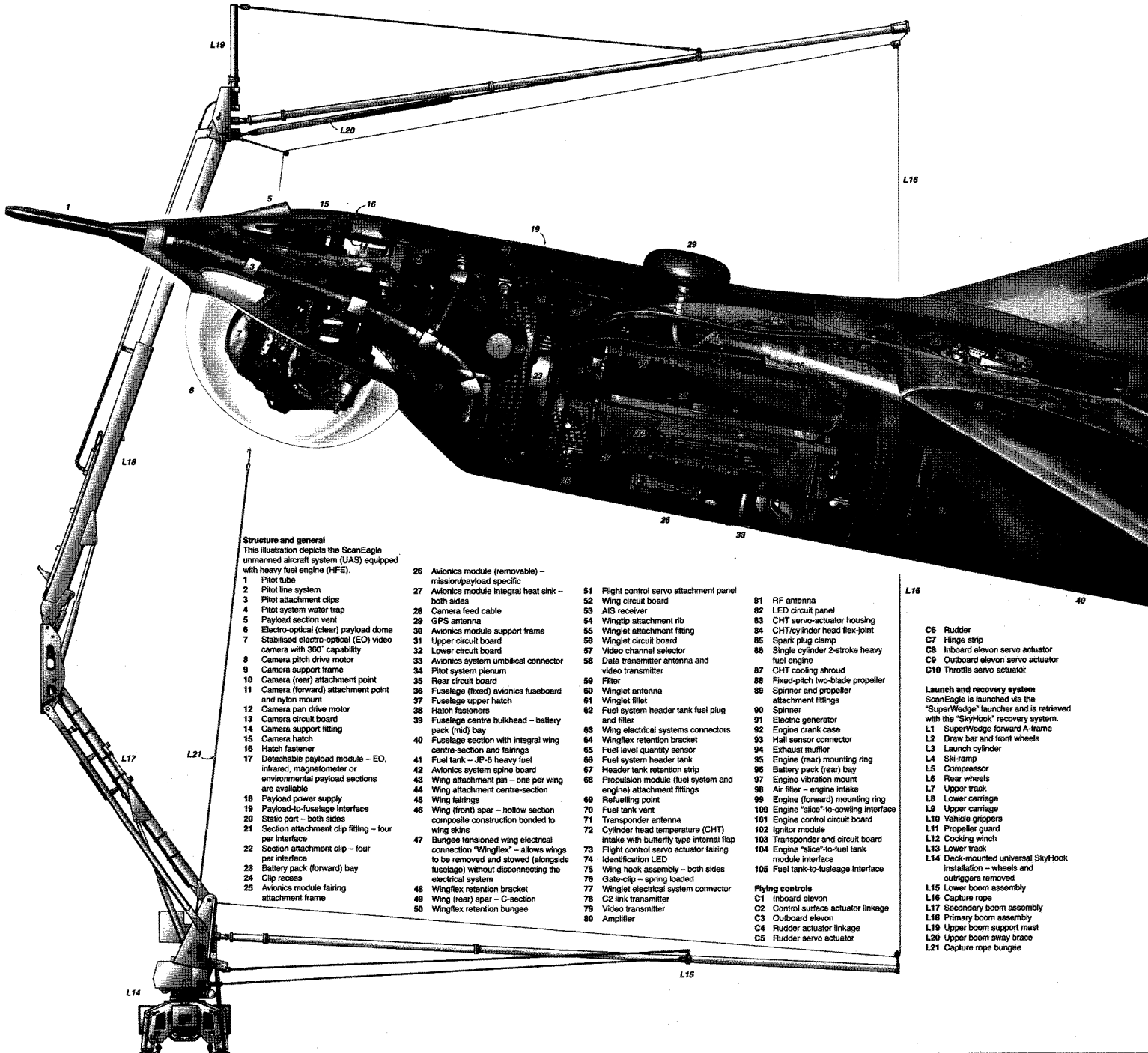


INSITU ScanEagle



Structure and general

This illustration depicts the ScanEagle unmanned aircraft system (UAS) equipped with heavy fuel engine (HFE).

