CHANGE NOTICE

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A1-F18AC-NFM-200

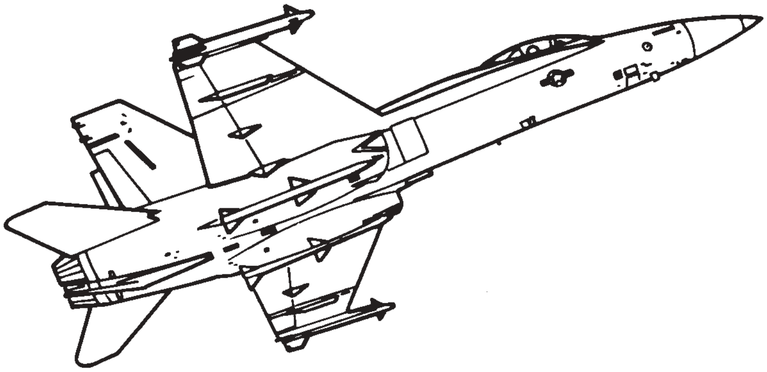
NATOPS FLIGHT MANUAL PERFORMANCE CHARTS

NAVY MODEL

F/A-18A/B/C/D

EQUIPPED WITH F404-GE-400 ENGINES

McDonnell Douglas Corporation



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THIS PUBLICATION SUPPLEMENTS A1-F18AC-NFM-000 NATOPS FLIGHT MANUAL FOR MODEL F/A-18A/B/C/D AIRCRAFT.

ISSUED BY AUTHORITY OF THE CHIEF OF NAVAL OPERATIONS AND UNDER THE DIRECTION OF THE COMMANDER, NAVAL AIR SYSTEMS COMMAND.

0801LP1059510

15 JANUARY 1993

CHANGE 7 - 1 AUGUST 2006

LIST OF EFFECTIVE PAGES

Insert latest changed pages; dispose of superseded pages in accordance with applicable regulations.

Dates of issue for original and changed pages:

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Change	2	15 Jan 97
Change	3	15 Feb 98
Change	4	15 May 00
Change	5	15 Jul 01
Change	6	1 Nov 04
Change	7	1 Aug 06

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INTERIM CHANGE SUMMARY

The following Interim Changes have been cancelled or previously incorporated in this manual:

INTERIM CHANGE NUMBER(S)	REMARKS/PURPOSE

The following Interim Changes have been incorporated in this Change/Revision:

INTERIM CHANGE NUMBER	REMARKS/PURPOSE
1	Interference Code Numbers.

Interim Changes Outstanding - To be maintained by the custodian of this manual:

INTERIM CHANGE NUMBER	ORIGINATOR/DATE (or DATE/TIME GROUP)	PAGES AFFECTED	REMARKS/PURPOSE

SUMMARY OF APPLICABLE TECHNICAL DIRECTIVES

Information relating to the following technical directives has been incorporated in this manual.

Change Number	ECP Number	Description	Visual Identification	Effectivity
AFC 102	00300	LEX Fence Installation	LEX Fence	(R)161353 thru 161924 (P)161925 and up
	00285	BRU-33/A Design Change	Canted VER	

Information relating to the following recent technical directives will be incorporated in a future change

Change Number	ECP Number	Description	Visual Identification	Effectivity

TABLE OF CONTENTS

* Refer to NATOPS Flight Manual, A1-F18AC-NFM-000.

FOREWORD

SCOPE

The NATOPS Flight Manual Performance Charts are issued by the authority of the Chief of Naval Operations and under the direction of Commander, Naval Air Systems Command in conjunction with the Naval Air Training and Operating Procedures Standardization (NATOPS) Program. This manual contains information on performance data and effective operations. However, it is not a substitute for sound judgement. Compound emergencies, adverse weather or terrain, or considerations affecting the lives and property of others may require modification of the procedures contained herein. Read this manual from cover to cover. It's your responsibility to have a complete knowledge of its contents.

APPLICABLE PUBLICATIONS

The following applicable publications complement this manual:

A1-F18AC-NFM-000 (NATOPS Flight Manual)
A1-F18AC-NFM-210 (Performance Data Charts for aircraft with F404-GE-402 engines)
A1-F18AC-NFM-500 (Pocket Checklist for aircraft with F404-GE-400 engines)
A1-F18AC-NFM-510 (Pocket Checklist for aircraft with F404-GE-402 engines)
A1-F18AC-NFM-600 (Servicing Checklist)
A1-F18AC-NFM-700 (Functional Checkflight Checklist)
A1-F18AC-TAC-000/A1-F18AE-TAC-000 (Volume I Tactical Manual)
A1-F18AC-TAC-010/A1-F18AE-TAC-010 (Volume II Tactical Manual)
A1-F18AC-TAC-100 (Volume III Tactical Manual)
A1-F18AC-TAC-020 (Volume IV Tactical Manual)
A1-F18AC-TAC-300 (Tactical Manual Pocket Guide)

HOW TO GET COPIES

Each flight crewmember is entitled to personal copies of the NATOPS Flight Manual and appropriate applicable publications.

One Time Orders

If this publication is needed on a one time basis (without future updates), order it from stock by sending an electronic DD 1348 requisition IAW NPFC pub 2002D.

Automatic Distribution (with updates)

This publication and changes to it are automatically sent to activities who are established on the Automatic Distribution Requirements List (ADRL) maintained by Naval Air Technical Services Facility (NAVAIRTECHSERVFAC), Philadelphia, PA. If you have a continuing need for this publication, have your Central Technical Publication Librarian send a revised ADRL report on floppy disk to NAVAIRTECHSERVFAC. If your activity does not have a library, then send a letter to Commanding Officer, NAVAIRTECHSERFAC, Attn: Code 32, 700 Robbins Avenue, Philadelphia, PA 19111 requesting assignment of a distribution account number (if necessary) and automatic mailing of future issues of the publication(s) needed.

NOTE

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UPDATING THE MANUAL

To ensure that the manual contains the latest procedures and information, NATOPS review conferences are held in accordance with OPNAVINST 3710.7 series.

CHANGE RECOMMENDATIONS

Recommended changes to this manual or other NATOPS publications may be submitted by anyone in accordance with OPNAVINST 3710.7 series.

Routine change recommendations are submitted directly to the Model Manager on OPNAV Form 3710/6 shown on the next page. The address of the Model Manager of this aircraft is:

Commanding Officer
VFA-125
U. S. Naval Air Station
Lemoore, CA 93245-0125
Attn: F/A-18 Model Manager
Autovon: 949-1727
Commercial: (209) 998-1727

Change recommendations of an URGENT nature (safety of flight, etc.,) should be submitted directly to the NATOPS Advisory Group Member in the chain of command by priority message.

NATOPS/TACTICAL CHANGE RECOMMENDATION
OPNAV/FORM 3710/6(4-90) S/N 0107-LF-009-7900

DATE

TO BE FILLED IN BY ORIGINATOR AND FORWARDED TO MODEL MANAGER

FROM (originator)	Unit
TO (Model Manager)	Unit

Complete Name of Manual/Checklist	Revision Date	Change Date	Section/Chapter	Page	Paragraph

Recommendation (be specific)

☐ CHECK IF CONTINUED ON BACK

Justification

Signature	Rank	Title

Address of Unit of Command

TO BE FILLED IN BY MODEL MANAGER (Return to Originator)

FROM	Date

TO

Reference
(a) Your change Recommendation Dated ____________________

☐ Your change recommendation dated ____________ is acknowledged. It will be held for action of the review conference planned for ____________ to be held at ____________________

☐ Your change recommendation is reclassified URGENT and forwarded for approval to ____________________ by my DTG ____________________

/S/____________________ ____________________AIRCRAFT
MODEL MANAGER

YOUR RESPONSIBILITY

NATOPS Flight Manuals are kept current through an active manual change program. Any corrections, additions, or constructive suggestions for improvement of its content should be submitted by routine or urgent change recommendation, as appropriate, at once.

NATOPS FLIGHT MANUAL INTERIM CHANGES

NATOPS Flight Manual Interim Changes are changes or corrections to the NATOPS Flight Manuals promulgated by CNO or NAVAIRSYSCOM. Interim Changes are issued either as printed pages, or as a naval message. The Interim Change Summary page is provided as a record of all interim changes. Upon receipt of a change or revision, the custodian of the manual should check the updated Interim Change Summary to ascertain that all outstanding interim changes have been either incorporated or canceled; those not incorporated shall be recorded as outstanding in the section provided.

CHANGE SYMBOLS

Revised text is indicated by a black vertical line in either margin of the page, adjacent to the affected text, like the one printed next to this paragraph. The change symbol identifies the addition of either new information, a changed procedure, the correction of an error, or a rephrasing of the previous material.

WARNING, CAUTIONS, AND NOTES

The following definitions apply to “WARNINGS”, “CAUTIONS”, and “NOTES” found throughout the manual.

WARNING

An operating procedure, practice, or condition, etc., which may result in injury or death, if not carefully observed or followed.

CAUTION

An operating procedure, practice, or condition, etc., which may result in damage to equipment if not carefully observed or followed.

NOTE

An operating procedure, practice, or condition, etc., which is essential to emphasize.

WORDING

The concept of word usage and intended meaning which has been adhered to in preparing this Manual is as follows:
“Shall’’ has been used only when application of a procedure is mandatory.
“Should“ has been used only when application of a procedure is recommended.
“May’’ and “need not’’ have been used only when application of a procedure is optional.
“Will’’ has been used only to indicate futurity, never to indicate any degree of requirement for application of a procedure.

AIRSPEED

All airspeeds in this manual are in knots calibrated airspeeds unless stated in other terms.

MANUAL DEVELOPMENT

This NATOPS Flight Manual was prepared using a concept that provides the aircrew with information for operation of the aircraft, but detailed operation and interaction is not provided. This concept was selected for a number of reasons: reader interest increases as the size of a technical publication decreases, comprehension increases as the technical complexity decreases, and accidents decrease as reader interest and comprehension increase.

To implement this streamlined concept, observance of the following rules was attempted:

a. The pilot shall be considered to have above-average intelligence and normal (average) common sense.

b. No values (pressure, temperature, quantity, etc.) which cannot be read in the cockpit are stated, except where such use provides the pilot with a value judgement.

c. Only the information required to fly the airplane is provided.

d. Notes, Cautions, and Warnings are held to an absolute minimum, since, almost everything in the manual could be considered a subject for a Note, Caution, or Warning.

e. No Cautions or Warnings or procedural data are contained in the Descriptive Section, and no abnormal procedures (Hot Starts, etc.) are contained in the Normal Procedures Section.

f. Notes, Cautions and Warnings will not be used to emphasize new data.

g. Multiple failures (emergencies) are not covered.

h. Simple words in preference to more complex or quasi-technical words are used and unnecessary and/or confusing word modifiers are avoided.

A careful study of the NATOPS Flight Manual will probably disclose a violation of each rule stated. In some cases this is the result of a conscious decision to make an exception to the rule. In many cases, it only demonstrates the constant attention and skill level that must be maintained to prevent slipping back into the old way of doing things.

In other words, the ‘‘Streamlined’’ look is not an accident, it takes constant attention for the NATOPS Flight Manual to keep its lean and simple concept to provide the pilot with the information required.

SECTION XI

PERFORMANCE DATA

F404-GE-400 Engines

INTRODUCTION

This section is divided into parts 1 thru 10 to present performance data in proper sequence for preflight planning. All data are based on flight test or the contractor's estimate, U.S. standard day, 1962 conditions and/or provisions to correct for non-standard temperatures, and using JP-5 fuel. Unless noted otherwise, there is no significant difference between using JP-5 or JP-8. When using JP-4 fuel, fuel flows and fuel used quantities will be approximately 1% lower. All reference to gallons is U.S. gallons.

GLOSSARY OF TERMS

Indicated Airspeed

Indicated airspeed (IAS) is the pitot static airspeed indicator reading, as installed in the aircraft, without correction for system errors.

Calibrated Airspeed

Calibrated airspeed (CAS) is indicated airspeed corrected for static source error.

Equivalent Airspeed

Equivalent airspeed (EAS) is calibrated airspeed corrected for adiabatic compressible flow for the particular altitude. EAS is equal to CAS at sea level in standard air.

True Airspeed

True Airspeed (TAS) is the aircraft speed over the ground in no-wind conditions. True airspeed is EAS corrected for density altitude.

Takeoff Speed

Takeoff speed is the speed at which the main gear lifts off the ground.

Nosewheel Lift-Off Speed

Nosewheel Lift-off speed is the speed at which the nosewheel lifts off the ground.

Pressure Altitude

Pressure Altitude is the vertical distance from the standard datum. This is a theoretical plane where air pressure (corrected to 15°C) is equal to 29.92 inches of mercury (Hg). The indicated pressure altitude may not be the actual height above sea level due to variations in temperature, lapse rate, atmospheric pressure, and errors on the sensed pressure.

Density Altitude

Density altitude is pressure altitude corrected for temperature. When conditions are standard, pressure altitude and density altitude are the same. Consequently, if the temperature is above standard, the density altitude will be higher than the pressure altitude. If the temperature is below standard, the density altitude will be lower than the pressure altitude.

Density Ratio

Density ratio is a single factor representation of a combination of temperature and pressure altitude.

Combat Ceiling

Combat ceiling is the altitude where the rate of climb is 500 feet per minute at either military (MIL) or maximum afterburner (MAX AB) rated power.

PART 1 - STANDARD DATA F404-GE-400

TABLE OF CONTENTS

Charts

DRAG INDEX SYSTEM

Cruise, climb, range, endurance, and descent charts contained in this section are presented in a drag index format. Before using the charts a total drag index figure (drag count) for the specific aircraft configuration must be determined. The basic aircraft is defined as an F/A 18 configured with wingtip AIM-9 missiles and has a Drag Index equal to zero (DI=0). The basic aircraft configured with LEX fences has a Drag Index equal to six (DI=6.0) for the F/A 18A/C and one (DI=1.0) for the F/A 18B/D. Two types of drag must be accounted for when determining the total drag index with external stores, the basic store drag and the interference drag. Basic store drag is the drag count assigned to specific stores and their associated suspension equipment. Interference drag develops between stores on adjacent wing and fuselage stations. The magnitude of this drag is a function of the distance between stores, airspeed, and aircraft angle of attack. In general, interference drag increases as the distance between stores decreases, as airspeed increases above 0.6 Mach, and as angle of attack decreases.

SAMPLE PROBLEM

The following sample problem is presented to demonstrate the method of computing both types of drag. Total drag at various Mach numbers and dash angle of attack is calculated for the following interdiction mission store loading. As drag information is obtained it is entered on a Drag Computation Form (figure 11-1).

Station	Store Load
1	Wingtip AIM-9
2	(2) VER mounted Mk-83 LD
3	330 gallon fuel tank
4	FLIR
5	330 gallon fuel tank
6	LDT
7	330 gallon fuel tank
8	(2) VER mounted Mk-83 LD
9	Wingtip AIM-9

Determining the Basic Store Drag

Basic store drag is the additional drag imposed when external stores are carried. The drag index values for selected stores in the inventory are presented in figure 11-2. Using the example station 2 load (pylon, VER, and (2) MK-83 LD), the basic store drag index is 28.5. The drag for each of the other stations (including fuselage stations) is similarly found and recorded in the Drag Computation Form (figure 11-1). The total of the drag on all stations is the basic store drag index (for the interdiction load example, DI = 132.5).

Determining Interference Drag

Because of the large combination of stores which can be carried, a table of interference drag code numbers (figure 11-3) has been devised to aid in computing interference drag while carrying any combination of external stores. These code numbers are used to compute an approximate interference drag index. The interference drag index is presented as a function of total interference code number and dash angle of attack or cruise angle of attack (figure 11-4). Only the loadings that generate interference drag are given an interference code. Wing tip mounted missiles and stores on the centerline station do not produce interference drag.

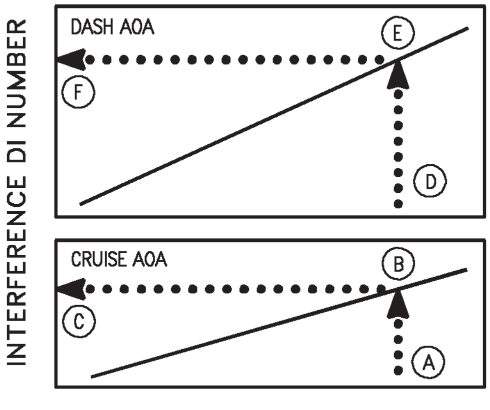
To calculate an interference DI number it is first necessary to obtain the interference code number corresponding to loadings which produce interference drag. For example, using the sample configuration, the two VER mounted MK-83 LD on the outboard station pylon produce interference drag with the 330 gallon fuel tank on the inboard pylon station. The interference code number representing this drag equals 3.9. The interference code numbers for the other stations producing interference drag can also be found in the table. The individual code numbers are then summed to obtain a total interference code number for the configuration (for the interdiction load example, total interference code = 12.4).

The interference DI charts (figure 11-4) are used to convert the configuration total interference code number to a DI number. The interference DI is a function of Mach number and either cruise AOA (greater than approximately 2.5°) or dash AOA (approximately 2.5° or lower). For the sample problem considered, the dash angle of attack chart is used. The total interference code number of 12.4 gives the interference drag indexes shown on the drag computation form (figure 11-1).

Sample Problem

A. Interference code number	14
B. Cruise AOA Mach number	.85
C. Cruise AOA Interference DI number	30
D. Interference code number	14
E. Dash AOA Mach number	.85
F. Dash AOA Interference DI number	41

SAMPLE INTERFERENCE CODE NUMBER TO INTERFERENCE DRAG INDEX NUMBER CONVERSION



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AIRSPEED CONVERSION CHART

The Airspeed Conversion chart (figure 11-7) provides a means of converting calibrated airspeed to true Mach number and true airspeed.

AIRSPEED POSITION ERROR CORRECTION CHARTS

Under normal conditions, airspeed position error is automatically compensated for by the air datacomputer system (ADC). However, if a malfunction of the ADC occurs, position error must be applied to the cockpit standby indication. These charts (figure 11-8, sheets 1 and 2) provides a direct-reading conversion from indicated airspeed to calibrated airspeed and from indicated Mach number to true Mach number.

Sample Problem

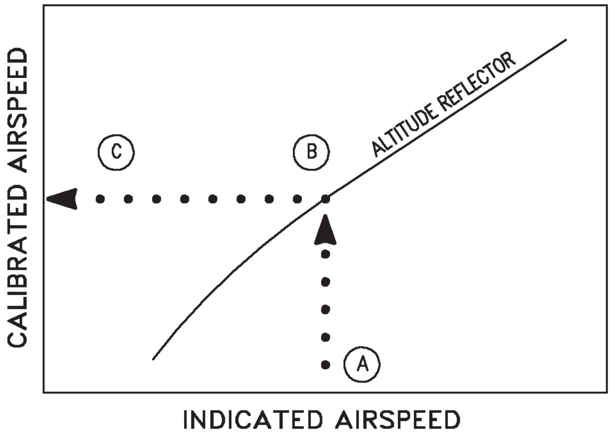
Indicated Airspeed (sheet 1)

A. Indicated airspeed	500 Kt.
B. Altitude	20,000 Ft.
C. Calibrated airspeed	510 Kt.

Mach Number (sheet 2)

A. Indicated Mach number	1.0
B. Altitude reflector	
C. True Mach Number	1.07

SAMPLE AIRSPEED POSITION ERROR CORRECTION



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ALTIMETER POSITION ERROR CORRECTION CHARTS

Under normal operating conditions, the air data computer (ADC) compensates for the static source position error. If the ADC fails in flight, the standby altimeter can be used. However, these readings must be corrected by means of the Altimeter Position Error Correction chart (figure 11-9, sheets 1 and 2). These charts provides altitude correction (ΔH) for indicated airspeeds up to 220 knots below 10,000 feet and for indicated Mach numbers up to 1.7 Mach at altitudes of sea level, 20,000 feet and 40,000 feet.

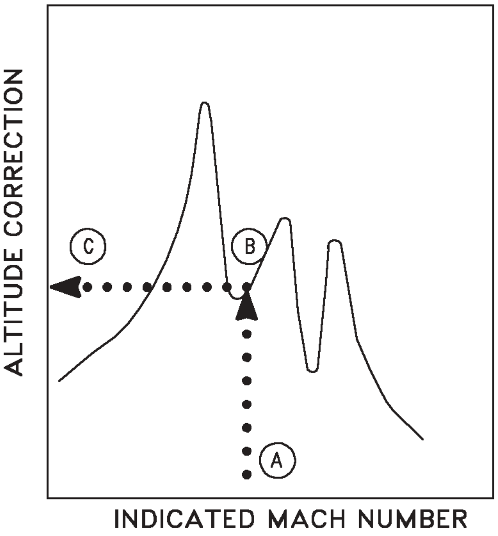
USE

Enter the applicable chart with the indicated Mach number or indicated airspeed. Project vertically upward to intercept the applicable altitude curve, then horizontally left to read the altitude correction (ΔH). Apply ΔH to the assigned altitude and fly assigned altitude +ΔH.

Sample Problem

A. Indicated Mach number	1.1
B. Assigned altitude	20,000 Ft.
C. Altitude correction (ΔH)	-510 Ft.
D. Assigned altitude +ΔH(B+C)	19,490 Ft.

SAMPLE ALTIMETER POSITION ERROR CORRECTION



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STALL SPEEDS CHART

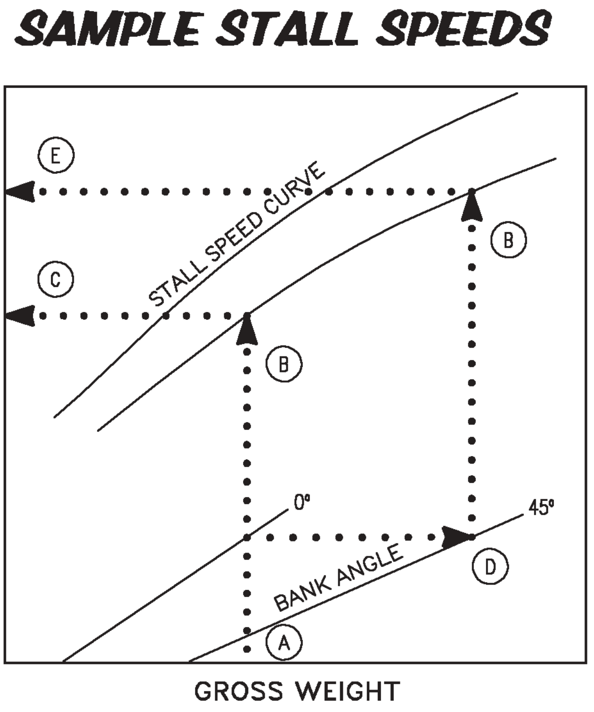
The Stall Speeds chart (figure 11-10) presents stall speeds for various combinations of gross weight, bank angle and power setting at maximum lift. The data are based on catapult, approach, and maneuvering configurations.

USE

Enter the chart with the applicable gross weight and project vertically up to intersect the 0° bank angle. From this intersection, project horizontally right to the appropriate bank angle. From this point, project vertically up to the appropriate power setting curve, then horizontally left to read stall speed.

Sample Problem

A. Gross weight	35,000 Lb.
B. Stall speed curve (MIL)	
C. Stall speed	106 Kt.
D. Bank angle	45°
E. Stall speed	133 Kt.



1BAC–NFM–20–(15–1)11–CATI

ANGLE OF ATTACK CONVERSION CHART

This chart (figure 11-11) presents the corresponding angle of attack in degrees for various combinations of calibrated airspeed and gross weight. The data are based on stabilized 1 G level flight conditions with separate plots for 30° and 45° flap settings both with landing gear down.

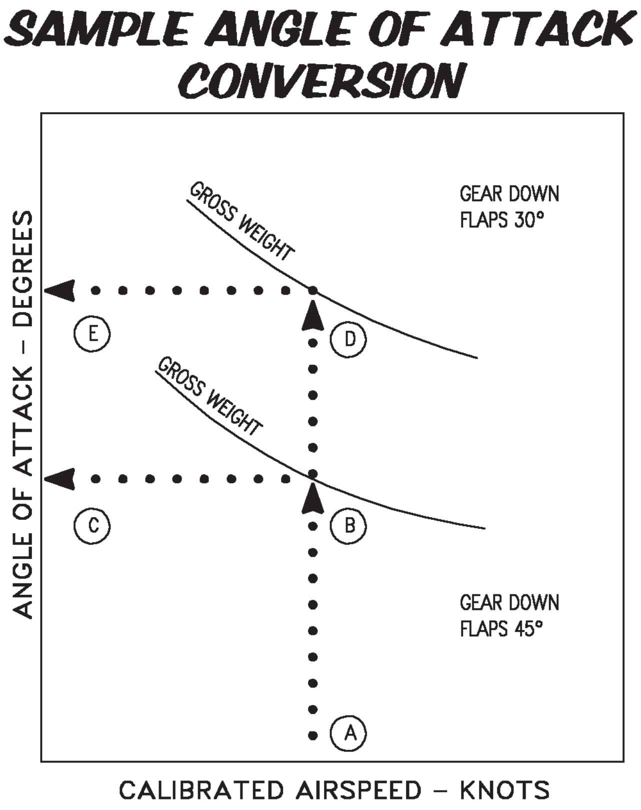
USE

Enter the applicable plot at the airspeed scale and project vertically up to intersect the appropriate aircraft gross weight curve. From this intersection, project horizontally left to read the corresponding angle of attack for the specified flight condition/ configuration.

Sample Problem

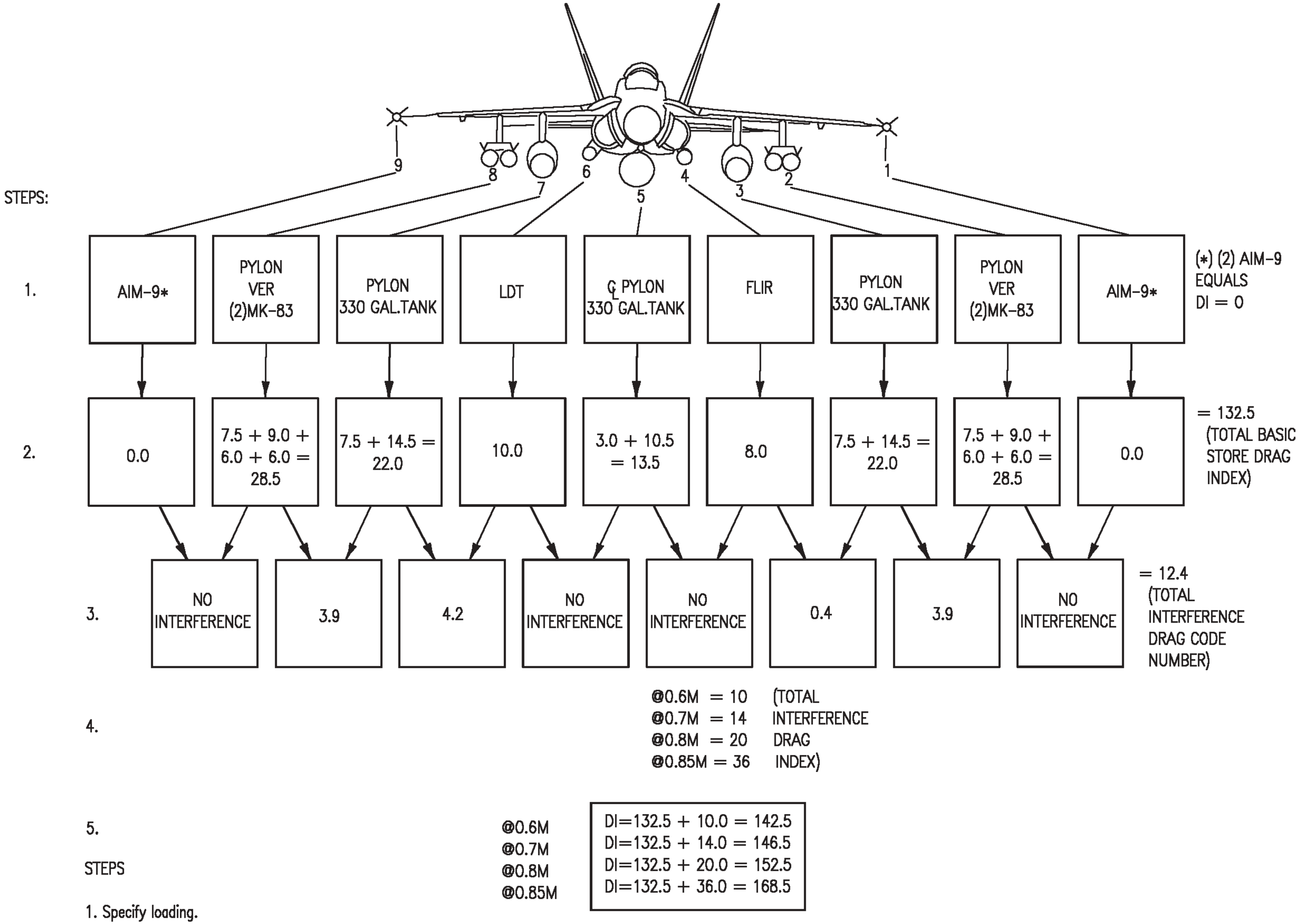
Configuration: Gear Down, Flaps 30°

A. Calibrated airspeed	160 Kt.
B. Gross weight	35,000 Lb.
C. Corresponding angle of attack	6.5°



1BAC–NFM–20–(14–1)11–CATI

SAMPLE DRAG COMPUTATION



STEPS

1. Specify loading.
2. Record basic store drag index for each loading. (Figure 11-2)
3. Obtain interference code numbers for stations with interference. (Figure 11-3)
4. Obtain interference drag index. (Figure 11-4 dash angle of attack)
5. Obtain total drag index. (Basic store drag index plus Interference drag index.)

18AC-NFM-20-(156-1)11-CATI

Figure 11-1. Sample Drag Computation

SUMMARY OF STORE DRAG INDEX NUMBERS

STORE	VERSION	WEIGHT PER STORE LB	CARRIAGE/DRAG
INTERNAL CANNON			
M61 Internal Cannon	M61A1 (to BuNo 164724) M61A2 light cannon (from BuNo 164725)	530 475	0
MISSILES			
AIM-7 Sparrow III	AIM-7M: monopulse seeker AIM-7M (H-build): improved GCS AIM-7P: improved low altitude capability ATM-7M: live trainer--telemetry ‘warhead’ ATM-7P: live trainer--telemetry ‘warhead’ CATM-7F-3: captive trainer	509 510 509 509 509 510	fuselage: 4.0 LAU-115: 6.0
AIM-9 Sidewinder	AIM-9L-1: all-aspect AIM-9M-1, -3, -4, -6, -8: improved IRCCM	196 196	2 on wingtips: 0.0 1 on wingtips: -2.3 dash, 7.5 cruise 0 on wingtips: -4.5 dash, 15.0 cruise 2 under wing on LAU-7 or LAU-127: 6.0 each (Wingtip drag also applies to TACTS pods)
	NATM-9L/M-1: live trainer--smoke/flash NATM-9L/M-2: live trainer--telemetry	200 196	
	CATM-9L/M-2,-4,-6,-8: captive trainer CATM-9L/M-2,-4, -6, -8, without fins/wings	195 163	
AIM-120 AMRAAM	AIM-120A, Adv. Med. Rng. Air-to-Air Msl. AIM-120B JAIM-120A or B Air Vehicle, Inst’d (AAVI)	347 347 330	fuselage: 4.0, LAU-127: 5.0
AGM-65 Maverick	AGM-65E: Laser Guided A/A37A-T9: TGM-65E: captive laser trainer AGM-65F: imaging infrared guided CATM-65F: captive IIR trainer	642 642 669 669	LAU-117: 10.0
AGM-84 Harpoon	AGM-84C-1: Block 1B AGM-84D-1: Block 1C	1,169[1] 1,221[2]	pylon: 10.5
	ATM-84C-1: exercise--telemetry ‘warhead’ ATM-84D-1: exercise--telemetry ‘warhead’	1,164[1] 1,213[2]	
	ATM-84C-1A: exercise--inert warhead ATM-84D-1A: exercise--inert warhead	1,169[1] 1,221[2]	
	ATM-84A-1C: inert captive trainer CATM-84D-1: inert captive trainer	1,151 1,151	
AGM-84E SLAM	AGM-84E-1C Standoff Land Attack Missile ATM-84E-1C: exercise--telemetry ‘warhead’ CATM-84E-1C: captive trainers	1,366 1,360 1,360	pylon: 11.5
AGM-88 HARM	AGM-88A: Block I & II seekers AGM-88B: Block II & III seekers AGM-88C: Block IV seekers[3] CATM-88A/B/C: captive trainers	800 800 800 800	LAU-118: 9.4
AGM-154 JSOW	AGM-154A: 145 X BLU-97A/B CEM CATM-154A: Captive Flight Vehicle (CFV)	1,043 1,055	pylon: 8.2
FUEL TANKS			
FPU-6/A External Fuel Tank	315-gal elliptical, P/N suffix 1019 or 1021	2,448 JP5 308 empty	CL: 10.0
FPU-8/A External Fuel Tank	330-gal circular, P/N suffix 1005 (For empty ferry on stations 2/8)	2,530 JP5 290 empty	CL: 10.5 wing: 14.5
BOMBS			
BLU-110A/B 1,000-lb TP Bomb	Mk 83 CFA, M904 or blunt nose Mk 83 CFA, TDD or ogive nose	995[4] 989[4]	pylon: 5.0 (C)VER: 6.0
	MAU-91 Retard	1,056	pylon: 11.0
	BSU-85 Retard, pilot option LD/HD	1,031[4]	pylon: 6.0 (C)VER: 7.0
BLU-111A/B 500-lb TP Bomb	MAU-93 CFA, M904 or blunt nose MAU-93 CFA, TDD or ogive nose	515[4] 509[4]	pylon: 3.0 (C)VER: 4.0
	Mk 15 Mod 6A Snakeye, LD/HD BSU-86 Retard, pilot option LD/HD	560[4] 560[4]	pylon: 5.0 (C)VER: 6.0
	BSU-33 CFA, M904 or blunt nose BSU-33 CFA, TDD or ogive nose	516[4] 510[4]	pylon: 3.0 (C)VER: 4.0
CBU-78 TP Gator	CBU-78/B & CBU-78B/B: Mk 339 CBU-78A/B: FMU-140	491 494	pylon: 7.5 CVER: 9.0
CBU-99 TP Rockeye II	CBU-99/B: Mk 339 CBU-99A/B: FMU-140	506 509	pylon: 7.5 CVER: 9.0
CBU-100 NTP Rockeye II	CBU-100/B: Mk 339 CBU-100A/B: FMU-140	490 493	pylon: 7.5 CVER: 9.0

Figure 11-2. Summary of Store Drag Index Numbers
(Sheet 1 of 5)

SUMMARY OF STORE DRAG INDEX NUMBERS (Continued)

STORE	VERSION	WEIGHT PER STORE LB	CARRIAGE/DRAG
GBU-10 (Mk 84) LGB	NTP GBU-10D/B & E/B TP GBU-10D/B & E/B	2,114[5] 2,153[5]	pylon: 15.0
GBU-12 (Mk 82) LGB	NTP GBU-12C/B & D/B TP GBU-12C/B & D/B	610[5] 619[5]	pylon: 5.5
GBU-16 (Mk 83) LGB	NTP GBU-16A/B & B/B TP GBU-16A/B & B/B	1,112[5] 1,131[5]	pylon: 9.5
GBU-24 (BLU-109) LLLGB	Low Level Laser Guided Bomb TP GBU-24B/B	2,396	pylon: 16.0
Mk 20 Rockeye II	Mk 20 Mod 11: Mk 339 fuze TP Mk 20 Mod 9: FMU-140 fuze, TP Mk 20 Mod 12: Mk 339 fuze, NTP	506 509 490	pylon: 7.5 CVER: 9.0
Mk 82 500-lb Bomb (Mod 1: NTP Mod 2: TP)	MAU-93 CFA, NTP, M904 or blunt nose MAU-93 CFA, NTP, TDD or ogive nose MAU-93 CFA, TP, M904 or blunt nose MAU-93 CFA, TP, TDD or ogive nose	513[4] 507[4] 522[4] 516[4]	pylon: 3.0 (C)VER: 4.0
	Mk 15 Mod 6 Snakeye, NTP, LD/HD Mk 15 Mod 6A Snakeye, TP, LD/HD BSU-86 retard NTP, pilot option LD/HD BSU-86 retard, TP, pilot option LD/HD	558[4] 567[4] 558[4] 567[4]	pylon: 5.0 (C)VER: 6.0
	BSU-33 CFA, NTP, M904 or blunt nose BSU-33 CFA, NTP, TDD or ogive nose BSU-33 CFA, TP, M904 or blunt nose BSU-33 CFA, TP TDD or ogive nose	514[4] 508[4] 523[4] 517[4]	pylon: 3.0 (C)VER: 4.0
Mk 83 1,000-lb Bomb (Mod 4: NTP Mod 5: TP)	Mk 83 CFA, NTP, M904 or blunt nose Mk 83 CFA, NTP, TDD or ogive nose Mk 83 CFA, TP, M904 or blunt nose Mk 83 CFA, TP, TDD or ogive nose	986[4] 980[4] 1,005[4] 999[4]	pylon: 5.0 (C)VER: 6.0
	MAU-91 retard, NTP, HD only MAU-91 retard, TP, HD only	1,043 1,062	pylon: 11.0
	BSU-85 retard, NTP, pilot option LD/HD BSU-85 retard, TP, pilot option LD/HD	1,022[4] 1,041[4]	pylon: 6.0 (C)VER: 7.0
Mk 84 2,000-lb Bomb	Mk 84 Mods 4/7, NTP, CFA Mk 84 Mods 3/5/6, TP, CFA	1,992[4] 2,031[4]	pylon: 7.0
PRACTICE STORES			
BDU-33 Practice Bomb	BDU-33D/B: LD practice bomb carried on (I) MERs	25	fwd: 1.1 aft: 0.6
BDU-45/B Inert Mk 82 w/side-mounted spotting charges	MAU-93 CFA, NTP, M904 or blunt nose MAU-93 CFA, NTP, TDD or ogive nose MAU-93 CFA, TP, M904 or blunt nose MAU-93 CFA, TP, TDD or ogive nose	502[4] 496[4] 511[4] 505[4]	pylon: 3.0 (C)VER: 4.0
	Mk 15 Mod 6 Snakeye, NTP, LD/HD Mk 15 Mod 6A Snakeye, TP, LD/HD BSU-86 Retard NTP, pilot option LD/HD BSU-86 Retard, TP, pilot option LD/HD	547[4] 556[4] 547[4] 556[4]	pylon: 5.0 (C)VER: 6.0
	BSU-33 CFA, NTP, M904 or blunt nose BSU-33 CFA, NTP, TDD or ogive nose BSU-33 CFA, TP, M904 or blunt nose BSU-33 CFA, TP, TDD or ogive nose	503[4] 497[4] 512[4] 506[4]	pylon: 3.0 (C)VER: 4.0
BDU-48 Practice Bomb	BDU-48/B: HD practice bomb carried on (I)MERs	10	fwd: 1.3 aft: 0.7
Mk 76 Practice Bomb	Mk 76 Mod 5: LD practice bomb carried on (I)MERs	25	fwd: 1.1 aft: 0.6
Mk 106 Practice Bomb	Mk 106 Mod 5: HD practice bomb carried on (I)MERs	5	fwd: 1.3 aft: 0.7
LGTR	Laser Guided Training Round Carried on bottom (I)MER stations.	89	(I)MER: 3
FIRE BOMBS			
Mk 77 Fire Bomb	Mod 4: 71 gal. of gelled AVGAS Mod 5: 43 lb imbiber beads + 63 gal of jet fuel	520 520	pylon: 8.5 CVER: 10.5

Figure 11-2. Summary of Store Drag Index Numbers
(Sheet 2)

SUMMARY OF STORE DRAG INDEX NUMBERS (Continued)

STORE	VERSION	WEIGHT PER STORE LB	CARRIAGE/DRAG
EO GUIDED WEAPONS			
AGM-62A Walleye I 1,000-lb EO-Guided Bomb	Mk 21 ER/DL, Phase I	1,224	pylon: 14.0
	Mk 29 ER/DL, Phase II	1,224	
	Mk 34 ER/DL, Phase II Haze Penetrator	1,224	
Walleye II 2,000-lb EOGB	Mk 23 ER/DL, Phase I	2,415	pylon: 16.0
	Mk 30 ER/DL, Phase II	2,415	
	Mk 37 ER/DL, Phase II Haze Penetrator	2,415	
Walleye PGW (Practice Guided Weapon) (without wings)	Mk 27 captive DL, Phase I	1,130	pylon: 8.0
	Mk 38 captive DL, Phase I Haze Penetrator	1,130	
	Mk 39 captive DL, Phase II Haze Penetrator	1,130	
ROCKET LAUNCHERS			
LAU-10 4 x 5.0-inch Zuni Rocket Pod	LAU-10C/A: NTP LAU-10D/A: TP Mk 71 Mod 0 or Mod 1 motors	107[6] 136[6]	(C)VER: w/fairings: 7.0 w/o fairings: 25.0
LAU-61 19 x 2.75-inch Rocket Pod	LAU-61C/A, TP, Mk 66 motors only (nose fairing adds 5.7 pounds)	160[7]	(C)VER: w/fairing: 8.0 w/o fairing: 31.5
LAU-68 7 x 2.75-inch Rocket Pod	LAU-68D/A, TP, Mk 66 motors only (nose fairing adds 2.0 pounds)	78[7]	(C)VER: w/fairing: 3.0 w/o fairing: 12.0
MINES			
Mk 36 Destructor (Mods 7/15)	OA 48/48K: Mk 15 Mod 6 Snakeye, NTP	552[8]	pylon: 5.0 (C)VER: 6.0
	OA 48: Mk 15 Mod 6A, Snakeye, TP	561[8]	
	OA 51: Mk 16 paratail, NTP	536[8]	
	OA 51: Mk 16 paratail, TP	545[8]	
	OA 54: BSU-86 retard, NTP	552[8]	
	OA 54: BSU-86 retard, TP	561[8]	
Mk 40 Destructor (Mods 7/15)	OA 48/48K: MAU-91 retard, NTP	1,056[8]	pylon: 11.0
	OA 48: MAU-91 retard, TP	1,075[8]	
	OA 51/51K: Mk 12 paratail, NTP	1,003[8]	pylon: 9.0 CVER: 10.5
	OA 51: Mk 12 paratail, TP	1,022[8]	
Mk 52 NTP Bottom Mine	OA 05K: Mod 0: with fairing	1,063	pylon: 16.0
Mk 55 NTP Bottom Mine	OA 04K, Mod 0: with fairing	2,059	pylon: 25.0
Mk 56 NTP Moored Mine	OA 06/06K/10/12, Mod 0: with fairing	2,210	pylon: 25.0
Mk 60 CAPTOR NTP Moored Mine	Mods 0/1, OA 01/01K (enCAPsulated Mk 46 TORpedo)	2,354	pylon: 36.0
Mk 62 Quickstrike Mine (Mod 0)	OA 03/03K: Mk 15 Mod 6 Snakeye, NTP	552[8]	pylon: 5.0 (C)VER: 6.0
	OA 03: Mk 15 Mod 6A Snakeye, TP	561[8]	
	OA 06/06K: Mk 16 paratail, NTP	536[8]	
	OA 06: Mk 16 paratail, TP	545[8]	
	OA 09/09K: BSU-86 retard, NTP	552[8]	
	OA 09: BSU-86 retard, TP	561[8]	
Mk 63 Quickstrike Mine (Mod 0)	OA 03/03K: MAU-91 retard, NTP	1,056[8]	pylon: 11.0
	OA 03: MAU-91 retard, TP	1,075[8]	
	OA 06/06K: Mk 12 paratail, NTP	1,003[8]	pylon: 9.0 CVER: 10.5
	OA 06: Mk 12 paratail, TP	1,022[8]	
Mk 65 TP Quickstrike Mine	Mod 0/1, OA 01/02, with fairing	2,309	pylon: 12.0
	Mods 0/1, OA 01K, with fairing	2,446	
MARINE LOCATION MARKER			
Mk 58 MLM	Marine Location Marker: carried on bottom and outboard (I)MER stations	13	fwd: 3.0 aft: 1.5
FLARES/MARKERS (EXTERNAL CARRIAGE)			
LUU-2 Paraflare	LUU-2A/B 1.6 Mcp for 5 minutes, **No CV ops.**	30	fwd: 3.0
	LUU-2B/B 2.0 Mcp for 4 minutes, **CV ops OK.**	30	aft: 1.5

Figure 11-2. Summary of Store Drag Index Numbers
(Sheet 3)

SUMMARY OF STORE DRAG INDEX NUMBERS (Continued)

STORE	VERSION	WEIGHT PER STORE LB	CARRIAGE/DRAG
PODS			
AAR-50 Nav FLIR Pod	AN/AAR-50 Thermal Imaging Navigation Set (TINS)	214	station 6: 9.0
AAS-38 Tgt FLIR Pod	AN/AAS-38 FLIR AN/AAS-38A w/Lsr Tgt Desig/Rngfd (LTD/R) AN/AAS-38B w/Laser Spot Tracker (LST)	353 370 372	station 4: 8.0
ADM-141 TALD	ADM-141A, active/passive RF aug. ADM-141B: chaff dispensing	400 382	ITER: 7.0
ALQ-167 ECM Pod	ALQ-167(V)-10/14/15/21/25/50/52/**71** ALQ-167(V)-11/20/**70** (70 & 71 are TCPs) ALQ-167(V)-22 ALQ-167(V)-**30**/31/32/40 (30 is CV trainer) ALQ-167(V)-33 ALQ-167(V)-61	310/**279**[9] 322/**286**[9] 326 **238**[9]/274 272 306	pylon: 9.0
ASQ-173 LDT/Cam Pod	AN/ASQ-173 Laser Detector (formerly spot) Tracker/Strike Camera pod	165	Station 6: 10.0
ATARS Data Link Pod	ATARS production centerline data link pod	552	8.1
AWW-9B Data Link Pod	Phase II AWW-9B for Walleyes & SLAM; Walleye interface only	645	pylon: 2.9
AWW-13 Adv. Data Link Pod	Phase II AWW-13 for Walleyes & SLAM; both Walleye and MIL-STD-1760 interfaces	707	pylon: 2.9
CNU-188 Baggage Pod	CNU-188/A: Converted AERO 1D fuel tank; bobtail (no fins) configuration only	195 empty 545 full	wing: 12.8
TACTS Pod (Tactical Aircrew Combat Training System)	AN/ASQ T-16: Acft Inst Subsys, Internal[10, 11] AN/ASQ T-17: P4A[11] AN/ASQ T-20: P4AX AN/ASQ T-25: P4AM[12] AN/ASQ T-27: P4B[12] AN/ASQ T-27(V)-1: P4BX[12] AN/ASQ T-29: P4AW[11, 12] AN/ASQ T-31(V): AISI(K)[10]	32 122/188[13] 124/190[13] 123/189[13] 127/193[13] 127/193[13] 128/178[14] 31	LAU-115 and LAU-7 or LAU-127: 5.0 (each) (for wingtip, see AIM-9)
TOW BANNER			
TDU-32	TDU-32/B Tow Banner (w/ cable)	277	tailhook: 200
PYLONS, RACKS, LAUNCHERS			
A/A37B-6E MER-7	non-ZRF Multiple Ejector Rack for practice bombs, flares, and MLMs	200	pylon: 15.0
BRU-32/A	Non-ZRF SUU-62/63 ejector rack	76	n/a
BRU-32A/A	ZRF SUU-62/63 ejector rack	76	n/a
BRU-33/A VER	Non-ZRF Vertical Ejector Rack	175	pylon: 9.0
BRU-33A/A CVER	ZRF Canted Vertical Ejector Rack	200	pylon: 12.0
BRU-41/A IMER	ZRF Improved Multiple Ejector Rack	240	pylon: 15.0
BRU-42/A ITER	ZRF Improved Triple Ejector Rack	124	pylon: 12.5
LAU-7 Launch Rail for AIM-9 or TACTS Pod	LAU-7/A through 163782 (Lot XI) LAU-7B/A from 163985 (Lot XII) * See AIM-9 for more drag information	90 90 (2 = 180)	wingtip: * LAU-115: 2.0 (2 = 4.0)
LAU-115/A Launcher Adapter	Wing pylon adapter for two LAU-7s (w/AIM-9s)	52	pylon: 3.0
LAU-115A/A Launcher Adapter	Wing pylon adapter for two LAU-7s (w/AIM-9s), or LAU-127s (w/AIM-9s/-120s)	59	pylon: 3.0
LAU-115C/A Launcher Adapter	LAU-115A/A with jettison adapter for AIM-7 or two LAU-127s (W/AIM-9s/-120s)	97	pylon: 4.0
LAU-116 Sta 4/6 AIM Ejector	LAU-116/A for AIM-7 LAU-116A/A for AIM-7 or AIM-120	65 65	0
LAU-117 AGM-65 Launcher	LAU-117(V)-2/A wing pylon adapter for one AGM-65 Maverick	135	pylon: 3.0
LAU-118 AGM-88 Launcher	LAU-118(V)-1/A wing pylon adapter for one AGM-88 HARM	100	pylon: 3.0
LAU-127A/A AIM Launcher	Pairs used with LAU-115 for AIM-9, AIM-120, or TACTS pod carriage	95 (2 = 191)	LAU-115: 2.4 (2 = 4.8)

Figure 11-2. Summary of Store Drag Index Numbers
(Sheet 4)

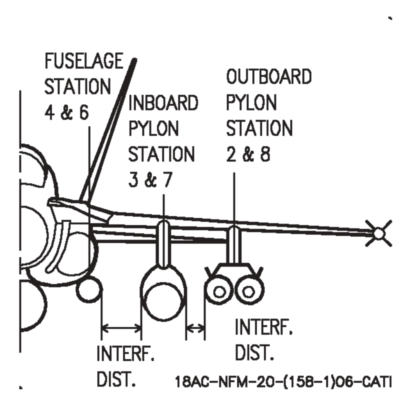
SUMMARY OF STORE DRAG INDEX NUMBERS (Continued)

STORE	VERSION	WEIGHT PER STORE LB	CARRIAGE/DRAG
SUU-62 Centerline pylon (w/BRU-32)	SUU-62/A through 163782 (Lot XI) SUU-62/A from 163985 (Lot XII)	130 139	3.0
SUU-63 Wing pylon (w/BRU-32)	SUU-63/A F/A-18A/Bs SUU-63A/A F/A-18C/Ds to 163782 (Lot XI) SUU-63A/A from 163985 (Lot XII)	273 310	7.5
Empty Station	No SUU-62 or -63 pylon mounted	0	0
Blank-Off Panel	Used when no stores are carried on stations 4/6.	12	0

[1] Missiles fueled with JP10; those fueled with JP5 weigh 20 pounds less.
[2] Gray missiles; white missiles weigh 52 pounds less.
[3] F/A-18C/D
[4] Weights include nose plug (blunt unless specified), warhead, fin, and 4-lb. tail fuze.
[5] Weights reflect Mk 80 series warheads including a MXU-735 nose plug and a 4-lb. tail fuze.
[6] Empty pods without fairings.
[7] Empty pods with tail fairings.
[8] Weights reflect Mk 80 series warheads.
[9] Boldface weight is for carrier qualified training and Tactical Contingency Pods (TCP)
[10] Mounted in gun bay (no drag). Includes weight of AS-4319 antenna.
[11] Carrier qualified.
[12] USAF pods with MIL-STD-1760 data bus interface.
[13] Weights without and with three external ballast weights (weights required for wingtip carriage).
[14] Weights without and with only fore and aft external ballast weights (weights required for wingtip carriage).

