



AEROSPACE RECOMMENDED PRACTICE

ARP169**REV. B**

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Superseding ARP169A

Numbering of Aircraft Engine Cylinders

RATIONALE

This document has been determined to contain basic and stable technology which is not dynamic in nature.

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1. SCOPE:

This SAE Aerospace Recommended Practice (ARP) defines a method of numbering aircraft engine cylinders.

2. REFERENCES:

There are no referenced publications specified herein.

3. DEFINITIONS:

3.1 Row:

A group of cylinders arranged in a common plane at right angles to the axis of the crankshaft.

3.2 Bank:

A group of cylinders arranged in a common plane parallel to the axis of the crankshaft.

3.3 Block:

A more or less integral group of cylinders constituting an entire bank or a part of a bank of cylinders.

3.4 Prop End:

That end of the engine to which the propeller is attached or the end from which the power is applied either directly or indirectly to the propeller or other points of application, also known as the front of the engine.

3.5 Anti-prop End:

The end of the engine opposite the prop end, also known as the rear of the engine.

3.6 Clockwise:

Comparable to the direction of rotation of the hands of a clock as viewed from the anti-prop end.

3.7 Counter-clockwise:

The opposite direction of clockwise as viewed from the anti-prop end.

4. DESIGNATIONS OF ENGINES:

4.1 Single Bank In-Line Engine:

A multi-cylinder engine consisting of a bank of cylinders mounted in line along a common crankcase.

4.2 Multi-Bank In-Line Engine:

An engine basically similar to a single bank in-line engine except for additional banks.

4.3 Single-Row Radial Engine:

An engine having three or more cylinders arranged radially in one row at substantially equal angular intervals operating on a common crankpin.

4.4 Multi-Row Radial Engine:

An engine basically similar to single row radial engines except having additional rows of cylinders.

5. NUMBERING OF ENGINE CYLINDERS:

5.1 Numbering Single Bank In-Line Engines:

The cylinders are numbered consecutively beginning with number one for the cylinder at the anti-propeller end.

5.2 Numbering Multi-Bank In-Line Engines:

The banks are given letters in a clockwise direction starting with A beginning with the bank at top vertical center, or beginning with the bank nearest to top center moving in a clockwise direction. The cylinders are numbered consecutively beginning with number one for the cylinder at the anti-propeller end of each bank.

5.3 Numbering Single-Row Radial Engines:

The cylinders are numbered consecutively in a clockwise direction beginning with the cylinder at top vertical center, or beginning with the cylinder nearest to top center moving in a clockwise direction.

5.4 Numbering Multi-Row Radial Engines:

When the succeeding rows of such engines are staggered they will be considered as a series of single row radial engines and numbered in the same manner, and rows given letters as A, B, C, D, E, beginning with A at anti-propeller end or rear of engine. When the succeeding rows are not staggered they will be considered as an In-Line Engine and cylinders and banks designated accordingly.

THE NUMBERING OF CYLINDERS AND DESIGNATION OF
BANKS IS IRRESPECTIVE OF CRANKSHAFT ROTATION.

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