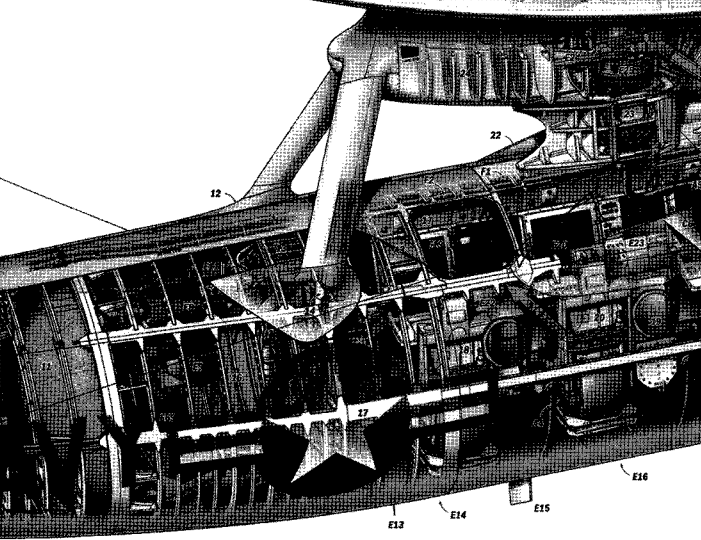
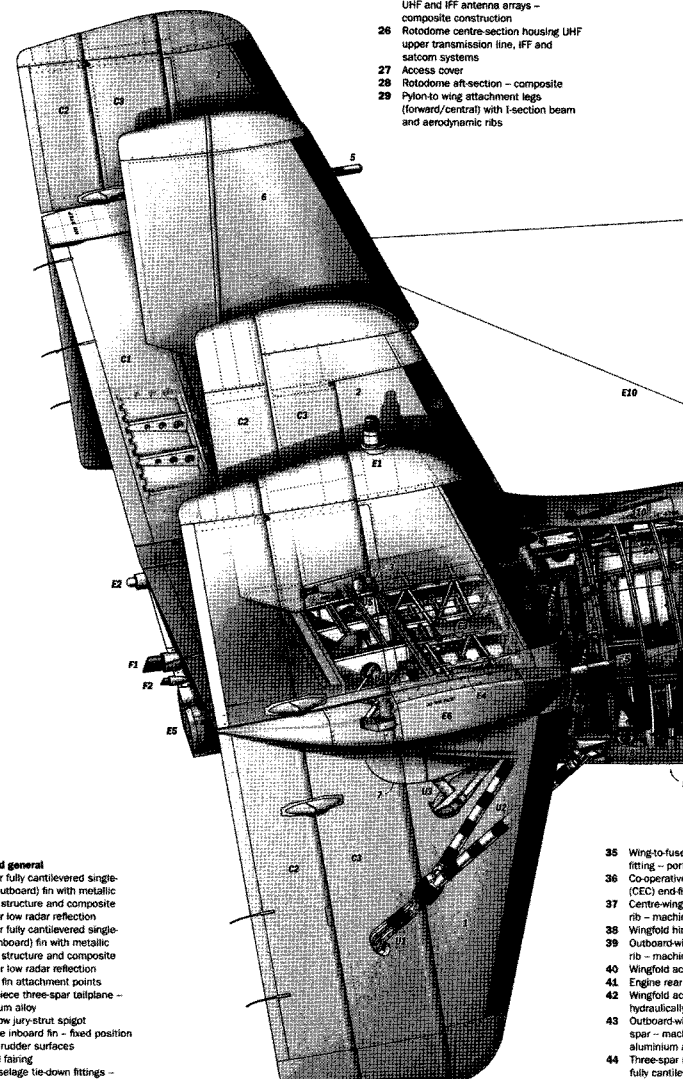
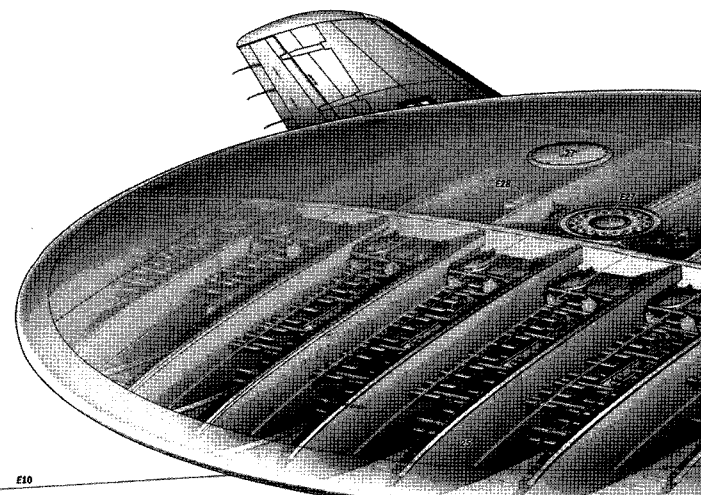


