LOCKHEED MARTIN

We never forget who we're working for®

C-130J Super Hercules

Whatever the Situation, We'll Be There

Table of Contents

Introduction

Note: In general this document and its contents refer to the C-130J-30, the stretched/advanced version of the Hercules.

The C-130 Hercules is the standard against which military transport aircraft are measured. Versatility, reliability, and ruggedness make it the military transport of choice for more than 60 nations on six continents. More than 2,300 of these aircraft have been delivered by Lockheed Martin Aeronautics Company since it entered production in 1956. During the past five decades, Lockheed Martin and its subcontractors have upgraded virtually every system, component, and structural part of the aircraft to make it more durable, easier to maintain, and less expensive to operate. In addition to the tactical airlift mission, versions of the C-130 serve as aerial tanker and ground refuelers, weather reconnaissance, command and control, gunships, firefighters, electronic recon, search and rescue, and flying hospitals.

The newest Hercules, the C-130J, has the same rugged good looks of its predecessors, but in fact is a greatly improved airplane with the performance and capability to prove it. Compared to the earlier C-130E, the maximum speed is 21 percent higher,

climb time is reduced by up to 50 percent, cruising altitude is up to 40 percent higher, and range is up to 40 percent longer. With new engines and props, the J has set 54 world records for rate of climb, cruise speed, and both distance and altitude with payload.

The C-130J incorporates these major improvements:

- A new propulsion system featuring four 4,591 pshp Rolls-Royce AE2100D3 engines and composite, six-bladed Dowty Aerospace R391 propellers with significantly improved fuel economy and high-hot performance.

- Two-person flight station including four multifunctional LCD displays; two holographic head-up displays (HUD); and electronic, digital readouts for aircraft operating, communicating, and navigating systems. The displays and aircraft general lighting are compatible with the USAF's night-vision imaging system.

- A 1553 data bus, two mission computers, and two backup bus interface units provide dual redundancy for the Hercules' systems. In addition, the computers provide for an integrated diagnostics system that monitors and records the status of the aircraft's structure and systems.

The C-130J-30, the stretched/advanced version of the Hercules, offers operators 55 feet of cargo compartment length – an additional 15 feet over the original "short" aircraft. The additional 15 feet is provided by inserting a 100-inch forward and an 80-inch aft plug to the fuselage. This translates into 30 percent more usable volume for increased seating, litters, pallets, or airdrop platforms. This additional capability provides significant advantages when transporting personnel or delivering priority cargo by reducing the number of sorties needed to complete the mission.

In addition to the significant increases in operational capability and performance, the C-130J offers a greater value when compared to any other tactical airlifter: System reliability and maintainability are improved by up to 50 percent; maintenance man-hours per flight hour are decreased by up to 68 percent; and flight and maintenance manpower are reduced by up to 50 percent, resulting in a 47 percent lower squadron operating and support cost.

Recent Capability/Performance Upgrades

Subsequent to the USAF Operational Test and Evaluation Acceptance of the C-130J combat delivery aircraft in 2006, several performance enhancements by Lockheed Martin Aeronautics were developed, tested, verified, qualified, accepted, and incorporated into the basic aircraft configuration. These include:

- Terrain Awareness and Warning System (TAWS), a forward-looking awareness and warning system, for improved in-flight situational awareness. The TAWS operates in conjunction with the existing Ground Collision Avoidance System (GCAS) as independent complementary systems providing visual and obstacle Voice Warning Alerts (VWA) to the crew.

- Identification Friend or Foe (IFF) Transponder Mode S with Enhanced Surveillance for use in civil Communications, Navigation, and Surveillance/Air Traffic Management (CNS/ATM) airspace. The IFF has growth capability to Mode 5.

- Communications, Navigation, and Identification (CNI) common software upgrade developed for all customers including updated chute ballistic tables, new track offset, additional drift down performance pages, and re-host of the Takeoff and Landing Data (TOLD) from the CNI to the Mission Computer (MC).

- TOLD re-hosted in MC Operational Flight Program (OFP), enabling additional and enhanced capabilities pertaining to charts and calculations for hot/high takeoffs, assault landing weight, modified minimum field length maximum effort takeoff, climb gradients, wind corrections, and temperature deviation expansion to ISA +/-45°C.

Recent Capability/Performance Upgrades

- Center Wing Box improvement to provide Enhanced Service Life (ESL) by strengthening structural components such as Hat Sections (stringers), Beam Caps and Webs, Wing Attach Fittings, and Engine Truss Mounts. The ESL wing was originally developed for the USAF Special Operations C-130s in support of Severe Mission Operations.

- Reduced Vertical Separation Minima (RVSM) for worldwide operations in CNS/ATM controlled airspace. Access to RVSM airspace increases true air speed and range while reducing fuel consumption, e.g., enhances long-range cruise performance.

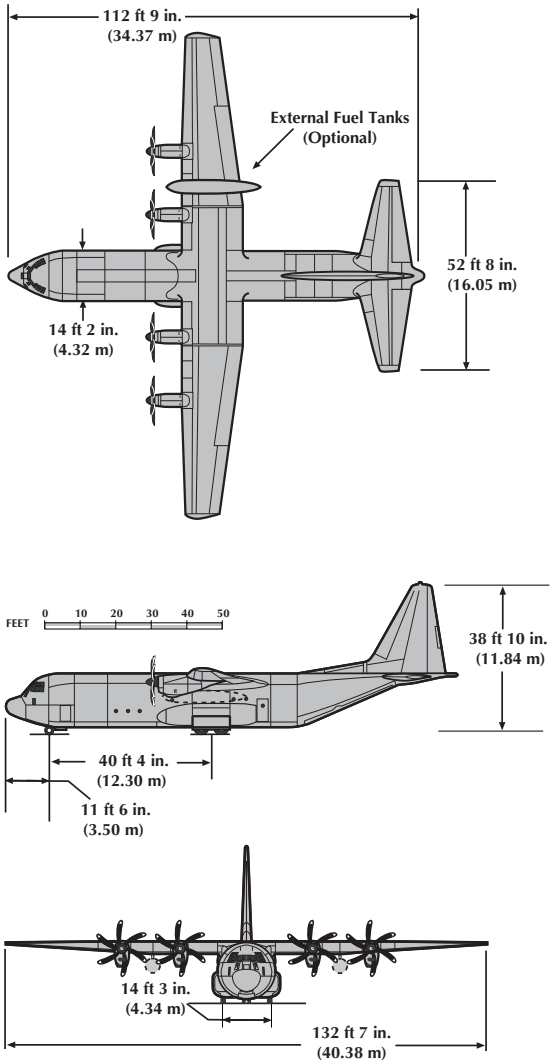
- Data Transfer and Diagnostic System (DTADS) Interface Unit for maintenance management of critical aircraft systems using a Windows Operating System. DTADS encompasses in-flight and post-flight analysis, ground maintenance processing, structural health monitoring, and engine life management. DTADS is scheduled to become available in 2010.

