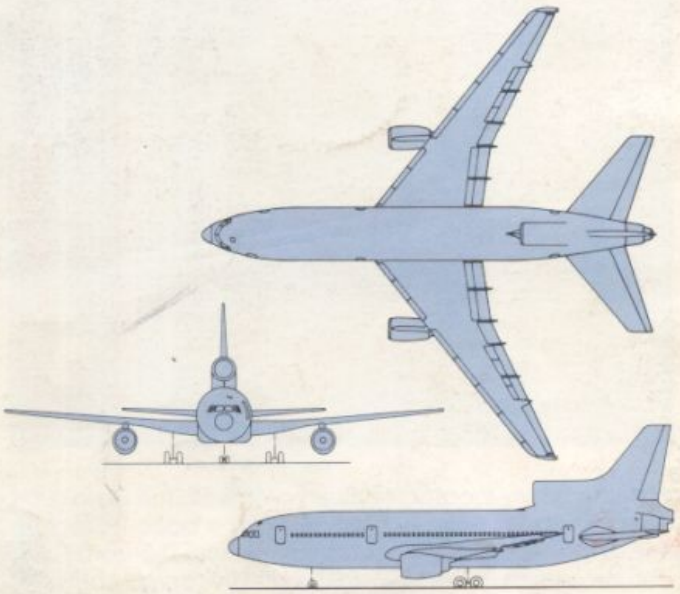
Dimensions and Characteristics

Fuselage Length	164.2 ft	50.1 m
Wing Span	164.3 ft	50.08 m
Tail Height	55.3 ft	16.9 m
Engines (3)	Rolls-Royce RB.211-524B	
Takeoff Thrust (Flat Rated ISA + 19.6°C)	48,000 lb	213.5 kN
Passengers—Mixed Class	246 (24 First/222 Economy)	
Cargo—Pallet Volume (4)	1480 cu ft	42 cu m
Cargo—Container Volume (19 LD-3s)	3002 cu ft	85 cu m
Cargo—Maximum Bulk Volume	4235 cu ft	120 cu m
Cargo—Maximum Load	61,500 lb	27,895 kg
Fuel Capacity	212,000 lb	96,162 kg
Operational Empty Weight	242,967 lb	110,208 kg
Maximum Zero Fuel Weight	338,000 lb	153,316 kg
Maximum Landing Weight	368,000 lb	166,924 kg
Maximum Gross Takeoff Weight	496,000 lb	224,984 kg



TriStar 500

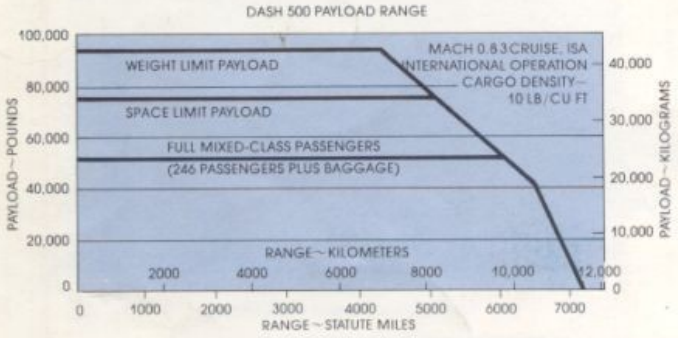
LOCKHEED-CALIFORNIA COMPANY, BURBANK, CA. 91520 PRINTED IN U.S.A.—MAY 1979

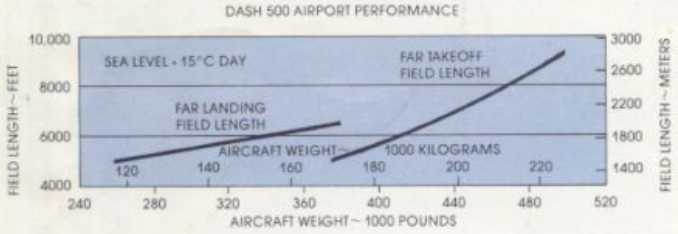
Performance

The Dash 500 TriStar can carry 246 passengers with baggage over 6000 miles (9700 km) at a cruise speed of Mach 0.83, using standard international flight profiles and fuel reserves. Full passenger and cargo loads can be carried on segments of more than 5000 miles (8000 km).

