***FLIGHT OPERATING LIMITATIONS***

TITLE: FLIGHT OPERATING LIMITATIONS (FOLs) FOR CONTRACTOR PROGRAMS

FOREWORD

Flight Operating Limitations (FOLs) define the airspeed, Mach number, altitude, maneuvering, power management and/or system/subsystem configuration limitations imposed on a flight vehicle. Safety dictates that the issue and removal of FOLs be closely controlled so that only one source of aircraft limitations exists.

I. INTRODUCTION

A. SCOPE: This procedure defines the policy and procedures for the formulation, approval, issue and removal of FOLs for aircraft involved in developmental flight test programs conducted by the Test and Evaluation Department.

B. APPLICATION: This document applies to all Test and Evaluation Department personnel involved in the formulation, approval, issue, use and removal of FOLs.

C. RESPONSIBLE ORGANIZATIONS:

- Flight Test Technology

- Flight Operations

- Program T&E Management

- Engineering

D. DEFINITIONS:

The following definition applies:

- Customer ... Department of the Navy, Air Force, Army or Civilian Corporation who contract for[company] to conduct a development flight test program.

E. ABBREVIATIONS:

- FOL ... Flight Operating Limitation

- T&E ... Test and Evaluation Department

- FTT ... Flight Test Technology

- GAEG ...[company]Aerospace & Electronics Group

- DPRO ... Defense Plant Representative Office

- NATOPS ...Naval Air Training and Operations Procedures Standardization

II. ASSOCIATED DOCUMENTS

A. Applicable Documents:

 - Non-conforming [company] and Customer Material/Property Discovered in the Flight Test Cycle

 - Verification and Traceability System: Procedure for Material Review

 - Work Order and Work Accomplishment Record

 - Engineering Order/Manufacturing Change Order

 - Military Specification Demonstration Requirements for Airplanes

 - Part 25 Airworthiness Standards for Transport Category Aircraft

III. GENERAL POLICY

 The purpose of a FOL is to prohibit a vehicle form operating in a flight or ground regime (or system/subsystem configuration) that might result in an aircraft mishap or expose the vehicle/crew to a known or potentially unsafe environment.

FOLs should be limited to their primary purpose of safety of flight considerations. In addition, FOLs may be written to define procedures or limit use or operations of unique development aircraft systems or aircraft configurations. FOLs should not be burdened with material that should be processed through other appropriate Corporate Procedures and documentation systems (see Applicable Documents).

The Test Conductor assigned to a flight test program has the primary responsibility for assembling and formatting the required data, obtaining the required approvals and distributing the FOL and FOL removals. On flight test programs that do not have Test Conductors assigned, the Technical Project Engineer shall assume the Test Conductor's FOL responsibilities.

The Structural Sciences Group has the responsibility to maintain a master file for the FOL system. A book containing all FOLs and FOL removals for each aircraft type will be maintained or, if computerized, sorts by aircraft type and aircraft tail number will be available for T&E personnel. Upon completion of a test program FOLs developed for the program will be maintained by the Structural Science Group; FOLs required on any aircraft not presently in a test or production phase will be under the Structural Science Group's cognizance.

A FOL system will be established and maintained for all flight test programs conducted by the T&E Department as follows:

A. New Model Aircraft

 1. Military ‑ for the duration of aircraft bailment (unless otherwise contractually

 stipulated).

 2. Non‑Military ‑ for the duration of the flight test program (unless otherwise

 contractually stipulated).

B. Existing Model Aircraft (covered by a NATOPS, Flight or Operators Manual; Military or Non‑Military)

 1. When the test program requires a change from the operating limits contained in the

 appropriate Operating Manual. Usually this is due to an airframe or aircraft system

 modification.

 2. When any vagueness or ambiguity exists which might cause uncertainty in

 identifying correct limitations.

Note: FOLs are not required when the only constraint to eventual clearance to existing flight manual limits is a T&E imposed test build‑up sequence.

IV. PROCEDURE

A. The procedural flow and organizational responsibilities for the Issue/Modification /Removal of FOLs is as follows:

 DEFINE LIMITATION

 1. By GAEG;

 a. Originator defines and documents limitation, includes all information

 required

 b. Limitation approved, as appropriate by

 1. Cognizant T&E Group Manager

 2. Program T&E Manager

 3. Engineering Director/Manager

 4. Project Pilot

 2. By Customer;

 a. Limitation defined and documented

 b. Limitation forwarded to FTT by Flight Test Manager

 3. Test Conductor or Technical Project Engineer

 a. Assemble required information/data and prepare appropriate form

 b. Obtain approval signatures

 c. Distribute FOL to:

 1. Approvers

 2. Director of FTT

 3. FTT Group Managers

 4. Chief Test Pilot

 5. DPRO

 6. Customer

 d. Modify (if required) Flight Crew Checklist

REMOVAL

 1. By GAEG;

 a. Prepare documentation to justify FOL removal

 b. Documentation approved(same as for originating FOL)

 2. By Customer;

 a. Documentation to remove FOL forwarded to FTT by the Program T&E

 Manager

 3. Test Conductor or Technical Project Engineer

 a. Assemble substantiation documentation and prepare appropriate form

 b. Obtain approval signatures

 c. Distribute FOL removal (same as originating FOL)

 d. Modify (if required) Flight Crew Checklist

B. Summary

 1. Originate Limitation: Limitations can be based on design analysis, wind tunnel or lab tests, ground tests and/or flight tests and can be originated by any cognizant personnel, eight GAEG or customer. All limitations must be documented in memo or message form and must:

 a. Contain information required to generate FOL

 b. GAEG originated - be approved by the cognizant Engineering Manager, T&E Group Manager, Program T&E Manager and Project Pilot. FOLs are noted by the Test Conductor or Technical Project Engineer.

 c. Customer generated - be reviewed by the cognizant Program T&E Manager for applicability to bailed development aircraft.

 2. The removal and originating procedures are the same. The approved documentation which justifies removing the FOL must clearly state how the "Action Required to Remove Limitation" section of the FOL has been satisfied.

***F***