# E-2D

## ADVANCED HAWKEYE

This illustration depicts the baseline E-2D Advanced Hawkeye airborne early warning command and control aircraft - customer specific equipment/optional items are indicated accordingly.

- 16 Rear compartment housing avionics, flying controls and hydraulic systems - lavatory or galley optional
- 17 Semi-monocoque fuselage construction, incorporating six (built-up) I-section primary longerons - aluminium alloy
- 19 Cabin window and blind - three-off
- 20 Combat information centre officer's (CICO) seat and PSE
- 21 Radar operator's (RO) seat and PSE
- 22 Wing-to-fuselage aerodynamic fairing - aluminium alloy construction
- 23 RF cable fairing
- 24 Rotodome-pylon (revised) aerodynamic fairing
- 25 Rotodome forward-section housing UHF and IFF antenna arrays - composite construction
- 26 Rotodome centre-section housing UHF upper transmission line, IFF and satcom systems
- 27 Access cover
- 28 Rotodome aft-section - composite
- 29 Pylon-to wing attachment legs (forward/central) with I-section beam and aerodynamic ribs



**Structure and general**

- 1 Two-spar fully cantilevered single-piece (outboard) fin with metallic primary structure and composite skins for low radar reflection
- 2 Two-spar fully cantilevered single-piece (inboard) fin with metallic primary structure and composite skins for low radar reflection
- 3 Inboard fin attachment points
- 4 Single-piece three-spar tailplane - aluminium alloy
- 5 Wing-stow jury-strut spigot
- 6 Port side inboard fin - fixed position with no rudder surfaces
- 7 Tail-skid fairing
- 8 Rear fuselage tie-down fittings - both sides
- 9 Arrestor gear attachment bulkhead - machined aluminium alloy
- 10 Rudder controls conversion quadrant
- 11 Pressure bulkhead - built-up aluminium alloy
- 12 Rotodome-pylon rear support fairing
- 13 Flying controls (rear cabin) conversion quadrant
- 14 Pylon leg-to-fuselage (rear) attachment fitting
- 15 Rear compartment access door

- 18 Air control officer's (ACO) swivelling seat with armrests and integral parachute/survival pack ensemble (PSE) - ergonomic workstation seats optional

- 30 Pylon-to-wing (forward/central) attachment fittings - two-off
- 31 Pylon-to-wing (forward/outboard) legs - two-off
- 32 Pylon-to-wing (forward/outboard) attachment fittings
- 33 Three-spar fully cantilevered (wet) centre-wing section with built-up and machined spars, ribs and skins
- 34 Cabin upper/forward capping bulkhead

- 35 Wing-to-fuselage (rear) attachment fitting - port and starboard
- 36 Co-operative engagement capability (CEC) end-fire array antenna fairing
- 37 Centre-wing section outboard hinge rib - machined aluminium alloy
- 38 Wingfold hinge-post
- 39 Outboard-wing section inboard hinge rib - machined aluminium alloy
- 40 Wingfold actuator fitting
- 41 Engine rear nacelle
- 42 Wingfold actuator - hydraulically actuated
- 43 Outboard-wing (partial span) centre spar - machined and built-up aluminium alloy
- 44 Three-spar (partial span centre spar) fully cantilevered outboard-wing section with built-up and machined spars, ribs and skins
- 45 Wingtip - composite
- 46 Wing-stow jury-strut - fully automated (hydraulic) actuation
- 47 Jury-strut bay
- 48 Rear spar
- 49 Forward spar
- 50 Detachable leading edge sections
- 51 Engine truss - steel
- 52 Wingfold warning flag - retracted when wing is locked in flight position
- 53 Wingfold (hydraulic) locking actuators - four per wing
- 54 Wing-to-fuselage (forward) attachment fitting - port and starboard
- 55 Air cycle and liquid cooling heat exchanger intake