The intercontinental range capability of the Dash 500 with full-passenger payload permits operations over such routes as London to the U.S. West Coast; New York to all cities in Europe including Athens and Moscow; and Tokyo to Australia and New Zealand.

With three Rolls-Royce RB.211-524 48,000-lb thrust engines flat-rated to 95°F (213.5 kN/34°C), the Dash 500 has excellent airport performance over a wide spectrum of operating conditions. Maximum gross weight takeoffs can be made at the majority of the world's international and intermediate airports, and landing performance is exceptional. The Dash 500 can readily use the smaller airports typical of shorter-haul domestic routes as well as those on international routes. The high zero-fuel and landing weights also contribute to this operational flexibility and facilitate good "fly-through" capabilities —allowing intermediate stops without the necessity for refueling.

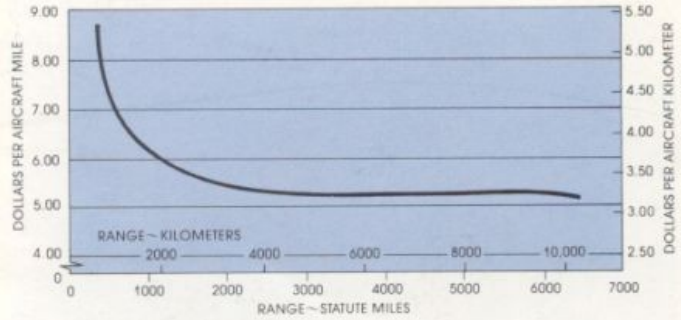


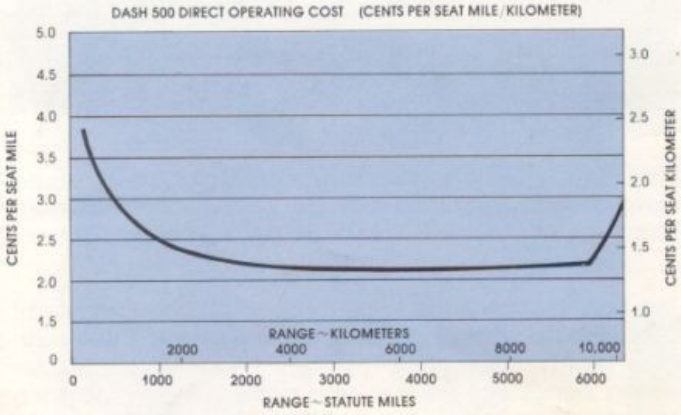


Economics

Compared with other long-range wide-body aircraft, the Dash 500 offers the highest profit potential on the greatest number of routes. Based on a fuel cost of 50 cents per U.S. gallon, (1979 dollars), the Dash 500 has a Direct Operating Cost of $5.50 or less per statute mile ($3.40 or less per kilometer) for ranges from about 2000 miles to over 6000 miles (3200 km to 9650 km). For the same range spread, the Dash 500 costs less than 2.25 cents per seat mile (1.40 cents per seat kilometer).

The Dash 500 has the lowest breakeven load factor of all the long-range wide-body jets—requiring fewer passengers at all distances to fully cover operating costs. This enables the Dash 500 to maintain or expand existing service levels more easily and permits earlier introduction of longer-haul operations.





The L-1011-500 (Dash 50) is the long-range member of the L-1011 TriStar family of transports. The principal differences of the Dash 500 from the basic Dash One TriStar are:

- ☐ Removal of fuselage sections fore and aft of the wing to reduce fuselage length by about 13 feet (4 meters).
- ☐ Higher thrust engines.
- ☐ Increased fuel capacity with additional tanks located in the wing center section.
- ☐ Location of galley services on the main deck.
- ☐ Removal of the galley lifts.
- ☐ Enlarged forward cargo compartment and cargo door.
- ☐ Strengthening of airframe structure and landing gear to allow for an increased maximum gross takeoff weight of 496,000 lb (224 984 kg).

