The McDonnell Douglas

DC-9 Super 80

CONFIGURATION GUIDE

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January 1981

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I. Basic Features

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OPTIONAL FEATURES PROGRAM

Since 1965, nearly 1000 DC-9s have flown over 11 billion miles with the highest dispatch reliability and lowest maintenance man-hours per flight-hour of any jet transport. And since the first DC-9 was built, numerous technological and efficiency improvements have been incorporated into each succeeding model. The DC-9 Super 80, newest member of this economical transport family, has added, in addition to markedly increased passenger capacity, engines that are significantly more fuel efficient and quieter than those of its predecessors. The level of technology designed into the DC-9 Super 80, both in the basic aircraft and the optional features offered, is appropriate not only for the 1980s, but beyond.

To assist DC-9 Super 80 customers in developing configurations to meet their specific needs, the McDonnell Douglas Corporation (MDC) has developed a program providing a wide variety of optional features from which airlines can select. These features have been pre-engineered and preplanned to minimize incorporation lead times and to provide more favorable prices. This DC-9 Super 80 Configuration Guide has been prepared to assist the airlines in taking maximum advantage of the program. The first section of the Guide presents pertinent data on the Baseline Configuration, model choices and design characteristics of the DC-9 Super 80 twin-jet. These data provide the base from which the airlines can configure their aircraft by means of the options and Buyer-Furnished Equipment (BFE) choices offered in the subsequent sections of this Guide.

BASIC FEATURES — SECTION I

This section describes the features of the Baseline Configuration — Model 81 — of the DC-9 Super 80, as defined in Detail Specification DS-8000. For more detail, reference should be made to DS-8000 itself, which defines a baseline aircraft powered by JT8D-209 refanned engines with a single-class passenger capacity of 155 and a maximum takeoff gross weight (MTOGW) of 140,000 pounds (63,503 kg).

The DC-9 Super 80 is also offered with optional weights up to 149,500 pounds (67,812 kg) and increased-thrust engines. The Baseline Configuration, the choice of models and the design features of the Super 80 are discussed in Section I of this Guide.

CUSTOM INTERIOR OPTIONS — SECTION II

To respond to individual airline requirements, MDC prepared a series of interior "building blocks" which can, when individually selected, be used to develop a complete customized interior. The options consist of alternative galley locations and sizes, power and water provisions, coatrooms, storage and partition locations and seat spacing, as well as interior decor options.

OTHER CUSTOM OPTIONS — SECTION III

Customer options are alternatives or additions to the features in the Baseline Configuration. These options are defined in Section III as Specification Change Notices (SCNs) and include brief descriptions and sketches, where appropriate. Since these options have been pre-engineered and developed at a favorable price, MDC encourages airlines to select any unique features they may desire from this listing.

BUYER-FURNISHED EQUIPMENT — SECTION IV

A Buyer-Furnished Equipment (BFE) listing is contained in Section IV, along with the equipment manufacturer and part number of the BFE specified in the DS-8000 Baseline Configuration. Where ARINC compatibility allows interchangeability of BFE part numbers, it is noted.

CROSS-REFERENCE INDEX — SECTION V

This index lists the SCNs and interior options in numerical order and cross-references them to ATA chapter, where applicable, and to the Configuration Guide page number on which the item is described.

CUSTOMER OPTIONS AND CHANGES

Customer options offered in this Configuration Guide, and other changes requested by the customer, are not included in the base price of DS-8000 and are therefore subject to separate quotations with respect to price and delivery schedule.

CONFIGURATION GUIDE REVISIONS

In the interim between periodic revisions of the DC-9 Super 80 Configuration Guide, revision sheets will be provided for inclusion in the Guide. However, the data contained in this Configuration Guide are subject to change without notice. In the event of a conflict between the Configuration Guide and the Detail Specification, the latter will prevail.

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General Characteristics

BASELINE CONFIGURATION

The DC-9 Super 80 is a twin-engine jetliner with intermediate range capability that combines the latest advancements in technology with proven features of the DC-9 family. The Super 80 incorporates new engines, wing design, fuselage length and avionics to provide performance characteristics that will meet increasing economic, operational, environmental and regulatory demands of the coming decades.

The airplane's new wing incorporates a 5-1/4-foot-per-side (1.6-m) root extension and 2-foot-per-side (0.6-m) tip extensions which increase its area by 28 percent and the fuel capacity by 59 percent (2161 gallons/8179 liters).

The baseline interior configuration features the contemporary "wide-body" look with enclosed baggage racks and provides accommodations for 155 passengers, single class, and a crew of six (captain, first officer and four flight attendants), as shown in Figure I-1. Five-abreast seating, in combination with the 17.7-inch (0.45-m) seat width, provides a clear aisle width of 19 inches (0.48 m). This results in a comfort level comparable to that of wide-body aircraft and better than any contemporary single-aisle aircraft. The interior has four galleys with hot meal capability and three lavatories. Optional interior arrangements include mixed-class versions,a 165-passenger charter interior and a 172-passenger maximum interior as discussed in Section II.

Figure I-2 shows the general layout and major areas of new design of the Super 80 with changes defined relative to the DC-9 Series 50. The combined effects of airframe, engine and equipment improvements result in improved aircraft efficiency compared to the Series 50, its immediate predecessor.

The DC-9 Super 80 Baseline Configuration, Model 81, is equipped with the Pratt & Whitney Aircraft increased bypass JT8D-209 engine. The operating weights of this aircraft are:

Maximum Takeoff Gross Weight lb/kg	140,000/63,503
Maximum Landing Gross Weight lb/kg	128,000/58,060
Maximum Zero Fuel Gross Weight lb/kg	118,000/53,524

An optional engine and higher operating weights are also offered for the DC-9 Super 80. The operational characteristics of the aircraft so equipped are presented and compared to those of the Model 81 in the following Model Choice discussion.

Figure I-1. Baseline (DS-8000) 155-passenger Single-Class Interior.

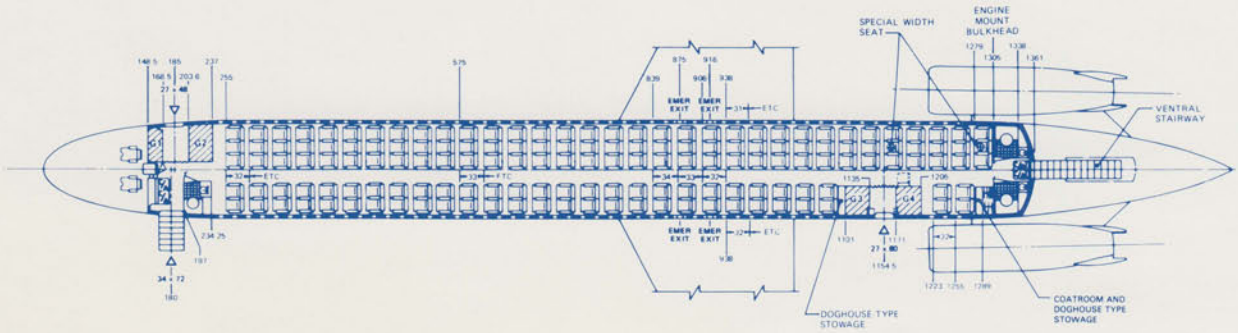

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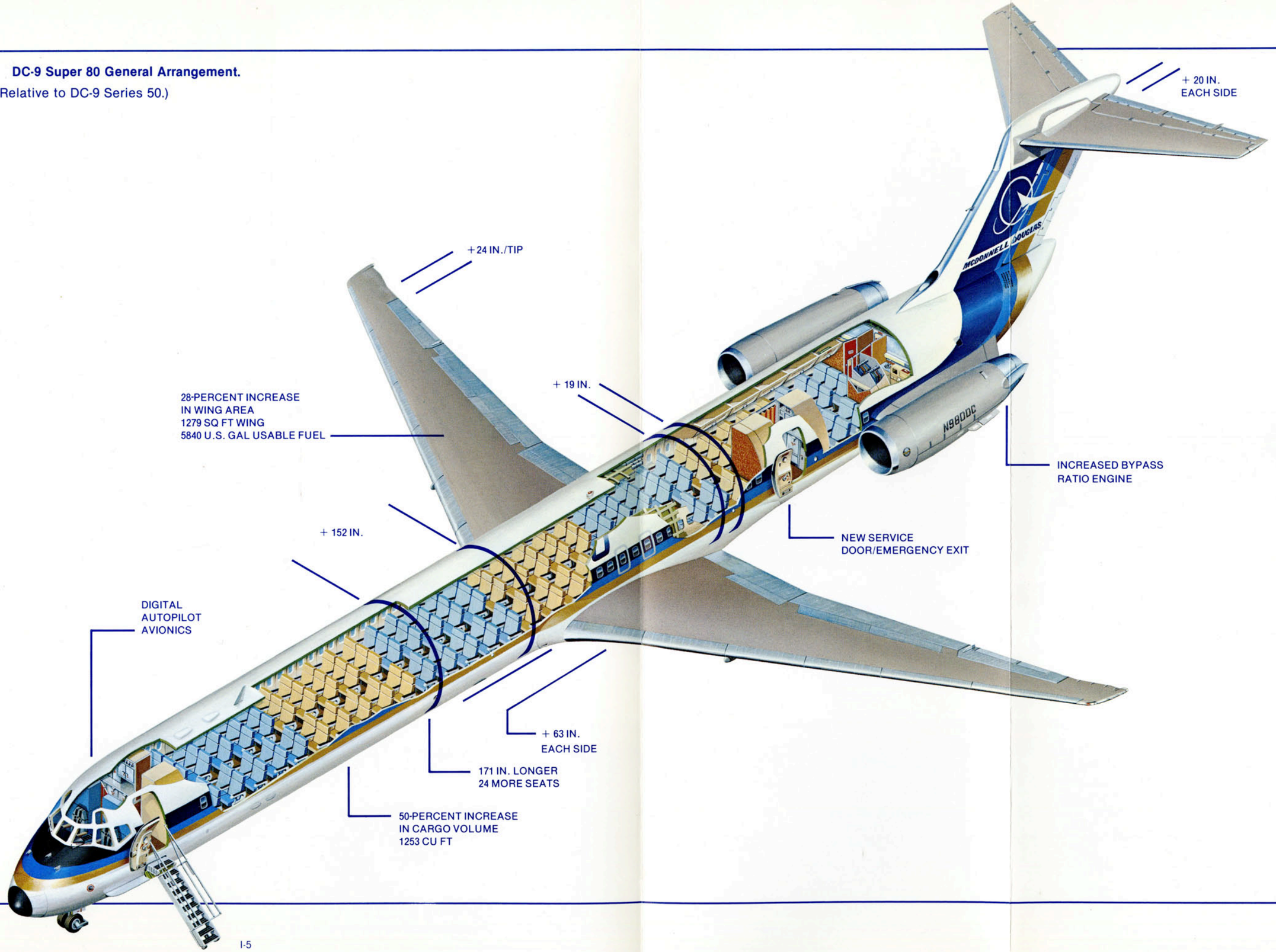
Figure I-2. DC-9 Super 80 General Arrangement.
(Changes Relative to DC-9 Series 50.)



MODEL CHOICES

The Baseline Configuration of the DC-9 Super 80 has a MTOGW of 140,000 pounds (63,503 kg) and is designated the Model 81. Although equipped with the JT8D-209 engine, this model can be powered by the optional Dash 217 engine.

The DC-9 Super 80 configuration with a MTOGW of 147,000 pounds (66,678 kg) is offered as an option and is designated the Model 82. The optional JT8D-217 engine is shown with this model of the Super 80. With either engine, the Super 80 meets all current noise level regulations, plus FAR 36 Stage III and ICAO CAN 5 requirements for new aircraft produced in the 1980s.

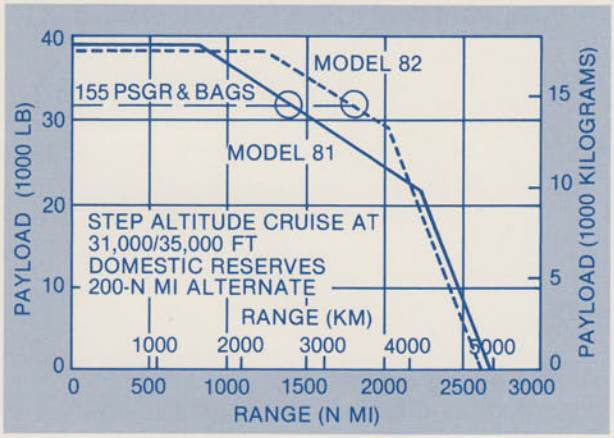
The engine, wing and weight characteristics of the respective models are presented in Table I-I. Optional MTOGWs of 142,000 pounds (64,410 kg) for the Model 81 and 149,500 pounds (67,812 kg) for the Model 82 are available, as defined in Section III.

The optional JT8D-217 engine is offered for operations from airports at high altitudes with predominantly hot temperatures. As an example, the Super 80 on a 500-nautical-mile (927 km) flight with 155 passengers and baggage (31,775 lb/14,413 kg) and operating from a 2000-foot (610-m) altitude airport at 90°F (32°C), takeoff field length with the Dash 217 engine is 6,420 feet (1,957 m) compared to 7,650 feet (2,332 m) with the Dash 209 engine.

PAYLOAD-RANGE

The combination of a new and larger wing, greater fuel capacity and new engines gives the DC-9 Super 80 a significantly improved range capability, with higher payloads, than previous DC-9s, as shown in Figure I-3.

Figure I-3. Payload-Range.



With the optional MTOGW of 142,000 pounds, the range of the Model 81 at maximum payload is increased by 130 nautical miles (241 km), while maximum-payload range of the Model 82 is increased by 170 nautical miles (315 km) with the optional MTOGW of 149,500 pounds.

Table I-I. Super 80 Operational Characteristics.

		Model 81 (Baseline)	Model 82 (Option)
Engines, Pratt & Whitney Aircraft		JT8D-209	JT8D-217
Normal Takeoff Thrust (SLS) (To 77°F/25°C)	lb/N	18,500/82,288	20,000/88,960
Maximum Takeoff Thrust (SLS) (To 84°F/29°C)	lb/N	19,250/85,624	20,850/92,741
Wing Area, Gross	ft^2/m^2	1,279/119	
Wing Area, Trapezoidal	ft^2/m^2	1,209/112	
Aspect Ratio, Trapezoidal		9.62	
WEIGHT AND CAPACITIES			
Maximum Takeoff Weight	lb/kg	140,000/63,503	147,000/66,678
Maximum Landing Weight	lb/kg	128,000/58,060	
Maximum Zero Fuel Weight	lb/kg	118,000/53,524	
Operating Empty Weight	lb/kg	79,427/36,028	79,612/36,112
Fuel Capacity	lb/kg	39,128/17,424	
Belly Cargo Volume	ft^3/m^3	1,253/35.5	
PERFORMANCE			
Cruise Speed	Mach	0.76 long-range cruise 0.80 high-speed cruise	
Takeoff Field Length, MTOGW SL, 84°F/29°C	ft/m	7,680/2,341	7,400/2,256

Design Characteristics

Some of the improvements designed into the Super 80 include a digital flight guidance system, dial-a-flap, 3-position slats, easier access to cargo compartments and a new aft galley service door, in addition to greater passenger capacity, better economics and significantly lower noise levels.

The digital flight guidance system integrates nine flight control subsystems into two identical digital computers, providing lower crew workload, greater reliability and lower maintenance costs.

Dial-a-flap and 3-position slats provide the pilot with the capability of selecting virtually any takeoff lift setting he desires, within specified limits, thus permitting optimum takeoff performance at any location, regardless of inherent airport constraints.

A flat cargo floor, a second loading door in the forward fuselage and an aft compartment door are incorporated to facilitate cargo handling.

Figure I-4 focuses on the major new design elements and pinpoints their locations.

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POWER PLANT

The standard engine for the Super 80 is the P&WA JT8D-209, a growth version of the proven JT8D-9, incorporating a larger (49-inch/1.25-m) fan and low-pressure spool to produce increased thrust, lower fuel consumption and significantly lower noise levels.

The Dash 209 generates a sea-level thrust rating of 18,500 pounds (82,288 N) with an additional 750 pounds (3336 N) of reserve thrust which is automatically available in the event of an engine failure on takeoff. A new radial-lobe exhaust mixer reduces exhaust gas exit velocity which contributes to the low noise level and better fuel efficiency of the engine.

A growth version of the JT8D-17 engine — the Dash 217 — is available as a customer option (see Section III). The Dash 217 has a sea-level thrust rating of 20,000 pounds (88,960 N) with an 850-pound (3781-N) reserve thrust.

The two engines have a high degree of commonality, with most differences confined to the first-stage high-pressure turbine vanes and blades and the combustor section. Through overhaul, the Dash 209 can be converted to a Dash 217.

Design of both the standard Dash 209 and optional Dash 217 engines provides a reduction in fuel consumption of up to 11 percent compared with the JT8D-17, while affording the Super 80 increased range with higher payload compared with previous DC-9s.

The engine, engine-mounted accessories, nose cowling and exhaust nozzle/thrust reverser assembly are detachable from the pylon as a unit. Access doors provide for ease of maintenance and servicing of the compressor section, accessory section and the burner and turbine sections.

Two ignition systems, one 20-Joule DC high-energy start system and one four-Joule AC low-energy continuous system are standard for each engine. The high-energy system provides power to both ignitors on the respective engine. The AC low-energy system provides power to only one ignitor on the engine. An optional ignition system with two 20-Joule AC high-energy systems is available as a customer option. Refer to Section III.

A target-type thrust reverser, together with all necessary actuators, controls and piping is installed for each engine. The thrust reverser is rotated approximately 15 degrees from the vertical to reduce the incidence of foreign object damage and eliminate exhaust gas ingestion.

A monitored automatic reserve thrust (ART) system is provided that will, in the event of an engine failure during takeoff, automatically increase the thrust of the unfailed engine and permit an uninterrupted takeoff. Performance is calculated using the higher thrust in the event of engine failure. An ART/READY annunciator panel is located in the center instrument panel, the upper half of which illuminates when the ART system is in a ready condition. An ART INOP annunciator is located in the engine caution annunciator panel.

In an ARTS inoperative condition, the airplane is certified operable until the end of that flying day.

FUEL SYSTEM

The fuel system for each engine consists of an integral fuel tank with a gravity-fed reservoir and a system supplying fuel by two booster pumps — located in the reservoir — to the engine. In addition, a single integral center wing fuel tank system supplies fuel directly into the supply line to both engines without the use of the crossfeed system. An interconnect system and crossfeed valve between the fuel tank supply systems permits the use of fuel from either wing tank to both engines.

Total usable fuel capacity is approximately 5,840 gallons (22,106 liters).

	U.S. Gal./Liters
Left Wing	1,383/5,235
Right Wing	1,383/5,235
Center Wing	3,074/11,636
TOTAL	5,840/22,106

FLIGHT COMPARTMENT

The flight compartment has accommodations for two pilots (captain and first officer) and an observer. The arrangement is designed such that the aircraft can be operated by one pilot from either the left-hand or right-hand seat. An overall view of the flight compartment is shown in Figure I-5.

All instruments, except seven-segment digital displays, have matte white dial markings on nonspecular black faces and are readable during daylight without artificial lighting. All standard instruments are graduated in United States units of measure for landplanes (feet per minute, gallons, pounds, etc.), except temperature indicators and airspeed indicators. Temperature indicators are graduated in degrees Centigrade, except the cabin temperature indicator which is graduated in degrees Fahrenheit. Airspeed indicators are graduated in knots or Mach number, as appropriate. All flight compartment placards read in the same units as the instruments affected.

A center instrument panel separates the pilot's and first officer's instrument panels, and an overhead switch panel is installed in the ceiling between the captain's and first officer's stations. Radio and navigation control panels are installed forward and aft of the center control pedestal, on the glareshield and on the overhead panel. The arrangements of the instrument panels, overhead panel and the center control pedestal are shown in Figures I-6 through I-8.

The captain's and first officer's altimeters provide an output of barometric setting (linear with feet correction) to the digital air data computer and display altitude as received in serial digital format from the air data computer. Barometric settings are in inches of mercury and millibars.

Figure I-4. Inboard Profile.

1. Three-panel windshield with openable clear-views
2. Two-man flight crew
3. Advanced digital avionics and integrated cockpit
4. Weather radar
5. Cat IIIa autoland (fail-passive, 50-foot decision height)
6. Electronic equipment
7. Forward airstair
8. 27- by 48-inch forward galley service door
9. Overhead stowage modules
10. 464 cubic feet forward cargo volume; 346 cubic feet center cargo volume
    - — Two 53- by 50-inch forward cargo doors
11. High-lift, low-drag, clean wing
    - — Full-span 3-position slats
    - — Double-slotted flaps
    - — Dial-a-flap optimum positions
12. P&WA JT8D-209 refan engines standard
    - — 18,500-pound takeoff thrust
    - — CAN 5 noise levels
13. Optional P&WA JT8D-217 refan engines
    - — 20,000-pounds takeoff thrust
    - — CAN 5 noise levels
14. 443 cubic feet aft cargo volume
    - — 53- by 50-inch aft cargo door
15. Electric stabilizer trim
16. Manual elevator with hydraulic boost
17. Powered rudder
18. Manual standby control tab
19. 27- by 60-inch aft galley service door
20. Improved auxiliary power unit
    - — Self-sufficient ground power
    - — Starting, air conditioning and electrical power
    - — Inflight electrical power
21. 5-rotor disc brakes
    - — Improved Mark IIIa anti-skid
    - — 1000-landing brake life
22. Tail cone evacuation slide
23. Aft ventral stair
24. Optional automatic braking

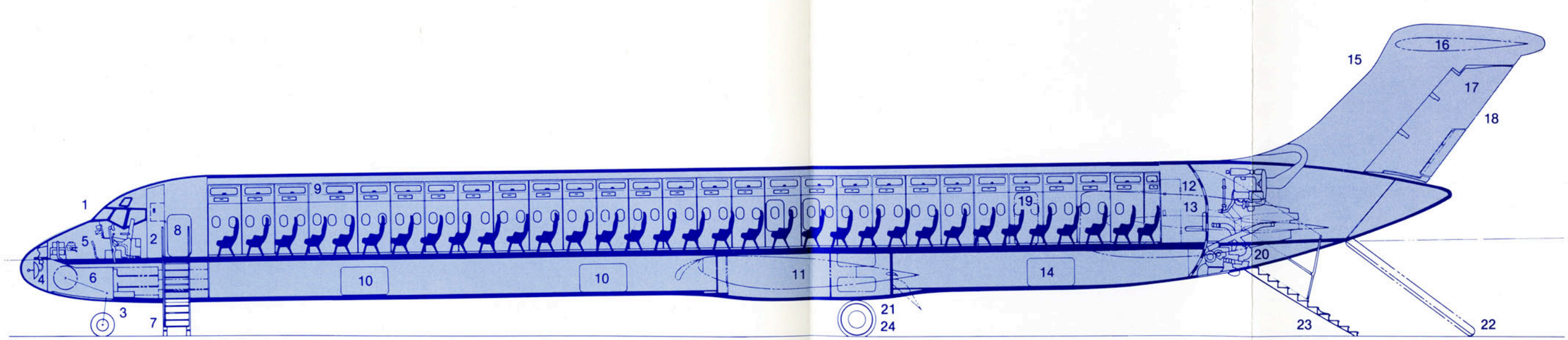

Figure I-5. Overall Cockpit Perspective.

