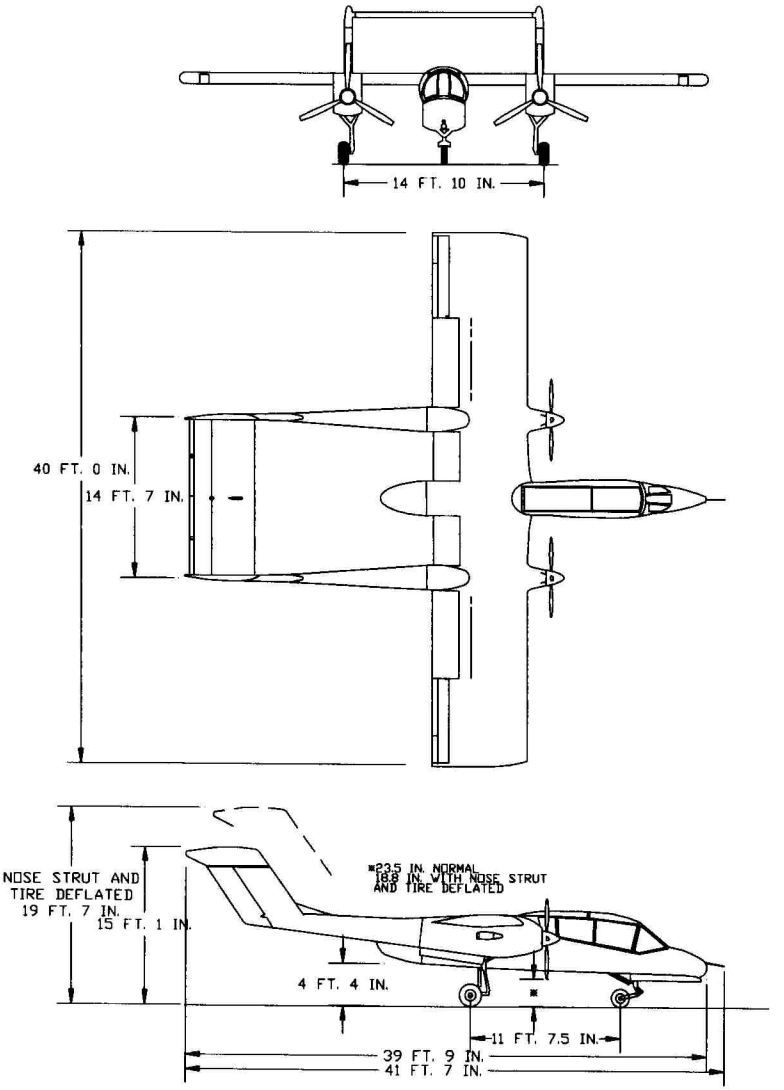


Figure VIII-1

THE AIRCRAFT

The Rockwell International OV-1OA is a twin-turboprop, multipurpose aircraft originally designed in 1968 for U.S. military counter-intergency operations. The California Department of Forestry and Fire Protection acquired the aircraft in 1993 through a Federal Excess Property Program (FEPP) transfer. The aircraft is modified from its original configuration to suit its new role as a firefighter as well as enabling it to function in the civil (vs. military) environment. Main identification features include a shoulder-mounted straight wing; a large, glass-enclosed cockpit; twin tail booms; and swept vertical stabilizers with a high-set horizontal stabilizer. The cockpit section contains a second flight crew station to accommodate a fire-control specialist (observer).

MODIFICATION SUMMARY

Major modifications by CDF are as follows:

REMOVED COMPONENTS	ADDED COMPONENTS
Sponsons (hard points for ordinance).	125 gallon auxiliary fuel tank
Centerline pylon (for external fuel tank).	Fully adjustable pilot & observer seats
Ejection seats.	All new avionics
Anti- "G" suit system	Redesigned instrument panels
Armor plating	New flight instruments
All military avionics	Redesigned warning lights panel
All military ordinance systems	New flight instruments
Yaw damper system	Redesigned warning lights panel
Approach light system	New electronic fuel management system
Windshield wiper system	New solid state a-c inverters
Numerous electrical components	New tinted canopy glass
All unnecessary wiring	Leading edge pulse lights
Original instrument panels	Wing tip strobe lights
Original (clear) canopy glass	Numerous storage compartmetns
Oxygen system	New gloss paint scheme
Original (IF) paint	
Numerous airframe components	

MODIFIED COMPONENTS

Electrical System is greatly modified and improved, enhancing function and reliability.

