

This booklet provides a list of positive features which Lockheed incorporates in the TriStar. Some of these features are unique to the TriStar while others have been used by some competitive models. The list includes items which concern:

Passenger Appeal, Comfort & Safety	1,2,3,4
The Flight Crew	5,6
The Cabin Crew	7,8
Maintenance and Ground Crews	9,10
Performance and Safety	11,12
Productivity and Profit	13,14
Community Acceptance	15,16
L-1011 Operators' Comments	17,18

Superior Design  
Features for:

# Passenger Appeal, Comfort & Safety



## Double Width Front Loading Door

Allows passengers to load and exit two abreast. Also facilitates evacuation during emergencies.



## No Doors over the Wing

This allows faster evacuation of passengers and optimum layout of cabin class areas.

## Wing Engines further from Cabin

The L-1011 has a highly effective rudder which allows the wing engines to be placed further from the cabin walls. This reduces cabin noise.

## Three Air Conditioning Supplies

Full operation permits a complete change in cabin air every three minutes. Adequate comfort can be maintained with one supply.

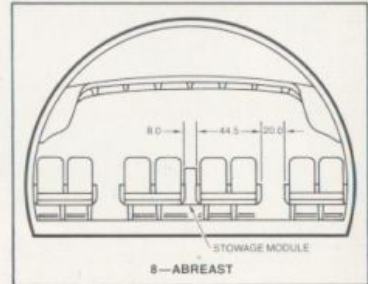
## Passenger Utilities Overhead

Overhead placement of air, lights, and oxygen, with controls in the seat arm, requires no compromises in seat design and comfort.



## Wider Seats

Coach Seats are more than an inch wider than on older jets. A wider floor allows more space than on some other wide bodies.





## Passenger Appeal, Comfort & Safety

### Lavatory Arrangement in Aft Cabin

The hemispherical aft cabin bulkhead accommodates five easily accessible lavatories, completely remote from food service areas.

### Ceiling Treatment

The L-1011 cabin decor has been rated as most pleasing of all wide body aircraft. The recessed ceiling areas and cold cathode indirect lighting are innovative.



### Direct Lift Control

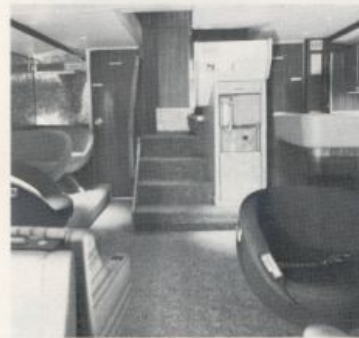
This system provides a smoother approach flight, calmer passengers, and more accurate automatic landings.

### Softer Landings

The soft-land design of the L-1011 shock struts pleases passengers, especially when combined with the easy touch-down of AUTOLAND.<sup>®</sup>

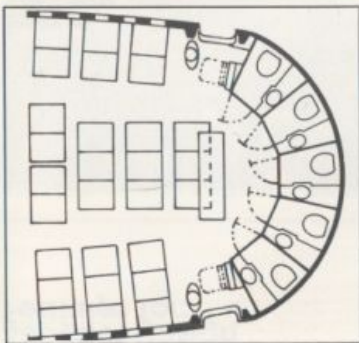
### Optional Lower Lounge

A luxurious lower deck lounge with 16 saleable seats is a unique optional feature.



### Optional Airstairs

Integral folding airstairs are available to expedite passenger loading and provide self sufficiency where needed.



Superior Design  
Features for:

# The Flight Crew



## Cockpit Layout

Design emphasizes safety, comfort, convenience, and visibility. Excellent vertical and horizontal reference is provided.

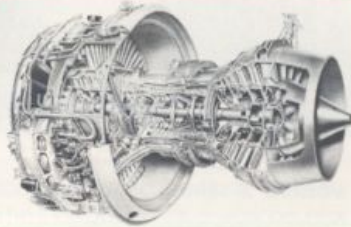


## Handling Characteristics

Total satisfaction was achieved by a combination of computerized design parameters and airline pilots evaluation.

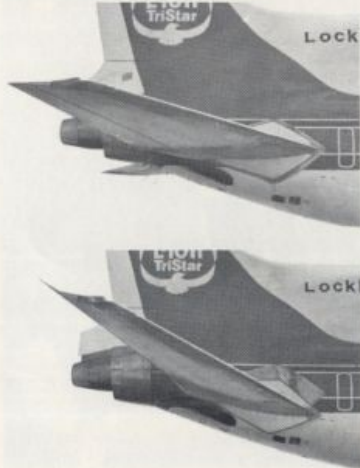
## Rolls-Royce Engines

Fewer stages means fewer parts. The three spool concept provides shorter, more rigid rotating assemblies and requires less pilot attention since each spool operates at its optimum RPM.