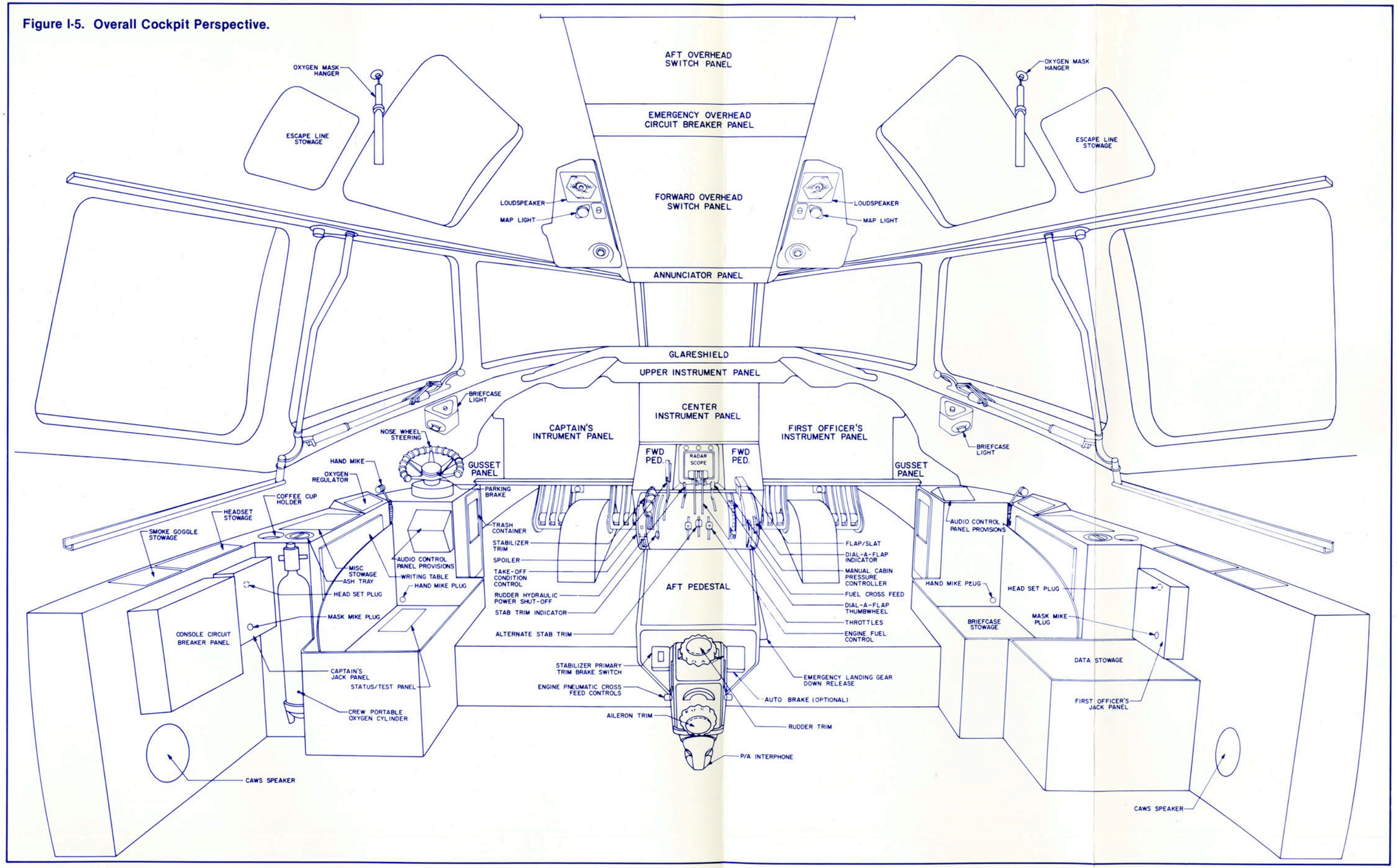

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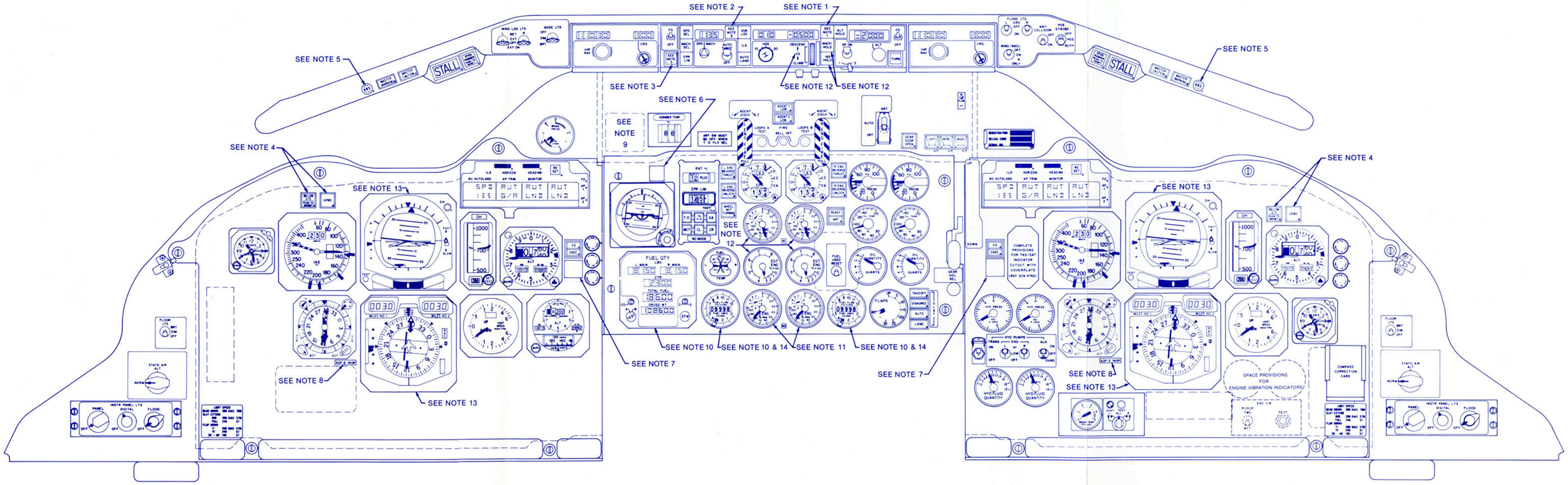
Figure I-6. Pilots' Instrument Panel.



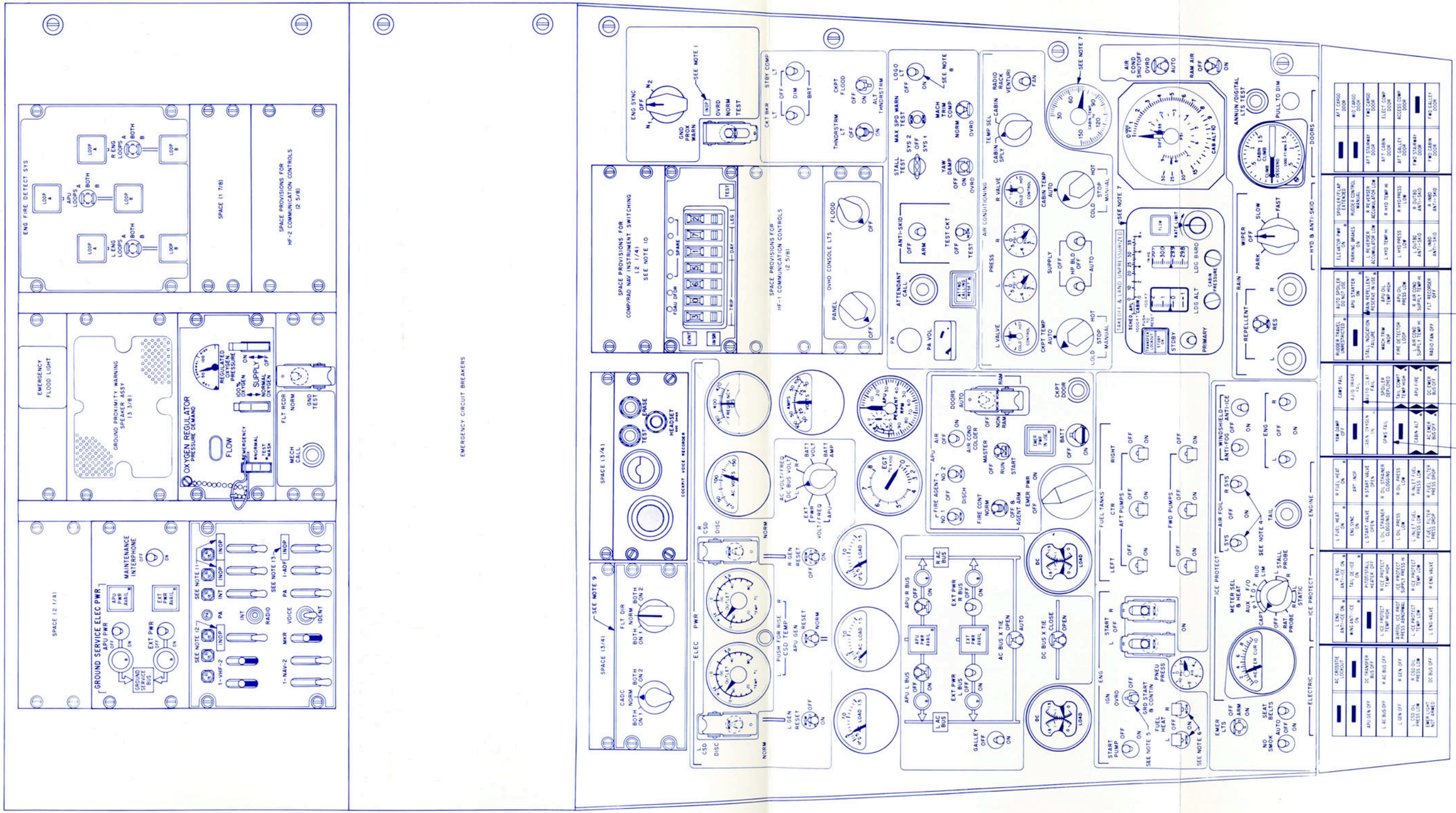
NOTES:

1. SPACE RESERVED FOR "VERT NAV" SWITCH. BLANK SWITCH IS INSTALLED.
2. SPACE RESERVED FOR "NAV" SWITCH. BLANK SWITCH IS INSTALLED.
3. SPACE RESERVED FOR "BACK CRS" SWITCH. BLANK SWITCH IS INSTALLED.
4. ANNUNCIATOR LIGHTS TO BE PLACARDED INOP UNTIL COMPLETE SYSTEM IS INSTALLED.
5. SPACE PROVISIONS FOR "AUTO BRAKE" SYSTEM.
6. SPACE PROVISIONS FOR "-209/-217 EPR SELECT" SWITCH.
7. SPACE PROVISIONS FOR "COMPASS SWITCHING AND NAV SWITCHING."
8. ADF-2 INOP PLACARD TO BE REMOVED WHEN ADF-2 SYSTEM IS INSTALLED.
9. SPACE PROVISIONS FOR MARKER BEACON SENSITIVITY SWITCH.
10. REVISE INSTRUMENTATION FROM ENGLISH TO METRIC GRADUATIONS.
11. INSTALLATION OF -217 ENGINE IN LIEU OF -209 ENGINE REQUIRES THE REPLACEMENT OF INDICATORS.
12. REVISE VERTICAL SPEED MODE CONTROL DISPLAY FUNCTIONS.
13. INSTALL SPERRY ADI AND HSI INDICATORS IN LIEU OF COLLINS INDICATORS.
14. FUEL FLOW INDICATORS WILL CHANGE WHEN METRIC GRADUATIONS AND -217 ENGINES ARE REQUIRED.

Figure I-7. Overhead Panel.

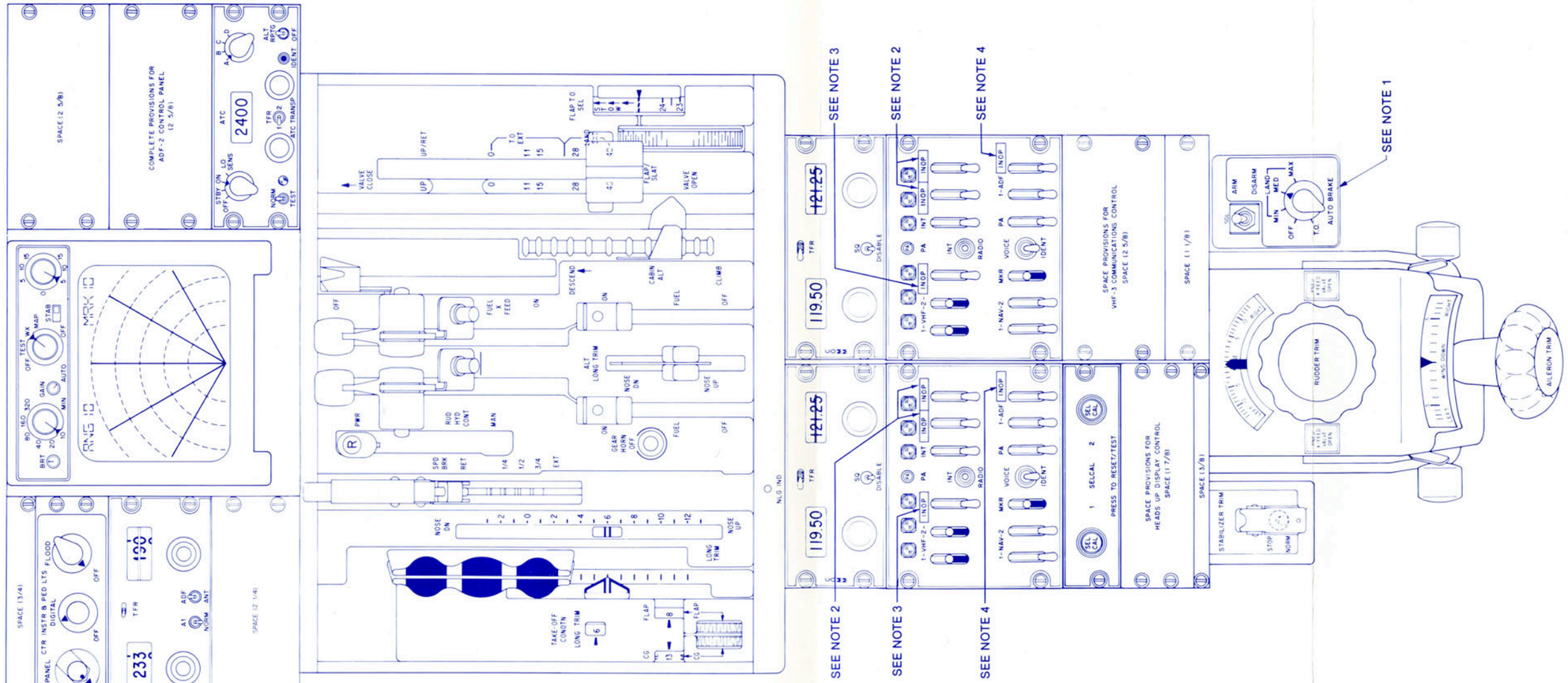
NOTES:

1. ANNUNCIATOR LIGHT "GPWS FAIL" IS INOPERATIVE UNTIL COMPLETE SYSTEM IS INSTALLED. LEGEND WILL ILLUMINATE ONLY WHEN ANNUNCIATOR LIGHT TEST SWITCH IS OPERATED. SWITCH TO BE PLACARDED INOP UNTIL COMPLETE SYSTEM IS INSTALLED.
2. SPACE PROVISIONS FOR "AUTO BRAKE FAIL" ANNUNCIATOR LIGHT.
3. SPACE PROVISIONS FOR BLUE "APU STARTER ON" ANNUNCIATOR LIGHT.
4. TO PROVIDE AUTOMATIC TAIL DEICING REQUIRES ONLY ONE AIRFOIL SWITCH.
5. INSTALLATION OF 20 JOULE A-C IGNITION SYSTEM REQUIRES A ROTARY IGNITION SWITCH.
6. PROVIDE AUTOMATIC ACTUATION OF AIR/FUEL HEATER SYSTEM.
7. REVISE INSTRUMENTATION FROM ENGLISH TO METRIC GRADUATIONS.
8. INSTALLATION OF LOGO LIGHTS REQUIRES AN ON-OFF SWITCH BE INSTALLED.
9. INSTALLATION OF A THIRD VERTICAL GYRO REQUIRES THE REMOVAL OF THE TWO SWITCH INSTRUMENT SWITCHING PANEL AND THE ADDITION OF A THREE SWITCH INSTRUMENT SWITCHING PANEL.
10. INSTALLATION OF COMPASS NAV SWITCHING REQUIRES THE ADDITION OF TWO SWITCH INSTRUMENT SWITCHING PANEL.
11. HF-1/-2 SWITCH TO BE PLACARDED INOP UNTIL COMPLETE SYSTEM IS INSTALLED.
12. VHF-3 SWITCH TO BE PLACARDED INOP UNTIL COMPLETE SYSTEM IS INSTALLED.
13. ADF-2 SWITCH TO BE PLACARDED INOP UNTIL COMPLETE SYSTEM IS INSTALLED.



EMERGENCY CIRCUIT BREAKERS

Figure I-8. Pedestal Panel.



NOTES:

1. SPACE PROVISIONS FOR AUTO BRAKE SYSTEM.
2. HF-1/-2 SWITCH TO BE PLACARDED INOP UNTIL COMPLETE SYSTEM IS INSTALLED.
3. VHF-3 SWITCH TO BE PLACARDED INOP UNTIL COMPLETE SYSTEM IS INSTALLED.
4. ADF-2 SWITCH TO BE PLACARDED INOP UNTIL COMPLETE SYSTEM IS INSTALLED.

Servoed Mach/airspeed indicators are installed for both captain and first officer which display indicated airspeed, V_{mo} and Mach number.

A counter/pointer standby pneumatic altimeter/airspeed indicator is installed on the captain's instrument panel for backup.

Two electric vertical speed indicators are provided, one for each pilot, which display vertical airspeed from 0 to 6000 feet (1827 meters) per minute.

Complete provisions are installed for a true airspeed/static air temperature (TAS/SAT) indicator on the first officer's instrument panel. (See Section III for installation.)

Two digital central air data computers (CADC) are installed in the electrical/electronics compartment. An air data instrument switching unit, controlled by the CADC switch, is installed in the electrical/electronics compartment to provide the capability of driving both pilots' primary air data displays simultaneously from either CADC-1 or CADC-2.

Each pilot is provided a Collins horizontal situation indicator (HSI) which presents a pictorial display of heading, VOR, glideslope and localizer deviation, to-from information, selected course and heading. Two digital readouts are provided for displaying DME information. Sperry HSIs are available as a customer option. Refer to Section III.

The captain and first officer are provided attitude director indicators (ADI) to display pitch and bank information, glideslope and localizer deviation, flight director steering command, slip-and-skid information, speed deviation and radio altitude. Sperry ADIs are available as a customer option. Refer to Section III.

A flight mode/instrument warning annunciator panel is installed on each of the pilot's instrument panels. The units display flight director, autopilot and autothrottle flight modes.

Two vertical gyros installed in the forward accessory compartment provide positive orientation of the gyro base to within 1/4 degree of the fuselage reference plane in roll and pitch axes.

Each vertical gyro and attitude indicating system includes monitoring of gyro speed, loss of gyro synchro-excitation, indicator servo null and loss of indicator power. A third vertical gyro for attitude switching, compass both on -1/both on -2 switching and NAV both on -1/both on -2 switching is available as a customer option. Refer to Section III.

Dual Digital Flight Guidance System — Two identical Sperry digital computers, which operate separately from each other, provide altitude alert, stability augmentation, automatic pilot, flight director, speed control, thrust rating, automatic reserve thrust and full-time automatic throttle functions. The autopilot provides a fail-passive automatic landing mode to allow landing in Category IIIa weather — 50-foot (15.2-m) decision height and 700 feet (213.4 m) runway visual range. An autoland rollout guidance function is also available as a customer option. Refer to Section III.

A glareshield-mounted flight guidance control panel provides the following functions:

- Automatic pilot engagement and mode selection
- Flight Director engagement and mode selection
- Autothrottle engagement and mode selection
- Altitude advisory and pre-select
- Selection of which guidance computer is in control of autopilot, autothrottle, automatic reserve thrust, thrust rating, altitude alert and stability augmentation.

A monitored altitude alert system driven by the selected digital guidance system provides various visual and aural annunciations to the flight crew, informing them of various levels of deviation from selected altitude.

Stability augmentation is provided in the pitch axis by a Mach trim compensator system and in the yaw axis by a yaw damper system.

Automatic Pilot — Two monitored automatic pilot functions are provided, one by each of the two digital computers. Each automatic pilot provides three-axis control of the aircraft under all normal conditions of attitude, altitude, airspeed, environment and flight configuration encountered in operation.

The automatic pilot and stability augmentation functions are fail-passive whenever all of their dual input sensors are operative. When one noncritical sensor is inoperative, the failure protection status reverts from fail-passive to fail-safe.

Red disengage warning lights flash for any automatic pilot disengagement. An aural disengage warning sounds whenever the automatic landing mode has been engaged and the autopilot is subsequently disengaged.

Two monitored flight director computations are provided, one by each of the two digital computers. Computer 1 normally provides signals for the captain's instruments and computer 2 for the first officer's. These computations are integrated with the autopilot computations and have complete mode compatibility except as specified herein. The flight director functions are certified to FAA Category II requirements. Full flight director capability is retained after loss of any single input sensor except those required for Category II operation. Flight director/speed control switching is provided.

Integrated automatic pilot and flight director modes both operate simultaneously in each of the following modes except as noted:

- Takeoff (Flight Director Only)
- Go-Around
- Vertical Speed
- Altitude Hold
- Altitude Pre-Select
- IAS/Mach Hold
- Heading Hold
- Heading Select
- VHF Omnirange (VOR)
- Instrument Landing System
- Automatic Glideslope and Localizer Capture and Tracking
- Bank Angle Limit Function
- Automatic Landing (Automatic Pilot Only)
- Turbulence (Automatic Pilot Only).

Two monitored speed control functions are provided, one by each of the two digital computers. During takeoff and go-around, the system provides two takeoff speed schedules: V_2 plus 10 knots command for two-engine operation and V_2 for single-engine operation. If an engine failure occurs between V_2 and V_2 plus 10 knots, the existing speed is used as the reference.

Two monitored full-time automatic throttle functions are provided, one by each of the two digital computers. The automatic throttle controls the thrust of each engine under all normal conditions of attitude, airspeed environment and aircraft configurations encountered during all phases of takeoff, flight and final landing approach. The throttles are driven by only one computer at a time. The system provides takeoff speed schedules and makes the necessary adjustment for single-engine operation.

