

Aircraft Engine Installation Instructions

Installation Instructions: This product is fragile and its surface finish is easily scratched. Take care to avoid bumps and impacts during installation.

Installation Process

1, Prepare materials and tools: Several engine components, screwdrivers. Double-sided tape and paper tape (as backup).



Installation Component 1 (High-Pressure Compressor Assembly)

1. Compressor blade orientation as shown in the figure
2. Rotate counterclockwise

Assembly sequence:

1. Organize parts—from largest to smallest: Stages 1 to 5
2. Position compressor spool upright to align with reinforcement markings;
3. Install Stage 1 compressor rotor onto compressor spool (note rotor orientation);
4. Place the compressor casing upside down so that the reinforcement information overlaps;
5. Sequentially install the 4th-stage compressor stator, 4th-stage compressor rotor, 3rd-stage compressor stator, 3rd-stage compressor rotor, 2nd-stage compressor stator, 2nd-stage compressor rotor, and 1st-stage compressor stator into the compressor casing (note the orientation of stators and rotors);
6. Mount the completed casing assembly (including stators and rotors) onto the compressor shaft;
7. Install the 5th-stage compressor rotor onto the compressor shaft;
8. Bolt the high-pressure turbine to the compressor shaft; (Tooling)
9. Install the right-hand bearing (Bearing 2) into the high-pressure turbine shaft.



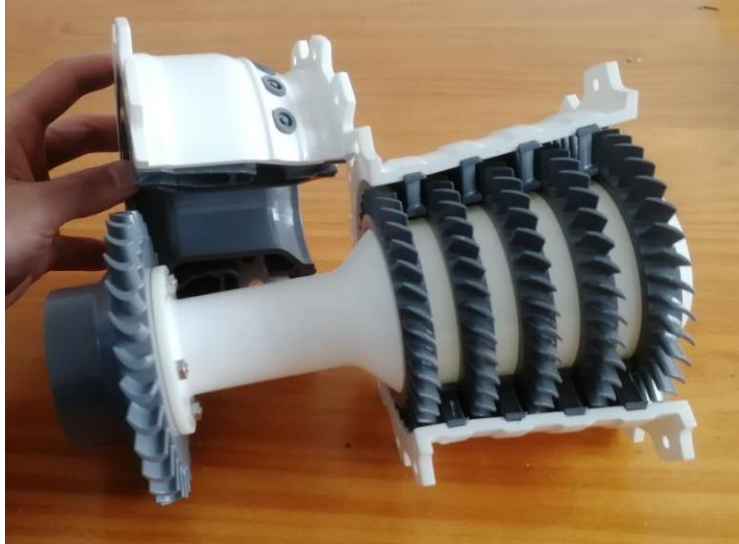
Install Component 2 (Combustion Chamber)

1. Parts organization
2. Position the combustion liner upright and align it with the reinforcement information;
3. Insert the swirl plate sideways into the combustion liner, then slowly rotate it in as shown in the figure;
4. Install the high-pressure compressor stage 5 turbine stator into the combustion liner assembly;
5. Slide the high-pressure turbine combustion sleeve over the assembled components;
6. Insert the hook assembly into the combustion sleeve in sequence.



Assemble Components 1 and 2

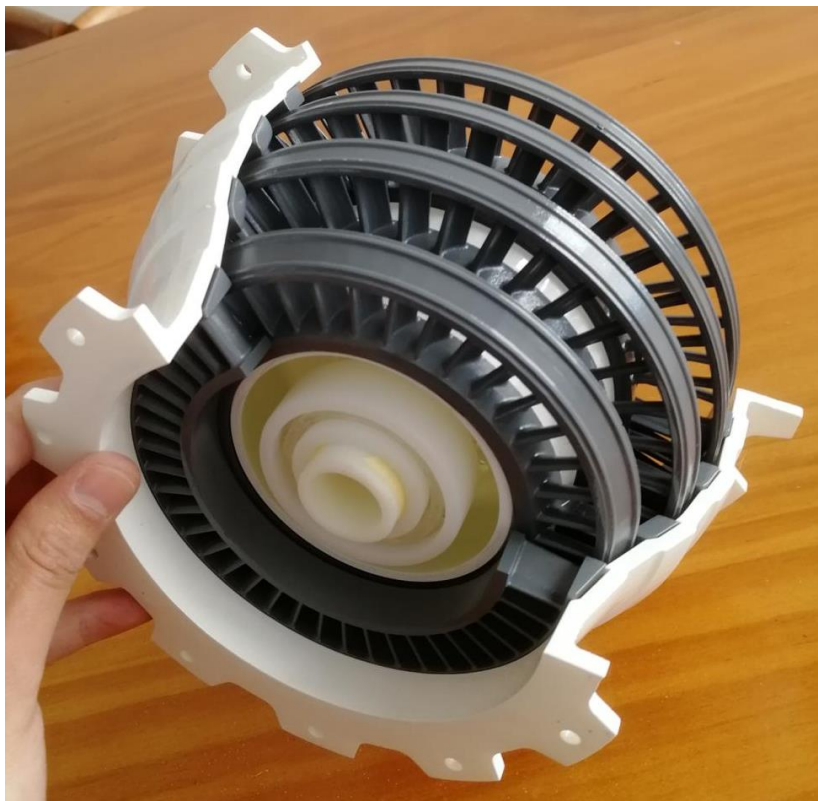
1. Position the compressor upright and align it with the reinforcement markings;
2. Insert the combustion chamber into the compressor and secure it with bolts.