## Flying Tail

Provides greater control effectiveness. And it is less complex than conventional stabilizer/elevator combinations.



## AUTOLAND® System

This fail-operative design provides accurate soft landings for true all-weather operation. Cat IIIA was included in initial aircraft certification.

## Curved Windshield

The line-replaceable curved design reduces noise, drag, and internal reflections and provides an unobstructed view.



Superior Design  
Features for:

# The Cabin Crew



## Galley Lifts

The two galley lifts are able to carry either carts or personnel, thereby providing faster food/beverage service.

## Spacious Galley

The optimum vertical location of the main cabin and galley floors allows a wider floor in each case with less cramped quarters and more head room.

## Advanced Infrared Ovens

Five new-technology infrared ovens are located immediately below the six refrigerators for easy transfer of food trays.

## Galley Refrigerators

Full refrigeration is supplied without the use of dry ice and its CO<sub>2</sub> fumes.

## Retractable Coat Rod Compartment

The new type coat storage compartments incorporate rods which retract into the ceiling saving valuable floor space.



## Multiple Galley Escape Routes

Two personnel rated lifts plus the outside loading door and overhead escape hatch provide multiple exit routes.

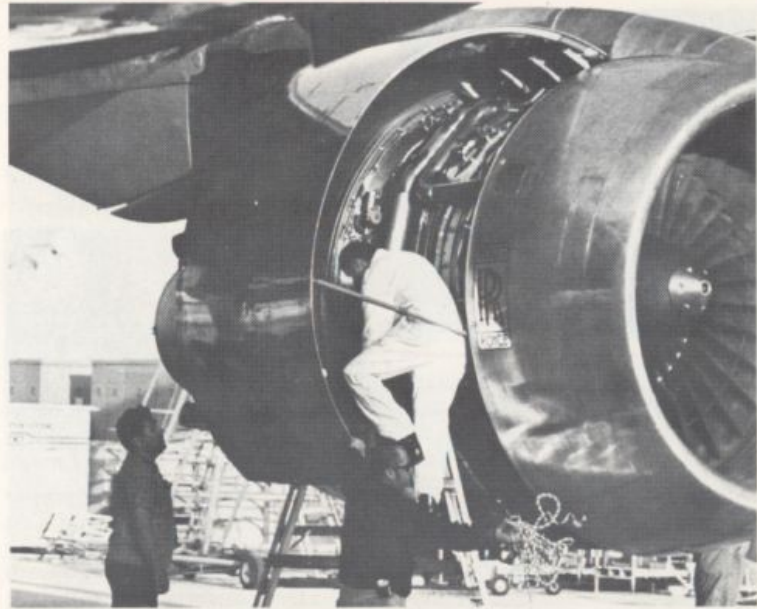


## Galley Work Counter & Window

The L-1011 galley has a work counter, sink and running water plus a small window for use of the galley crew.

Superior Design  
Features for:

# Maintenance & Ground Service Crews



## Separate Galley Loading Door

Since the galley has its own loading door, cargo loading and galley servicing can proceed simultaneously.

## Separate Hydraulic Center

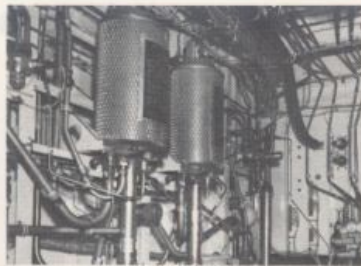
All four hydraulic systems may be conveniently serviced from a single center. Fewer parts are required.

## Center Engine Position

In the S-duct arrangement the engine is 10 ft. lower than a fin mounted engine. This permits easier access for maintenance or engine changes.

## Built-In Test Equipment

Fault isolation and built-in test equipment reduce maintenance related delays and unjustified parts removals.



## Electronic and Electrical Service Centers

Avionics and electronic equipment is located directly below the flight station and is accessible during flight. The electrical service center is also accessible from the galley during flight.



## Optional Spare Engine Pod

The ability to carry a spare engine under the wing on a scheduled flight reduces the down time at out-stations and reduces the spares required.



Superior Design Features for:

Lockheed Model 707-320 (707-320) is a four-engine, jet-powered, medium-range transport aircraft. It was developed by Lockheed Aircraft Corporation and first flew in 1957. The aircraft is notable for its high-wing configuration and T-tail. It has been used by numerous airlines and military forces around the world.

# Performance & Safety



## Flying Tail Performance

Provides greater longitudinal control effectiveness, particularly at high speeds, and prevents jet upset accidents. It also eliminates trim problems.



## Direct Lift Control Performance

Minimizes frequent attitude changes during approach. Provides faster control response and improves landing accuracy.

