



DEPARTMENT OF THE NAVY  
OFFICE OF THE CHIEF OF NAVAL OPERATIONS  
WASHINGTON, DC 20350

IN REPLY REFER TO

OPNAVINST 4442.3B  
OP-516

20 MAR 1985

OPNAV INSTRUCTION 4442.3B

From: Chief of Naval Operations

Subj: GUIDELINES FOR COMPUTING SPARE AIRCRAFT ENGINE AND  
ENGINE MODULE REQUIREMENTS

Ref: (a) DODINST 4230.4

1. Purpose. To implement reference (a) policies and procedures governing the programming, budget and procurement of aircraft engines and modules. OPNAVINST 4442.3B is a complete revision.

2. Cancellation. OPNAV Instruction 4442.3A.

3. Definitions

a. Newly Developed Engines. The period in design development prior to the stabilization of demand and re-supply rates and before the effects of significant engineering and support concept changes have been discovered and incorporated.

b. Mature Engines. The period in design development in which demand and re-supply rates have stabilized and the effects of significant engineering and support concept changes are known and incorporated.

4. Background. Reference (a) establishes a uniform methodology for computing spare aircraft engine/module requirements. This methodology provides a major improvement in requirements determination techniques and the standardization necessary to assure the efficient use of procurement funds and provide a high level of supply support.

5. Program Guidance. Commander, Naval Air Systems Command (COMNAVAIRSYSCOM) shall obtain program guidance for computation of aircraft engine/module requirements from the Office of the Chief of Naval Operations (OP-51). The data required to compute spare engine/module requirements will be obtained from the following documents.

a. Distribution of aircraft and number of operating aircraft: Weapon System Planning Document (WSPD).

b. Flying Hours

(1) Peacetime: Budget Analysis Report from Flying Hour Projection System (FHPS).

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c. (2) Wartime or Combat: Naval Aircraft Wartime Utilization Planning Data.

d. Pipeline Times (Peacetime/Wartime). NAVAIR will develop Navy standard pipeline times for peacetime and wartime in accordance with reference (a). Separate standards will be established for engines processed through the Depot and engines processed by the Intermediate Maintenance Activity (IMA). Pipeline times will reflect the time from removal until the engine is processed through either the Depot or the IMA and returned to the user, considering the following elements:

- (1) Removal from aircraft, inspect and process for shipment.
- (2) In transit to IMA/depot facility.
- (3) IMA/depot receiving/workload processing.
- (4) IMA/depot in process time.
- (5) In transit to user.
- (6) Engine buildup days.

e. Removal Rates. NAVAIR will develop removal rates in accordance with reference (a) and the information below:

(1) Newly developed engines. Engine maintenance plans will be used where available. Documented experience data on the "nearest-of-kind" Type, Model, Series (TMS) when maintenance planning data is not available.

(2) Mature engines. Historical data modified by major Engineering Change Proposal (ECP) incorporations as appropriate.

(3) Actuarial factors. NAVAIR will derive and publish to reflect removal rates for new and mature applications for both peace and war.

6. Initial Outfitting Allowance. All ships and MAGs are authorized a thirty day allowance of engines, based on wartime flying hours, to support removals, repair turn around time, and attrition. If space limitations dictate, portions of the allowance may be prepositioned at advance bases.

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## 7. Pipeline Requirements

a. Peacetime. The peacetime pipeline requirement consisting of Depot Turnaround Time (TAT) and an IMA TAT will be computed for each type of engine. This requirement will be based on: 1) peacetime flying hours provided from the FHPS, 2) the standard times developed by NAVAIR for each pipeline segment, 3) the aircraft distribution provided by the WSPD, and 4) Safety Level factors based on a Poisson Formula, using a ninety percent confidence level for combat and combat support aircraft and an eighty percent confidence level for all others.

b. Wartime. The wartime pipeline requirement for each type of engine necessary to sustain combat operations will be computed as discussed in paragraph 7a above, using wartime flying hours for each type of aircraft engine.

8. Modular Type Spare Engine Requirements. The modular concept requires a mix of fully assembled spare engines, to be available for immediate installation into aircraft, and spare modules for utilization during repair. The maintenance activity will remove, replace, repair and retrograde modules/engines in accordance with the maintenance plan. This concept will ensure that requirements for complete spare engines will be minimal.

9. Yearly Proration of War Reserve Requirements. The portion of spare engines computed each year to meet wartime requirements will be shown as an offset against War Reserve Requirements (WRR) to allow a more accurate portrayal of peacetime versus wartime requirements. In prorating aircraft engine WRR requirements, the following guidelines will be observed:

a. For those aircraft with a procurement program of up to five years, no WRR engines will be computed for the first two years. The entire WRR requirement will be prorated over the remaining life of the program. For example, a WRR of thirty-three with three years remaining would cause a computation of eleven and deferral of twenty-two; the following year a requirement of eleven, deferring eleven, etc.

b. For those aircraft with a lifetime program of over five years, no WRR will be computed during the first three years, and a prorated buy will be initiated for the final years.

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10. Documentation. Computations made to achieve all of the above requirements will be calculated and displayed in accordance with reference (a).

  
C. J. MOORE  
By direction

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