- 56 Crew entry door with integral steps
- 57 Vapour-cycle cooling system primary heat-exchanger fairing
- 58 Cockpit upper window/escape hatch (both sides) - gold laminated EMI filter
- 59 Co-pilot's seat with headrest and PSE
- 60 Centre pedestal with engine, trim and auto-pilot controls
- 61 Cockpit bulged side windows - gold laminated EMI filter
- 62 Nose section upper structure
- 63 Upward-hingeing dielectric nose/radome
- 64 Side consoles with comms, lighting, ECS controls, brake system and map stowage
- 65 Forward pressure bulkhead - built-up aluminium alloy
- 66 Forward fuselage tie-down fittings - both sides
- 67 Double-wall cockpit structure - built-up aluminium alloy
- 68 Cabin/cockpit bulkhead and door

**Air conditioning and anti-icing systems**

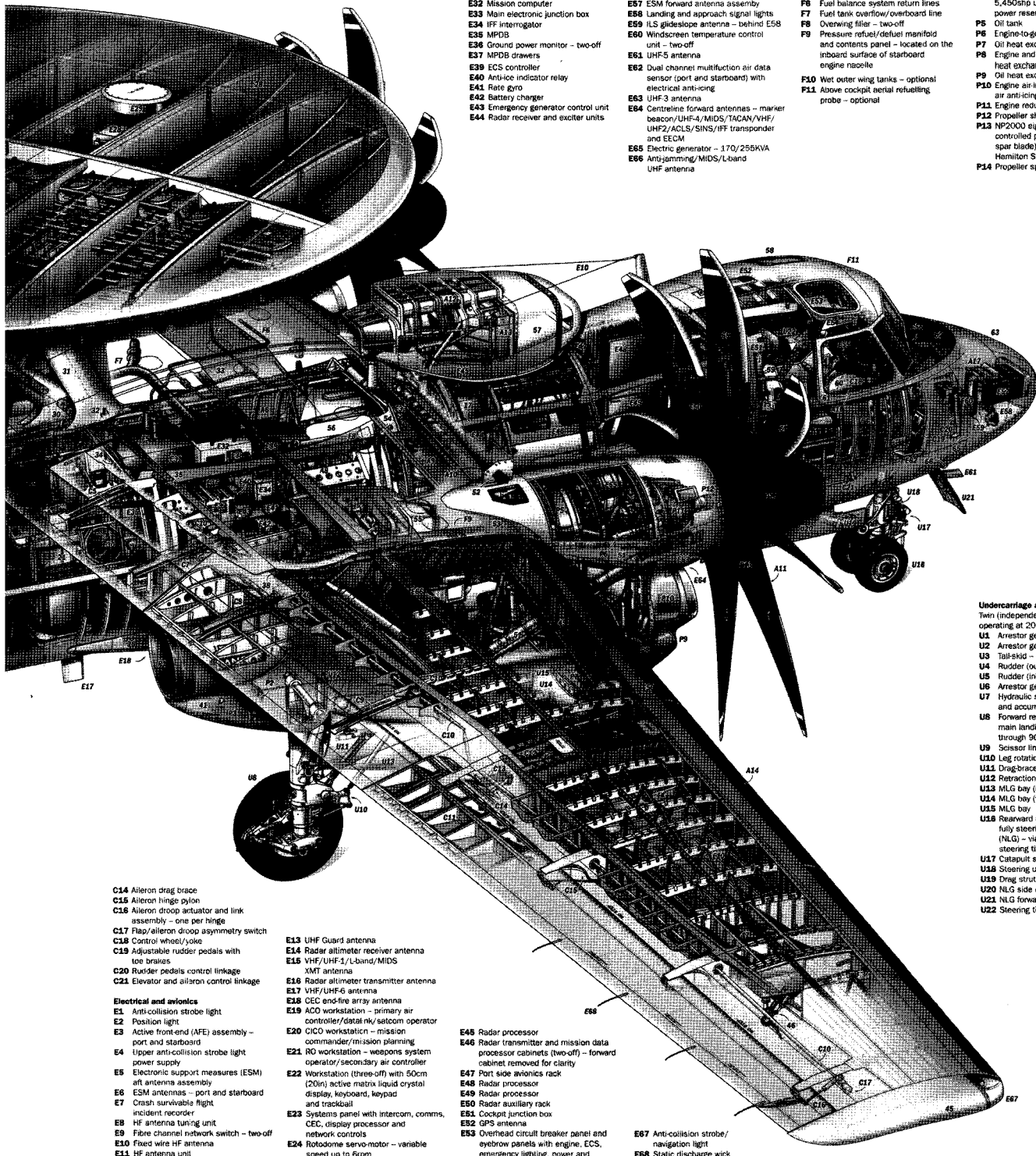
- A1 Fin leading edge anti-icing boot - cyclic type
- A2 Tailplane leading edge anti-icing boot - cyclic type
- A3 Overhead oxygen panel
- A4 Air-conditioner duct assembly
- A5 Radar pressure and cooling subsystem (RPCS) duct assembly fitting - port and starboard
- A6 Crew ECS sand particle separator system - optional
- A7 Air cycle ECS heat exchanger