Installation Component3 (Low-Pressure Turbine)

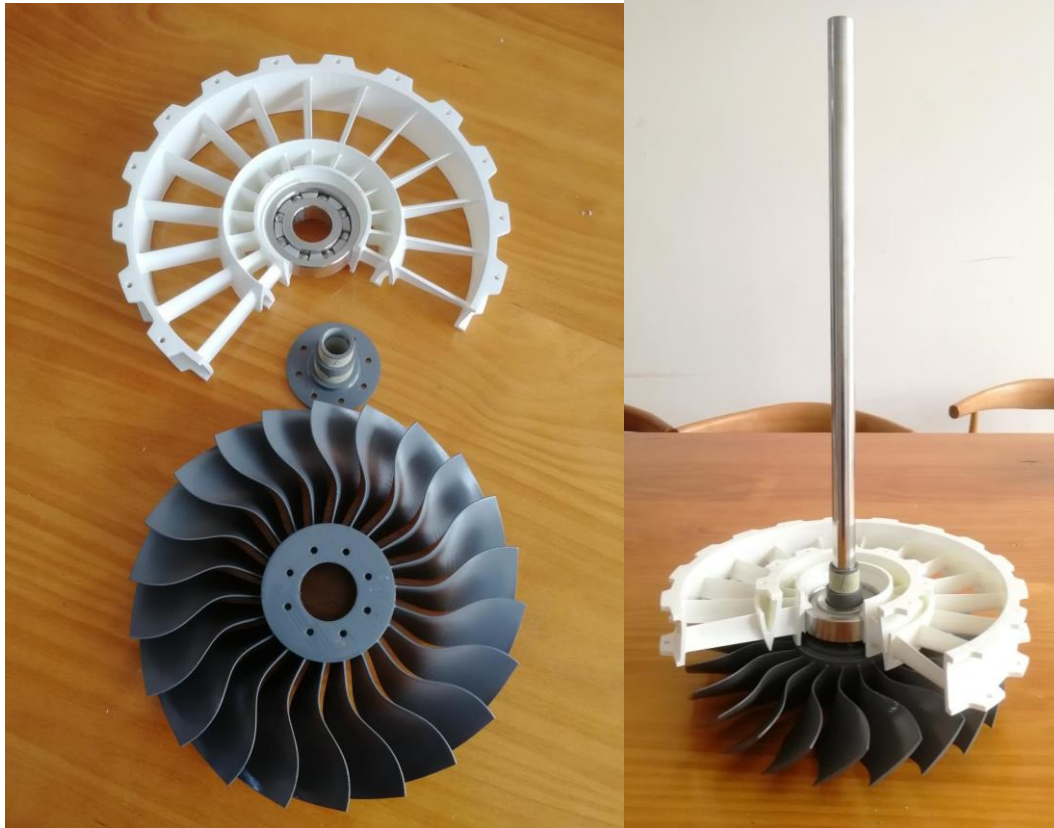
1. Position the low-pressure shaft sleeve in its designated location.
 2. Sequentially install the following components into the low-pressure turbine casing:
 - Stage 1 compressor stator
 - Stage 1 compressor rotor
 - Stage 2 compressor stator
 - Stage 2 compressor rotor
 - Stage 3 compressor stator
- (Note the orientation of stators and rotors).
3. Assemble the low-pressure shaft connector and low-pressure turbine shaft; (primary orientation, bolted connection)
 4. Position the assembled unit from the previous step in its designated location; (the previous assembly step may be omitted)
 5. Sequentially install the Stage 3 compressor rotor, Stage 4 compressor stator, and Stage 4 compressor rotor into the low-pressure turbine shaft housing;
 6. Install the assembly from the previous step into the casing from Step 2;
 7. Install the Right 1 bearing into the nozzle shaft;
 8. Assemble the nozzle with the low-pressure turbine (bolt connection).





Installation Component 4

1. Assemble the fan with the low-pressure shaft (front end); (Bolt connection, nuts are already secured inside the fan)
2. Assemble the fan stator support housing with the bearing;
3. Install the fan stator support housing onto the low-pressure shaft;
4. Position as shown in the diagram.



Final Assembly

1. Install the high-pressure compressor-combustion chamber section onto the low-pressure shaft;
2. Bolt the high-pressure compressor-combustion chamber to the fan stator support housing; (Confined space, specialized tools)
3. Install the low-pressure turbine onto the low-pressure shaft and connect it to the combustion chamber; (Bolts)
4. Place the assembled section onto the support frame;
5. Assemble the fan casing to the fan stator support housing; (Bolted connection)
6. Install the diffuser cone onto the fan front end;
7. Install the nozzle cone onto the nozzle rear end;
8. Assemble the mixer onto the nozzle cone and bolt it in place.



Assembly complete

