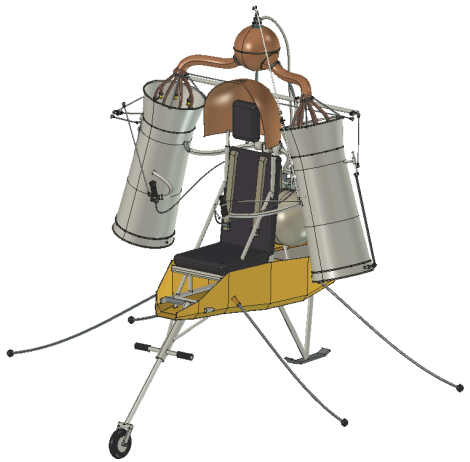
SA-610 Ludion

Historical information model. Target configuration: airframe 002, December 1968.



R5 assembly rendered from the native model. Its layout and installation dimensions include reconstructed decisions.

Sud-Aviation · SEPR · Bertin

Construction, connections and supporting evidence

What R5 explains

The left control transmission, connections within the assembly and the basis of material information. Bright internal parts make the propulsion cutaways easier to read.

Reading the model

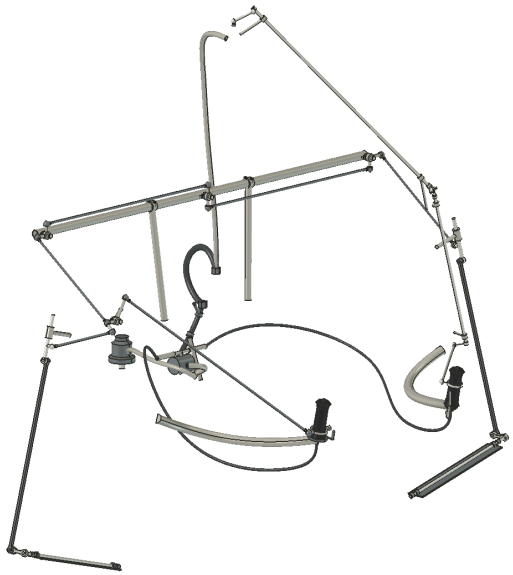
Historical evidence, type analogies and developed geometry carry different statuses. A part in CAD does not establish its exact installation on airframe 002.

Open 3D viewer FreeCAD STEP AP242

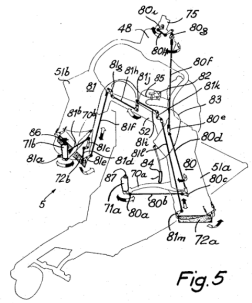
Release record: R5 checklist · evidence register · Русский. This atlas supports study of the construction; no manufacturing release status is assigned.

Control routing

The patent provides the sequence of links. Their spatial implementation in R5 remains a reconstruction.



R5 routing. Rods, rotating members, supports and flexible sections are represented as separate assembly parts.



Historical drawing: US3506221A, fig. 5. Type architecture; applicability to 002 is unconfirmed.

Mixed transmission 80

The patent specifies rotation for 80d and 80f, and translation for 80b and 80h. This supports the topology of the left transmission.

ANALOG → ASSUMED Factory lever arms, axes, clearances and supports for this airframe remain unknown.

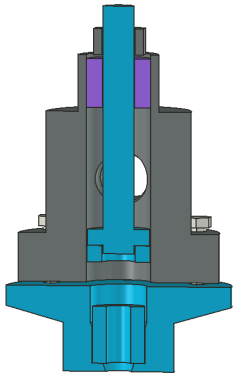
71a → 80a → 80b → 80c → 80d → 80e → 80f → 80g → 80h → 80i → 75

Cables 83/85 transmit mechanical commands. Grip buttons alone are not evidence of electrical circuits. The wiring diagram, instrumentation and wire routes for airframe 002 remain unresolved.

Patent, fig. 5 and column 4 · R5 transmission check · Parts register

Twistgrip and valve

The left grip has an illustrative 0–20° travel. This shows mechanism motion without calibration to flow or thrust.



Valve cutaway. Internal construction and dimensions are reconstructed and remain open to future archival verification.

0–20° · illustrative motion

Input and movement

The grip command is connected to movement of the links and output member. The information model's motion law is not a recovered factory metering characteristic.

What geometry can check

Connection consistency, moving part positions and contacts at the poses examined. The transmission report records the actual conditions and results.