The most important consideration in the development of the Dash 500 was the achievement of maximum commonality with the basic L-1011 series to minimize initial aircraft cost and the impact on customer resources. The operationally proven, advanced technology features of the TriStar are retained, including the following:

- ☐ Flying Horizontal Stabilizer—to eliminate the dangers of mistrim during takeoff and assure a larger control margin.
- ☐ Direct Lift Control—to achieve more precise glide-slope tracking and a smoother approach/descent flight path.
- ☐ Autoland System—to permit landing under reduced ceiling and visibility conditions (certified for Category IIIa operations and designed to meet Category IIIb requirements).
- ☐ Long-Life Airframe Structure—use of advanced structural materials, metal-to-metal bonding and extensive corrosion protection.

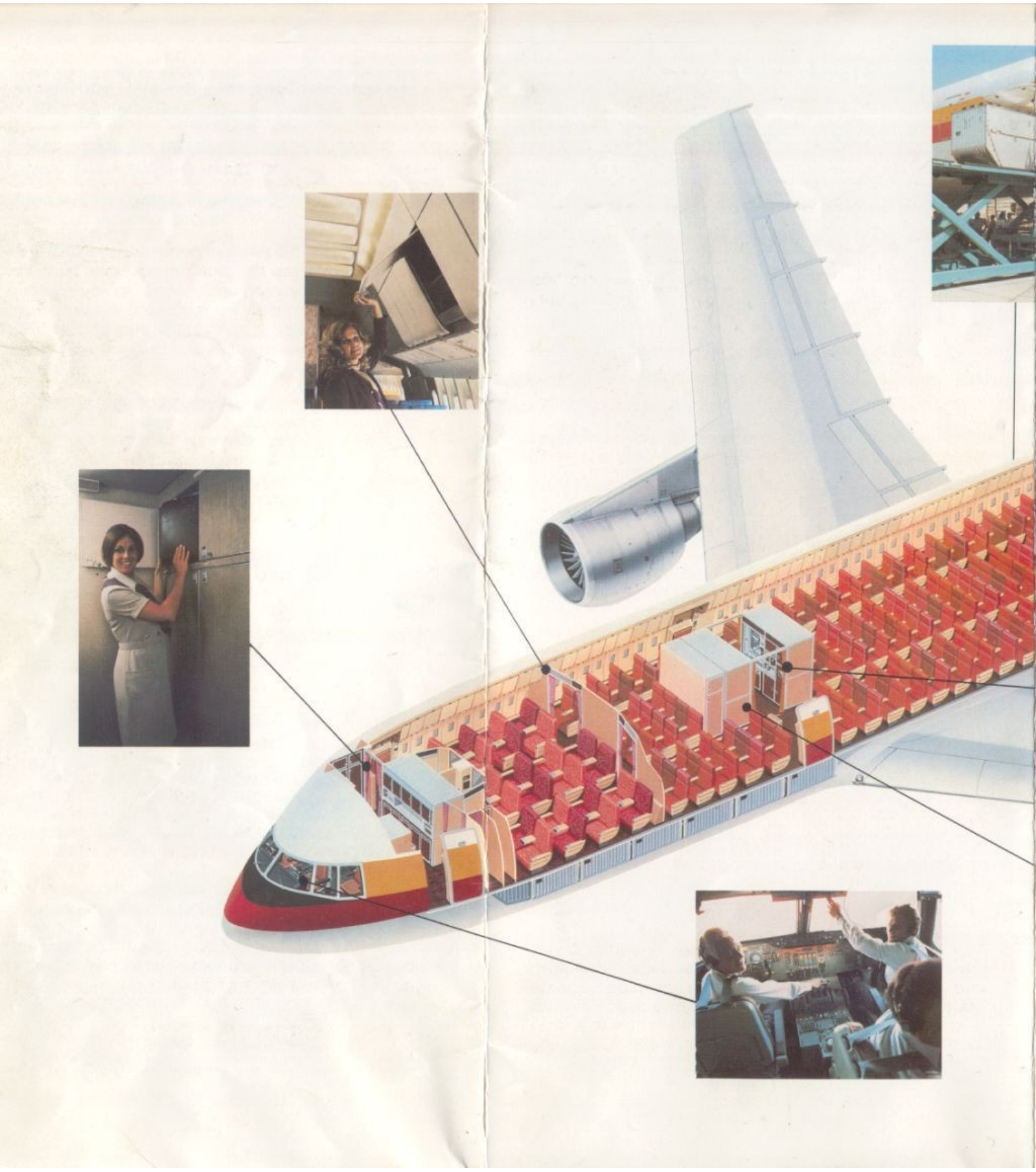
Aircraft in the TriStar series are technologically the most advanced commercial airliners available. The Dash 500, as the latest L-1011 derivative to enter airline service, maintains this tradition of technical ascendancy by incorporating many recent developments. A concerted ongoing development program ensures continued product improvement.