Figure 11-2. Summary of Store Drag Index Numbers
(Sheet 5)

INTERFERENCE CODE NUMBERS



INBOARD PYLONS OUTBOARD PYLONS	FPU-8, 330 gal fuel tank	AIM-7 LAU-115C	AIM-120 on LAU-115C & -127	AGM-65 Maverick on LAU-117	AGM-84D Harpoon	AGM-84E SLAM ER	AGM-88 HARM on LAU-118	AGM-154 JSOW	AN/AWW-13 Data Link Pod	CBU-78/-99/-100 & Mk-20 CBU	CNU-188 Baggage Pod	GBU-12 (Mk-82) LGB	GBU-16 (Mk-83 LGB)	GBU-31(v)2 (Mk-84 JDAM)	GBU-31(v)4 (BLU-109 JDAM)	Mk-77 Fire Bomb	Mk-82, BDU-45 or BLU-111	Mk-83 or BLU-110	Mk-84 PYLON	PDU-5	BRU-33/A VER or BRU-33A/A CVER	CBU-78/99/100 & Mk-20 on CVER	Mk-77 Fire Bombs on CVER	Mk-82, BDU-45 or BLU-111 on CVER
AIM-7 LAU-115C/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AIM-9 on LAU-115C & -127	3.8	0.0	5.4	0.0	4.2	4.2	0.0	2.8	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	10.6	5.9
AIM-120 on LAU-115C & -127	4.1	0.0	5.7	0.0	4.5	4.5	0.0	3.1	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.2	10.9	6.2
AGM-65 Maverick on LAU-117	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AGM-84D Harpoon	3.0	0.0	4.5	0.0	3.4	3.4	0.0	2.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	9.8	5.1
AGM-84 SLAM	3.0	0.0	4.5	0.0	3.4	3.4	0.0	2.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	9.8	5.1
AGM-84 SLAM ER	3.0	0.0	4.5	0.0	3,4	3.4	0.0	2.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	9.8	5.1
AGM-88 HARM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AGM-154 JSOW	1.5	0.0	3.1	0.0	2.0	2.0	0.0	0.5	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	8.3	3.6
AN/ALQ-167 ECM POD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AN/AWW-13 Data Link POD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0
CBU-78/-99/-100 & Mk-20 CBU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0
CNU-188 Baggage Pod	1.6	0.0	3.2	0.0	2.1	2.1	0.0	0.6	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	8.4	3.7
FPU-8, 330 gal fuel tank	2.5	0.0	4.1	0.0	3.0	3.0	0.0	1.5	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6	9.3	4.6
GBU-10 (Mk-84) LGB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	3.9	0.0
GBU-12 (Mk-82) LGB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GBU-16 (Mk-83) LGB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GBU-24 (BLU-109) LLLGB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	3.9	0.0
GBU-31(v)2 (Mk-84 JDAM)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	4.1	0.0
GBU-31(v)4 (BLU-109 JDAM)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0
Mk-77 fire bomb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	4.2	0.0
Mk-82, BDU-45 or BLU-111	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Figure 11-3. Interference Code Numbers (Sheet 1 of 6)

INTERFERENCE CODE NUMBERS
(Continued)

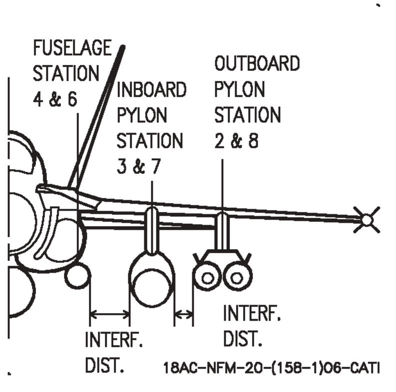
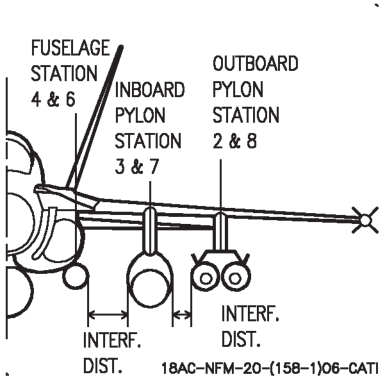
 INBOARD PYLONS OUTBOARD PYLONS	FPU-8, 330 gal fuel tank	AIM-7 LAU-115C	AIM-120 on LAU-115C & -127	AGM-65 Maverick on LAU-117	AGM-84D Harpoon	AGM-84E SLAM ER	AGM-88 HARM on LAU-118	AGM-154 JSOW	AN/AWW-13 Data Link Pod	CBU-78/-99/-100 & Mk-20 CBU	CNU-188 Baggage Pod	GBU-12 (Mk-82) LGB	GBU-16 (Mk-83 LGB)	GBU-31(v)2 (Mk-84 JDAM)	GBU-31(v)4 (BLU-109 JDAM)	Mk-77 Fire Bomb	Mk-82, BDU-45 or BLU-111	Mk-83 or BLU-110	Mk-84 PYLON	PDU-5	BRU-33/A VER or BRU-33A/A CVER	CBU-78/99/100 & Mk-20 CVER	Mk-77 Fire Bombs on CVER	Mk-82, BDU-45 or BLU-111 on CVER
Mk-83 or BLU-110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mk-84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	3.9	0.0
PDU-5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0
BRU-33/A VER or BRU-33A/A CVER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CBU-78/99/100 & Mk-20 on CVER	5.6	0.0	7.2	0.0	6.1	6.1	0.0	4.6	0.0	0.0	4.7	0.0	0.0	0.4	0.0	0.5	0.0	0.0	0.2	0.0	0.0	5.6	12.4	5.3
LAU-10 5″ pods on CVER	6.3	0.0	7.9	0.0	6.8	6.8	0.0	5.3	0.0	0.0	5.4	0.0	0.0	1.1	0.0	1.2	0.0	0.0	0.9	0.0	0.0	5.9	13.1	5.6
LAU-61 2.57″ pods on CVER	7.1	0.0	8.7	0.0	7.6	7.6	0.0	6.1	0.0	0.0	6.2	0.0	0.0	1.9	0.7	2.0	0.0	0.0	1.7	0.0	0.0	7.2	13.9	6.9
LAU-68 2.75″ pods on CVER	3.7	0.0	5.3	0.0	4.2	4.2	0.0	2.7	0.0	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	10.5	5.0
Mk-82, BDU-45 or BLU-111 on CVER	4.6	0.0	6.2	0.0	5.1	5.1	0.0	3.6	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	11.4	5.1
Mk-83 or BLU-110 on CVER	5.3	0.0	6.9	0.0	5.8	5.8	0.0	4.3	0.0	0.0	4.4	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	5.6	12.1	5.3
PDU-5 on CVER	5.6	0.0	7.2	0.0	6.1	6.1	0.0	4.6	0.0	0.0	4.7	0.0	0.0	0.4	0.0	0.5	0.0	0.0	0.2	0.0	0.0	5.6	12.4	5.3
LAU-10 5″ pods on VER	4.0	0.0	5.6	0.0	4.5	4.5	0.0	3.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	10.8	4.5
LAU-61 2.75″ pods on VER	4.7	0.0	6.3	0.0	5.2	5.2	0.0	3.7	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	11.5	5.2
LAU-68 2.75″ pods on VER	1.7	0.0	3.3	0.0	2.2	2.2	0.0	0.7	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	8.5	2.2
Mk-82, BDU-45 or BLU-111 on VER	2.2	0.0	3.8	0.0	2.7	2.7	0.0	1.2	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	9.0	2.7
Mk-83 or BLU-110 on VER	3.9	0.0	5.5	0.0	4.4	4.4	0.0	2.9	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	10.7	4.4
BRU-42 ITER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ADM-141 TADL on ITER	4.2	0.0	5.8	0.0	4.7	4.7	0.0	3.2	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	11.0	5.5
BRU-41 IMER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BDU-33 or Mk-76 on IMER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0
BDU-48 or Mk-106 IMER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0
BDU-57, -59 & -60 LGTR on IMER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0

Figure 11-3. Interference Code Numbers (Sheet 2)

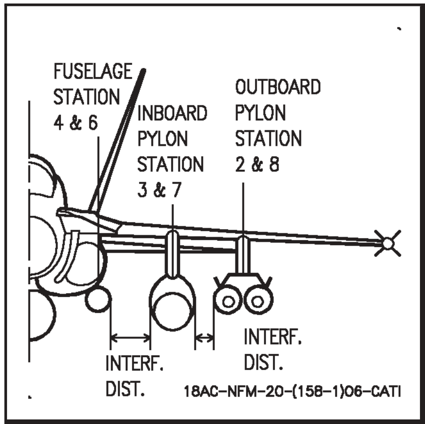
INTERFERENCE CODE NUMBERS
(Continued)



	INBOARD PYLONS																							
OUTBOARD PYLONS	FPU-8, 330 gal fuel tank	AIM-7 LAU-115C	AIM-120 on LAU-115C & -127	AGM-65 Maverick on LAU-117	AGM-84D Harpoon	AGM-84E SLAM ER	AGM-88 HARM on LAU-118	AGM-154 JSOW	AN/AWW-13 Data Link Pod	CBU-78/-99/-100 & Mk-20 CBU	CNU-188 Baggage Pod	GBU-12 (Mk-82) LGB	GBU-16 (Mk-83 LGB)	GBU-31(v)2 (Mk-84 JDAM)	GBU-31(v)4 (BLU-109 JDAM)	Mk-77 Fire Bomb	Mk-82, BDU-45 or BLU-111	Mk-83 or BLU-110	Mk-84 PYLON	PDU-5	BRU-33/A VER or BRU-33A/A CVER	CBU-78/99/100 & Mk-20 CVER	Mk-77 Fire Bombs on CVER	Mk-82, BDU-45 or BLU-111 on CVER
LUU-2 on IMER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.0
Mk-58	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0
Mk-52 1,000 lb bottom mine	2.0	0.0	3.5	0.0	2.4	2.4	0.0	1.1	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	8.8	4.2
Mk-55 2,000 lb bottom mine	4.4	0.0	5.9	0.0	4.8	4.8	0.0	3.4	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	11.2	6.5
Mk-55 2,000 lb moored mine	4.4	0.0	5.9	0.0	4.8	4.8	0.0	3.4	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	11.2	6.5
Mk-62 QS Mk-15 or BSU-86 fin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mk-62 QS Mk-16 fin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mk-63 QS MAU-91 fin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mk-63 QS Mk-12 fin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mk-65 QS 2,000 lb bottom mine	2.8	0.0	4.3	0.0	3.2	3.2	0.0	1.8	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	9.6	4.9
Mk-62 QS Mk-15 or BSU-86 fin on CVER	4.6	0.0	6.2	0.0	5.1	5.1	0.0	3.6	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	11.4	5.1
Mk-62 QS Mk-16 fin on CVER	4.6	0.0	6.2	0.0	5.1	5.1	0.0	3.6	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	11.4	5.1
Mk-63 QS Mk-12 fin on CVER	5.3	0.0	6.9	0.0	5.8	5.8	0.0	4.3	0.0	0.0	4.4	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	5.6	12.1	5.3
Mk-62 QS any fin on VER	2.2	0.0	3.8	0.0	2.7	2.7	0.0	1.2	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	9.0	2.7
BDU-48 practice mine on IMER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0
FUSELAGE STATIONS																								
AN/AAR-50 NAVFLIR (sta 6)	5.2	0.0	6.8	0.0	0.0	0.0	0.0	4.2	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	8.5	12.0	7.3
AN/AAS-38 tgt FLIR (sta 4)	0.4	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	7.2	2.5
AN/ASQ-173 LDT/Cam (sta 6)	4.2	0.0	5.8	0.0	0.0	0.0	0.0	3.2	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	11.0	6.3

Figure 11-3. Interference Code Numbers (Sheet 3)

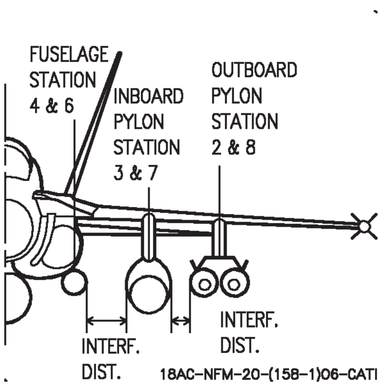
INTERFERENCE CODE NUMBERS
(Continued)



INBOARD PYLONS OUTBOARD PYLONS	Mk-83 or BLU-110 on CVER	LAU-10 5″ pods on VER	Mk-82, BDU-45 or BLU-111 on VER	Mk-83 or BLU-110 on VER	BRU-42 ITER	ADM-141 TADL on ITER	BRU-41 IMER	BDU-33 or Mk-76 on IMER	BDU-46 or Mk-106 on IMER	BDU-57, -59 & -60 LGTR on IMER	Mk-52 1,000 lb bottom mine	Mk-55 2,000 lb bottom mine	Mk-56 2,000 lb moored mine	Mk-62 QS Mk-15 or BSU-86 fins	Mk-62 QS Mk-16 fin	Mk-63 QS MAU-91 fin	Mk-63 QS Mk-12 fin	Mk-65 QS 2,000lb bottom mine	BRU-33/A VER or BRU-33A/A CVER	Mk-62 QS Mk-15/BSU-86 fin on CVER	Mk-62 QS Mk-16 fin on CVER	Mk-62 QS any fin on VER	BRU-41 IMER	BDU-48 as practice mine on IMER
AIM-7 LAU-115C/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AIM-9 on LAU-115C & -127	6.6	5.3	3.5	5.2	0.0	5.5	0.0	0.0	0.0	0.0	3.2	5.6	5.6	0.0	0.0	0.0	0.0	4.0	0.0	5.9	5.9	3.5	0.0	0.0
AIM-120 on LAU-115C & -127	6.9	5.6	3.8	5.5	0.0	5.8	0.0	0.0	0.0	0.0	3.5	5.9	5.9	0.0	0.0	0.0	0.0	4.3	0.0	6.2	6.2	3.8	0.0	0.0
AGM-65 Maverick on LAU-117	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AGM-84D Harpoon	5.8	4.5	2.7	4.4	0.0	4.7	0.0	0.0	0.0	0.0	2.4	4.8	4.8	0.0	0.0	0.0	0.0	3.2	0.0	5.1	5.1	2.7	0.0	0.0
AGM-84 SLAM	5.8	4.5	2.7	4.4	0.0	4.7	0.0	0.0	0.0	0.0	2.4	4.8	4.8	0.0	0.0	0.0	0.0	3.2	0.0	5.1	5.1	2.7	0.0	0.0
AGM-84 SLAM ER	5.8	4.5	2.7	4.4	0.0	4.7	0.0	0.0	0.0	0.0	2.4	4.8	4.8	0.0	0.0	0.0	0.0	3.2	0.0	5.1	5.1	2.7	0.0	0.0
AGM-88 HARM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AGM-154 JSOW	4.3	3.0	1.2	2.9	0.0	3.2	0.0	0.0	0.0	0.0	1.1	3.4	3.4	0.0	0.0	0.0	0.0	1.8	0.0	3.6	3.6	1.2	0.0	0.0
AN/ALQ-167 ECM POD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AN/AWW-13 Data Link POD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CBU-78/-99/-100 & Mk-20 CBU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNU-188 Baggage Pod	4.4	3.1	1.3	3.0	0.0	3.3	0.0	0.0	0.0	0.0	1.1	3.5	3.5	0.0	0.0	0.0	0.0	1.9	0.0	3.7	3.7	1.3	0.0	0.0
FPU-8, 330 gal fuel tank	5.3	4.0	2.2	3.9	0.0	4.2	0.0	0.0	0.0	0.0	2.0	4.4	4.4	0.0	0.0	0.0	0.0	2.8	0.0	4.6	4.6	2.2	0.0	0.0
GBU-10 (Mk-84) LGB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GBU-12 (Mk-82) LGB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GBU-16 (Mk-83) LGB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GBU-24 (BLU-109) LLLGB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GBU-31(v)2 (Mk-84 JDAM)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GBU-31(v)4 (BLU-109 JDAM)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mk-77 fire bomb	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mk-82, BDU-45 or BLU-111	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Figure 11-3. Interference Code Numbers (Sheet 4)

INTERFERENCE CODE NUMBERS
(Continued)



INBOARD PYLONS OUTBOARD PYLONS	Mk-83 or BLU-110 on CVER	LAU-10 5″ pods on VER	Mk-82, BDU-45 or BLU-111 on VER	Mk-83 or BLU-110 on VER	BRU-42 ITER	ADM-141 TADL on ITER	BRU-41 IMER	BDU-33 or Mk-76 on IMER	BDU-46 or Mk-106 on IMER	BDU-57, -59 & -60 LGTR on IMER	Mk-52 1,000 lb bottom mine	Mk-55 2,000 lb bottom mine	Mk-56 2,000 lb moored mine	Mk-62 QS Mk-15 or BSU-86 fins	Mk-62 QS Mk-16 fin	Mk-63 QS MAU-91 fin	Mk-63 QS Mk-12 fin	Mk-65 QS 2,000 lb bottom mine	BRU-33/A VER or BRU-33A/A CVER	Mk-62 QS Mk-15/BSU-86 fin on CVER	Mk-62 QS Mk-16 fin on CVER	Mk-62 QS any fin on VER	BRU-41 IMER	BDU-48 as practice mine on IMER
Mk-83 or BLU-110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mk-84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PDU-5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BRU-33/A VER or BRU-33A/A CVER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CBU-78/99/100 & Mk-20 on CVER	5.6	4.0	2.2	3.9	0.0	5.8	0.0	0.0	0.0	0.0	5.2	7.5	7.5	0.0	0.0	0.0	0.0	5.9	0.0	5.3	5.3	2.2	0.0	0.0
LAU-10 5″ pods on CVER	5.9	4.0	2.2	3.9	0.0	6.1	0.0	0.0	0.0	0.0	5.9	8.2	8.2	0.0	0.0	0.0	0.0	6.6	0.0	5.6	5.6	2.2	0.0	0.0
LAU-61 2.57″ pods on CVER	7.2	5.8	4.0	5.7	0.0	7.4	0.0	0.6	0.5	0.6	6.7	9.0	9.0	0.0	0.0	0.0	0.0	7.4	0.0	6.9	6.9	4.0	0.0	0.0
LAU-68 2.75″ pods on CVER	5.3	5.3	3.5	5.2	0.0	5.5	0.0	0.0	0.0	0.0	3.3	5.6	5.6	0.0	0.0	0.0	0.0	4.0	0.0	5.0	5.0	3.5	0.0	0.0
Mk-82, BDU-45 or BLU-111 on CVER	5.3	4.5	2.7	4.4	0.0	5.5	0.0	0.0	0.0	0.0	4.2	6.5	6.5	0.0	0.0	0.0	0.0	4.9	0.0	5.1	5.1	2.7	0.0	0.0
Mk-83 or BLU-110 on CVER	5.7	4.8	3.0	4.7	0.0	5.8	0.0	0.0	0.0	0.0	4.9	7.2	7.2	0.0	0.0	0.0	0.0	5.6	0.0	5.3	5.3	3.0	0.0	0.0
PDU-5 on CVER	5.6	4.0	2.2	3.9	0.0	5.8	0.0	0.0	0.0	0.0	5.2	7.5	7.5	0.0	0.0	0.0	0.0	5.9	0.0	5.3	5.3	2.2	0.0	0.0
LAU-10 5″ pods on VER	4.8	5.5	3.7	5.4	0.0	5.7	0.0	0.0	0.0	0.0	3.6	5.9	5.9	0.0	0.0	0.0	0.0	4.3	0.0	4.5	4.5	3.7	0.0	0.0
LAU-61 2.75″ pods on VER	5.5	6.2	4.4	6.1	0.0	6.4	0.0	0.0	0.0	0.0	4.3	6.6	6.6	0.0	0.0	0.0	0.0	5.0	0.0	5.2	5.2	4.4	0.0	0.0
LAU-68 2.75″ pods on VER	2.5	3.2	1.4	3.1	0.0	3.4	0.0	0.0	0.0	0.0	1.3	3.6	3.6	0.0	0.0	0.0	0.0	2.0	0.0	2.2	2.2	1.4	0.0	0.0
Mk-82, BDU-45 or BLU-111 on VER	3.0	3.7	1.9	3.6	0.0	3.9	0.0	0.0	0.0	0.0	1.8	4.1	4.1	0.0	0.0	0.0	0.0	2.5	0.0	2.7	2.7	1.9	0.0	0.0
Mk-83 or BLU-110 on VER	4.7	5.4	3.6	5.3	0.0	5.6	0.0	0.0	0.0	0.0	3.5	5.8	5.8	0.0	0.0	0.0	0.0	4.2	0.0	4.4	4.4	3.6	0.0	0.0
BRU-42 ITER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ADM-141 TADL on ITER	5.8	5.7	3.9	5.6	0.0	5.9	0.0	0.0	0.0	0.0	3.8	6.1	6.1	0.0	0.0	0.0	0.0	4.5	0.0	5.5	5.5	3.9	0.0	0.0
BRU-41 IMER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BDU-33 or Mk-76 on IMER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BDU-48 or Mk-106 IMER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BDU-57, -59 & -60 LGTR on IMER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Figure 11-3. Interference Code Numbers (Sheet 5)

INTERFERENCE CODE NUMBERS
(Continued)

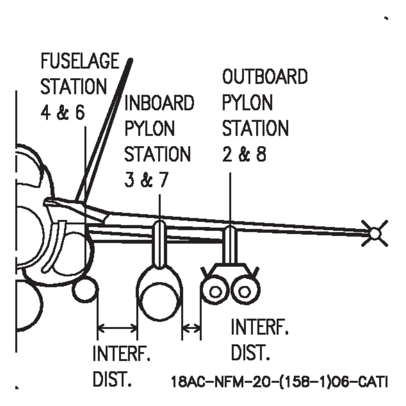
 **INBOARD PYLONS** **OUTBOARD PYLONS**	Mk-83 or BLU-110 on CVER	LAU-10 5" pods on VER	Mk-82, BDU-45 or BLU-111 on VER	Mk-83 or BLU-110 on VER	BRU-42 ITER	ADM-141 TADL on ITER	BRU-41 IMER	BDU-33 or Mk-76 on IMER	BDU-46 or Mk-106 on IMER	BDU-57, -59 & -60 LGTR on IMER	Mk-52 1,000 lb bottom mine	Mk-55 2,000 lb bottom mine	Mk-56 2,000 lb moored mine	Mk-62 QS Mk-15 or BSU-86 fins	Mk-62 QS Mk-16 fin	Mk-63 QS MAU-91 fin	Mk-63 QS Mk-12 fin	Mk-65 QS 2,000 lb bottom mine	BRU-33/A VER or BRU-33A/A CVER	Mk-62 QS Mk-15/BSU-86 fin on CVER	Mk-62 QS Mk-16 fin on CVER	Mk-62 QS any fin on VER	BRU-41 IMER	BDU-48 as practice mine on IMER
LUU-2 on IMER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mk-58 on IMER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mk-52 1,000 lb bottom mine	4.9	3.6	1.8	3.5	0.0	3.8	0.0	0.0	0.0	0.0	1.6	4.0	4.0	0.0	0.0	0.0	0.0	2.4	0.0	4.2	4.2	1.8	0.0	0.0
Mk-55 2,000 lb bottom mine	7.2	5.9	4.1	5.8	0.0	6.1	0.0	0.0	0.0	0.0	4.0	5.4	5.4	0.0	0.0	0.0	0.0	3.8	0.0	6.5	6.5	4.1	0.0	0.0
Mk-55 2,000 lb moored mine	7.2	5.9	4.1	5.8	0.0	6.1	0.0	0.0	0.0	0.0	4.0	5.4	5.4	0.0	0.0	0.0	0.0	3.8	0.0	6.5	6.5	4.1	0.0	0.0
Mk-62 QS Mk-15 or BSU-86 fin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mk-62 QS Mk-16 fin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mk-63 QS MAU-91 fin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mk-63 QS Mk-12 fin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mk-65 QS 2,000 lb bottom mine	5.6	4.3	2.5	4.2	0.0	4.5	0.0	0.0	0.0	0.0	2.4	3.8	3.8	0.0	0.0	0.0	0.0	1.3	0.0	4.9	4.9	2.5	0.0	0.0
Mk-62 QS Mk-15 or BSU-86 fin on CVER	5.3	4.5	2.7	4.4	0.0	5.5	0.0	0.0	0.0	0.0	4.2	6.5	6.5	0.0	0.0	0.0	0.0	4.9	0.0	5.1	5.1	2.7	0.0	0.0
Mk-62 QS Mk-16 fin on CVER	5.3	4.5	2.7	4.4	0.0	5.5	0.0	0.0	0.0	0.0	4.2	6.5	6.5	0.0	0.0	0.0	0.0	4.9	0.0	5.1	5.1	2.7	0.0	0.0
Mk-63 QS Mk-12 fin on CVER	5.7	4.8	3.0	4.7	0.0	5.8	0.0	0.0	0.0	0.0	4.9	7.2	7.2	0.0	0.0	0.0	0.0	5.6	0.0	5.3	5.3	3.0	0.0	0.0
Mk-62 QS any fin on VER	3.0	3.7	1.9	3.6	0.0	3.9	0.0	0.0	0.0	0.0	1.8	4.1	4.1	0.0	0.0	0.0	0.0	2.5	0.0	2.7	2.7	1.9	0.0	0.0
BDU-48 practice mine on IMER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FUSELAGE STATIONS																								
AN/AAR-50 NAVFLIR (sta 6)	8.9	6.7	4.9	6.5	0.0	6.9	0.0	0.0	0.0	0.0	0.2	2.5	2.5	0.0	0.0	0.0	0.0	1.2	0.0	7.3	7.3	4.9	0.0	0.0
AN/AAS-38 tgt FLIR (sta 4)	4.1	1.9	0.1	1.7	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.5	0.1	0.0	0.0
AN/ASQ-173 LDT/Cam (sta 6)	7.9	5.7	3.9	5.5	0.0	5.9	0.0	0.0	0.0	0.0	0.0	1.5	1.5	0.0	0.0	0.0	0.0	0.2	0.0	6.3	6.3	3.9	0.0	0.0

Figure 11-3. Interference Code Numbers (Sheet 6)

INTERFERENCE CODE NUMBER TO INTERFERENCE DRAG INDEX NUMBER CONVERSION

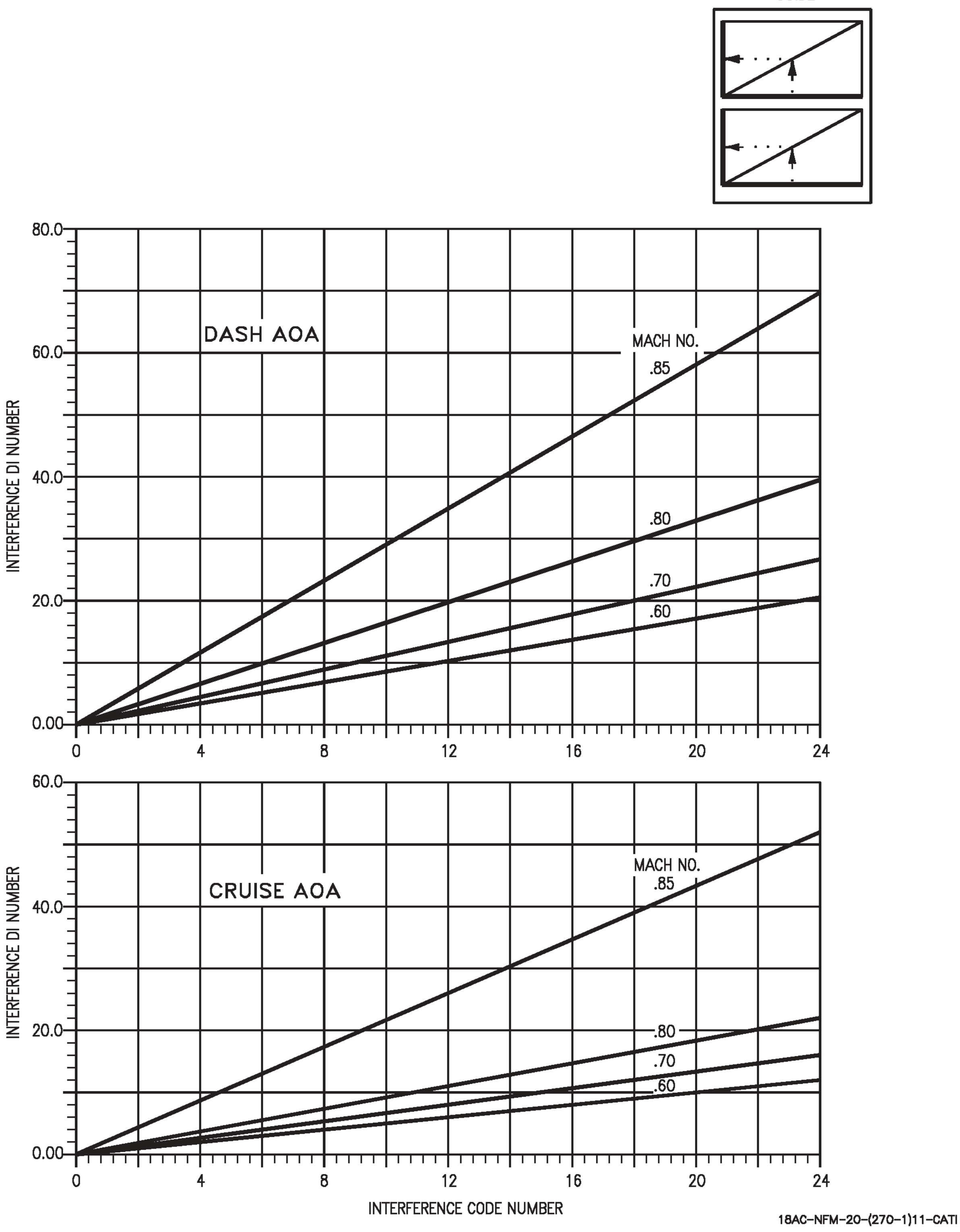


Figure 11-4. Interference Code Number To Interference Drag Index Number Conversion

STANDARD ATMOSPHERE

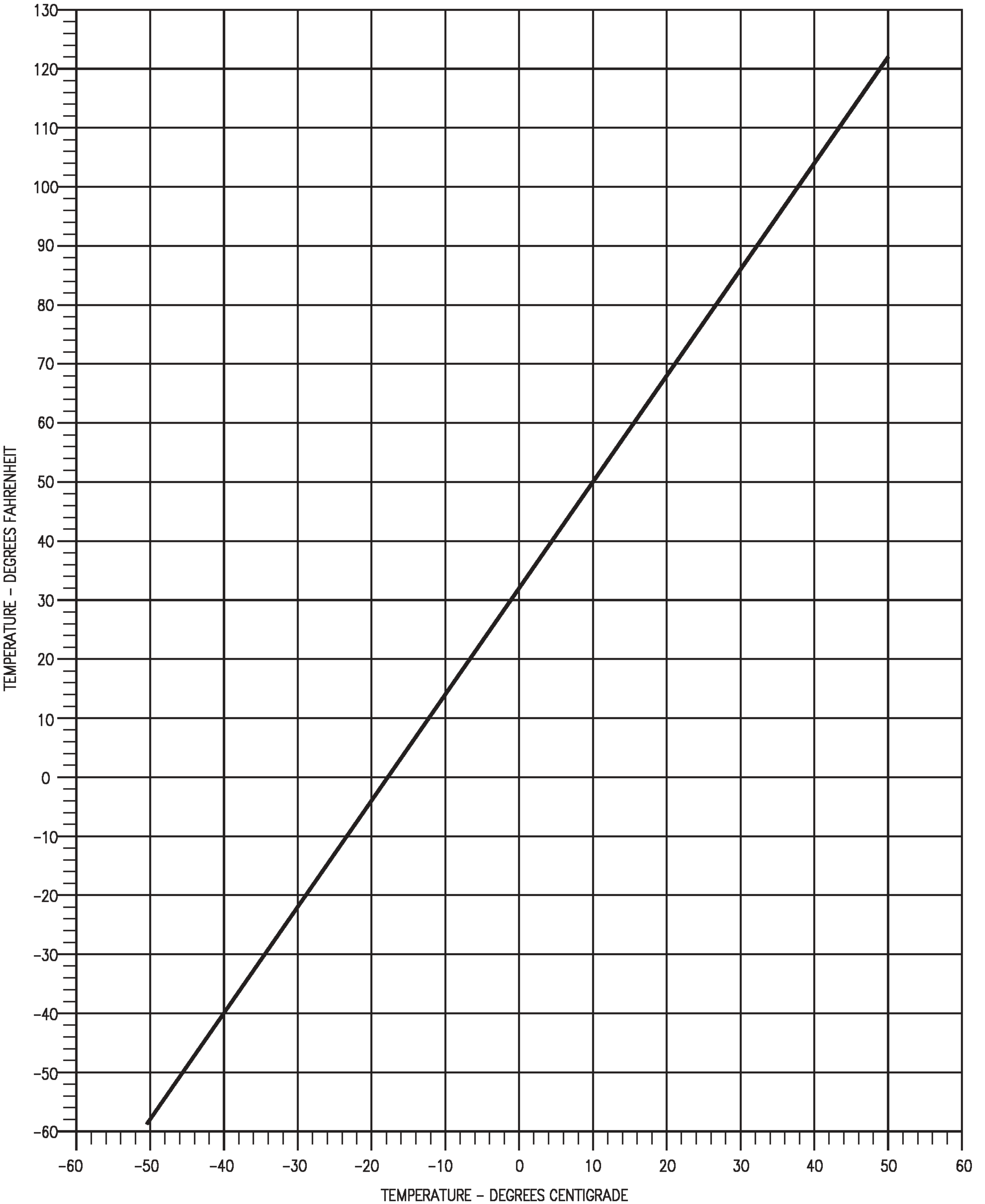
STANDARD SEA LEVEL AIR:
T=59°F (15°C)
P= 29.921 IN. HG

W=0.076475 LB/SQ FT=0.0023769 SLUGS/CU FT.
1 IN. HG = 70.732 LB/SQ FT=0.4912 LB/SQ IN.
a_0 =1116.5 FT/SEC=661.5 KNOTS

ALTITUDE FEET	DENSITY RATIO $\rho/\rho_0=\sigma$	$1/\sqrt{\delta}$	AIR TEMPERATURE DEG F	DEG C	SPEED OF SOUND a/a_0	PRESSURE IN HG	RATIO $p/p_0=\delta$
-2,000	1.0598	0.9714	66.132	18.962	1.0068	32.15	1.0745
-1,000	1.0298	0.9855	62.566	16.981	1.0034	31.02	1.0368
0	1.0000	1.0000	59.000	15.000	1.0000	29.92	1.0000
1,000	0.9711	1.0148	55.434	13.019	0.9966	28.86	0.9644
2,000	0.9428	1.0299	51.868	11.038	0.9931	27.82	0.9298
3,000	0.9151	1.0454	48.302	9.057	0.9896	26.82	0.8962
4,000	0.8881	1.0611	44.735	7.075	0.9862	25.84	0.8637
5,000	0.8617	1.0773	41.169	5.094	0.9827	24.90	0.8320
6,000	0.8359	1.0938	37.603	3.113	0.9792	23.98	0.8014
7,000	0.8106	1.1107	34.037	1.132	0.9756	23.09	0.7716
8,000	0.7860	1.1279	30.471	-0.849	0.9721	22.22	0.7428
9,000	0.7620	1.1456	26.905	-2.831	0.9686	21.39	0.7148
10,000	0.7385	1.1637	23.338	-4.812	0.9650	20.58	0.6877
11,000	0.7156	1.1822	19.772	-6.793	0.9614	19.79	0.6614
12,000	0.6932	1.2011	16.206	-8.774	0.9579	19.03	0.6360
13,000	0.6713	1.2205	12.604	-10.756	0.9543	18.29	0.6113
14,000	0.6500	1.2403	9.074	-12.737	0.9507	17.58	0.5875
15,000	0.6292	1.2606	5.508	-14.718	0.9470	16.87	0.5643
16,000	0.6090	1.2815	1.941	-16.699	0.9434	16.22	0.5420
17,000	0.5892	1.3028	-1.625	-18.681	0.9397	15.57	0.5203
18,000	0.5699	1.3246	-5.191	-20.662	0.9361	14.94	0.4994
19,000	0.5511	1.2470	-8.757	-22.643	0.9324	14.34	0.4791
20,000	0.5328	1.3700	-12.323	-24.624	0.9287	13.75	0.4593
21,000	0.5150	1.3935	-15.889	-26.605	0.9250	13.18	0.4406
22,000	0.4976	1.4176	-19.456	-28.587	0.9213	12.64	0.4223
23,000	0.4807	1.4424	-23.022	-30.568	0.9175	12.11	0.4046
24,000	0.4642	1.4678	-26.588	-32.549	0.9138	11.60	0.3876
25,000	0.4481	1.4938	-30.154	-34.530	0.9100	11.10	0.3711
26,000	0.4325	1.5206	-33.720	-36.511	0.9062	10.63	0.3552
27,000	0.4173	1.5480	-37.286	-38.492	0.9024	10.17	0.3398
28,000	0.4025	1.5762	-40.852	-40.473	0.8986	9.725	0.3250
29,000	0.3881	1.6052	-44.419	-42.455	0.8948	9.297	0.3107
30,000	0.3741	1.6349	-47.985	-44.436	0.8909	8.885	0.2970
31,000	0.3605	1.6645	-51.551	-46.417	0.8871	8.488	0.2837
32,000	0.3473	1.6968	-55.117	-48.398	0.8832	8.106	0.2709
33,000	0.3345	1.7291	-58.683	-50.379	0.8793	7.737	0.2586
34,000	0.3220	1.7623	-62.249	-52.361	0.8754	7.382	0.2467
35,000	0.3099	1.7964	-65.816	-54.342	0.8714	7.041	0.2353
36,000	0.2981	1.8315	-69.382	-56.323	0.8675	6.712	0.2243
37,000	0.2844	1.8753	-69.700	-56.500	0.8671	6.397	0.2138
38,000	0.2710	1.9209	-69.700	-56.500	0.8671	6.097	0.2038
39,000	0.2583	1.9677	-69.700	-56.500	0.8671	5.811	0.1942
40,000	0.2462	2.0155	-69.700	-56.500	0.8671	5.538	0.1851
41,000	0.2346	2.0645	-69.700	-56.500	0.8671	5.278	0.1764
42,000	0.2236	2.1148	-69.700	-56.500	0.8671	5.030	0.1681
43,000	0.2131	2.1662	-69.700	-56.500	0.8671	4.794	0.1602
44,000	0.2031	2.2189	-69.700	-56.500	0.8671	4.569	0.1527
45,000	0.1936	2.2728	-69.700	-56.500	0.8671	4.355	0.1455
46,000	0.1845	2.3281	-69.700	-56.500	0.8671	4.151	0.1387
47,000	0.1758	2.3848	-69.700	-56.500	0.8671	3.956	0.1322
48,000	0.1676	2.4428	-69.700	-56.500	0.8671	3.770	0.1260
49,000	0.1597	2.5022	-69.700	-56.500	0.8671	3.593	0.1201
50,000	0.1522	2.5630	-69.700	-56.500	0.8671	3.425	0.1145
51,000	0.1451	2.6254	-69.700	-56.500	0.8671	3.264	0.1091
52,000	0.1383	2.6892	-69.700	-56.500	0.8671	3.111	0.1040
53,000	0.1318	2.7546	-69.700	-56.500	0.8671	2.965	0.09909
54,000	0.1256	2.8216	-69.700	-56.500	0.8671	2.826	0.09444
55,000	0.1197	2.8903	-69.700	-56.500	0.8671	2.693	0.09001
56,000	0.1141	2.9606	-69.700	-56.500	0.8671	2.567	0.08578
57,000	0.1087	3.0326	-69.700	-56.500	0.8671	2.446	0.08176
58,000	0.1036	3.1063	-69.700	-56.500	0.8671	2.331	0.07792
59,000	0.09877	3.1819	-69.700	-56.500	0.8671	2.222	0.07426
60,000	0.09414	3.2593	-69.700	-56.500	0.8671	2.118	0.07078
61,000	0.08972	3.3386	-69.700	-56.500	0.8671	2.018	0.06746
62,000	0.08551	3.4198	-69.700	-56.500	0.8671	1.924	0.06429
63,000	0.08150	3.5029	-69.700	-56.500	0.8671	1.833	0.06127
64,000	0.07767	3.5881	-69.700	-56.500	0.8671	1.747	0.05840
65,000	0.07403	3.6754	-69.700	-56.500	0.8671	1.665	0.05566

Figure 11-5. Standard Atmosphere Table

TEMPERATURE CONVERSION

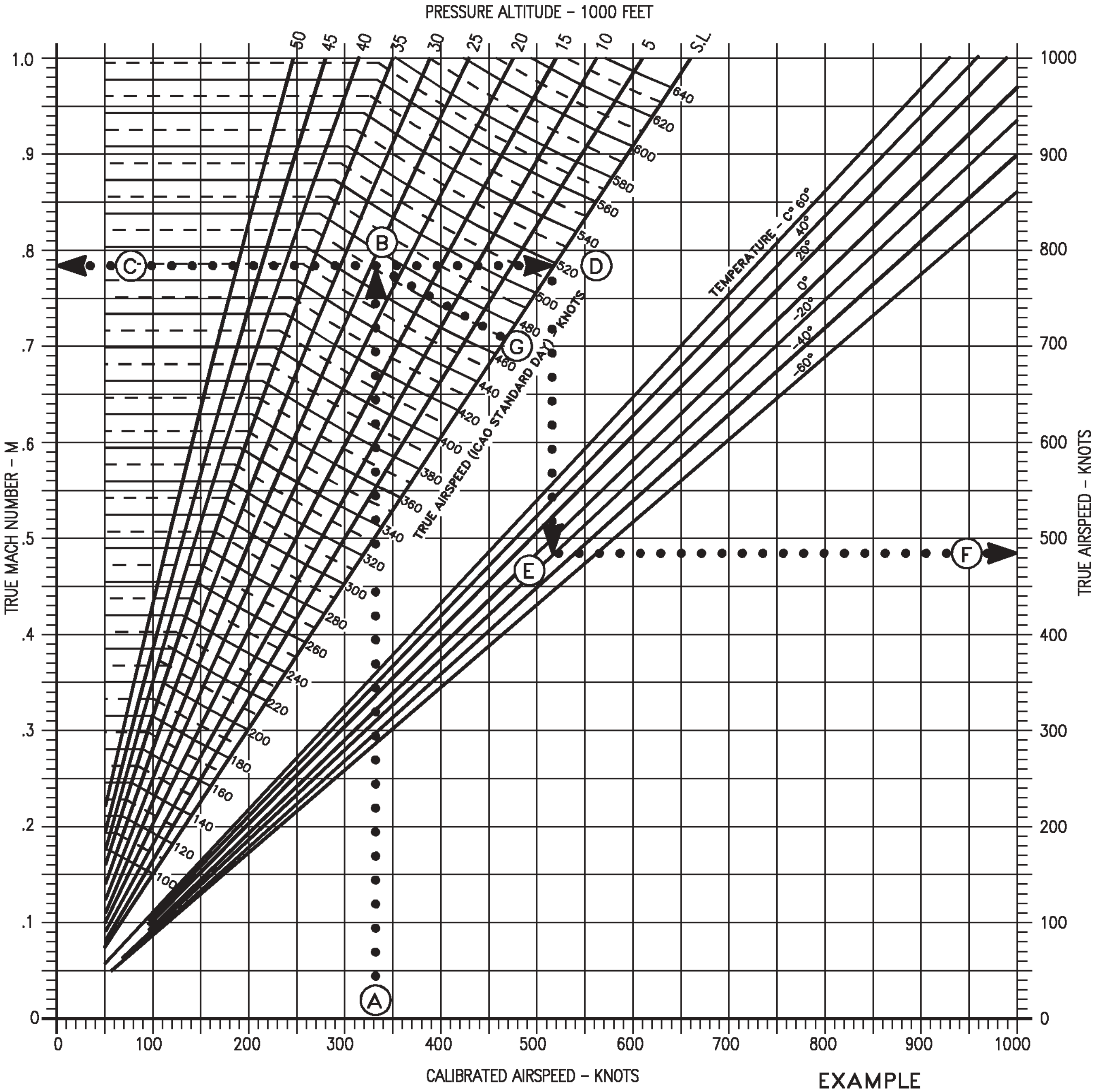


18AC-NFM-20-(31-1)11-CATI

Figure 11-6. Temperature Conversion

AIRSPEED CONVERSION

LOW MACH



EXAMPLE

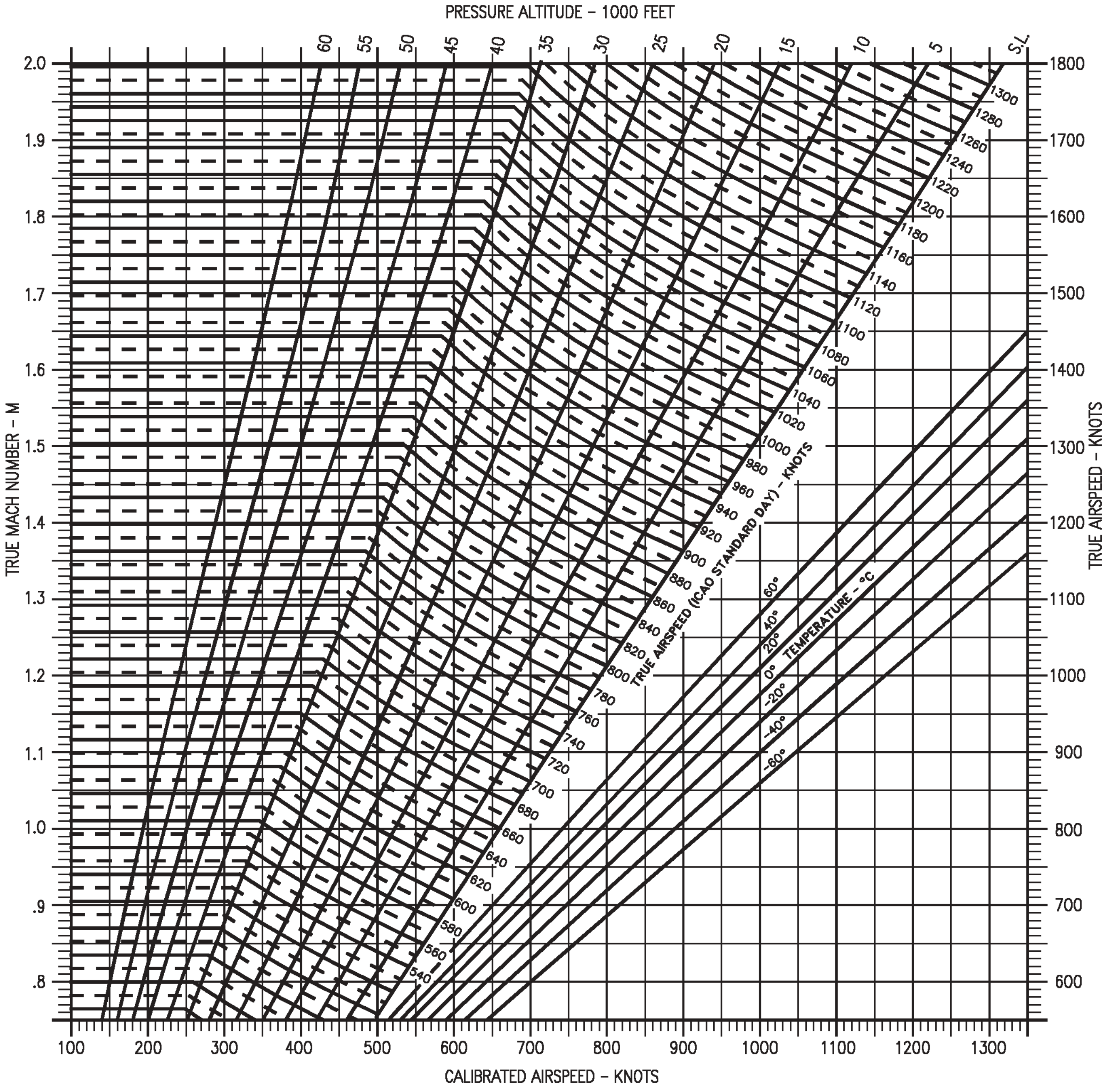
A = CAS=330 KNOTS
B = ALTITUDE=25,000 FEET
C = MACH=.782
D = SEA LEVEL LINE
E = TEMPERATURE=-20°C
F = TAS=486 KNOTS
G = TAS (STANDARD DAY)=472 KNOTS

18AC-NFM-20-(29-1)11-CATI

Figure 11-7. Airspeed Conversion - Low Mach
(Sheet 1 of 2)

AIRSPEED CONVERSION

HIGH MACH



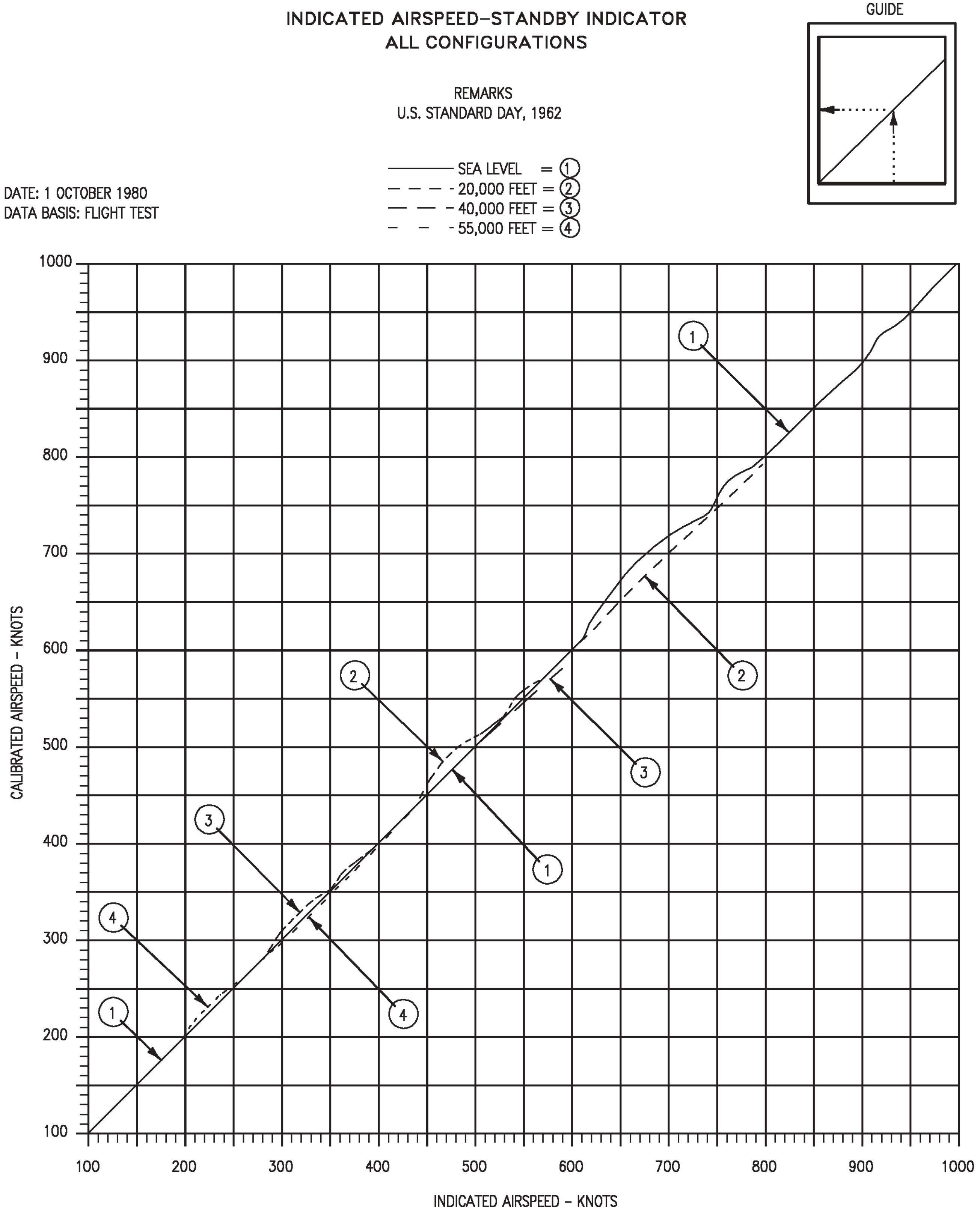
18AC-NFM-20-(29-2)11-CATI

Figure 11-7. Airspeed Conversion - High Mach
(Sheet 2 of 2)

AIRSPEED POSITION ERROR CORRECTION

INDICATED AIRSPEED–STANDBY INDICATOR
ALL CONFIGURATIONS

REMARKS
U.S. STANDARD DAY, 1962



DATE: 1 OCTOBER 1980
DATA BASIS: FLIGHT TEST

18AC-NFM-20-(23-1)12-CATI

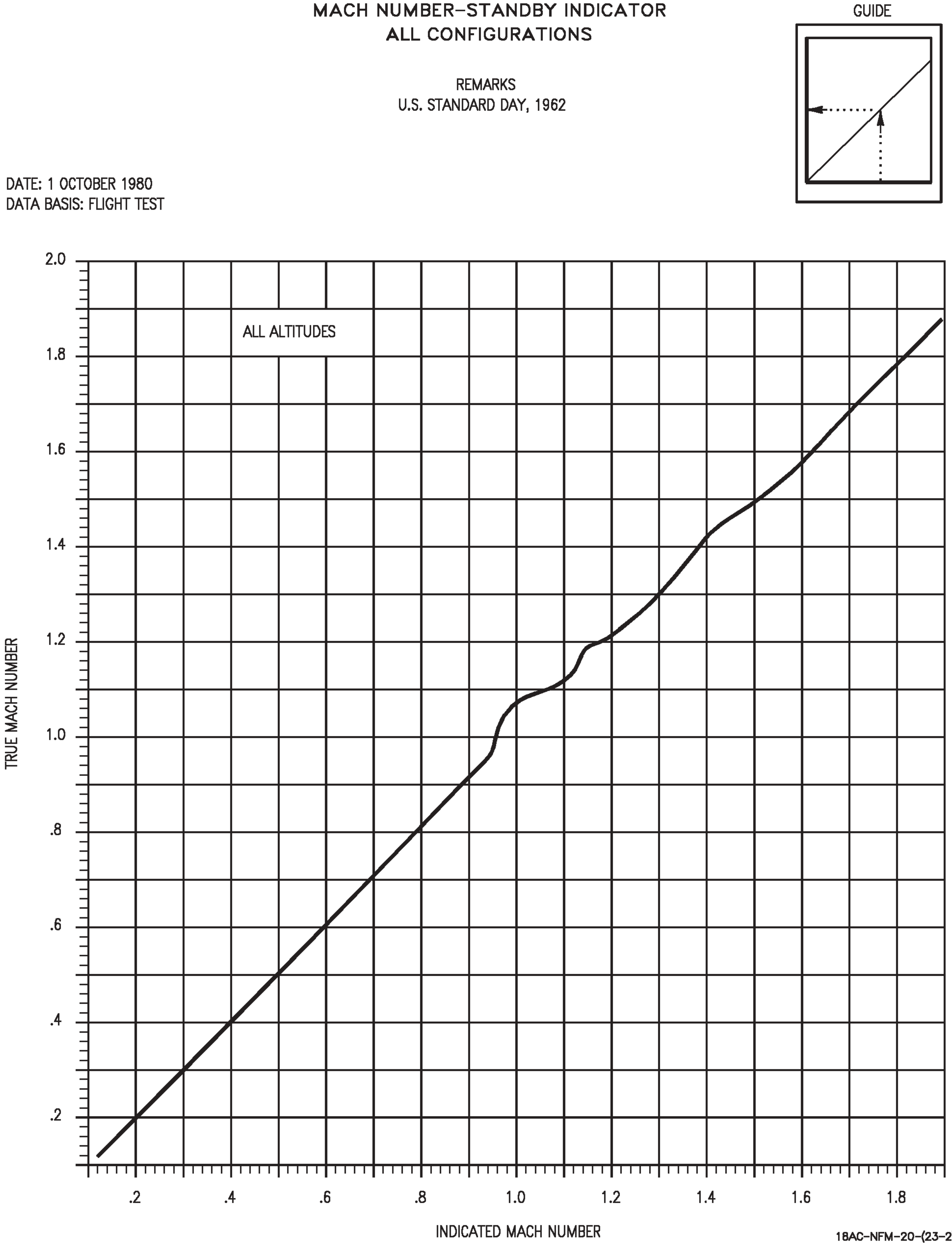
Figure 11-8. Airspeed Position Error Correction - Indicated Airspeed
(Sheet 1 of 2)

