

This illustration depicts the Italian air force Boeing KC-767A tanker/transporter configured as the convertible "combi" model with a 50/50 freighter/passenger layout

**Structure and general**

- 1 Sideways hinging di-electric radome
- 2 Forward pressure bulkhead
- 3 Two-crew cockpit
- 4 Pilot's fully adjustable seat with headrest and armrests
- 5 Observers seat
- 6 Cockpit folding jump seat
- 7 Cockpit/cabin wall and door-lockable
- 8 Opening side window/escape exit
- 9 Nose landing gear bay
- 10 Waste-water tank
- 11 Crew/cabin attendants folding seat-two in crew area

Leading-edge (inboard section) slat detail

Main instrument panel, shroud and forward centre console detail

- 12 Crew upper entry hatch
- 13 Main cabin (forward) door doubler
- 14 Inward and upwards opening main cabin forward door(1,87x1,06m)-all doors and exits fitted with inflatable escape slide and raft
- 15 Service door-1,83x1,06m
- 16 Cabin floor panels-glassfibre-reinforced plastic/nomex honeycomb sandwich
- 17 Crew entry hatch(lower) and telescopic boarding ladder
- 18 Typical LD2 container
- 19 Main deck cargo door actuator arm-two off
- 20 Upward opening main deck cargo door with piano hinge and 12 latching points-2,51x3,4m
- 21 Cargo handling system rollers and guide rails
- 22 Ball transfer mat and power drive units
- 23 Forward cargo hold with cargo handling system/ball transfer mat and Kevlar-reinforced plastic fire-resistant internal panels(40.8m<sup>2</sup>)-capable of accommodating three cargo pallets (2,74x2,23m), or a mixture of cargo pallets/containers and up to three auxiliary fuel tanks
- 24 Main deck cargo door (lower) latches
- 25 Forward cargo bay door-1,75x3,4m
- 26 Main deck cabin side-wall panels and dado vents
- 27 Waste-water system forward drain mast
- 28 Wing-to-pylon upper link
- 29 Nacelle aerodynamic strake-inboard only
- 30 Nacelle inlet cowling with sound-suppression linings
- 31 Cascade actuators(six per engine)-electrically actuated
- 32 Cascade-type thrust reverser-shown in closed position
- 33 Engine pylon-aluminium alloy and steel construction
- 34 Translating cowl section
- 35 Engine core cowling
- 36 Engine forward mount
- 37 Engine rear mount

- 38 Engine diagonal thrust brace
- 39 Thrust brace fuse-pin fitting
- 40 Leading-edge slat track can
- 41 Leading-edge spar-built-up aluminium alloy
- 42 Three-piece wing with machined/built-up ribs and skins with riveted stringers
- 43 Leading-edge fixed structure
- 44 Wing inspection panels-32 off
- 45 Wing tip
- 46 Trailing-edge fixed structure
- 47 Rear spar-built-up aluminium alloy
- 48 Main landing gear (MLG) wing attachment fitting-machined aluminium alloy
- 49 MLG beam-machined aluminium alloy
- 50 MLG(fuselage) attachment fitting-machined aluminium alloy
- 51 Centre wing box(CWB)-machined and built-up aluminium alloy
- 52 CWB-to-fuselage forward circumferential frame
- 53 Contoured freight pallet-up to 15 can be carried on the main deck in the transport role and 10 in the "Combi" configuration
- 54 Emergency exit(both sides)-96x51 cm
- 55 CWB-to-fuselage rear circumferential frame
- 56 Keel beam
- 57 Wing-to-CWB attachment fittings
- 58 MLG well
- 59 MLG well aft circumferential frame
- 60 Emergency exit(both sides) 1,52x61m
- 61 Inboard flap track attachment fitting
- 62 Wing-to-fuselage rear fairing
- 63 Rear cargo hold with cargo handling system/ball transfer mat and Kevlar-reinforced plastic fire-resistant internal panels(34m<sup>2</sup>)-capable of accommodating a mixture of cargo containers and up to three auxiliary fuel tanks
- 64 Rear cargo bay door-1,75x1,77m
- 65 Window blank
- 66 Window skin doubler
- 67 Waste-water system rear drain mast
- 68 Centreline refuelling system bay door 1,2m x 96m
- 69 Main cabin(infl) door skin doubler
- 70 Cabin rear door in open position-1,87x1,06m
- 71 Cabin lavatory No 1
- 72 Airstair storage area
- 73 Four-section folding airstair
- 74 Door exterior actuation handle
- 75 Cabin lavatory No 3
- 76 Cabin attendant's folding seats-two-off