Survivability Options

- Small Arms Armor Kit, available as Customer-Furnished Equipment (CFE), provides protection for the pilot and co-pilot, crew station and bunk, forward and aft loadmaster stations, paratroop doors, nose wheel well, and liquid oxygen converter.

- Explosive Suppressant Tank Foam is available as CFE for the main and auxiliary fuel tanks, which aids in protecting against ballistic penetration and lightning strikes.

General Arrangement



General Characteristics

Dimensions	
Wingspan	132 ft 7 in.
Length	112 ft 9 in.
Height	38 ft 10 in.
Cargo Floor	
Length (Floor + Ramp)	55 ft + 10 ft 8 in.
Width (Minimum)	10 ft
Height (Minimum)	9 ft
Area (Floor + Ramp)	550 + 107 sq ft
Cargo Volume	6,022 cu ft
Weights	
Max Takeoff Weight (2.5g)	164,000 lb
Max Takeoff Weight (2.25g)	175,000 lb
Max Landing Weight, 9 fps	162,000 lb
Max Landing Weight	164,000 lb
Operating Weight Empty	87,667 lb
Max Payload (2.5g) (Note 2)	47,333 lb
Max Fuel (JP-8)	43,562 lb
Max Zero Fuel Weight (Note 1)	129,000 lb
Max Zero Fuel Weight (Note 2)	135,000 lb
Performance	
Max Cruise Speed	355 kts
Airdrop Speed	Up to 250 KIAS
Takeoff Dist Over 50 ft (S/L, ISA, 164,000 lb) Normal	5,850 ft
Takeoff Roll (S/L, ISA, 164,000 lb) Max Effort	3,100 ft
Landing Dist Over 50 ft (S/L, ISA, 135,000 lb) Normal	3,000 ft
Ground Roll (S/L, ISA, 135,000 lb) Max Effort	1,630 ft
Max Range (Without Tanks)	3,510 n.mi
Range (40,000-lb Payload – 2.5-g Mission)	2,200 n.mi
Cruising Altitude (T/O at MTOW)	27,000 ft
Service Ceiling (T/O at MTOW)	29,000 ft
Crew	2 Pilots + Loadmaster
Power Plant	4 Rolls-Royce AE2100D3, 4,591 pshp Turboprop Engines (4 Dowty R391, 6-Blade Propellers, All Composite)

Note 1: Structural Reserve Fuel
Note 2: With Wing Bending Relief Fuel

Technology Improvements

AIRCRAFT

- Two-Person Flight Deck Crew
- Provisions for Auxiliary Crew Member Station
- Ergonomically Designed Cockpit
- Interchangeable Panel Layout
- Soft Panels
- Advanced Communications and Navigation Systems
- New Electrical System
- 1553B Data Bus Architecture
- Integrated Diagnostic System
- Head-Up Display (Dual) – Certified Primary Flight Instrument
- 250 KIAS Airdrop Speed Ramp and Door
- Single Cross-Ship Fuel Manifold
- Defensive Systems
- Air Traffic and Ground Collision Avoidance Systems
- Enhanced Cargo Handling System (USAF Configuration)
- Color Digital Map Display
- Color Weather Radar/Ground Mapping Radar
- Night-Vision Imaging System (NVIS) Compatible (Flight Deck and Cargo Compartment)

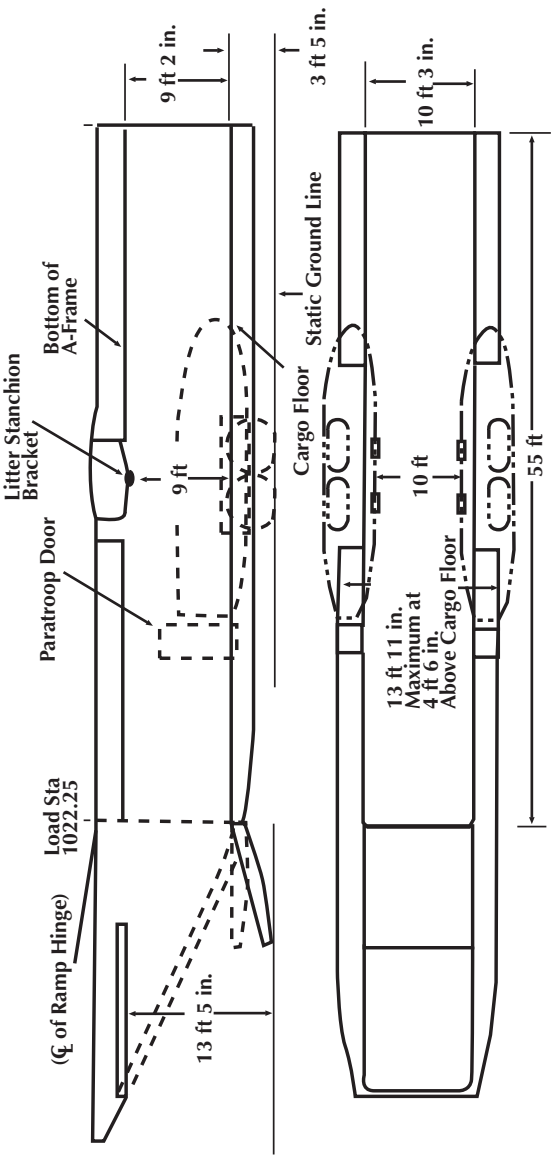
PROPULSION

- Rolls-Royce AE2100D3, Flat Rated at 4,591 pshp
- Full-Authority Digital Electronic Control (FADEC)
- Dowty R391 Six-Bladed Composite Propeller