- 1 Pitot tube
- 2 Pitot line system
- 3 Pitot attachment clips
- 4 Pitot system water trap
- 5 Payload section vent
- 6 Electro-optical (clear) payload dome camera with 360° capability
- 7 Stabilised electro-optical (EO) video camera
- 8 Camera pitch drive motor
- 9 Camera support frame
- 10 Camera (rear) attachment point
- 11 Camera (forward) attachment point and nylon mount
- 12 Camera pan drive motor
- 13 Camera circuit board
- 14 Camera support fitting
- 15 Camera hatch
- 16 Hatch fastener
- 17 Detachable payload module – EO, infrared, magnetometer or environmental payload sections are available
- 18 Payload power supply
- 19 Payload-to-fuselage interface
- 20 Static port – both sides
- 21 Section attachment clip fitting – four per interface
- 22 Section attachment clip – four per interface
- 23 Battery pack (forward) bay
- 24 Clip recess
- 25 Avionics module fairing attachment frame

- 26 Avionics module (removable) – mission/payload specific
- 27 Avionics module integral heat sink – both sides
- 28 Camera feed cable
- 29 GPS antenna
- 30 Avionics module support frame
- 31 Upper circuit board
- 32 Lower circuit board
- 33 Avionics system umbilical connector
- 34 Pilot system plenum
- 35 Rear circuit board
- 36 Fuselage (fixed) avionics fuselage
- 37 Fuselage upper hatch
- 38 Hatch fasteners
- 39 Fuselage centre bulkhead – battery pack (mid) bay
- 40 Fuselage section with integral wing centre-section and fairings
- 41 Fuel tank – JP-5 heavy fuel
- 42 Avionics system spine board
- 43 Wing attachment pin – one per wing
- 44 Wing attachment centre-section
- 45 Wing fairings
- 46 Wing (front) spar – hollow section composite construction bonded to wing skins
- 47 Bungees tensioned wing electrical connection “Wingflex” – allows wings to be removed and stowed (alongside fuselage) without disconnecting the electrical system
- 48 Wingflex retention bracket
- 49 Wing (rear) spar – C-section
- 50 Wingflex retention bungees

- 51 Flight control servo attachment panel
- 52 Wing circuit board
- 53 AIS receiver
- 54 Wingtip attachment rib
- 55 Winglet attachment fitting
- 56 Winglet circuit board
- 57 Video channel selector
- 58 Data transmitter antenna and video transmitter
- 59 Filter
- 60 Winglet antenna
- 61 Winglet fillet
- 62 Fuel system header tank fuel plug and filler
- 63 Wing electrical systems connectors
- 64 Wingflex retention bracket
- 65 Fuel level quantity sensor
- 66 Fuel system header tank
- 67 Header tank retention strip
- 68 Propulsion module (fuel system and engine) attachment fittings
- 69 Refuelling point
- 70 Fuel tank vent
- 71 Transponder antenna
- 72 Cylinder head temperature (CHT) intake with butterfly type internal flap
- 73 Flight control servo actuator fairing
- 74 Identification LED
- 75 Wing hook assembly – both sides
- 76 Gate-clip – spring loaded
- 77 Winglet electrical system connector
- 78 C2 link transmitter
- 79 Video transmitter
- 80 Amplifier

- 81 RF antenna
- 82 LED circuit panel
- 83 CHT servo-actuator housing
- 84 CHT/cylinder head flex-joint
- 85 Spark plug clamp
- 86 Single cylinder 2-stroke heavy fuel engine
- 87 CHT cooling shroud
- 88 Fixed-pitch two-blade propeller
- 89 Spinner and propeller attachment fittings
- 90 Spinner
- 91 Electric generator
- 92 Engine crank case
- 93 Hall sensor connector
- 94 Exhaust muffler
- 95 Engine (rear) mounting ring
- 96 Battery pack (rear) bay
- 97 Engine vibration mount
- 98 Air filter – engine intake
- 99 Engine (forward) mounting ring
- 100 Engine “silice”-to-cowling interface
- 101 Engine control circuit board
- 102 Ignitor module
- 103 Transponder and circuit board
- 104 Engine “silice”-to-fuel tank module interface
- 105 Fuel tank-to-fuselage interface

- C6 Rudder
 - C7 Hinge strip
 - C8 Inboard elevon servo actuator
 - C9 Outboard elevon servo actuator
 - C10 Throttle servo actuator
- Launch and recovery system**
ScanEagle is launched via the “SuperWedge” launcher and is retrieved with the “SkyHook” recovery system.
- L1 SuperWedge forward A-frame
 - L2 Draw bar and front wheels
 - L3 Launch cylinder
 - L4 Ski-ramp
 - L5 Compressor
 - L6 Rear wheels
 - L7 Upper track
 - L8 Lower carriage
 - L9 Upper carriage
 - L10 Vehicle grippers
 - L11 Propeller guard
 - L12 Cocking winch
 - L13 Lower track
 - L14 Deck-mounted universal SkyHook installation – wheels and outriggers removed
 - L15 Lower boom assembly
 - L16 Capture rope
 - L17 Secondary boom assembly
 - L18 Primary boom assembly
 - L19 Upper boom support mast
 - L20 Upper boom sway brace
 - L21 Capture rope bungee