Optional Head-Up Display — The DC-9 Super 80 incorporates as a customer option a head-up display (HUD) that provides reductions in crew workload and increases in safety. This system is the first of its kind to be offered in commercial aviation and is available in either a single or dual arrangement. HUD is designed to assist the pilot in precision and visual approaches by presenting data on a see-through acrylic block from an overhead cathode ray tube. These data also provide a pilot with sufficient information to fly safely through low altitude wind shear and assist in avoiding illusions brought about by airport physical and lighting conditions. A more detailed explanation of the HUD system and its benefits is contained in Section III of this Guide.

ENVIRONMENTAL CONTROL SYSTEMS

Cabin pressurization and conditioned air ventilation of the flight compartment and passenger cabin plus ice protection of the engine inlets, fuselage strakes, wing leading edges and tail surfaces of the aircraft are provided. Automatic drainage is provided at all points in the system where the accumulation of moisture could be detrimental to system operation.

Conditioned air is delivered through two fully automatic independent air conditioning systems designed for parallel operation, but capable of independent operation. This cabin recirculation system reduces fuel consumption while providing increased ventilation rates for greater passenger comfort. With both systems in operation, the inflight recirculation system increases airflow in the passenger cabin approximately 30 percent at 37,000 feet (11,278 m). Individual cold air outlets are provided for each passenger.

The cargo compartments and cargo compartment floors are maintained above freezing. The forward section of the forward cargo compartment is thermostatically controlled to a temperature which permits safe transport of animals.

Two fully automatic, independent, all-electronic cabin-pressure control systems are installed, either of which permits comfortable flights at altitudes up to 37,000 feet (11,278 m).

The crew is provided a gaseous, diluter-demand-type oxygen system with automatic pressure breathing at 28,000 feet (8,534 m) and above. In addition, a portable oxygen cylinder is provided for crew mobility.

A chemical oxygen-generating system, incorporating automatic mask presentation and individual flow indicators, is installed to supply oxygen to passengers and attendants. Maintenance costs on this system are less than with the gaseous system. Four portable gaseous oxygen cylinders with masks are provided for cabin attendant use and mobility.

An ice-protection system is provided for flight in icing conditions.

Two electrically operated windshield wipers are provided, along with a liquid rain repellent system consisting of two liquid storage tanks, one normal and one reserve.

Anti-fogging of the three windshields, the clear-view panels and the windows above the captain's and first officer's stations is accomplished by means of electrical conductive coatings within the glass assemblies.

A ram-air cooling system is installed to lower the temperature of the main landing gear brakes in flight.

A pneumatic system, using engine bleed air, is installed for cabin pressurization, air conditioning and ice protection of the aircraft. Engine and/or APU bleed air is also used for pneumatic engine starting and air conditioning on the ground.

SYSTEMS POWER

Electrical — Three 40-kva, 3-phase, 120/208-volt, 400-Hz generators are installed, two of which are mounted on the aircraft engines and driven by their respective engines through constant speed drive units. These generators are the primary source of electrical power for the airplane. The third generator is mounted on and driven by the auxiliary power unit and serves as an alternate source of power.

A 28-volt battery system consisting of two 14-volt nickel-cadmium battery assemblies connected in series is installed in the electrical/electronics compartment to provide emergency power.

Hydraulic — Two separate 3000-psi hydraulic systems are installed. Each is primarily powered by one engine-driven variable displacement piston-type pump. The two separate hydraulic systems are completely independent and have separate reservoirs with filters, pressure line filters, relief valves, accumulators and control valves. The right system includes an auxiliary electrically driven pump. A reversible hydraulic power transfer unit, which mechanically connects the left and right hydraulic systems, is installed to provide an alternate system for landing gear operation.

SELF-SUFFICIENCY

Auxiliary Power Unit (APU) — A constant-speed auxiliary power unit installed in the aft lower fuselage provides electrical and pneumatic power for main engine starting, air conditioning and electrical functions during ground operations and auxiliary electrical power in flight.

Stairways — Two self-contained stairways are incorporated in the aircraft to facilitate passenger loading/offloading and reduce ground handling time at outlying airports which have minimal or no ground support equipment.

An integral forward airstair stored beneath the cabin floor is electrically operated, illuminated, has nonskid surfaces and telescoping handrails. Normal control of the stair is from inside the aircraft; external operation is possible without ground equipment.

A hydraulically operated ventral stairway for passenger loading and unloading is installed through the aft pressure bulkhead and the lower aft fuselage. Two control stations are provided, one inside the aircraft and one outside, accessible to ground personnel. The inside station is deactivated for U.S. operators to comply with FAA anti-hijacking rules, unless the aircraft is equipped with an airstream actuated control lock.

BASELINE INTERIOR ARRANGEMENT

The main cabin of the baseline airplane provides accommodations for 155 passengers in a single-class arrangement and four cabin attendants. A fifth cabin attendant's seat is also installed.

In the forward cabin just aft of the cockpit are two galley sections, the forward cabin attendants' station, a forward lavatory and the forward passenger door above the integrated airstair. The aft cabin contains two galley sections, two lavatories, one coatroom, two doghouse-type storage units, cabin attendants' station and the ventral stairway door in the pressure bulkhead. Basic structural, air and electrical provisions are incorporated for the maximum standard passenger configuration. The cabin interior is designed for quick conversion to a mixed-class configuration. Provisions are installed for the attachment of a cabin divider in the fuselage constant section to allow for two to five rows of first-class seating.

Enclosed overhead stowage compartments are installed on both sides of the cabin. The compartments are divided into basic 38-inch (0.97-m) sections, each with a volume of approximately 4.2 cubic feet (0.12 cubic meter) and feature latched, upward opening doors. The compartments are suitable for stowage of miscellaneous passenger carry-on items and packages.

Passenger service units containing reading lights, cold air outlets, oxygen masks, chemical oxygen generator units and cabin attendant call switches are built into the bottom of the overhead stowage.

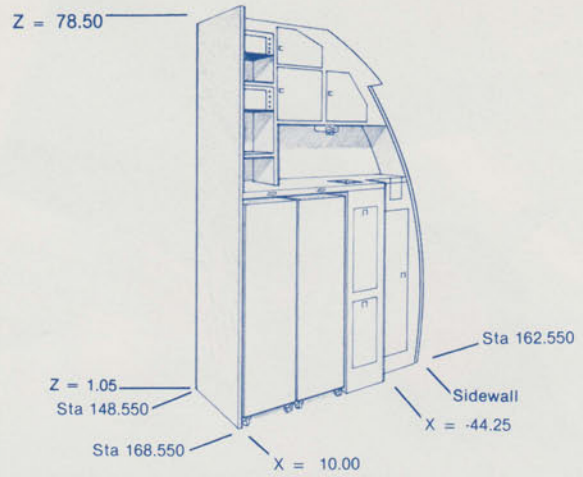
Passenger seat assemblies — Buyer-Furnished Equipment (BFE) — are installed as shown in Figure I-1 for the Baseline Configuration. In this case, 33 right-hand triple and 28 left-hand double seat assemblies are mounted on floor tracks separated by a single aisle.

Galley sections G1 and G2 are located on the right side of the cabin adjacent to the forward galley service door. The G3 and G4 galley sections are installed in the left aft cabin, separated by the aft galley service door. All galleys are supplied with 115-/200-volt 3-phase power. Galleys G1 and G4 are supplied with water. Galleys G1, G3 and G4 are equipped with drains. The galley sections in the basic configuration are designed to provide one-meal service for 155 passengers and the crew. Power and water lines incorporate disconnects to permit removal of the galley sections from the aircraft. The galleys are BFE. Figures I-9 and I-10 depict typical makeups and footprint sizes of the galleys.

Galley sections G1 and G4 and lavatory washbasins are supplied water from a pressurized tank located immediately forward of the mid-cargo compartment door on the right side of the fuselage. The water service panel is on the left side of the fuselage. An electric heater provides hot water in each lavatory.

The aft coatroom is located behind the last row of passenger seats on the left side of the airplane and forward of the aft lavatory as illustrated in Figure I-1. It is illuminated, has a shelf, capacity of 22.3 cubic feet ($0.63m^3$), two fore-and-aft coatrods providing 21 inches (0.53 m) for garment stowage, coat hangers and a sliding curtain.

Figure 1-9. Forward Galley Envelopes and Typical Makeups (Dimensions in inches)



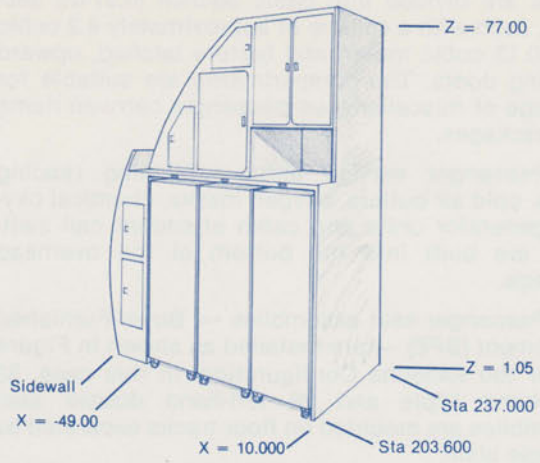
Galley G1 Volume: 31 ft³ (0.88 m³)

Equipment
- 2 Beverage Carts
- 2 Coffee Makers
- 2 Ice Drawers
- 1 Waste Compartment
- 3 Miscellaneous Stowage Units

Power: 7,000 Watts

Features
- Worklight
- Hot and Cold Water Sink
- Work Counter
- Hot Cup (Optional)
- Drain

Floor Support: Inboard and outboard fittings
Ceiling support: Sta 161.290 and X = -19.81



Galley G2 Volume: 65.5 ft³ (1.85 m³)

Equipment
- 1 Double Oven
- 1 Single Oven
- 3 Meal Carts (12" x 32.3" x 42")
- 4 Miscellaneous Stowage Compartments

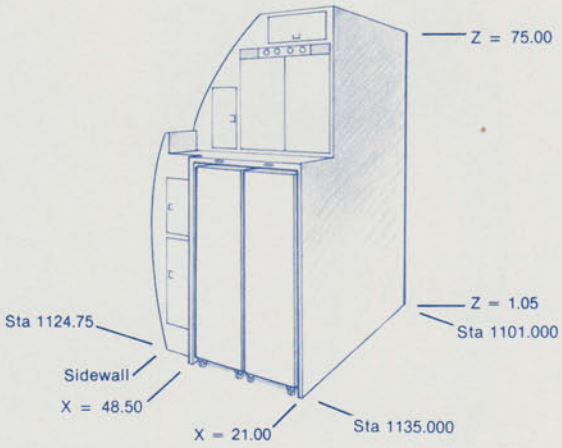
Power: 10,000 Watts

Features
- Worklight
- Work Counter

Floor Support: Inboard and outboard fittings and seat tracks
Ceiling support: Sta 217.060 and X = -28.41

Galley G1 forward surface is the cockpit enclosure; the flight compartment bifold door is attached to the inboard surface.

Figure I-10. Aft Galley Envelopes and Typical Makeups (Dimensions in inches)



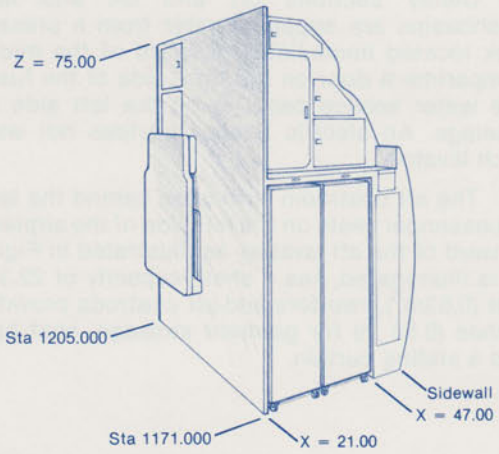
Galley G3 Volume: 47.5 ft³ (1.34 m³)

Equipment
- 1 Double Oven
- 2 Meal Carts (12" x 32.3" x 42")
- 2 Miscellaneous Stowage Compartments
- 2 Ice Drawers

Power: 7,000 Watts

Features
- Work Counter
- Drain Line for Ice Drawers

Floor Support: Outboard fitting and seat tracks
Ceiling Support: Sta 1116.06 and X = 28.41



Galley G4 Volume: 47.5 ft³ (1.34 m³)

Equipment
- 2 Coffee Makers
- 2 Meal Carts (12" x 32.3" x 42")
- 1 Single Oven
- 4 Miscellaneous Stowage Compartments
- 1 Waste Container

Power: 7,000 Watts

Features
- Water and Drain
- Cabin Attendant Interphone Console
- Provisions for Cabin Attendant's Seat

Floor Support: Outboard fitting and seat tracks
Ceiling Support: Sta 1191.06 and X = 28.41

The G3 and G4 aft galley complex accommodates 33-inch-deep carts and provides power and water requirements to satisfy the aft needs of ovens and coffee makers. Worklight for the two galleys is located in the entryway.

EMERGENCY EQUIPMENT

The relative locations of emergency equipment are illustrated in Figure I-11.

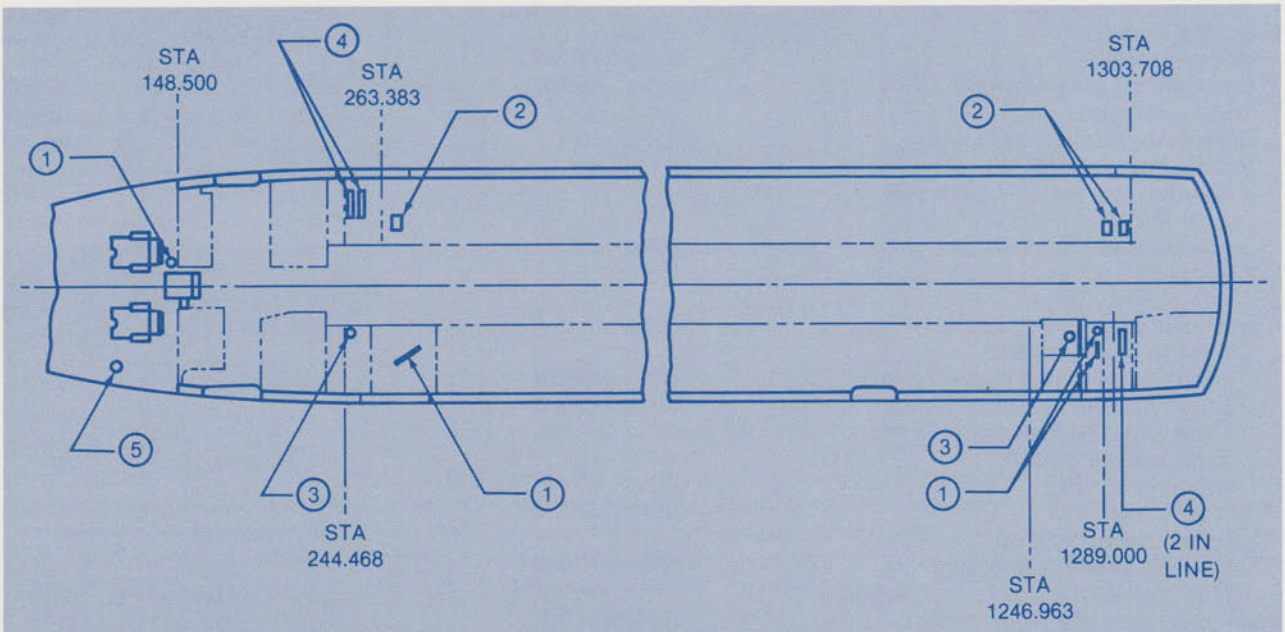
Three first-aid kits are stowed in the main cabin, readily accessible to cabin attendants.

Four hand fire extinguishers are provided, two carbon dioxide and two water.

An 11-cubic-foot (0.31-m^3) oxygen bottle is located in the flight crew compartment, and four 4.25-cubic-foot (0.12-m^3) oxygen bottles, each with regulator and mask, are located in the passenger compartment for use by the cabin attendants.

Complete provisons are installed for two electronic megaphones.

Figure I-11. Emergency Equipment Locations.



KEY		QUANTITY
(1) = FIRE EXTINGUISHER		4
(2) = FIRST AID KIT		3
(3) = MEGAPHONE PROVISIONS		2
(4) = OXYGEN CYLINDERS (ATTENDANT)	(4.25 FT^3)	4
(5) = OXYGEN CYLINDER (CREW)	(11 FT^3)	1

LOADING SUMMARY

The manufacturer's weight empty for the Baseline Configuration DC-9 Super 80, Model 81, is 75,778 pounds (34,372 kg) with the Dash 209 engine and 75,963 pounds (34,456 kg) for the optional Model 82 with the Dash 217 engine. These values, along with the incremental weight buildups to the maximum taxi weights, are shown in Table I-II for the baseline 155-passenger, single-class cabin configuration.

Table I-II. Loading Summary.

		Model 81 (Baseline) JT8D-209	Model 82 (Option) JT8D-217
Manufacturer's Weight Empty Includes 940-lb (426-kg) galley structure, 3565-lb (1617-kg) seats, 519-lb (235-kg) utilities and 40-lb (18-kg) coatroom	lb/kg	75,778/34,372	75,963/34,456
Standard Items	lb/kg	485/220	
Unusable fuel	lb/kg	224/102	
Unusable oil (engine, APU, CSD)	lb/kg	45/20	
Toilet chemicals	lb/kg	69/31	
Crew compartment manuals	lb/kg	10/5	
Emergency equipment			
Oxygen (portable — included in MEW)			
Evacuation slides (4)	lb/kg	131/59	
Life vests (5)	lb/kg	6/3	
Operational Items	lb/kg	3,164/1,434	
Crew and crew luggage			
Flight crew (2 at 170 lb/77 kg)	lb/kg	340/154	
Cabin crew (4 at 130 lb/57 kg)	lb/kg	520/236	
Crew luggage (6 at 25 lb/11 kg)	lb/kg	150/68	
Briefcases (pilots')	lb/kg	15/7	
Oil (engine and APU)	lb/kg	91/41	
Water (potable)	lb/kg	392/178	
Passenger service items			
Cabin and lavatory supplies (155 psgr at 2 lb/0.9 kg per psgr)	lb/kg	310/141	
Food and beverages (hot meals) 161 psgr and crew at 2.2lb/1 kg)	lb/kg	354/161	
Galley service equipment (hot meals) (161 psgr and crew at 1.5 lb/0.68 kg)	lb/kg	242/110	
Galley inserts	lb/kg	750/340	
Operational Empty Weight		79,429/36,028	79,612/36,112

	Model 81 JT8D-209		Model 82 JT8D-217	
	Psgr and Baggage	Weight Limited	Psgr and Baggage	Weight Limited
	(lb/kg)		(lb/kg)	
Payload	31,775/14,413	38,573/17,496	31,775/14,413	38,388/17,412
155 psgr at 165 lb/75 kg per psgr	25,575/11,601		25,575/11,601	
Cargo and/or baggage	6,200/2,812	12,998/5,895	6,200/2,812	12,813/5,811
Zero Fuel Wt	111,202/50,441	118,000/53,524*	111,387/50,525	118,000/53,524*
Fuel (at 6.7 lb/ 3.04 kg per U.S. gal)	29,822/13,516	23,000/10,433	36,613/16,607	30,000/13,608
Max Taxi Wt	141,000/63,957		148,000/67,132	

*Maximum Zero Fuel Weights of 120,000 pounds (54,431 kg) for the 140,000-pound (63,503-kg) MTOGW aircraft and 122,000 pounds (55,338 kg) for the 147,000-pound (66,678-kg) aircraft are available as Customer Options. Refer to Section III.

II. Custom Interior Options

Custom Interior Options

Contained in this section are descriptions of the customer interior configurations offered in MDC's preplanned program. Six arrangements are shown in Figures II-1 through II-6.

- The baseline 155-passenger single-class interior arrangement defined in Detail Specification DS-8000 (Figure II-1).
- A single-class arrangement with all the baseline interior features but accommodating up to 165 passengers, as shown in Figure II-2. Varied passenger requirements can be accommodated by changing the seat-row pitch. The galleys, lavatories and other interior items are identical to the DS-8000 configuration.
- A mixed-class arrangement with a class divider (Figure II-7) separating the first-class and coach sections. The location of the divider can be varied within the forward fuselage constant cross-section area to permit installation of two to five rows of first-class passenger seats to match the airline's specific need. As an example, the 147-passenger arrangement is presented in Figure II-3. Again, the galley envelopes (Figures II-8 and II-9), lavatories and other interior items are identical to the DS-8000 configuration.
- The 152-passenger mixed-class version shown in Figure II-4, illustrating further the variety of interior arrangements in a mixed-class interior.
- A customized single- or mixed-class seating arrangement made possible by changing seat spacing, installing a class divider, incorporating optional galley envelopes (Figures II-10 and II-11) and selecting various options from the galley, lavatory and windscreen combinations identified as INTR-( ) items in Figures II-12 and II-13. With the selection of certain galley and lavatory options, configurations of up to 172 passengers become possible (Figure II-5).
- A single- or mixed-class extended-service interior arrangement for operators desiring two-meal galley capacity. Due to the interdependence of the galleys (Figures II-14, II-15 and II-16) and lavatories, only changes in seat pitch in the single-class arrangement are offered. In the mixed-class arrangement, the divider partition may be varied to provide for two to five rows of first-class seating, keeping the galley and lavatories unchanged. As an example, the 135-passenger version having 12 first-class seats is illustrated in Figure II-6.

From these options, the customer may select compatible features, and MDC will design an interior utilizing these features within the framework of the optional features program.

Some of the interior furnishings such as galleys, seats, etc. are Buyer-Furnished Equipment (BFE), while the lavatories, partitions and coatrooms not attached to galleys are seller-furnished. A listing of BFE is contained in Section IV.

Interior decor items such as side panels, partitions, carpeting and drapes may be selected from those available which meet lead-time requirements.

GALLEY OPTIONS

A variety of galley options is offered, defined as dimensional galley envelopes with specified attach points, water and drain locations, weight and center-of-gravity limitations and power availability. Within these envelopes and constraints, the BFE galleys may be configured to the requirements of the customer, providing the MDC on-dock requirements are met.

FORWARD GALLEY CONFIGURATIONS

Galley envelope options are available for both the right and left forward section of the DC-9 Super 80. Footprints of these are shown in Figure II-12.

A configuration can be developed using these forward galley envelope options or with the deletion of any, except G1 (Figure II-8) which is the aft right-hand enclosure to the flight compartment.

The envelope for G1 is identical to the DS-8000 galley, but inserts may be configured to suit individual customer requirements within the envelope and limitations shown in Figure II-8. Galley G2 and G2A may also be configured to specific customer needs within the dimensions and constraints shown in Figures II-8 and II-10, respectively.

AFT GALLEY CONFIGURATIONS

Aft galley envelope options are available both forward and aft of the galley service door. Either or both of these galleys may be deleted. Their footprint locations are shown in Figure II-13.