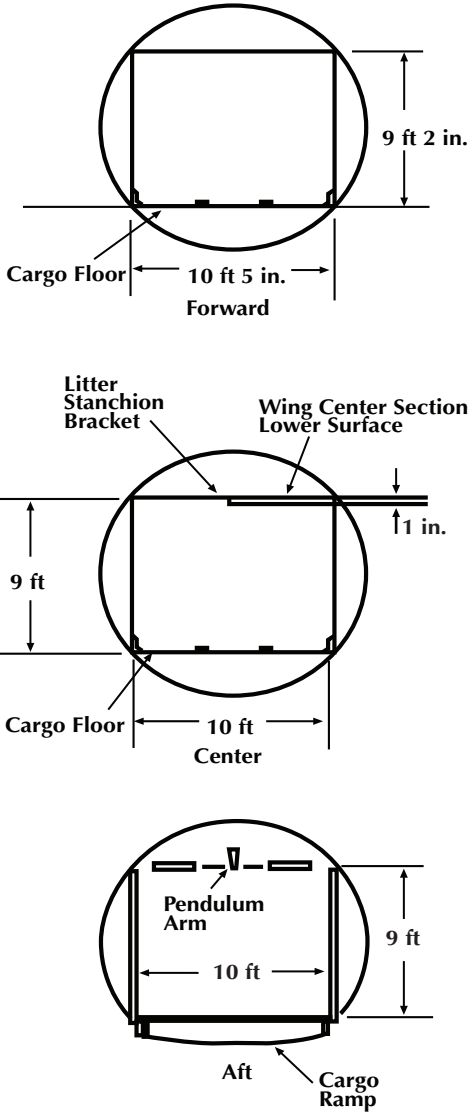
Competitive Comparison

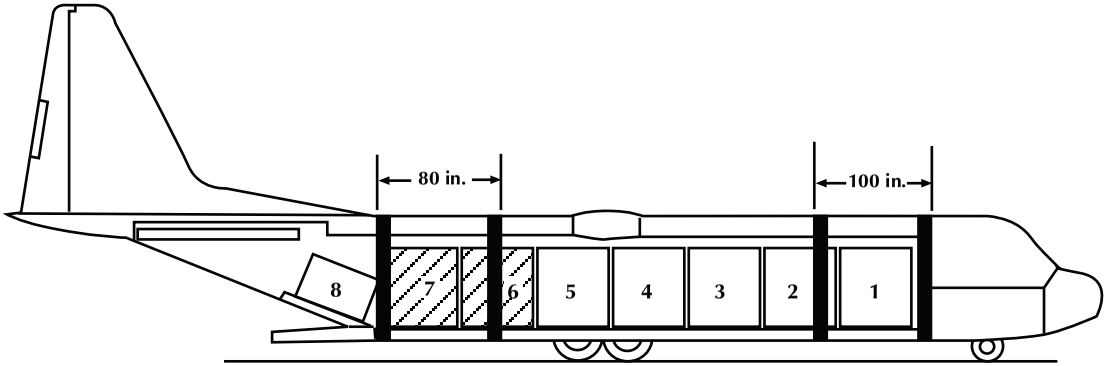
Model	Cargo Floor	#463L Pallets	Litters	CDS Bundles	Combat Troops	Para-troops
C-130J-30	55 ft	8	97	24	128	92
A400M (Proposed)	58 ft	9	66	24	120	120
C-17	65 ft	18	36	40	102	102
C-130E/H C-130J (Short)	40 ft	6	74	16	92	64

Cargo Compartment



Cross Sections





Model	Cargo Floor	#463L Pallets	Litters	CDS Bundles	Combat Troops	Para-troops
C-130J-30	55 ft	8	97	24	128	92

The C-130J-30 Can Carry 90 Percent of the U.S. Army and USAF Combat Equipment

SUMMARY OF CARGO COMPARTMENT CAPACITY AND MAXIMUM ALLOWABLE FLIGHT LOADS

Load Station Centroid	Inch	365	428	517	607	697	787	877	967	1027	1083	1133
Compartment		C	D	E	F	G	H	I	J	K	L 2	M Ramp
Area	sq ft (sq m)	32 (2.98)	76 (7.06)	77 (7.16)	77 (7.16)	75 (6.97)	75 (6.97)	77 (7.16)	76 (7.06)	27 (2.51)	71 (6.60)	15 (1.39)
Volume	cu ft (cu m)	292 (8.17)	684 (19.15)	692 (19.37)	692 (19.37)	678 (18.98)	676 (18.92)	692 (19.37)	684 (19.15)	219 (6.13)	454 (12.71)	73 (2.04)

MAXIMUM LOAD RATE

Maximum Individual Compartment Capacity	lb (kg)	5,700 (2,585)	11,500 (5,216)	21,000 (9,525)	38,000 (17,236)	45,000 (20,412)	45,000 (20,412)	34,000 (15,422)	19,500 (8,845)	3,500 (1,588)	4,500 (2,041)	500 (744)
Concentrated Loads – All Areas	psi (kg sq cm)	50 (3.52)	50 (3.52)	50 (3.52)	50 (3.52)	50 (3.52)	50 (3.52)	50 (3.52)	50 (3.52)	50 (3.52)	50 (3.52)	50 (3.52)
Running Loads per Treadway 11	lb/ft (kg/m)	1,400 (2,083)	1,400 (2,083)	1,400 (2,083) 12	3,000 (4,464)	3,000 (4,464)	3,000 (4,464)	1,400 (2,083) 12	1,400 (2,083)	500 (744)	500 (744)	500 (744)
Running Loads Between Treadways 11	lb/ft (kg/m)	1,600 (2,381)	1,600 (2,381)	1,600 (2,381)	1,600 (2,381)	1,600 (2,381)	1,600 (2,381)	1,600 (2,381)	1,600 (2,381)	500 (744) 13	500 (744)	500 (744)
Tongue Load Between Treadways 11	lb (kg)	2,000 (907)	2,000 (907)	2,000 (907)	2,000 (907)	2,000 (907)	2,000 (907)	2,000 (907)	2,000 (907)	450 (204)	450 (204)	450 (204)
Palletized and Containerized Cargo	lb/ft (kg/m)	5	2,800 (4,167)	2,800 (4,167) 14	3,200 (4,762)	3,200 (4,762)	3,200 (4,762)	2,800 (4,167) 14	2,800 (4,167) 6	5	1,000 (1,488)	5

MAXIMUM AXLE LOAD

Pneumatic Tires, 100 psi (689.5 KPA) Maximum Pressure	Treadways	lb (kg)	6,000 (2,722) 7	6,000 (2,722)	6,000 (2,722) 16	13,000 (5,897)	13,000 (5,897)	13,000 (5,897)	6,000 (2,722) 15	6,000 (2,722)	2,500 (1,134)	2,500 (1,134)	2,500 (1,134)
	Between Treadways	lb (kg)	5,000 (2,268) 7	5,000 (2,268)	5,000 (2,268)	5,000 (2,268)	5,000 (2,268)	5,000 (2,268)	5,000 (2,268)	5,000 (2,268)	1,200 (544)	1,200 (544)	1,200 (544)
Hard Rubber Tires and Steel Wheels 10	Treadways	lb (kg)	2,300 (1,043) 7	2,300 (1,043)	2,300 (1,043) 16	5,000 (2,268)	5,000 (2,268)	5,000 (2,268)	2,300 (1,043) 15	2,300 (1,043)	950 (431)	950 (431)	950 (431)
	Between Treadways	lb (kg)	2,000 (907) 7	2,000 (907)	2,000 (907)	2,000 (907)	2,000 (907)	2,000 (907)	2,000 (907)	2,000 (907)	450 (204)	450 (204)	450 (204)

1 Do not exceed overall airplane restrictions.

2 The ramp (load stations 1023 through 1141) contains the aft 19 in. (48.26 cm) of compartment K and compartments L and M. The maximum allowable flight load permitted on the ramp is 5,000 lb (2,268 kg) and the load center of gravity must be located at or forward of the ramp centroid (load station 1063).