AIRSPEED POSITION ERROR CORRECTION

MACH NUMBER–STANDBY INDICATOR
ALL CONFIGURATIONS

REMARKS
U.S. STANDARD DAY, 1962

DATE: 1 OCTOBER 1980
DATA BASIS: FLIGHT TEST



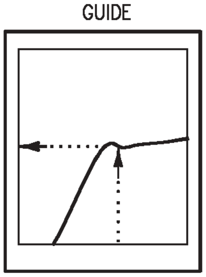
18AC-NFM-20-(23-2)12-CATI

Figure 11-8. Airspeed Position Error Correction - Mach Number
(Sheet 2 of 2)

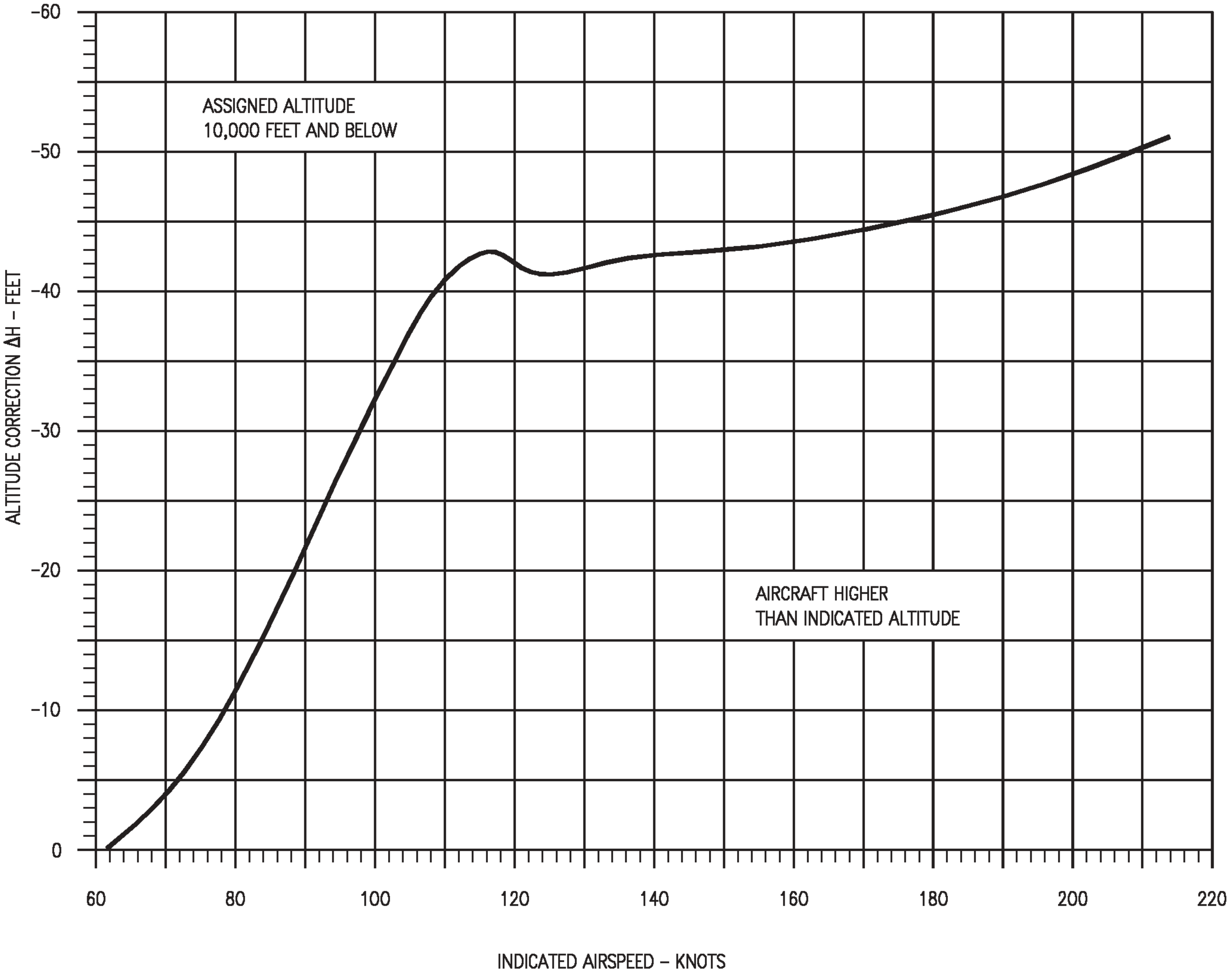
ALTIMETER POSITION ERROR CORRECTION

F404−GE−400
INDICATED AIRSPEED−STANDBY INDICATOR
ALL CONFIGURATIONS

REMARKS
ENGINE(S): (2)F404−GE−400
U.S. STANDARD DAY, 1962
NOTE
FLY ASSIGNED ALTITUDE+ ΔH



DATE: 15 JULY 1986
DATA BASIS: FLIGHT TEST



18AC−NFM−20−(24−1)12−CATI

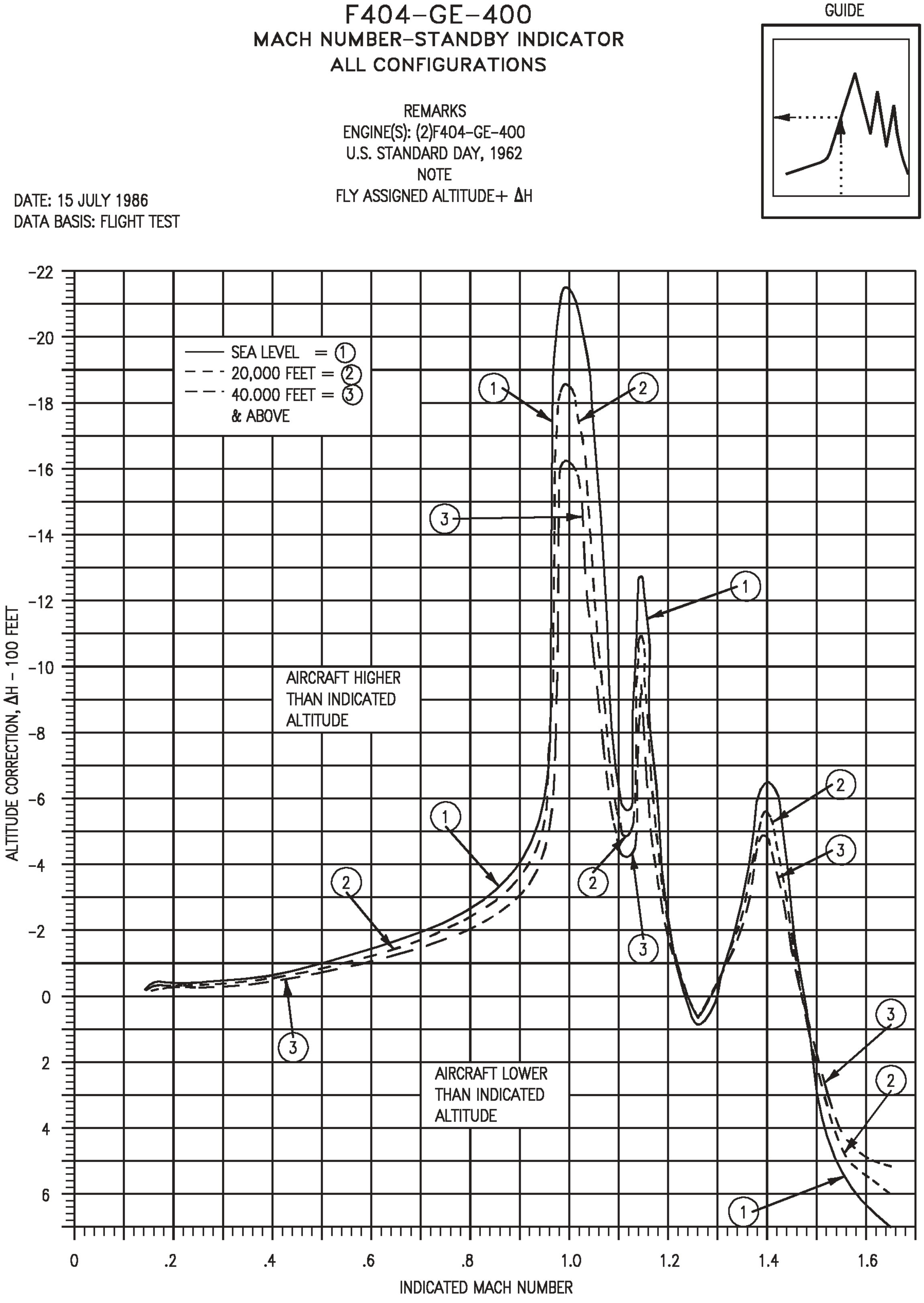
Figure 11-9. Altimeter Position Error Correction - Indicated Airspeed
(Sheet 1 of 2)

ALTIMETER POSITION ERROR CORRECTION

F404–GE–400
MACH NUMBER–STANDBY INDICATOR
ALL CONFIGURATIONS

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
NOTE
FLY ASSIGNED ALTITUDE+ ΔH

DATE: 15 JULY 1986
DATA BASIS: FLIGHT TEST



18AC–NFM–20–(24–2)12–CATI

Figure 11-9. Altimeter Position Error Correction - Mach Number
(Sheet 2 of 2)

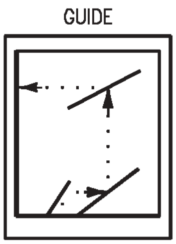
STALL SPEEDS

F404–GE–400

ALL CONFIGURATIONS

REMARKS

ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

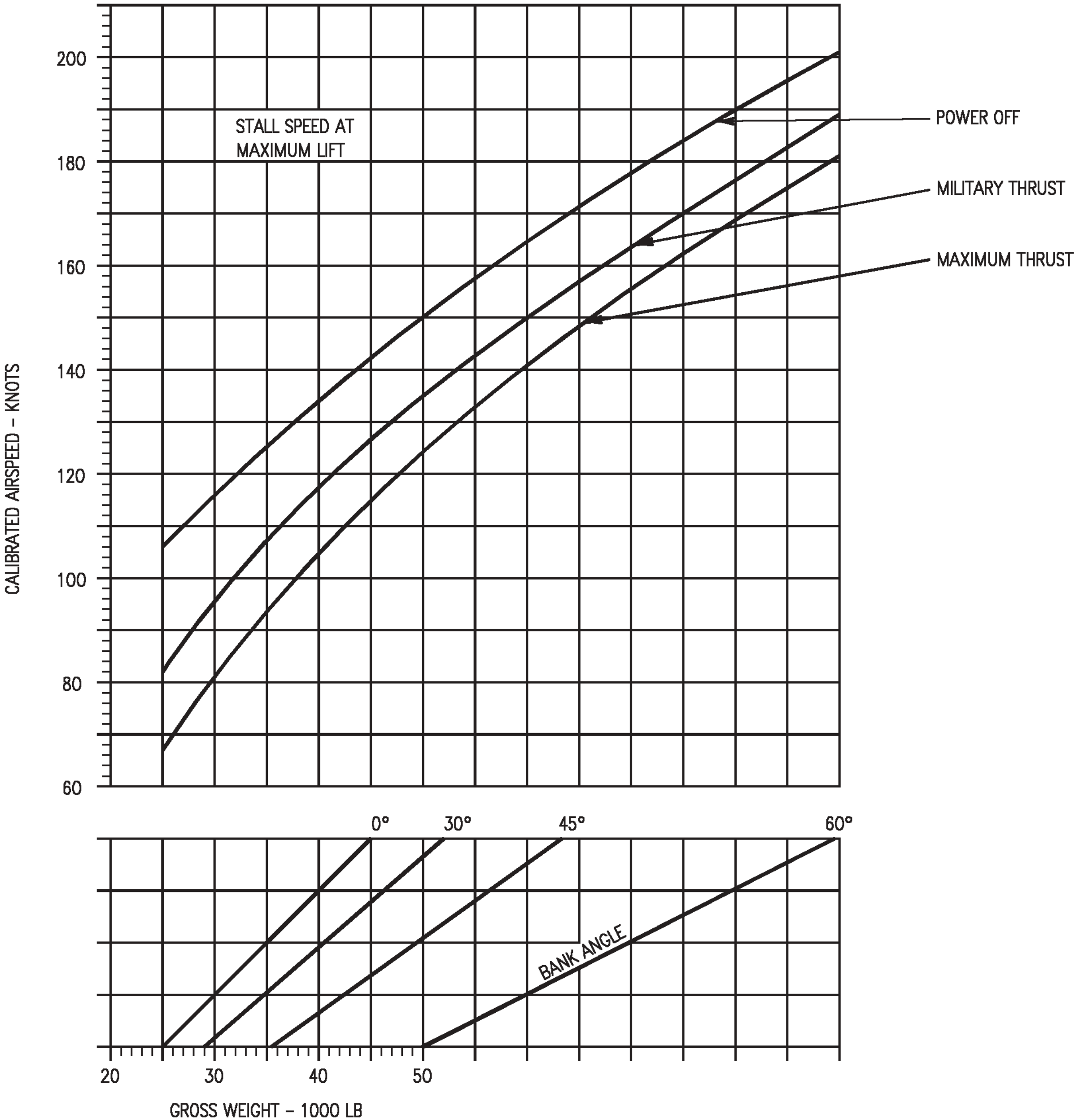


DATE: 3 MARCH 1981
DATA BASIS: FLIGHT TEST

NOTE

IF SINGLE ENGINE, DIRECTIONAL CONTROL WILL BE LOST ABOVE STALL SPEED AT HIGHER POWER SETTINGS.

FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(25–1)10–CATI

Figure 11-10. Stall Speeds - F404-GE-400

ANGLE OF ATTACK CONVERSION

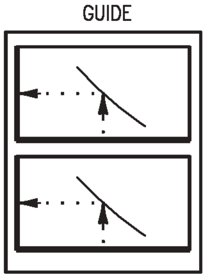
F404-GE-400

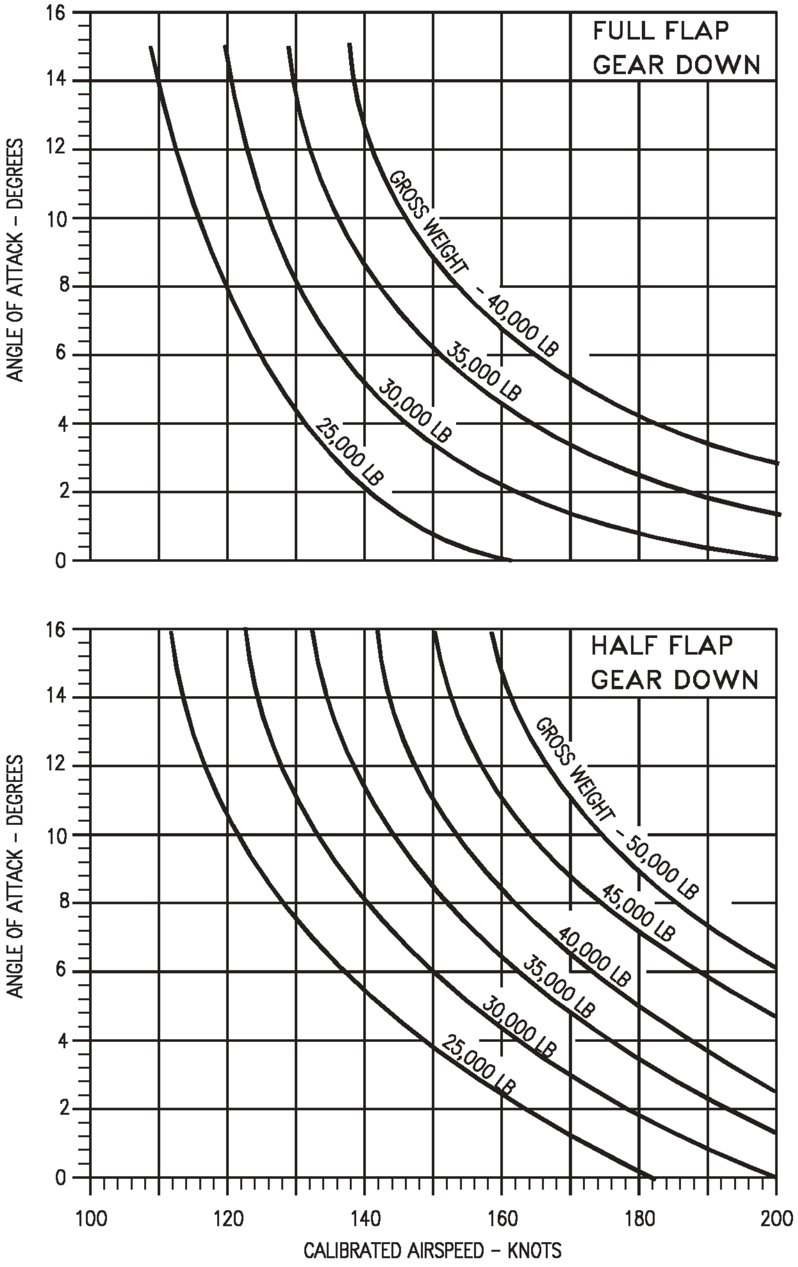
STABILIZED 1G LEVEL FLIGHT

AIRCRAFT CONFIGURATION
GEAR AND FLAPS AS NOTED

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
SEA LEVEL - CG 25% MAC

DATE: 1 MARCH 1983
DATA BASIS: FLIGHT TEST





18AC-NFM-20-(26-1)12-CATI

Figure 11-11. Angle of Attack Conversion

PART 2 - TAKEOFF F404-GE-400

TABLE OF CONTENTS

Charts

WIND COMPONENTS CHART

This chart (figure 11-12) is used primarily for breaking a forecast wind down into crosswind and headwind components for takeoff computations. It is not to be used as a ground controllability chart.

USE

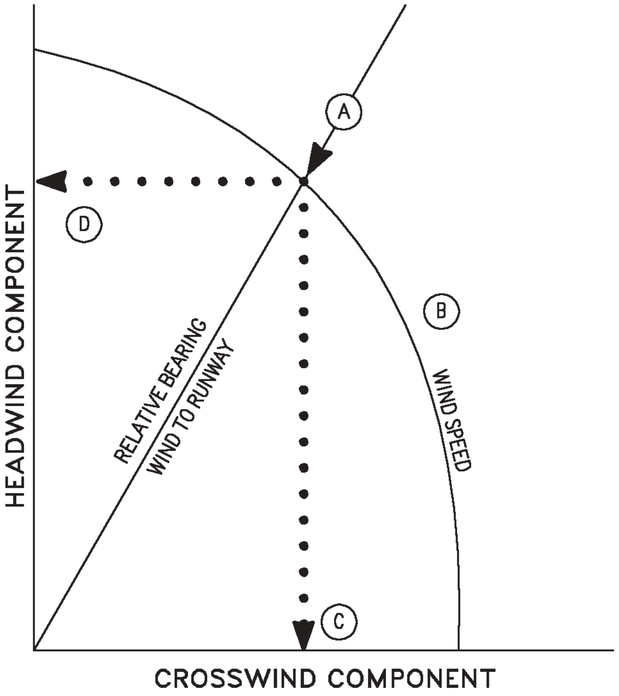
Determine the effective wind velocity. For crosswind component add the full value of any reported gust velocity (incremental wind factor) to the steady state velocity; e.g., reported wind 050/30 G40, effective wind is 050/40. For headwind component add one-half the gust velocity (incremental wind factor) to the steady state velocity; e.g., reported wind 050/30 G40, effective wind is 050/35. Reduce the reported wind direction to a relative bearing by determining the wind direction and runway heading. Enter the chart with the relative bearing. Move along the relative bearing to intercept the crosswind effective wind speed arc. From this point, descend vertically to read the crosswind component. From the intersection of bearing and effective headwind speed, project horizontally to the left to read headwind component.

Sample Problem

Reported wind 050/30 G40, runway heading 030.

A. Relative bearing	20°
B. Intersect: Crosswind windspeed arc	40 Kt
Headwind windspeed arc	35 Kt.
C. Crosswind component	14 Kt.
D. Headwind component	33 Kt.

SAMPLE WIND COMPONENTS



18AC-NFM-20-(18-1)11-CATI

DENSITY RATIO CHART

This chart (figure 11-13) provides a means of obtaining a single factor (density ratio) that may be used to represent a combination of temperature and pressure altitude. Density ratio must be determined before the takeoff data charts can be utilized.

USE

Enter the chart with existing temperature and project vertically to intersect the applicable pressure altitude curve. From this point, project horizontally to the left scale to read density ratio.

Sample Problem

A. Temperature	60°F
B. Pressure altitude	2,000 Ft.
C. Density ratio	0.93

MINIMUM GO SPEED CHARTS

These charts (figures 11-14 and 11-15) provide the means of determining the minimum speed at which the aircraft can experience an engine failure and still take off under existing conditions of temperature, pressure altitude, gross weight, and the runway length remaining. Separate plots are provided for maximum and military thrust conditions. The data is based on an engine failure occurring at the minimum go speed and allows for a 3-second decision period with one engine operating at its initial thrust setting. In the case of a military thrust takeoff, an additional 2-second period is allowed for advancing the operating engine throttle to maximum thrust.

WARNING

> If an engine is lost above the maximum abort speed but below the minimum go speed or at a condition where insufficient rate of climb capability exists, the pilot can neither abort nor take off safely on the runway length remaining without considering such factors as reducing gross weight or engaging the overrun end arrestment cable.

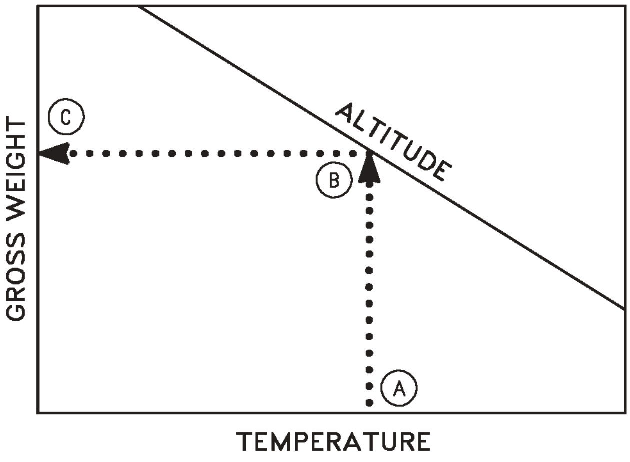
USE

To determine the maximum gross weight for 100 fpm single engine rate of climb, enter the applicable chart with the field temperature and project vertically up to the field altitude. From this point project horizontally to read the maximum gross weight. If the takeoff weight is higher than this value and gross weight cannot be safely reduced, the takeoff should be aborted.

Sample Problem

A. Temperature	60° F (15.6 °C)
B. Altitude	8000 Ft
C. Maximum Gross Weight	43,700 Lb.

SAMPLE MAXIMUM GROSS WEIGHT WITH SINGLE ENGINE



18AC-NFM-20-(4B5-1)12-CATI

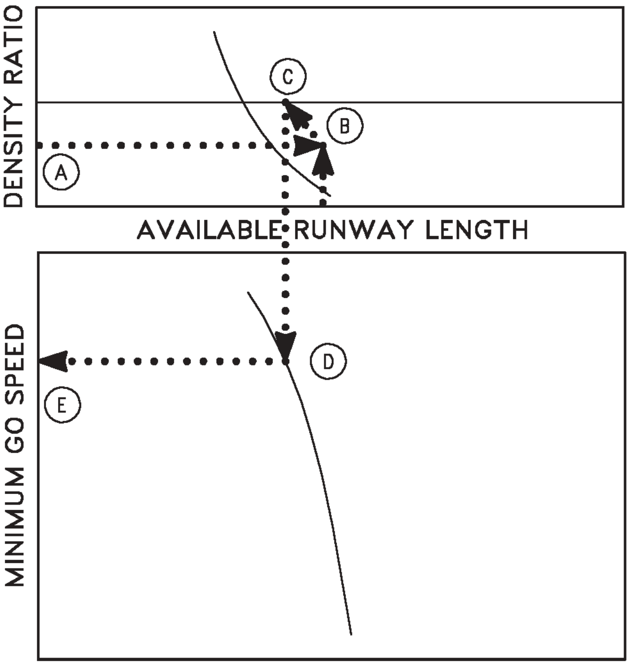
USE

To determine minimum go speed, enter the applicable plot with the prevailing density ratio, and project horizontally to the available runway length grid line. Parallel the nearest guideline up or down to intersect the baseline. From this point descend vertically to intersect the applicable takeoff gross weight curve, then horizontally to read minimum go speed. If this projected line does not intersect the computed takeoff gross weight curve, then there will be no corresponding minimum go speed. If the gross weight curve lies to the right of the projected line, a single-engine takeoff cannot be made under the combined conditions.

NOTE

> This problem assumes maximum thrust on operating engine within 5 seconds after engine failure. The minimum go speed for a maximum thrust takeoff will be less than that for a military thrust takeoff due to the greater acceleration with maximum thrust up to and including the 3-second decision time.

SAMPLE MINIMUM GO SPEED



18AC-NFM-20-(103-1)11-CATI

Sample Problem

Maximum Thrust Takeoff

A. Density ratio	0.90
B. Available runway length	8,000 Ft.
C. Parallel guideline to baseline	
D. Takeoff gross weight	50,000 Lb.
E. Minimum go speed	150 KCAS

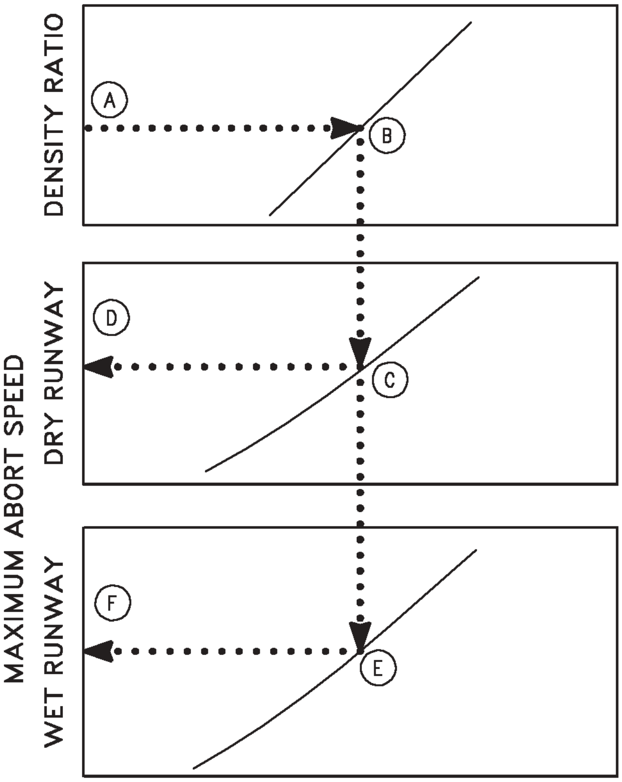
MAXIMUM ABORT SPEED CHARTS

These charts (figures 11-16 and 11-17) provide a means of determining the maximum speed at which an abort may be started and the aircraft stopped within the remaining runway length. Separate charts are provided for maximum and military thrust and various takeoff gross weights on both dry and wet runways. The data are based on a 3-second reaction time after engine failure followed by a 2-second transition time to reach idle thrust and full braking (brake limits applied).

USE

Enter the chart with the prevailing density ratio and project horizontally right to intersect the available runway length curve. From this point, project vertically down to the applicable gross weight curve for either dry or wet runway conditions, then horizontally left to read maximum abort speed.

SAMPLE MAXIMUM ABORT SPEED



18AC-NFM-20-(98-1)11-CATI

Sample Problem

Maximum Thrust Takeoff,

A. Density ratio	0.90
B. Available runway length	8,000 Ft.
C. Gross weight	45,000 Lb.
D. Maximum abort speed, Dry Runway	120 KCAS
E. Maximum abort speed Wet Runway	105 KCAS

TAKEOFF DISTANCE CHARTS

These charts (figures 11-18 and 11-19) are used to determine the no wind ground run distance, wind adjusted ground run and the total distance to climb to a height of 50 feet. Separate charts are provided for maximum and military thrust. A table has been provided on each chart to show nosewheel liftoff speed with the corresponding aircraft takeoff speed for various gross weight and CG combinations.

USE

Enter the density ratio plot with the gross weight and project vertically up to intersect the appropriate CG curve. From this intersection, project horizontally to the left to read the minimum allowable density ratio for takeoff at this weight/CG combination.

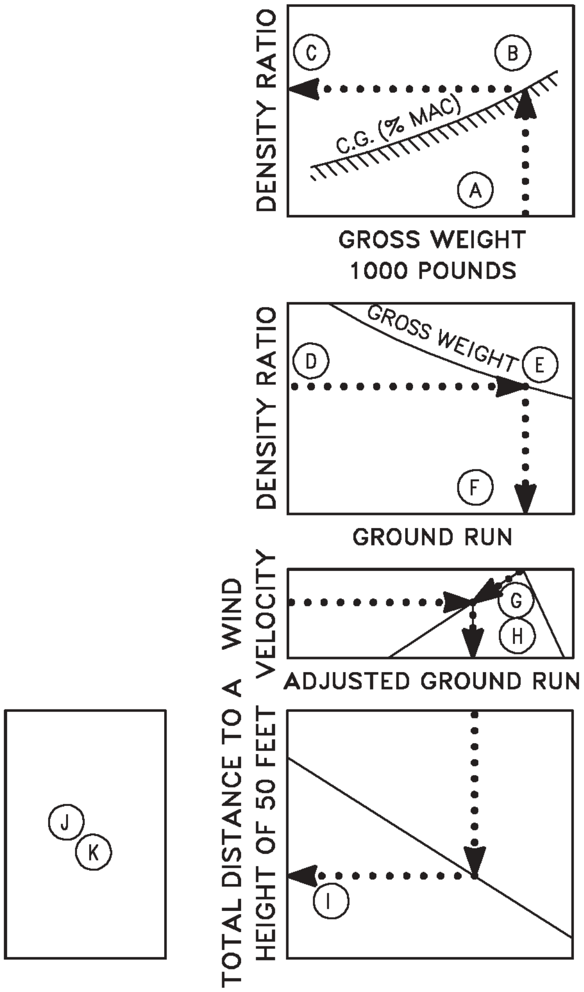
Enter the chart with the applicable density ratio and project horizontally to the right to intersect the appropriate takeoff gross weight curve. From this intersection, project vertically down to read no wind ground run distance. Parallel the appropriate wind guideline (headwind or tailwind) to intersect the takeoff wind velocity. From this point project vertically down to read ground run adjusted for wind effects. To find the total distance required to climb to a height of 50 feet, continue down to the reflector line and project horizontally to the left scale. These takeoff speeds and distances reflect a CG location of 22 % MAC. Use figures 11-20 and 11-21 to adjust for other CG locations.

Sample Problem

Maximum Thrust Takeoff

A. Gross weight	48,000 Lb.
B. CG	20 % MAC
C. Minimum Density Ratio (Applicable density ratio > Minimum density ratio)	0.83
D. Applicable Density ratio	0.90
E. Gross weight	48,000 Lb.
F. No wind ground run distance	4,300 Ft.
G. Effective headwind	10 Kt.
H. Ground run (wind corrected)	4,000 Ft.
I. Total distance required to climb to a height of 50 feet	5,200 Ft.
J. Nosewheel liftoff speed for a CG of 22 % MAC (from table)	163 KIAS
K. Takeoff speed (from table)	173 KIAS

SAMPLE TAKEOFF DISTANCE



18AC-NFM-20-(19-1)13-CATI

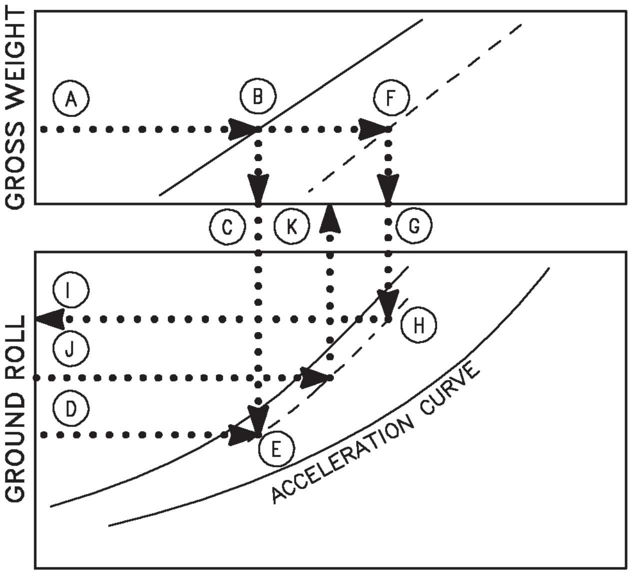
TAKEOFF GROUND ROLL CORRECTION FOR CG CHARTS

These charts (figures 11-20 and 11-21) are used primarily to determine takeoff distances resulting from adverse conditions of gross weight and CG. The charts can also be used to obtain any distance and speed relationship during the takeoff ground run.

USE

Enter the chart with the applicable takeoff gross weight and project horizontally right to intersect the normal CG curve, then project vertically down. The vertical projection passes through the normal CG takeoff speed. Reenter the chart with the normal no wind ground run (from Takeoff Distance chart) and project horizontally right to intersect the vertical projection from the normal CG curve. From this intersection, parallel the nearest acceleration guideline. Return to the gross weight-normal CG intersection and project further right to the actual takeoff CG curve, then vertically down to intersect the new acceleration curve. The vertical projection passes through the actual CG takeoff speed. From this intersection, project horizontally left to ground run corrected for CG. To determine wind effect on ground run and total distance to height of 50 feet, reenter appropriate takeoff distance chart with corrected ground roll. The nosewheel liftoff speed can be determined in the takeoff distance chart by interpolation in the speed table using gross weight and CG. To determine speed at a given distance on the takeoff run, enter the chart at the ground run distance and project horizontally to the reference acceleration curve. Then project vertically up to the corresponding speed.

SAMPLE TAKEOFF GROUND ROLL CORRECTION FOR CG



18AC-NFM-20-(104-1)11-CATI

Sample Problem

Maximum Thrust Takeoff CG - 20 % MAC

A. Gross weight	48,000 Lb.
B. Normal CG	22 % MAC
C. Normal CG takeoff speed	173 KIAS
D. Normal no wind ground run (from Takeoff Distance chart)	4,300 Ft.
E. Parallel acceleration guideline	
F. Takeoff CG	20 % MAC
G. 20 % MAC takeoff speed	183 KIAS
H. Intersection of new acceleration curve	
I. Ground run corrected for CG	5,000 Ft.
J. Given distance on ground run	2,000 Ft.
K. Corresponding ground run speed	130 KIAS
L. Read nosewheel liftoff speed at 20 % MAC (From Takeoff Distance - Maximum Thrust - Nosewheel Liftoff/Takeoff Speeds)	170 KIAS

WIND COMPONENTS

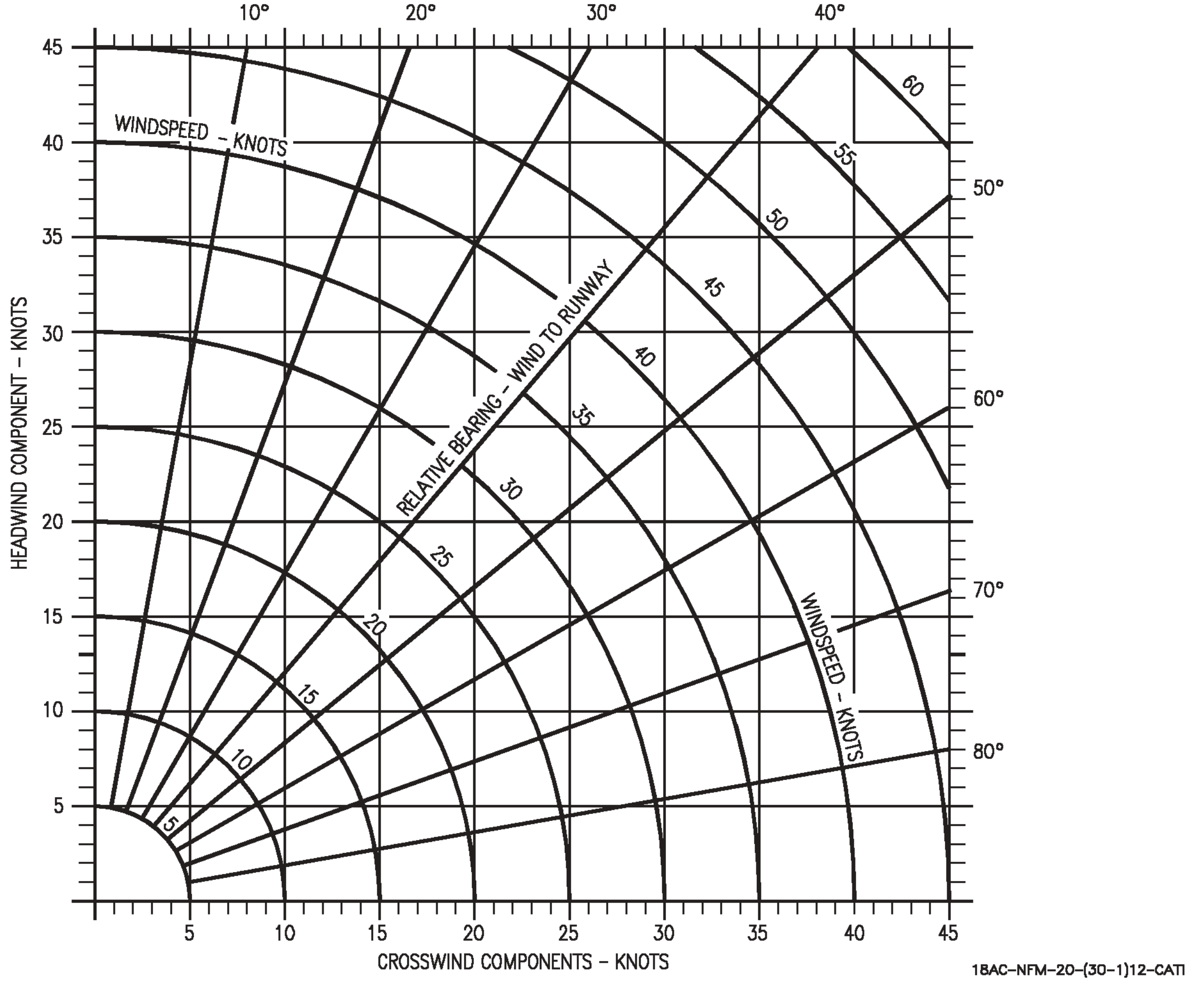


Figure 11-12. Wind Components

DENSITY RATIO

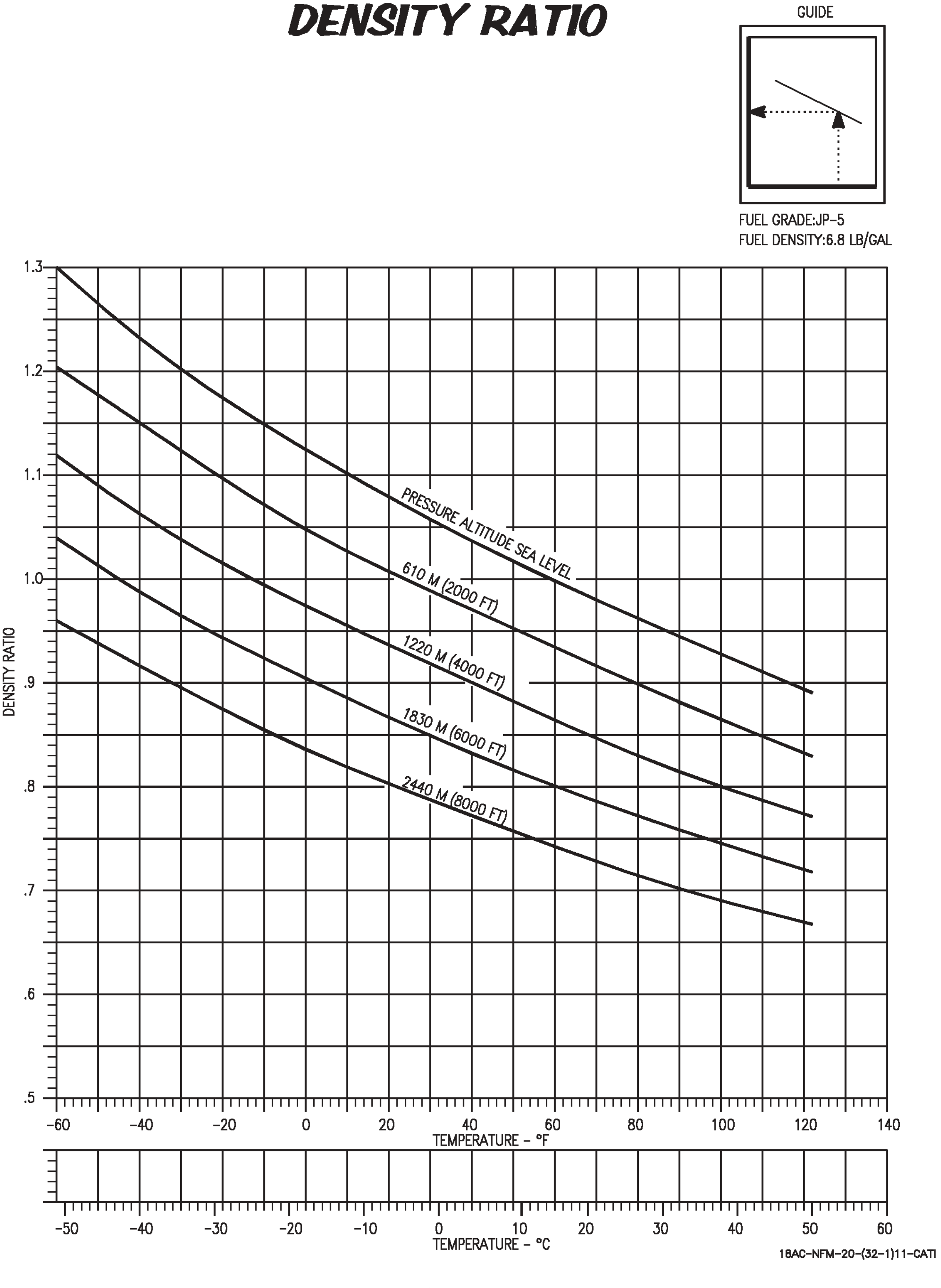


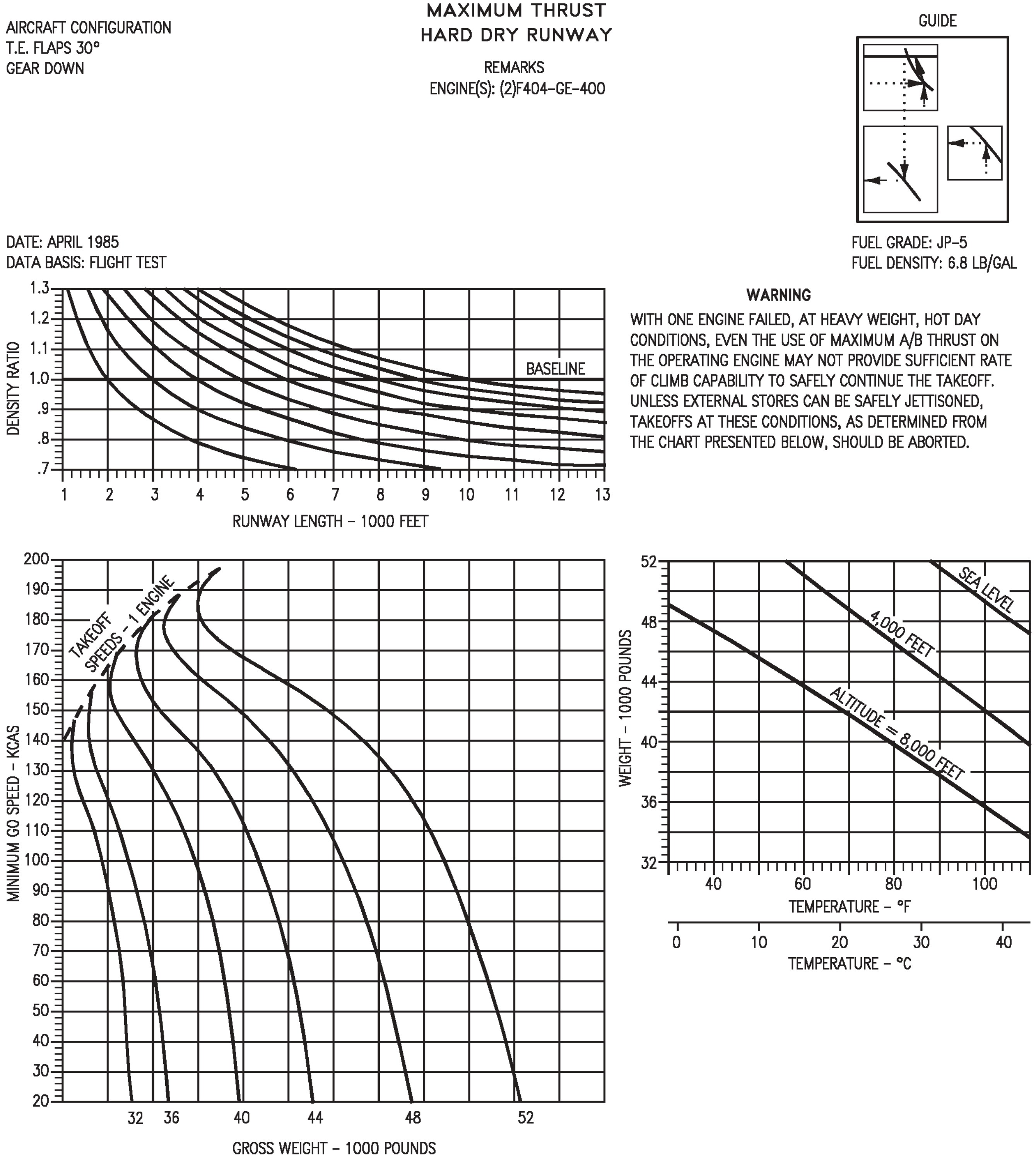
Figure 11-13. Density Ratio

MINIMUM GO SPEED

F404–GE–400
MAXIMUM THRUST
HARD DRY RUNWAY

REMARKS
ENGINE(S): (2)F404–GE–400

AIRCRAFT CONFIGURATION
T.E. FLAPS 30°
GEAR DOWN



DATE: APRIL 1985
DATA BASIS: FLIGHT TEST

FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

WARNING

WITH ONE ENGINE FAILED, AT HEAVY WEIGHT, HOT DAY CONDITIONS, EVEN THE USE OF MAXIMUM A/B THRUST ON THE OPERATING ENGINE MAY NOT PROVIDE SUFFICIENT RATE OF CLIMB CAPABILITY TO SAFELY CONTINUE THE TAKEOFF. UNLESS EXTERNAL STORES CAN BE SAFELY JETTISONED, TAKEOFFS AT THESE CONDITIONS, AS DETERMINED FROM THE CHART PRESENTED BELOW, SHOULD BE ABORTED.

18AC–NFM–20–(102–1)12–CATI

Figure 11-14. Minimum Go Speed - Maximum Thrust - F404-GE-400

MINIMUM GO SPEED

F404-GE-400

MILITARY THRUST

HARD DRY RUNWAY

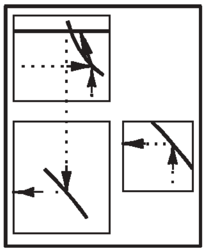
AIRCRAFT CONFIGURATION
T.E. FLAPS 30°
GEAR DOWN

REMARKS
ENGINE(S): (2)F404-GE-400

NOTE
REMAINING ENGINE AT
MAXIMUM THRUST AFTER
FAILURE RECOGNIZED.

DATE: APRIL 1985
DATA BASIS: FLIGHT TEST

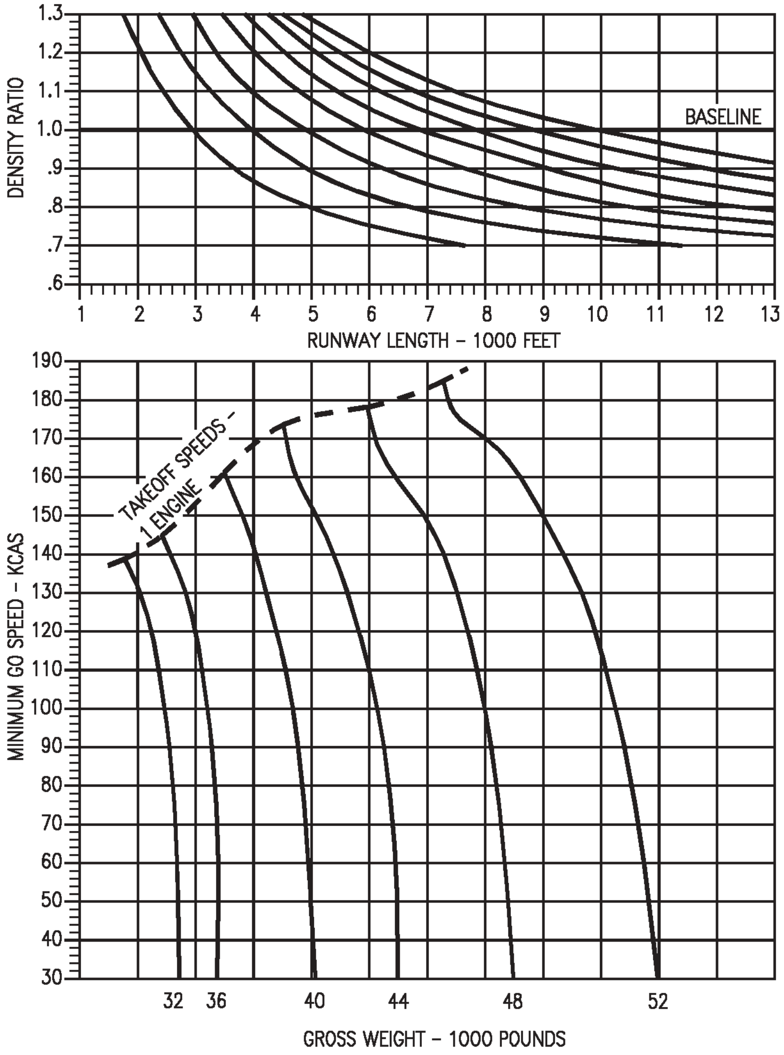
GUIDE

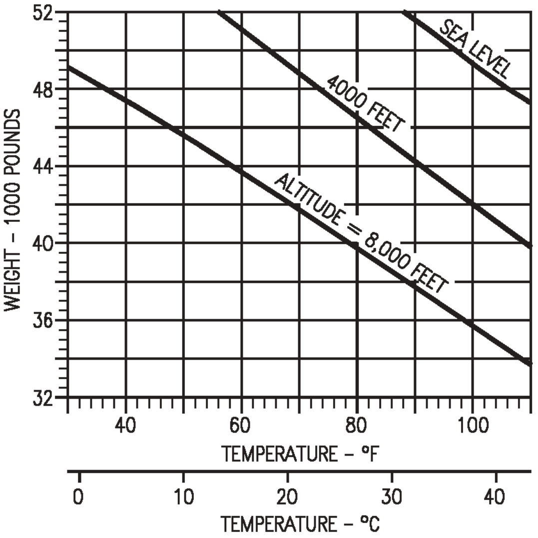


FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

WARNING

WITH ONE ENGINE FAILED, AT HEAVY WEIGHT, HOT DAY CONDITIONS, EVEN THE USE OF MAXIMUM A/B THRUST ON THE OPERATING ENGINE MAY NOT PROVIDE SUFFICIENT RATE OF CLIMB CAPABILITY TO SAFELY CONTINUE THE TAKEOFF. UNLESS EXTERNAL STORES CAN BE SAFELY JETTISONED, TAKEOFFS AT THESE CONDITIONS, AS DETERMINED FROM THE CHART PRESENTED BELOW, SHOULD BE ABORTED.