The envelopes for G3 and G4 are shown in Figure II-9. Arrangement of inserts may be made to individual airline requirements within the dimensions and limitations of the envelopes.

Galleys G3A and G4A have slightly less volume than the standard, or baseline, configuration. Envelopes for these units are shown in Figure II-11. Inserts may be customer-configured within the envelopes as defined in the figure.

A configuration can be developed with all these aft galley envelopes or with the deletion of any, as shown in Figure II-13.

Aft Galley Service Door Attendant's Seat — In addition to two cabin attendant seats mounted on the forward bulkhead and two mounted on the aft bulkhead, the Federal Aviation Administration requires a cabin attendant seat and communication capability adjacent to the aft galley service door.

When a galley is selected aft of the service door, a galley-mounted, forward-facing, folding alternate attendant seat is installed as shown in Figure II-13.

With the selection of a galley forward of the service door, and none aft, the aisle passenger seat in the first row aft of the service door becomes the alternate attendant's seat. This seat is adapted to conform to attendant seat standards, including the addition of shoulder harness and a higher seat back. This configuration also requires the addition of a windscreen partition to house the interphone console for the cabin attendant. This arrangement is shown in INTR-1A of Figure II-13.

Figure II-1. Baseline (DS-8000) 155-Passenger Single-Class Configuration

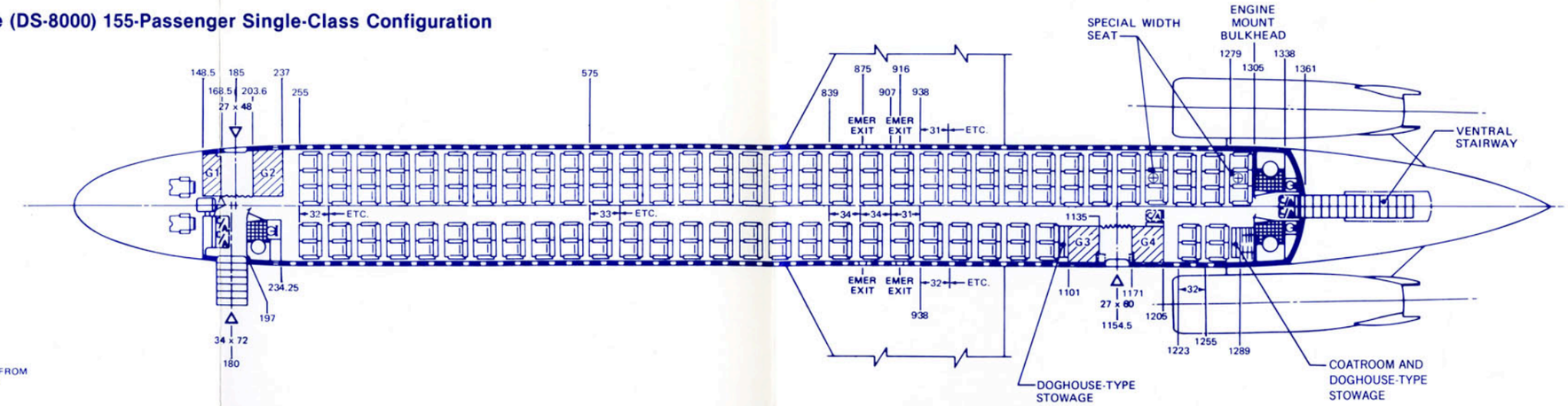


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Figure II-2. Single-Class 165-Passenger Interior

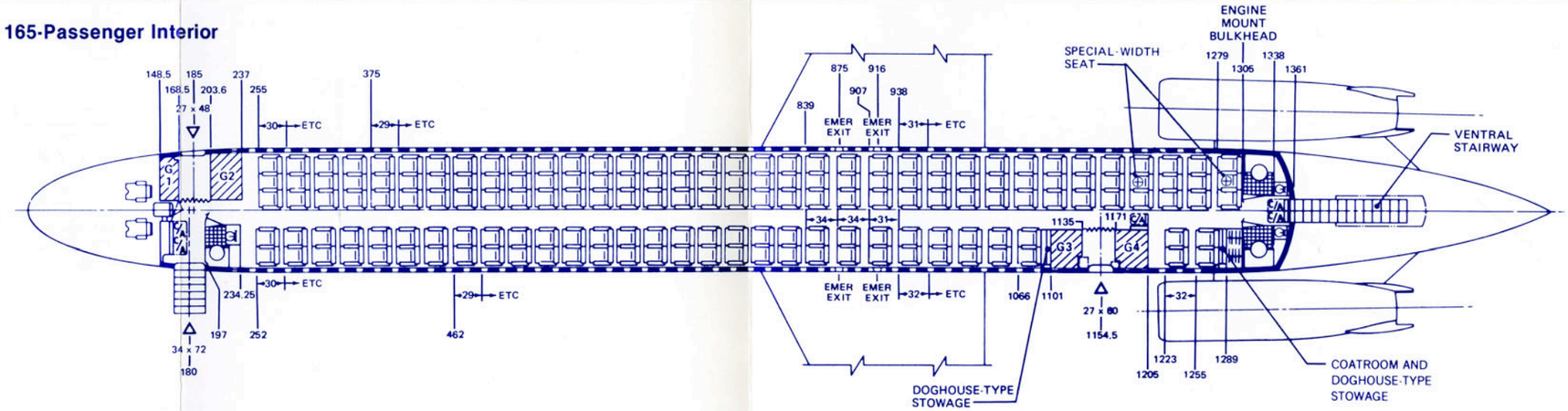

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Figure II-3. Mixed-Class 147-Passenger Configuration

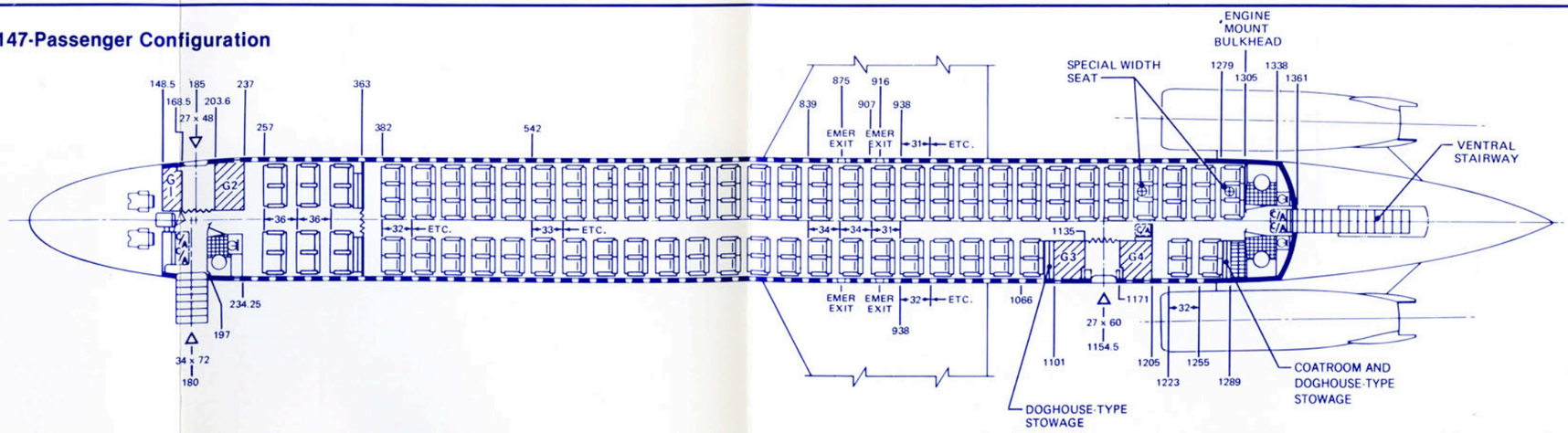

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Figure II-4. Mixed-Class 152-Passenger Arrangement

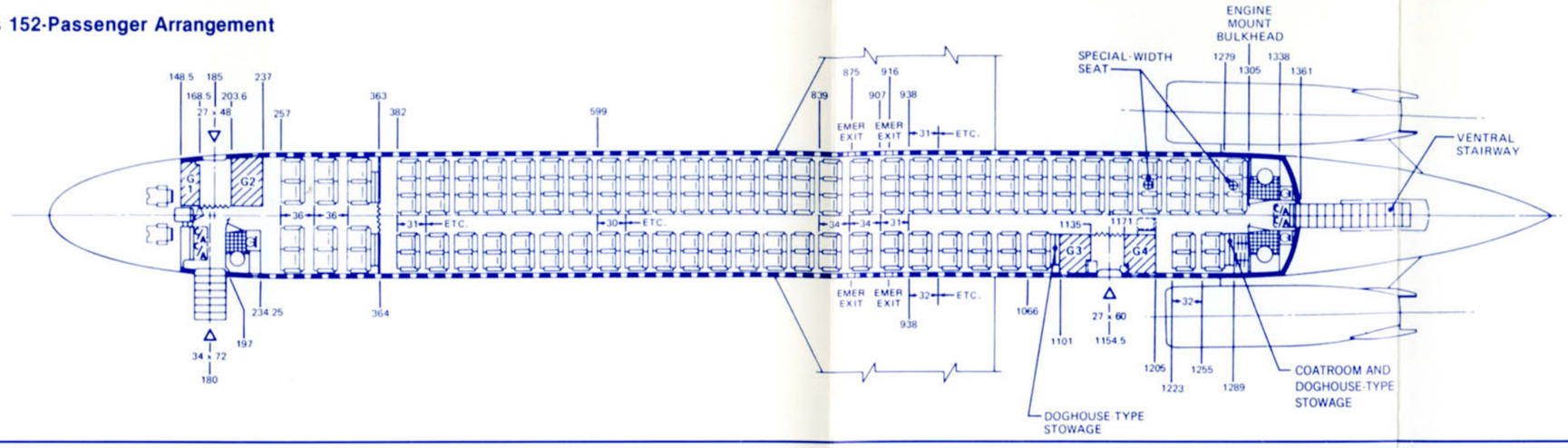

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Figure II-5. High-Density 172-Passenger Arrangement

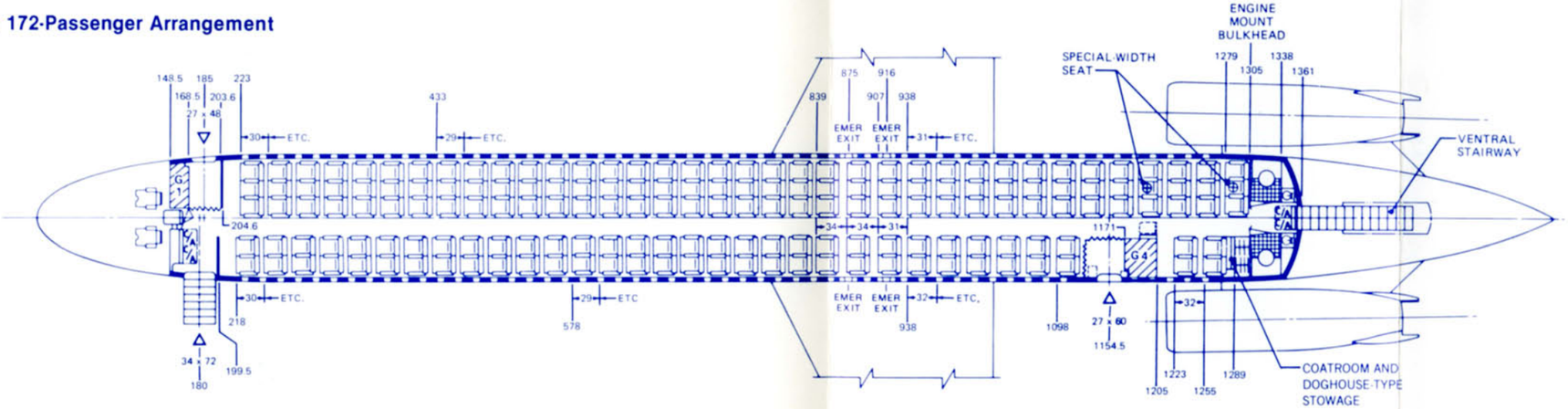

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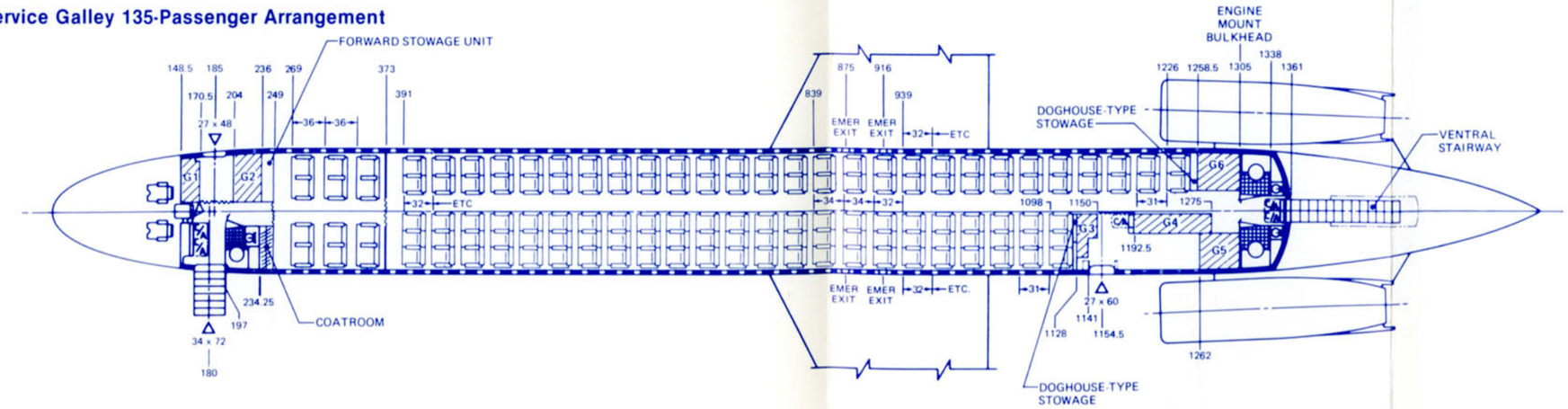
Figure II-6. Extended-Service Galley 135-Passenger Arrangement



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COATROOM AND STOWAGE UNITS

Coatroom — One coatroom option is offered, located in the forward cabin as shown in INTR-3F of Figure II-12. The supporting surface at STA 234.25 may be the forward lavatory partition as shown, or the G2A galley. This unit fits below the stowage rack and has a capacity of 20 cubic feet ($0.6m^3$) with a coat rod length of 15 inches (0.4 m).

Stowage Units — Two 'doghouse'-type stowage units are installed, one aft of the last row of seats on the left side of the airplane and one forward of galley G3, either or both of which may be deleted. These two units may be installed behind seats and forward of galleys, coatrooms or partitions.

WINDSCREEN PARTITIONS/ CLASS DIVIDERS

Floor-to-ceiling windscreen partitions are available at three locations in the passenger cabin, two forward and one aft.

When galley G2 has been deleted, a partition is installed aft of the forward service door, separating galley G1 from the first row of seats as shown in INTR-1F of Figure II-12.

On the left side of the airplane, when deletion of the forward lavatory is selected, a partition is installed immediately aft of the passenger door as shown in INTR-2F of Figure II-12.

The aft partition is installed in conjunction with selection of the left aisle passenger seat aft of the rear galley service door as a cabin attendant's station. This partition, shown in INTR-1A of Figure II-13, supports the cabin attendant's interphone console.

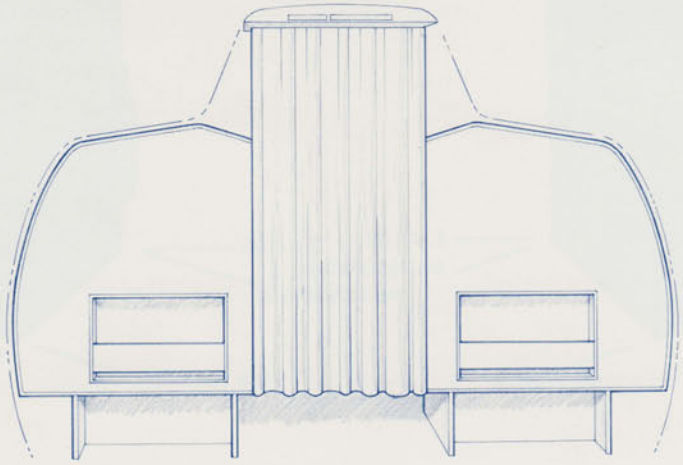
The class divider, shown in Figure II-7, consists of left and right sections, a sliding cross-aisle curtain and separate curtain header. Each section is mounted below the overhead stowage rack and is seat-track mounted.

In the mixed-class configuration, the seat-track-mounted class divider partition may be located at any point between stations 337.00 and 438.00. In the 147-passenger mixed-class arrangement, the class divider partition is located at station 363 (Figure II-3).

THE EXTENDED-GALLEY MIXED-CLASS INTERIOR

For those carriers requiring extended galley service, a mixed-class 135-passenger interior is available as shown in Figure II-6. In this arrangement the triple-seat side is on the left to provide for the galleys of this configuration. The galley envelopes and makeups forward and aft are shown in Figures II-14, II-15 and II-16.

Figure II-7. Class Divider Partition (INTR-IP)



Weight: 84 lb/38.1 kg

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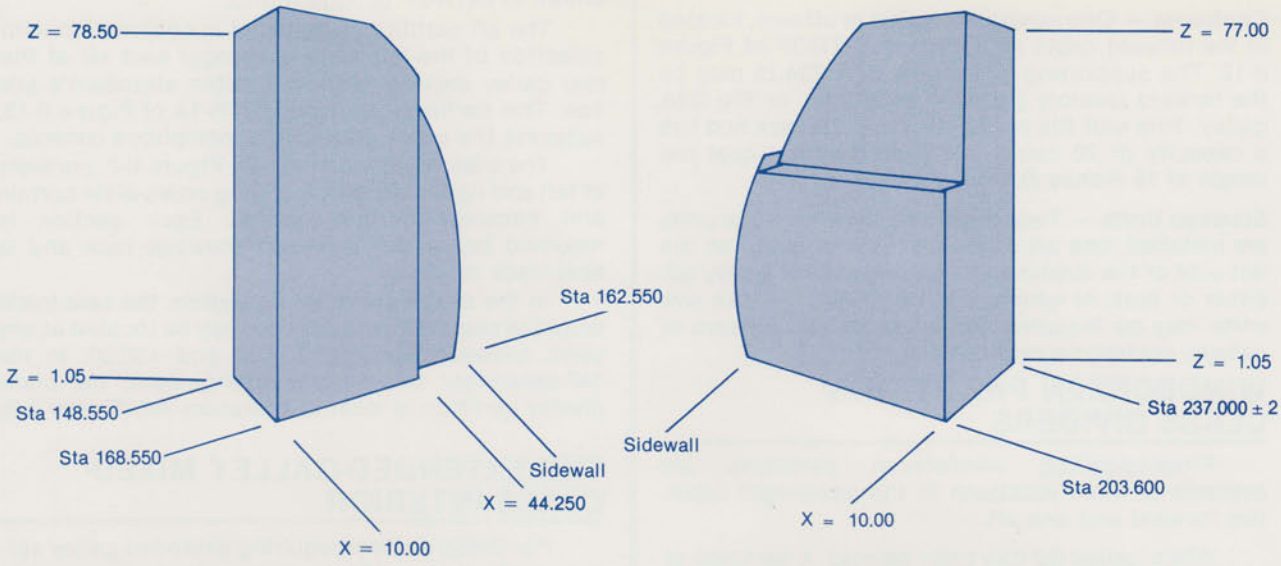
Figure II-8 Forward Galley Envelopes (Dimensions in inches)



Galley G1 Volume: 31.0 ft³ (0.88m³)

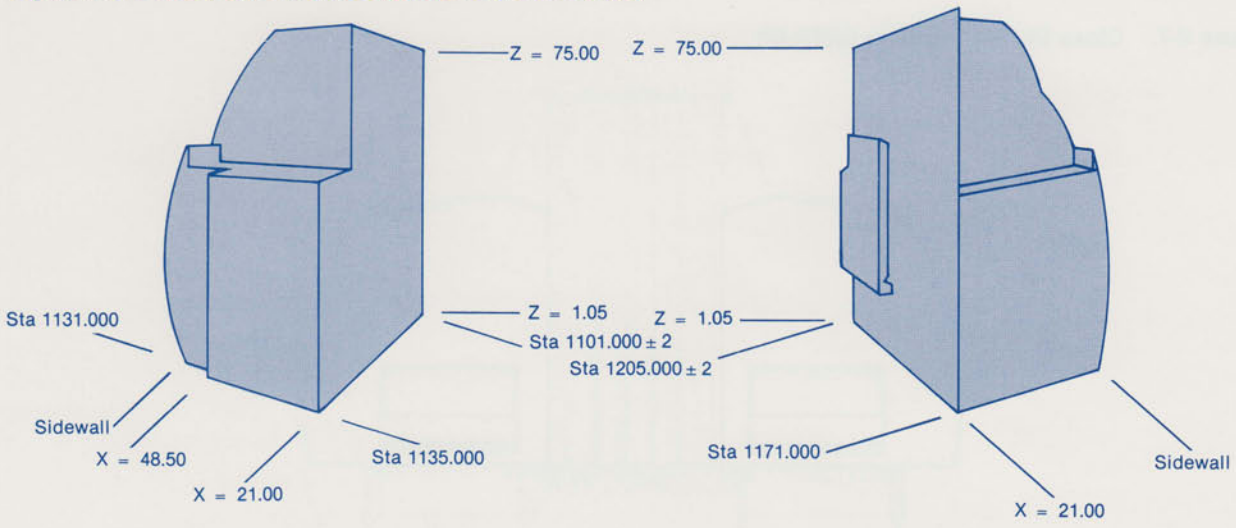
Floor Support: Inboard/outboard fittings and seat tracks
Water and Drain
Worklight in entry
Ceiling Support: Sta 161.290 and X = —19.81
Power: Total forward power not to exceed 20,000 watts

Galley G2 Volume: —2 in. 61.6 ft³ (1.74m³)
+ 2 in. 69.4 ft³ (1.96m³)

Floor Support: Inboard/outboard fittings and seat tracks
Ceiling Support: Sta 217.060 and X = —28.41
Worklight in entry
No water or drain
Power: Total forward power not to exceed 20,000 watts

The aft face of Galley G2 may vary ± 2 inches

Figure II-9. Aft Galley Envelopes (Dimensions in inches)



Galley G3 Volume: —2 in 44.7 ft³ (1.27m³)
+ 2 in 50.3 ft³ (1.42m³)

Drain Only
Worklight in entry
Floor Support: Outboard fitting and seat tracks
Ceiling Support: Sta 1116.06 and X = 28.41
Power: 7,000 watts

Galley G4 Volume: —2 in. 44.7 ft³ (1.27m³)
+ 2 in. 50.3 ft³ (1.42m³)

Water and Drain
Worklight in entry
Floor Support: Outboard fittings and seat tracks
Ceiling Support: Sta 1191.06 and X = 28.41
Power: 7,000 watts

The forward face G3 and aft face of G4 may vary ± 2 inches.