3 Adequate shoring shall be used to contain tongue loads within psi limits.

4 4-ft (1.22 m) minimum distance between axles. Total wheeled load not to exceed compartment capacities listed for pallets or containers.

5 Palletized or containerized cargo centroids will not fit in these compartments.

6 The cargo loading system restraint rail sections 5 and 6 are limited to 8,500 lb (3,856 kg) total weight restraint.

7 Axle loads must not be forward of load station 357.

8 Maximum cargo height in the cargo compartments is 108 in. (274.3 cm). When roller conveyors are installed, maximum cargo height is reduced 2-5/8 in. (6.7 cm).

9 Maximum height of cargo secured to the cargo ramp is 81 in. (205.7 cm) at ramp station 8 and 77 in. (195.5 cm) at ramp station 10. When roller conveyors are installed, maximum cargo height is reduced 2-5/8 in. (6.7 cm).

10 See figure 4-7 for hard rubber tire and steel wheel limitations.

11 These allowables are separate and not additive. If both center floor and treadways are loaded, the total load cannot exceed the maximum treadway load.

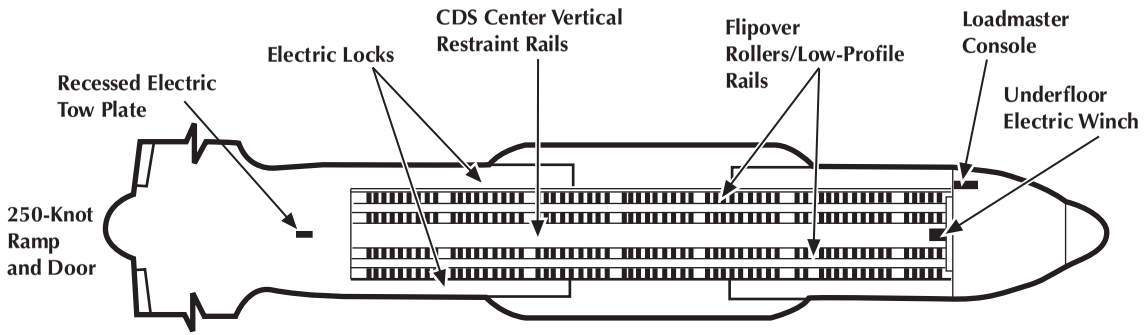
12 3,000 lb/ft (4,464 kg/m) between load station 537 and load station 882.

13 1,600 lb/ft (2,381 kg/m) between load station 1011 and load station 1017.

14 3,200 lb/ft (4,762 kg/m) between load station 537 and load station 882.

15 13,000 lb/ft (5,897 kg/m) between load station 537 and load station 882.

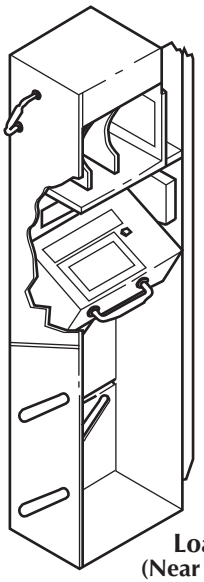
16 5,000 lb/ft (2,268 kg/m) between load station 537 and load station 882.



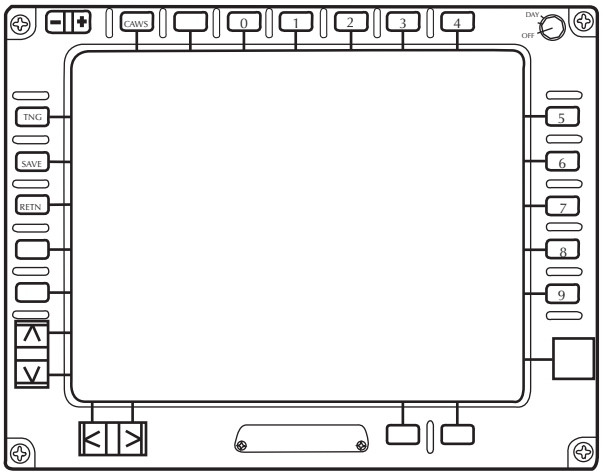
RECONFIGURATION TIME IN MINUTES

Aircraft	Slick Floor to Pallets	Pallets to Slick Floor	Winching	Centerline Vertical Restraint	Tow Plate
C-130E/H	15	24	24	10	21
C-130J-30	5	5	8	1	1
Improvement	67%	79%	67%	90%	95%

Enhanced Cargo Handling System

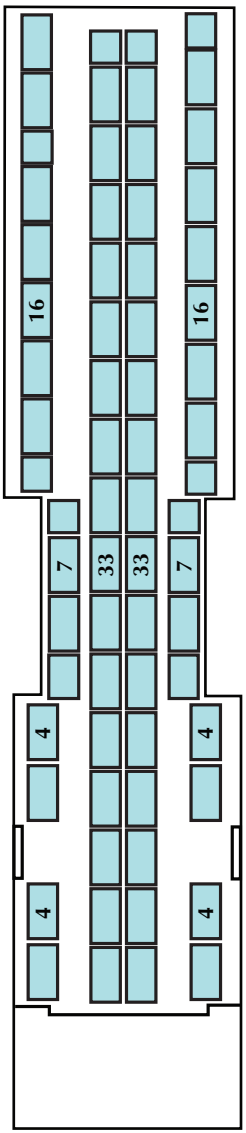


Loadmaster Station
(Near Crew Entrance Door)