What remains unknown

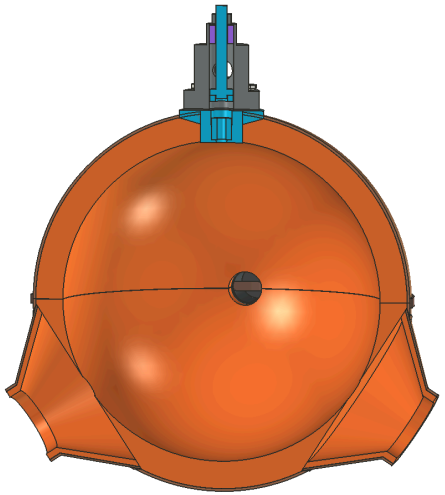
Actual travel, transmission ratios, backlash, stops, operating forces, deflection and thermal behaviour. Geometric animation does not establish these properties.

A percentage of control travel must not be read as a percentage of thrust. The cutaway explains part arrangement; it does not define propulsion operating conditions.

Kinematic check · Interfaces · Interactive model

Inside the gas generator

Separate shells, thermal protection and passages reveal the adopted interpretation of SeG8 construction.



Native R5 model cutaway. The user-requested bright palette identifies components for educational viewing.

Thermal protection · Injector and valve · Primary nozzles · Seal

Rothmund: the Ludion propulsion system · Engine assembly · Engine BOM · Exploded view · Evidence register

Type evidence and airframe evidence

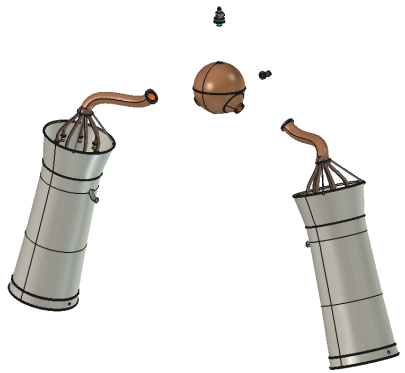
Historical descriptions of the SeG8 family support information about the type. They do not establish the grade, condition, batch or properties of every part fitted to airframe 002.

Model property	Meaning
Material class	Material category and intended role
Status	Type evidence or reconstruction
Basis	Source and its applicability limits

These entries are available in CAD properties and the parts register. The illustrative palette establishes no design allowables, service life or confirmed material properties for airframe 002.

Propulsion assemblies

Exploded SEPR S.178 assembly with a SeG8 generator and two Bertin ejectors.



Groups displaced for inspection. The FreeCAD engine file retains assembly positions.

FreeCAD engine · Engine STEP AP242 · Component list · Ejector section · Nozzle section

Gas generator

Two shells, thermal liners, outlet cones, seam and face inserts, plus an independent inert ignition casing.

Valve assembly

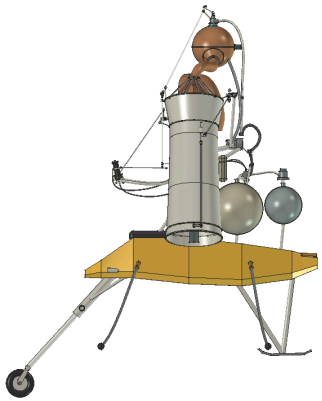
Valve body, seat, stem, gland, nut, injector with insert and the fastening hardware.

Left and right ejectors

Lined elbows, distributors on articulated stays, seven individual nozzles on each side, shell sections, bands and rivets.

Verification and release limits

Read the result together with the source model, evidence register and reports for this specific revision.



R5 side projection. Access and layout resemblance are assessed within the scope of an information reconstruction.

Evidence	Record
Interfaces and classification	Interface report
Transmission movement	Kinematic report
Exchange file readback	FCStd ↔ STEP
FeedBack package	File readback · Model replay
Parts and materials	BOM
Open questions	R5 checklist

Package status

Historical information model. Geometric checks and file reproducibility do not establish strength, service life, manufacturability or airworthiness.

An accurate replica still needs measurements and documents demonstrably applicable to 002: control installation, electrical diagram, materials, equipment records and dated modifications.

Dating a specific configuration requires separate verification. Publications differ on the character of the December flight of 002; museum and patent details cannot automatically be assigned to the selected sortie.

Evidence and limitations · AAMS, Prendre l'air, no. 4 · Return to the model