AIRCRAFT DIMENSIONS

Overall static dimensions of the aircraft are as follows:

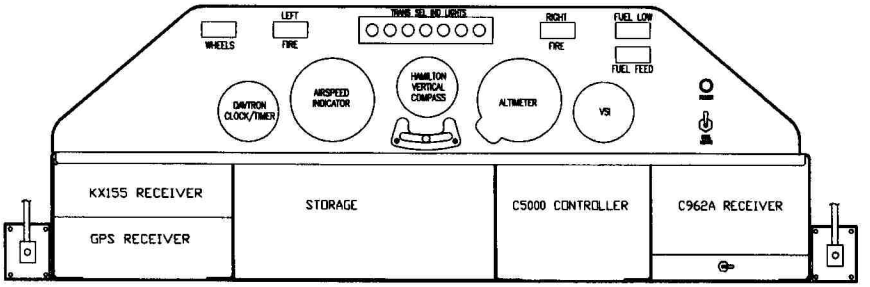
Span ..... 40 feet

Length ..... 39.7 feet

Height (vertical stabilizer) ..... 15.1 feet

Tread Width ..... 14.8 feet

OBSERVERS COCKPIT



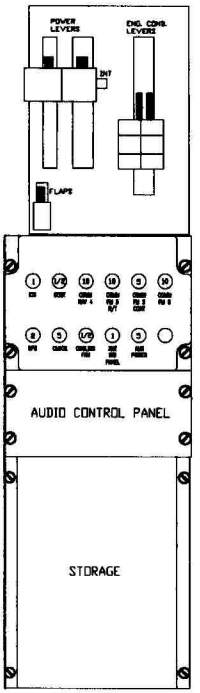


Figure VIII-4

PILOTS INSTRUMENT PANEL

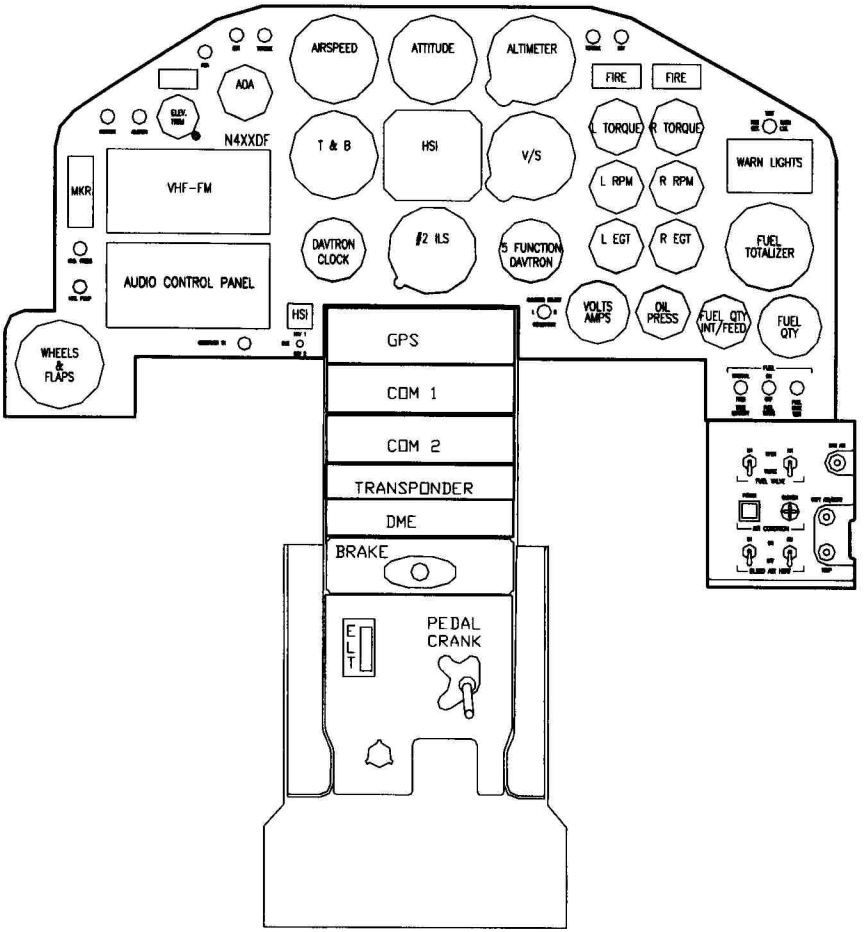


Figure VIII-2