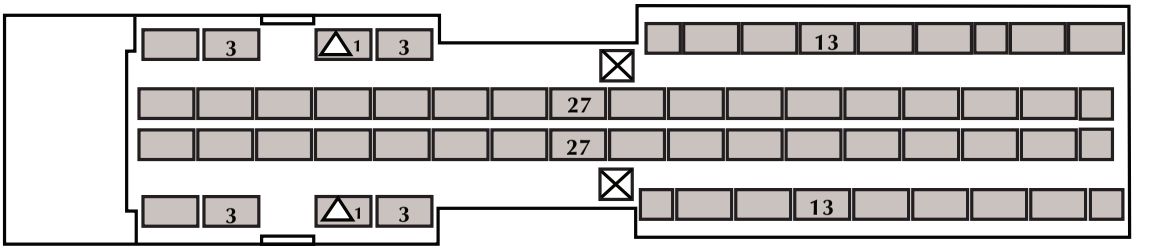


Multifunction Control Display

Combat Troop Seating



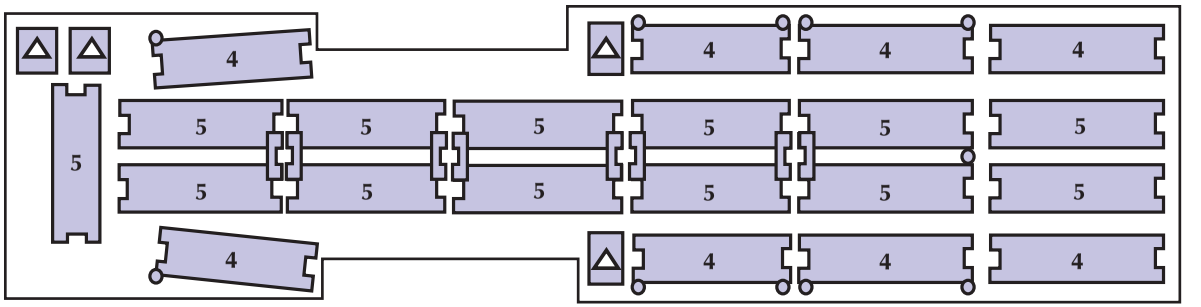
128 Ground Troops
20-Inch Seating



Loadmaster Seats

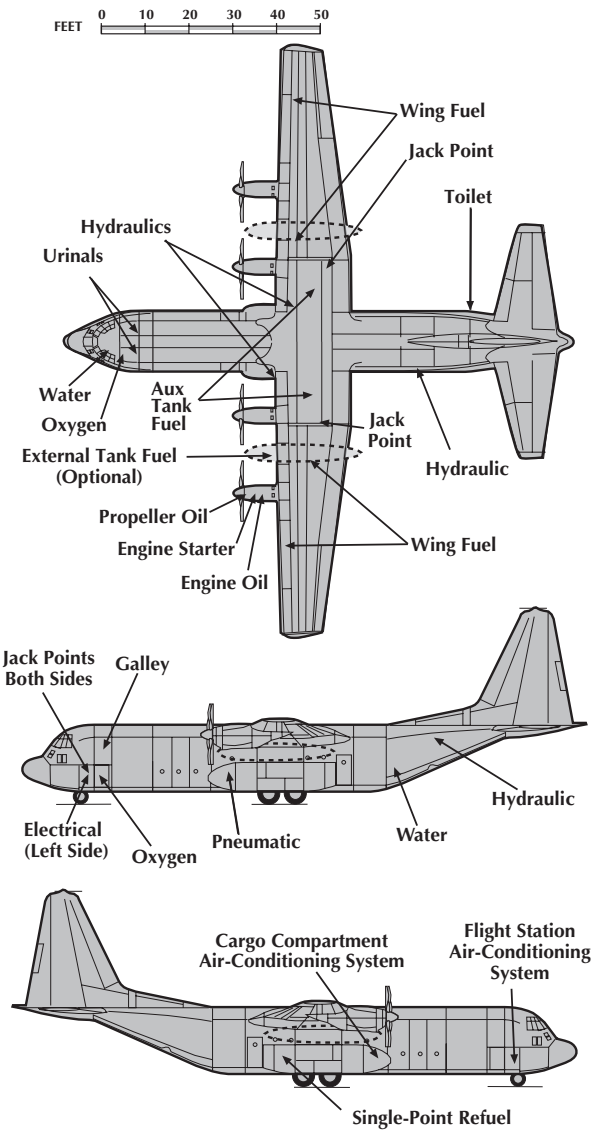
Safety Men

92 Paratroops
24-Inch Seating

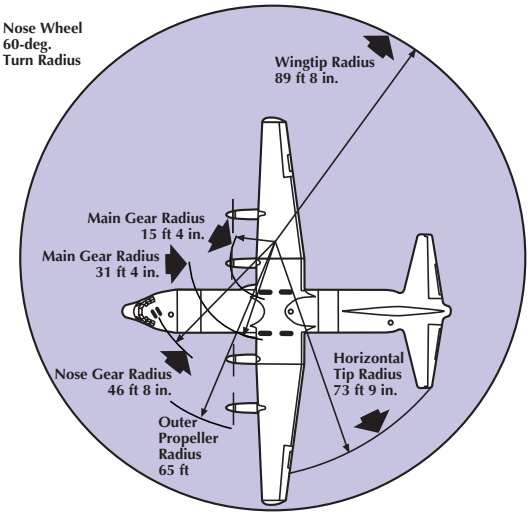


Attendants
97 Litters

Ground Servicing Points



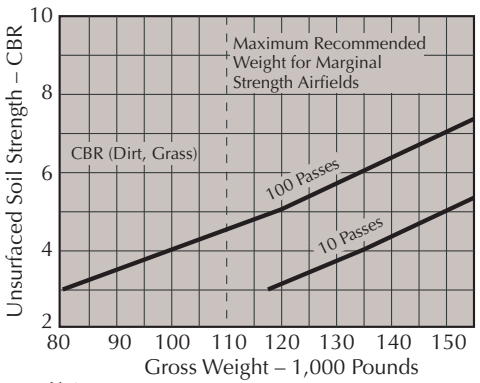
Ground Operations



Vertical Clearances

Wingtip	12 ft
Vertical Stabilizer Tip	38 ft 10 in.
Inboard Propeller	6 ft
Outboard Propeller	6 ft 8 in.

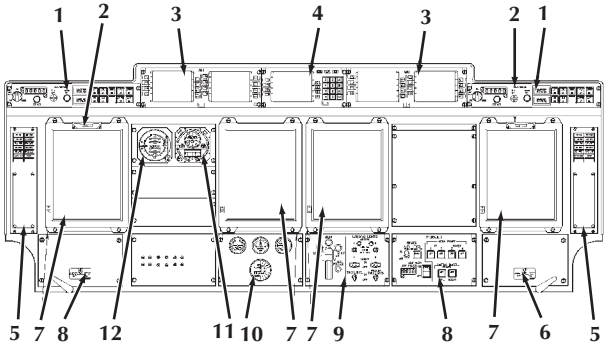
Minimum Space Required for Turning is 179 Feet 4 Inches With the Nose Gear Turned to the Maximum of 60 Degrees at Taxi Speeds Under 5 Knots



Note

Number of Passes Is Based on Main Landing Gear Tire Inflation Pressure for Marginal Strength Airfields. A Pass Is Defined as One Landing and One Takeoff.