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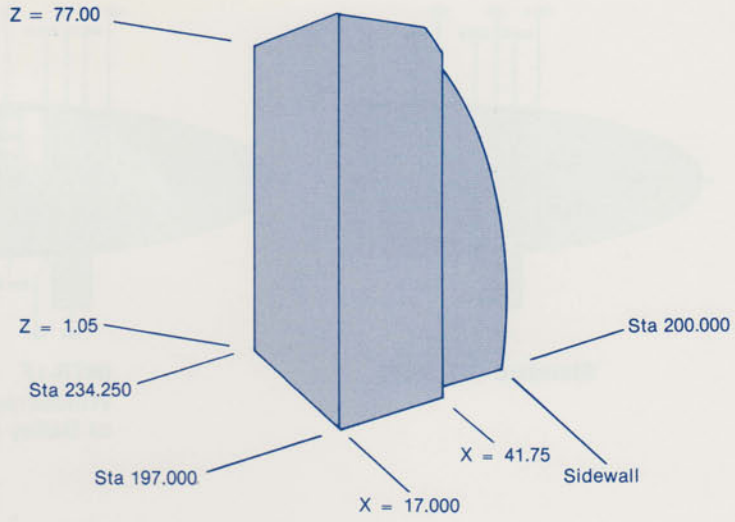
Figure II-10 Optional Forward Galley G2A Envelope. (Dimensions in inches)



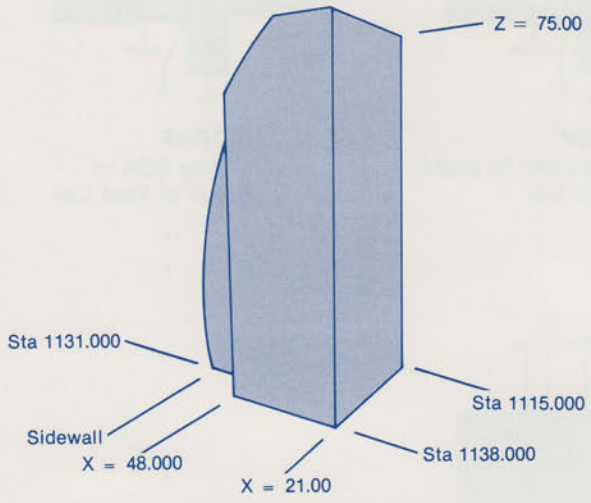
Galley G2A Volume: 55.5 ft^3 (1.57 m^3)

Floor Support: Seat track fittings
Ceiling Support: Sta 217.06 and X = 28.41
No water or drain
Will accommodate forward-facing or aisle-mounted carts.
Worklight in entry

Power: Depends on wattage of other forward galley:
total forward power not to exceed 20,000 watts

Galley G2A is an auxiliary unit to store goods and baggage when combined with galleys G1 and G2, Galley G2 being fully powered. This galley unit can serve as a full-use galley with meal carts and ovens.

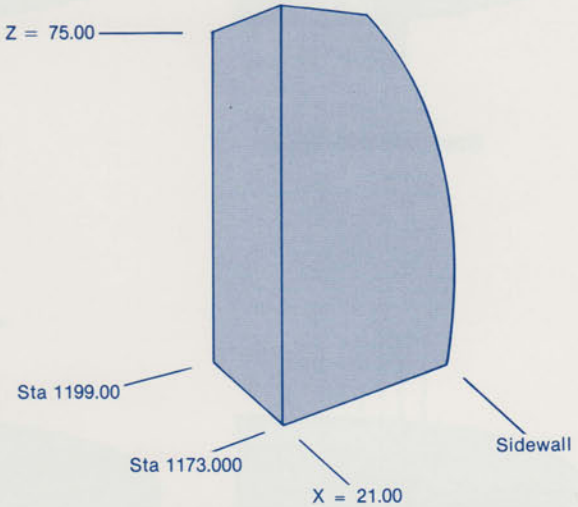
Figure II-11. Optional Aft Galley Envelopes. (Dimensions in inches)



Galley G3A Volume: 31.1 ft^3 (0.88m^3)

Cart Volume: 42" x 28"x 22"
Drain only
Worklights in entry
Power: 7,000 watts

Floor Support: Outboard fittings and seat tracks
Ceiling Support: Sta 1126.500 and X = 27.920



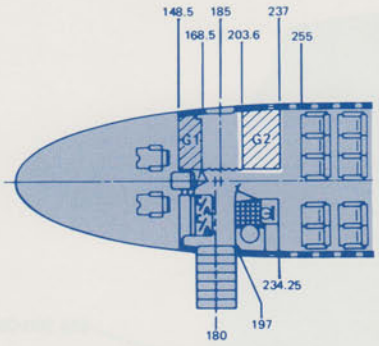
Galley G4A Volume: 25.5 ft^3 (0.72m^3)

Cart Volume 42" x 30" x 26"
Water and drain provided
Worklights in entry
Power: 9,000 watts

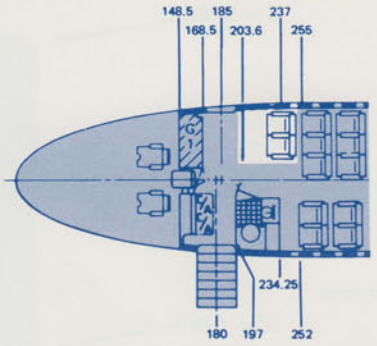
Floor Support: Outboard fittings and seat tracks
Ceiling Support: Sta 1191.060 and X = 28.41

Galleys G3A and G4A accept reduced size carts or inserts of various sizes in the lower areas of the units. Power and water are available in the aft unit G4A to provide for ovens, coffee makers/water boilers. Power is available for the same insert types in the forward position. A drain is provided at this location to accommodate ice drawers. If the aft galley is selected, a cabin attendant seat and console will be installed.

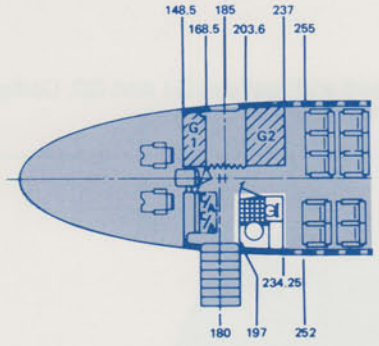
Figure II-12. Forward Options



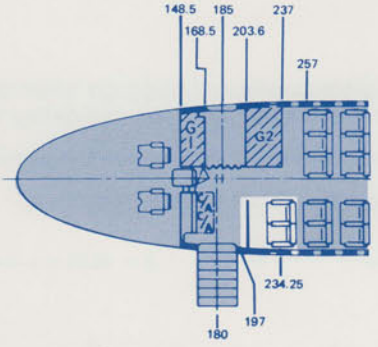
Standard (DS 8000)



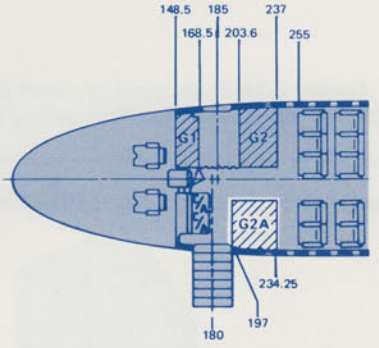
INTR-1F
Windscreen in place of Galley G2



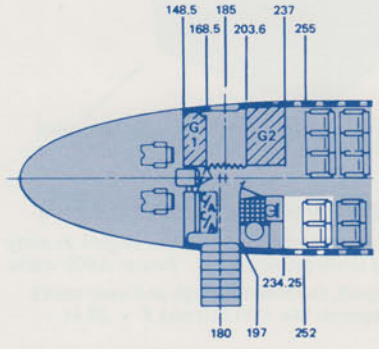
Standard (DS 8000)



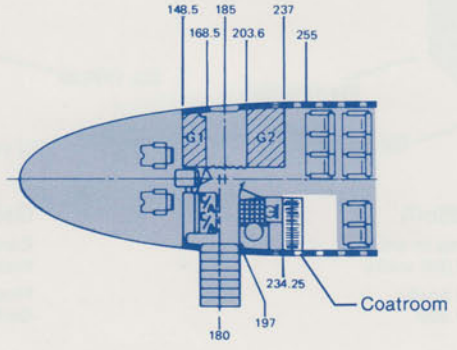
INTR-2F
Windscreen in place of Fwd Lav



INTR-5F
Galley G2A in place of Fwd Lav



Standard (DS-8000)



INTR-3F
Coatroom installation

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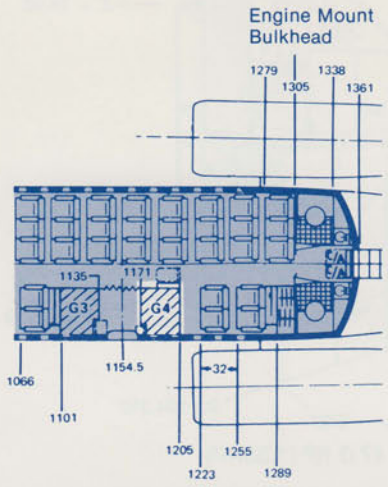
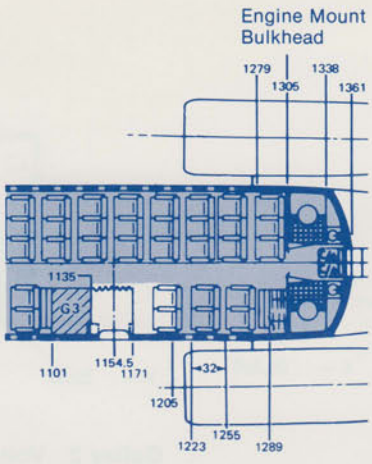
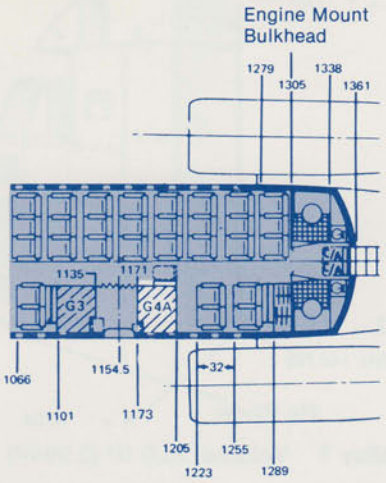
Figure II-13 Aft Options



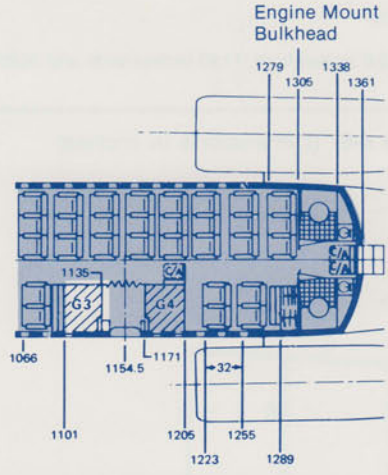
Standard (DS-8000)



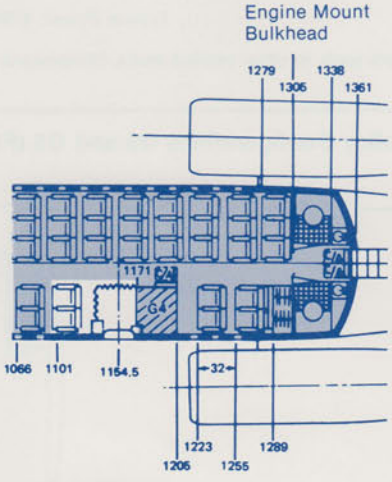
INTR-1A
Windscreen, Curtain in place of Galley G4



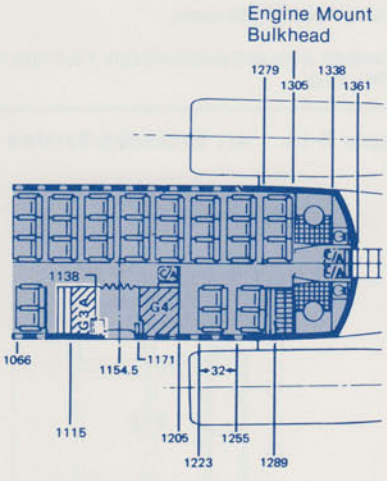
INTR-4A
Galley G4A in place of Galley G4



Standard (DS-8000)



INTR-2A
Curtain in place of Galley G3



INTR-3A
Galley G3A in place of Galley G3

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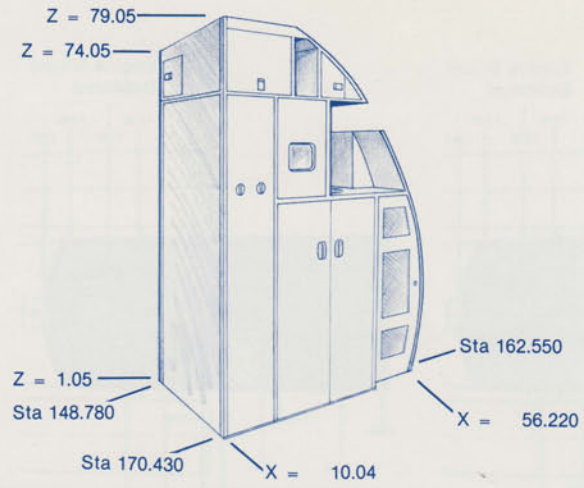
Figure II-14. Forward Extended-Service Galley Configurations G1 and G2 (Figure II-6) (Dimensions in inches)

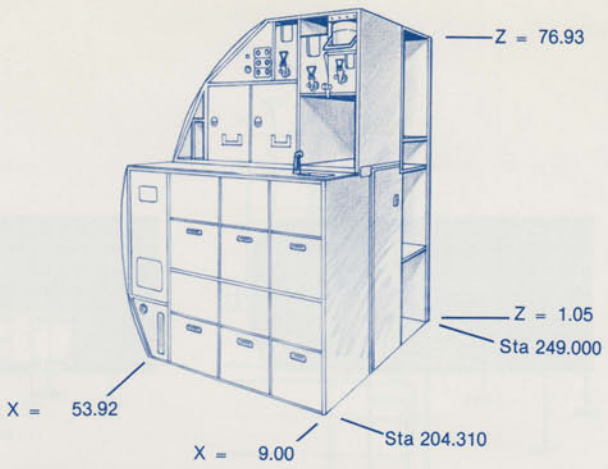


Galley 1 Volume: 35.0 ft³ (0.99m³)

Equipment
- 4 Refrigerated standard units*
- 1 Oven
- 1 Hot cup
- 3 Miscellaneous stowage units

Features
- Crew coatroom on the inboard surface inside of cockpit area

Typical Power: 5,755 watts



Galley 2 Volume: 47.0 ft³ (1.33m³)

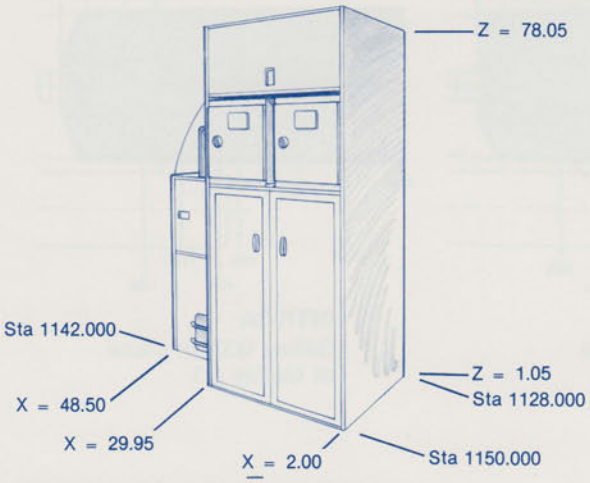
Equipment
- 2 Liquid containers
- 1 Coffee maker
- 9 Standard Units*
- 2 Trolleys containing 2 standard units* each
- 1 Ice drawer

Features
- Sink with running water located in large work counter

Typical Power: 4,080 watts

*Standard units will accommodate 7 full-size meals each, or other related items. Dimensions are 18.6 inches high, 11.93 inches wide and 16.65 inches long.

Figure II-15. Aft Extended-Service Galley Configurations G3 and G6 (Figure II-6) (Dimensions in inches)

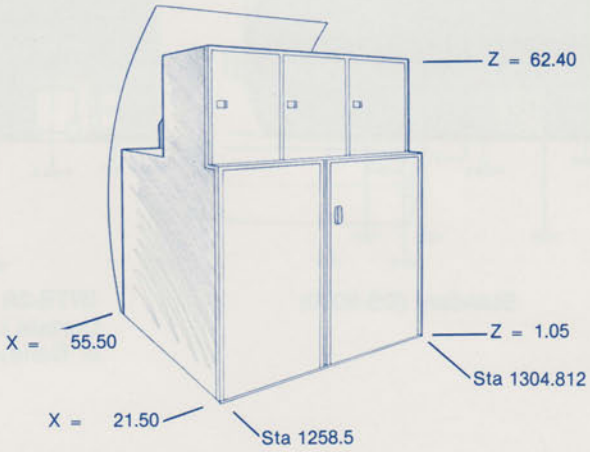


Galley 3 Volume: 36.4 ft³ (1.03m³)

Equipment
- 2 Ovens
- 2 Refrigerated standard units*
- 1 Refrigerated trolley holding 2 standard units*
- 3 Miscellaneous stowage units
- 1 Doghouse stowage unit on the forward surface

Features
Refrigeration capability

Typical Power: 9,160 watts



Galley 6 Volume: 53.0 ft³ (1.50m³)

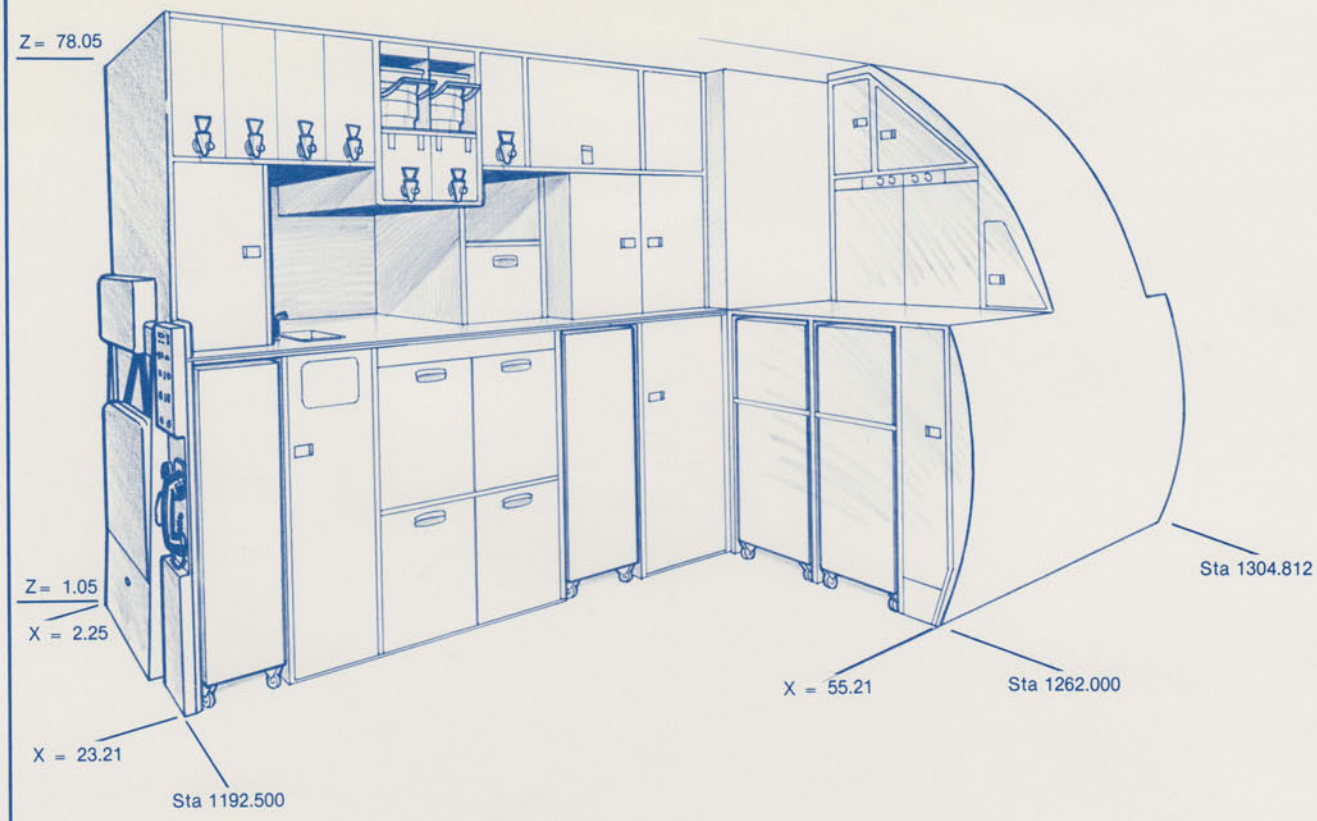
Equipment
- 3 Standard units*
- 5 Refrigerated trolleys containing 2 standard units* each
- 1 Doghouse stowage unit on forward surface

Features
- Refrigeration capability

Typical Power: 1,280 watts

*Standard units will accommodate 7 full-size meals each, or other related items. Dimensions are 18.6 inches high, 11.93 inches wide and 16.65 inches long.

Figure II-16. Aft Extended-Service Galley Configuration Composed of Units G4 and G5 (Figure II-6)
(Dimensions in inches)



Galley 4 Volume 73.5 ft³ (2.08m³)

Equipment
— 5 Liquid containers
— 2 Coffee makers
— 7 Standard units*
— 2 Trolleys containing 2 standard units* each
— 1 Waste trolley
— 1 Ice Drawer
— 1 Hot Cup
— 1 Miscellaneous compartment

Features
— Sink with running water located in large work counter

Typical Power: 6,210 watts

Galley 5 Volume 55.4 ft³ (1.57m³)

Equipment
— 2 Ovens
— 4 Trolleys containing 2 standard units* each
— 4 Miscellaneous stowage compartments

Typical Power: 7,780 watts

*Standard units will accommodate 7 full-size meals each, or other related items. Dimensions are 18.6 inches high, 11.73 inches wide and 16.85 inches long.

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III. Other Custom Options

Other Custom Options

Where requirements dictate changes from or additions to the DS-8000 Baseline Configuration described in Section I, the customer should select from the Specification Change Notices (SCNs) contained in this section. These SCNs are listed by ATA chapter sequence by number and title and are accompanied by a brief description and sketch, where appropriate. The weight effect of each optional feature is listed.

While care has been taken to point out possible incompatibilities, some may still exist between SCNs in this section. Should these be selected, additional configuration definition may be required.