**Avionics cycle system**

- A8 RPCS
- A9 Engine bleed air supply
- A10 Engine bleed air supply heat-exchanger fairing
- A11 Propeller leading-edge - electrical anti-icing
- A12 RPCS heat exchanger
- A13 Vapour-cycle heat-exchanger
- A14 Wing leading edge (outboard) anti-icing boot - cyclic type
- A15 Cockpit conditioned air vent
- A16 Side window and windscreen-de-mist vent
- A17 On-board oxygen generating system concentrator

**Flying controls**

- C1 Single-piece elevator panel - both sides
- C2 Hinge-mounted all speed rudder tabs - composite
- C3 Hinge-mounted all speed rudders - composite
- C4 Rudder conversion quadrant and autopilot controls
- C5 Inboard flap track
- C6 Inboard "Fowler" type flap - aluminium alloy construction
- C7 Flap support trussion and rollers
- C8 Outboard "Fowler" type flap - aluminium alloy construction
- C9 Flap actuator
- C10 Flap transmission shaft and actuator - interlinked with the aileron to provide aileron droop
- C11 Hinge mounted (drooping) aileron - aluminium alloy construction
- C12 Aileron actuator - hydraulic
- C13 Aileron actuation and droop interlink



- E26 Integrated UHF radar/IFF box element
- E27 18-channel rotary coupler
- E28 IFF beam former networks – two-off
- E29 Satcom antenna
- E30 Avionics flight management computers – two-off
- E31 CEC SDP-S
- E32 Mission computer
- E33 Main electronic junction box
- E34 IFF interrogator
- E35 MPDB
- E36 Ground power monitor – two-off
- E37 MPDB drawers
- E38 ECS controller
- E40 Anti-ice indicator relay
- E41 Rate gyro
- E42 Battery charger
- E43 Emergency generator control unit
- E44 Radar receiver and exciter units

- E54 Instrument panel with three 43cm (17 in) primary flight displays. The pilot or co-pilot's display panel can be used by a fourth tactical operator, with portable keyboard and pointing device
- E55 Control display units – port and starboard
- E56 Windscreens wipers – electric
- E57 ESM forward antenna assembly
- E58 Landing and approach signal lights
- E59 ILS glideslope antenna – behind E58
- E60 Windscreen temperature control unit – two-off
- E61 UHF-5 antenna
- E62 Dual channel multifunction air data sensor (port and starboard) with electrical anti-icing
- E63 UHF-3 antenna
- E64 Centreline forward antennas – marker beacon/UHF-4/MIDS/TACAN/VHF/UHF2/ACLS/SINS/IFF transponder and EECM
- E65 Electric generator – 170/255KVA
- E66 Anti-jamming/MIDS/L-band UHF antenna

- Fuel system**  
Total capacity 6,904 litres (1,824 USgal)
- F1 Fuel dump pipe
- F2 Fuel vent pipe
- F3 Centre wing section fuel tank – port and starboard of wing centreline rib
- F4 Fuel balance system feed lines
- F5 Fuel (aft) boost pumps – two-off
- F6 Fuel balance system return lines
- F7 Fuel tank overflow/overboard line
- F8 Overwing filler – two-off
- F9 Pressure refuel/defuel manifold and contents panel – located on the inboard surface of starboard engine nacelle
- F10 Wet outer wing tanks – optional
- F11 Above cockpit aerial refuelling probe – optional