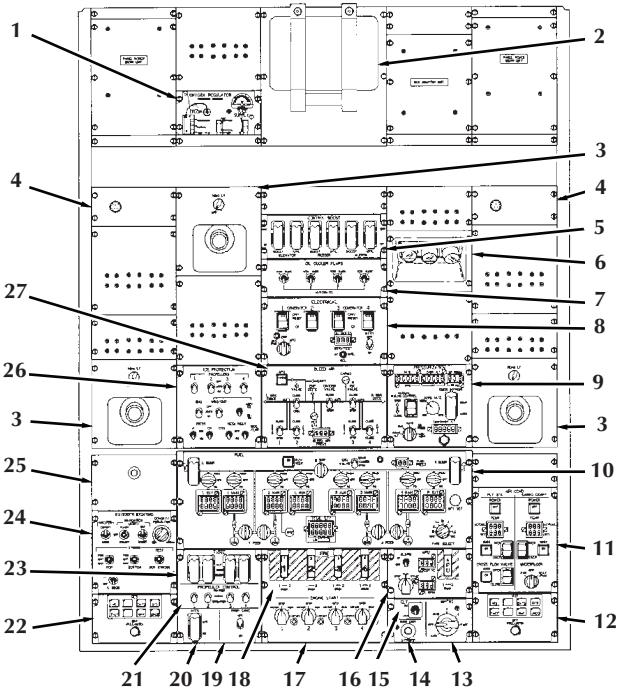
Instrument Panel



1 Reference Set/Mode Select Panel (Two Places)
2 Inclinometer (Two Places)
3 Avionics Management Unit (Two Places)
4 Communication/Navigation/ Electronic Circuit Breaker Panel
5 Mode Annunciator Panel (Two Places)
6 Air Diverter Handle (Two Places)
7 Color Multipurpose Display Unit (CMDU)
8 Hydraulic Control Panel
9 Landing Gear/Landing Lights Panel
10 Flap and Trim Indicator Panel
11 Standby Altimeter/ Airspeed Indicator
12 Standby Attitude Indicator

Flight Station Layouts

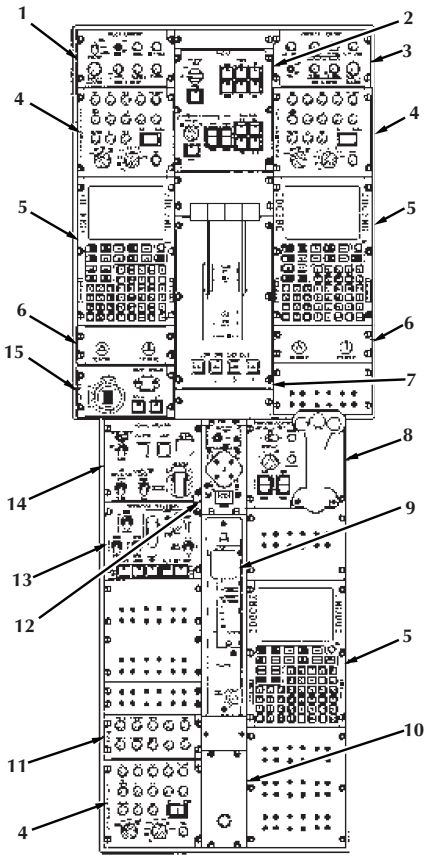
Overhead Panel



1 Oxygen Regulator
2 Oxygen Mask Stowage Box
3 Reading Light Control
4 Headset Interface Unit
5 Control Boost Panel
6 Console Light
7 Oil Cooler Flaps Panel
8 Electrical Panel
9 Pressurization Panel
10 Fuel Management Panel
11 Air Cond Panel
12 Co-pilot HUD Panel
13 Wipers Panel
14 Emergency Exit Lights Extinguish
15 ELT Panel
16 APU Panel
17 Engine Start Panel
18 Fire Panel
19 Prop Sync Panel
20 ATCS Panel
21 Propeller Control Panel
22 Pilot HUD Panel
23 FADEC Panel
24 Exterior Lighting Panel
25 Voice Recorder Microphone Panel
26 Ice Protection Panel
27 Bleed Air Panel

Flight Station Layouts

Center Console



1 Pilot Lighting Panel
2 Radar Control Panel
3 Co-pilot Lighting Panel
4 Intercommunications System Control Panel (Three Places)
5 Communication/Navigation/ Identification Management Unit (Three Places)
6 Remote Heading and Course Selector (Two Places)
7 Throttle Quadrant Assembly
8 Cursor Control Panel
9 Wing-Flaps Control Quadrant Panel
10 Headset Interface Unit Panel
11 Intercommunications System Monitor Panel
12 Trim Panel
13 Defensive Systems Panel
14 Aerial Delivery Panel
15 Automatic Flight Control System Panel

USAF Avionics Configuration

	Qty
Color Multipurpose Display Unit (CMDU)	4
Head-Up Display (HUD)	2
Global Digital Map Unit (GDMU)	1
Mission Computer	2
Avionic Management Unit (AMU)	2
Comm/Nav/Breaker Panel	1
Multichannel Dimming Unit	3
VHF AM/FM Comm Radio, AN/ARC-222 (MXF-626)	2
UHF Communication Radio, AN/ARC-164	2
HF Communication Radio, AN/ARC-190	2
HF Secure Voice, KYV-5 (ANDVT) (Group A)	2
VHF/UHF Secure Voice, KY-58 (Group A)	4
SATCOM (Group A)	1
UHF Satellite Terminal System (USTS) (Group A)	1
Intercommunication System	1
Embedded Global Positioning System/INS (EGI)	2
CNI-System Processor	2
CNI-Management Unit	3
Low-Power Color Radar, APN-241	1
Formation Station Keeping Equipment, SKE 2000	1
Distributed Air Data System	1
Radar Altimeter, HG9550	2
Tactical Air Navigation, AN/ARN-153	2
VHF Omnirange/Instrument Landing System/Marker Beacon, AN/ARN-147 (One Marker Beacon)	2
Automatic Direction Finder, AN/ARN-149	2
UHF Direction Finder, DF-301E	1
Identification Friend or Foe, APX-119	1
Group A Provisions for 2nd IFF	1
Terrain Awareness and Warning System	1
Group A Provisions for Second Enhanced Traffic Alert and Collision Avoidance Subsystem	1
Digital Autopilot/Flight Director	2
Missile Warning System, AN/AAR-47 (Group A)	1
Countermeasures Dispensing System, AN/ALE-47 (Group A)	1
Radar Warning Receiver, AN/ALR-56M (Group A)	1
Ground Proximity Warning System	1
Integrated Precision Radar Approach System	1

ELECTRICAL

- The electrical system includes four regulated transformer rectifier units, five AC generators, controls, and conversion equipment needed to satisfy and control the diversified power requirements of the various electrical and electronic equipment and other systems. Secondary distribution uses electronic and electromechanical circuit breakers.
- Four 40/50-kVA oil-cooled, three-phase AC generators constitute the primary AC power source. Each engine-driven generator has an overtorque shaft disconnect and an individual generator control unit. A fifth 40/50-kVA air-cooled, three-phase AC generator is mounted on the auxiliary power unit as an additional AC power source.
- Two 24-volt, 42-ampere-hour (beginning of life), sealed, lead acid, and maintenance-free batteries are installed in a battery compartment in the lower left forward fuselage. A control switch in the flight station disconnects the batteries from the electrical system. With fully charged batteries, sufficient battery power is available to operate standby instruments and other flight-critical components for approximately 30 minutes after complete loss of primary aircraft power. When required, one battery can provide electrical power for APU starting.
- Four regulated 200-ampere transformer rectifiers convert AC power to DC power. Two 1-kVA inverters provide uninterruptable electrical power for the essential avionics bus and the main avionics bus.
- Regulated power supplies (RPSs) provide filtered and regulated DC power to the flight station consoles. The RPS is powered by two independent 28-VDC power sources.