ATA CHAPTER 02 General Requirements

SCN 4791G
10-7-80

CERTIFICATION OF AIRCRAFT FOR OPERATION WITH JT8D-209 OR JT8D-217 ENGINES USING JT8D-209 THRUST RATING — FAA flight manual data is provided to allow operation with two JT8D-209 engines, one JT8D-209 and one JT8D-217 engine intermixed or two JT8D-217 engines using JT8D-209 performance. Adds a switch/indicator for pilot selection of JT8D-209 or JT8D-217 EPR limit data display on the thrust rating indicator. Performance is limited to JT8D-209 takeoff and landing weights when operating the aircraft at JT8D-209 thrust rating.

Prerequisite: SCN 5417C
WEIGHT IMPACT: Negligible

SCN 5084
6-9-78

CERTIFICATION FOR DISPATCH WITH ONE BRAKE HYDRAULIC SYSTEM INOPERATIVE WITHIN ANY ONE WHEEL—This system enables the aircraft to take off for flight with one brake hydraulic system within any one wheel inoperative, assuming the antiskid system is operative. FAA certification and flight manual data are provided.

WEIGHT IMPACT: None

SCN 5301
11-18-80

CERTIFICATION FOR TAKEOFF USING TWO-ENGINE THRUST WITH ARTS INOPERATIVE (JT8D-209 ENGINE)—Provides certification data to permit using two-engine thrust rating for takeoff with ARTS inoperative. Two-engine thrust rating shall be displayed on the thrust rating indicator and on the EPR indicator target bugs when 00°C is set on the assumed temperature selector and TO FLEX mode is selected.

WEIGHT IMPACT: Negligible

SCN 5451A
11-18-80

CERTIFICATION FOR TAKEOFF USING TWO-ENGINE THRUST WITH ARTS INOPERATIVE (JT8D-217 ENGINE)—Provides certification data to permit using two-engine thrust rating for takeoff with ARTS inoperative. Two-engine thrust rating shall be displayed on the thrust rating indicator, and on the EPR indicator target bugs when 00 °C is set on the assumed temperature selector and TO FLEX mode is selected.

Prerequisite: SCN 5417C or equivalent
WEIGHT IMPACT: Negligible

ATA CHAPTER 03 — Structural Design Criteria

SCN 5304A
4-23-79

INCREASED MAXIMUM ZERO FUEL WEIGHT FROM 118,000 LB TO 122,000 LB (Aircraft with 147,000 LB MTOGW)—This changes the maximum zero fuel weight from 118,000 pounds to 122,000 pounds and revises the operating gross weights. This SCN provides up to 4,000 pounds increased payload capacity.

Prerequisite: SCN 5417C or equivalent
WEIGHT IMPACT: None

SCN 5417C
11-12-80

INCREASED MTOGW FROM 140,000 LB TO 147,000 LB AND INSTALLATION OF JT8D-217 ENGINES IN LIEU OF JT8D-209 ENGINES—This SCN increases the maximum takeoff gross weight from 140,000 pounds to 147,000 pounds, increases maximum taxi weight from 141,000 pounds to 148,000 pounds and installs JT8D-217 engines in lieu of JT8D-209 engines. Installs 26-ply-rated tires. The JT8D-217 engines increase thrust from 18,500 pounds to 20,000 pounds and with automatic reserve thrust from 19,250 pounds to 20,850. This additional weight and thrust increase provides approximately 400 nautical miles increased range from the unrestricted airfields and greater payload capabilities from airports with hot summer temperatures and high pressure altitudes.

WEIGHT IMPACT: +185 LB

SCN 5728
4-30-80

INCREASED MAXIMUM LANDING WEIGHT FROM 128,000 LB TO 130,000 LB (MODEL 81)—This SCN allows a 2,000-pound increase in reserve fuel.

WEIGHT IMPACT: None

SCN 5728A
4-30-80

INCREASED MAXIMUM LANDING WEIGHT FROM 128,000 LB TO 130,000 LB (MODEL 82)—This SCN allows a 2,000-pound increase in reserve fuel.

Prerequisite: SCN 5417C or equivalent
WEIGHT IMPACT: None

SCN 5760A
12-12-80

INCREASED MTOGW FROM 140,000 LB TO 142,000 LB AND MLW FROM 128,000 LB TO 130,000 LB (MODEL 81)

Prerequisite: SCN 5736
WEIGHT IMPACT: None

SCN 5803
9-11-80

INCREASED MTOGW FROM 147,000 LB TO 149,500 LB FOR MODEL 82 AIRCRAFT—Increases the MTOGW by 2,500 pounds.

Prerequisites: SCNs 5728A and 5417C or equivalent
WEIGHT IMPACT: Negligible

SCN 6684
6-29-77

INCREASED MAXIMUM ZERO FUEL WEIGHT FROM 118,000 LB TO 120,000 LB (Aircraft with 140,000 lb MTOGW)—This SCN increases the payload capacity up to 2,000 pounds.

WEIGHT IMPACT: None

ATA CHAPTER 22 — Automatic Flight

SCN 5250A
9-23-80

REVISION OF VERTICAL SPEED MODE CONTROL/DISPLAY FUNCTIONS—This revised system provides additional capability for the automatic pilot/flight director IAS/MACH and TURB modes. The pilot can now select and/or change IAS or MACH with the pitch wheel without being required to revert to the vertical speed mode. Also, the flight directors now have a turbulence mode and a digital readout of existing pitch attitude during this mode. The pitch attitude can be changed by use of the pitch wheel.

WEIGHT IMPACT: Negligible

SCN 5830
11-07-80

AUTOLAND WITH ONE RADIO ALTIMETER INOPERATIVE—Revises aircraft wiring to enable autoland with one radio altimeter inoperative. This installation limits the selection of the buyer-furnished radio altimeter receiver/transmitter to Collins part number 622-3890-014. This SCN is a requirement for a HUD installation.

WEIGHT IMPACT: Negligible

SCN 6501
6-6-77

LOC CAPTURE BEFORE G/S CAPTURE INTERLOCK—During approach this interlock system prevents the autopilot and flight directors from capturing the glideslope before the localizer has been captured.

WEIGHT IMPACT: Negligible

SCN 6512B
8-26-80

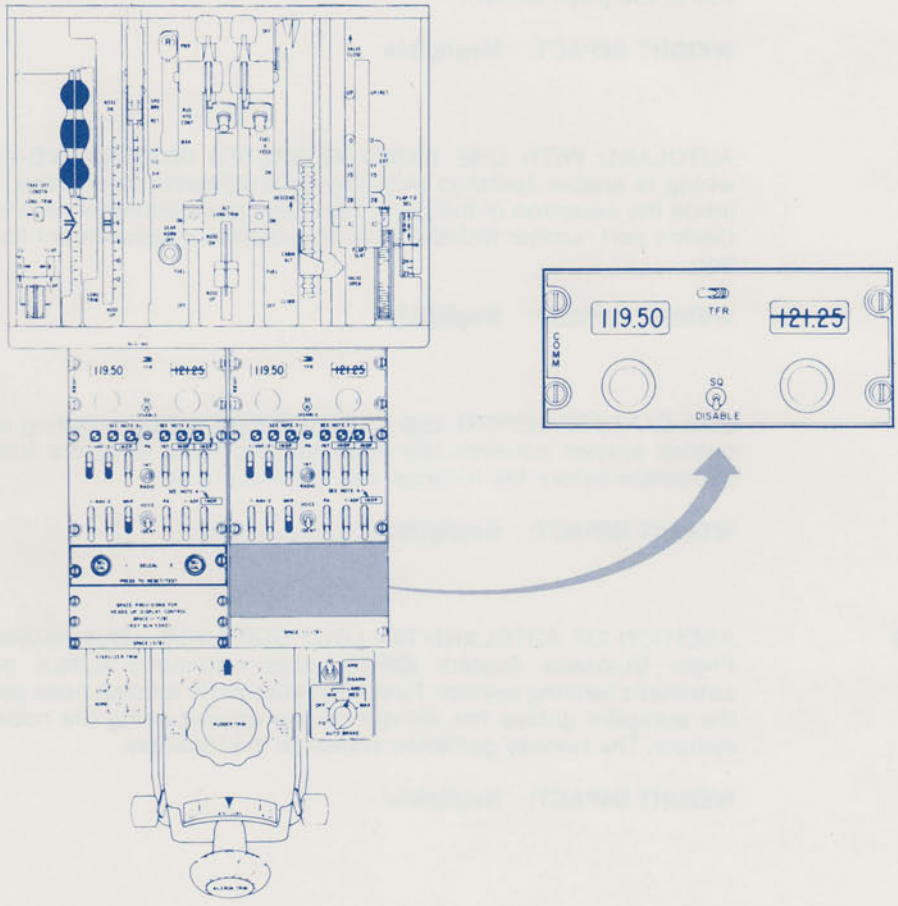
ADDITION OF AUTOLAND ROLLOUT GUIDANCE—This revision to the Digital Flight Guidance System (DFGS) adds automatic rollout guidance to the automatic landing system. Following automatic landing nose gear compression, the autopilot guides the aircraft on the runway using the nose wheel steering system. The runway guidance source is the localizer.

WEIGHT IMPACT: Negligible

SCN 1104P
12-3-80

INSTALLATION OF A THIRD VHF COMMUNICATION SYSTEM—This SCN installs a third VHF transceiver, a communications control panel and an antenna on the lower aft fuselage. This additional VHF radio will allow further VHF capability and can provide dedication to any particular function.

WEIGHT IMPACT: +30 LB



SCN 1414E
7-15-77

INSTALLATION OF PARTIAL PROVISIONS FOR ONE HF COMMUNICATION SYSTEM—Installs partial provisions for a single HF communications system consisting of a tail cone with an integral antenna, a grounding strap, a pressure feed-through and mounting provisions for an antenna accessory coupler and antenna tuner. (These are minimum provisions for ferry purposes only. See SCN 5518 for complete provisions.)

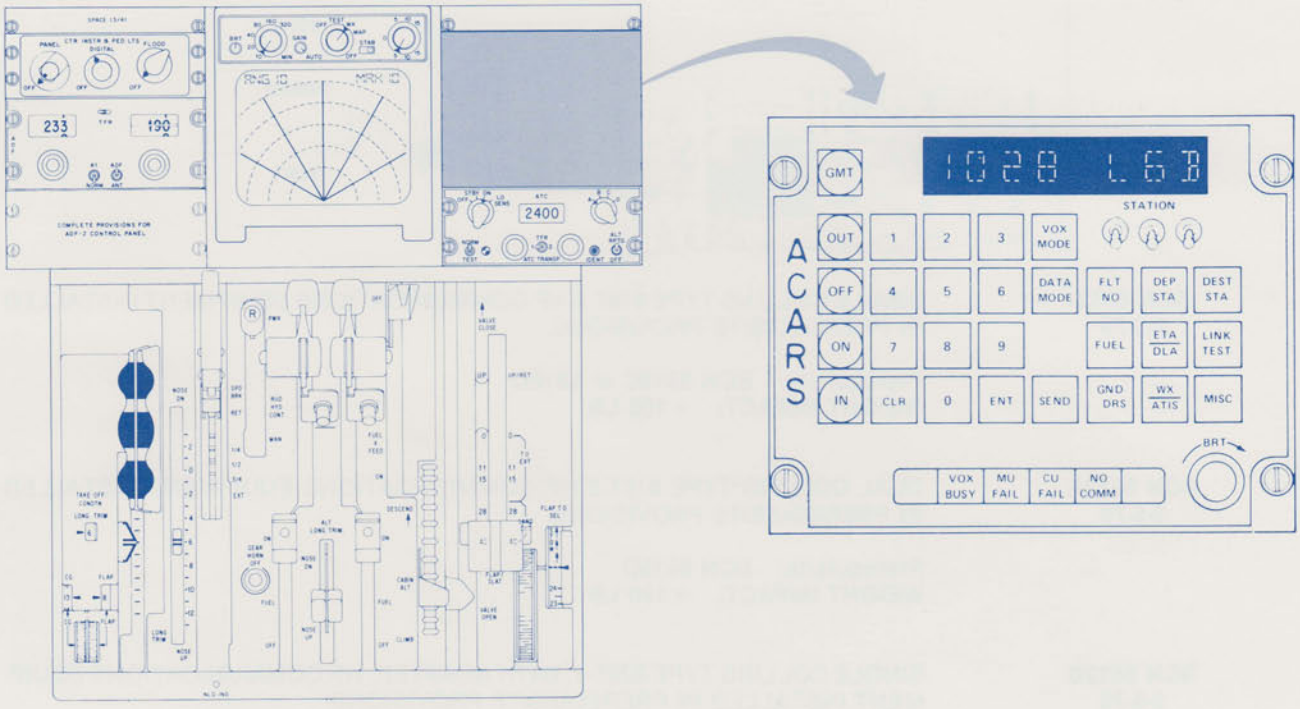
WEIGHT IMPACT: +16 LB

SCN 5116M
12-15-80

INSTALLATION OF TELEDYNE ACARS DATA LINK WITH CONTROL UNIT IN THE RIGHT FORWARD PEDESTAL—The ARINC Communications Addressing and Reporting System (ACARS) provides a digital data link between the aircraft and an ARINC ground-based station using VHF frequencies. ACARS provides a means of reporting vital flight and routine information such as the "OUT", "OFF", "ON", "IN" times. The signals shall be derived as follows:

OFF/ON — ground control relay
OUT — main/aft cabin door closed, parking brake released, engine oil pressure
IN — main/aft cabin door open and engine oil pressure

WEIGHT IMPACT: +21 LB



HF COMMUNICATION SYSTEMS

The series 5518 and 5512 SCNs provide any combination of provisions and/or installation of one or two Collins high-frequency communications systems.

SCN 5518C
12-2-80

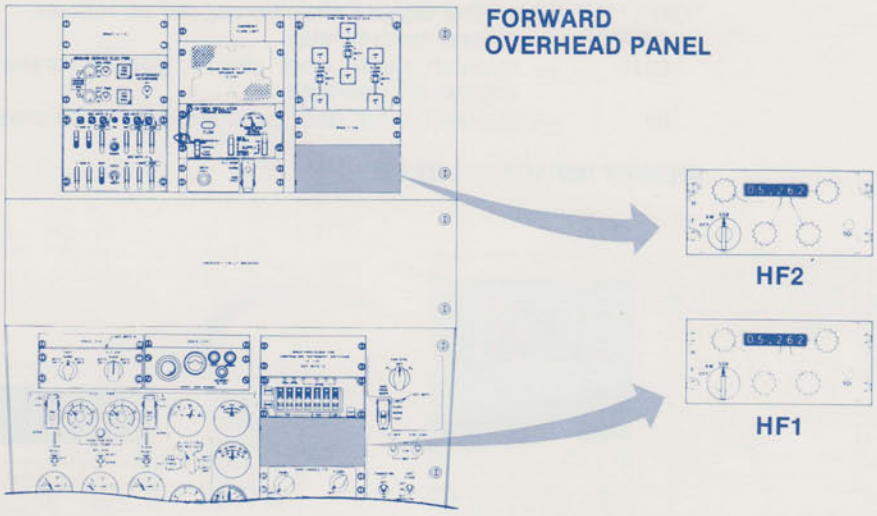
COMPLETE PROVISIONS FOR ONE COLLINS TYPE 618T-2, 618T-5, OR 628T-1 WITH ADAPTER, HF COMMUNICATIONS SYSTEM (ARINC 533A Wiring)

WEIGHT IMPACT: +64 LB

SCN 5518D
12-2-80

COMPLETE PROVISIONS FOR TWO COLLINS TYPE 618T-2, 618T-5, OR 628T-1 WITH ADAPTER, HF COMMUNICATIONS SYSTEMS (ARINC 533A Wiring).

WEIGHT IMPACT: +105 LB



SCN 5512
3-5-79

SINGLE COLLINS TYPE 618T-2 HF COMMUNICATIONS EQUIPMENT INSTALLED IN PREREQUISITE PROVISIONS.

Prerequisite: SCN 5518C or 5518D
WEIGHT IMPACT: +102 LB

SCN 5512A
3-5-79

DUAL COLLINS TYPE 618T-2 HF COMMUNICATIONS EQUIPMENT INSTALLED IN PREREQUISITE PROVISIONS.

Prerequisite: SCN 5518D
WEIGHT IMPACT: +190 LB

SCN 5512B
3-5-79

SINGLE COLLINS TYPE 628T-1, WITH ADAPTER, HF COMMUNICATIONS EQUIPMENT INSTALLED IN PREREQUISITE PROVISIONS.

Prerequisite: SCN 5518C or 5518D
WEIGHT IMPACT: +81 LB

SCN 5512C
3-5-79

DUAL COLLINS TYPE 628T-1, WITH ADAPTER, HF COMMUNICATIONS EQUIPMENT INSTALLED IN PREREQUISITE PROVISIONS.

Prerequisite: SCN 5518D
WEIGHT IMPACT: +146 LB

SCN 5512F
3-5-79

SINGLE COLLINS TYPE 618T-5 HF COMMUNICATIONS EQUIPMENT INSTALLED IN PREREQUISITE PROVISIONS.

Prerequisite: SCN 5518C or 5518D
WEIGHT IMPACT: +102 LB

ATA CHAPTER 23 Communications

SCN 5512G
3-5-79

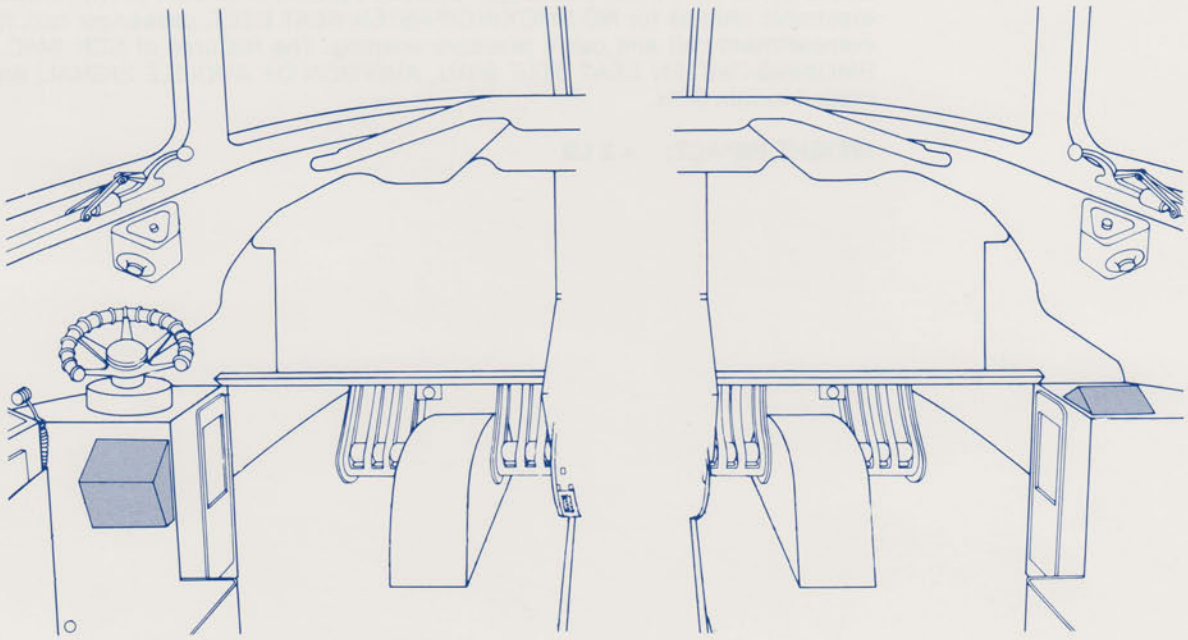
DUAL COLLINS TYPE 618T-5 HF COMMUNICATIONS EQUIPMENT INSTALLED IN PREREQUISITE PROVISIONS.

Prerequisite: 5518D
WEIGHT IMPACT: +190 LB

SCN 6566G
11-10-80

RELOCATION OF THE AUDIO SELECTOR CONTROL PANELS TO THE LEFT AND RIGHT CONSOLES—Relocates the captain's and first officer's audio selector panels outboard to the left and right consoles, respectively. Provides pedestal panel space for future growth.

WEIGHT IMPACT: Negligible



SCN 319L
1-3-78

INSTALLATION OF GABLES G-825C TAPE REPRODUCER UTILIZING COMPLETE PROVISIONS—A seller-furnished tape reproducer (player) is installed to provide taped boarding music over the passenger address system. This SCN is an alternate to SCN 1806H.

WEIGHT IMPACT: +24 LB

SCN 1806H
3-6-80

INSTALLATION OF A BUYER-FURNISHED SUNDSTRAND CAM 202 RECORDED ANNOUNCEMENT SYSTEM WITH BOARDING MUSIC—A Sundstrand CAM 202 recorded announcement and music playback system is installed modifying existing provisions. This SCN provides the capability of playing boarding music and pre-recorded announcements such as flight attendant safety briefings, evacuation announcements and other emergency messages over the passenger address system. This SCN is an alternate to SCN 319L.

WEIGHT IMPACT: +29 LB

SCN 6568A
8-8-79

MUTING OF FLIGHT COMPARTMENT SPEAKERS—This system mutes both flight compartment overhead speakers if any microphone is keyed from the captain's or first officer's station or if the pedestal handset is keyed on passenger address.

WEIGHT IMPACT: Negligible

SCN 6570D
12-15-80

INSTALLATION OF A BUYER-FURNISHED PASSENGER ADDRESS AMPLIFIER WITH ELECTRONIC CHIME IN LIEU OF THAT SPECIFIED (DELETES THE SINGLE TONE CHIME)—A buyer-furnished Collins passenger address amplifier with an integral high, low and high-low chime feature is installed, replacing the existing passenger address amplifier and deleting the single-tone electronic chime feature from the passenger address system. This SCN provides distinct electronic chimes for NO SMOKING/FASTEN SEAT BELT, passenger call, flight compartment call and cabin pressure warning. The features of SCN 846C (NO SMOKING-FASTEN SEAT BELT SIGN, ADDITION OF AUDIBLE SIGNAL) are included in this SCN.

WEIGHT IMPACT: +2 LB

SCN 181C
6-19-78

GROUND POWER CIRCUITRY PROTECTION—Application of external electrical power to the aircraft ground service bus is prevented if the frequency or voltage of the power supply is abnormal. The change provides protection should the frequency or voltage be different than that required on the aircraft.

WEIGHT IMPACT: +10 LB

SCN 182
4-1-64

ELECTRICAL MAINTENANCE RECEPTACLES—This change installs a 115-volt outlet in the electrical/electronics rack area for use with electronic test equipment or maintenance tools such as a vacuum cleaner.

WEIGHT IMPACT: +1 LB

SCN 1221F
12-3-80

INSTALLATION OF SPARE WIRES (CATEGORY I, II AND IV)—Installs Category I, II and IV spare wires which are routed from the radio rack to each engine firewall disconnect, to each main landing gear wheel well and to the flight compartment overhead panel area.

Category I wiring conducts 115-200 VAC, 3-phase/single-phase at 400 Hz, AC and DC power at 28 volts and DC power to non-electronic loads.

Category II wiring conducts 28 volts AC and DC to electronic and instrumentation loads.

Category IV wiring conducts sensitive circuits such as microphone, audio and video signals, metering and bridge inputs.