18AC-NFM-20-(101-1)12-CATI

Figure 11-15. Minimum Go Speed - Military Thrust - F404-GE-400

MAXIMUM ABORT SPEED

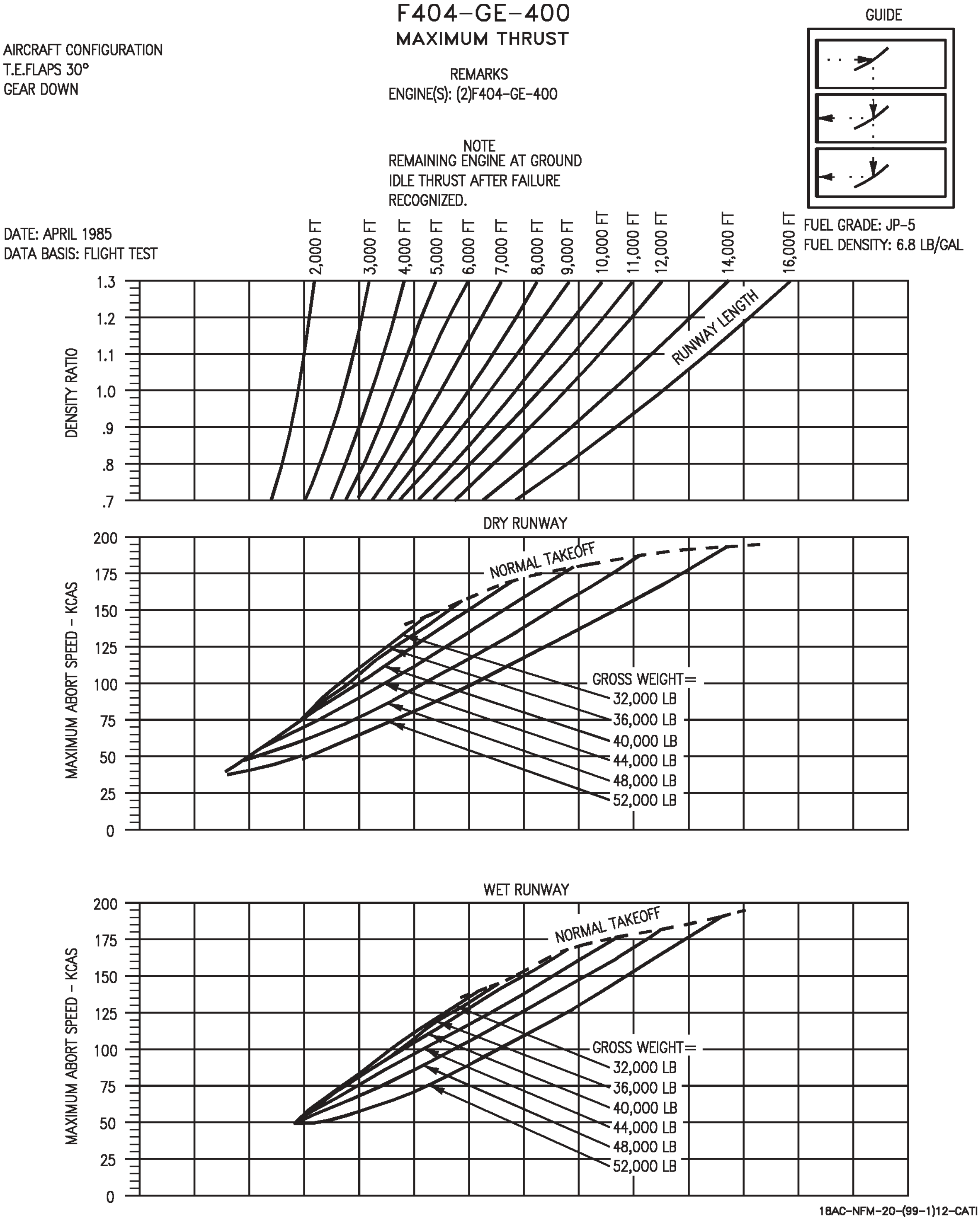
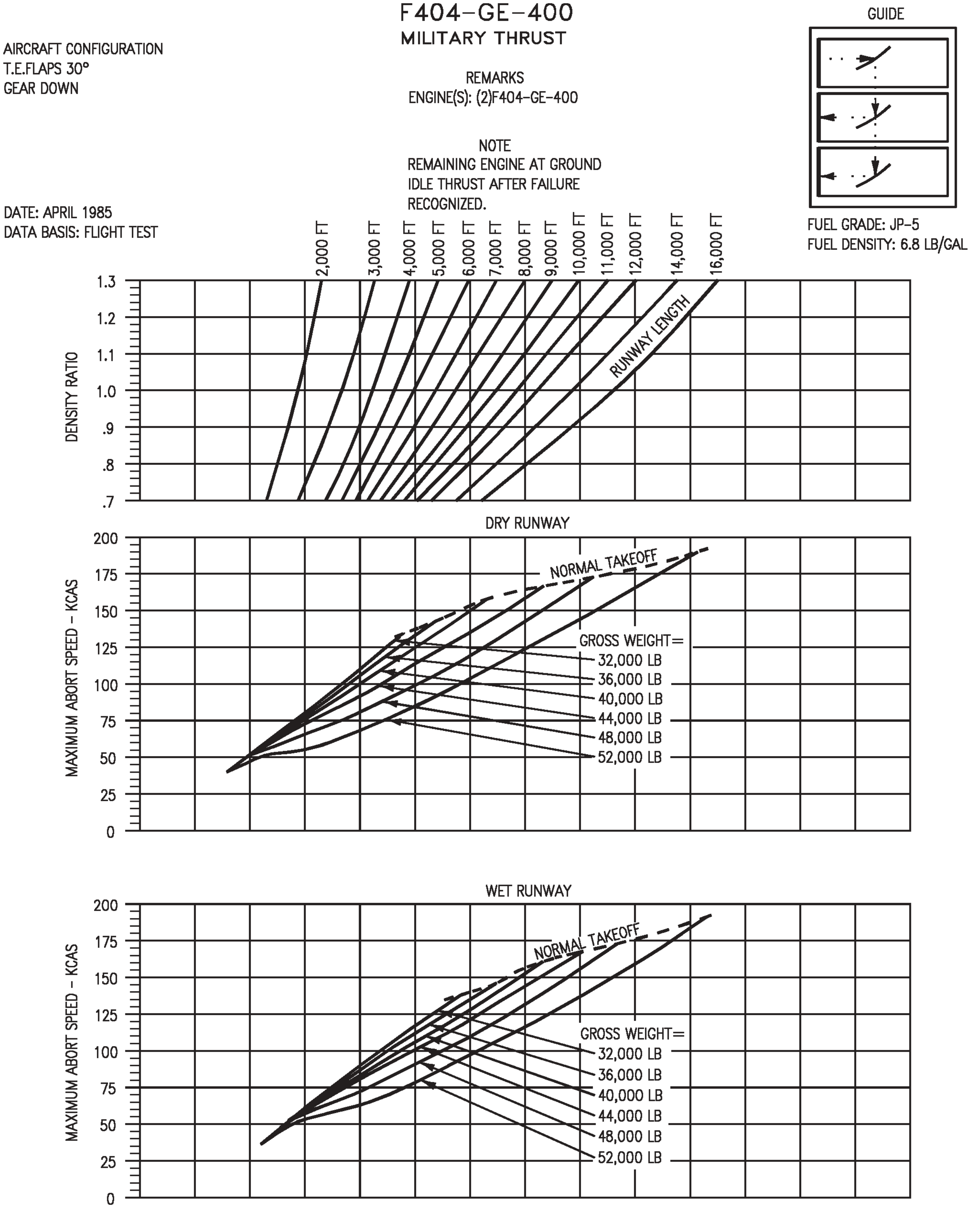


Figure 11-16. Maximum Abort Speed - Maximum Thrust - F404-GE-400

MAXIMUM ABORT SPEED


F404-GE-400
MILITARY THRUST

AIRCRAFT CONFIGURATION
T.E.FLAPS 30°
GEAR DOWN

REMARKS
ENGINE(S): (2)F404-GE-400

NOTE
REMAINING ENGINE AT GROUND IDLE THRUST AFTER FAILURE RECOGNIZED.

DATE: APRIL 1985
DATA BASIS: FLIGHT TEST

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

Figure 11-17. Maximum Abort Speed - Military Thrust - F404-GE-400

TAKEOFF DISTANCE

F404–GE–400

MAXIMUM THRUST
HARD DRY RUNWAY

AIRCRAFT CONFIGURATION
T.E. FLAPS 30°
GEAR DOWN

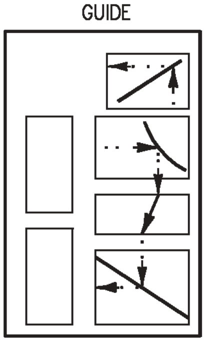
REMARKS
ENGINE(S): (2)F404–GE–400

NOTES

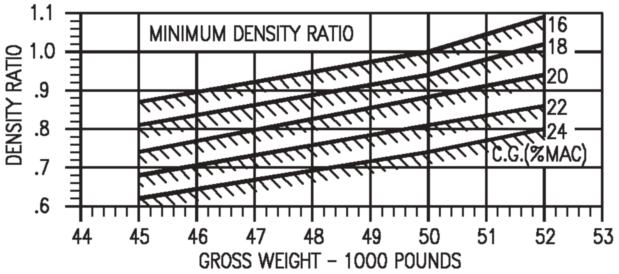
FOR TAKEOFF WEIGHTS GREATER THAN 45,000 POUNDS, 10° NOSE UP INITIAL STABILATOR TRIM IS RECOMMENDED.

GROUND ROLL DISTANCES ARE FOR A TAKEOFF CG OF 22% MAC. FOR GROUND ROLL CORRECTION FOR OTHER CG LOCATIONS, REFER TO TAKEOFF GROUND ROLL CORRECTION FOR CG – MAXIMUM THRUST.

CHECK FOR MINIMUM DENSITY RATIO FOR TAKEOFF WEIGHT AND C.G. LOCATION.



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



CG (%C̄)	GROSS WEIGHT–1000 POUNDS		
	32	36	40
	NOSEWHEEL LIFTOFF/ TAKEOFF SPEEDS (KIAS)		
16	145/159	154/167	165/175
18	139/154	148/162	159/170
20	134/149	142/157	152/164
22	128/144	135/151	145/158
24	121/140	129/147	138/153
26	114/136	122/142	131/148

CG (%C̄)	GROSS WEIGHT–1000 POUNDS		
	44	48	52
	NOSEWHEEL LIFTOFF/ TAKEOFF SPEEDS (KIAS)		
16	176/185	183/192	193/203
18	170/179	177/186	186/196
20	162/173	170/180	180/189
22	154/167	163/173	174/182
24	147/161	156/167	167/175
26	140/155	149/160	159/168

DATE: APRIL 1985
DATA BASIS: FLIGHT TEST

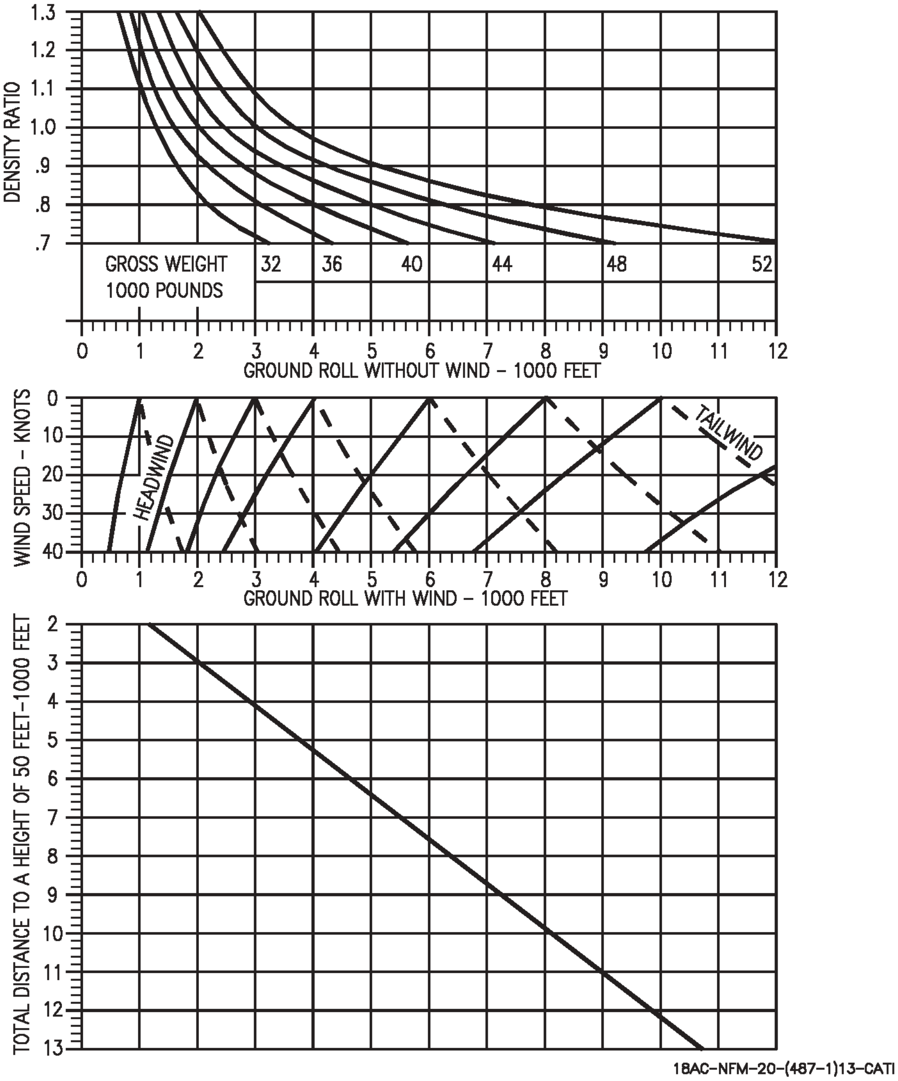


Figure 11-18. Takeoff Distance - Maximum Thrust - F404-GE-400

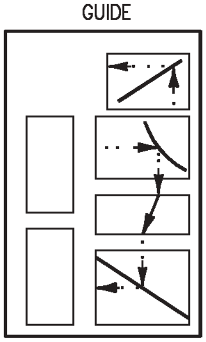
TAKEOFF DISTANCE

F404–GE–400

MILITARY THRUST
HARD DRY RUNWAY

REMARKS
ENGINE(S): (2)F404–GE–400

AIRCRAFT CONFIGURATION
T.E. FLAPS 30°
GEAR DOWN

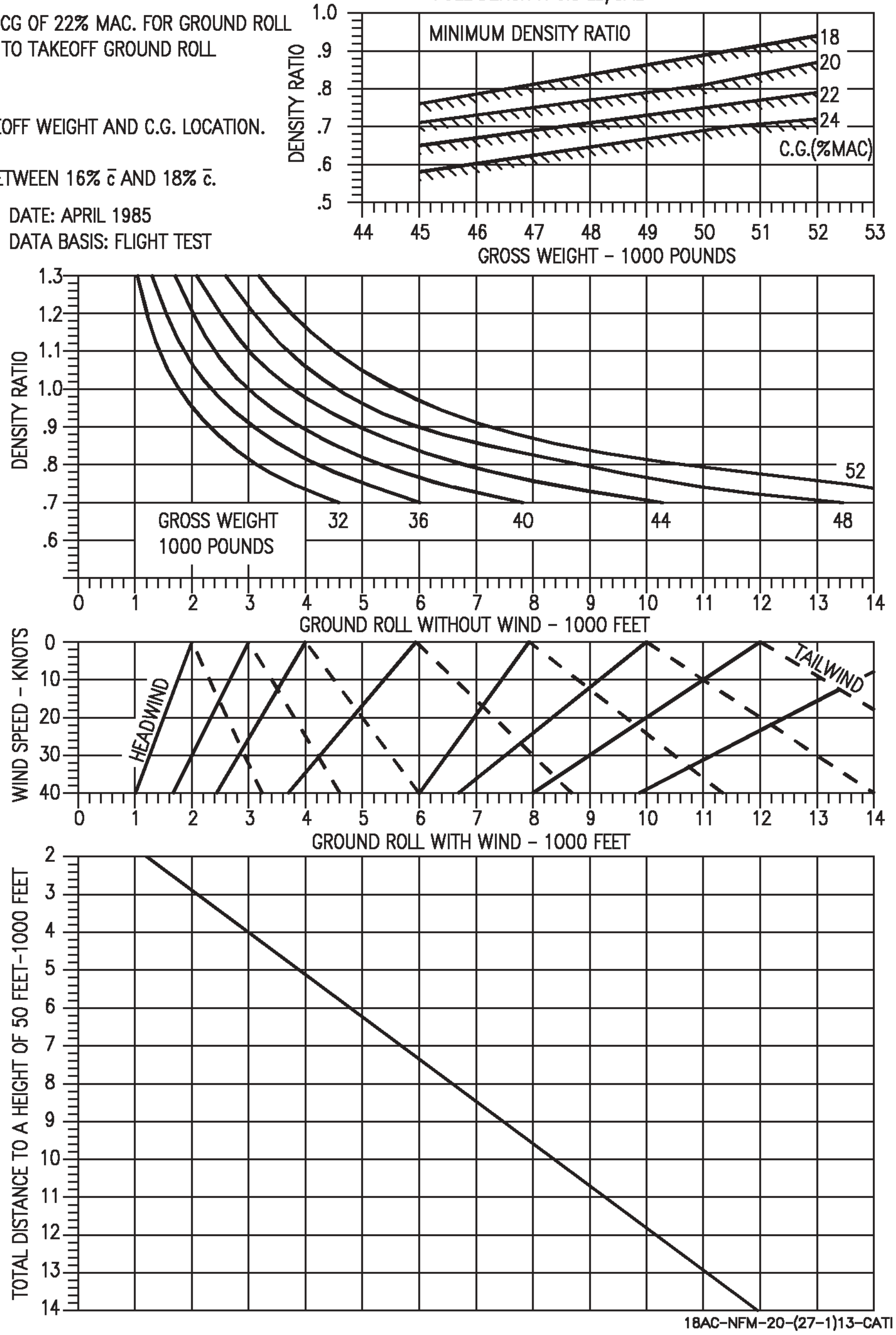


NOTES

- FOR TAKEOFF WEIGHTS GREATER THAN 45,000 POUNDS, 10° NOSE UP INITIAL STABILATOR TRIM IS RECOMMENDED.
- GROUND ROLL DISTANCES ARE FOR A TAKEOFF CG OF 22% MAC. FOR GROUND ROLL CORRECTION FOR OTHER CG LOCATIONS, REFER TO TAKEOFF GROUND ROLL CORRECTION FOR CG – MILITARY THRUST.
- CHECK FOR MINIMUM DENSITY RATIO FOR TAKEOFF WEIGHT AND C.G. LOCATION.
- USE MAXIMUM THRUST FOR C.G. LOCATIONS BETWEEN 16% c̄ AND 18% c̄.

FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: APRIL 1985
DATA BASIS: FLIGHT TEST



CG (%c̄)	GROSS WEIGHT–1000 POUNDS		
	32	36	40
	NOSEWHEEL LIFTOFF/ TAKEOFF SPEEDS (KIAS)		
18	136/ 146	145/ 155	154/ 163
20	131/ 142	139/ 150	148/ 158
22	125/ 138	132/ 144	141/ 152
24	119/ 134	126/ 140	134/ 147
26	112/ 130	119/ 135	127/ 141

CG (%c̄)	GROSS WEIGHT–1000 POUNDS		
	44	48	52
	NOSEWHEEL LIFTOFF/ TAKEOFF SPEEDS (KIAS)		
18	164/ 174	170/ 178	178/ 186
20	157/ 167	164/ 171	172/ 179
22	149/ 160	158/ 164	165/ 171
24	142/ 154	151/ 158	158/ 165
26	135/ 147	143/ 151	150/ 158

Figure 11-19. Takeoff Distance - Military Thrust - F404-GE-400

TAKEOFF GROUND ROLL CORRECTION FOR CG

F404-GE-400

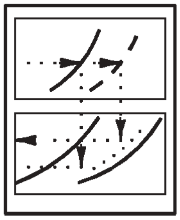
MAXIMUM THRUST

AIRCRAFT CONFIGURATION
T.E. FLAPS 30°
GEAR DOWN

REMARKS
ENGINE(S): (2)F404-GE-400

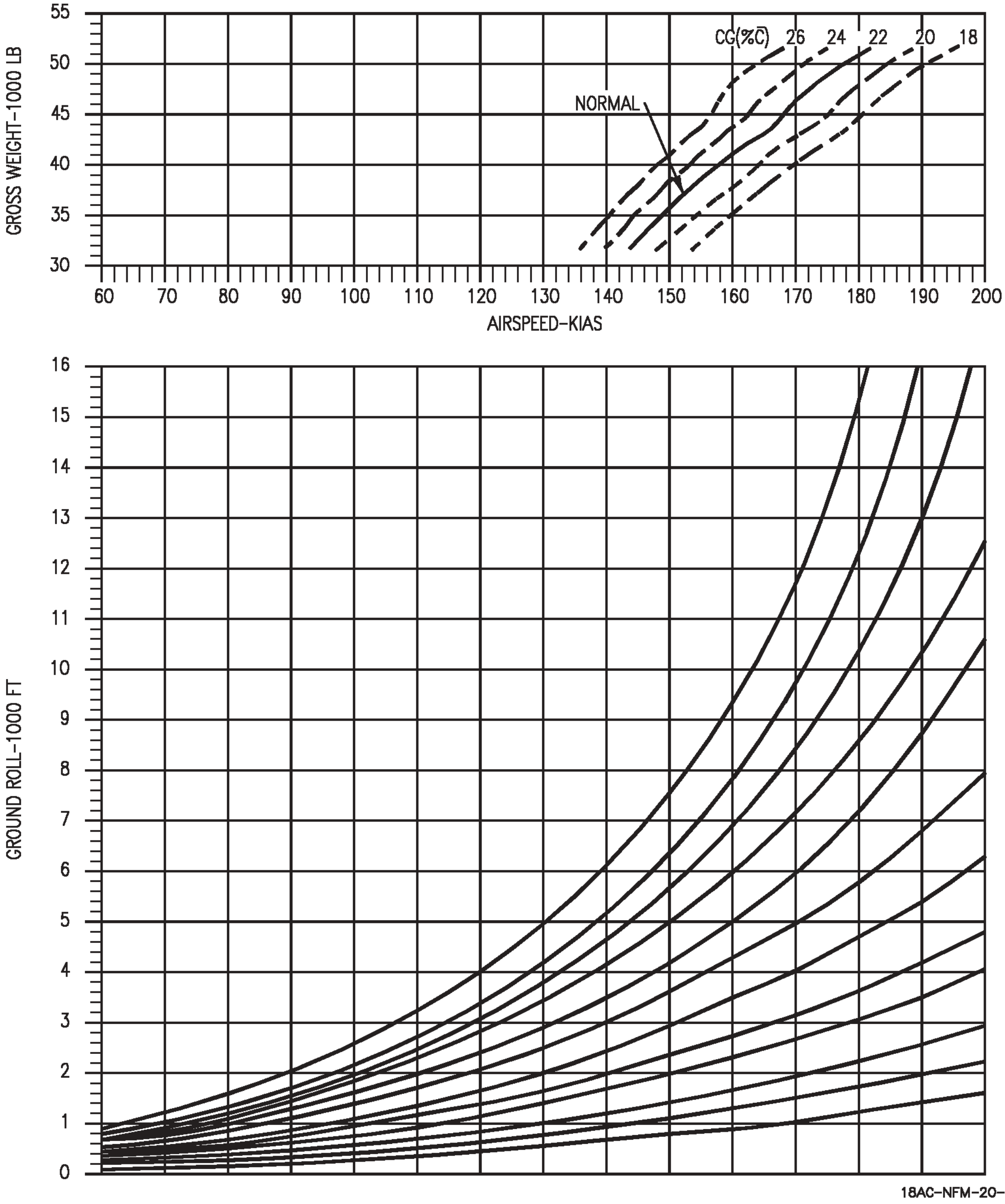
◎ INCREASE GROUND ROLL BY 5% PER % $\bar{c}$ FORWARD OF 18% $\bar{c}$ (FORWARD TO 16% $\bar{c}$ ONLY).

GUIDE



DATE: JANUARY 1984
DATA BASIS: FLIGHT TEST

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(105-1)13-CATI

Figure 11-20. Takeoff Ground Roll Correction for CG - Maximum Thrust - F404-GE-400

TAKEOFF GROUND ROLL CORRECTION FOR CG

F404-GE-400

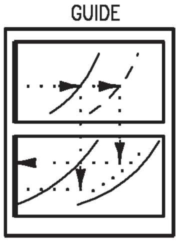
MILITARY THRUST

AIRCRAFT CONFIGURATION
T.E. FLAPS 30°
GEAR DOWN

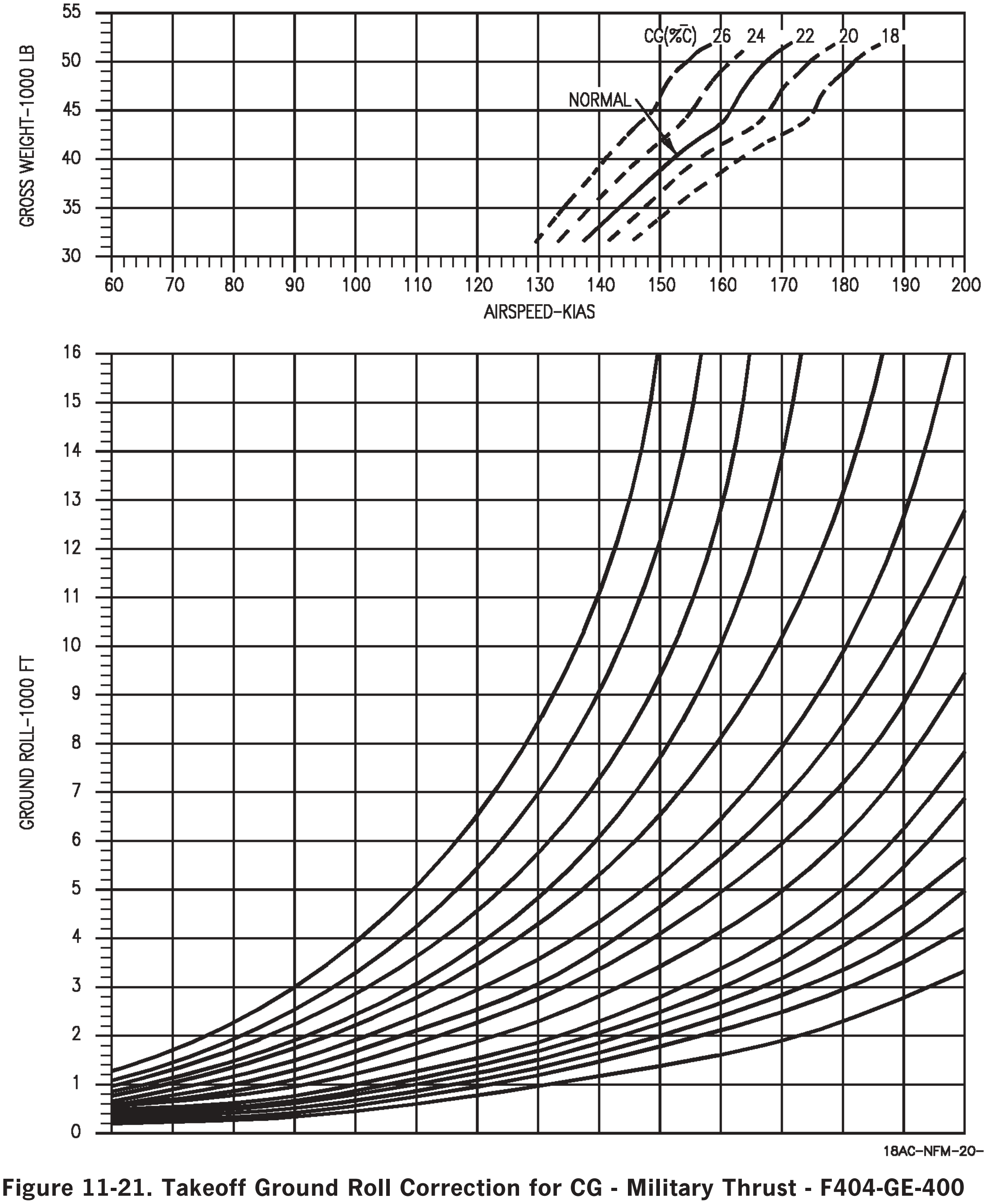
REMARKS
ENGINE(S): (2)F404-GE-400

◎ USE MAXIMUM THRUST FOR C.G. LOCATIONS
BETWEEN 16% c̄ AND 18% c̄.

DATE: JANUARY 1984
DATA BASIS: FLIGHT TEST



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(106-1)13-CATI

Figure 11-21. Takeoff Ground Roll Correction for CG - Military Thrust - F404-GE-400

PART 3 - CLIMB F404-GE-400

TABLE OF CONTENTS

CHARTS

TAKEOFF ALLOWANCES CHART

The takeoff allowances and acceleration to climb speed chart (figure 11-22) presents fuel usage during start, taxi, engine runup. This chart is used to determine fuel, time and distance data from brake release to 350 KIAS or climb speed.

CLIMB PERFORMANCE CHARTS

Climb charts present the military thrust climb performance for two-engine and single engine operation. Climb charts are also included to present the maximum thrust climb performance for two-engine operation. These charts are used to obtain climb data after takeoff to selected altitude in a gear-up and flaps-up configuration.

MILITARY THRUST CLIMB

Military thrust climb charts (figure 11-23 for two-engine operation and figure 11-31 for single engine operation) are provided for various drag indexes and gross weights. The data includes climb speed schedule; combat ceiling and service ceiling; optimum cruise altitude; and separate charts for time, fuel, and distance required to climb from sea level to selected altitude at climb speed schedule. Also provided are data for peak rate of climb (figure 11-27) and instantaneous rate of climb (figure 11-28) for two-engine operation at military thrust.

MAXIMUM THRUST CLIMB

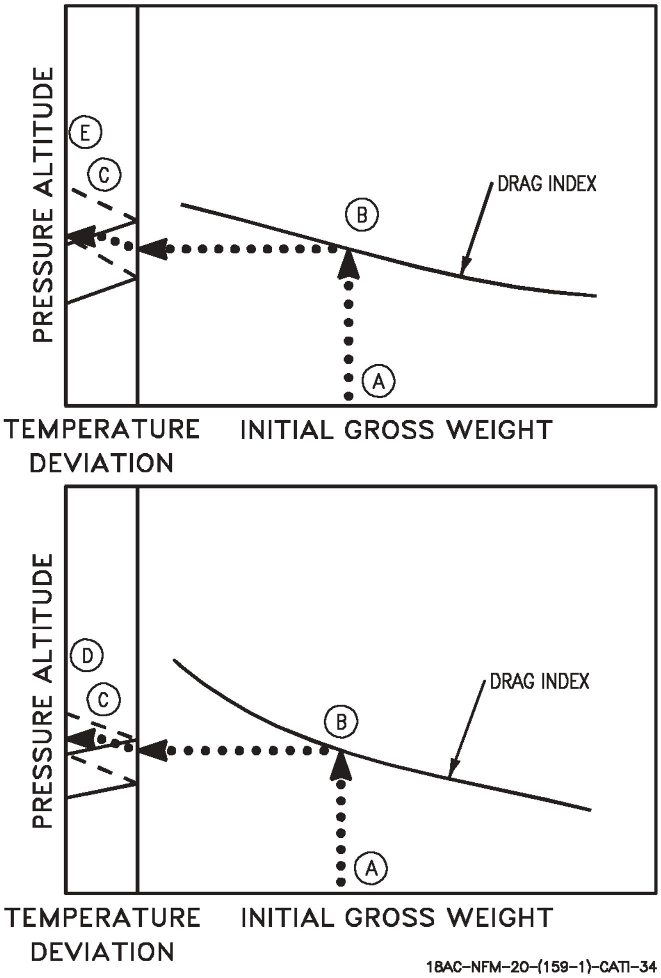
Maximum thrust climb charts for two-engine operation (figure 11-29) are provided for various drag indexes and gross weights. The data include peak rate of climb Mach number; combat ceiling; and separate charts for time, fuel, and distance required to climb from sea level to selected altitude at peak rate of climb. Also included are data for instantaneous rate of climb (figure 11-30).

USE

CLIMB SPEED SCHEDULE - From the appropriate drag index column determine the optimum climb speed (calibrated airspeed to constant Mach number) for the selected climb altitude. The preclimb fuel requirements should be noted if the takeoff acceleration phase is to be considered in the climb planning.

COMBAT CEILING AND SERVICE CEILING - Enter the chart with the initial climb gross weight and project vertically up to the appropriate drag index curve, then horizontally left to the temperature baseline and parallel the appropriate temperature deviation guideline to the correct temperature deviation. Project horizontally left to find the service ceiling and the combat ceiling for initial climb gross weight.

SAMPLE COMBAT CEILING AND SERVICE CEILING



18AC-NFM-20-(159-1)-CATI-34

Sample Problem

Combat Ceiling and Service Ceiling (figure 11-23, sheet 2)

A. Initial gross weight	44,000 Lb.
B. Drag Index	100
C. Temperature deviation from standard day	-10°C
D. Service ceiling	41,000 Ft.
E. Combat ceiling	39,500 Ft.

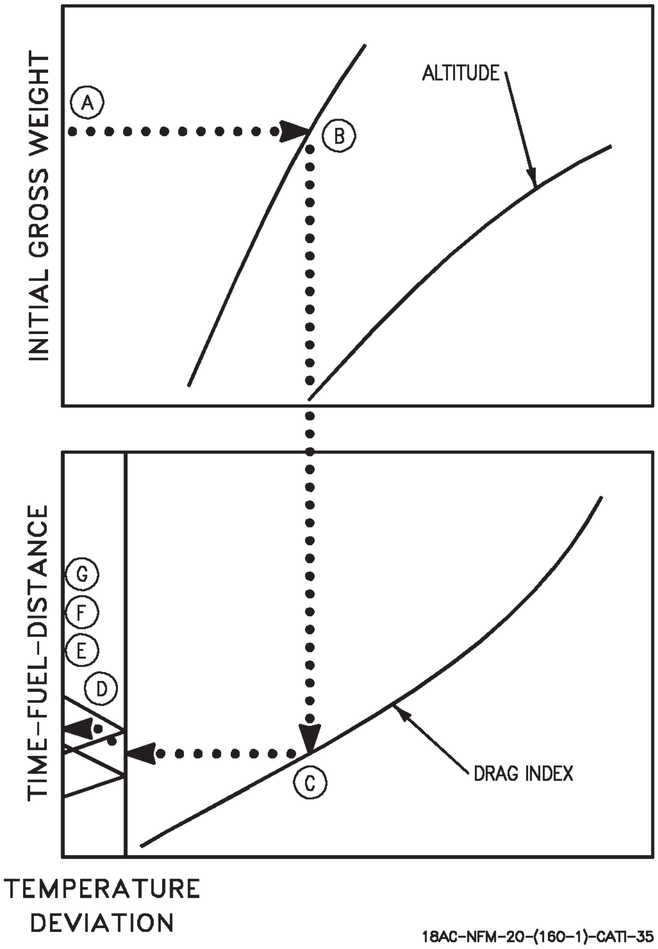
OPTIMUM CRUISE ALTITUDE - Enter the chart with the initial gross weight and project vertically up to the appropriate drag index curve, then horizontally left to the temperature baseline and parallel the appropriate temperature deviation guideline to the correct temperature deviation. Project horizontally left to find the optimum cruise altitude for initial climb gross weight.

Optimum Cruise Altitude (figure 11-23, sheet 3)

A. Initial gross weight	44,000 Lb.
B. Drag Index	100
C. Temperature deviation from standard day	-10°C
D. Optimum cruise altitude	36,450 Ft.

TIME, FUEL, AND DISTANCE - Presentations of these charts are identical: therefore, they are used in the same manner. Enter the appropriate chart with the initial gross weight and project horizontally right to intersect the desired altitude then vertically down to the appropriate drag index curve. From this point project horizontally left to the temperature baseline and parallel the appropriate temperature deviation guideline to the correct temperature deviation, project horizontally left to find time, fuel, or distance required.

SAMPLE TIME-FUEL-DISTANCE TO CLIMB



18AC-NFM-20-(160-1)-CATI-35

Time, Fuel, and Distance to Climb (figure 11-23, sheets 4, 5, & 6)

A. Initial gross weight	44,000 Lb.
B. Selected altitude	35,000 Ft.
C. Drag Index	100
D. Temperature deviation from standard day	+10°C
E. Time to climb	7.4 Min.
F. Fuel required	1480 Lb.
G. Distance	60NM

CLIMB CHARTS - 350 KCAS

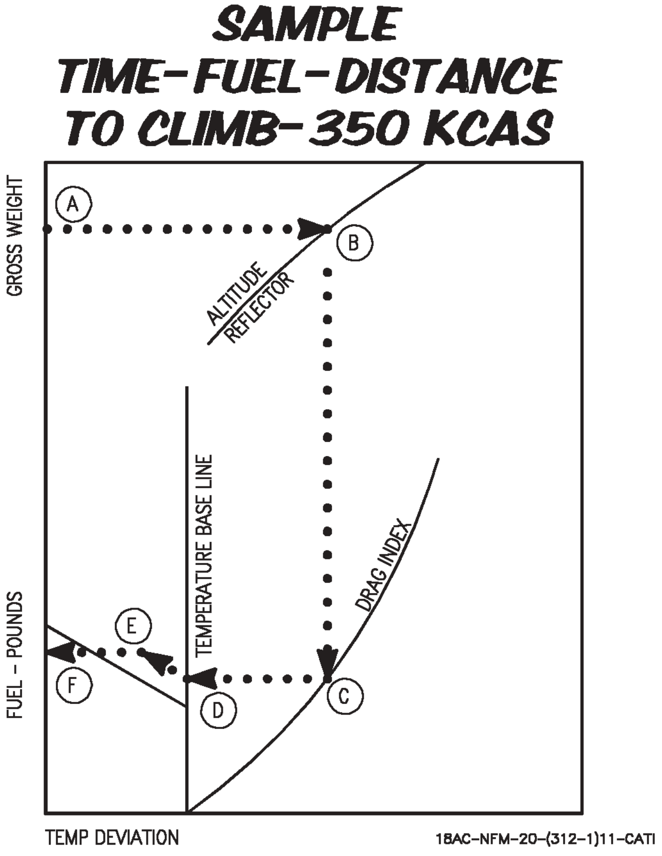
These charts (figure 11-24 thru figure 11-26) show time, fuel, and distance for a simplified military thrust climb. These data charts are based on climbing at 350 knots until interception of the constant Mach portion of the military thrust climb speed schedule, then maintaining constant Mach to cruise altitude.

USE

Enter the charts with the initial climb gross weight. Project horizontally to the right and intersect the assigned cruise altitude, or the optimum cruise altitude for the computed drag index. Project vertically downward to intersect the applicable drag index line, then project horizontally to the left to the temperature deviation baseline (corresponds to a U.S. Standard day (°C)). Parallel the applicable guideline (hotter or colder) to intersect a vertical grid line corresponding to the degree of deviation between forecast flight temperature and standard day temperature. From this point continue horizontally to the left to read the planning data (fuel, time, or distance).

Sample Problem

A. Gross Weight	35,000 Lb.
B. Cruise Altitude	30,000 Ft.
C. Drag index	150
D. Temperature baseline	
E. Temperature deviation	+5°C
F. Fuel required	1000 Lb.
Time to Climb	4.8 Min.
Distance nautical miles	33 NM



PEAK RATE OF CLIMB CHARTS

These charts provide peak rate of climb data for two-engine operation. The data are based on either military thrust (figure 11-27) or maximum thrust (figure 11-29) at selected altitudes, gross weights, and drag indexes. The charts include a climb schedule (Mach number) and the normal time, fuel, and distance required charts which are used in an identical manner as the military thrust climb charts based on the climb speed schedule. A combat ceiling chart is included for maximum thrust.

USE

MACH NUMBER - Enter the chart at the selected pressure altitude and project horizontally right to the appropriate drag index curve, then vertically down to find the Mach number for peak rate of climb.

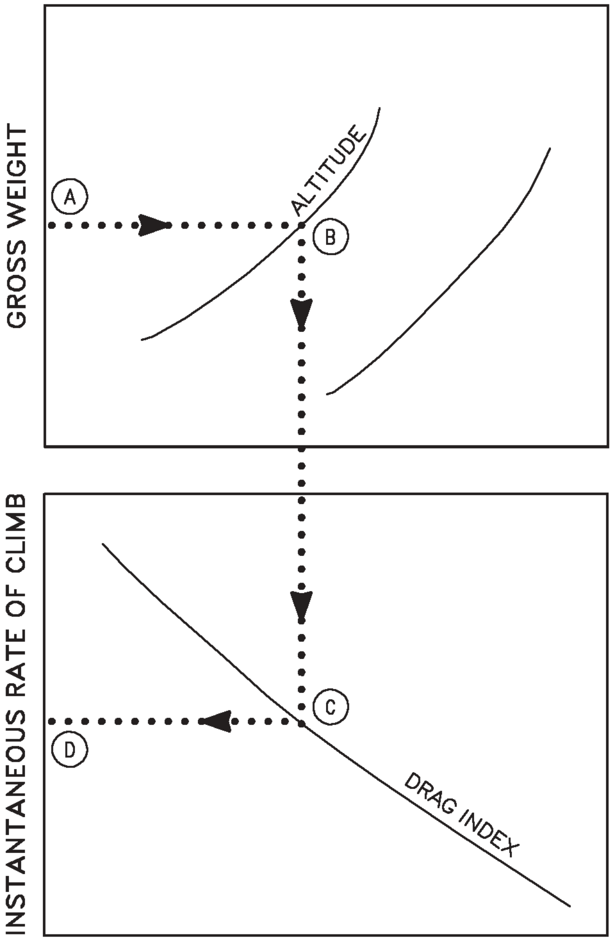
INSTANTANEOUS RATE OF CLIMB CHARTS

These charts are based on two-engine operation at military thrust (figure 11-28) or maximum thrust (figure 11-30) and provides instantaneous rate of climb for any given altitude gross weight combination with various drag indexes.

USE

Enter the chart with the appropriate gross weight and project horizontally right to the selected altitude curve. From this point, project vertically down to the computed drag index curve, then horizontally left to read the instantaneous rate of climb in feet per minute.

SAMPLE INSTANTANEOUS RATE OF CLIMB



1BAC-NFM-20-(161-1)11-CATI

Sample Problem

Instantaneous Rate of Climb (figure 11-28)

A. Gross weight	40,000 Lb.
B. Selected altitude	30,000 Ft.
C. Drag index	100
D. Instantaneous rate of climb	4,100 FPM

SUPERSONIC MAXIMUM THRUST CLIMB CHARTS

These charts (figure 11-32, sheets 1 thru 4) are plotted for supersonic maximum thrust climb from 35,000 feet to the supersonic combat ceiling. Distance traveled in the climb is plotted against gross weight, with guidelines provided to show the weight reduction as the climb progresses. The time to distance/altitude relationship is superimposed on the plot. Level flight acceleration data are provided which includes time, fuel used (gross weight change), and distance required to accelerate from the subsonic to the supersonic climb Mach number at 35,000 feet. If supersonic climb is contemplated, acceleration at 35,000 feet followed by the climb is recommended, since acceleration to supersonic Mach numbers at this altitude provides for the optimum performance capability.

USE

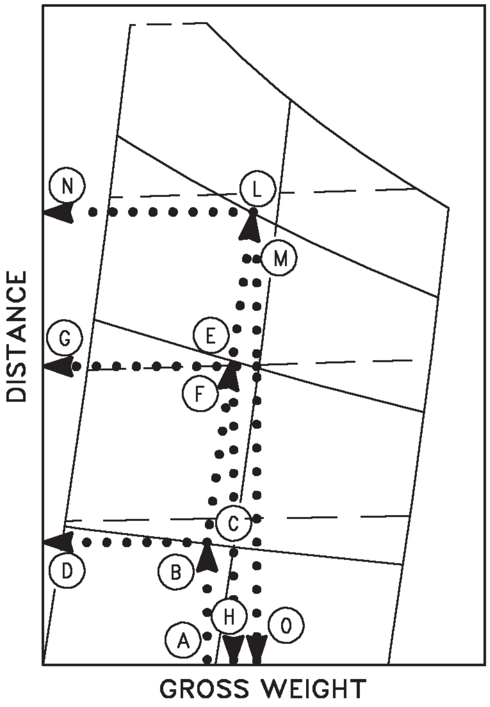
Enter the chart with the gross weight and proceed vertically to the initial Mach number and note the corresponding distance and time. Proceed parallel to the guidelines to the desired supersonic climb Mach number (end of acceleration). Project both vertically downward and horizontally to the left from this point to read gross weight and distance traveled, also note the time. From these values, subtract the distance, weight, and time corresponding to the initial Mach number to determine the distance, fuel, and time required to accelerate. From the climb Mach number gross weight intersection (start of climb), proceed parallel along the guidelines to the desired altitude. Obtain the distance, gross weight, and time for this starting point. Subtract from this data the corresponding values at the start of climb to obtain the distance traveled, the weight change (fuel used), and the time required to complete the climb. If total distance, fuel and time are desired, add the climb and acceleration values together.

Sample Problem

Configuration: (2)AIM-9 +(2)AIM-7

A. Initial gross weight	42,000 Lb.
B. Initial Mach number	1.1
C. Time corresponding to initial Mach number	0.7 Min.
D. Distance corresponding to initial Mach number	6.9 NM
E. Climb Mach number	1.24
F. Time at end of acceleration	1.3 Min.
G. Distance at end of acceleration	13.0 NM
H. Gross weight at end of acceleration	41,500 Lb.
I. Time required for acceleration (F-C)	0.6 Min.
J. Fuel required for acceleration (A-H)	500 Lb.
K. Distance required for acceleration (G-D)	6.1 NM
L. Altitude at end of climb	46,000 Ft.
M. Time at end of climb	3.7 Min.
N. Distance at end of climb	42.0 NM
O. Gross weight at end of climb	40,500 Lb.
P. Time required for climb (M-F)	2.4 Min.
Q. Distance required for climb (N-G)	29.0 NM
R. Fuel required for climb (H-O)	1,000 Lb.
S. Total time required to accelerate and climb (I+P)	3.0 Min.
T. Total distance required to accelerate and climb (K+Q)	35.1 NM
U. Total fuel required to accelerate and climb (J+R)	1,500 Lb.

SAMPLE SUPERSONIC MAXIMUM THRUST CLIMB



18AC-NFM-20-(311-1)11-CATI

SINGLE ENGINE RATE OF CLIMB LAUNCH/TAKEOFF CONFIGURATION CHARTS

These charts (figure 11-33, sheets 1 thru 12) provide the single engine rate of climb capability in the catapult launch and field takeoff (half flaps, gear down) configurations with both maximum afterburner and military rated thrust on the operating engine. Charts are provided for six different external store loadings. The single engine rate of climb achievable with external stores jettisoned is also provided on each chart. Single engine rate of climb is presented as a function of temperature, gross weight, angle of attack, and airspeed. Dual engine operational launch endspeeds are provided for reference on each of the charts.

USE

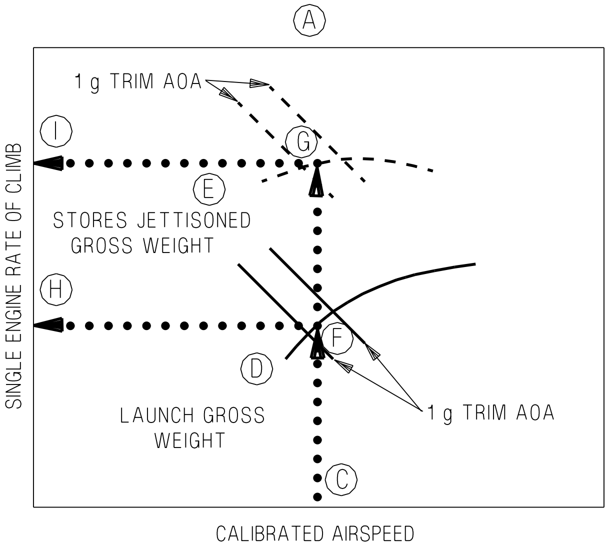
Enter the chart representing the applicable air temperature at the desired airspeed and project vertically upward until intersecting the appropriate gross weight curve. From this intersection, read the angle of attack required to maintain 1 g, unaccelerated flight at this condition and then project horizontally left to obtain the corresponding single engine rate of climb. For air temperatures between the values listed at the top of each chart, linear interpolation between the two applicable charts must be used.

Sample Problem

FE + 330 Gallon Centerline Tank, (2)AIM-9 + (2)AIM-7 + 330 Gallon Centerline Fuel Tank, Maximum thrust launch power seting (figure 11-33, sheet 3)

A. Temperature	59°F
B. $V_{operational}$ endspeed (from operational endspeed table at top of chart)	166 knot
C. $V_{single\ engine}$ endspeed (assume 5 knot reduction in endspeed due to single engine thrust loss)	161 knot
D. Launch weight	40,000 lb
E. Stores jettisoned weight	36,000 lb
F. Stores retained 1g trim AOA	9.3°
G. Stores jett 1g trim AOA	7.2°
H. Stores retained SEROC	1,820 fpm
I. Stores jettisoned SEROC	2,730 fpm

SAMPLE SINGLE ENGINE RATE OF CLIMB



ADA523-309-1-017

ADJUSTMENT TO SEROC FOR RETRACTING LANDING GEAR CHART

This chart (figure 11-33A) provides the effect of raising the landing gear on single engine rate of climb capability in the catapult launch and field takeoff (half flaps, gear down) configurations with maximum afterburner thrust on the operating engine. Gear up single engine rate of climb is presented as a function of gear down single engine rate of climb and the angle of attack required to maintain 1g, unaccelerated flight as determined from figure 11-33, sheets 1 through 12.

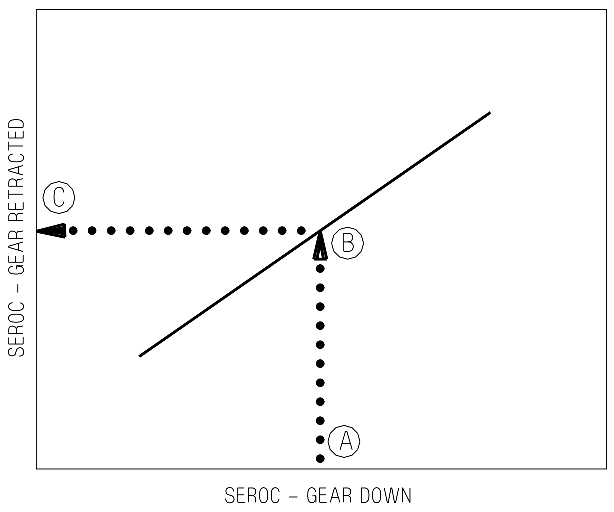
USE

Enter the chart with the gear down single engine rate of climb established using figure 11-33 and project vertically upward to the appropriate angle of attack. From this intersection, project horizontally left to obtain the corresponding gear up single engine rate of climb.

Sample Problem

A Gear down SEROC	2,730 fpm
B. 1g trim AOA	7.2°
C. Gear up SEROC	3,340 fpm

SAMPLE ADJUSTMENT TO SEROC FOR RETRACTING LANDING GEAR



ADA523-489-1-017

TAKEOFF ALLOWANCES AND ACCELERATION TO CLIMB SPEED

F404-GE-400

AIRCRAFT CONFIGURATION	REMARKS
VARIOUS DRAG INDEXES	ENGINE(S): (2) F4O4-GE-4OO U.S. STANDARD DAY, 1962

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

START = 10 LB /ENG

TAXI AT IDLE = 14 LB /MIN /ENG

ENGINE RUNUP, 30 SEC AT MIL = 66 LB /ENG

BRAKE RELEASE TO CLIMB SPEED (NOMINAL VALUES)					
		MIL TAKEOFF MIL ACCEL TO 350 KNOTS	MIL TAKEOFF MIL ACCEL TO MIL CLIMB SPEED	MAX TAKEOFF MIL ACCEL TO MIL CLIMB SPEED	MAX TAKEOFF MAX ACCEL TO MAX CLIMB SPEED
DI =0 TO 75 TOGW= 38,000 LB.	TIME (MIN) FUEL (LB) DIST (NM)	0.9 260 2.5	1.3 400 5.6	1.2 540 5.4	0.8 850 3.5
DI > 75 TOGW= 50,000 LB.	TIME (MIN) FUEL (LB) DIST (NM)	1.4 410 4.1	1.5 440 4.7	1.3 670 4.4	1.1 1120 4.0

Figure 11- 22. Takeoff Allowances and Acceleration to Climb Speed - F404-GE-400.

CLIMB SPEED SCHEDULE
F404-GE-400
MILITARY THRUST

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES
ALL GROSS WEIGHTS

REMARKS
ENGINE(S): (2) F4O4-GE-4OO
U.S. STANDARD DAY, 1962

DATE: 16 JULY 1986
DATA BASIS: **ESTIMATED**
(BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

		AIRCRAFT DRAG INDEX													
		0		25		50		75		100		125		150	
		KCAS	MACH	KCAS	MACH	KCAS	MACH	KCAS	MACH	KCAS	MACH	KCAS	MACH	KCAS	MACH
PRESSURE ALTITUDE 1000FT	S.L.	515	.78	500	.76	490	.74	425	.64	360	.54	340	.51	320	.48
	5	515	.84	500	.83	490	.80	425	.70	360	.59	340	.56	320	.53
	10	478	.85	472	.84	466	.83	425	.76	360	.65	340	.61	320	.58
	15	438	.85	432	.84	426	.83	426	.83	360	.71	340	.67	320	.63
	20	398	.85	394	.84	391	.83	391	.83	360	.77	340	.73	320	.69
	25	361	.85	356	.84	352	.83	352	.83	342	.81	340	.80	320	.76
	30	325	.85	321	.84	317	.83	317	.83	308	.81	308	.81	304	.80
	35	291	.85	287	.84	284	.83	276	.83	276	.81	276	.81	272	.80
	40	259	.85	256	.84	253	.83	246	.83	246	.81	246	.81	242	.80

		AIRCRAFT DRAG INDEX											
		175		200		225		250		275		300	
		KCAS	MACH	KCAS	MACH	KCAS	MACH	KCAS	MACH	KCAS	MACH	KCAS	MACH
PRESSURE ALTITUDE 1000FT	S.L.	305	.46	285	.43	285	.43	280	.42	270	.41	260	.39
	5	305	.50	285	.47	285	.47	280	.46	270	.45	260	.43
	10	305	.55	285	.51	285	.51	280	.51	270	.49	260	.47
	15	305	.60	285	.56	285	.56	280	.55	270	.54	260	.52
	20	305	.66	285	.62	285	.62	280	.61	270	.59	260	.57
	25	305	.73	285	.68	285	.68	280	.67	270	.65	260	.63
	30	304	.80	285	.75	285	.75	280	.74	270	.72	260	.69
	35	272	.80	269	.79	265	.78	257	.76	250	.74	243	.72
	40	242	.80	240	.79	236	.78	229	.76	222	.74	216	.72

NOTE

FUEL ALLOWANCE FOR TAKEOFF AND ACCELERATION TO CLIMB SPEED IS 12OO POUNDS, AND IS BASED ON START, 2O MINUTES AT IDLE, 3O SECONDS RUNUP AT MIL, AND A MIL POWER TAKEOFF.