ENVIRONMENTAL CONTROL SYSTEM

- The aircraft's environmental control system (ECS) is capable of stabilizing the cockpit environment from a heat soak temperature condition at external ambient temperature of +120°F (+49°C) to +84°F (+28.8°C) within 30 minutes from cooling operation ECS start. The ECS is capable of increasing the cabin average temperature from -22°F (-30°C) to +41°F (+5°C) within 20 minutes.
- Cargo-floor heating is accomplished by using hot air circulating through an underfloor manifold.
- A forced-air cooling system is provided for the flight-station displays and certain rack-mounted avionics and electrical equipment.
- A system for pressurizing the flight station and cargo compartment is supplied by engine compressor bleed air. This electronically controlled pneumatic system is capable of maintaining a maximum of 8,000-foot cabin altitude at 32,200-foot flight altitude. The aircraft is pressurized and depressurized in accordance with a preprogrammed schedule and under rate control while in the automatic mode. A separate backup manual control of the pressurization system provides outflow valve operation in case of a failure in the automatic system.

FUEL SYSTEM

- The fuel system uses a common cross-ship manifold that serves as a refueling system, a fuel supply crossfeed, a direct feed system, a ground defueling system, and a fuel jettisoning system. The fuel system consists of tanks, pumps, piping, valves, flowmeters, strainers, and quantity gage units.
- Fuel system design and performance is based on the use of fuel conforming to JP-8 (MIL-T-83133).
- The system is compatible with JP-4, JP-5, Jet A, Jet A-1, and Jet B fuels with or without anti-icing

additive. Deviations and flight restrictions are required for use of some fuels other than JP-8.
- Group A provisions are provided on the lower side of each outer wing at outer-wing station 81.0 for optional installation of pylons and tanks. When the tanks/pylons are installed, each tank has a usable fuel capacity of 1,379 U.S. gallons (9,377 pounds or 18,754 pounds per aircraft).
- The aircraft has the capability for single-point refueling (SPR) which is integrated into the fuel management system and controlled via the fuel management panel. Refueling quantities can be set for each tank. A manual over-the-wing fuel-filler cap is installed in each main tank.
- Defueling normally is through the ground single-point refueling system using the fuel boost and dump pumps to supply pressure. Defuel quantities can be set for each tank at the fuel management panel.
- Fuel dump controls are located on the fuel management panel located in the flight station.
- Receiver P3I provisions are available for aerial refueling.
- Tanker P3I provisions are included.

HYDRAULIC SYSTEMS
- Three separate hydraulic systems are controlled by engine-mounted or electrically driven pumps. The pumps for the booster system are mounted on engines three and four, and the pumps for the utility system are mounted on engines one and two. The auxiliary system is powered by an electrically driven pump located in the aft fuselage. Normal operating pressure is 3,000 pounds per square inch.
- The booster system operates one-half of each control surface actuator.
- The utility system operates the landing gear (including doors and steering), wing flaps, wheel brakes, and one-half of each control surface actuator.

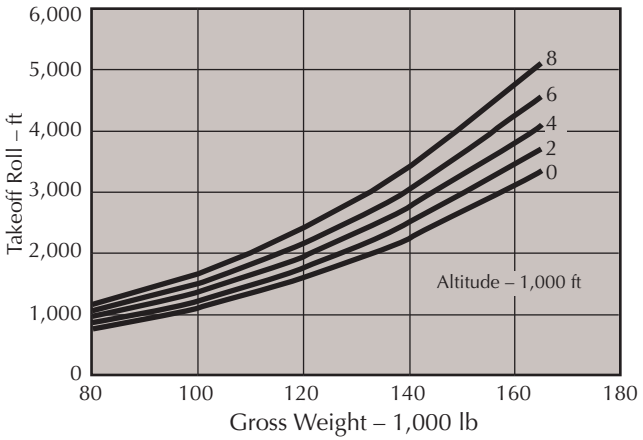
- The auxiliary system furnishes hydraulic power for normal ramp and cargo door operation. The system also provides pressure for wheel brake operation, NLG extension, and down lock in the event of utility system failure.

ENHANCED CARGO HANDLING SYSTEM (ECHS)
- The ECHS allows the load-crew to control all aspects of logistic and airdrop operations by providing computer-controlled event sequencing of all onload, offload, airdrop, and emergency functions from a single location. The multifunction control/display, located at the loadmaster position, provides control and display of all ECHS functions. The aircraft is capable of performing aerial delivery missions using manual, computer, or combined computer- and manual-controlled modes.

DEFENSIVE SYSTEMS
- Missile Warning System, AN/AAR-47
- Countermeasures Dispensing System, AN/ALE-47
- Radar Warning Receiver, AN/ALR-56M

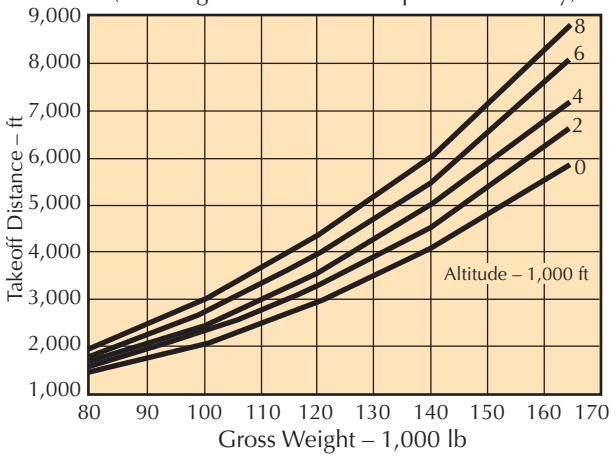
MAXIMUM EFFORT TAKEOFF ROLL

(Standard Day)



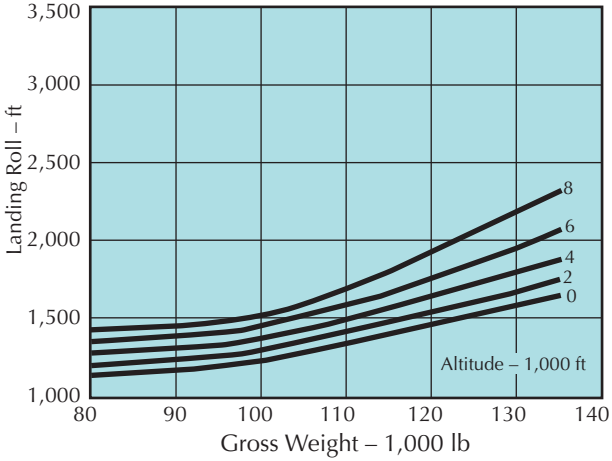
NORMAL TAKEOFF DISTANCE (Over 50 Feet)

Takeoff Distance
Over 50-Foot Obstacle
(Four Engines/50 Percent Flaps/Standard Day)



