

MIL-STD-1557A
25 October 1983
SUPERSEDING
MIL-STD-1557
28 January 1974

MILITARY STANDARD
DESIGNATION OF AIRCRAFT PROPULSION RECIPROCATING ENGINES



MIL-STD-1557A
25 October 1983

DEPARTMENT OF DEFENSE
Washington, D.C. 20301

Designation of Aircraft Propulsion Reciprocating Engines

MIL-STD-1557A

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DESIGNATION OF AIRCRAFT PROPULSION RECIPROCATING ENGINES

1. SCOPE

1.1 This standard describes the method of assignment used by the Military Services in establishing the type and model designation of aircraft propulsion reciprocating engines.

2. REFERENCED DOCUMENTS

2.1 Not applicable.

3. DEFINITIONS

3.1 Not applicable.

4. GENERAL REQUIREMENTS

4.1 Former engine designation assignments. An engine initially designated in accordance with the former Air Force-Navy Aeronautical system (now canceled) shall normally retain the designation assigned for the remainder of its in-service life. Designation changes to engines so designated shall be permitted only to the extent specified in 4.1.1 or 4.1.2.

4.1.1 Mixed form designation. When an engine with an existing designation is so revised to involve the assignment of a new model number, the engine shall continue to use the type indicator originally assigned. The new model number shall be assigned as described in 5.1.2.1 (example: R-4360-100).

4.1.2 Suffix letter changes to designated engines. When an engine with an existing designation requires the addition of change of the suffix letter in the model number as a result of minor design changes, the engine shall continue to use the type indicator and model number initially assigned. The change shall be reflected by the addition of the suffix letter A or the next consecutive suffix letter as applicable for the specific engine, except for the letters I, O, T, and W. (Example: When modified, the R-1830-92 would become the R-1830-92A, the R-1830-90D would become the R-1830-90E).

a. The letters "I" and "O" shall not be used.

b. The letter T shall follow the designator assigned to an operational version of the training engine. (Example: An operational R-1830-92A engine used for training purposes would be the R-1830-92AT).

c. The letter W is used with the basic model numeral, or numeral and suffix letter, to indicate engines equipped with water injection. When so used, the letter W shall precede any other suffix letter assigned in the model indicator. (Example: The R-3350-95W would become the R-3350-95WA).

4.2 New designations. A new numerical designation shall be assigned when an engine design is new or so revised that a significant change in performance, flight safety, installation, or interchangeability of the complete engine is affected, and the change is not made retroactive to all engines of the same model previously delivered.

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4.3 Special designations. The letters X and Y may be used at the discretion of the Services for the purpose of signifying development engines, as applicable. Generally, the prefix letter X shall be used to denote an engine under development which has not reached the stage of successfully completing the official Preliminary Flight Rating Tests, and the prefix Y shall be used to denote an engine still in the development category but which has been cleared for limited flight use by successfully completing the Preliminary Flight Rating Tests. When used, such letters shall precede the designation arrangement described herein.

5. DETAIL REQUIREMENTS

5.1 Designation assignment. The complete engine designation shall consist of two parts: (1) the type indicator and (2) the model indicator. A given engine design shall have only one designation for all Services. For example, should the Navy desire to use an engine bearing Air Force type and model numbers, the Navy shall use those numbers without change for all designation purposes. Further, should the Army desire to use a Navy designation type engine, but require changes to the Navy model of that type, the Army shall use the Navy designation and assign its own model number to the modified engine.

5.1.1 Type indicator. The type indicator part of the engine designation shall consist of the appropriate type letter symbol selected from 5.1.1.1 together with a dash number assigned in accordance with 5.1.1.2.

5.1.1.1 Type letter symbols. Type letter symbols shall conform to the following:

<u>LETTER SYMBOLS</u>	<u>TYPES</u>
O	Opposing
R	Radial
V	Vee
RC	Rotating Combustion

5.1.1.2 Type dash numerals. The type dash numerals used in connection with the type letter shall be assigned by the Services. The type numerals represent the cubic inch displacement to the nearest 5 cubic inches.

5.1.2 Model indicator. The model indicator shall consist of a dash and a model number, or a dash and a model number with a suffix letter.

5.1.2.1 Model number. The model number shall be assigned initially for specific configuration of a given type engine. Air Force model numbers for each type shall begin with -100 and continue with consecutive numbers. Navy model numbers for each type of engine shall begin with -400 and continue with consecutive numbers. Army model numbers for each type of engine shall begin with -700 and continue with consecutive numbers.

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5.1.2.2 Suffix letter. The suffix letter, with the basic model number, shall indicate a minor design change(s) which will affect performance, flight safety, installation, or interchangeability of the complete engine. Suffix letters shall be assigned consecutively, starting with the letters A, B, C, etcetera, except the letter T is reserved for assignment on engines used exclusively in training programs and are not to be installed in operational aerospace vehicles. The letter W is reserved for use on engines equipped with water injection. The letters "I" and "O" shall not be used.

5.2 Assignment responsibility. Each Service is responsible for the assignment of the engine designations within the scope of this standard. When a designation is assigned, the assigning Service shall notify the other two Services of this action and include a definitive description of the engine so designated. Notification letters shall be forwarded as follows:

Commander
US Army Aviation R & D Command
ATTN: DRDAV-ERS
4300 Goodfellow Blvd
St Louis MO 63120

Commander
Naval Air System Command
AIR-5360D1
Washington DC 20361

ASD/ENES
Wright-Patterson AFB OH 45433.

Custodians:
Army - AV
Navy - AS
Air Force - 11

Preparing activity:
Air Force - 11

Project No. 2810-0111

Reviewers:
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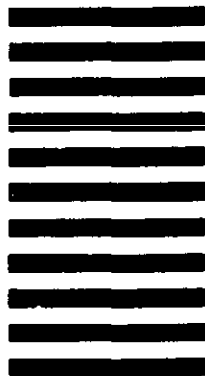
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