Figure 11-23. Military Thrust Climb - F404-GE-400
(Sheet 1 of 6)

COMBAT CEILING AND SERVICE CEILING

F404-GE-400
MILITARY THRUST

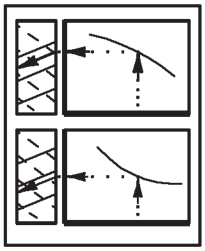
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
COMBAT CEILING
= 500 FPM
SERVICE CEILING
= 100 FPM

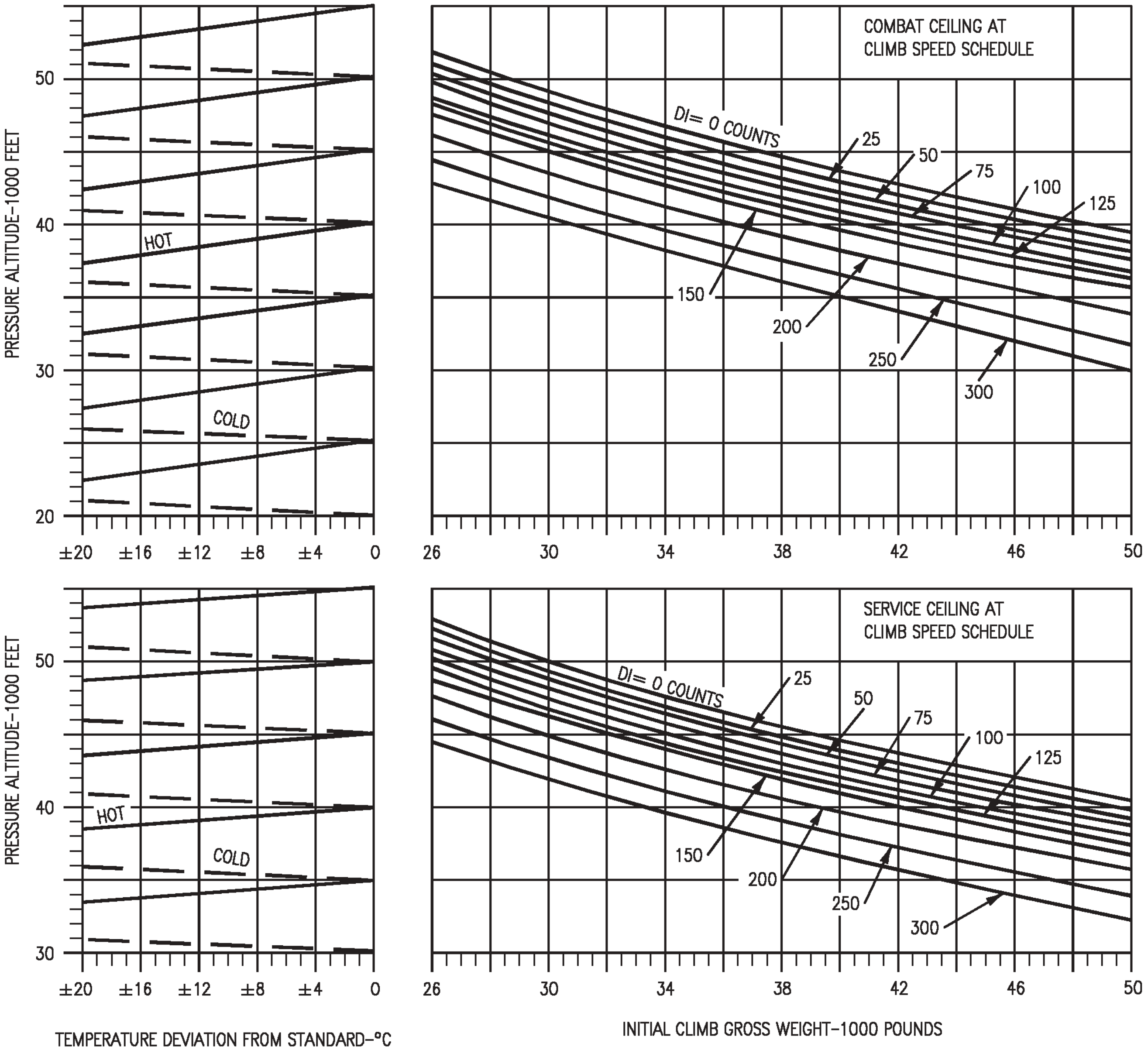
DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	-5	12
15,000	-15	6
20,000	-25	-12
25,000	-35	-30
30,000	-44	-48
35,000	-54	-66
40,000	-57	-70
70,000	-57	-70

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(162-1)11-CATI

Figure 11-23. Military Thrust Climb - F404-GE-400
(Sheet 2 of 6)

OPTIMUM CRUISE ALTITUDE

F404–GE–400

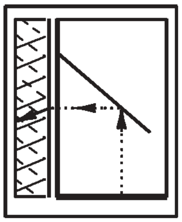
MILITARY THRUST

REMARKS
ENGINE(S): (2)F404–GE–400

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

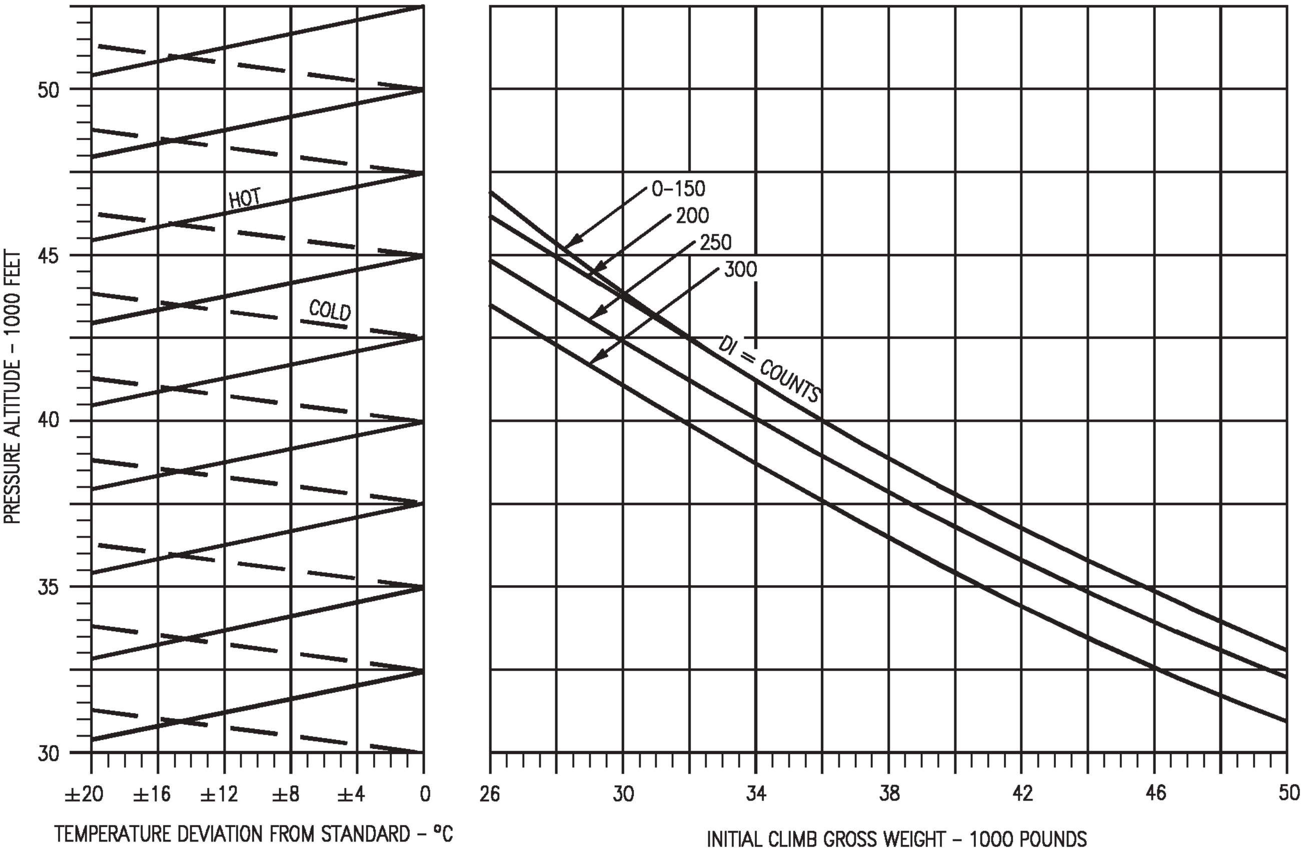
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(162–2)12–CATI

Figure 11-23. Military Thrust Climb - F404-GE-400
(Sheet 3 of 6)

TIME REQUIRED TO CLIMB

F404–GE–400

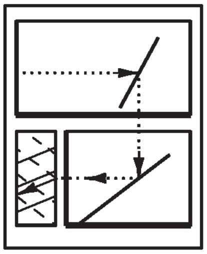
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

MILITARY THRUST
CLIMB SPEED SCHEDULE

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

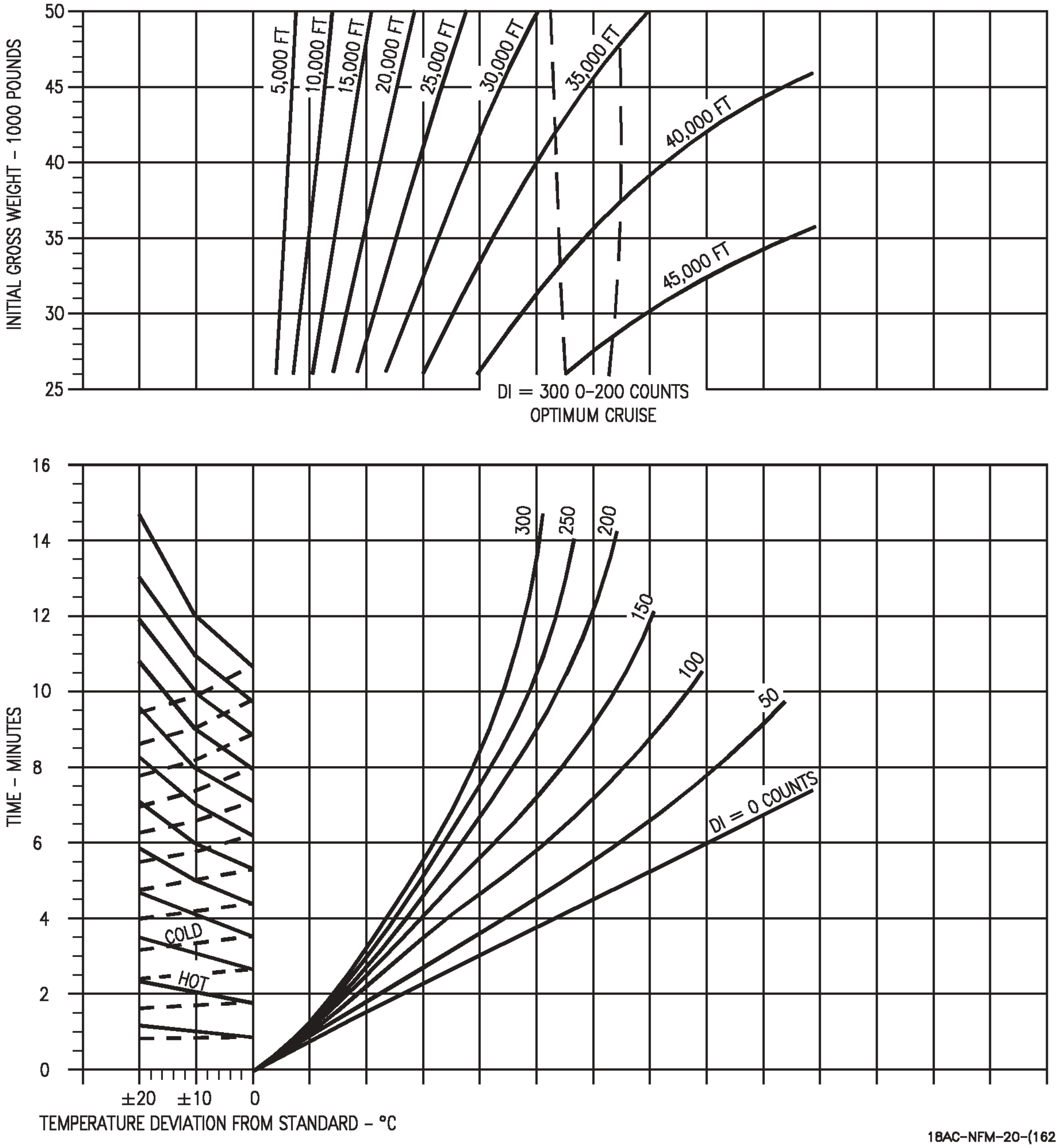
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(162–3)12–CATI

Figure 11-23. Military Thrust Climb - F404-GE-400
(Sheet 4 of 6)

FUEL REQUIRED TO CLIMB

F404–GE–400

MILITARY THRUST

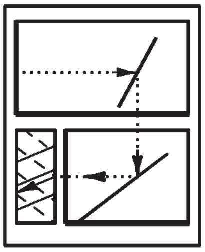
CLIMB SPEED SCHEDULE

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

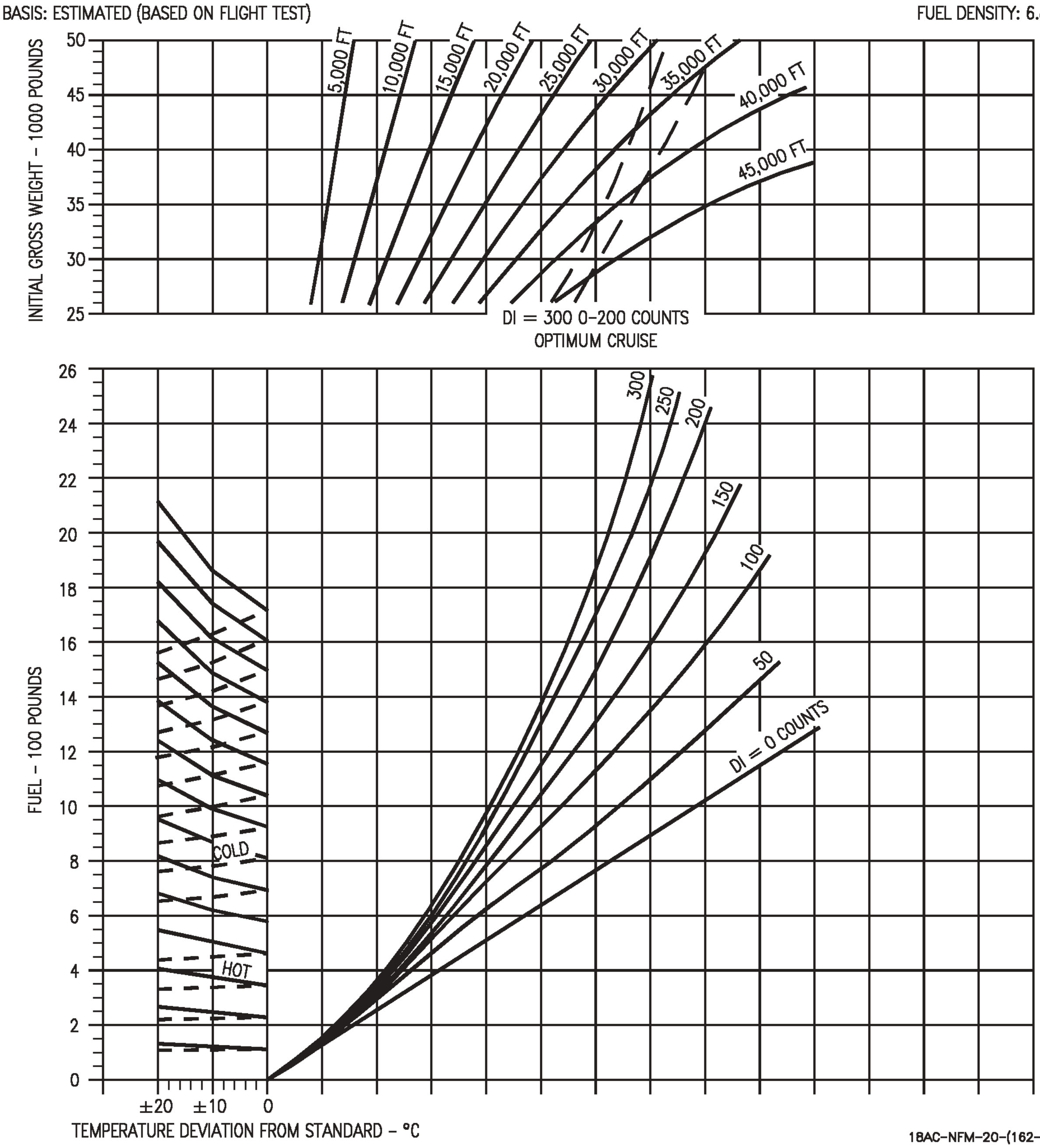
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(162–4)12–CATI

Figure 11-23. Military Thrust Climb - F404-GE-400
(Sheet 5 of 6)

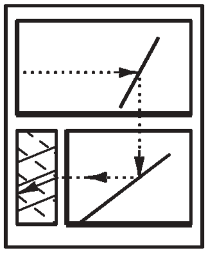
DISTANCE REQUIRED TO CLIMB

F404–GE–400
MILITARY THRUST
CLIMB SPEED SCHEDULE
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

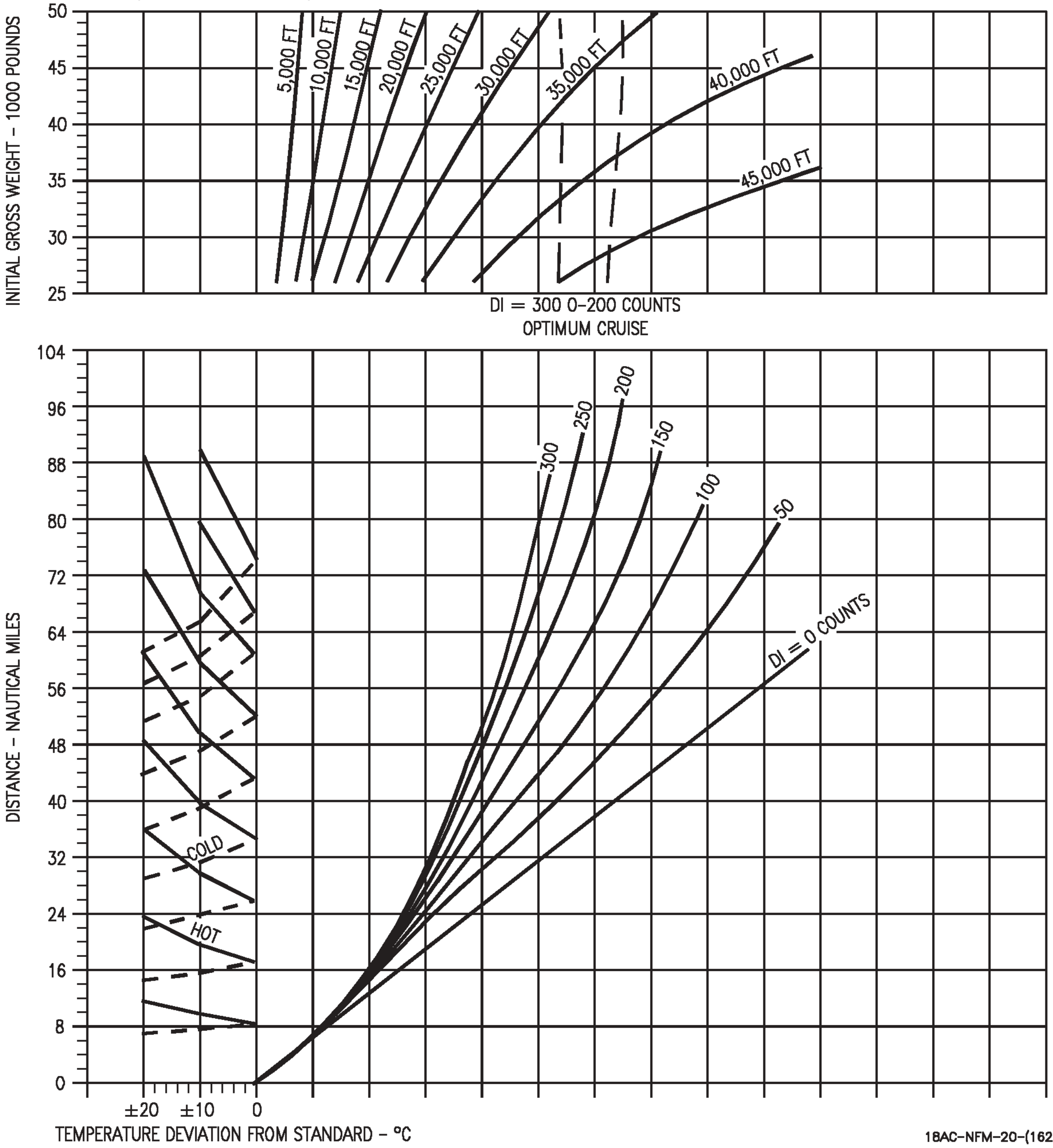
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(162–5)12–CATI

Figure 11-23. Military Thrust Climb - F404-GE-400
(Sheet 6 of 6)

TIME REQUIRED TO CLIMB

F404-GE-400

MILITARY THRUST
350 KCAS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

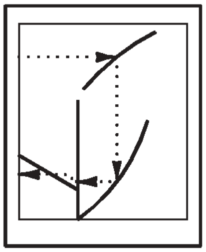
REMARKS
ENGINE(S): (2) F404-GE-400
U.S. STANDARD DAY, 1962

NOTE

DATA BASED ON 350 KNOT CLIMB UNTIL INTERCEPTION OF CONSTANT MACH PORTION OF MILITARY THRUST CLIMB SPEED SCHEDULE, THEN MAINTAIN CONSTANT MACH TO CRUISE ALTITUDE.

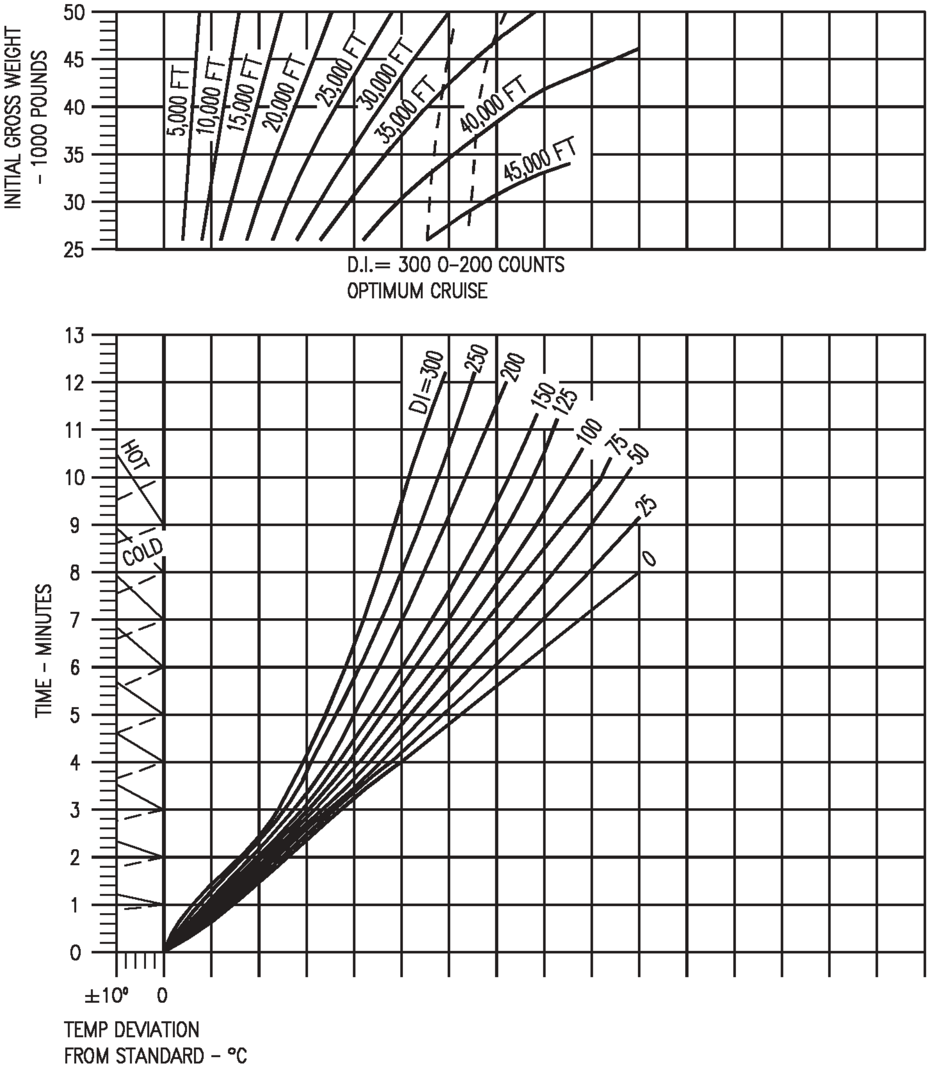
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	-5	12
15,000	-15	6
20,000	-25	-12
25,000	-35	-30
30,000	-44	-48
35,000	-54	-66
40,000	-57	-70
70,000	-57	-70

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(312-2)12-CATI

Figure 11-24. Time to Climb - Military Thrust - 350 KCAS - F404-GE-400

FUEL REQUIRED TO CLIMB

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

F404–GE–400
MILITARY THRUST
350 KCAS

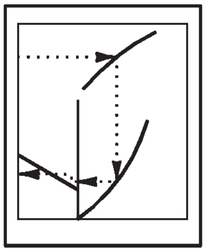
REMARKS
ENGINE(S): (2) F404–GE–400
U.S. STANDARD DAY, 1962

NOTE

DATA BASED ON 350 KNOT CLIMB UNTIL INTERCEPTION OF CONSTANT MACH PORTION OF MILITARY THRUST CLIMB SPEED SCHEDULE, THEN MAINTAIN CONSTANT MACH TO CRUISE ALTITUDE.

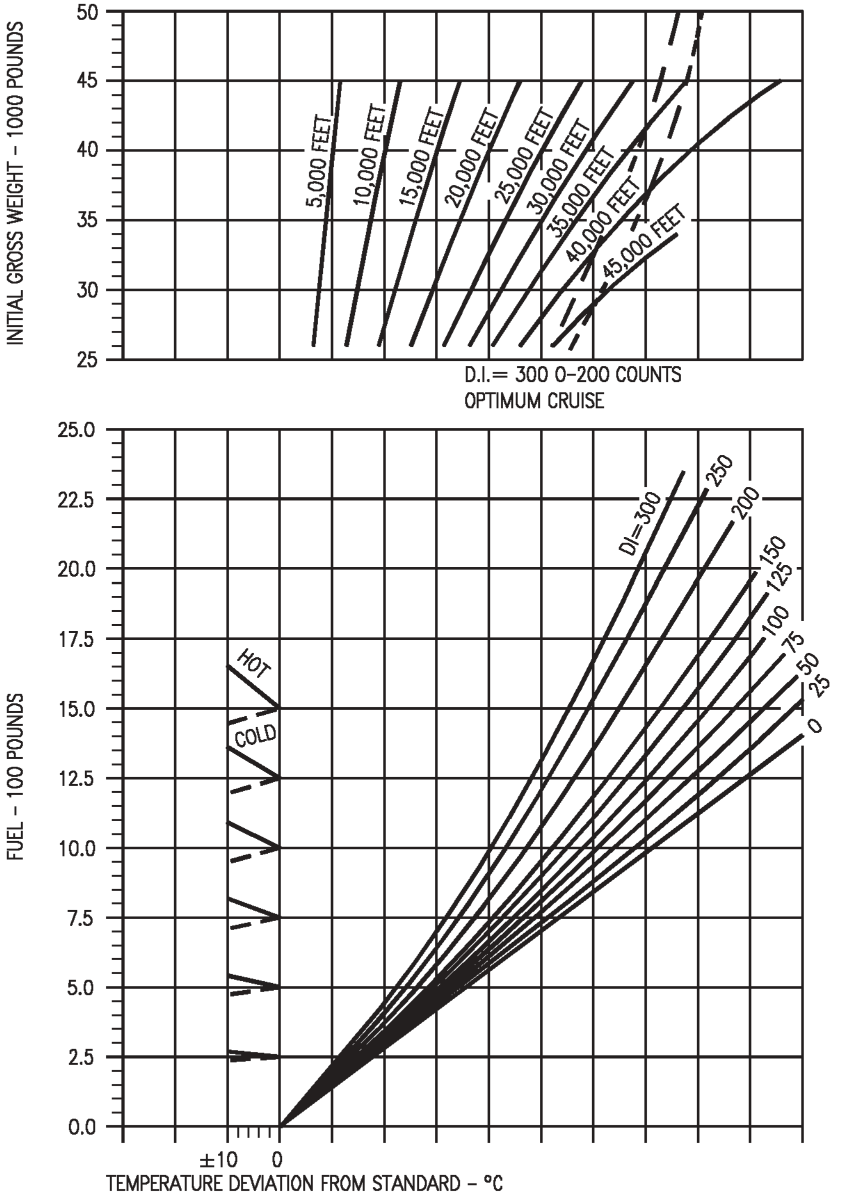
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(314–1)12–CATI

Figure 11-25. Fuel to Climb - Military Thrust - 350 KCAS - F404-GE-400

DISTANCE REQUIRED TO CLIMB

F404–GE–400
MILITARY THRUST
350 KCAS

REMARKS
ENGINE(S): (2) F404–GE–400
U.S. STANDARD DAY, 1962

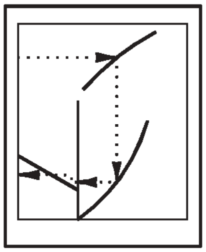
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

NOTE

DATA BASED ON 350 KNOT CLIMB UNTIL INTERCEPTION OF CONSTANT MACH PORTION OF MILITARY THRUST CLIMB SPEED SCHEDULE, THEN MAINTAIN CONSTANT MACH TO CRUISE ALTITUDE.

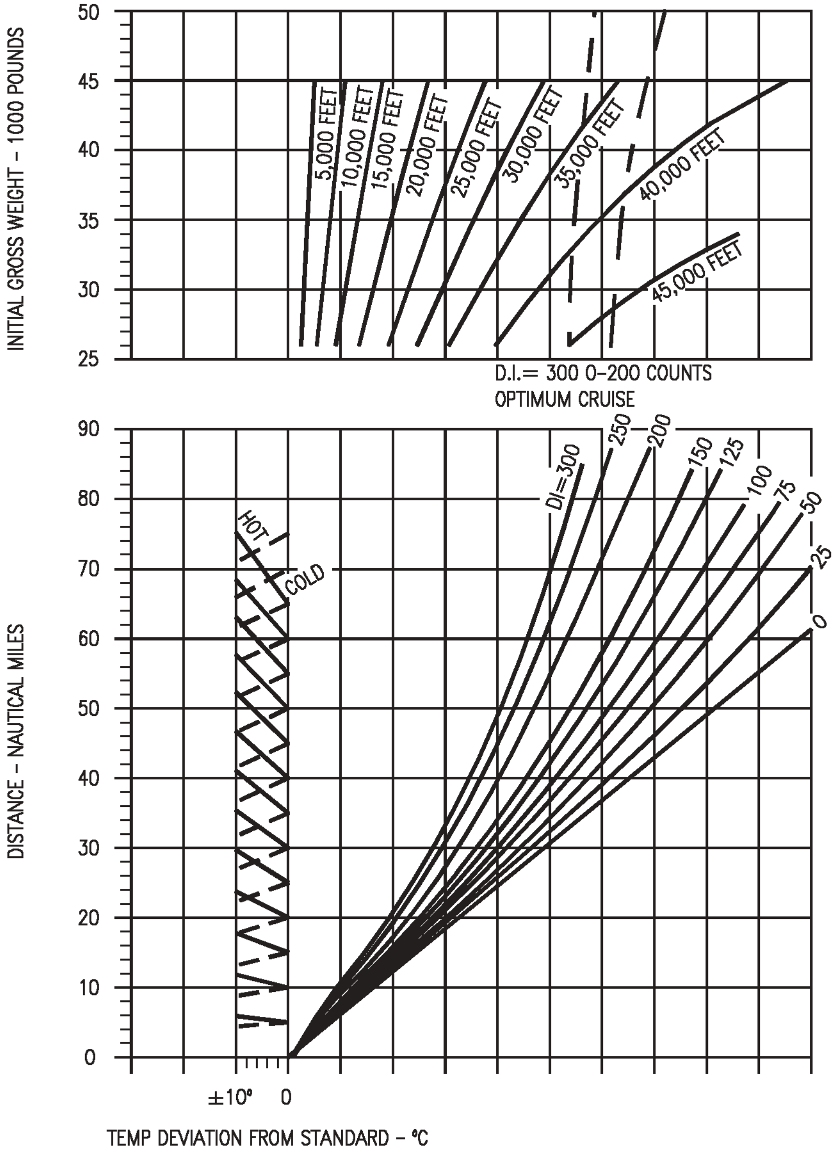
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(313–1)12–CATI

Figure 11-26. Distance To Climb - Military Thrust - 350 KCAS - F404-GE-400

PEAK RATE OF CLIMB

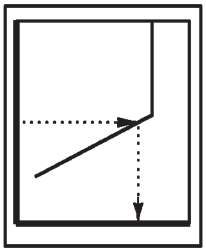
F404–GE–400

MILITARY THRUST
MACH NUMBER

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

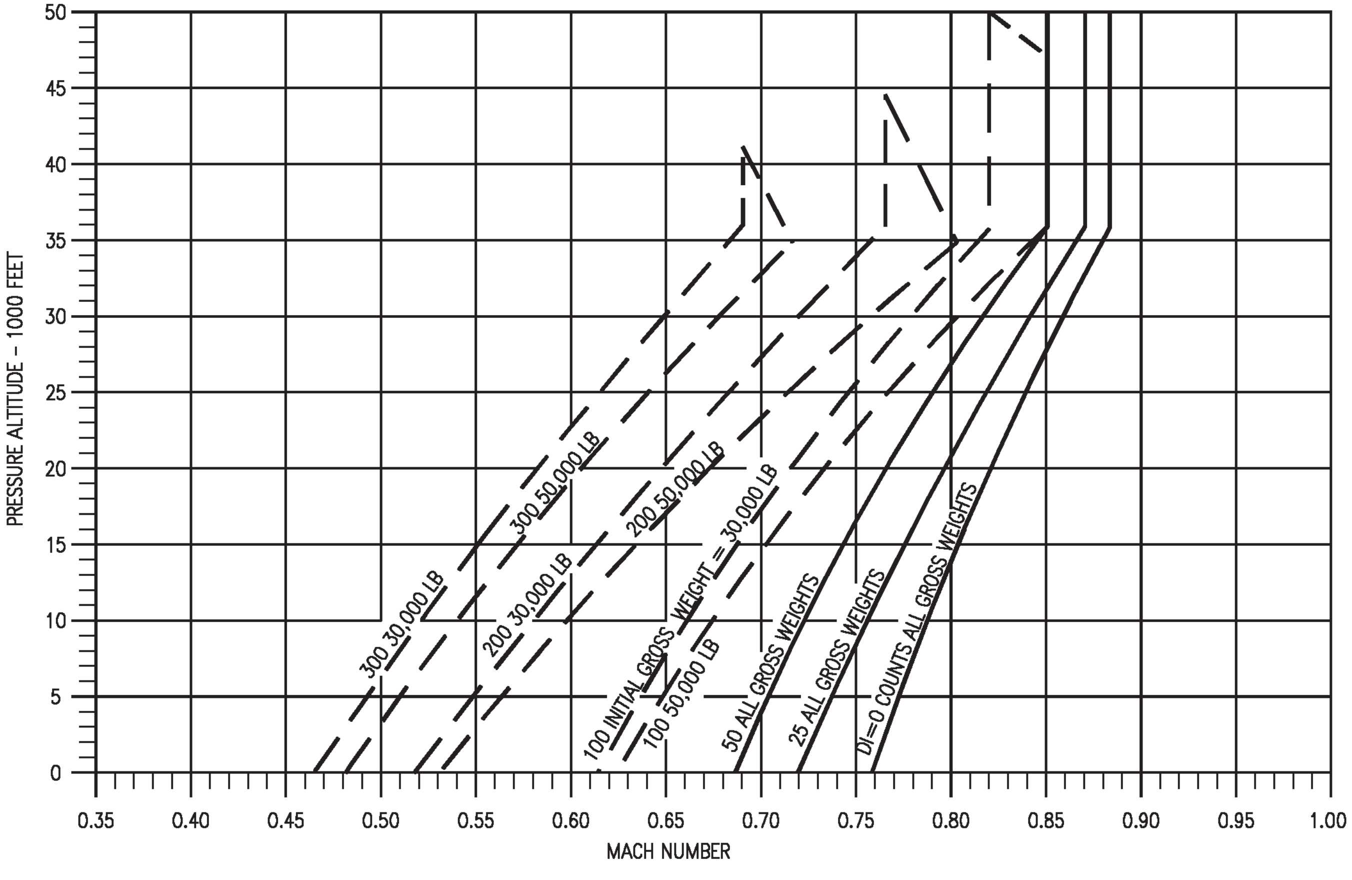
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(163–1)12–CATI

Figure 11-27. Peak Rate of Climb - Military Thrust - F404-GE-400
(Sheet 1 of 4)

TIME REQUIRED TO CLIMB

F404–GE–400

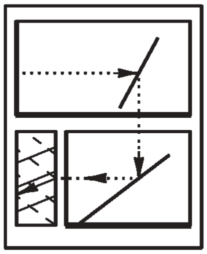
MILITARY THRUST
PEAK RATE OF CLIMB

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

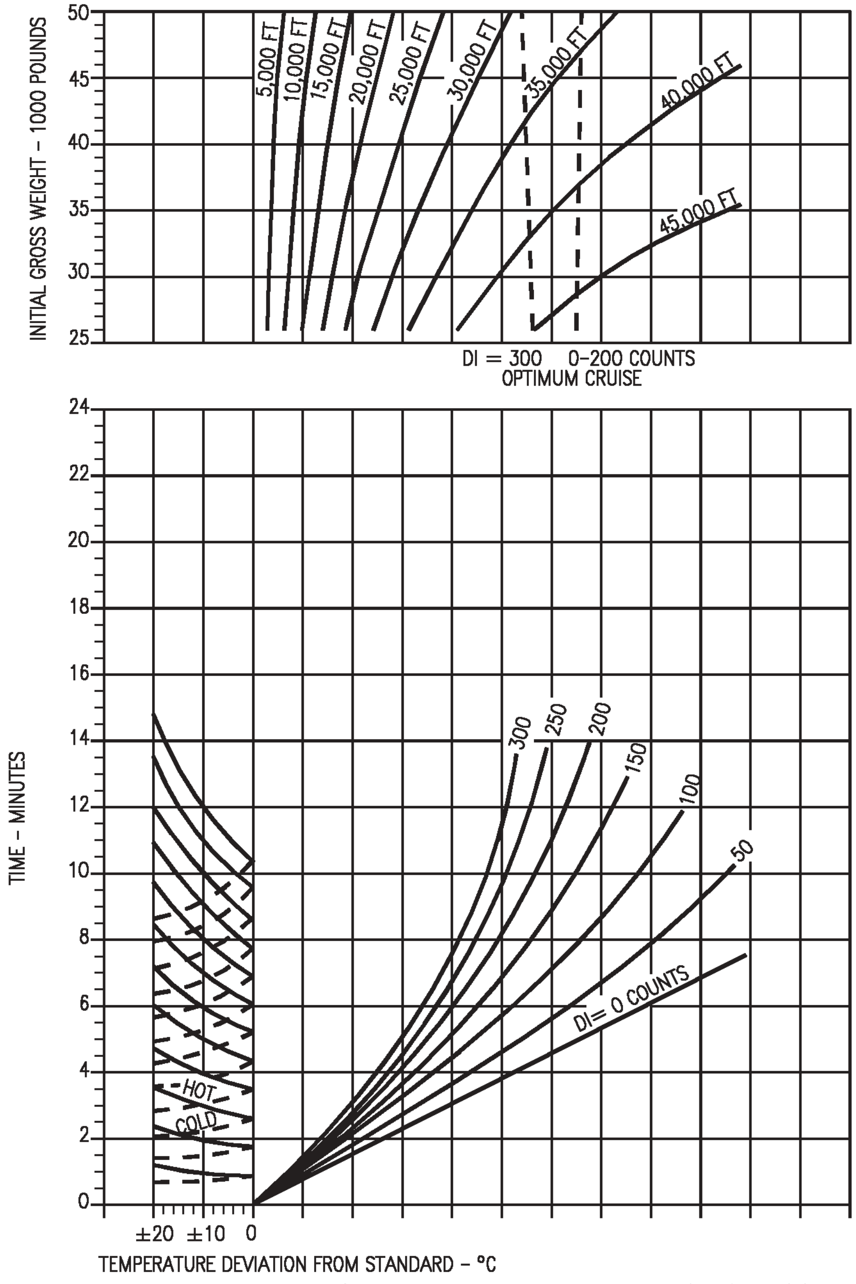
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(163–2)12–CATI

Figure 11-27. Peak Rate of Climb - Military Thrust - F404-GE-400
(Sheet 2 of 4)

FUEL REQUIRED TO CLIMB

F404–GE–400

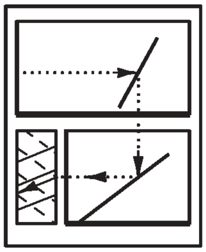
MILITARY THRUST
PEAK RATE OF CLIMB

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

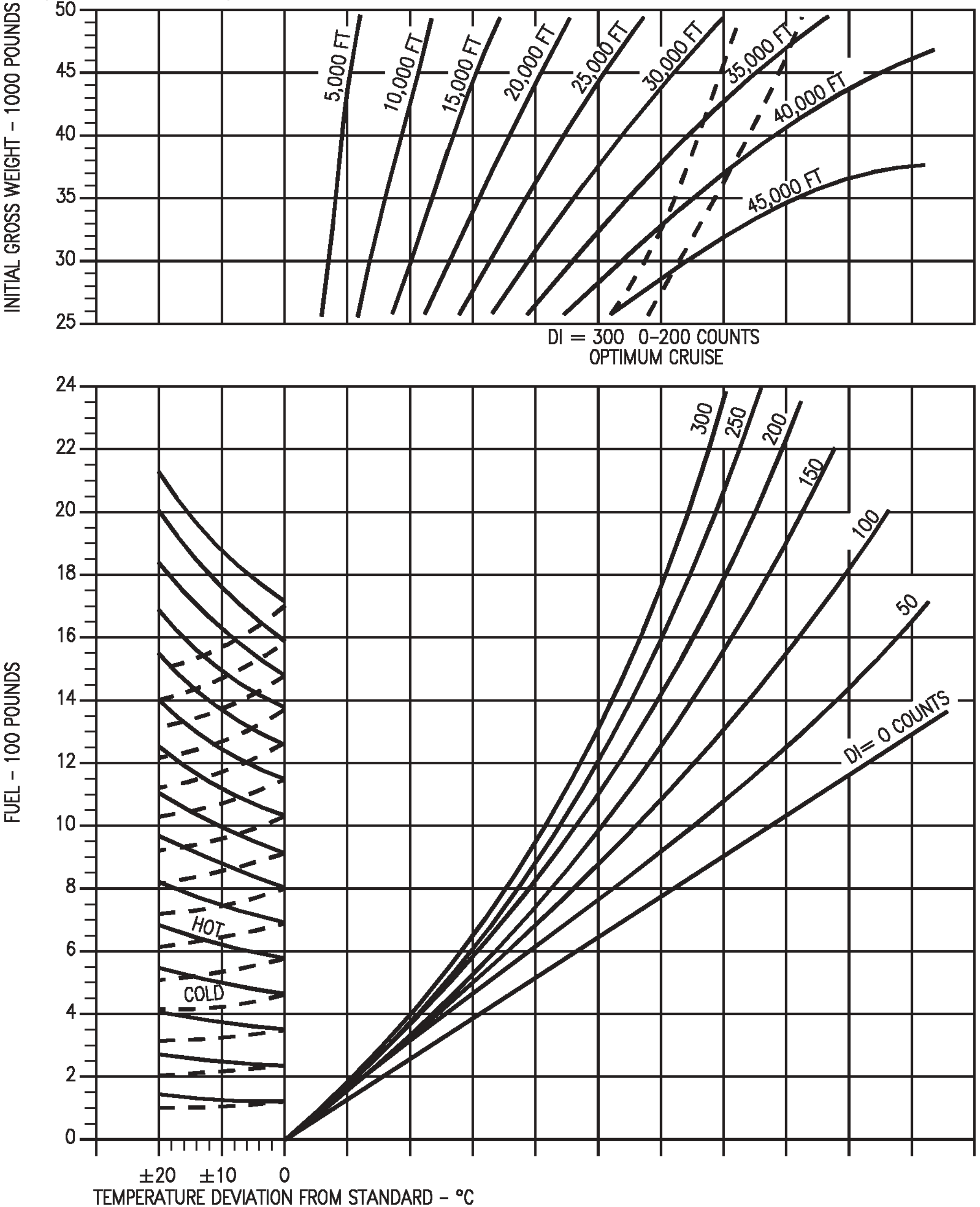
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(163–3)12–CATI

Figure 11-27. Peak Rate of Climb - Military Thrust - F404-GE-400
(Sheet 3 of 4)

DISTANCE REQUIRED TO CLIMB

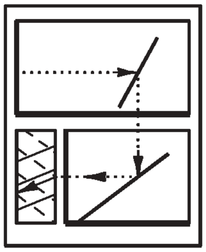
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

F404–GE–400
MILITARY THRUST
PEAK RATE OF CLIMB

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

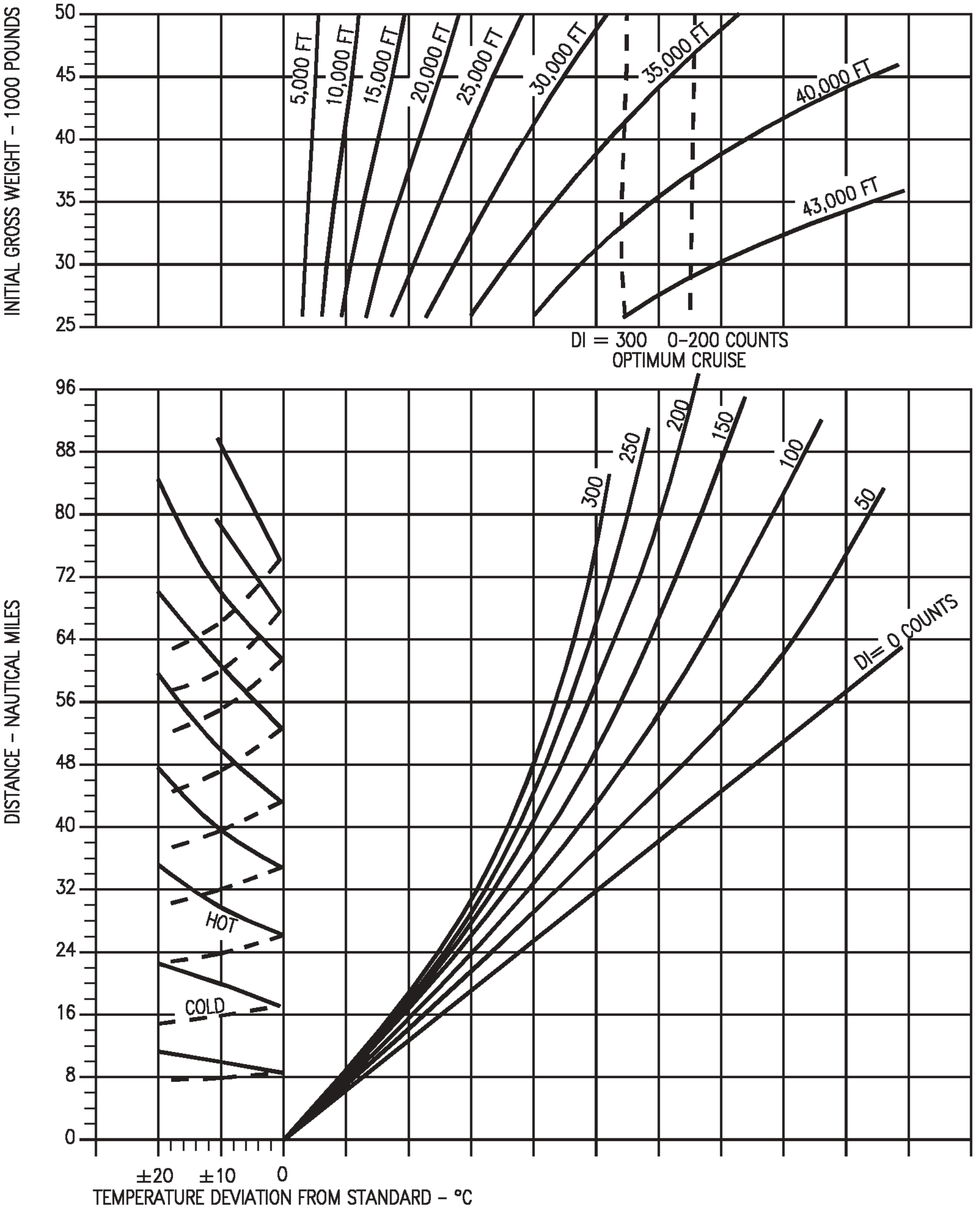
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(163–4)12–CATI

Figure 11-27. Peak Rate of Climb - Military Thrust - F404-GE-400
(Sheet 4 of 4)

INSTANTANEOUS RATE OF CLIMB

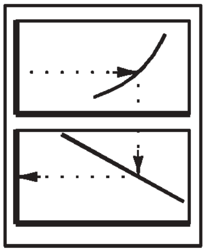
F404-GE-400

MILITARY THRUST
PEAK RATE OF CLIMB

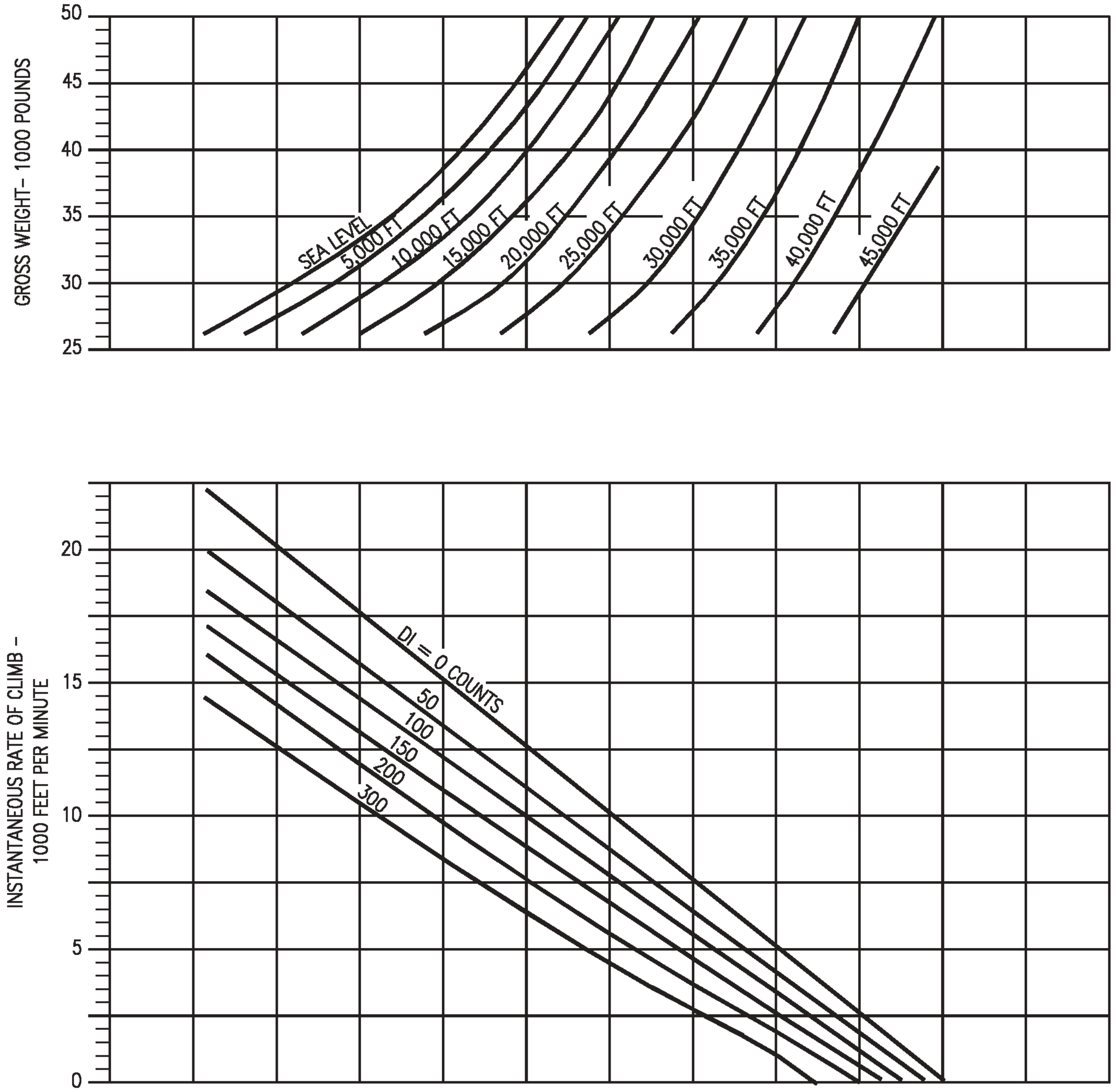
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(164-1)11-CATI

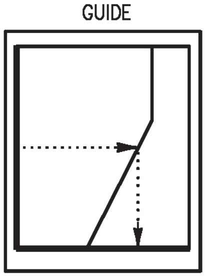
Figure 11-28. Instantaneous Rate of Climb - Military Thrust - F404-GE-400

