Overview:
The RS-27A propulsion system consists of one main and two vernier engines. The main engine is a single-start, fixed thrust, liquid bi-propellant (LOX/RP-1) gas generator cycle device. The main RS-27A engine provides 200,000 lb of sea-level thrust and 237,000 lb at altitude. The vernier engines produce 1,012 lb thrust each and provide vehicle roll control throughout flight.

Specifications

- **Type:** Liquid Propellant/Pump-fed
- **Propellants:** LOX/RP-1
- **Thrust:**
  - (Sea Level): 200,000 lb
  - (Altitude): 237,000 lb
- **Specific Impulse:**
  - (Sea Level): 255 sec
  - (Altitude): 302 sec
- **Run Duration:** 265 sec
- **Mixture Ratio (O/F):** 2.245:1
- **Chamber Pressure:** 700 psia
- **Area Ratio:** 12:1
- **Weight:** 2,528 lb
- **Dimensions:**
  - 149 in. long
  - 67 in. dia

RS-27A engine in place on test stand to be hot fired