These spare wires are not for use with autoland circuits.

WEIGHT IMPACT: +22 LB

SCN 51H
10-17-80

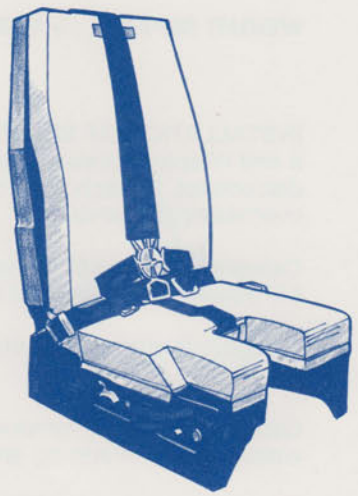
INSTALLATION OF LIQUID SOAP DISPENSERS IN LIEU OF BAR SOAP DISPENSERS.

WEIGHT IMPACT: +1 LB

SCN 811D
6-6-77

INSTALLATION OF ROTARY BUCKLE ON THE CROTCH STRAP OF THE PILOT'S SAFETY BELTS (in lieu of on Lap Belt)—A rotary buckle is attached on the crotch strap of the pilot's safety belt instead of the lap belt which assures that pilots utilize the crotch straps when fastening the belt system.

WEIGHT IMPACT: +1 LB



SCN 4482A
6-6-77

REPLACEMENT OF EVACUATION SLIDE WITH A SELF-ILLUMINATING EVACUATION SLIDE NEAR THE TAIL CONE—The standard evacuation slide in the tail compartment is illuminated by a single floodlight located in the fuselage at the top of the tail cone opening. This floodlight sends a beam of light down the length of the slide onto the ground. This SCN adds battery-powered incandescent lights spanning the length of each side of the evacuation slide in addition to the one large beam.

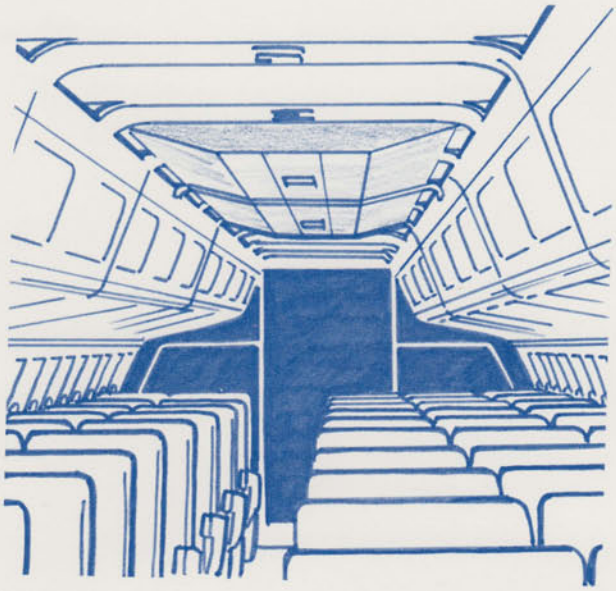
WEIGHT IMPACT: None

ATA CHAPTER 25

SCN 5132B
7-25-79

INSTALLATION OF CEILING STOWAGE COMPARTMENTS FOR LIFE RAFTS (in Forward Cabin and Overwing Area)—These pull-down stowage compartments are installed in the passenger cabin ceiling for future installation by the buyer of 42-man Pan Avion Type C42 life rafts.

WEIGHT IMPACT: +61 LB



ATA CHAPTER 26

Fire Protection

SCN 4827
9-28-77

CONNECTS FIRE DETECTOR LOOP WARNING SIGNAL TO MASTER CAUTION SYSTEM—A fire detector loop annunciator light installed in the miscellaneous caution annunciator panel illuminates whenever any loop light on the fire detector overhead panel is activated; this SCN extends the caution signal to the Master Caution light on the glareshield.

WEIGHT IMPACT: Negligible

ATA CHAPTER 28 Fuel System

SCN 609N
4-18-79

INSTALLATION OF DRIPLESS DIP STICKS GRADUATED IN POUNDS IN LIEU OF INCHES (6.7 Lb/Gal)—Dripless dip sticks measure the fuel quantity in the fuel tanks in terms of pounds of fuel rather than inches of fuel.

WEIGHT IMPACT: None

SCN 609P
4-18-79

INSTALLATION OF DRIPLESS DIP STICKS GRADUATED IN KILOGRAMS IN LIEU OF INCHES (0.790 Kilograms/Liter)—These measure the fuel quantity by kilogram markings rather than inch markings.

WEIGHT IMPACT: None

ATA CHAPTER 30 — Ice and Rain Protection

SCN 2145A
9-29-77

REVISION TO AIRFOIL ICE PROTECTION SYSTEM—This SCN replaces the existing continuous wing anti-ice system and the manual tail deicing system with an automatic wing/tail system which provides a continuous cycle of 15 minutes of wing anti-icing and 2.5 minutes of tail deicing. It also installs a manual override switch that, when actuated, interrupts the wing continuous anti-ice cycle and provides 2.5 minutes of tail deicing.

WEIGHT IMPACT: +13 LB

SCN 6637
11-1-78

INSTALLATION OF A TRANSFORMER TO CONVERT 220-VOLT EXTERNAL POWER TO 115 VOLTS FOR POTABLE WATER HEATING—A transformer is installed to convert 220-volt ground power to 115 volts for use in the aircraft potable water freeze protection system. The standard DS-8000 provides a water heating system that accepts 115 volts only.

WEIGHT IMPACT: +15 LB

ATA CHAPTER 31 Instruments

SCN 852X
9-25-78

GENERAL INSTRUMENTATION, REVISED (Metric in Lieu of English for JT8D-209 Engine)—Metric instrumentation is available on the cabin temperature indicator, the cabin air pressure selector, the fuel integrated cockpit display unit, the refuel selector and display unit and fuel flow and fuel used indicators. The standard equipment is in English units.

WEIGHT IMPACT: Negligible

SCN 852Z
12-03-80

GENERAL INSTRUMENTATION, REVISED (Metric in Lieu of English for JT8D-217 Engine)—Metric instrumentation is available on the cabin temperature indicator, the cabin air pressure selector, the fuel integrated cockpit display unit, the refuel selector and display unit and fuel flow and fuel used indicators. The standard equipment is in English units.

Prerequisite: SCN 5417C or equivalent
WEIGHT IMPACT: Negligible

SCN 5236A
11-10-78

PROVIDES VOICE WARNINGS IN CENTRAL AURAL WARNING SYSTEM —The revision to the system provides voice warning messages in addition to the required tone for some of the warnings such as altitude, landing gear, cabin altitude, stall, etc. The tone warning precedes the voice message.

WEIGHT IMPACT: Negligible

SCN 5643
11-30-79

INSTALLATION OF SUNDSTRAND UNIVERSAL FLIGHT DATA RECORDER IN LIEU OF THE RECORDER SPECIFIED—A buyer-furnished Sundstrand Universal flight data recorder with underwater locating beacon, compatible with ARINC 573 and ARINC 542 is installed in place of the specified buyer-furnished data recorder. This new unit will accept both analog and digital inputs, thereby allowing fleet interchangeability.

WEIGHT IMPACT: +1 LB

SCN 6401E
11-4-80

ADDITION OF PARAMETERS TO THE DIGITAL FLIGHT DATA RECORDER SYSTEM (EGT, N_1, N_2, FUEL FLOW AND MACH)

WEIGHT IMPACT: +3 LB

SCN 6404F
10-29-80

INSTALLATION OF A DIGITAL AIDS RECORDER, MANAGEMENT CONTROL UNIT, IDENTIFICATION RECEPTACLE AND FDEP PART NUMBER CHANGE—Installs a buyer-furnished AIDS system consisting of a digital aids recorder and management control unit. Replaces the specified flight data entry panel with a buyer-furnished panel that controls both the digital aids recorder via the management control unit and documentary data input to the Flight Recorder/AIDS system. Installs receptacle for aircraft identification plug. The AIDS provides a means of selectively recording flight data parameters on a quick-access tape cassette. The data is usable for performance and maintenance monitoring.

WEIGHT IMPACT: +35 LB

SCN 5192A
12-20-77

INSTALLATION OF LANDING GEAR WARNING LIGHT INHIBIT—When the landing gear is not down and locked (extended), and the throttles are retarded to less than approximately 1/2 inch from the idle stop, the landing gear red unsafe lights will illuminate. This feature inhibits the warning light at greater than 210 knots indicated airspeed, for high descent profiles.

WEIGHT IMPACT: Negligible

SCN 5736
5-7-80

INSTALLATION OF MAIN LANDING GEAR TIRES WITH 26-PLY RATING INSTEAD OF 24-PLY RATING

WEIGHT IMPACT: +88 LB

SCN 6522
8-7-78

INSTALLATION OF AUTOMATIC BRAKING SYSTEM WITH LANDING AND TAKEOFF MODES—The main landing gear brakes are automatically applied during landing upon ground spoiler deployment and during takeoff upon initiation of a rejected takeoff. The pilot may select from three landing deceleration levels. Maximum braking is used for rejected takeoff. This system provides increased passenger comfort through controlled deceleration and smooth brake pressure application and release, reduces workload during rollout and permits the pilot to concentrate on directional control, and increases braking efficiency on slippery surfaces by the application of steady pressure on the antiskid valves.

WEIGHT IMPACT: +26 LB

SCN 846C
9-22-77

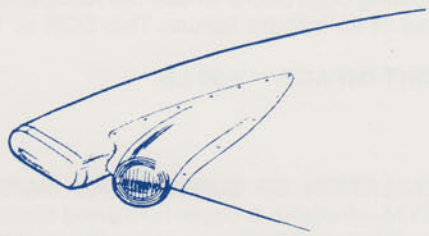
NO SMOKING—FASTEN SEAT BELT SIGN, ADDITION OF AUDIBLE SIGNAL—This is an electronic chime that sounds momentarily in the passenger cabin when the NO SMOKING or FASTEN SEAT BELT sign is illuminated either by actuation of the switch in the flight compartment or by automatic function. This chime will immediately focus the passengers' and cabin crews' attention on the overhead signs. The standard system provides only illumination of the signs. (see SCN 6570D for additional feature)

WEIGHT IMPACT: +1 LB

SCN 4313E
9-1-78

INSTALLATION OF LOGO LIGHTS (DEVORE)—A light is installed on each wing tip to illuminate logo markings on each side of the vertical stabilizer.

WEIGHT IMPACT: +12 LB



SCN 1025R
8-9-78

INSTALLATION OF A THIRD VERTICAL GYRO, ATTITUDE SWITCHING UNIT AND SELECTOR SWITCH—A third vertical gyro and selector switch to transfer the outputs of this gyro are installed. The third vertical gyro allows the pilots an alternate system in case of a failure as well as being a third attitude source for the HUD and Flight Guidance System. This SCN or 1025U is necessary for HUD operation.

WEIGHT IMPACT: +32 LB

SCN 1025U
11-10-80

INSTALLATION OF AUX VERTICAL GYRO, ATTITUDE SWITCHING, COMPASS SWITCHING AND NAV SWITCHING—A third vertical gyro and selector switches to transfer the outputs of this gyro, a compass switching unit and navigation switching unit are installed. The third vertical gyro allows the pilots an alternate system in case of a failure as well as being a third attitude source in the HUD and Flight Guidance System. The compass and navigation switching provide a means of allowing both pilots to use the remaining compass and navigation information in case of an inflight failure. This SCN or 1025R is necessary for HUD operation.

WEIGHT IMPACT: +30 LB

SCN 4281T
9-11-79

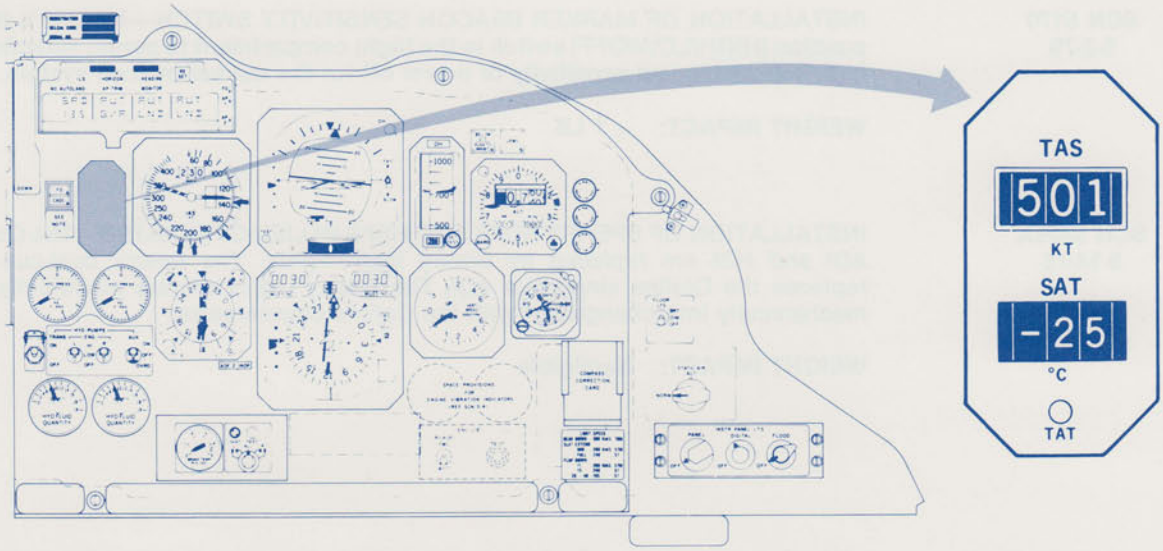
INSTALLATION OF SUNDSTRAND MARK II GROUND PROXIMITY WARNING SYSTEM—Installs a buyer-furnished Sundstrand Mark II ground proximity warning computer (GPWC), revising the existing ARINC 594 provisions. The Sundstrand Mark II GPWS provides distinctive aural annunciation, permitting the flight crew to readily identify warning conditions, e.g., "flaps" for nonlanding flap configuration, and provides improved warning detection capability during level flight into rising terrain.

WEIGHT IMPACT: +9 LB

SCN 4765C
3-31-78

INSTALLATION OF SAT/TAS INDICATOR—A static air temperature/true airspeed indicator is installed in the first officer's instrument panel. The indicator also provides TAT indication in the SAT window when the TAT push-button is pressed. Complete provisions for this SCN are provided in the standard DS-8000.

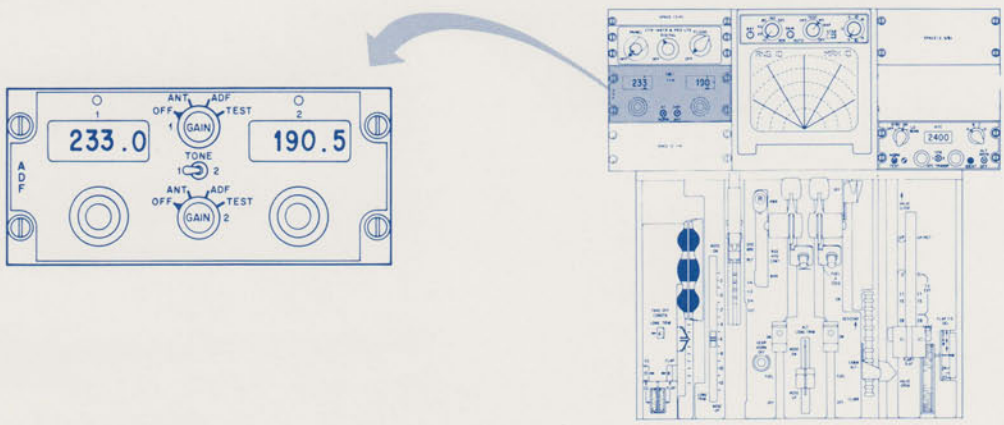
WEIGHT IMPACT: +1 LB



SCN 4928M
12-2-80

INSTALLATION OF EQUIPMENT FOR ADF-2 SYSTEM WITH DUAL ADF CONTROL PANEL (Revises the Existing Complete Provisions)—Installs a buyer-furnished ADF receiver for a second ADF system and replaces the existing ADF-1 control panel with a buyer-furnished panel for controlling both ADF systems.

WEIGHT IMPACT: +15 LB



SCN 4928P
12-2-80

INSTALLATION OF EQUIPMENT FOR ADF-2 SYSTEM UTILIZING EXISTING COMPLETE PROVISIONS—A buyer-furnished ADF-2 receiver and a second buyer-furnished control panel and a loop antenna are installed to provide a second ADF system.

WEIGHT IMPACT: +17 LB

SCN 5170
5-2-79

INSTALLATION OF MARKER BEACON SENSITIVITY SWITCH—Installs a three-position (HIGH/LOW/OFF) switch in the flight compartment to permit selection of high sensitivity, low sensitivity or power off for the marker beacon system.

WEIGHT IMPACT: +1 LB

SCN 5329A
9-14-78

INSTALLATION OF SPERRY ADI'S AND HSI'S IN LIEU OF COLLINS—The Collins ADI and HSI are replaced by Sperry instruments. The Sperry dual-cue ADI replaces the Collins single-cue ADI. The Sperry indicators are electrically and mechanically interchangeable with the Collins counterparts.

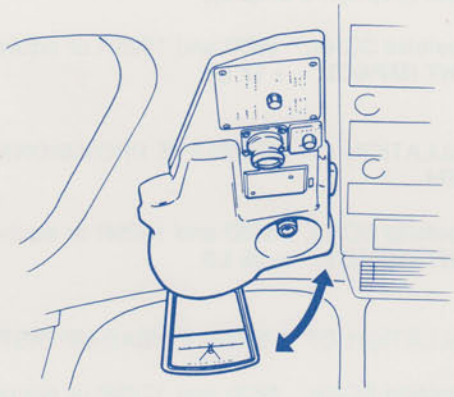
WEIGHT IMPACT: Negligible

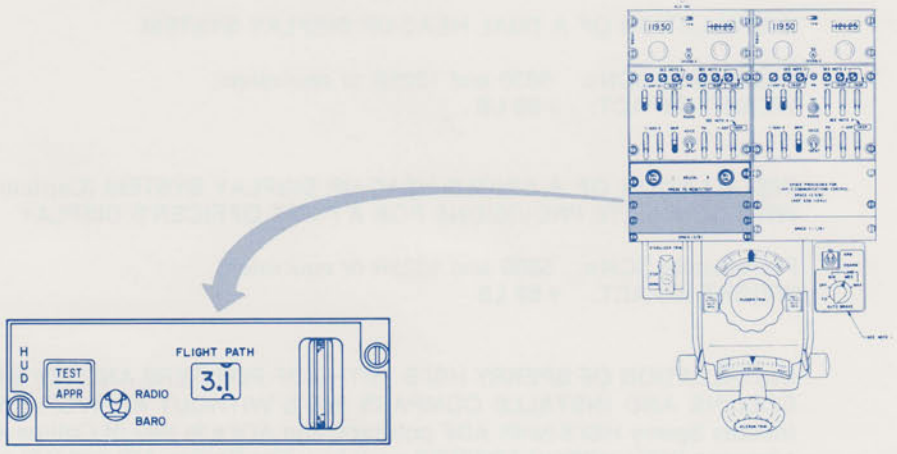
HEAD-UP DISPLAY

HUD is designed to assist the pilot during the following conditions:

- Manual approaches into non-ILS equipped runways in conjunction with available visual cues,
- Manual approaches into ILS equipped runways to FAA CAT I and II limits,
- Monitoring flight director approaches in conjunction with available visual cues,
- Monitoring autopilot-coupled approaches with the capability of manual takeover in conjunction with visual cues after autopilot failure at or below DH to touchdown,
- Missed approach (go-around) from any altitude without outside visual cues,
- Ground rollout augmenting outside visual cues,
- Pitch and roll guidance following liftoff.

These maneuvers are achieved by presenting the essential guidance information displayed on a combiner coincident with the pilot's forward field of view.





The HUD consists of:

- HUD Computer (1)
- Control Panel (1)
- Pilot's Display Unit (PDU) (1)
- First Officer's PDU (Optional) (1).

The HUD computer is a rack-mounted high-speed computer providing all the necessary computation for symbol generation, control law mechanization and system monitoring.

The control panel is located on the pedestal and incorporates a flight path angle selector, a switch to select either radio altitude or barometric altitude displayed and a system test/approach switch.

The PDU is a compact, modularized, overhead-mounted cockpit element which contains the HUD optics, cathode ray tube (CRT), associated electronics and the optics stow mechanism. The PDU permits the pilot to receive important aircraft flight guidance information in the same field of view as the outside world and provides a flexible display format through use of electronic symbology, a large field of view and automatic maintenance of display brightness.

SCN 5340N
11-1-80

INSTALLATION OF COMPLETE PROVISIONS FOR A SINGLE HEAD-UP DISPLAY SYSTEM (Captain's Display)

Prerequisite SCNs: 5830 and 1025R or equivalent.
WEIGHT IMPACT: +17 LB

SCN 5340P
11-1-80

INSTALLATION OF COMPLETE PROVISIONS FOR A DUAL HEAD-UP DISPLAY SYSTEM

Prerequisite SCNs: 5830 and 1025R or equivalent.
WEIGHT IMPACT: +25 LB

SCN 5340T
11-1-80

INSTALLATION OF A SINGLE HEAD-UP DISPLAY SYSTEM (Captain's Display)

Prerequisite SCNs: 5830 and 1025R or equivalent.
WEIGHT IMPACT: +53 LB

SCN 5340U
11-1-80

INSTALLATION OF A DUAL HEAD-UP DISPLAY SYSTEM

Prerequisite SCNs: 5830 and 1025R or equivalent.
WEIGHT IMPACT: +83 LB

SCN 5340V
11-1-80

INSTALLATION OF A SINGLE HEAD-UP DISPLAY SYSTEM (Captain's Display) WITH COMPLETE PROVISIONS FOR A FIRST OFFICER'S DISPLAY

Prerequisite SCNs: 5830 and 1025R or equivalent.
WEIGHT IMPACT: +63 LB

SCN 5783
7-24-80

INSTALLATION OF SPERRY HSI'S WITH ADF POINTERS AND ADI'S IN LIEU OF COLLINS AND INSTALLS COMPASS IND'S WITHOUT ADF/VOR SWITCHES—Installs Sperry HSI's (with ADF pointers) and ADI's in lieu of Collins and installs compass IND's without ADF/VOR switches. The Collins ADI and HSI are replaced with Sperry Instruments. The ADI is the same ADI as installed by SCN 5329A. The Sperry HSI includes two ADF bearing pointers to always display ADF-1 and ADF-2 (if installed) bearing information. The compass indicator always displays VOR-1 and VOR-2 bearing information.

WEIGHT IMPACT: Negligible

ATA CHAPTER 35 Oxygen

SCN 1012A
9-29-77

INSTALLATION OF 64-CUBIC-FOOT CREW OXYGEN CYLINDER IN LIEU OF THE 48-CUBIC-FOOT—The 48-cubic-foot crew oxygen cylinder is replaced with one of 64-cubic feet, thus increasing the crew's oxygen supply and reducing maintenance time. The cyclinder is attached to the forward face of Galley G1.