PEAK RATE OF CLIMB

F404–GE–400
MAXIMUM THRUST
MACH NUMBER

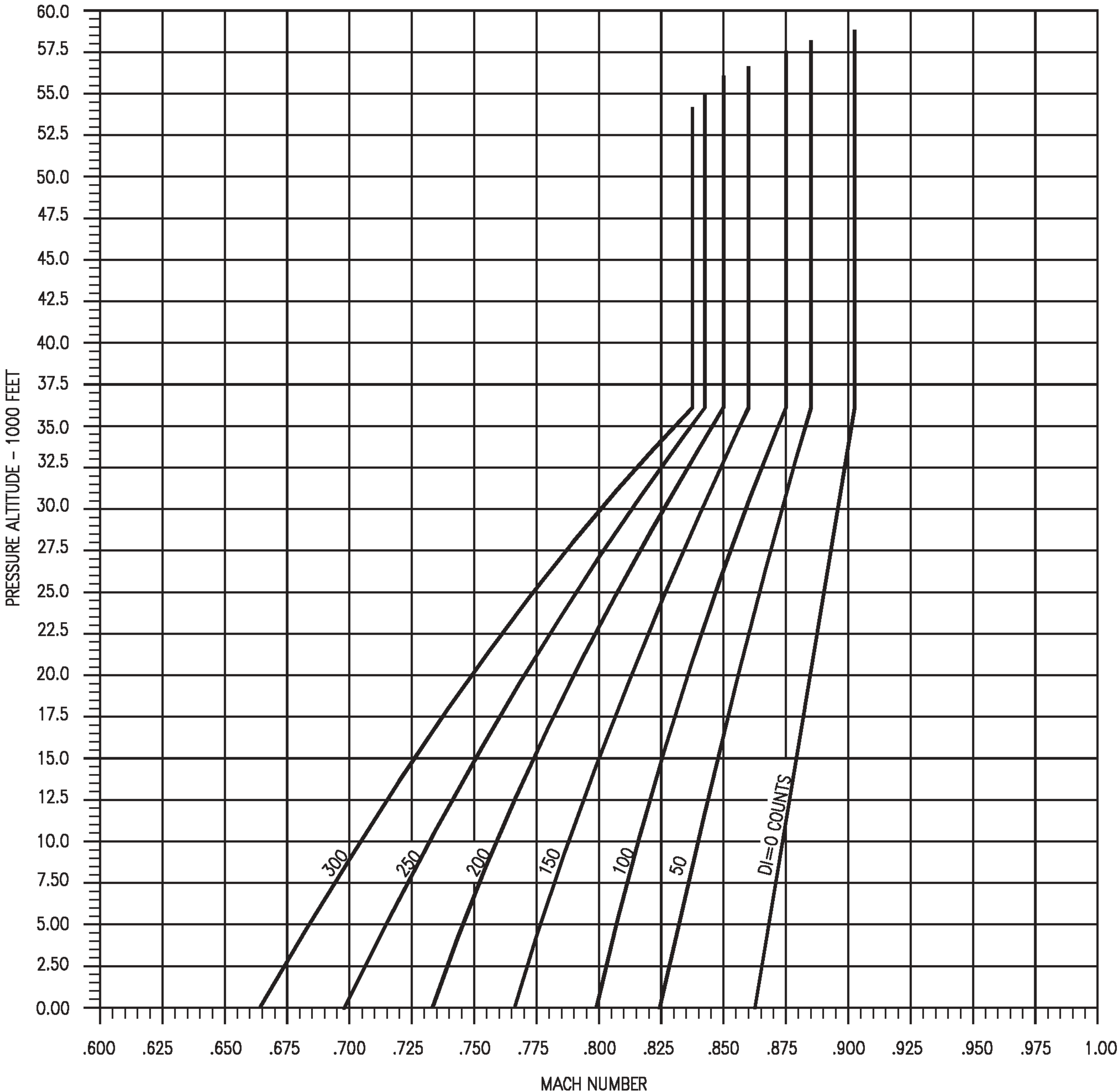
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(271–1)12–CATI

Figure 11-29. Peak Rate of Climb - Maximum Thrust - F404-GE-400
(Sheet 1 of 5)

COMBAT CEILING

F404−GE−400

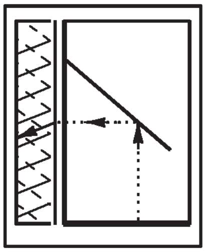
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

MAXIMUM THRUST

REMARKS
ENGINE(S): (2)F404−GE−400
U.S. STANDARD DAY, 1962
COMBAT CEILING=500fpm

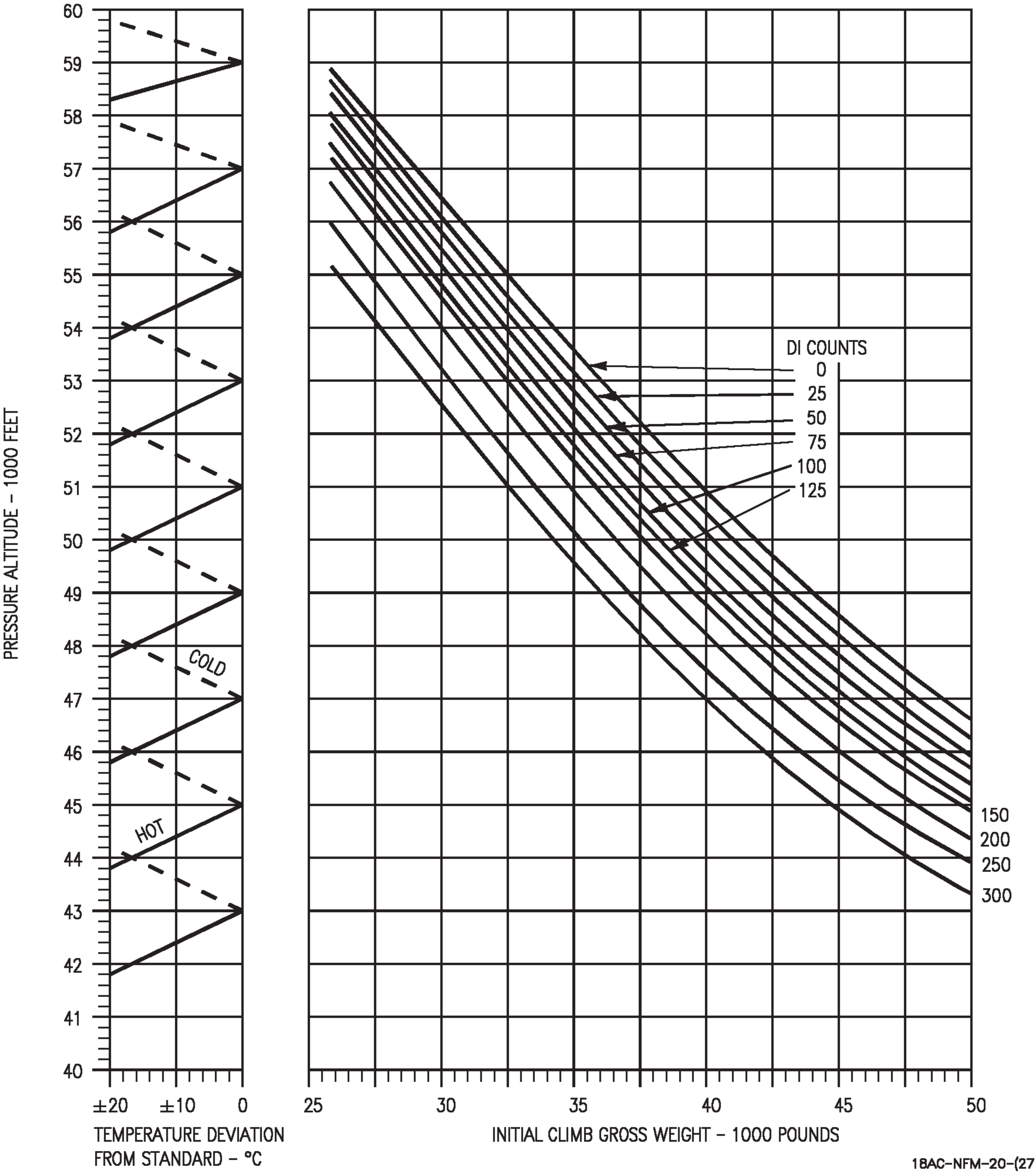
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	−5	12
15,000	−15	6
20,000	−25	−12
25,000	−35	−30
30,000	−44	−48
35,000	−54	−66
40,000	−57	−70
70,000	−57	−70

GUIDE



FUEL GRADE: JP−5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC−NFM−20−(271−2)12−CATI

Figure 11-29. Peak Rate of Climb - Maximum Thrust - F404-GE-400
(Sheet 2 of 5)

TIME REQUIRED TO CLIMB

F404–GE–400

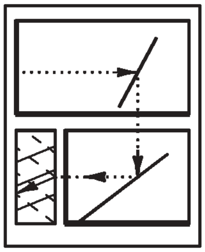
MAXIMUM THRUST
PEAK RATE OF CLIMB

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

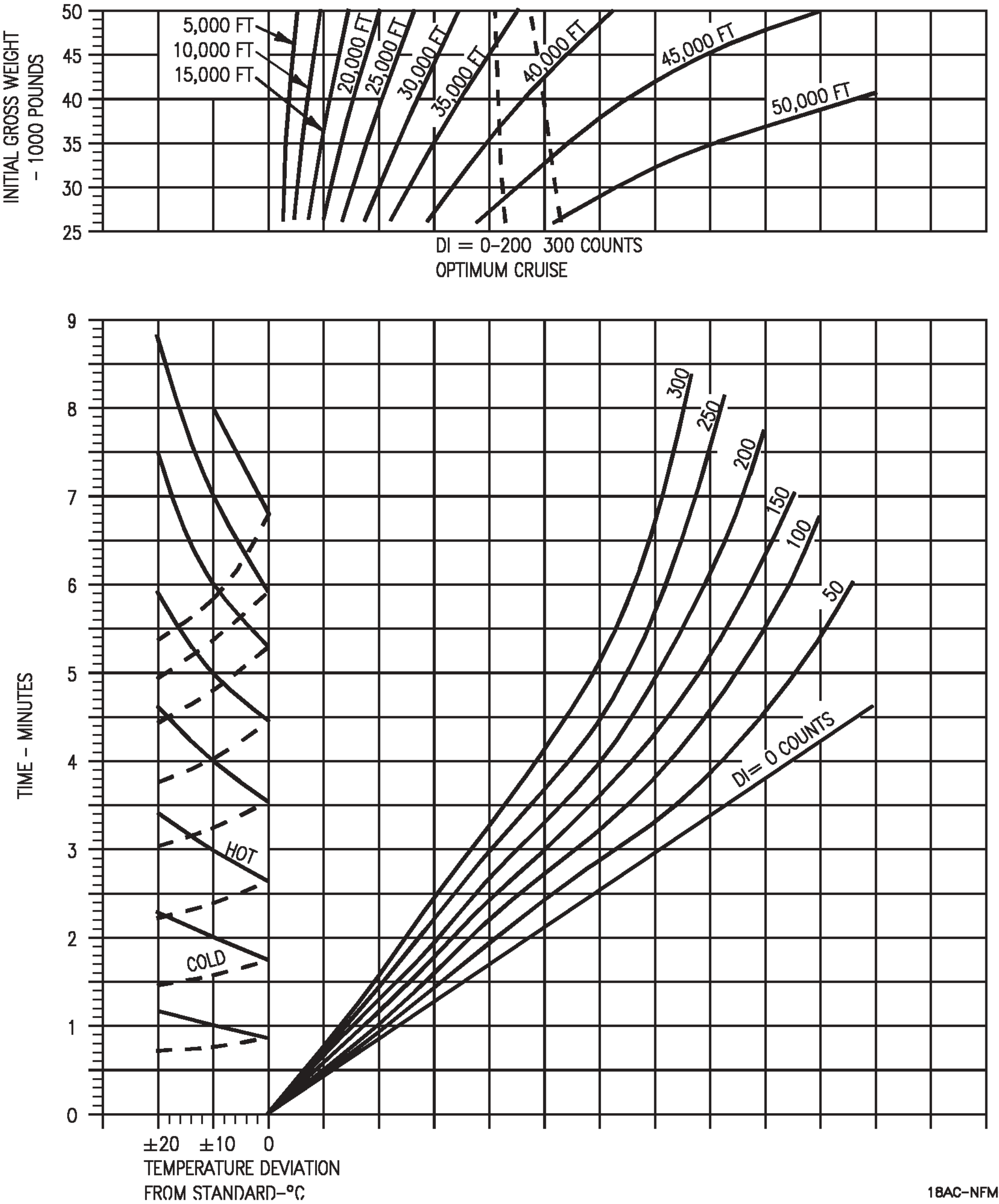
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(271–3)12–CATI

Figure 11-29. Peak Rate of Climb - Maximum Thrust - F404-GE-400
(Sheet 3 of 5)

FUEL REQUIRED TO CLIMB

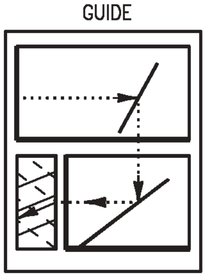
F404–GE–400

MAXIMUM THRUST
PEAK RATE OF CLIMB

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

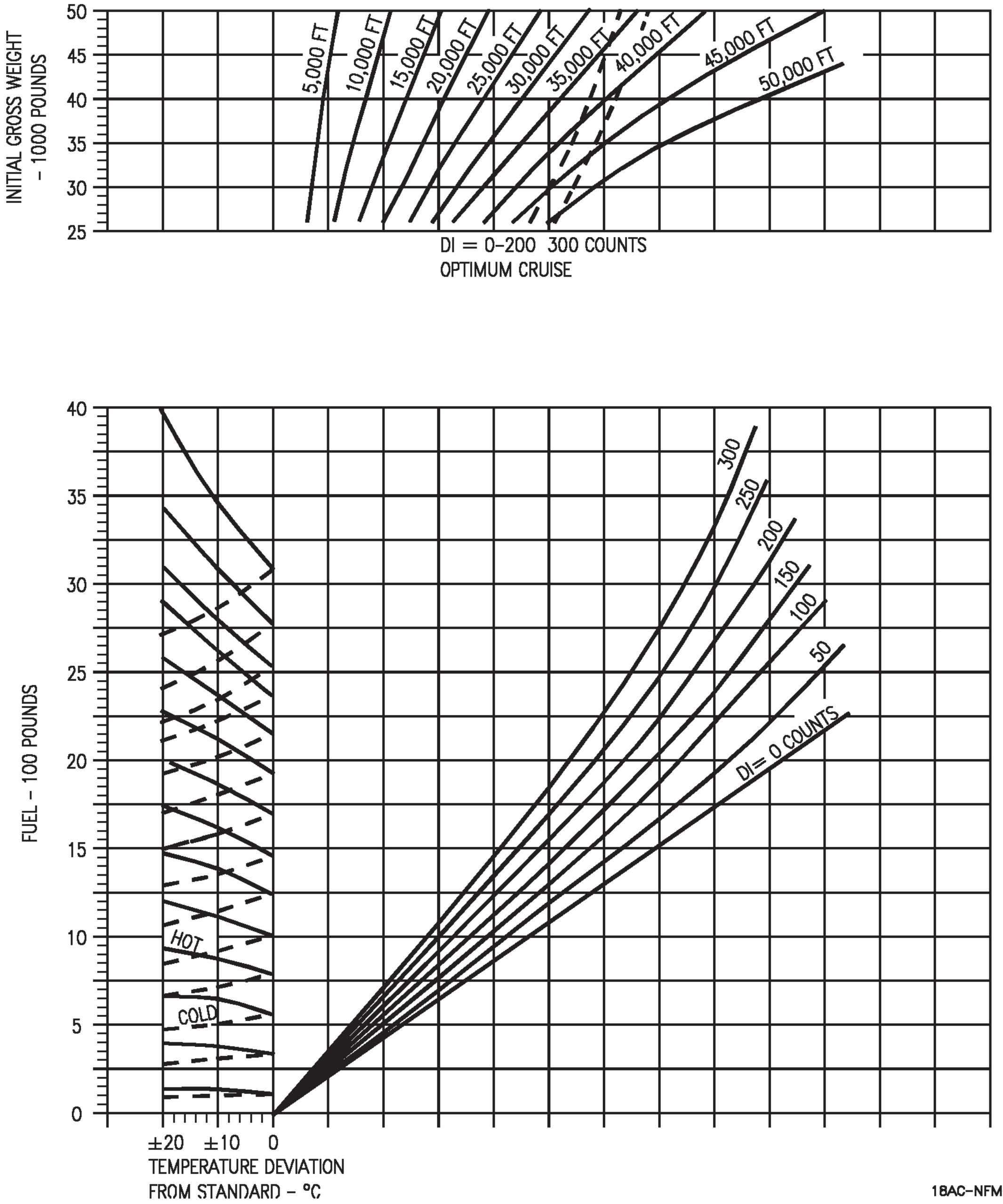
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(271–4)12–CATI

Figure 11-29. Peak Rate of Climb - Maximum Thrust - F404-GE-400
(Sheet 4 of 5)

DISTANCE REQUIRED TO CLIMB

F404-GE-400

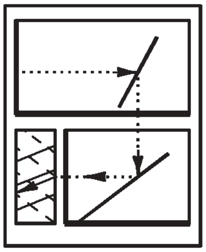
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

MAXIMUM THRUST
PEAK RATE OF CLIMB

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

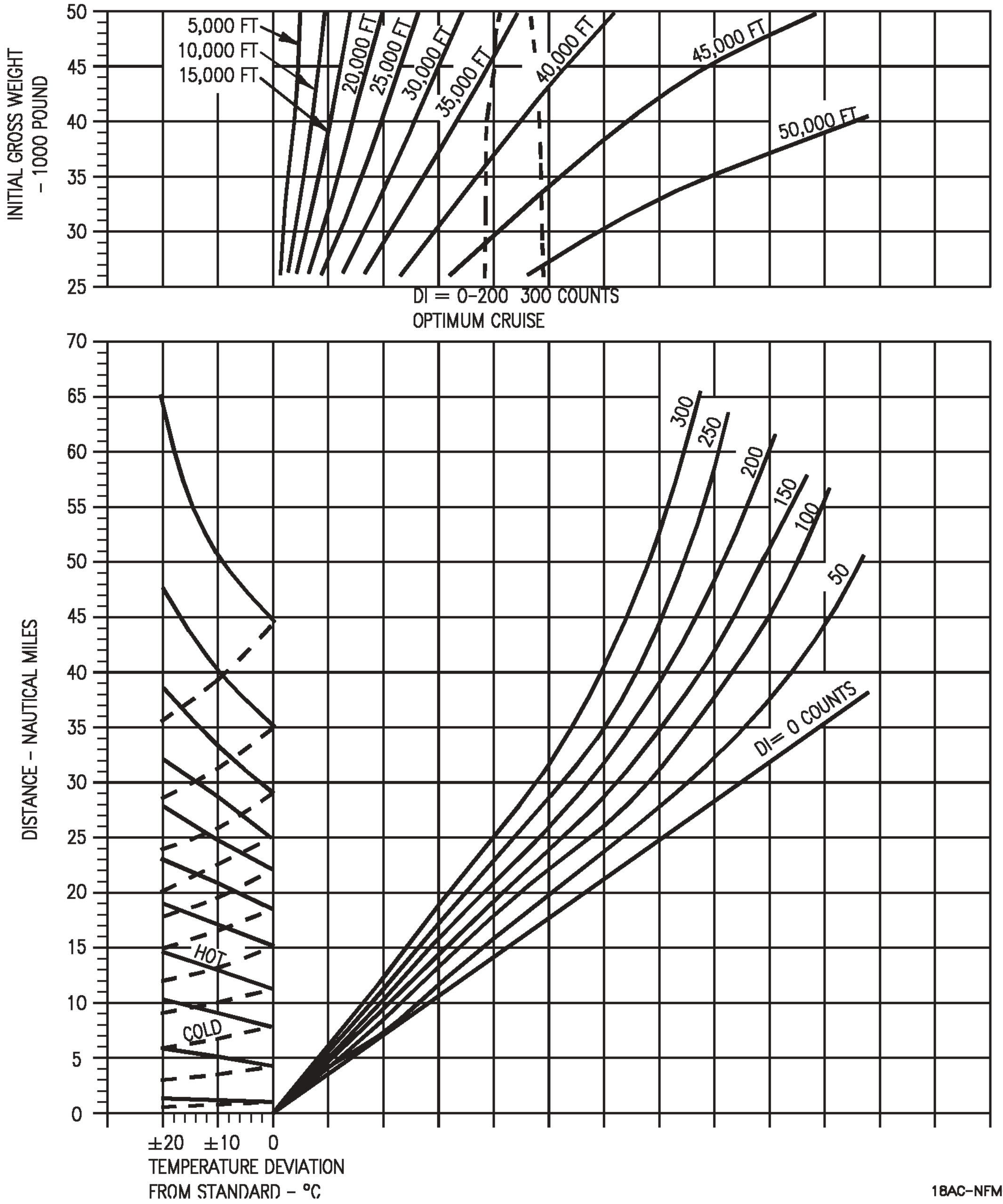
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	-5	12
15,000	-15	6
20,000	-25	-12
25,000	-35	-30
30,000	-44	-48
35,000	-54	-66
40,000	-57	-70
70,000	-57	-70

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(271-5)12-CATI

Figure 11-29. Peak Rate of Climb - Maximum Thrust - F404-GE-400
(Sheet 5 of 5)

INSTANTANEOUS RATE OF CLIMB

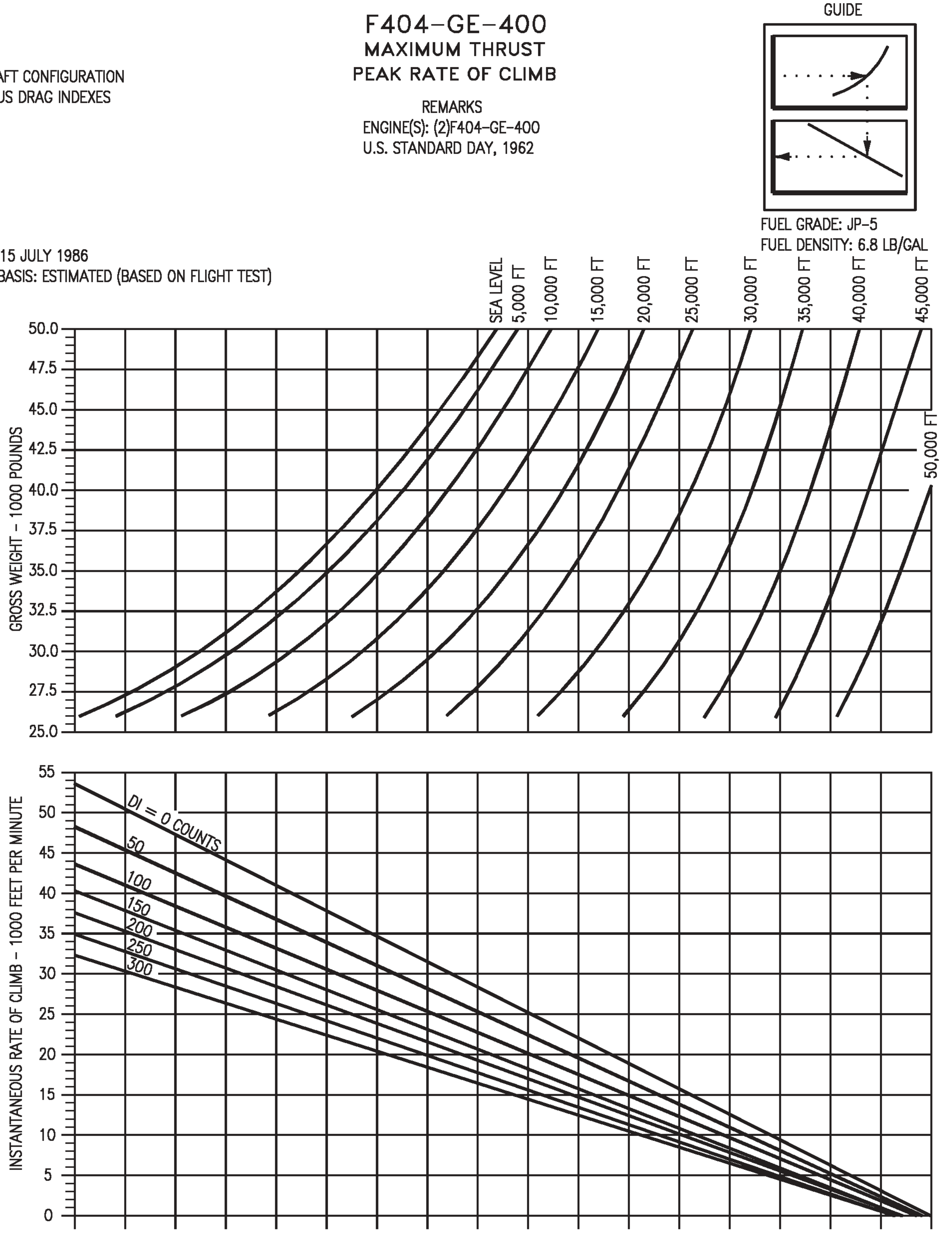
F404–GE–400
MAXIMUM THRUST
PEAK RATE OF CLIMB

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(272–1)12–CATI

Figure 11-30. Instantaneous Rate of Climb - Maximum Thrust - F404-GE-400

CLIMB SPEED SCHEDULE
F404-GE-400
ONE ENGINE OPERATING
MILITARY THRUST

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES
ALL GROSS WEIGHTS

REMARKS
ENGINE(S): (2) F4O4-GE-4OO
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

DATE: 15 JULY 1986
DATA BASIS: **ESTIMATED**
(BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

		AIRCRAFT DRAG INDEX					
		0		25		50 & ABOVE	
		KCAS	MACH	KCAS	MACH	KCAS	MACH
PRESSURE ALTITUDE 1000FT	S.L.	275	.42	265	.40	250	.38
	5	275	.45	265	.44	250	.41
	10	275	.50	265	.48	250	.45
	15	275	.54	265	.53	250	.50
	20	275	.60	265	.58	250	.55
	25	275	.66	265	.64	250	.60
	30	263	.70	263	.70	250	.67
	35	235	.70	235	.70	235	.70
	40	208	.70	208	.70	208	.70

NOTE

FUEL ALLOWANCE FOR TAKEOFF AND ACCELERATION TO CLIMB SPEED IS 12OO POUNDS, AND IS BASED ON START, 2O MINUTES AT IDLE, 3O SECONDS RUNUP AT MIL, AND A MIL POWER TAKEOFF.

Figure 11-31. Military Thrust Climb - One Engine Operating - F404-GE-400
(Sheet 1 of 6)

COMBAT CEILING & SERVICE CEILING

F404–GE–400

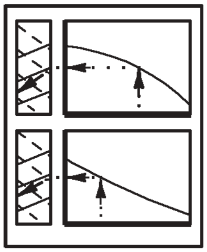
ONE ENGINE OPERATING
MILITARY THRUST

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
INOPERATIVE ENGINE WINDMILLING
COMBAT CEILING
=500 fpm
SERVICE CEILING
=100 fpm

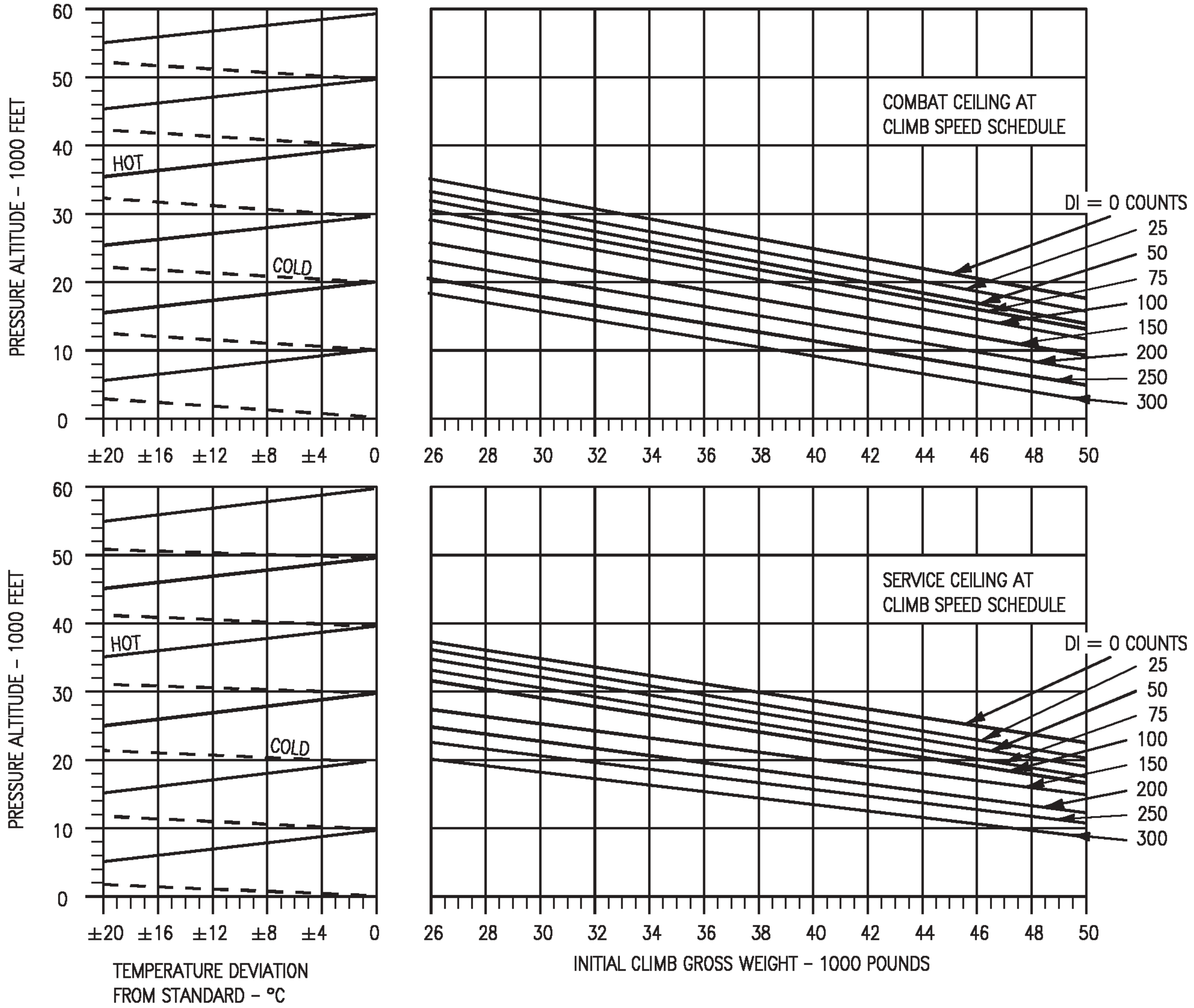
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(165–1)12–CATI

Figure 11-31. Military Thrust Climb - One Engine Operating - F404-GE-400
(Sheet 2 of 6)

OPTIMUM CRUISE ALTITUDE

F404-GE-400

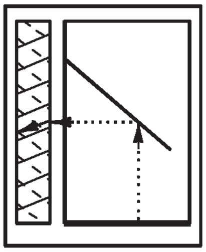
ONE ENGINE OPERATING
MILITARY THRUST

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
INOPERATIVE ENGINE WINDMILLING

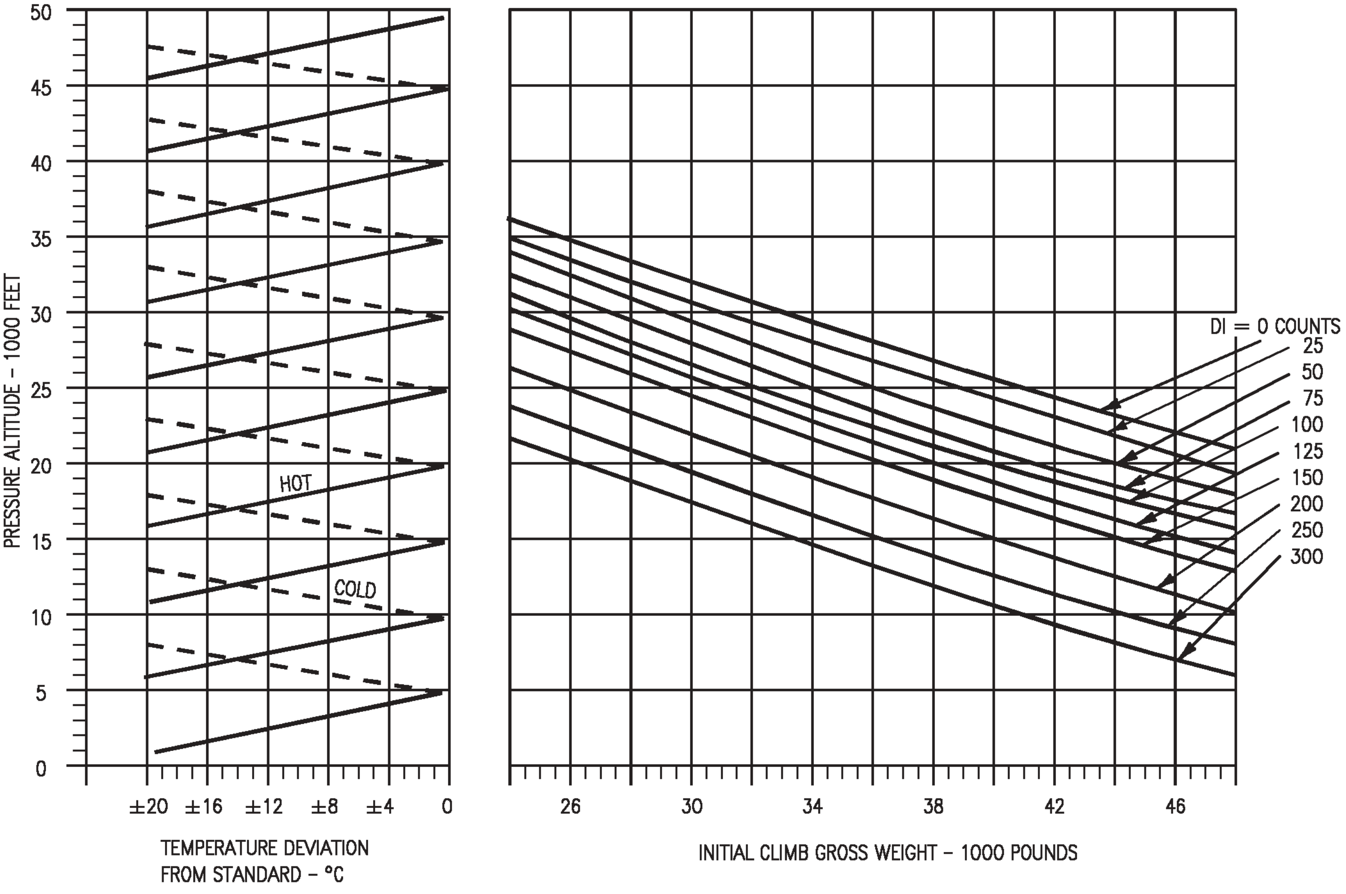
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	−5	12
15,000	−15	6
20,000	−25	−12
25,000	−35	−30
30,000	−44	−48
35,000	−54	−66
40,000	−57	−70
70,000	−57	−70

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(165-2)12-CATI

Figure 11-31. Military Thrust Climb - One Engine Operating - F404-GE-400
(Sheet 3 of 6)

TIME REQUIRED TO CLIMB

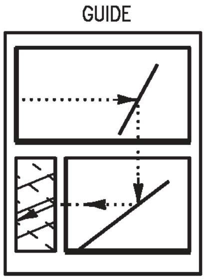
F404−GE−400

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

ONE ENGINE OPERATING
MILITARY THRUST
CLIMB SPEED SCHEDULE

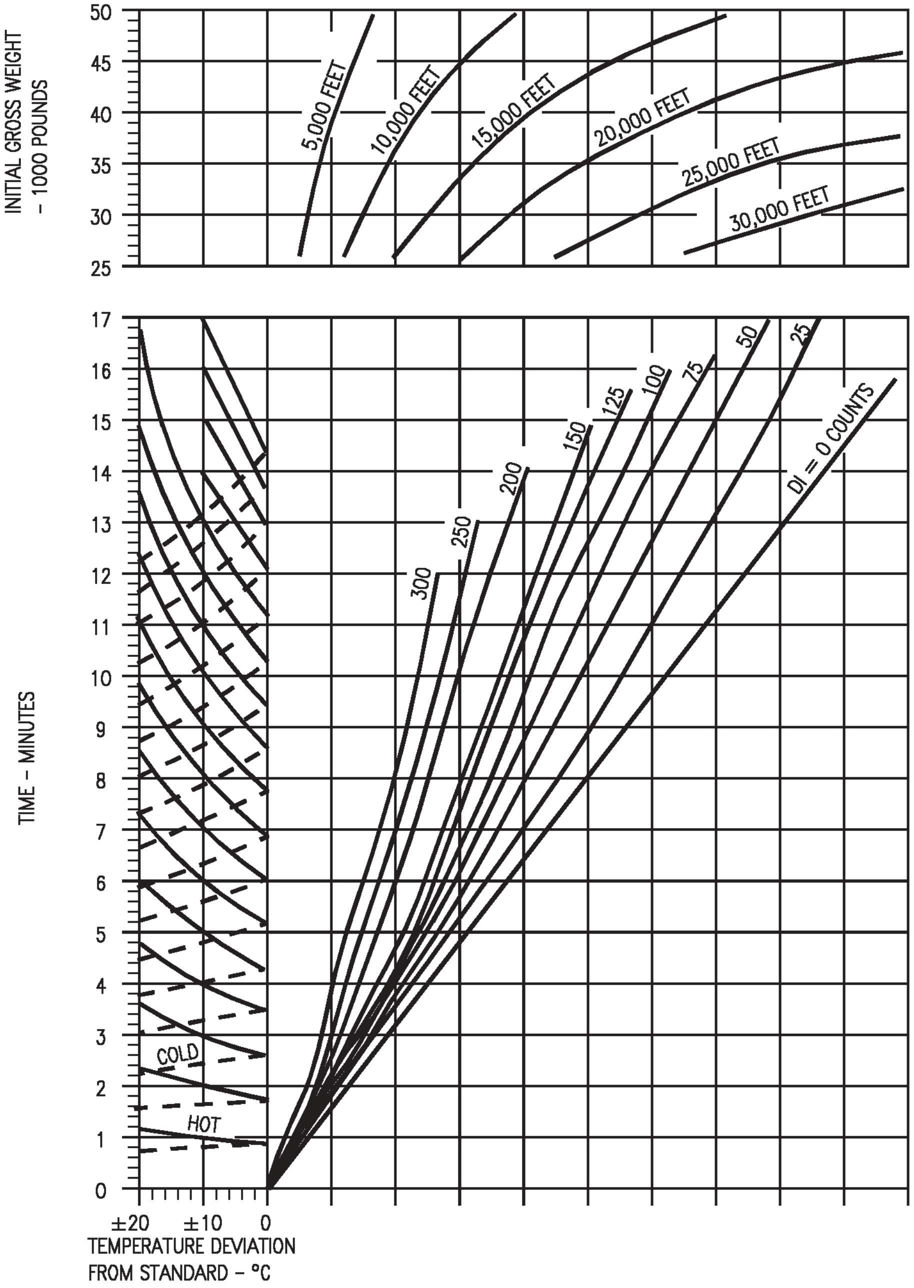
REMARKS
ENGINE(S): (2)F404−GE−400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	−5	12
15,000	−15	6
20,000	−25	−12
25,000	−35	−30
30,000	−44	−48
35,000	−54	−66
40,000	−57	−70
70,000	−57	−70



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP−5
FUEL DENSITY: 6.8 LB/GAL



18AC−NFM−20−(165−3)12−CATI

Figure 11-31. Military Thrust Climb - One Engine Operating - F404-GE-400
(Sheet 4 of 6)

FUEL REQUIRED TO CLIMB

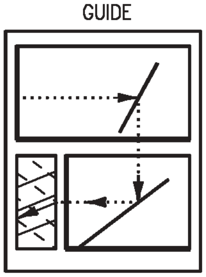
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

F404–GE–400

ONE ENGINE OPERATING
MILITARY THRUST
CLIMB SPEED SCHEDULE

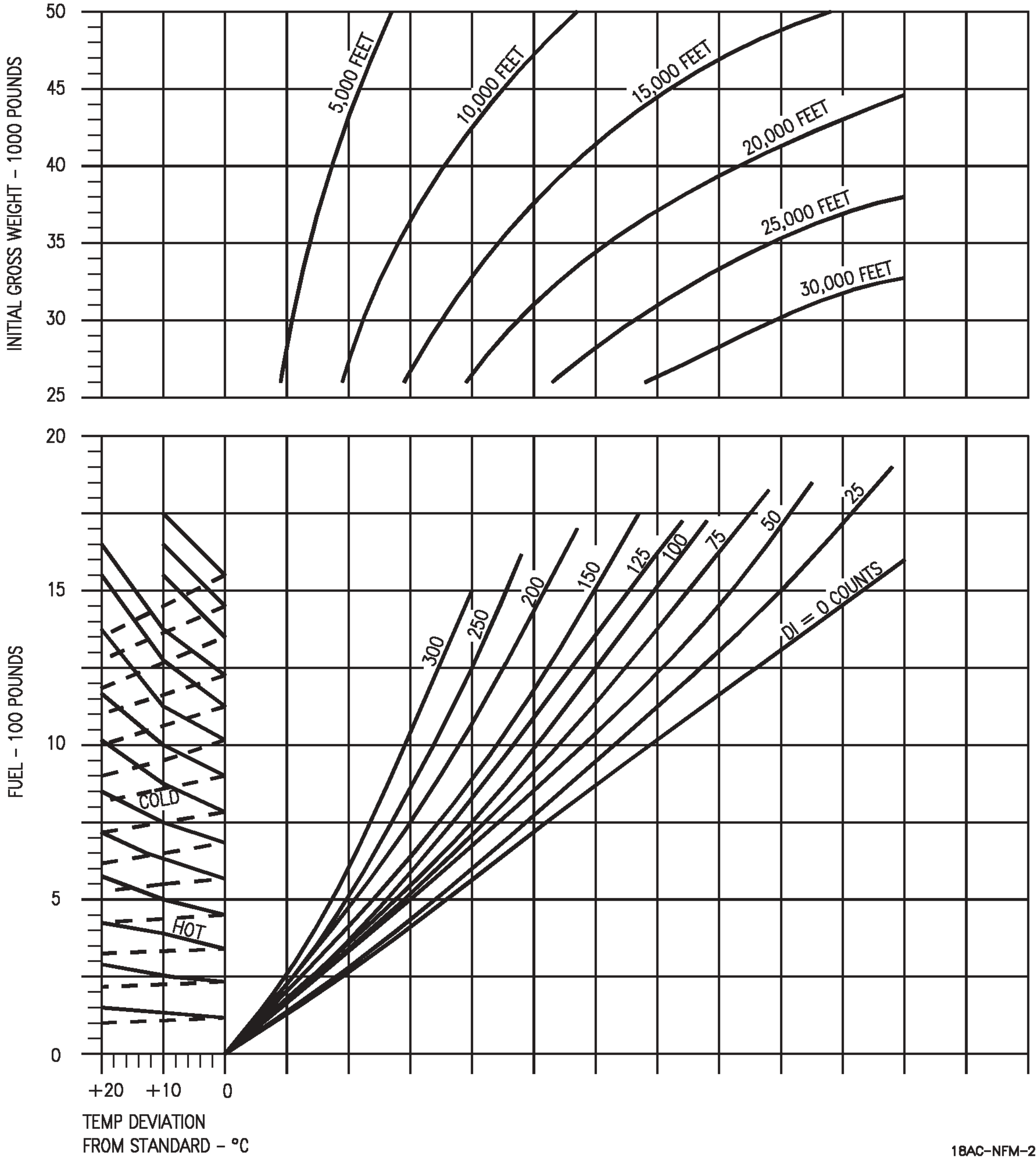
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70



FUEL GRADE: JP–5
FUEL DENSITY: 6.5 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(165–4)12–CATI

Figure 11-31. Military Thrust Climb - One Engine Operating - F404-GE-400
(Sheet 5 of 6)

DISTANCE REQUIRED TO CLIMB

F404–GE–400

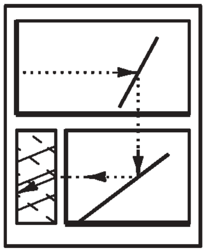
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

ONE ENGINE OPERATING
MILITARY THRUST
CLIMB SPEED SCHEDULE

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

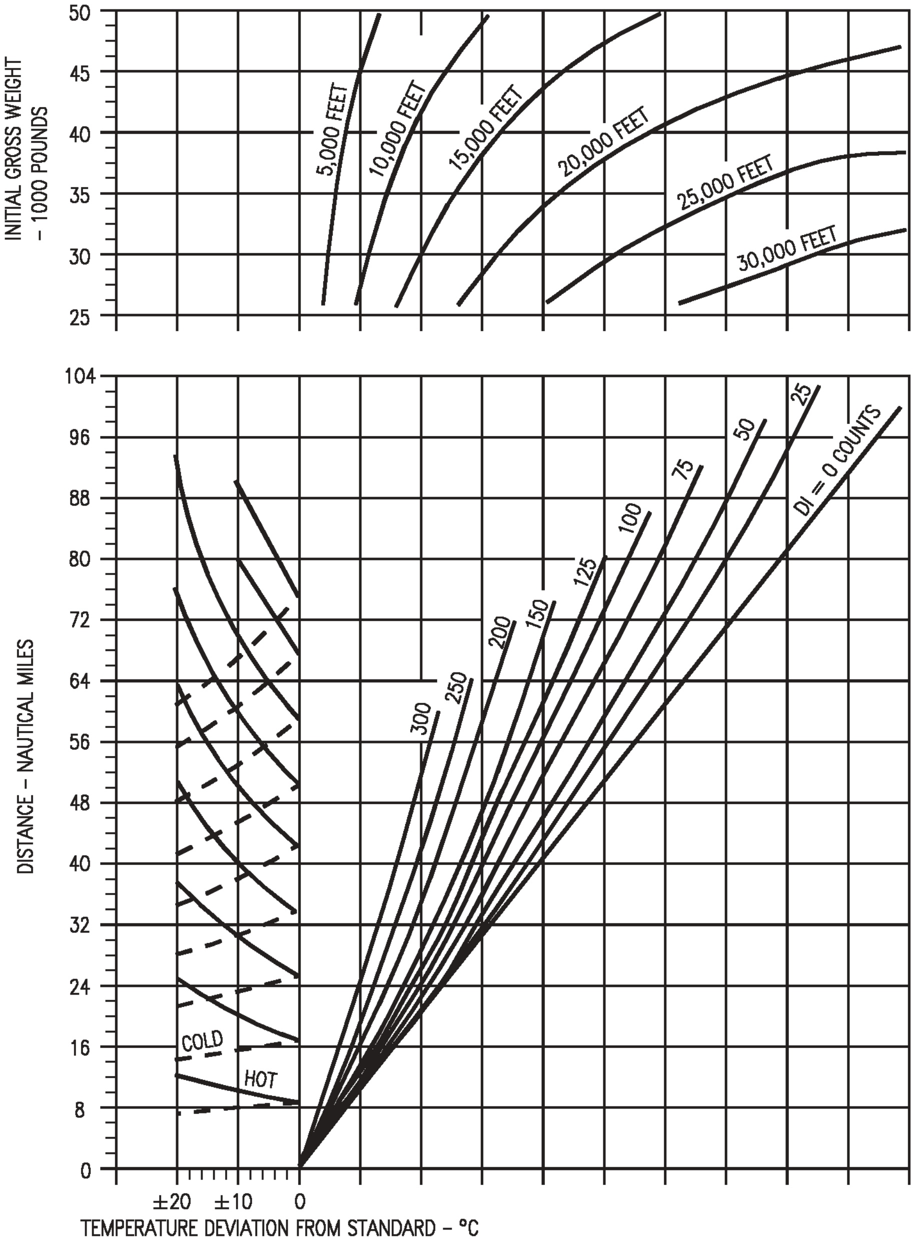
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(165–5)12–CATI

Figure 11-31. Military Thrust Climb - One Engine Operating - F404-GE-400
(Sheet 6 of 6)

SUPERSONIC MAXIMUM THRUST CLIMB

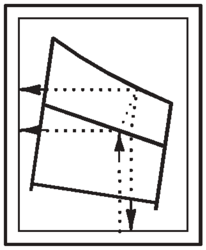
F404–GE–400

AIRCRAFT CONFIGURATION
(2) AIM–9 + (2) AIM–7

REMARKS
ENGINE(S): (2) F404–GE–400
U.S. STANDARD DAY, 1962

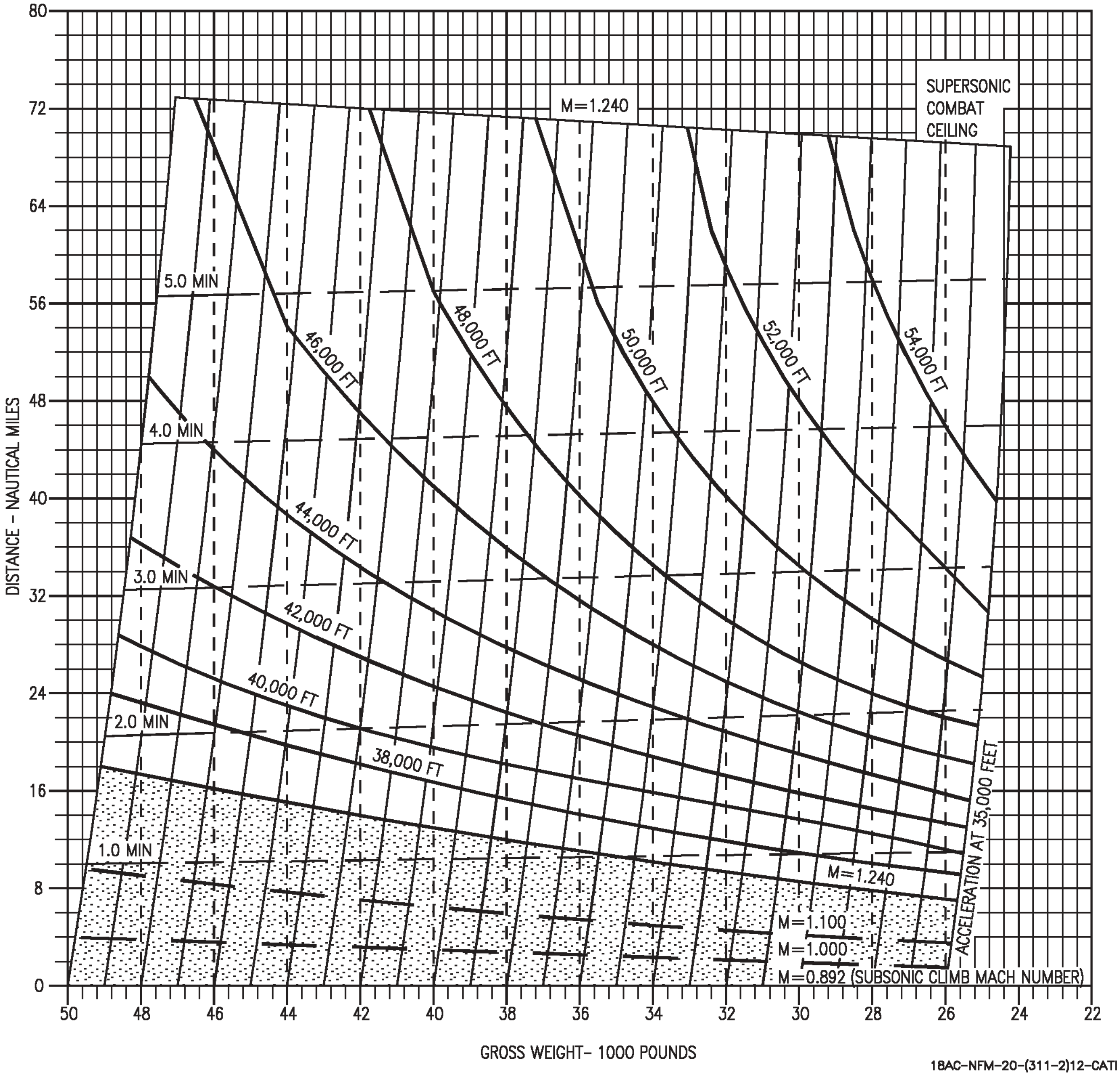
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(311–2)12–CATI

Figure 11-32. Supersonic Maximum Thrust Climb - F404-GE-400
(Sheet 1 of 4)

SUPERSONIC MAXIMUM THRUST CLIMB

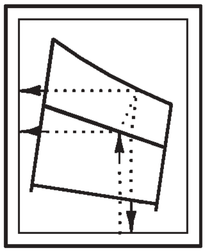
F404-GE-400

AIRCRAFT CONFIGURATION
(2) AIM-9 + (2) AIM-7
+ ℄ TANK

REMARKS
ENGINE(S): (2) F404-GE-400
U.S. STANDARD DAY, 1962

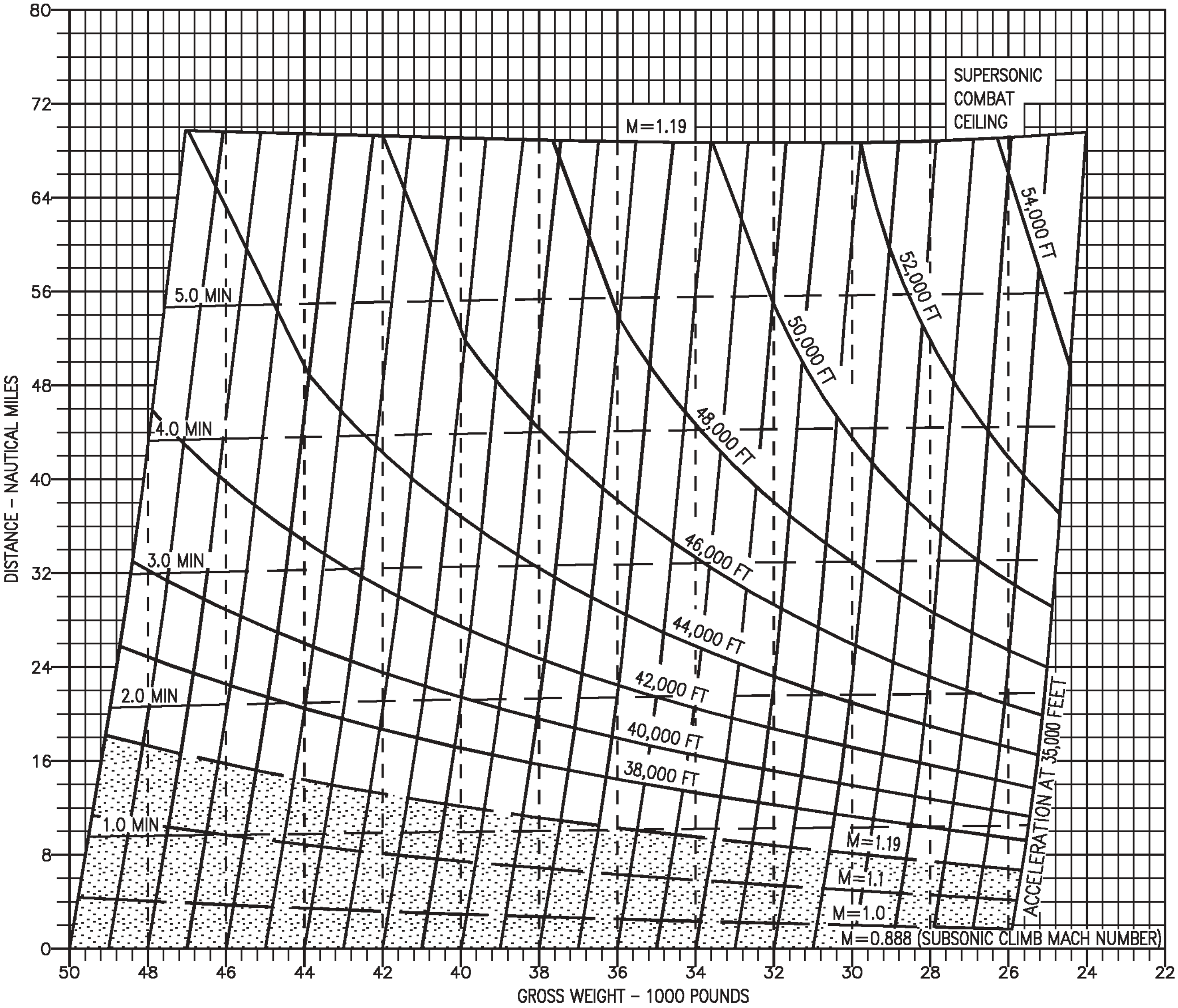
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	-5	12
15,000	-15	6
20,000	-25	-12
25,000	-35	-30
30,000	-44	-48
35,000	-54	-66
40,000	-57	-70
70,000	-57	-70