### DIRECT LIFT CONTROL

DLC (SPOILER) CONTROL OF FLARE TRAJECTORY AND STABILIZER CONTROL OF ATTITUDE RESULT IN:

- RAPID RESPONSE—HIGHER SYSTEM GAIN
- REDUCED ATTITUDE CHANGES
- IMPROVED SPEED STABILITY
- LOWER FLARE HEIGHT
- LESS SENSITIVITY TO WIND VARIATIONS
- REDUCED VARIATIONS AT TOUCHDOWN IN: VERTICAL VELOCITY LONGITUDINAL SCATTER



## Four Hydraulic Systems

More reliability with fewer parts and longer pump service life. One system alone can maintain safe flight operation.

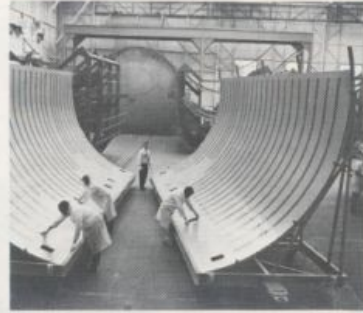
## Redundant Brake System

A separate alternate braking system is functionally identical to the normal system but operates from a different hydraulic system.



## Bonded Structure

Thermal adhesive bonding combined with rivets provides double joint strength. Corrosion protection is advanced by a factor of ten.



## Aged Clad Skin

Minimum corrosion is assured by the use of clad exterior wing skins and age stabilized aluminum alloys.

Superior Design  
Features for:

# Productivity & Profit

## Fuel Efficiency

The RB.211 engines provide 25% better specific fuel consumption than pre-1970 engines, with a corresponding decrease in fuel burned per seat-mile.

## Cabin Flexibility

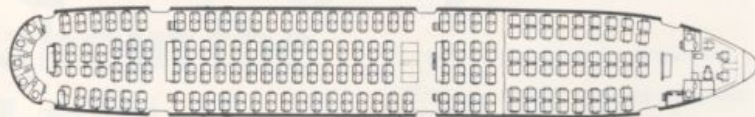
The cabin was designed to accommodate a wide range of airline needs, not only in first class and coach ratios but also in the total seat capacity – up to 400.

## Cargo Capacity

Wide body aircraft have voluminous cargo holds which accommodate two abreast LD-3 containers. With an optional larger forward cargo door, pallets may be carried.

## Maintainability

The revolutionary maintainability improvements designed into the L-1011 have reduced the frequency of routine and periodic maintenance checks.



## Reliability

L-1011 airline fleet dispatch reliability has reached 98.9%, against the original target of 99%.



## S-Duct Payload Benefits

The S-duct center engine location benefits payload by its lower fuselage weights. It allows a longer constant fuselage section thereby adding seating space. The more effective rudder allows the engines to be located further outboard on the wings and provides an optimized center cabin door location. The exhaust efflux provides an effective fineness ratio increase and hence reduces drag.



Superior Design  
Features for:

# Community Acceptance

## Noise

The RB.211 engine produces the least noise of any of the new generation engines and the L-1011 produces 60 to 75 percent less relative annoyance during takeoff and approach than pre-1970 large four-engine fan jet commercial transports.



## Smoke

Design of the annular combustion chamber and the fuel spray nozzle results in combustion flow patterns which reduce smoke generation to near invisibility.



# What L-1011 Operators are saying about the L-1011:

## U.S. Operators Spokesmen:

- "TriStar is the best wide-body flying today. It is the most comfortable and the safest."
- "L-1011 has reached higher dispatch rate than DC-8 ever did."

• "Best airplane we have ever flown."

• "RB.211 headed toward becoming best of wide-body engines—now living up to original expectations."

• "L-1011 is the best airplane we have ever owned."

## Foreign Operators Spokesmen:

• "The sole reason why we selected TriStars (L-1011s) from among the candidate wide-bodies as the mainstays of our fleet was that, after careful evaluation, we found them technically and economically superior to their competitors."

• "We are very pleased to bring to the people and shippers in (our country) the world's most sophisticated wide-body aircraft—the Rolls-Royce powered Lockheed TriStar."

• "Their fine new aeroplane is the most up-to-the-minute version of the new generation of wide-bodied aircraft, and sets new standards of reliability and comfort for its passengers. The TriStar also sets new standards in quietness of operation which will benefit those who live near airports...."

• "TriStar boasts the most comprehensive and advanced cockpit navigational aids and avionics equipment installed in any commercial jetliner, including the Concorde. It is the most advanced wide-body commercial jetliner in the world...."

• "This high standard of mechanical safety backing up the pilot's sheer flying ability is unsurpassed in any other aircraft. The TriStar gets you to your destination using the most comprehensive, proven, up-to-the-minute set of flying techniques known to the world's commercial airlines."

• "The TriStar aircraft continue to perform extremely well... with no major technical problems developing."