SAE Aerospace
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AEROSPACE RECOMMENDED PRACTICE

SAE ARP246 | REV. C

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Superseding ARP246B

Orientation of Engine Axis, Coordinate and Numbering Systems for Aircraft Gas Turbine Engines

RATIONALE

ARP246C has been reaffirmed to comply with the SAE five-year review policy.

FOREWORD

Changes in this Revision are format/editorial only.

1. SCOPE:

1.1 Orientation of the engine, engine axis and coordinate system referred to herein shall be the conventional terminology used in all references to aircraft gas turbine engines.

1.2 Numbering as provided herein is intended for convenience in locating a particular unit in a group of like or similar units.

1.3 Purpose:

To establish an orientation standard for aircraft gas turbine engines and their component parts.

2. REFERENCES:

There are no referenced publications specified herein.

3. ENGINE ORIENTATION:

3.1 Front (Forward) End:

The end nearest the first stage of the engine compressor.

3.2 Rear (Aft) End:

The end from which the jet of expanding gas is expelled.

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3.3 Right and Left Sides:

With the observer and engine facing forward, the right side of the engine will correspond with the observer's right and the left side with the observer's left. (See Figure 1)

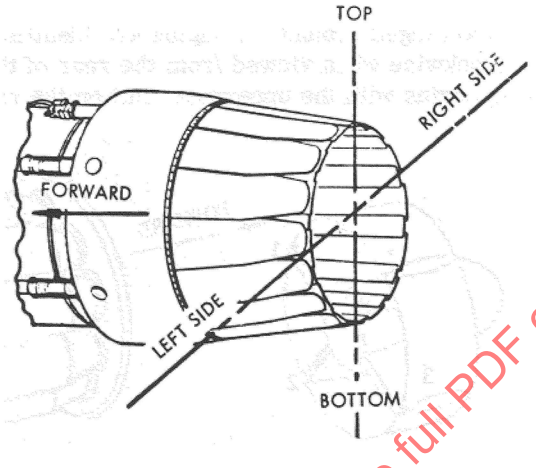

FIGURE 1

3.4 Engine Installations:

Engines installed in aircraft are numbered from extreme left to the extreme right when viewed from the rear of the aircraft. Engine axes that are a common distance from the center line of the aircraft shall be numbered from front to rear or from bottom to top of the aircraft as appropriate.

3.5 Exceptions:

When an engine configuration does not meet the practices defined in this standard, the most suitable terms will be applied and clearly defined in the engine manufacturer's drawings and publications.

4. ENGINE COORDINATES:

4.1 Coordinates:

A system of rectilinear coordinates when required shall have their origins and directions as shown in Figure 2. A suitable reference feature (normally a flange) shall be chosen for the X plane origin.

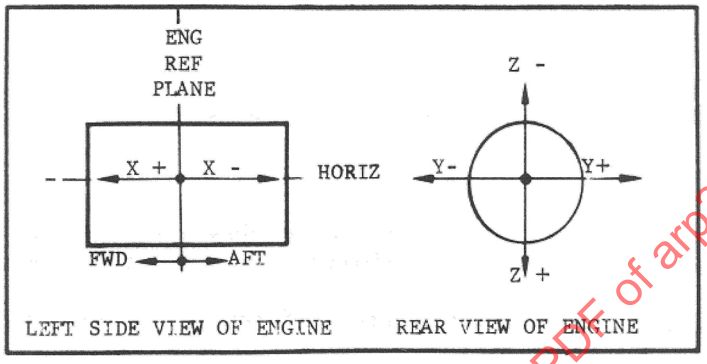

FIGURE 2

5. NUMBERING OF ENGINE COMPONENTS:

5.1 General:

5.1.1 All numbering begins with number 1.

5.1.2 Two or more similar units arranged around the engine are identified by numbers which start at the top center line and progress clockwise when viewed from the rear of the engine. If there is no unit on the top center line, numbering begins with the uppermost unit on the right hand side. (See Figure 3)

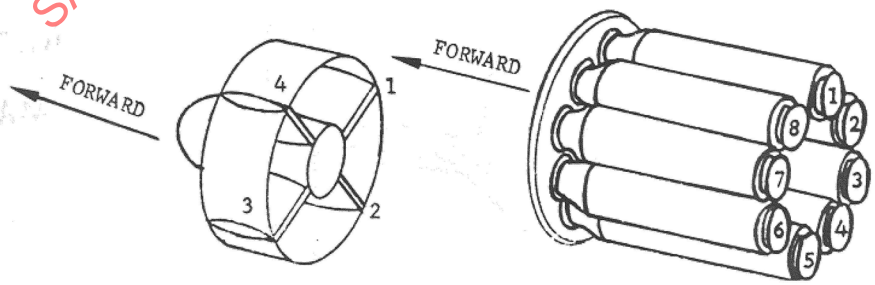

FIGURE 3