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(311-3)12-CATI

Figure 11-32. Supersonic Maximum Thrust Climb - F404-GE-400
(Sheet 2 of 4)

SUPERSONIC MAXIMUM THRUST CLIMB

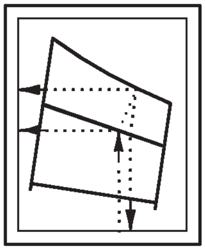
F404–GE–400

AIRCRAFT CONFIGURATION
(4) AIM–9 + (2) AIM–7
+ FLIR

REMARKS
ENGINE(S): (2) F404–GE–400
U.S. STANDARD DAY, 1962

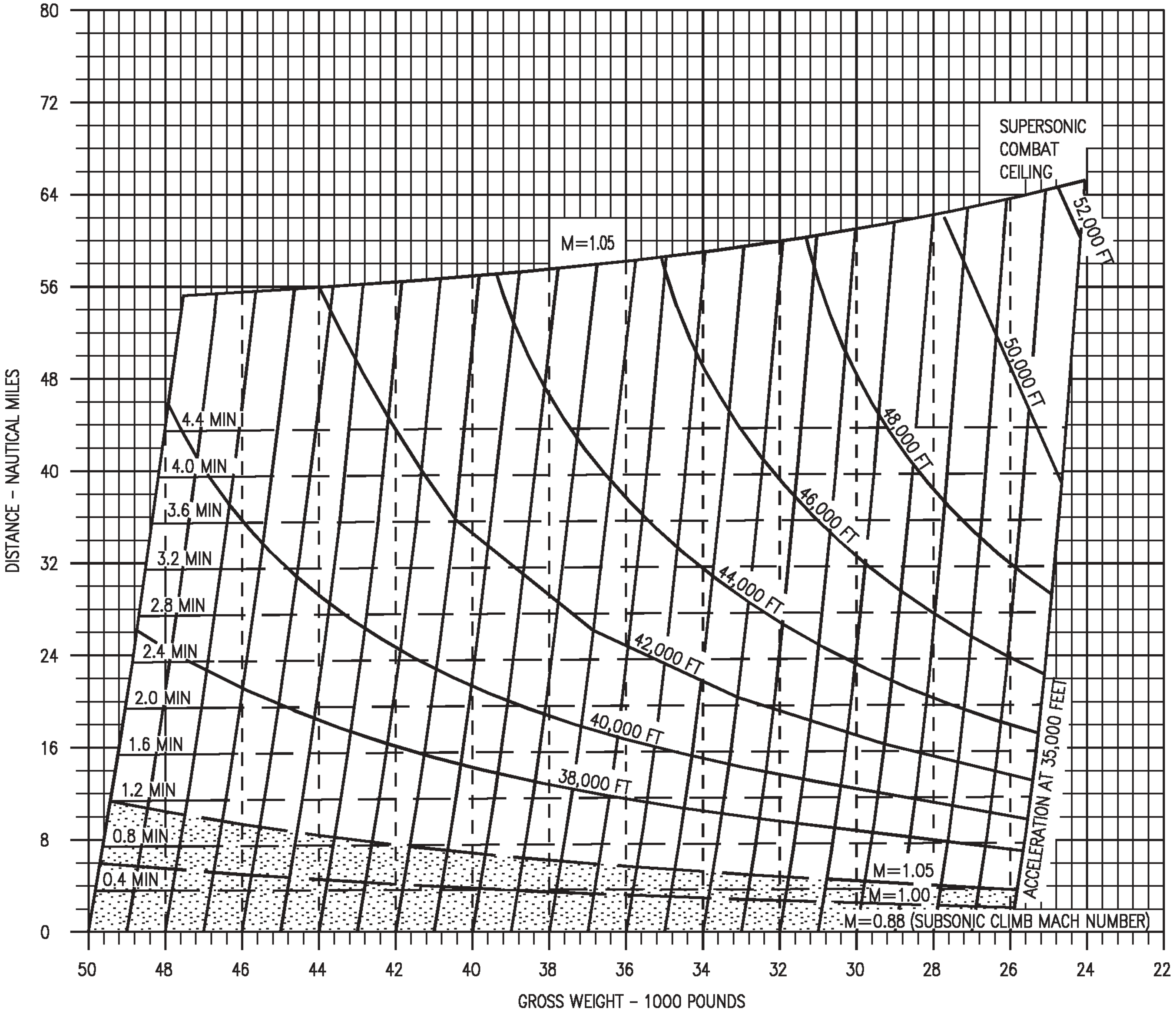
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(311–4)12–CATI

Figure 11-32. Supersonic Maximum Thrust Climb - F404-GE-400
(Sheet 3 of 4)

SUPERSONIC MAXIMUM THRUST CLIMB

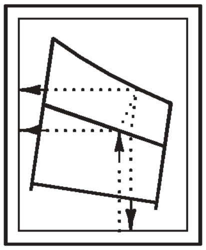
F404-GE-400

AIRCRAFT CONFIGURATION
(4) AIM-9 + (2) AIM-7
+ $\mathbb{C}_L$ TANK + FLIR

REMARKS
ENGINE(S): (2) F404-GE-400
U.S. STANDARD DAY, 1962

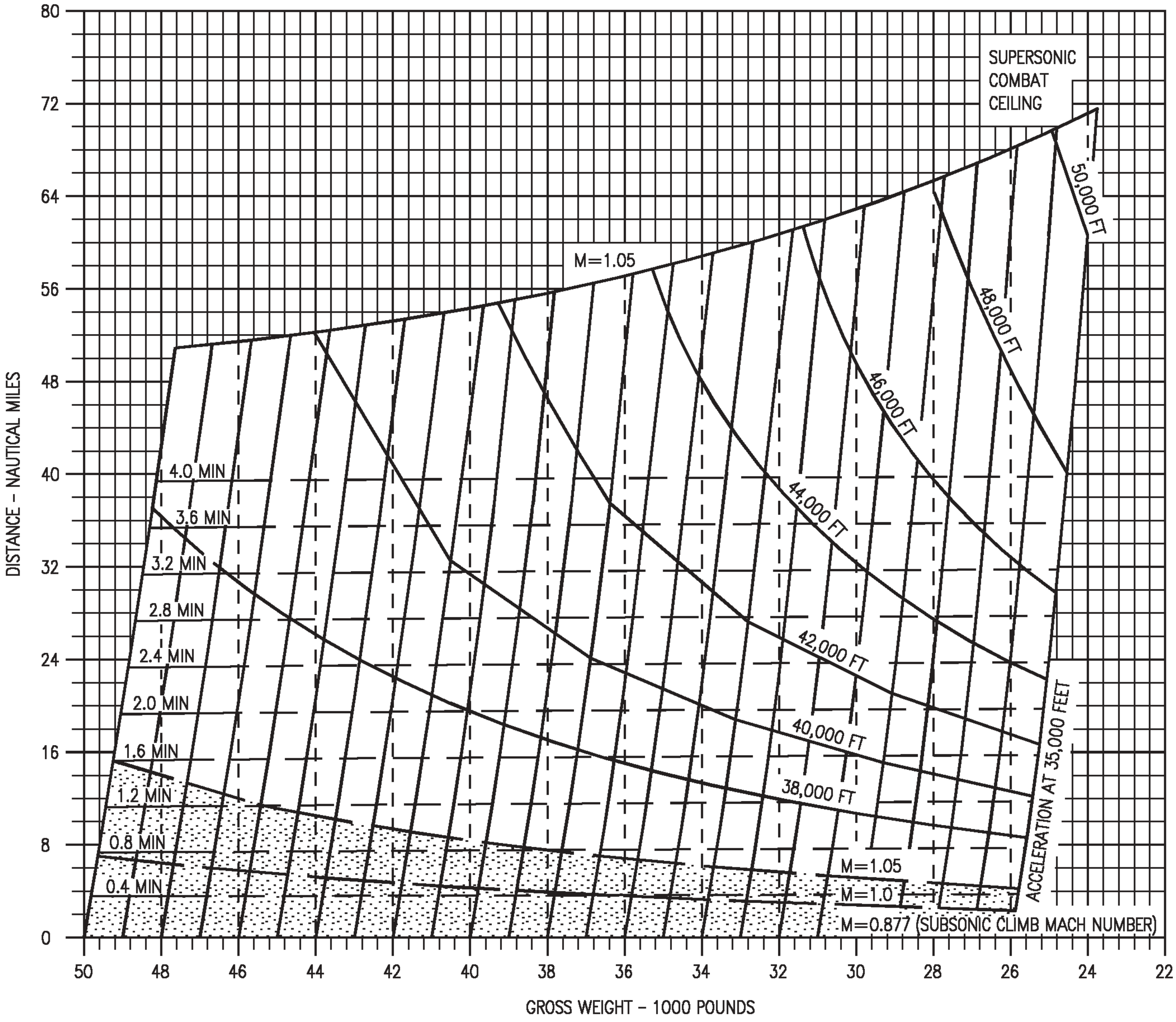
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	-5	12
15,000	-15	6
20,000	-25	-12
25,000	-35	-30
30,000	-44	-48
35,000	-54	-66
40,000	-57	-70
70,000	-57	-70

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(311-5)12-CATI

Figure 11-32. Supersonic Maximum Thrust Climb - F404-GE-400
(Sheet 4 of 4)

SINGLE ENGINE RATE OF CLIMB

F404-GE-400

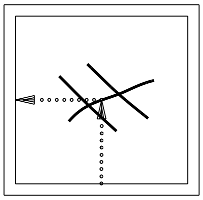
ONE ENGINE OPERATING,
INOPERATIVE ENGINE WINDMILLING
MAXIMUM THRUST
HALF FLAPS, GEAR DOWN

AIRCRAFT CONFIGURATION:
(2) AIM-9 + (2) AIM-7
(DI=8)

GW (1000 LB)	OPERATIONAL ENDSPEED (KCAS)
<36	149
37-45	166
46	167
48	171
50	175
51.9	179

DATE: SEPTEMBER 1999
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

NOTE: FOR FIELD OPERATIONS, REFER TO TAKEOFF SPEEDS ON TAKEOFF DISTANCE CHARTS.

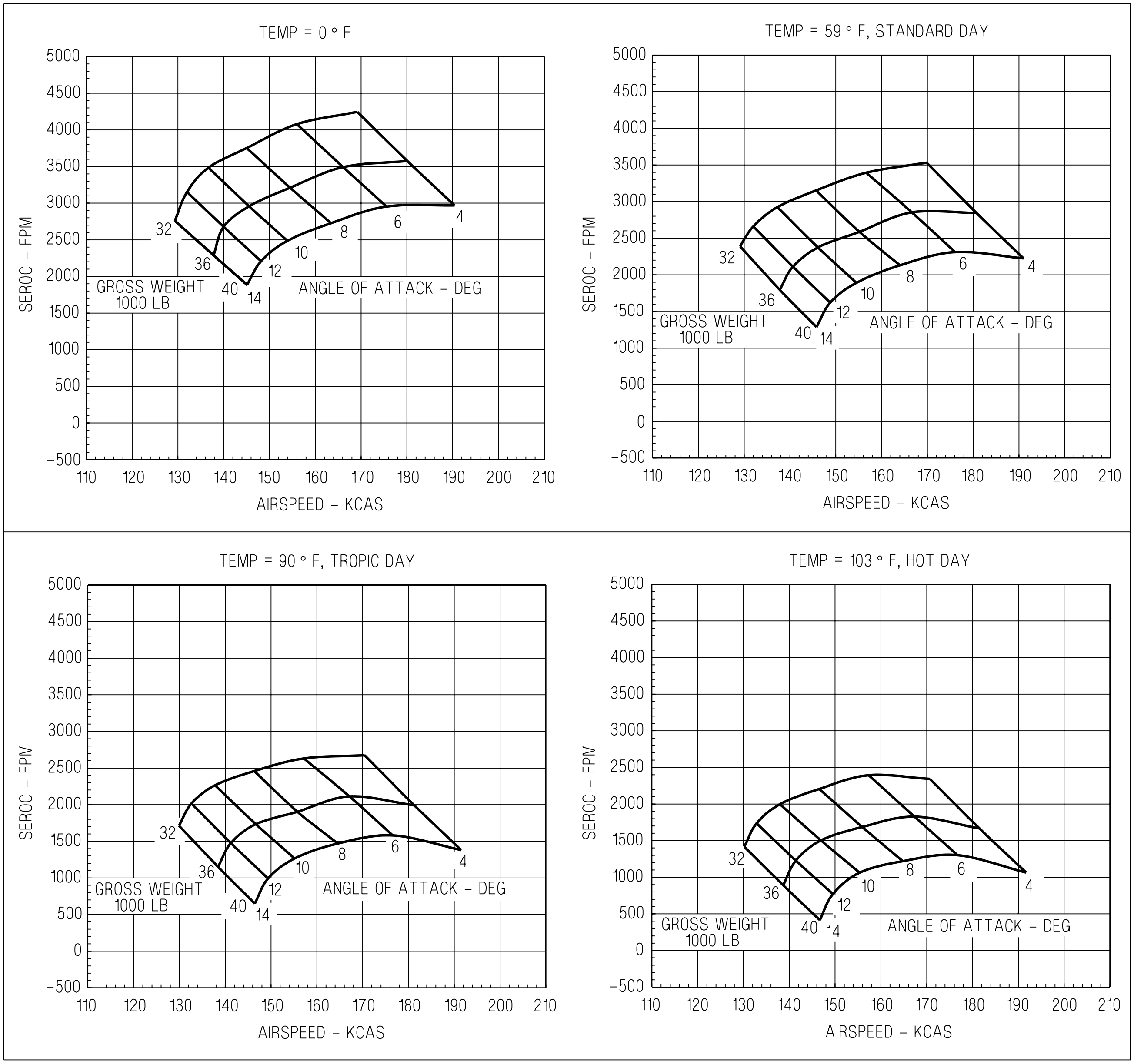


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Figure 11-33. Single Engine Rate of Climb - F404-GE-400
(Sheet 1 of 12)

SINGLE ENGINE RATE OF CLIMB

F404-GE-400

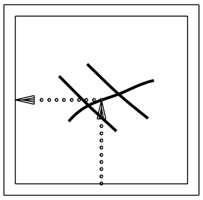
ONE ENGINE OPERATING,
INOPERATIVE ENGINE WINDMILLING
MILITARY THRUST
HALF FLAPS, GEAR DOWN

AIRCRAFT CONFIGURATION:
(2) AIM-9 + (2) AIM-7
(DI=8)

DATE: SEPTEMBER 1999
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

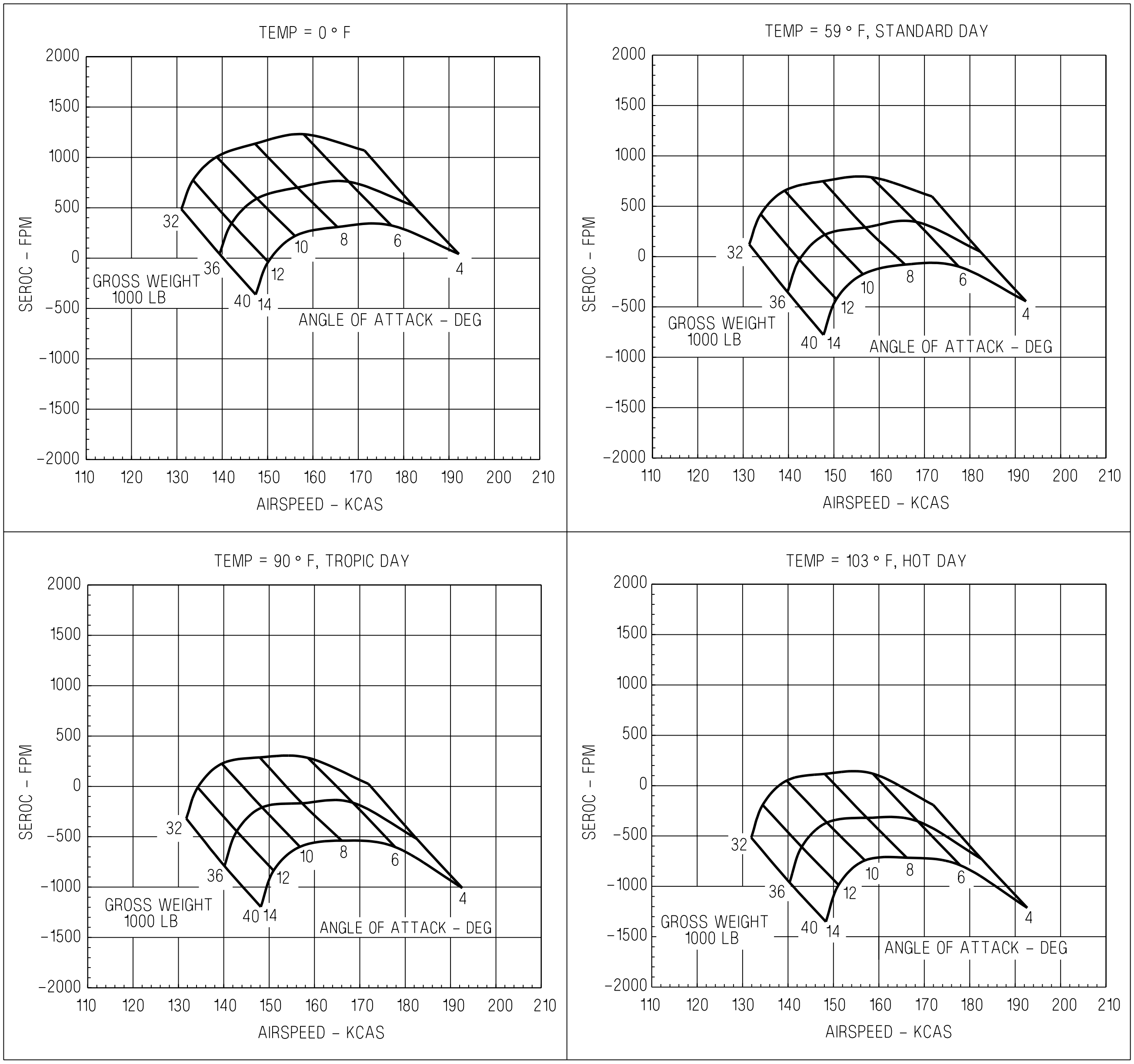
GW (1000 LB)	OPERATIONAL ENDSPEED (KCAS)
<36	149
37-45	166
46	167
48	171
50	175
51.9	179

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

NOTE: FOR FIELD OPERATIONS, REFER TO TAKEOFF SPEEDS ON TAKEOFF DISTANCE CHARTS.



ADA523-310-2-017

Figure 11-33. Single Engine Rate of Climb - F404-GE-400
(Sheet 2 of 12)

SINGLE ENGINE RATE OF CLIMB

F404-GE-400

ONE ENGINE OPERATING,
INOPERATIVE ENGINE WINDMILLING
MAXIMUM THRUST
HALF FLAPS, GEAR DOWN

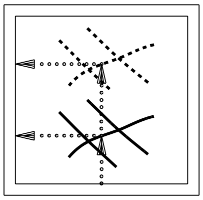
AIRCRAFT CONFIGURATION:
(2) AIM-9 + (2) AIM-7 +
330 GALLON CENTERLINE FUEL TANK
(DI=21.5)

STORES JETTISONED LOADING:
(2) AIM-9 + (2) AIM-7
(DI=8)
(PYLON MASS PROPERTIES AND
AERODYNAMICS NOT REFLECTED)

DATE: SEPTEMBER 1999
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

GW (1000 LB)	OPERATIONAL ENDSPEED (KCAS)
<36	149
37-45	166
46	167
48	171
50	175
51.9	179

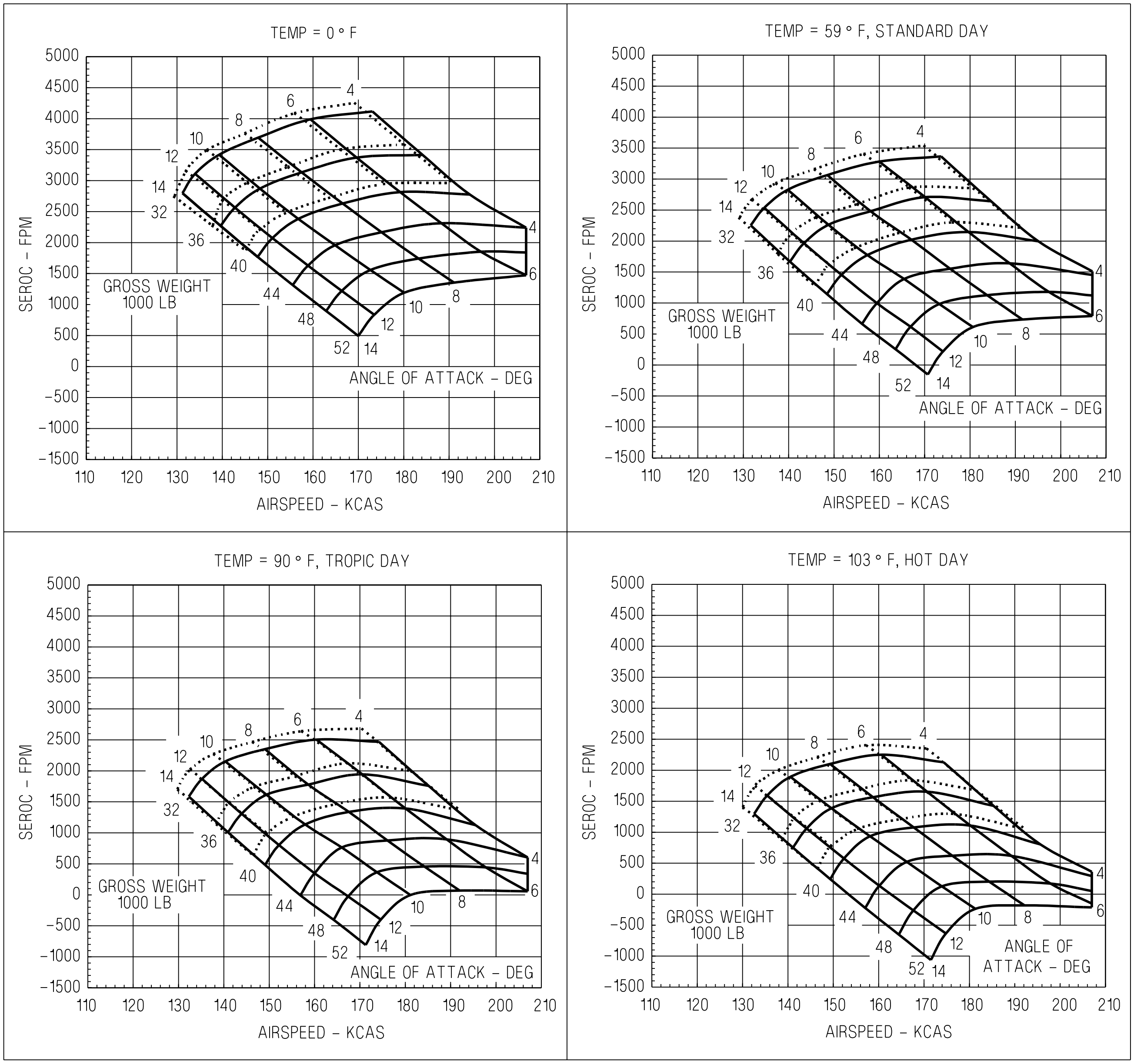
GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

——— STORES RETAINED
------- STORES JETTISONED

NOTE: FOR FIELD OPERATIONS, REFER TO TAKEOFF SPEEDS ON TAKEOFF DISTANCE CHARTS.



ADA523-310-3-017

Figure 11-33. Single Engine Rate of Climb - F404-GE-400
(Sheet 3 of 12)

SINGLE ENGINE RATE OF CLIMB

F404-GE-400

AIRCRAFT CONFIGURATION:
(2) AIM-9 + (2) AIM-7 +
330 GALLON CENTERLINE FUEL TANK
(DI=21.5)

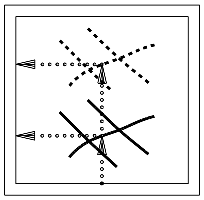
STORES JETTISONED LOADING:
(2) AIM-9 + (2) AIM-7
(DI=8)
(PYLON MASS PROPERTIES AND
AERODYNAMICS NOT REFLECTED)

DATE: SEPTEMBER 1999
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

ONE ENGINE OPERATING,
INOPERATIVE ENGINE WINDMILLING
MILITARY THRUST
HALF FLAPS, GEAR DOWN

GW (1000 LB)	OPERATIONAL ENDSPEED (KCAS)
<36	149
37-45	166
46	167
48	171
50	175
51.9	179

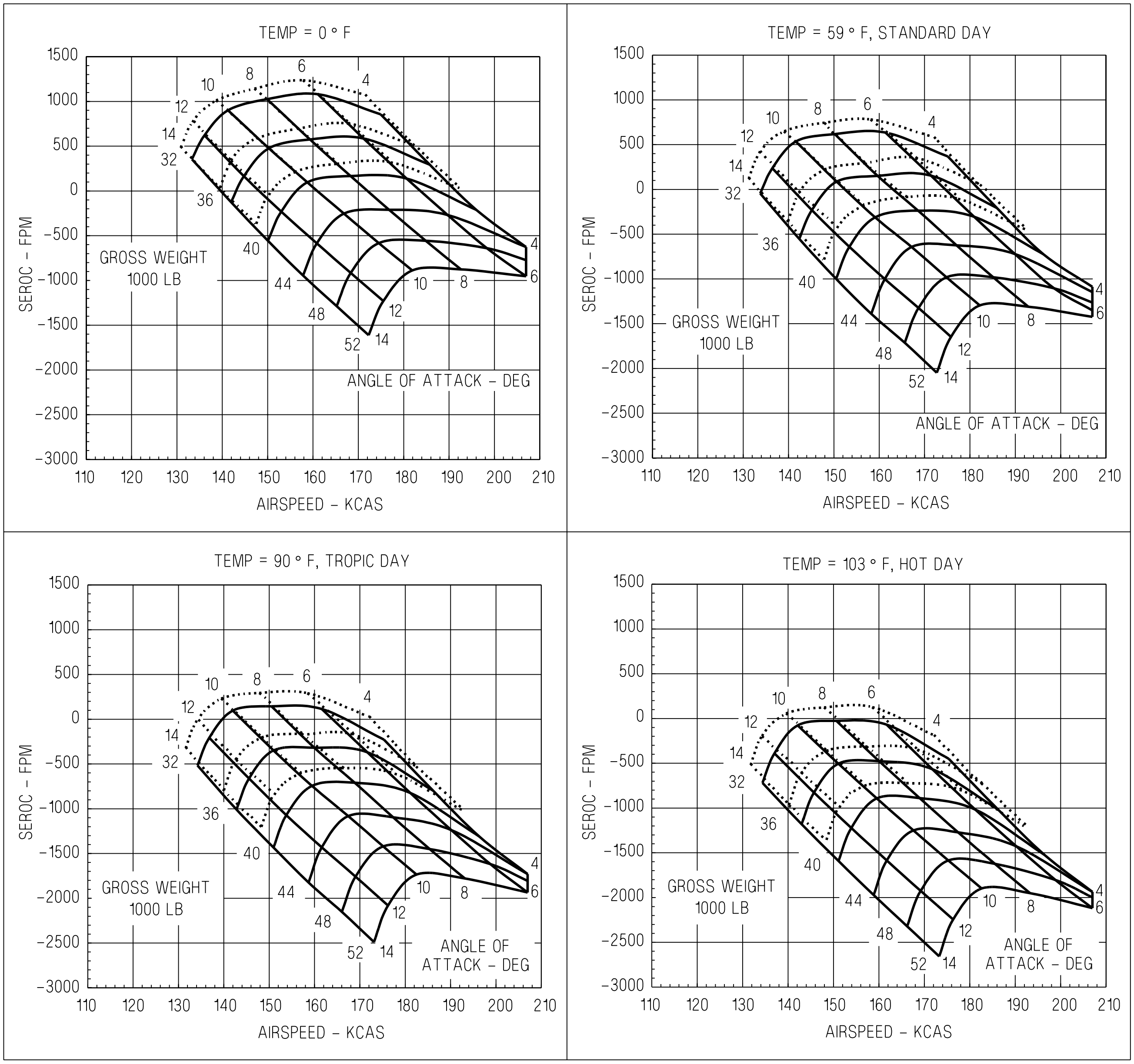
GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

—— STORES RETAINED
······ STORES JETTISONED

NOTE: FOR FIELD OPERATIONS, REFER TO TAKEOFF SPEEDS ON TAKEOFF DISTANCE CHARTS.



ADA523-310-4-017

Figure 11-33. Single Engine Rate of Climb - F404-GE-400
(Sheet 4 of 12)

SINGLE ENGINE RATE OF CLIMB

F404-GE-400

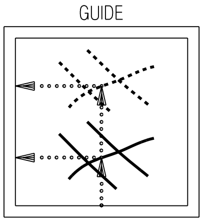
AIRCRAFT CONFIGURATION:
(2) AIM-9 + (1) AIM-7 + FLIR +
(2) 330 GALLON FUEL TANKS
(DI = 56)

STORES JETTISON LOADING:
(2) AIM-9 + (2) AIM-7
(DI = 8)
(PYLON/VER MASS PROPERTIES AND
AERODYNAMICS NOT REFLECTED)

DATE: SEPTEMBER 1999
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

ONE ENGINE OPERATING, INOPERATIVE ENGINE WINDMILLING
MAXIMUM THRUST
HALF FLAPS, GEAR DOWN

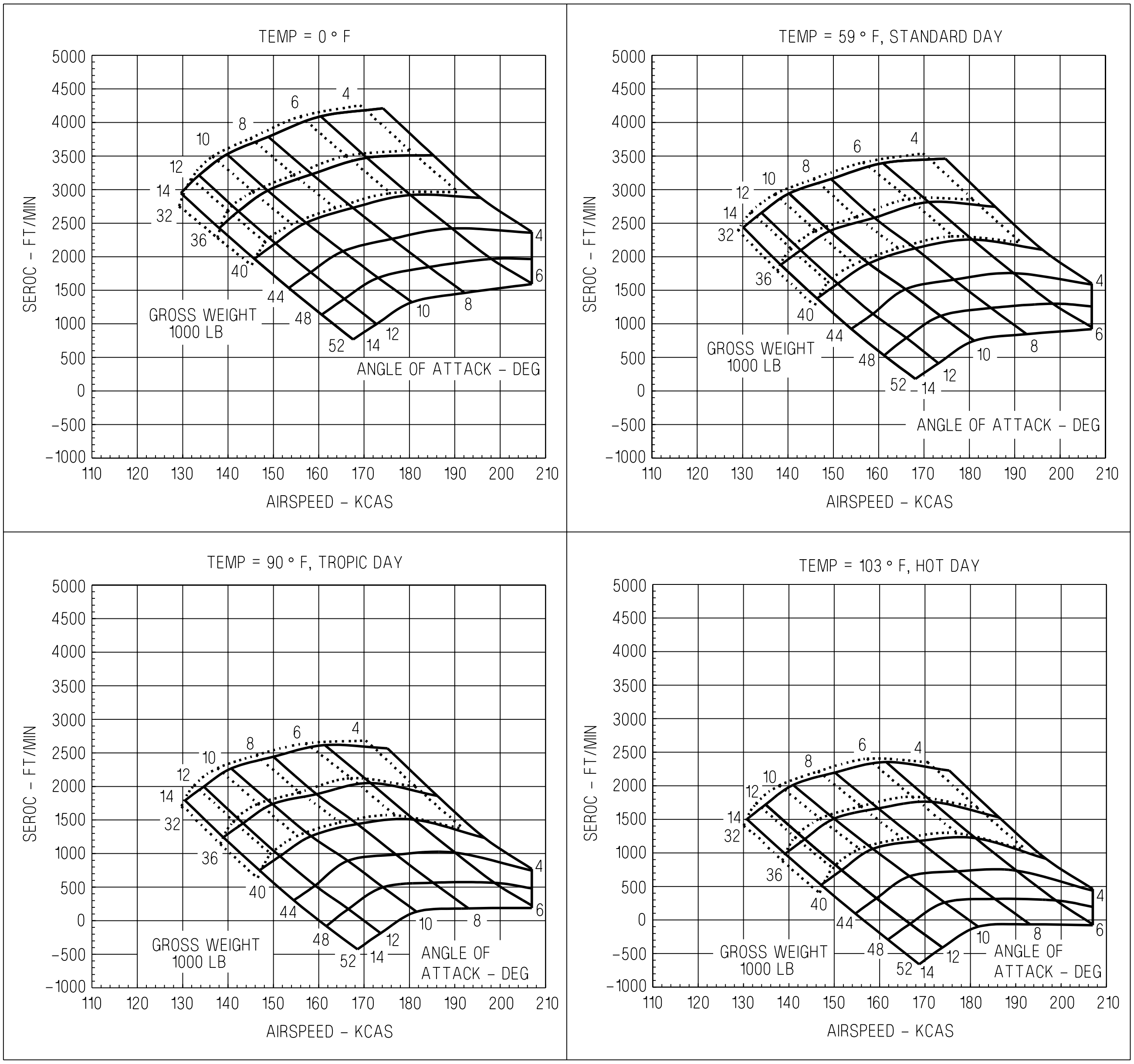
GW (1000 LB)	OPERATIONAL ENDSPEED (KCAS)
< 36	149
37–45	166
46	167
48	171
50	175
51.9	179



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

——— STORES RETAINED
- - - - - STORES JETTISONED

NOTE: FOR FIELD OPERATIONS, REFER TO TAKEOFF SPEEDS ON TAKEOFF DISTANCE CHARTS.



ADA523-310-9-017

Figure 11-33. Single Engine Rate of Climb - F404-GE-400
(Sheet 5 of 12)

SINGLE ENGINE RATE OF CLIMB

F404-GE-400

AIRCRAFT CONFIGURATION:
(2) AIM-9 + (1) AIM-7 + FLIR +
(2) 330 GALLON FUEL TANKS
(DI = 56)

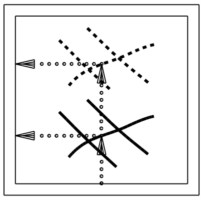
STORES JETTISON LOADING:
(2) AIM-9 + (2) AIM-7
(DI = 8)
(PYLON/VER MASS PROPERTIES AND
AERODYNAMICS NOT REFLECTED)

DATE: SEPTEMBER 1999
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

ONE ENGINE OPERATING, INOPERATIVE ENGINE WINDMILLING
MILITARY THRUST
HALF FLAPS, GEAR DOWN

GW (1000 LB)	OPERATIONAL ENDSPEED (KCAS)
< 36	149
37-45	166
46	167
48	171
50	175
51.9	179

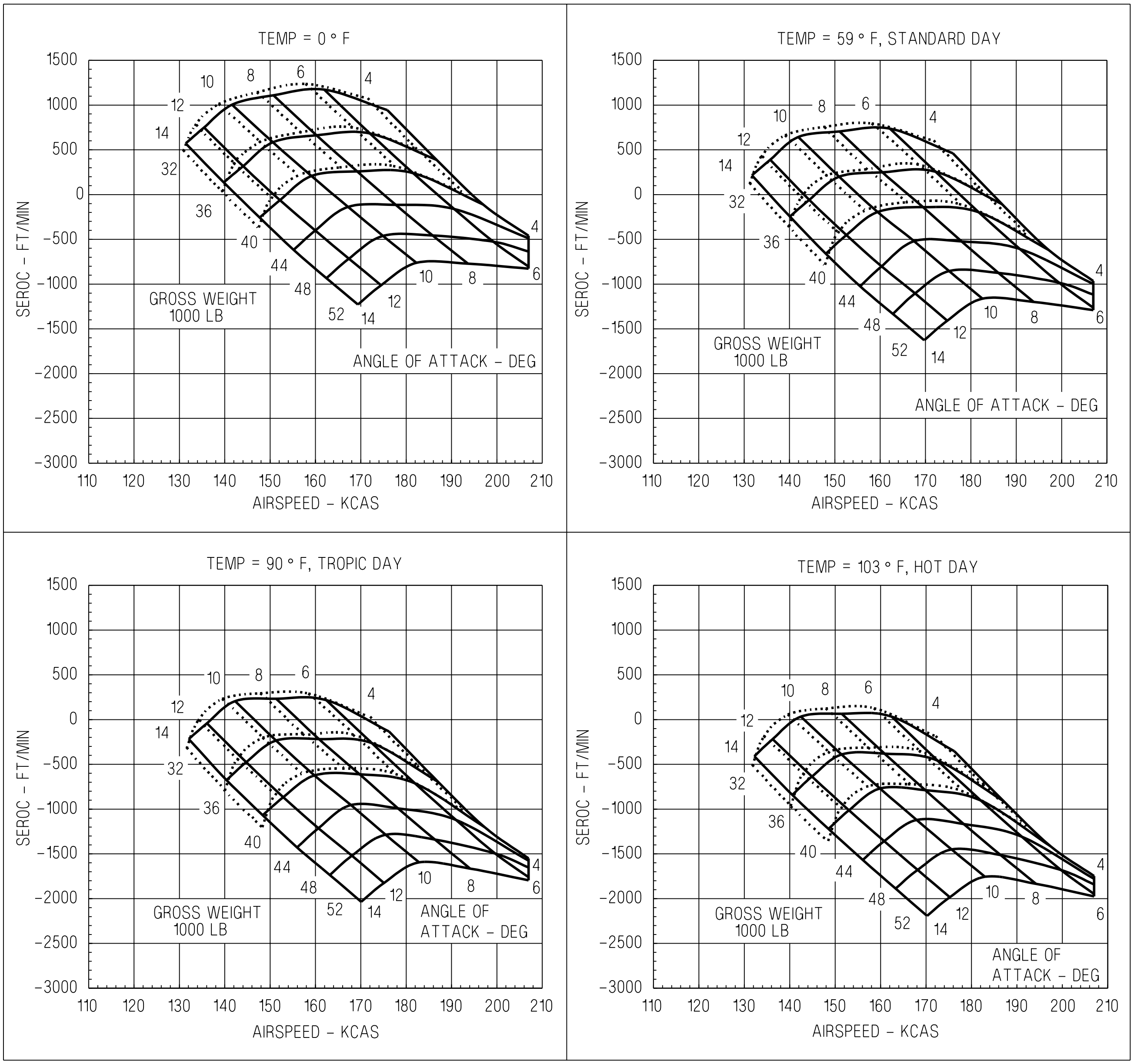
GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

——— STORES RETAINED
------- STORES JETTISONED

NOTE: FOR FIELD OPERATIONS, REFER TO TAKEOFF SPEEDS ON TAKEOFF DISTANCE CHARTS.



ADA523-310-10-017

Figure 11-33. Single Engine Rate of Climb - F404-GE-400
(Sheet 6 of 12)

SINGLE ENGINE RATE OF CLIMB

F404-GE-400

ONE ENGINE OPERATING, INOPERATIVE ENGINE WINDMILLING
MAXIMUM THRUST
HALF FLAPS, GEAR DOWN

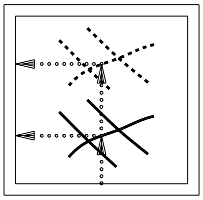
AIRCRAFT CONFIGURATION:
(2) AIM-9 + (1) AIM-7 + (2)VER'S +
(4) MK-83 + (2) 330 GALLON FUEL TANKS + FLIR
(DI = 111)

STORES JETTISON LOADING:
(2) AIM-9 + (2) AIM-7
(DI = 8)
(PYLON/VER MASS PROPERTIES AND
AERODYNAMICS NOT REFLECTED)

DATE: SEPTEMBER 1999
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

GW (1000 LB)	OPERATIONAL ENDSPEED (KCAS)
< 36	149
37-45	166
46	167
48	171
50	175
51.9	179

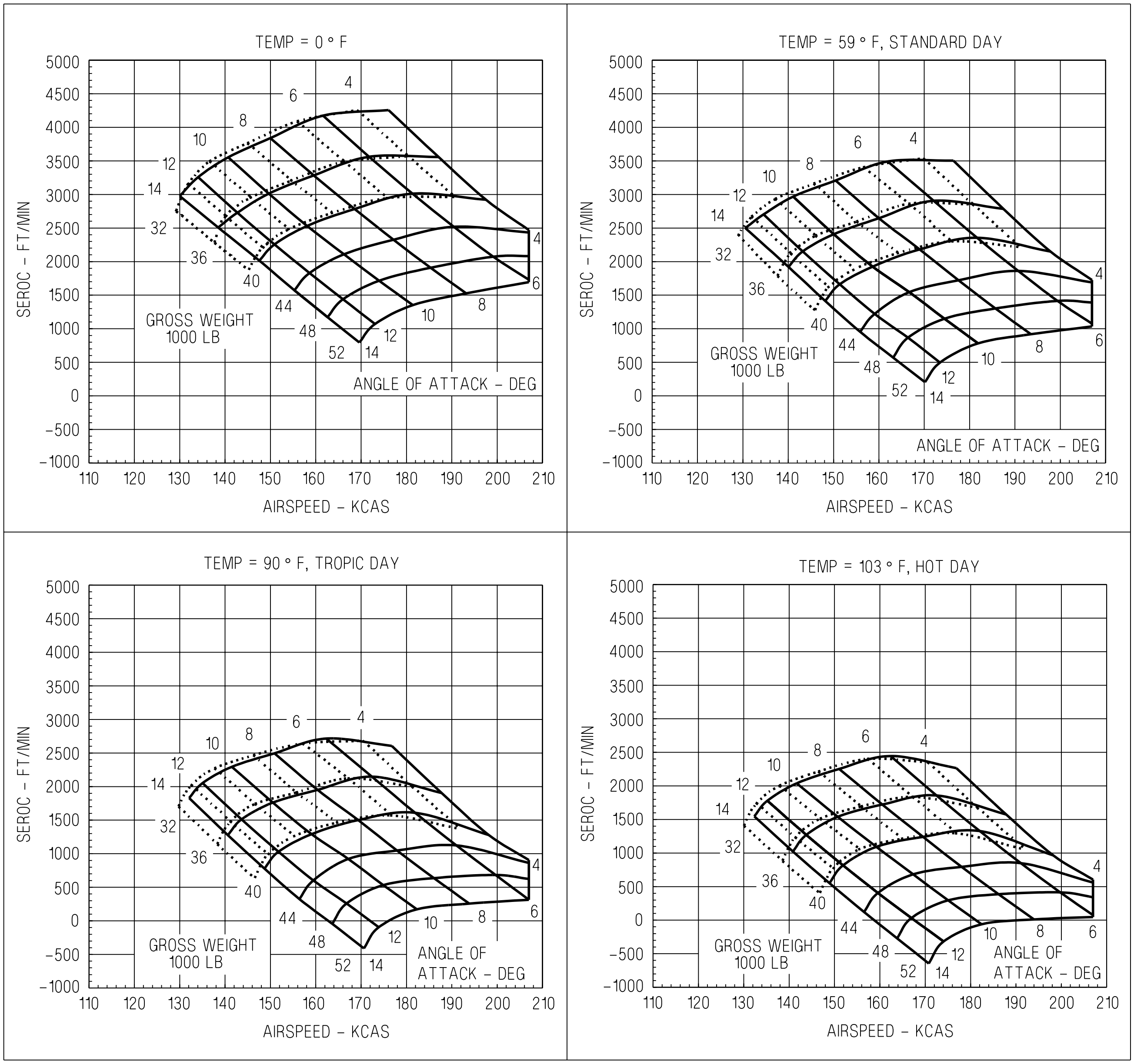
GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

——— STORES RETAINED
- - - - - STORES JETTISONED

NOTE: FOR FIELD OPERATIONS, REFER TO TAKEOFF SPEEDS ON TAKEOFF DISTANCE CHARTS.



ADA523-310-11-017

Figure 11-33. Single Engine Rate of Climb - F404-GE-400
(Sheet 7 of 12)

SINGLE ENGINE RATE OF CLIMB

F404-GE-400

AIRCRAFT CONFIGURATION:
(2) AIM-9 + (1) AIM-7 + (2)VER'S +
(4) MK-83 + (2) 330 GALLON FUEL TANKS + FLIR
(DI = 111)

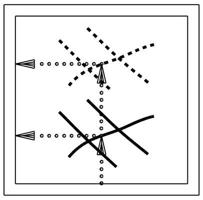
STORES JETTISON LOADING:
(2) AIM-9 + (2) AIM-7
(DI = 8)
(PYLON/VER MASS PROPERTIES AND
AERODYNAMICS NOT REFLECTED)

DATE: SEPTEMBER 1999
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

ONE ENGINE OPERATING, INOPERATIVE ENGINE WINDMILLING
MILITARY THRUST
HALF FLAPS, GEAR DOWN

GW (1000 LB)	OPERATIONAL ENDSPEED (KCAS)
< 36	149
37-45	166
46	167
48	171
50	175
51.9	179

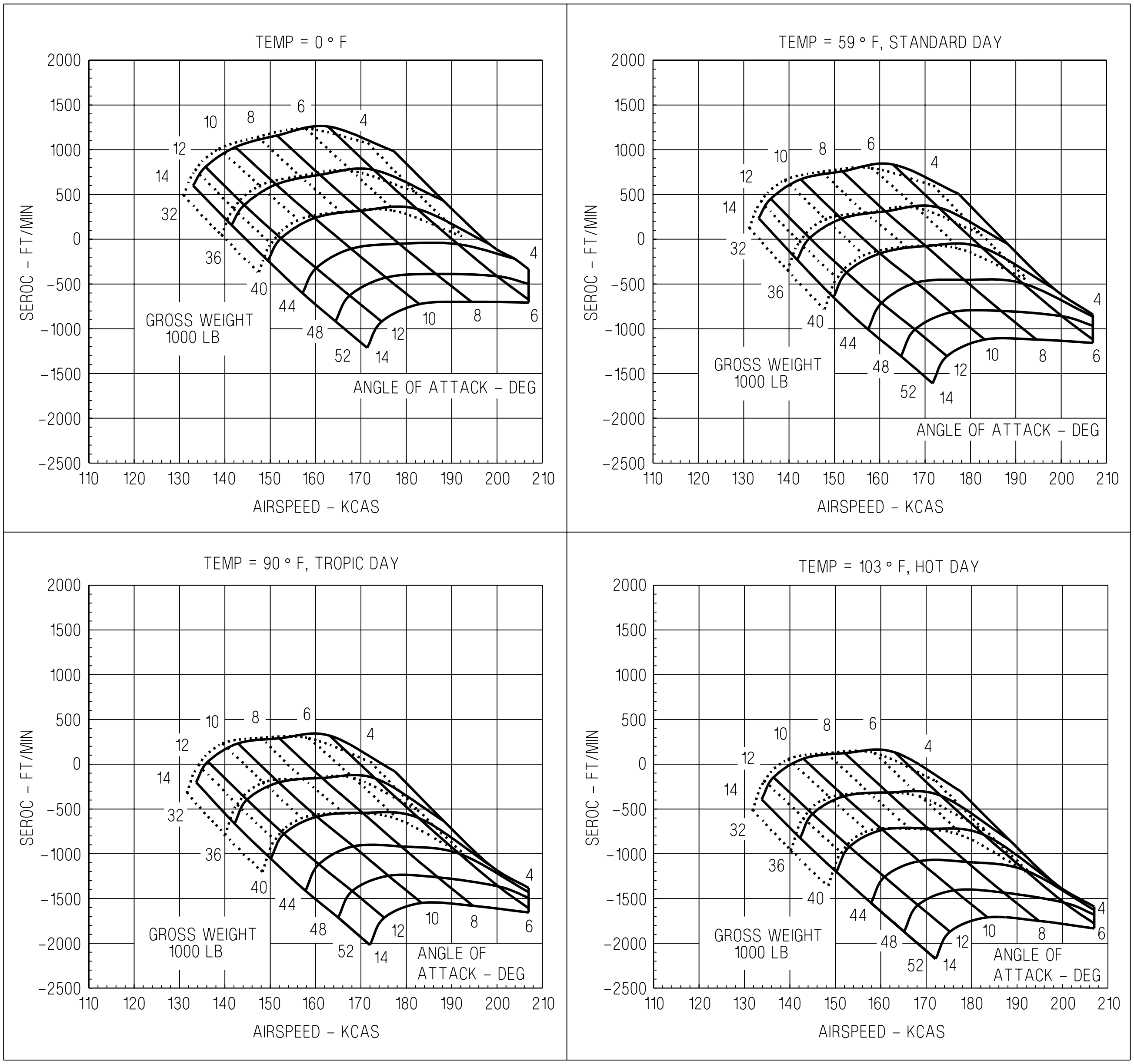
GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

——— STORES RETAINED
- - - - - STORES JETTISONED

NOTE: FOR FIELD OPERATIONS, REFER TO TAKEOFF SPEEDS ON TAKEOFF DISTANCE CHARTS.



ADA523-310-12-017

Figure 11-33. Single Engine Rate of Climb - F404-GE-400
(Sheet 8 of 12)

SINGLE ENGINE RATE OF CLIMB

F404-GE-400

ONE ENGINE OPERATING,
INOPERATIVE ENGINE WINDMILLING
MAXIMUM THRUST
HALF FLAPS, GEAR DOWN

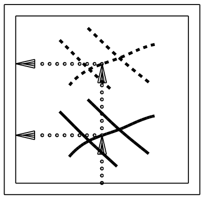
AIRCRAFT CONFIGURATION:
(2) AIM-9 + (2) AIM-7 +
(3) 330 GALLON FUEL TANKS
(DI=65.5)

STORES JETTISONED LOADING:
(2) AIM-9 + (2) AIM-7
(DI=8)
(PYLON MASS PROPERTIES AND
AERODYNAMICS NOT REFLECTED)

DATE: SEPTEMBER 1999
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

GW (1000 LB)	OPERATIONAL ENDSPEED (KCAS)
<36	149
37-45	166
46	167
48	171
50	175
51.9	179

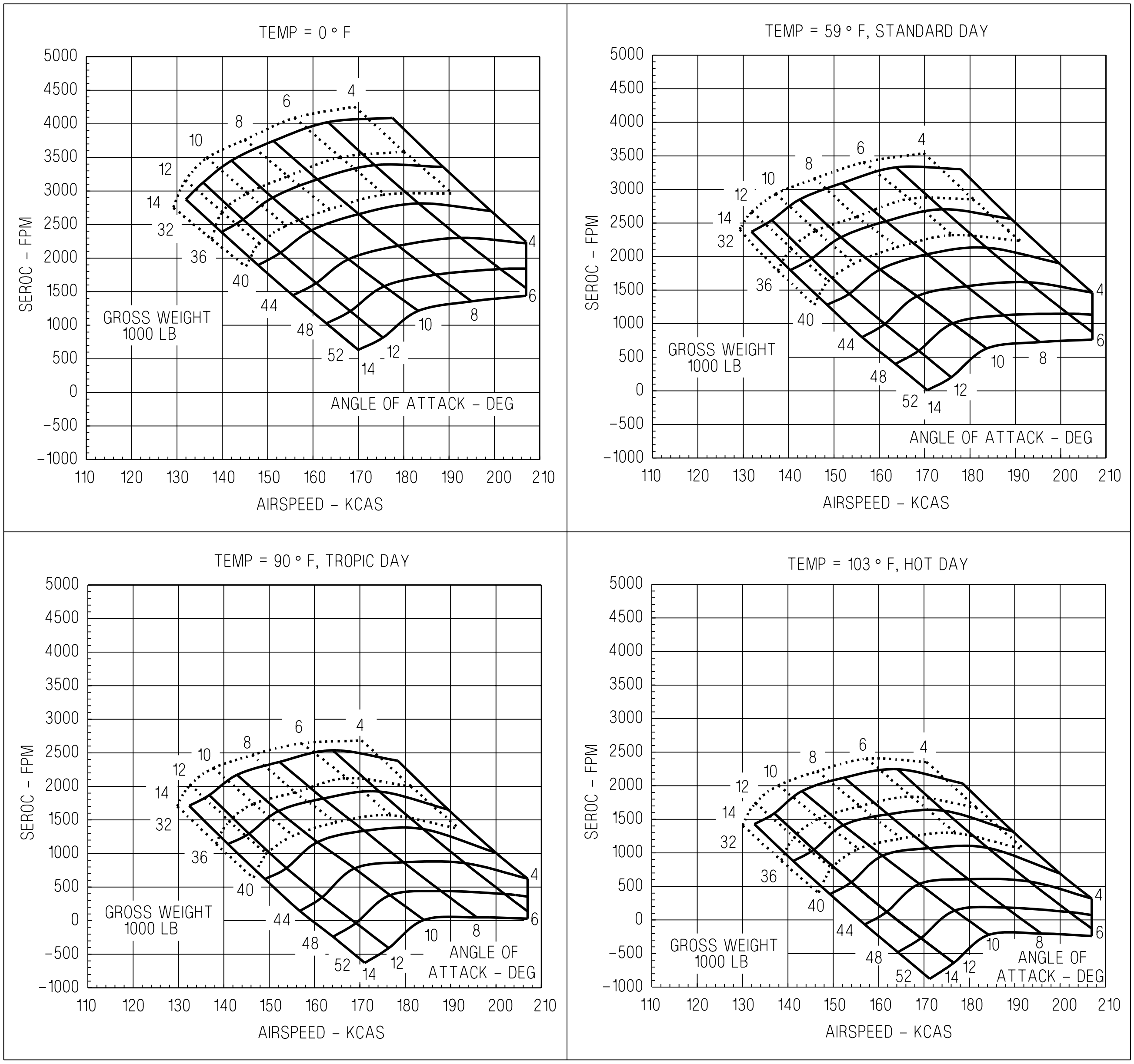
GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

——— STORES RETAINED
- - - - - STORES JETTISONED

NOTE: FOR FIELD OPERATIONS, REFER TO TAKEOFF SPEEDS ON TAKEOFF DISTANCE CHARTS.