- 77 Cabin lavatory No 2
- 78 Cabin galley
- 79 Potable-water tank
- 80 Waste-water tank
- 81 Rear pressure bulkhead-aluminium alloy
- 82 Tailplane leading edge-detachable
- 83 Three-piece three spar pivoting tailplane-aluminium alloy
- 84 Tailcone auxiliary power unit bay
- 85 Tailcone firewall-titanium
- 86 Single-piece three-spar cantilevered fin-aluminium alloy
- 87 Fin leading edge-detachable
- 88 Pylon upper fairing
- 89 Engine cowl in open position
- 90 Nose bay access hatch
- 91 Rear service door-1,83x1,06m
- 92 Vortex generators-three per side
- 93 Door retraction counter-balance

- Air conditioning and anti-icing**
- A1 Conditioned air supply to cockpit
  - A2 Engine bleed air
  - A3 Environmental control system(ECS) air conditioning packs(two-off)and heat exchangers-located in lower fuselage fairing
  - A4 Bleed air pre-cooler
  - A5 Nacelle intake anti-icing
  - A6 Pre-cooler intake
  - A7 Leading-edge slat anti-icing(telescopic)tube
  - A8 Anti-icing piccolo tube
  - A9 Cabin-air(negative) pressure-relief valve-two per cargo bay door
  - A10 Cabin-air (positive) pressure-relief valves
  - A11 Cabin pressure control-valve
  - A12 Auxiliary power unit bleed-air
  - A13 ECS conditioned air mixer unit
  - A14 Main avionics bay heat exchangers

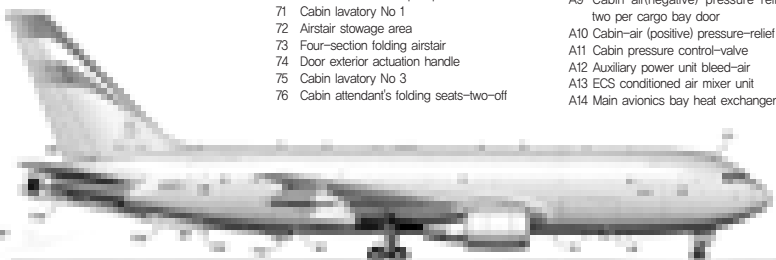
- Flying controls**
- C1 control column
  - C2 Rudder pedals
  - C3 Leading-edge(inboard) slat-aluminium alloy
  - C4 Slat brace link
  - C5 Inboard leading edge slat/Krueger seal power drive unit-hydraulic
  - C6 Inboard leading-edge slat drive-shaft
  - C7 Krueger seal
  - C8 Outboard leading-edge slat drive-shaft-hydraulically powered
  - C9 Leading-edge slat rotary actuator and arm-12 per wing
  - C10 Slat programming cam-two per slat
  - C11 Slat truck and rollers-two per slat
  - C12 Slat actuator link

- C13 Leading-edge (outboard)slat-five panels per wing
- C14 Outboard aileron (+30° and -15° deflection)-carbonfibre-reinforced plastic(CFRP)/honeycomb sandwich construction
- C15 Trailing-edge flap linkage fairing-glassfibre-reinforced plastic
- C16 Trailing-edge(outboard wing)outer flap linkage and actuator
- C17 Outboard wing lift spoilers/dumpers with 60° deflection(four off per wing)-carbonfibre-reinforced plastic(CFRP)/honeycomb sandwich construction
- C18 Single-slotted outboard flap(36° deflection)-aluminium alloy construction

Leading-edge (outboard section) slat detail

Trailing-edge(outboard section) single-slotted flap detail

Forward and rear cargo hold and centreline HDU detail



# BOEING KC-767A



Forward fuselage cross-section (far left) showing two "contoured" pallets and Pratt & Whitney PW4062 engine profiles on the main deck and auxiliary fuel tank profile in the forward cargo hold. Rear fuselage cross-section (left) showing palletised passenger seating on the main deck and centreline HDU in the rear cargo/bulk cargo hold