Recent advanced technology features incorporated on or available for the Dash 500 include:

- ☐ Wing Extensions and Active Controls—to further improve the fuel efficiency of the Dash 500.

- ☐ Flight Management System—to provide automatic, accurate control of airplane speeds and engine thrust during climb, cruise, and descent.

- ☐ Digital Autopilot—to provide improved operational capability and display of information, and increased maintainability and reliability.



TriStar
500

Features

The Dash 500 can accommodate 246 passengers (24 first class and 222 economy class) in a standard international configuration. With this arrangement, first-class seating is six abreast at 42-inch (107-cm) pitch and economy-class seating is nine abreast at 34-inch (86-cm) pitch. Pairs of double-width passenger doors, with cross-aisles between them, are located at the front and rear of the cabin and just forward of the wing. There are no "over-wing" cabin doors so that conventional mobile passenger stairs and bridges may be used. The two aisles, which run the full length of the cabin, are wider than those found in any competitive wide-body transport with comparable seating arrangements.

One of three cabin-level galley complexes is located at the front to support the first-class cabin, and the other two are located at the center cross-aisle and at the rear to support the economy-class cabin. There is a total of seven lavatories, two at the front of the cabin and five at the rear. Movie screens can be mounted on the aft walls of the forward lavatories and the center galley complex.

Both the first-class and economy-class cabins have coat closets as well as several miscellaneous stowage units. In addition, overhead sidewall stowage cabinets are located along each side for the entire length of the cabin, and overhead centerline cabin-length stowage cabinets are available as an option.

With the galley located on the main deck, the Dash 500's cargo capacity is larger than that of the basic TriStar with the longer fuselage. A total of nineteen LD-3 containers can be carried in the forward and center cargo compartments, which have powered loading systems. The aft cargo compartment is designed for bulk cargo. The forward cargo compartment has a large 104-inch by 68-inch (264 x 173-cm) door which permits loading of four 88-inch x 125-in (224 x 317-cm) pallets in lieu of twelve LD-3 containers. Large items of bulk cargo may also be carried as well as various combinations of pallets, containers and bulk cargo.

Maximum allowable weight loading of all three cargo compartments is 61,500 lb (27,895 kg) and the maximum space limited volume is 4235 cubic feet (120 cubic meters).

The flight station is the largest and most comfortable of any wide-body airplane and provides for a three-man crew plus two observers. The flight engineer has a side-facing panel, but he can also position himself to face forward, when required, to assist in instrument and traffic scanning. The flat glareshield is designed to provide good horizontal reference in all flight modes and the windshield posts have also been carefully oriented to provide good vertical reference. The large single-curvature windshield provides outstanding visibility; the side posts are further aft than those on any contemporary transport design, allowing 50 degrees unrestricted peripheral vision for the pilots.

Good Neighbor

Noise regulations aimed at reducing community exposure have had an ever increasing influence on the design and operation of aircraft. Recognized as the quietest of the large jet transports, the L-1011 TriStar's noise characteristics are appreciably less than those of competitive widebody aircraft. Airport noise levels of the Dash 500 are well below the latest (1978) noise limits specified in the U.S. Federal Air Regulations (FAR) Part 36, ensuring that expensive modifications will not be required to meet more stringent noise standards in the future. This also means that the L-1011 is the least likely to be affected by any operational restrictions imposed by local authorities, such as curfews or limitations on number of flights.