**AIRCRAFT ENGINE CHARACTERISTICS SUMMARY**

<table>
<thead>
<tr>
<th>MFG. DESIGNATION</th>
<th>TURBOJET</th>
<th>J79-GE-8, -8A, -8B, -8C</th>
<th>General Electric Co.</th>
<th>Cincinnati, Ohio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td>Spec E-763-C (Approved)</td>
<td>Dated 1 April 1966</td>
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</tbody>
</table>

**GENERAL DESCRIPTION**

The J79-GE-8, -8A, -8B and -8C engines are gas turbine engines featuring a high pressure ratio, single rotor compressor with variable inlet guide vanes and six stages of variable stator vanes, a can annular combustor, a high inlet temperature three stage turbine, a third stage turbine blade guard in the upper half of the turbine casing, and a high augmentation ratio afterburner with a variable area convergent-divergent ejector nozzle.

**AVAILABILITY**

<table>
<thead>
<tr>
<th>Description</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Engine Mock-up Inspection</td>
<td>November 1959</td>
</tr>
<tr>
<td>Experimental Engine</td>
<td>December 1959</td>
</tr>
<tr>
<td>Mock-up for Aircraft</td>
<td>March 1960</td>
</tr>
<tr>
<td>Installation Engine</td>
<td>October 1960</td>
</tr>
<tr>
<td>50 Hr. Preliminary Flight Rating Test</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>150 Hr. Endurance Test (JP-5)</td>
<td>May 1960</td>
</tr>
<tr>
<td>150 Hr. Endurance Test (JP-4)</td>
<td>July 1960</td>
</tr>
</tbody>
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**PROCUREMENT**

Final Price (CY 66) - $147,782

**STATUS**

Production completed.

**SPECIFIC FEATURES**

- **Compressor**—Axial flow, single spool, 17 stage; inlet guide vanes and first 6 stages of stator vanes are variable
- **Maximum Design Pressure Ratio (SLS)**—13.0:1
- **Maximum Allowable Air Bleed**—9.5%
- **Maximum Airflow (SLS)**—169 lb/sec
- **Combustion Chamber**—10 unit, can-annular, through flow type
- **Turbine**—Axial flow, three stage, with integrated turbine impingement starting manifold at second stage
- **Turbine Cooling**—First two stages of stator vanes air cooled
- **Afterburner**—Core-annulus type
- **Exhaust Nozzle**—Convergent-divergent, variable area
- **Maximum Allowable Exhaust Temperature**—1175°F at maximum and intermediate thrust
- **Ignition**—Capacitor discharge type, high energy
- **Power Control**—Hydromechanical; integrated main fuel, afterburner fuel and nozzle area control system
- **Fuel**—MIL-T-5624, Grade JP-5, (Alternate) JP-4
- **Oil**—MIL-L-23699, MIL-L-7808 (below -40°F)
- **Accessory Drive Provisions**—Seven
- **Thrust to Weight Ratio**—4.6:1

**SIZE & WEIGHT**

- **Length**—208.5 inches
- **Maximum Diameter**—35.2 inches (engine), 38.2 inches (afterburner)
- **Dry Weight**—3665 lbs. (-8, -8A); 3672 lbs. (-8B, -8C)

**UTILIZATION**

- F-4A, F-4B, F-4J Fighter Aircraft (two GE-8 engines each); A-5A Attack, F-4A, F-4B, F-4G, F-4J Fighter, RA-5C, RF-4B Reconnaissance, NF-4J Special Test Aircraft (two GE-8A or -8B engines each); RA-5C Reconnaissance Aircraft (two GE-8C engines)

August 1968
The J79-GE-8, -8A, -8B, -8C engines are the same in configuration and performance except that the J79-GE-8A, -8B, -8C engines incorporate provisions for anti-icing of the airframe supplied inlet bullet nose. The J79-GE-8B and -8C include an Approach Power Compensation System power lever control to provide the desired power lever position from either manual or automatic inputs. The J79-GE-8C includes a Speed Modulated Afterburner Thrust System (SMATS) and has some small changes in performance.