Trailing-edge (inboard section) double-slotted flap detail

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E45 Low-visibility formation lighting  
E46 Main deck cargo door actuation motor  
E47 Airstair lighting

#### Fuel system

F1 Inflight refuelling universal aerial refuelling receptacle (UFR) slipway installation—capable of receiving 3,406 litres per minute  
F2 IFR fuel line  
F3 Center wing tank—capacity 45,273 litres  
F4 Main fuel tanks (left and right)—capacities 22,750 litres per wing tank

T6 Wing pod attachment pylon  
T7 Wing pod air-driven hydraulic power unit  
T8 Wing pod hydraulic system heat exchanger  
T9 Hose reel (common to both wing pod and fuselage units)—capable of delivering 2,270 litres of fuel per minute  
T10 High-speed refuelling drogue  
T11 Hose guide unit  
T12 Situational awareness camera fairing one camera per hose refuelling station  
T13 Centerline hose drum unit (HDU) and guide tube—27.5m hose  
T14 HDU pressure box  
T15 Aerial refuelling boom (ARB) camera  
T16 ARB hinge point  
T17 ARB hoist motor and cable  
T18 ARB uplock latch  
T19 Aerial refuelling boom with improved delivery nozzle, load alleviation system and fly-by-wire control system  
T20 ARB fairing  
T21 ARB control surfaces  
T22 Tailplane illumination lights—two-off  
T23 Centreline hose and drogue exit  
T24 Cargo pallets (2.74x2.23m)—10 depicted  
T25 Palletised seating with integral services and oxygen generators (2 seats per pallet)—98 seats configuration depicted  
T26 Crew compartment/cabin wall—removable  
T27 Additional crew seats  
T28 Wing pod illumination light  
T29 Wing pod observation window  
T30 Cabin divider/smoke barrier—removable  
T31 Wing pod hose illumination light  
T32 Crew galley  
T33 Crew lavatory  
T34 Telescopic boom (extended)—capable of delivering 3,406 litres per minute  
T35 Wing pod fuel-supply manifold  
T36 ARB hoist uplock mechanism

#### Undercarriage and hydraulics

U1 Nose landing gear (NLG) forward doors (kevlar/CFRP structure) typically closed when the aircraft is on the ground—two-off  
U2 Nose landing gear (NLG) rear doors (Kevlar/CFRP structure)—Two-off  
U3 NLG steering actuators (hydraulic)—±16° steering via rudder pedals and ±65° via pilot's steering tiller  
U4 Forward retracting hydraulically actuated NLG  
U5 Hydraulic reservoir (centre system)—located in main landing gear (MLG) right-hand wheel well  
U6 MLG inboard door retraction actuator—MLG outboard doors removed for clarity  
U7 MLG single piece inboard door—kevlar/CFRP structure  
U8 MLG uplock  
U9 MLG drag strut  
U10 MLG retraction actuator  
U11 MLG side strut  
U12 MLG down-lock spring  
U13 Inward retracting hydraulically actuated and controlled MLG with five rotor multi-disc brakes  
U14 Engine driven hydraulic pump—starboard engine provides right-hand hydraulic system and Port engine provides left-hand hydraulic system  
U15 Hydraulic reservoir—left system  
U16 Drop-down ram-air turbine—emergency hydraulic power system  
U17 APU bleed-air driven hydraulic pump (port side only)—centre system

#### Instrument panel

A Primary flight display  
B Navigation display  
C Standby instruments  
D Multifunction display  
E Engine-indicating and crew-alerting system display  
F Multifunction display  
G Flight-management system control display unit  
H VOR controls  
I Autopilot controls  
J Undercarriage control  
K Radio distance magnetic indicator  
L Instrument switching controls  
M Lighting control panel  
N Caution/warning panel

C27 Inboard wing lift spoilers/dumpers with 60° deflection (two-off per wing)—carbonfibre-reinforced plastic (CFRP)/honeycomb sandwich construction  
C28 Inboard aileron (±20° deflection)—carbonfibre-reinforced plastic (CFRP)/honeycomb sandwich construction  
C29 Inboard aileron actuators (two per surface)—hydraulic  
C30 Outboard aileron actuators (two per surface)—hydraulic  
C31 Tailplane trim actuator screw-jack-twin hydraulic motors  
C32 Tailplane sliding plate aerodynamic fairing  
C33 Elevator control quadrant  
C34 Tailplane pivot hinge  
C35 Elevator actuators (hydraulic)—three per surface  
C36 Two piece elevator (+28° and -20° deflection)—carbonfibre-reinforced plastic (CFRP)/honeycomb sandwich construction