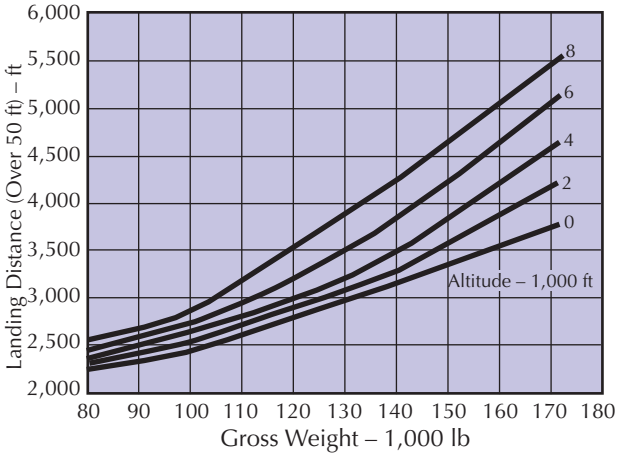
MAXIMUM EFFORT LANDING ROLL

(Four Engines/100 Percent Flaps/Standard Day)



NORMAL LANDING DISTANCE (Over 50 Feet)

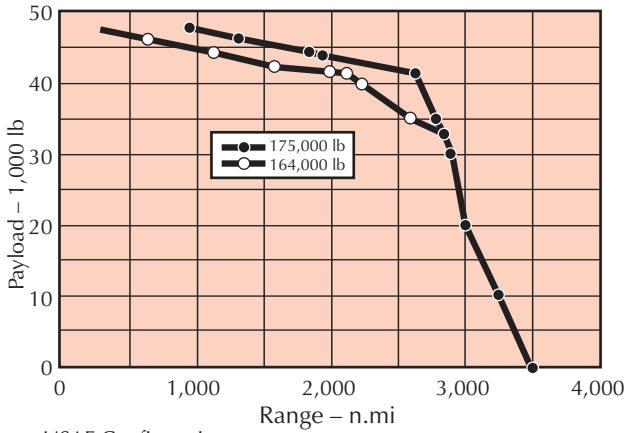
(100 Percent Flaps/Standard Day)



Performance

PAYLOAD RANGE

Standard Day, MIL-C-5011A Reserves (Foam in Tanks)



USAF Configuration
Wing Relief Fuel

World Records

54 WORLD RECORDS

All in production-standard, unmodified aircraft

These flights demonstrate that the C-130J can:

- Carry a useful payload quickly over typical mission distance.
- Get in and out of short fields quickly and carry useful payload.
- Quickly climb to altitude with a significant payload.
- Be flown a strategic distance quickly without external tanks or stopping to refuel.

LOCKHEED MARTIN C-130J CLAIMS 54 WORLD RECORDS

The following records have been certified as world records:

Class C-1.N Turboprop, Group II, Heavy Airplanes (132,276 to 176,368 lb)

Records broken	15
Records set	6
Total	21

Closed Circuit (Speed and Distance)

NEW RECORD USA, 396.17 mph; Lockheed Martin C-130J, 4/20/99

Breaks old record by 8 percent while carrying twice the payload

BREAKS these existing records: 1,000 km speed with following payloads: 0 kg; 1,000 kg; 2,000 kg; 5,000 kg; 10,000 kg

ESTABLISHES these records:
1,000 km speed with 15,000 and 20,000 kg payloads

NEW RECORD USA, 394.87 mph; Lockheed Martin C-130J, 4/20/99

Breaks old record by 16 percent while carrying twice the payload

BREAKS these existing records:
2,000 km speed with following payloads: 0 kg; 1,000 kg; 2,000 kg; 5,000 kg; 10,000 kg

ESTABLISHES these records:
2,000 km speed with 15,000 and 20,000 kg payloads

Altitude

NEW RECORD USA, 36,560 feet; Lockheed Martin C-130J, 4/20/99

Breaks old record by 18 percent while carrying twice the payload

BREAKS these existing records:
Altitude with following payloads: 0 kg; 1,000 kg; 2,000 kg; 5,000 kg; 10,000 kg

ESTABLISHES these records: Altitude with 15,000 and 10,000 kg payloads

The following short takeoff and landing (STOL) records have been certified as U.S. national records.

STOL Aircraft, Class N, Group II, Turboprop

Records broken	1
Records set	28
Total	29

Closed Circuit

NEW RECORD USA, 371.6 mph; Lockheed Martin C-130J, 5/14/99

ESTABLISHES these records:
1,000 km speed with following payloads: 0 kg; 1,000 kg; 2,000 kg; 5,000 kg; 10,000 kg

NEW RECORD USA, 371.96 mph, Arlen Rens (pilot), Lyle Schaefer (co-pilot), Lockheed Martin C-130J, 5/14/99

ESTABLISHES these records:
2,000 km speed with following payloads: 0 kg; 1,000 kg; 2,000 kg; 5,000 kg; 10,000 kg

NEW RECORD USA, 22,300 lb; Lockheed Martin C-130J, 5/14/99

BREAKS this existing record:
Greatest load to 2,000 meters

NEW RECORD USA, 40,386 feet; Lockheed Martin C-130J, 5/14/99

ESTABLISHES these records:
Absolute altitude with following payloads: 0 kg; 1,000 kg; 2,000 kg; 5,000 kg; 10,000 kg

NEW RECORD USA, 39,052 feet; Lockheed Martin C-130J, 5/14/99

ESTABLISHES this record:
Greatest altitude in horizontal flight (Note: Must hold this altitude for a minimum of 90 seconds)

Time-to-Climb

NEW RECORD USA, 3 min 49 sec; Lockheed Martin C-130J, 5/14/99

ESTABLISHES these records:
To 3,000 meters with following payloads: 1,000 kg; 2,000 kg; 5,000 kg; 10,000 kg

NEW RECORD USA, 8 min 0 sec; Lockheed Martin C-130J, 5/14/99

ESTABLISHES these records:
Time-to-climb to 6,000 meters with following payloads: 1,000 kg; 2,000 kg; 5,000 kg; 10,000 kg

NEW RECORD USA, 15 min 12 sec; Lockheed Martin C-130J, 5/14/99

ESTABLISHES these records:
Time-to-climb to 9,000 meters with following payloads: 1,000 kg; 2,000 kg; 5,000 kg; 10,000 kg

Speed Over a Recognized Course

NEW RECORD USA, 413.99 mph; Lockheed Martin C-130J, 12/7-8/99

ESTABLISHES these records:
Speed over a recognized course, unlimited class; speed over a recognized course, class C-1.N
Duration: 10 hours 58 minutes 14 seconds

NEW RECORD USA, 417 mph; Lockheed Martin C-130J, 2/12-13/00

ESTABLISHES these records:
Speed over a recognized course with 34,000 pounds of payload, unlimited class; speed over a recognized course with 34,000 pounds of payload, class C-1.N
Duration: 9 hours 31 minutes

LOCKHEED MARTIN

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