WEIGHT IMPACT: +6 LB

SCN 1192C
6-6-77

INSTALLATION OF REVISED CREW OXYGEN CYLINDERS—This SCN replaces the existing 48-cubic-foot crew oxygen cylinder with a 74-cubic-foot crew oxygen cylinder. The new size increases the crew oxygen supply and reduces maintenance. In addition, the 11-cubic-foot crew portable oxygen cylinder with a quick-detachable adapter is replaced with the same size cylinder having a threaded adapter.

WEIGHT IMPACT: +13 LB

SCN 3285H
8-27-79

ADDITION OF POLYURETHANE FINISH TO LOWER FUSELAGE (COLOR TO BE DETERMINED)—Impact-resistant polyurethane coating is added to the exterior lower fuselage, extending up to the left and right window belt doublers. The polyurethane provides additional corrosion and erosion protection.

WEIGHT IMPACT: +37 LB

SCN 4186A
8-29-77

EXTERIOR POLYURETHANE FINISH, INCREASED COVERAGE FOR—Impact resistant polyurethane coating is added to the lower forward fuselage behind the nose wheel well and to the bottom of each wing flap. The polyurethane provides additional corrosion and erosion protection.

WEIGHT IMPACT: +7 LB

SCN 4631
6-4-75

REMOVAL OF RADOME EROSION PROTECTION BOOT AND APPLICATION OF EROSION-RESISTANT COATING WITH POLYURETHANE TOP-COATINGS—The existing black radome erosion protection boot is removed and Hughson Chemical Company Chemglaze white erosion-resistant coating is applied to the entire radome exterior. The radome exterior is then overcoated with a polyurethane coating in a color matching the aircraft exterior markings.

WEIGHT IMPACT: +1 LB

SCN 4631B
12-19-75

REMOVAL OF RADOME EROSION PROTECTION BOOT AND APPLICATION OF EROSION-RESISTANT COATING—The existing black radome erosion boot is removed and Astrocoat Black erosion-resistant coating is applied.

WEIGHT IMPACT: Negligible

SCN 4631C
10-10-78

REMOVAL OF RADOME EROSION PROTECTION BOOT AND APPLICATION OF EROSION-RESISTANT COATING—The existing black radome erosion boot is removed and Stepan Chemical Company Prestec erosion-resistant coating is applied.

WEIGHT IMPACT: Negligible

SCN 6608
6-6-77

INSTALLATION OF APU STARTER ANNUNCIATOR LIGHT—A blue annunciator light is installed on the overhead annunciator panel that illuminates when the APU starter is energized.

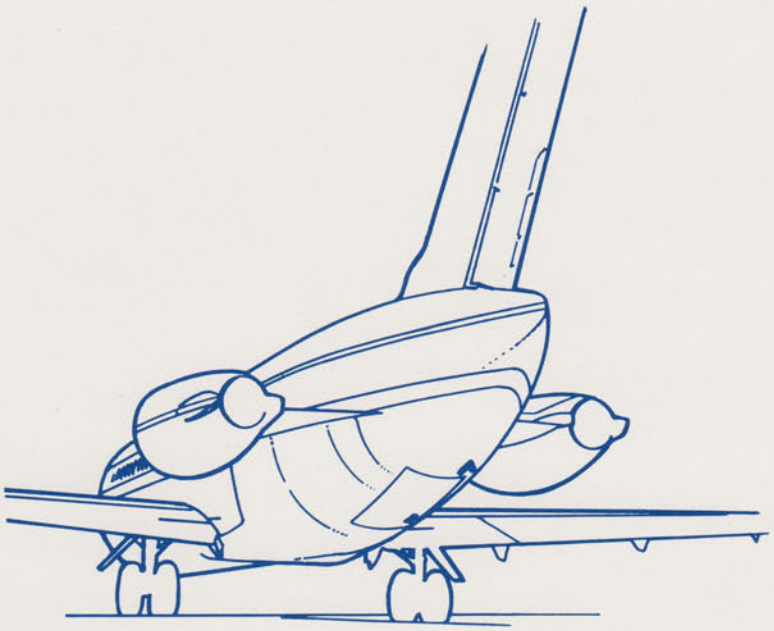
WEIGHT IMPACT: +1 LB

Doors

SCN 5306
5-10-78

INSTALLATION OF AIRFLOW-ACTUATED VENTRAL STAIRWAY LOCKING SYSTEM—This new system, activated by airflow, automatically locks the ventral stair during flight and unlocks the stair while on the ground. This system permits opening the ventral stairway from inside the aircraft only when on the ground. The system complies with FAA antihijacking rules.

WEIGHT IMPACT: +2 LB



SCN 5399
9-12-78

INSTALLATION OF INTERIOR VENTRAL STAIR CONTROL HANDLE—An operating handle on the interior ventral stair control panel is installed to allow the ventral stair to be extended from inside the aircraft. The change does not comply with FAA antihijacking rules required for U.S. operators. (Refer to SCN 5306.)

WEIGHT IMPACT: None

ATA CHAPTER 53

SCN 4962A
12-15-80

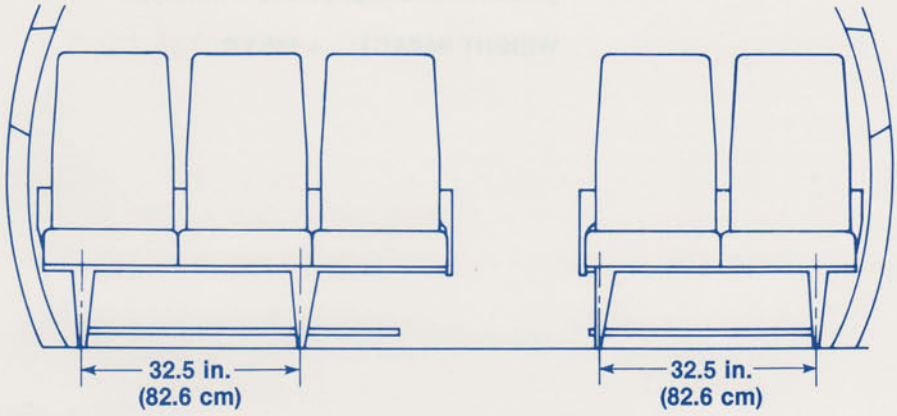
Fuselage

INSTALLATION OF ADDITIONAL PASSENGER SEAT TRACKS, LH AND RH, 54.5 INCHES OUTBOARD OF FUSELAGE CENTERLINE—This SCN installs two additional passenger seat tracks at 54.5 inches outboard, one left and one right. The change allows a customer to select seats with wide leg spacing for improved under-seat stowage.

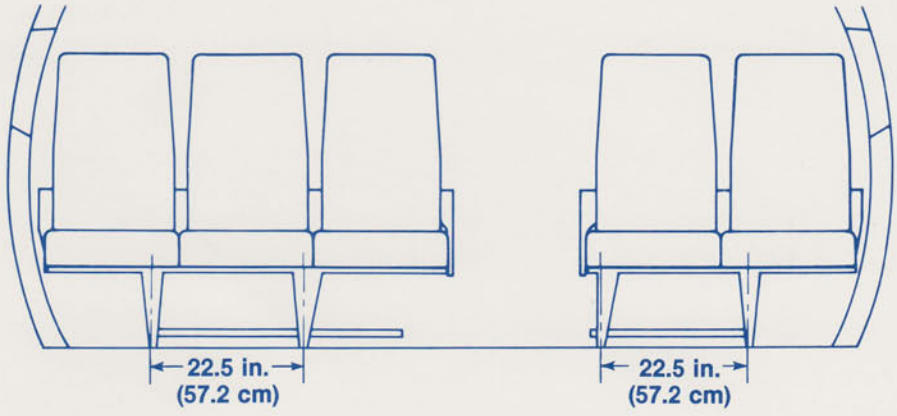
WEIGHT IMPACT: +177 LB

LOOKING AFT

OPTION



BASELINE



ATA CHAPTER 72

Engines

SCN 5417C
11-12-80

INCREASED MTOGW FROM 140,000 TO 147,000 LB AND INSTALLATION OF JT8D-217 ENGINES IN LIEU OF JT8D-209 ENGINES—This SCN increases the maximum takeoff gross weight from 140,000 to 147,000 pounds, increases the maximum taxi weight from 141,000 to 148,000 pounds and installs JT8D-217 engines in lieu of JT8D-209 engines. Installs 26-ply-rated tires. The JT8D-217 engines increase thrust from 18,500 to 20,000 pounds and with automatic reserve thrust from 19,250 pounds to 20,850. This additional weight and thrust increase provides approximately 400 nautical miles increased range from unrestricted airfields and greater payload capabilities from airports with hot summer temperatures and high pressure altitudes.

WEIGHT IMPACT: +185 LB

ATA CHAPTER 73

SCN 855
1-30-66

Engine Fuel and Control

AIR/FUEL HEATER SYSTEM, REVISED—This SCN modifies the air/fuel heater system to sense filter icing. A relay actuates the system by means of a signal from the fuel filter differential pressure switch. The standard ON-OFF switch is replaced with one that has positions for ON, OFF and AUTOMATIC. In the automatic position engine bleed air provides heat to the fuel system as required.

WEIGHT IMPACT: +1 LB

ATA CHAPTER 74

SCN 651D
3-2-67

Ignition

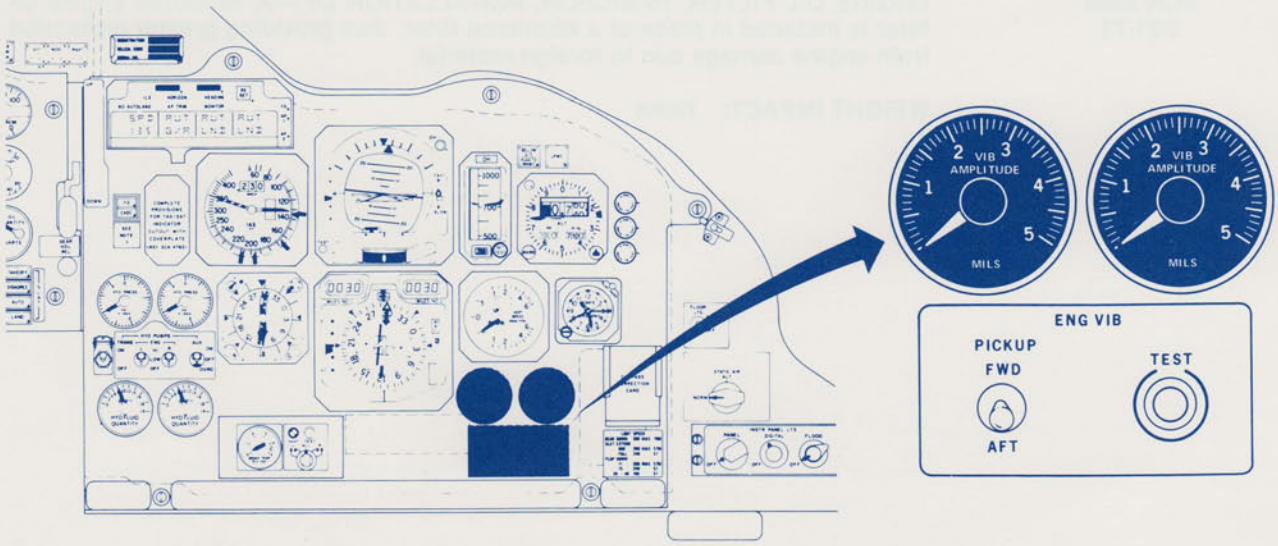
20-JOULE IGNITION SYSTEM, INSTALLATION OF—The dual 20-Joule ignition system is installed in place of the 20/4 ignition system which is standard equipment as specified in the DS-8000. The 20/20 Joule-ignition system allows the pilot to select either system or both systems for starting or for flight, if required, when the associated fuel shutoff lever is in the ON position. The OVRD position will provide ignition to both systems of both engines independent of the fuel levers.

WEIGHT IMPACT: +4 LB

SCN 314M
11-13-80

INSTALLATION OF A WAVELABS ENGINE VIBRATION MONITORING SYSTEM (With EVM Parameter to the FDAU)—Installs a Wavelabs engine vibration monitoring system utilizing existing partial provisions to provide the flight crew with vibration levels of each engine. Provides EVM parameters to the digital flight data recorder system.

WEIGHT IMPACT: +15 LB



SCN 2228B
4-5-78

INSTALLATION OF MAGNETIC METAL CHIP DETECTORS (Engine Oil System)—Tedeco magnetic chip detectors are installed to detect engine bearing deterioration. They are located in strategic locations in the lubrication system of the JT8D engines.

WEIGHT IMPACT: +3 LB

SCN 3968
3-21-73

ENGINE OIL FILTER, 15-MICRON, INSTALLATION OF—A 15-micron engine oil filter is installed in place of a 40-micron filter, thus providing greater protection from engine damage due to foreign material.

WEIGHT IMPACT: None

SCN 5086A
8-22-79

INSTALLATION OF REMOTE ENGINE STARTER CONTROL MECHANISM--This lever allows easy access for reset of failed engine start valve through a quick access door. The standard engine start valve must be reset manually without benefit of the lever.

WEIGHT IMPACT: +2 LB

IV. Buyer-Furnished Equipment

Buyer-Furnished Equipment

Equipment normally furnished by the buyer of the aircraft is listed on the following pages. These items are not included in the price of the aircraft and are subject to separate contractual negotiations between the buyer and seller as to price, procurement, terms and delivery dates.

The listing of multiple supplier and/or equipment part numbers under a single item indicates equipment conforming to ARINC characteristics defined in the appropriate paragraphs of the Detail Specification (DS-8000) and, as such, the equipment is interchangeable. Buyer selection of specific equipment from this list prior to engineering release authorization for each buyer configuration will be accommodated at no cost. Where multiple selections are shown, those items with a phi symbol (ϕ) were used to calculate the Manufacturer's Empty Weight shown in Section I. In the entries for passenger seats, the quantities and descriptions shown are applicable only to the 155-passenger Baseline Configuration. Other seating arrangements will require different lists.

Those items of BFE that are added or changed by customer options are not included in this section, but are identified in the SCN descriptions.

JANUARY 1981

ATA Chapter 23

No. Req.	Description	Vendor	Identity
	COMMUNICATIONS EQUIPMENT		
2	Transceiver, VHF Comm (ARINC 566A) or any of the following VHF Transceivers:	Collins	Type 618M-3 622-1181-001
		Collins	ϕ Type 618M-3 622-1181-003
		Collins	Type 618M-3 622-1181-004
		Collins	Type 618M-3 622-1181-005
		Collins	Type 618M-3 622-1181-006
		Bendix	Type RTA-43A 2070945-4301
		King	Type KTR 9100A 064-1005-04
1	SELCAL Decoder, Dual Channel	Motorola	NA-135
	AUDIO EQUIPMENT		
1	Amplifier, Service Interphone	Gables	G-610-11
1	Amplifier, Passenger Address or the following Passenger Address Amplifier:	Collins	ϕ Type 346D-2 622-4487-001
		Pacific Electro Dynamics	255-7
1	Amplifier, Flight Interphone	Gables	G-610-11
2	Loudspeaker, with Integral Amplifier and Volume Control	Gables	G-5515

ATA Chapter 25

INTERIOR EQUIPMENT

29	Seat Assy., RH Coach Passenger, Triple	TBD	TBD
1	Seat Assy., RH Coach Passenger, Triple, Special	TBD	TBD
1	Seat Assy., RH Coach Passenger, Triple, Special	TBD	TBD
2	Seat Assy., RH Coach Passenger, Triple, Special Width	TBD	TBD
26	Seat Assy., LH Coach Passenger, Double	TBD	TBD
1	Seat Assy., LH Coach Passenger, Double, Special	TBD	TBD
1	Seat Assy., LH Coach Passenger, Double, Special	TBD	TBD
1	Galley Section, G1	Nordskog	Model 1-527
1	Galley Section, G2	Nordskog	Model 1-528A
1	Galley Section, G3	Nordskog	Model 1-529A
1	Galley Section, G4	Nordskog	Model 1-530A
1 Set	Galley Inserts	Nordskog	TBD
7	Tray, Utility, Plug-In	TBD	TBD
1	Seat, Self-Folding Attendant	Nordskog	50403

TBD = To Be Determined

ATA Chapter 31

No. Req.	Description	Vendor	Identity
	CONTROL PANELS		
2	Control Panel, VHF Comm	Gables	G-5584
1	Control Panel, ADF (ARINC 570) or the following ADF Control Panel:	Gables Collins	ϕ G-3107D Type 614L-12 787-6366-016
1	Control Panel, ATC Transponder	Gables	G-5587
4	Control Panel, Audio Selector	Gables	G-6101
1	Control Panel, SELCAL	Gables	G-5686
	FLIGHT AND NAVIGATION INSTRUMENTS		
1	Indicator, Standby Horizon	SFENA	705-15-V1
1	Inverter, Static, Standby Horizon	SFENA	TSG420-102
1	Recorder, Voice, Flight Compartment (ARINC 557) with (Underwater Locating Beacon or any of the following Voice Recorders:	Fairchild Collins Collins Sundstrand Sundstrand Sundstrand	ϕ Type A100A 93-A100-80 Type 642C-1 522-4057-002 Type 642C-1 522-4057-010 Type AV557C 980-6005-076 Type AV557C 980-6005-077 Type AV557C 980-6005-078
1	Control Panel, Voice Recorder (ARINC 557) or any of the following Voice Recorder Panels:	Fairchild Fairchild Fairchild Collins Sundstrand Sundstrand Sundstrand	ϕ Type A152B 93-A152-30 Type A152 93-A152-00 Type A152-4 93-A152-04 Type 914F-1 522-4058-001 980-6100-001 980-6100-010 980-6109-001

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No. Req.	Description	Vendor	Identity
	FLIGHT AND NAVIGATION INSTRUMENTS (continued)		
1	Recorder, Flight Data, Digital (ARINC 573-6) with Underwater Locating Beacon	Sundstrand	981-6009-011
1	Acquisition Unit, Flight Data or the following FDAU:	Hamilton Standard	ϕ ED742951-9
		Teledyne	2222601-6
1	Panel, Flight Data Entry or the following Flight Data Entry Panel:	Hamilton Standard	ϕ 773770-1
		Teledyne	2226649
1	Accelerometer, Three-Axis	Sundstrand	971-4193-001

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No. Req.	Description	Vendor	Identity
	NAVIGATION EQUIPMENT		
2	Navigation Unit VOR/ILS (ARINC 547) or any of the following Navigation Units:	Collins	Type 51RV-2B 522-4280-101
		Collins	Type 51RV-2B 522-4280-105
		Collins	Type 51RV-4 622-3255-001
		Collins	Type 51RV-4B 622-3257-001
		Collins	ϕ Type 51RV-4B 622-3257-003
		Collins	Type 51RV-4B 622-3257-006
		Bendix	Type RNA-34A 2041234-3401
		King	Type KNR6030 066-1060-00
2	Interrogator, DME (ARINC 568-5) or the following DME Interrogator:	Collins	ϕ Type 860E-5 622-2921-001
		King	Type KDM-7000B 066-1019-23
1	Receiver, ADF (ARINC 570) or any of the following ADF Receivers:	Collins	ϕ Type 51Y-7 777-1492-003
			Type 51Y-7 777-1492-004
		Bendix	Type DFA-74A 2070677-7401
		King	Type KDF-8000 066-1022-01
1	Antenna, Loop, ADF	Collins	Type 137A-6A 522-3761-001
2	Coupler, Sense Antenna, ADF	Collins	Type 179J-18 622-4732-002
1	Receiver, Marker Beacon or any of the following:	Bendix	Type MKA-28A 2087821-2801
		Bendix	Type MKA-28A 2087821-2809
		Bendix	Type MKA-28A 2087821-2810
		Bendix	ϕ Type MKA-28C 2087821-2811
		Collins	Type 51Z-4 522-2996-011
2	Transponder, ATC (ARINC 532D) or:	Collins	Type 621A-3 522-2703-011
2	Transponder, ATC (ARINC 572) with:	Collins	ϕ Type 621A-6A 622-2224-001
2	Adapter Tray, ATC (ARINC 572)	Collins	ϕ Type 599W-2 622-3768-001

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No. Req.	Description	Vendor	Identity
2	Transmitter-Receiver, Radio Altimeter (ARINC 552) or any of the following Radio Altimeter Transmitter-Receivers:	Bendix	Type ALA-51A 2067631-0501
		Collins	Type 860F-1 522-3698-003
		Collins	Type 860F-1 522-3698-006
		TRT	Type ERT-530A 9599-607-14908
	(ARINC 552A) or any of the following:	Collins	Type 860F-1 522-3698-014
		Collins	ϕ Type 860F-4 622-3890-014
		Bendix	Type ALA-51A 2067631-5151
		TRT	Type AHV5-011A 9599-607-11127
2	Indicator, Radio Altimeter, Vertical-Scale any of the following Radio Altimeter Indicators:	Bendix	Type INA-51V 2070484-5110
		Collins (Gray Bezel)	ϕ Type 339H-2 522-4825-006
		TRT	Type AHV5-221 9599-607-14118
4	Antenna, Radio Altimeter or any of the following Radio Altimeter Antennas:	Bendix	Type ANA-51C 2070058-0701
		Collins	ϕ Type 437X-1A 522-4255-001
		TRT	Type AHV5-501 9599-607-12302
	RADAR EQUIPMENT		
1	Receiver-Transmitter Weather Radar (ARINC 708) or the following Receiver-Transmitter:	Bendix	ϕ Type RTA-4A 2041217-0401
		Collins	Type WRT-701X 622-5132-001
1	Mount Assembly, Receiver-Transmitter or the following Mount Assembly:	Bendix	ϕ Type MBA-4A 2041213-0403
		Collins	Type WMT-701X 622-5133-105
1	Connector, (ARINC 600) or any of the following Connectors:	Bendix	2039923-0501 or ϕ 2039923-0502
		Collins	642-9831-001
1	Pedestal, Antenna (Single Drive) or the following Antenna Pedestal:	Bendix	ϕ Type DAA-4A 2041444-0403
		Collins	Type WMA-701X 622-5135-001
1	Flat Plate, Antenna (30-inch Plate) or the following antenna Flat Plate:	Bendix	ϕ Type REA-4B 2041446-0401
		Collins	Type WFA-701X 622-5137-001
1	Indicator, Weather Radar (ARINC 708 Color Display with Controls) or the Indicator:	Bendix	ϕ Type PPI-4B 2041222-0405
		Collins	Type WXI-701 622-5128-204

No. Req.	Description	Vendor	Identity
	OXYGEN SYSTEM		
3	Mask, Oxygen, Pilots' and Observer, with Microphone	Douglas	7647640-503
3	Goggles, Smoke, Crew	Puritan	118070

V. Cross-Reference Index

Cross-Reference Index

The following listing of Custom Option Changes is classified sequentially by SCN number and title and cross-referenced by ATA chapter number. Also shown are the interior options designated as INTR—( ). The page number on which each item appears in this Guide is in the far right-hand column.

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DC-9 Super 80

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