Main deck cabin and crew compartment detail

E6 Angle of attack sensor—two-off  
E7 Overhead electrical panel  
E8 Main avionics bay  
E9 TCAS No 1 antenna  
E10 TCAS No 2 antenna  
E11 Upper formation/navigation light  
E12 Low-visibility formation lighting  
E13 Landing and taxi lights—three-off  
E14 Wing inspection light  
E15 UHF antenna  
E16 Radio altimeter receivers—three-off  
E17 Radio altimeter transmitters—three-off  
E18 DME antenna  
E19 Low-visibility formation lighting  
E20 Landing and turn-off lights—two per side  
E21 Formation/navigation light  
E22 Anti-collision light  
E23 Rear facing formation and anti-collision lights  
E24 CPS antennas  
E25 VHF 1 antenna  
E26 Mid-avionics bay  
E27 UHF antennas  
E28 UHF antennas  
E29 Satcom antenna  
E30 UHF antenna  
E31 ADF antennas  
E32 UHF satcom antenna  
E33 VHF 3 antenna  
E34 Rear avionics bay  
E35 ELT antenna  
E36 HF antenna  
E37 VOR antenna  
E38 Low visibility formation lighting  
E39 Static-discharge wicks  
E40 Fin illumination lights  
E41 Low-visibility formation lighting  
E42 Marker beacon  
E43 Low-visibility formation lighting  
E44 VHF 2 antenna

F5 Centre wing tank/main fuel tank rib  
F6 Fuel tank dry bay  
F7 Main fuel tank end rib  
F8 Surge tank  
F9 Fuel vent-NACA outlet  
F10 Fuel jetison vent and flame arresters  
F11 Single point pressure-refuel/defuelling adaptor and control panel—left wing only  
F12 Outboard baffle rib with one-way flap valves  
F13 Fuel system vent lines—three "top-hat" stringers in each wing  
F14 Fuel-capacity probes—magnetic type  
F15 Refuel/defuel manifold  
F16 Chord-wise fuel vent tubes—three  
F17 Over-wing filler point  
F18 Engine fuel manifold

#### Powerplant and auxiliary power unit (APU)

P1 PT2 probe—located in inlet cowl  
P2 General Electric CF6-80C2B6F high bypass turbofan—rated at 60,800lb (270,5KN) thrust  
P3 Accessories gearbox—below engine  
P4 Engine exhaust nozzle  
P5 APU deployable inlet  
P6 APU air intake and muffler  
P7 Intake plenum  
P8 Honeywell 331-400 auxiliary power unit—rated at 120kVA  
P9 APU exhaust and muffler  
P10 APU fire extinguisher—two-off  
P11 Engine fire extinguishers—two-off

#### Tanker/transport

T1 Remote aerial refuelling operator (RARO) station with stereoscopic head mounted display unit  
T2 Crew bunks—three-off  
T3 Optional auxiliary fuel tanks with a maximum fuel capacity of 19,400 litres—three tanks in each cargo bay  
T4 Pilot director lights  
T5 Wing illumination lights—two on each pylon

C19 Spoiler actuator (one per surface)—hydraulic  
C20 Spoiler hinges—four off per surface  
C21 Trailing-edge (outboard wing) inner flap linkage and actuator  
C22 Flap drive gearbox and inboard aileron droop control  
C23 Trailing-edge (inboard wing) outer flap linkage and actuator  
C24 Inboard flap fixed programming track  
C25 Flap rotary actuator  
C26 Double slotted "Fowler" type inboard flap (25° deployment)—aluminium alloy construction

C37 Single piece rudder (±26° deflection)—carbonfibre-reinforced plastic (CFRP)/honeycomb sandwich construction  
C38 Rudder actuators (hydraulic)—three per surface

#### Avionics and electronic

E1 Weather radar antenna  
E2 Glideslope and localiser antenna—located on forward pressure bulkhead  
E3 Electrically heated windshield and twin wipers  
E4 Total air temperature probe  
E5 Pitot tubes—four off