- Powerplant**
- P1 Engine core exhaust nozzle
- P2 Engine fire suppression bottle (one per engine) – Halon
- P3 Optional auxiliary power unit – located in lower aft starboard fairing
- P4 Rolls-Royce T56-A-427A turboprop engine rated at 5,100shp with 5,450shp using automatic power reserve
- P5 Oil tank
- P6 Engine-to-gearbox driveshaft
- P7 Oil heat exchanger exhaust
- P8 Engine and generator oil heat exchanger
- P9 Oil heat exchanger air intake
- P10 Engine air-intake with bleed-air anti-icing
- P11 Engine reduction gearbox
- P12 Propeller shaft
- P13 NP2000 eight-bladed digitally controlled propeller (composite/metal spar blade) with electric anti-icing – Hamilton Sundstrand
- P14 Propeller spinner

- C14 Aileron drag brace
- C15 Aileron hinge pylon
- C16 Aileron droop actuator and link assembly – one per hinge
- C17 Flap/aileron droop asymmetry switch
- C18 Control wheel/yoke
- C19 Adjustable rudder pedals with toe brakes
- C20 Rudder pedals control linkage
- C21 Elevator and aileron control linkage
- Electrical and avionics**
- E1 Anti-collision strobe light
- E2 Position light
- E3 Active front-end (AFE) assembly – port and starboard
- E4 Upper anti-collision strobe light power supply
- E5 Electronic support measures (ESM) aft antenna assembly
- E6 ESM antennas – port and starboard
- E7 Crash survivable flight incident recorder
- E8 HF antenna tuning unit
- E9 Fibre channel network switch – two-off
- E10 Fixed wire HF antenna
- E11 HF antenna unit
- E12 Stormscope antenna

- E13 UHF Guard antenna
- E14 Radar allimeter receiver antenna
- E15 VHF/UHF-1/L-band/MIDS XMT antenna
- E16 Radar altimeter transmitter antenna
- E17 VHF/UHF-6 antenna
- E18 CEC end-fire array antenna
- E19 ACO workstation – primary air controller/datalink/satcom operator
- E20 CICO workstation – mission commander/mission planning
- E21 RO workstation – weapons system operator/secondary air controller
- E22 Workstation (three-off) with 50cm (20in) active matrix liquid crystal display, keyboard, keypad and trackball
- E23 Systems panel with intercom, comms, CEC, display processor and network controls
- E24 Rotodome servo-motor – variable speed up to 5rpm
- E25 Resolver/rotodome gearbox

- E46 Radar processor
- E46 Radar transmitter and mission data processor cabinets (two-off) – forward cabinet removed for clarity
- E47 Port side avionics rack
- E48 Radar processor
- E49 Radar processor
- E50 Radar auxiliary rack
- E51 Cockpit junction box
- E52 GPS antenna
- E53 Overhead circuit breaker panel and eyebrow panels with engine, ECS, emergency lighting, power and anti-icing controls

- E67 Anti-collision strobe/navigation light
- E68 Static discharge wick
- E69 ESM processor

- Undercarriage and hydraulics**  
Two independent hydraulic systems operating at 207bar (3,000lb/in<sup>2</sup>)
- U1 Arrestor gear shoe
- U2 Arrestor gear arm
- U3 Tail-skid – pneumatic
- U4 Rudder (outboard) actuator
- U5 Rudder (inboard) actuator
- U6 Arrestor gear dashpots
- U7 Hydraulic system reservoir, filters and accumulator
- U8 Forward retracting oleo pneumatic main landing gear (MLG) – leg rotates through 90° to lie flat in the gear bay
- U9 Scissor links
- U10 Leg rotation linkage
- U11 Drag brace and down lock
- U12 Retraction actuator
- U13 MLG bay (rear) doors – two per bay
- U14 MLG bay (forward) doors – two per bay
- U15 MLG bay
- U16 Rearward retracting oleo pneumatic fully steering nose landing gear (NLG) – via rudder pedals and steering tiller
- U17 Catapult strap attachment arm
- U18 Steering unit
- U19 Drag strut
- U20 NLG side doors – both sides
- U21 NLG forward door
- U22 Steering tiller