TEMP = 0 ° F

TEMP = 59 ° F, STANDARD DAY

TEMP = 90 ° F, TROPIC DAY

TEMP = 103 ° F, HOT DAY

ADA523-310-5-017

Figure 11-33. Single Engine Rate of Climb - F404-GE-400
(Sheet 9 of 12)

SINGLE ENGINE RATE OF CLIMB

F404-GE-400

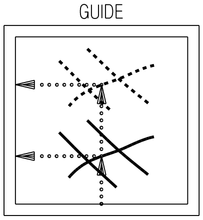
ONE ENGINE OPERATING,
INOPERATIVE ENGINE WINDMILLING
MILITARY THRUST
HALF FLAPS, GEAR DOWN

AIRCRAFT CONFIGURATION:
(2) AIM-9 + (2) AIM-7 +
(3) 330 GALLON FUEL TANKS
(DI=65.5)

STORES JETTISONED LOADING:
(2) AIM-9 + (2) AIM-7
(DI=8)
(PYLON MASS PROPERTIES AND
AERODYNAMICS NOT REFLECTED)

DATE: SEPTEMBER 1999
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

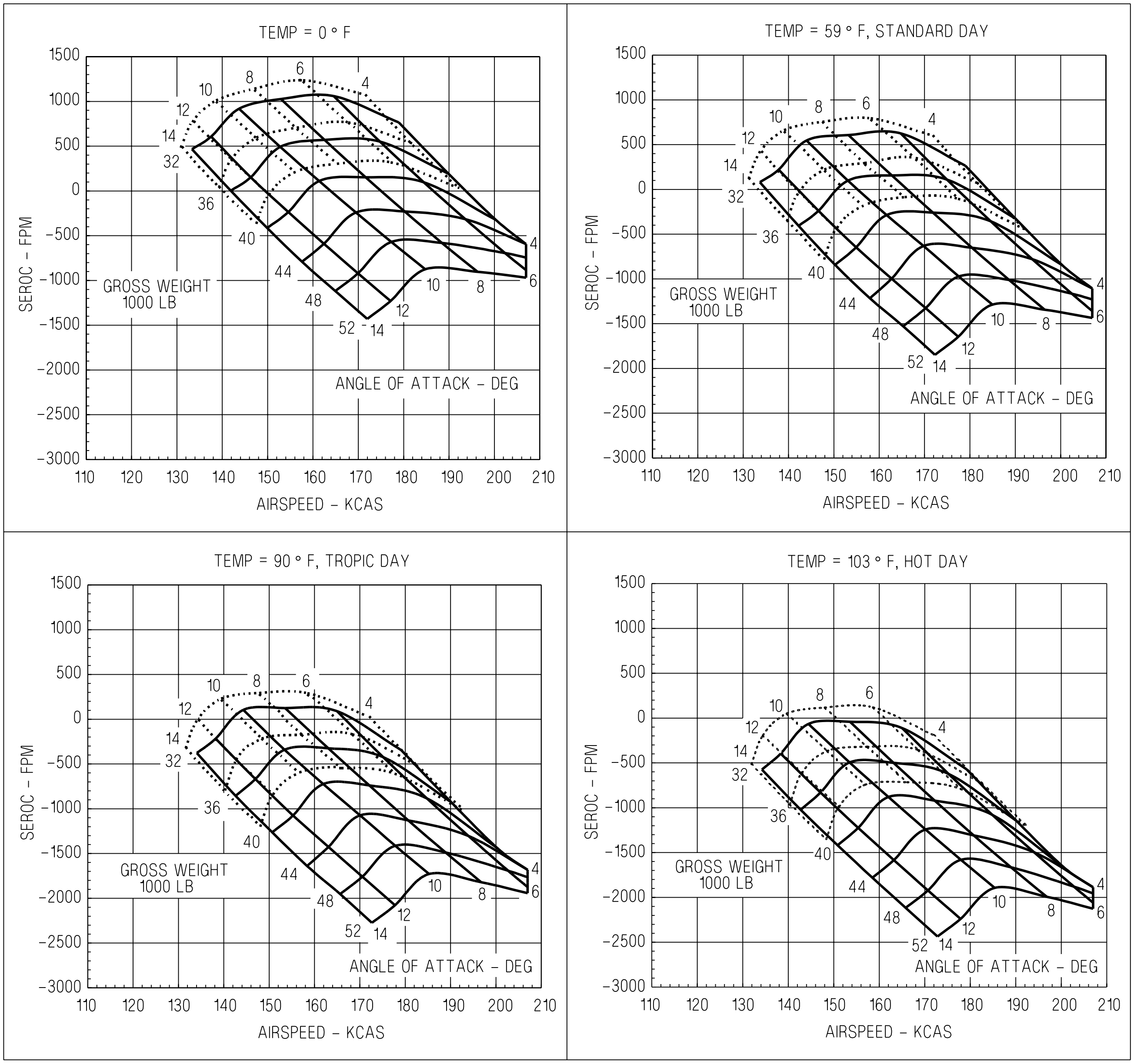
GW (1000 LB)	OPERATIONAL ENDSPEED (KCAS)
<36	149
37-45	166
46	167
48	171
50	175
51.9	179



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

——— STORES RETAINED
------- STORES JETTISONED

NOTE: FOR FIELD OPERATIONS, REFER TO TAKEOFF SPEEDS ON TAKEOFF DISTANCE CHARTS.



ADA523-310-6-017

Figure 11-33. Single Engine Rate of Climb - F404-GE-400
(Sheet 10 of 12)

SINGLE ENGINE RATE OF CLIMB

F404-GE-400

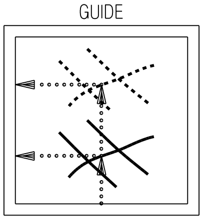
ONE ENGINE OPERATING,
INOPERATIVE ENGINE WINDMILLING
MAXIMUM THRUST
HALF FLAPS, GEAR DOWN

AIRCRAFT CONFIGURATION:
(2) AIM-9 + (2)VER'S + (4) MK-83 +
(3) 330 GALLON FUEL TANKS + LST + FLIR
(DI=138.5)

STORES JETTISONED LOADING:
(2) AIM-9 + (2) AIM-7
(DI=8)
(PYLON/VER MASS PROPERTIES AND
AERODYNAMICS NOT REFLECTED)

DATE: SEPTEMBER 1999
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

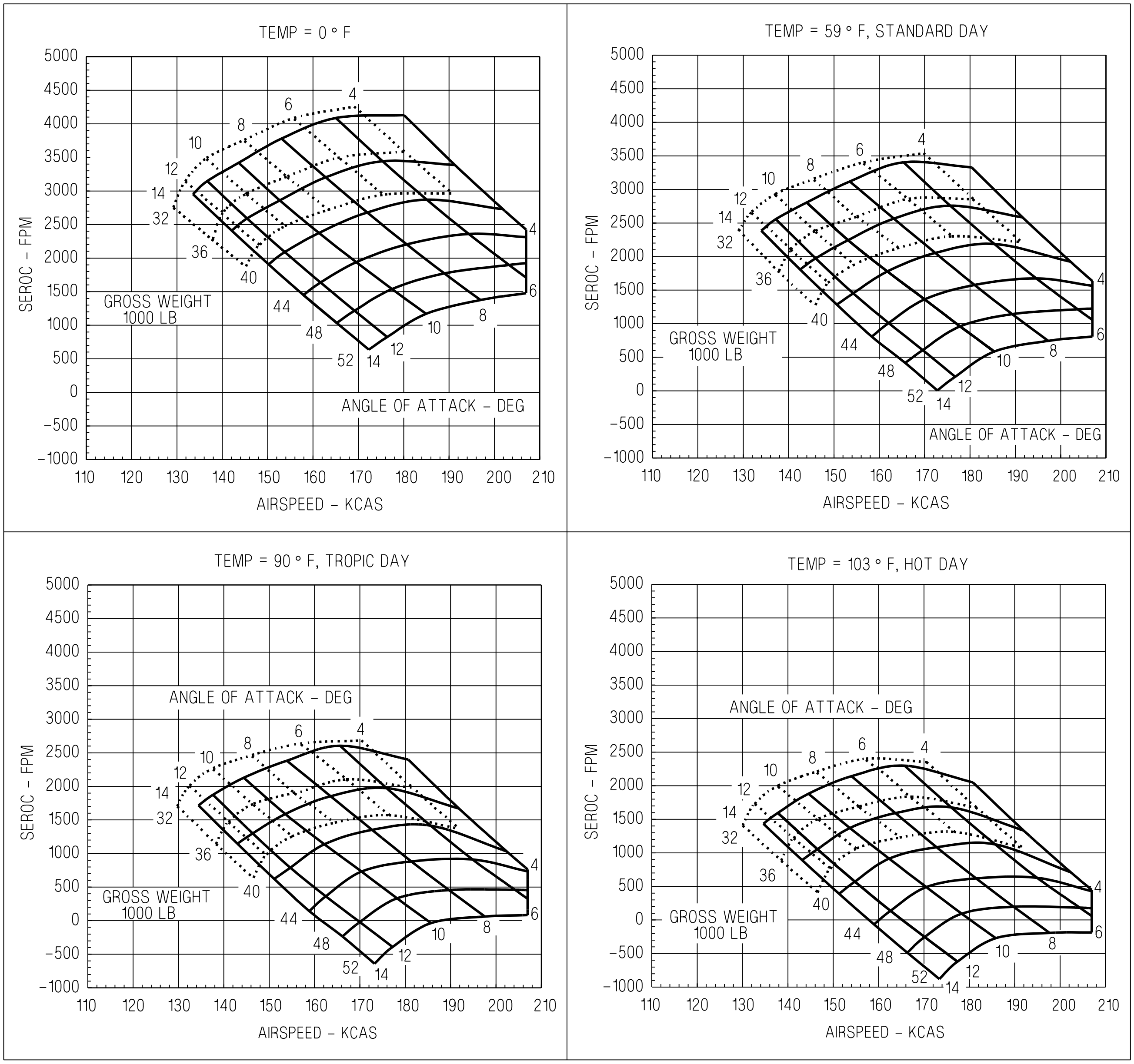
GW (1000 LB)	OPERATIONAL ENDSPEED (KCAS)
<36	149
37-45	166
46	167
48	171
50	175
51.9	179



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

—— STORES RETAINED
------ STORES JETTISONED

NOTE: FOR FIELD OPERATIONS, REFER TO TAKEOFF SPEEDS ON TAKEOFF DISTANCE CHARTS.



ADA523-310-7-017

Figure 11-33. Single Engine Rate of Climb - F404-GE-400
(Sheet 11 of 12)

SINGLE ENGINE RATE OF CLIMB

F404-GE-400

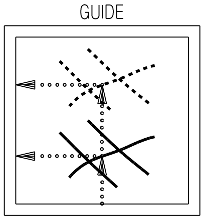
ONE ENGINE OPERATING,
INOPERATIVE ENGINE WINDMILLING
MILITARY THRUST
HALF FLAPS, GEAR DOWN

AIRCRAFT CONFIGURATION:
(2) AIM-9 + (2) VER'S + (4) MK-83 +
(3) 330 GALLON FUEL TANKS + LST + FLIR
(DI=138.5)

STORES JETTISONED LOADING:
(2) AIM-9 + (2) AIM-7
(DI=8)
(PYLON/VER MASS PROPERTIES AND
AERODYNAMICS NOT REFLECTED)

DATE: SEPTEMBER 1999
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

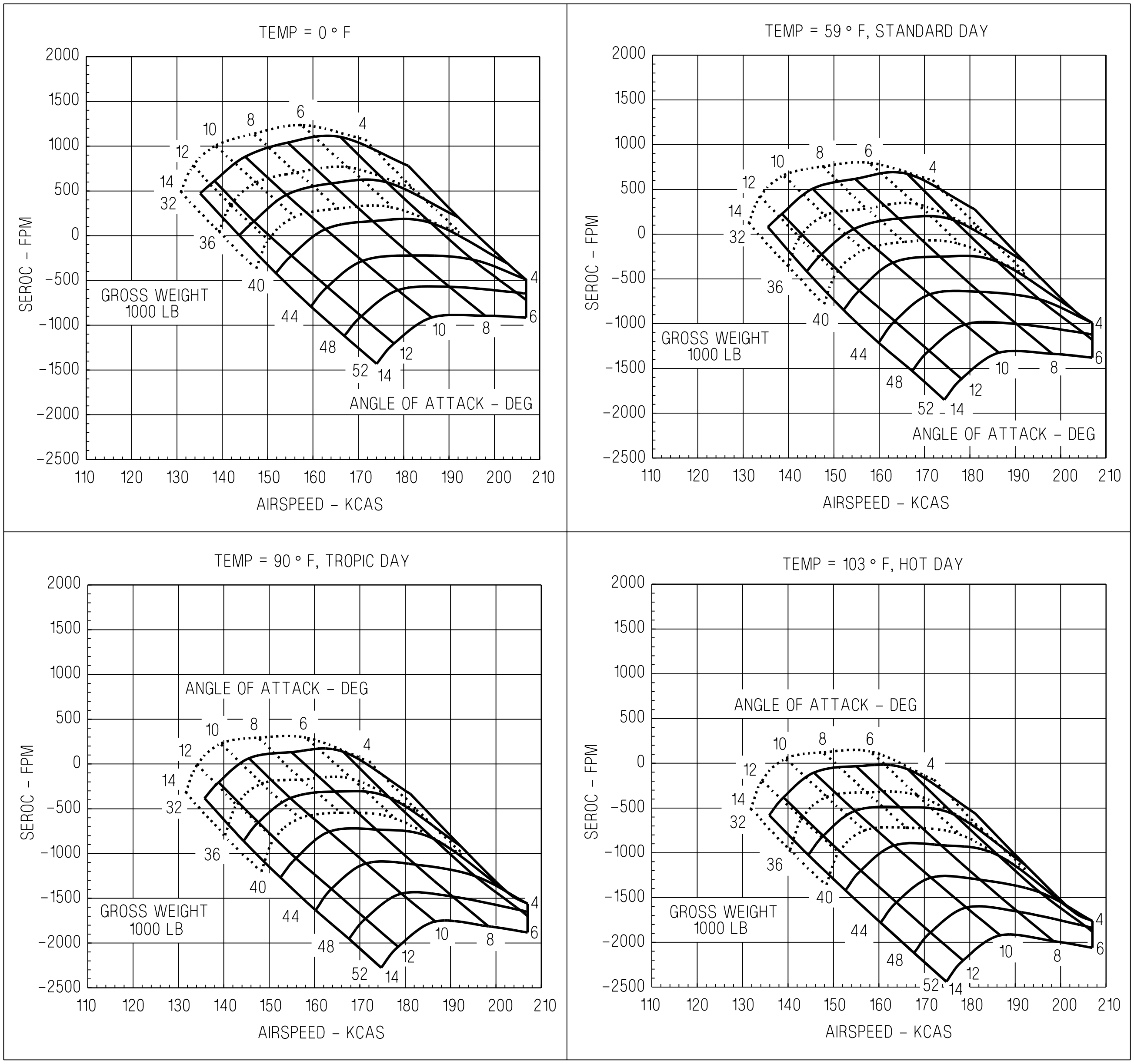
GW (1000 LB)	OPERATIONAL ENDSPEED (KCAS)
<36	149
37-45	166
46	167
48	171
50	175
51.9	179



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

——— STORES RETAINED
------- STORES JETTISONED

NOTE: FOR FIELD OPERATIONS, REFER TO TAKEOFF SPEEDS ON TAKEOFF DISTANCE CHARTS.



ADA523-310-8-017

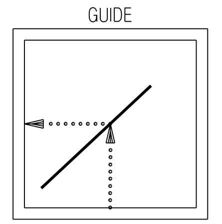
Figure 11-33. Single Engine Rate of Climb - F404-GE-400
(Sheet 12 of 12)

ADJUSTMENT TO SEROC FOR RETRACTING LANDING GEAR

F404-GE-400

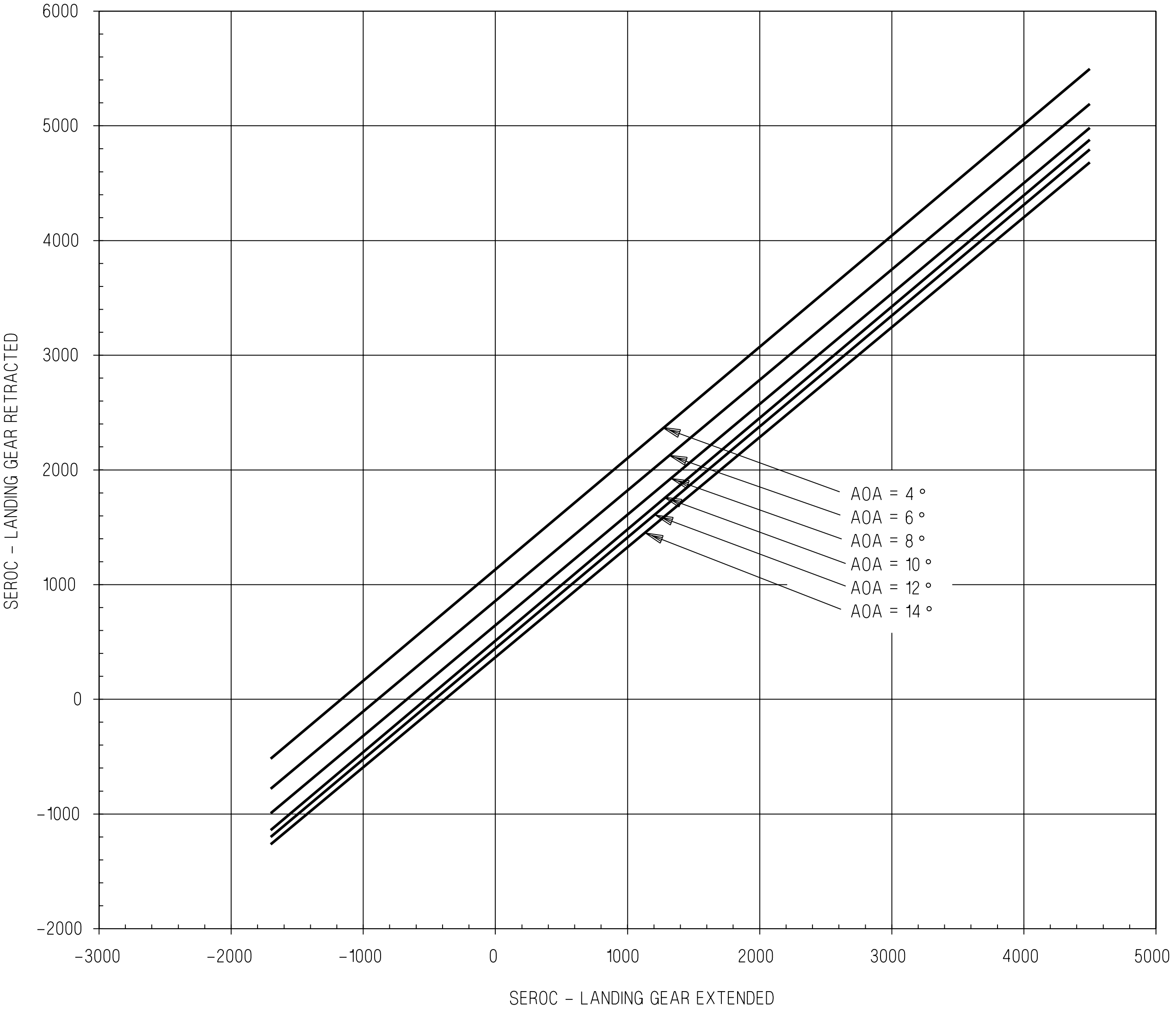
ONE ENGINE OPERATING,
INOPERATIVE ENGINE WINDMILLING
MILITARY AND MAXIMUM THRUST
HALF FLAPS

AIRCRAFT CONFIGURATION:
LAUNCH
ALL LOADINGS



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: SEPTEMBER 1999
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



ADA523-310-13-017

Figure 11-33A. Adjustment to SEROC for Retracting Landing Gear - F404-GE-400

PART 4 - RANGE F404-GE-400

TABLE OF CONTENTS

CHARTS

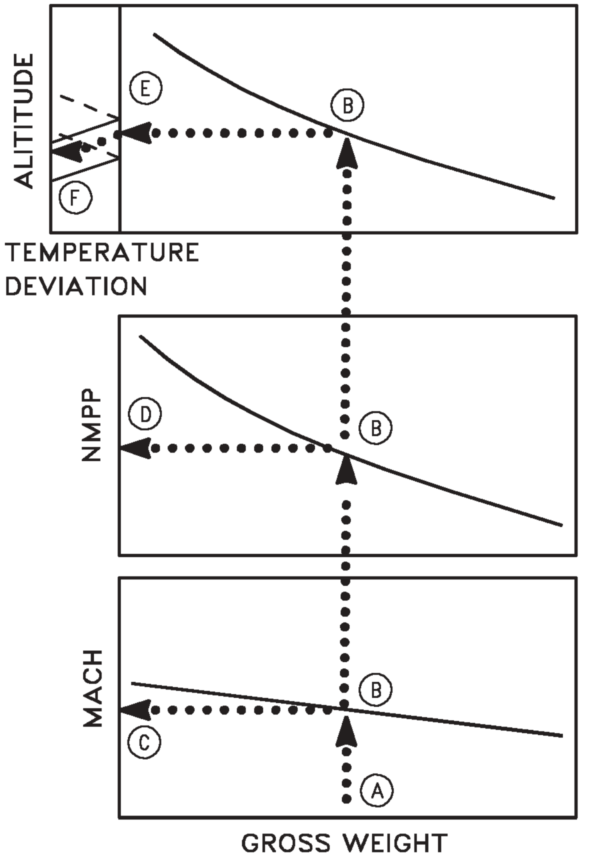
OPTIMUM CRUISE CHARTS

These charts (figures 11-34 and 11-35) present cruise data for two-engine and single engine operation. The charts depict cruise altitude, specific range (nautical miles per pound of fuel (NMPP)), and cruise Mach number for various gross weights and drag indexes.

USE

Enter the chart with the applicable gross weight and project vertically up to intersect the appropriate drag index curves. From the intersection of these drag index curves, reflect horizontally left and read Mach number and specific range in nautical miles per pound. To read optimum cruise altitude, project horizontally left from the intersection of the drag index curve to the temperature baseline and parallel the appropriate temperature deviation guideline to the correct temperature deviation. Project horizontally to read optimum cruise altitude.

SAMPLE OPTIMUM CRUISE



18AC-NFM-20-(166-1)11-CATI

Sample Problem

One Engine Operating (figure 11-35)

A. Gross weight	40,000 Lb.
B. Drag index	50
C. Mach number	0.64
D. Specific range	0.079 NMPP
E. Temperature deviation from standard day	+10°C
F. Optimum cruise altitude	20,700 Ft.

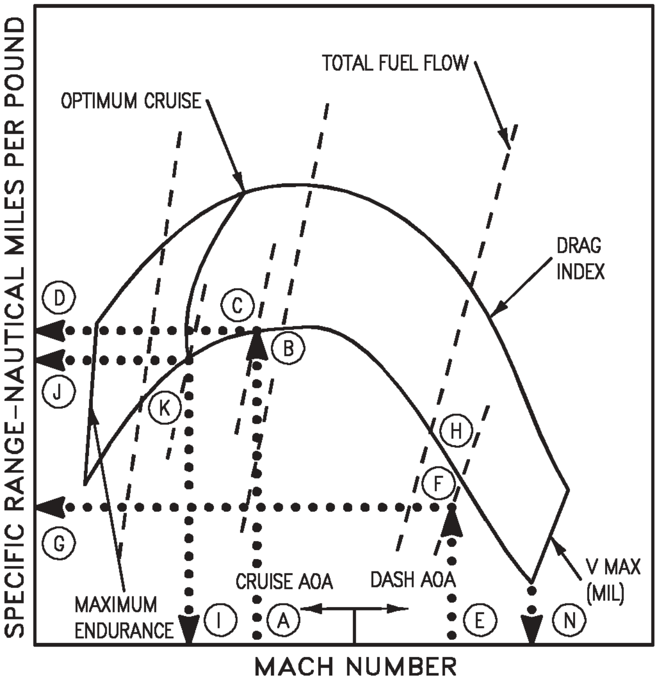
SPECIFIC RANGE CHARTS

These charts (figures 11-36 thru 11-141) present planning data for constant altitude cruise with various drag indexes at altitudes of sea level, 5,000, 10,000, 15,000, 20,000, 25,000, 30,000, 35,000, 40,000, and 45,000 feet and gross weights of 26,000 thru 50,000 pounds in 4,000 pound increments. The charts depict specific range (nautical miles per pound of fuel (NMPP)) and total fuel flow in pounds per hour for various Mach numbers at cruise AOA (greater than approximately 2.5°) and dash AOA (approximately 2.5° or lower). Also depicted on the charts are lines for optimum cruise and maximum endurance.

USE

Enter the appropriate chart for desired cruise altitude and gross weight with the desired Mach number for cruise AOA and project vertically up to the computed drag index. From this point read total fuel flow, then project horizontally left to read specific range in nautical miles per pound of fuel. Repeat this process to obtain like data for desired Mach number at dash AOA. Total fuel flow for any combination of Mach number and drag index can be obtained by interpolating between the total fuel flow lines provided on the charts. Mach number, total fuel flow and specific range for optimum cruise can be obtained by entering the chart on the optimum cruise line at the appropriate drag index and projecting vertically down and horizontally left to read Mach number and specific range respectively. Maximum endurance data is obtained in an identical manner entering the chart on the line labeled maximum endurance. Maximum Mach number at a particular drag index and military power setting can be obtained by reading the V_{MAX} curve at that drag index. To correct for nonstandard day conditions, multiply the maximum Mach number obtained by the V_{MAX} factor corresponding to the desired temperature deviation.

SAMPLE SPECIFIC RANGE



18AC–NFM–20–(167–1)–CATI–24

Sample Problem

Chart: 5,000 Feet - 42,000 Pounds (figure 11-47) Problem based on loading in figure 11-1.

A. Mach number (cruise AOA)	0.6
B. Drag index (total)	138.5
C. Total fuel flow	7,900 PPH
D. Specific range	0.0495 NMPP
E. Mach number (dash AOA)	0.8
F. Drag index (total)	152.5
G. Specific range	0.0362 NMPP
H. Total fuel flow	14,300 PPH
I. Mach number (optimum cruise)	0.5
J. Specific range	0.0515 NMPP
K. Total fuel flow	6,300 PPH
L. Temperature deviation from standard day	+20°C
M. V_{MAX} Factor	0.96
N. Standard Day V_{MAX}	0.862
O. Correct V_{MAX}	0.827

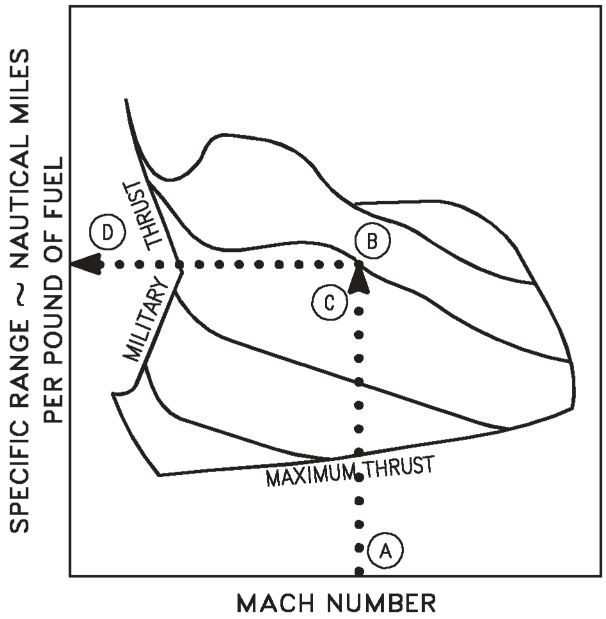
COMBAT SPECIFIC RANGE CHARTS

These charts (figure 11-142, sheets 1 thru 4) present the specific range and the general thrust settings required to maintain a constant Mach number for a U.S. standard day and standard day +10°C at all altitudes from sea level to 50,000 feet. The specific range values are based on a stabilized level flight condition and do not represent the fuel flow required to accelerate to a given Mach number.

USE

Enter the chart corresponding to the aircraft configuration with the desired Mach number for stabilized level flight. Proceed vertically upward to the selected flight altitude. Note the general thrust setting required, and then project horizontally left to obtain the specific range.

SAMPLE COMBAT SPECIFIC RANGE



18AC-NFM-20-(315-1)11-CATI

Sample Problem

Configuration: (2)AIM-9 +(2)AIM-7

A. Desired Mach number	1.2
B. Altitude (Standard Day)	25,000 Ft.
C. Thrust setting required	Mod. Afterburners
D. Specific range	0.023 NMPP

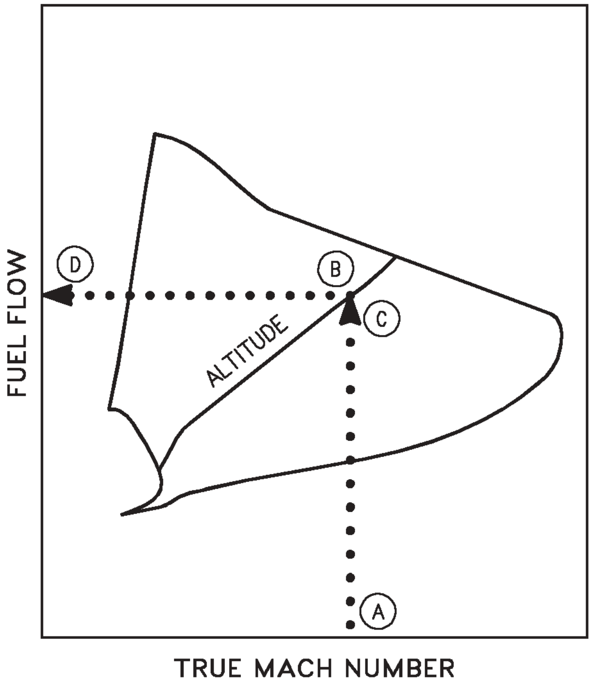
COMBAT FUEL FLOW CHARTS

These charts (figure 11-143, sheets 1 thru 4) present the specific fuel flow and general thrust setting to maintain a constant Mach number for a U.S. standard day and standard day +10°C at all altitudes between sea level and 50,000 feet. Each chart is plotted for a specific configuration. The fuel flow values are based on a stabilized level flight condition and do not represent the fuel flow required to accelerate to a given Mach number.

USE

Enter the chart corresponding to the aircraft configuration with the desired Mach number for stabilized level flight. Proceed vertically upward to the selected flight altitude. Note the general thrust setting required, and then project horizontally to the left to read specific fuel flow.

SAMPLE COMBAT FUEL FLOW



18AC-NFM-20-(316-1)11-CATI

Sample Problem

Configuration: (2) AIM-9 + (2)AIM-7

A. Desired Mach number	1.4
B. Altitude (Standard Day)	30,000 Ft.
C. Thrust setting required	Mod. Afterburners
D. Specific fuel flow	630 Lb/Min.

CONSTANT ALTITUDE/LONG RANGE CRUISE (SPEED-TIME-FUEL) CHART

This chart (figure 11-144, sheet 1) is used to determine the airspeed, time, and fuel required to travel a given distance when the cruise Mach number, outside air temperature (OAT), wind component at altitude, and fuel flow are known. The chart may be used for single engine or two-engine operation.

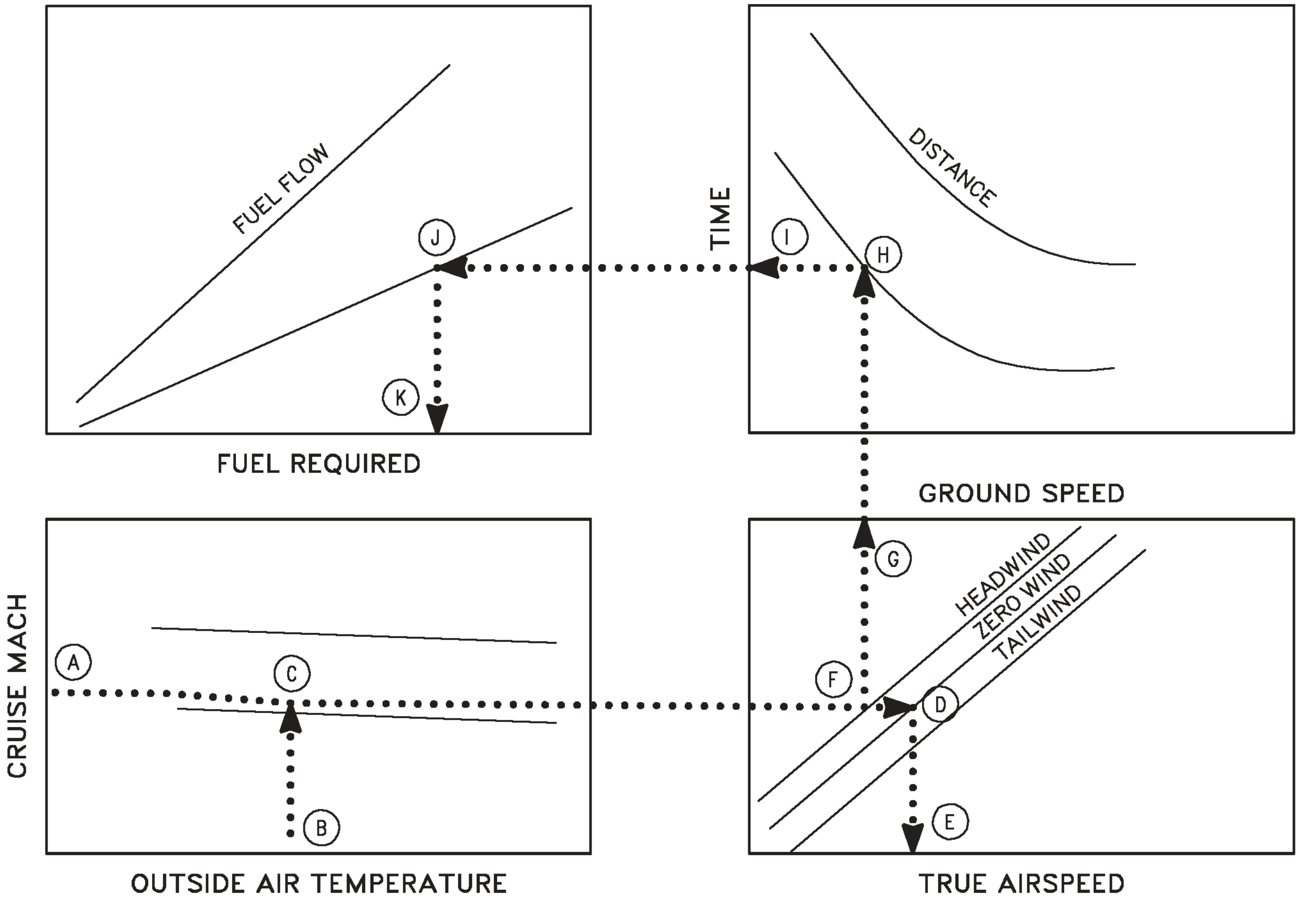
USE

Enter the chart with the desired cruise Mach number and parallel the guidelines to intersect a vertical line projected up from the outside air temperature scale. From this point, project horizontally to the zero wind component line, then vertically down to read true airspeed. If winds are expected at the cruise altitude, trace back to the zero wind line and project horizontally to the appropriate headwind or tailwind line, then vertically up to read groundspeed. From this point, continue to project vertically up to the selected distance curve, then horizontally left to read time required. Continue to project horizontally left to the appropriate fuel flow line, then vertically down to read fuel required.

Sample Problem

A. Cruise Mach	0.65
B. OAT	20 °F
C. Intersect OAT	
D. Wind component	0
E. True airspeed	410 Kt.
F. Headwind	50 Kt.
G. Groundspeed	360 Kt.
H. Selected distance	600 NM
I. Time required	100 Min.
J. Fuel flow	4,000 PPH
K. Fuel required	6,667 Lb.

SAMPLE CONSTANT ALTITUDE/LONG RANGE CRUISE
-SPEED. TIME AND FUEL



18AC-NFM-20-(168-1)11-CATI

CONSTANT ALTITUDE/LONG RANGE CRUISE (TRUE AIRSPEED AND FUEL FLOW) CHART

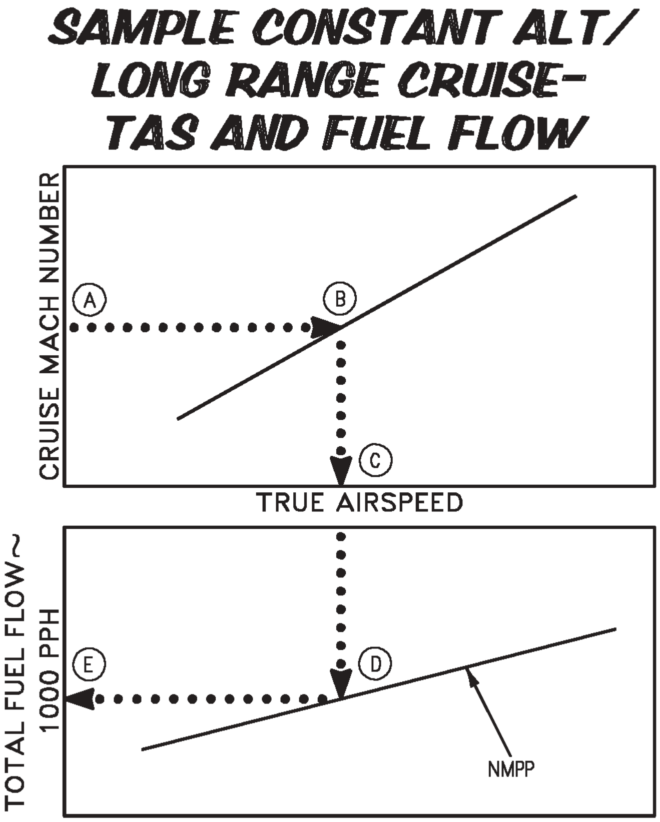
This chart (figure 11-144, sheet 2) is used to determine the true airspeed and total fuel flow when the cruise Mach number, outside air temperature (OAT), and specific range are known at a particular cruise condition. The chart may be used for single engine or two-engine operation.

USE

Enter the chart with the desired cruise Mach number and project horizontally right to the outside air temperature curve. Project horizontally down to read true airspeed and continue projection down to the specific range (nautical miles per pound) curve as determined from the specific range charts at the gross weight, altitude and drag index of interest. From the intersection of the nautical miles per pound curve project horizontally left to read total fuel flow.

Sample Problem

A. Cruise Mach	0.52
B. OAT	-20°C
C. True Airspeed	320 Kt.
D. Specific Range	0.0400 NM/Lb.
E. Total Fuel Flow	8,100 PPH



SAMPLE CONSTANT ALT/ LONG RANGE CRUISE- TAS AND FUEL FLOW

18AC-NFM-20-(305-1)-CATI-26

RANGEWIND CORRECTION CHART

This chart (figure 11-145) provides a means of correcting computed range (specific or total) for existing wind effects. The presented range factors consider wind speeds up to 150 knots from any relative wind direction for aircraft speeds of 200 to 1,300 KTAS.

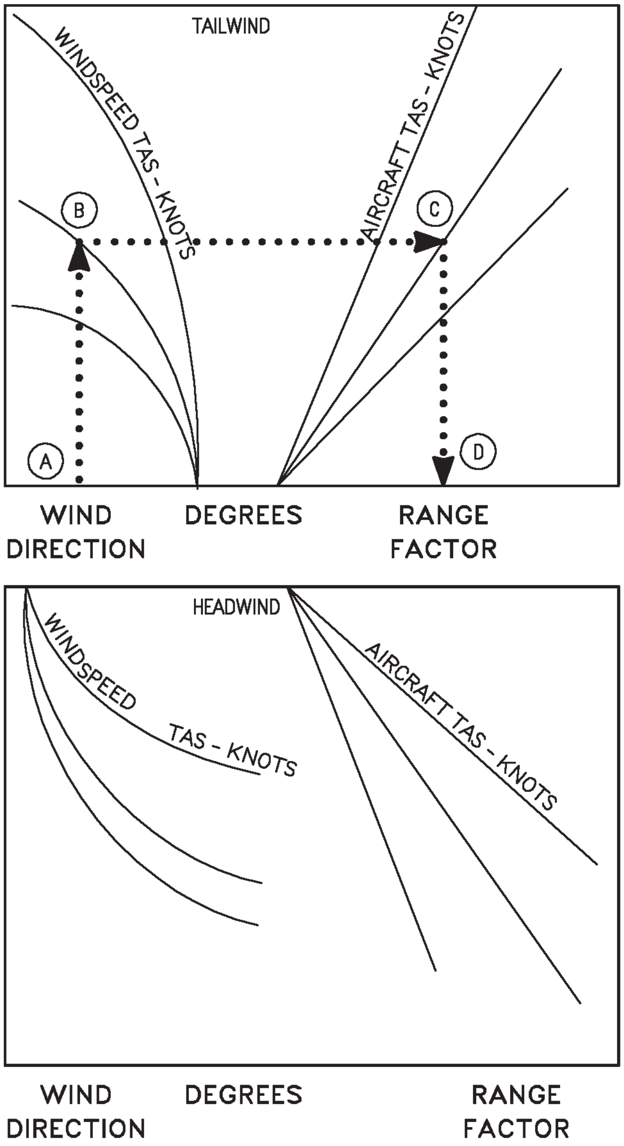
USE

Determine the relative wind direction by subtracting the aircraft heading from the forecast wind direction. If the aircraft heading is greater than forecast wind direction, add 360° to the wind direction and then perform the subtraction. Enter the chart with relative wind direction and proceed vertically to the interpolated wind speed. From this point, project horizontally to intersect the aircraft true airspeed and reflect to the lower scale to read the range factor. Multiply computed range by this range factor to find range as affected by wind.

Sample Problem

A. Relative wind direction	150°
B. Wind speed	125 Kt.
C. Aircraft speed	400 KTAS
D. Range - factor	1.25

SAMPLE RANGEWIND CORRECTION



18AC-NFM-20-(169-1)11-CATI

HEADWIND EFFECTS ON BINGO FUEL

These charts (figure 11-145a and 11-145b) show the adjusted fuel required to perform the Bingo mission profiles as a function of headwind, aircraft landing gear, and flap setting. Charts are provided for Bingo cruise at best altitude and cruise at sea level.

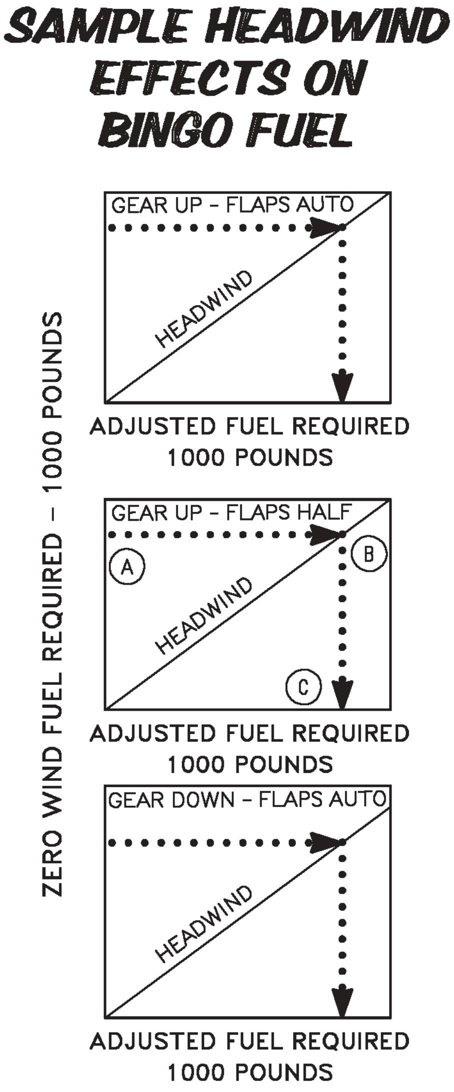
USE

Enter the appropriate chart with the zero wind fuel required and project horizontally to the headwind speed. From this point, project vertically down to read the adjusted fuel required.

Sample Problem

Cruise at Sea Level, Gear Up - Flaps Half

A. Zero wind fuel required	3,200 Lb.
B. Headwind speed	75 Kts.
C. Adjusted fuel required	4,460 Lb.



18AC-NFM-20-(488-1)13-CATI

BINGO CHARTS

These charts (figures 11-146 thru 11-154) show time, fuel, and airspeed required to travel a given distance using a combination of climb, maximum range cruise, and normal descent. Charts are provided for two-engine and single engine operation at various combinations of drag index, weight and gear up and gear down configurations. Fuel required values include a 1,500 pound reserve. Data are provided for both cruise at optimum cruise altitude and at sea level.

OPTIMUM CRUISE

F404–GE–400

ALTITUDE AND MACH NUMBER

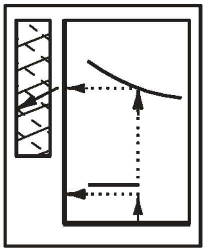
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400

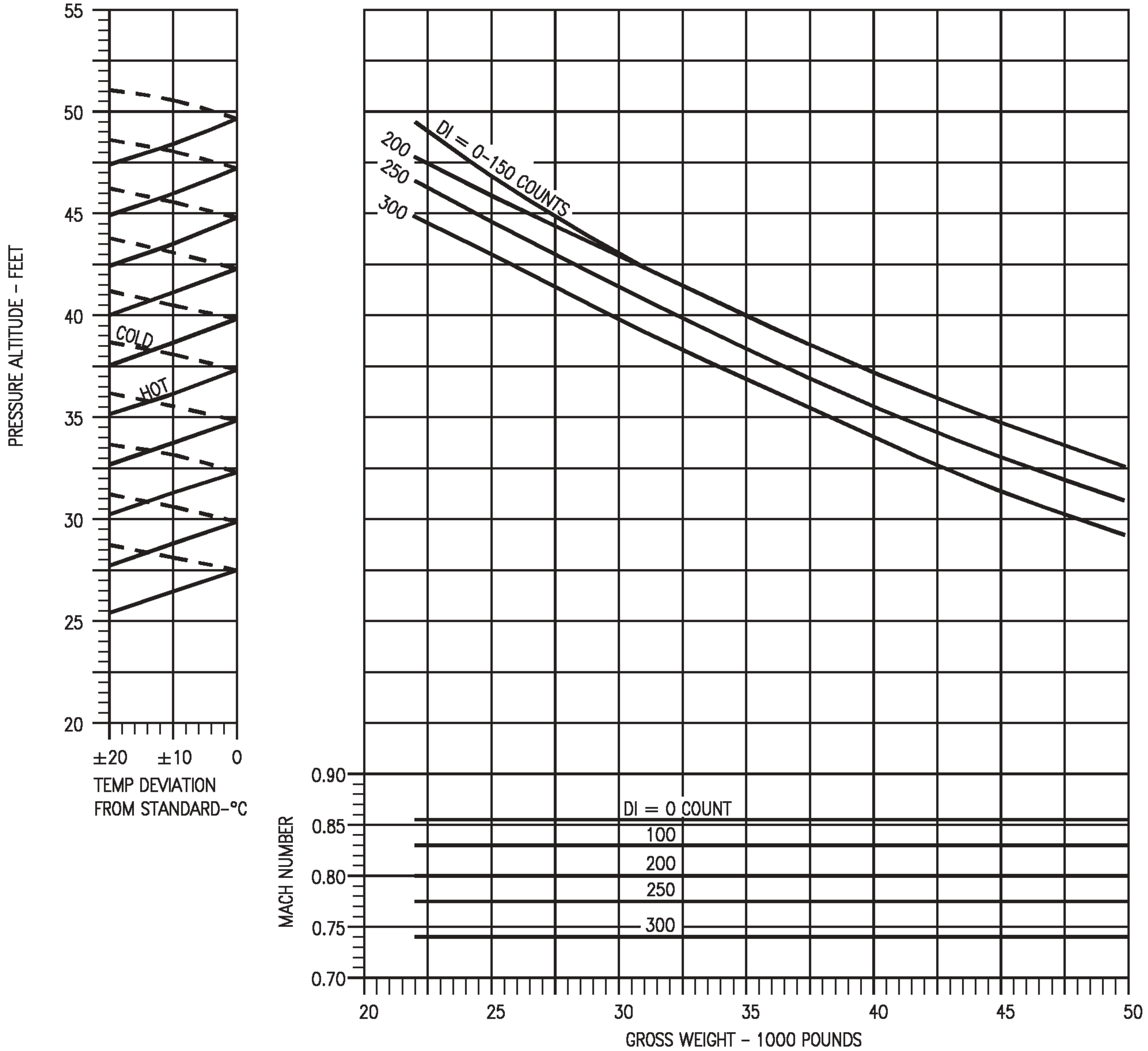
DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(170–1)11–CATI

Figure 11-34. Optimum Cruise - F404-GE-400
(Sheet 1 of 2)

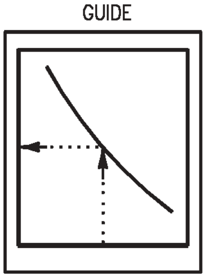
OPTIMUM CRUISE

F404-GE-400

SPECIFIC RANGE

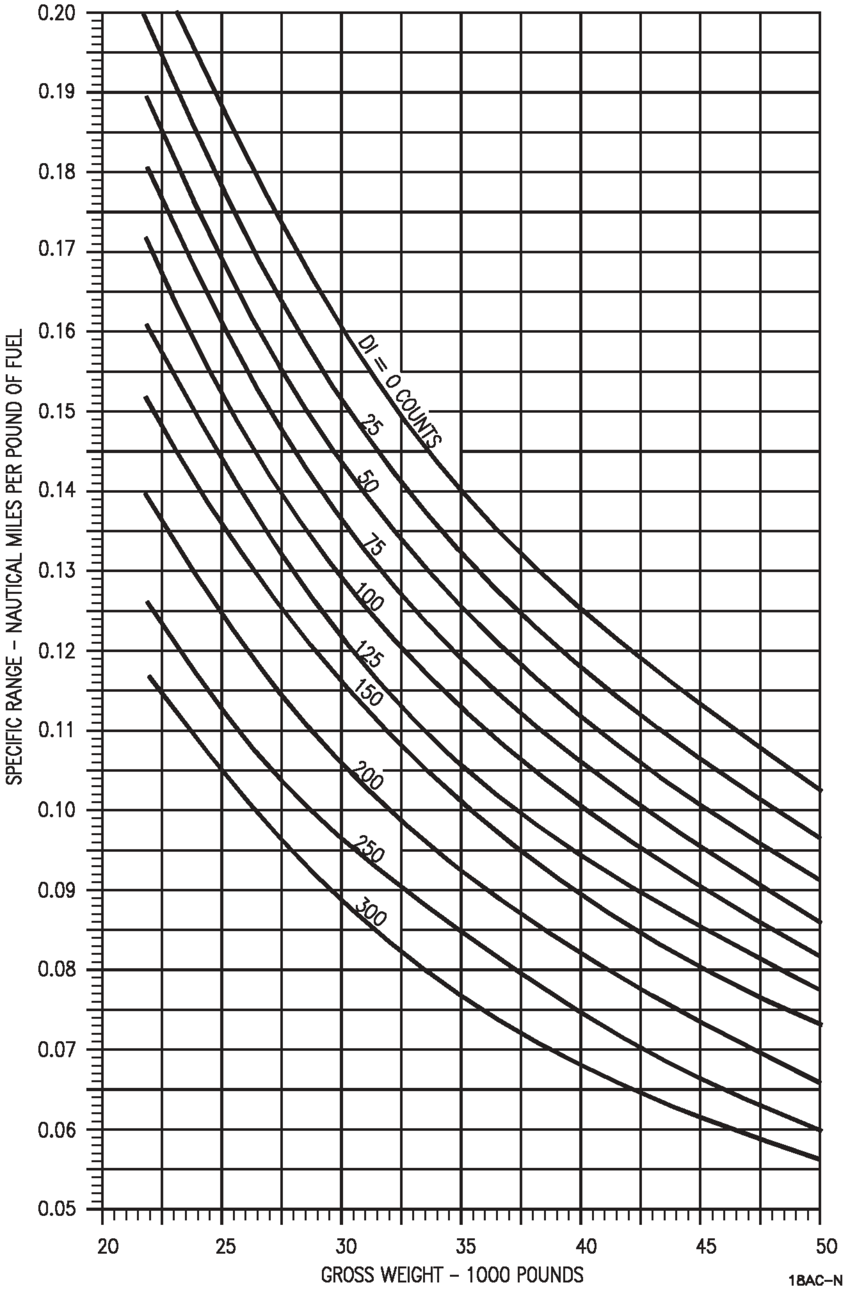
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



1BAC-NFM-20-(170-2)01-CATI

Figure 11-34. Optimum Cruise - F404-GE-400
(Sheet 2 of 2)

OPTIMUM CRUISE

F404–GE–400

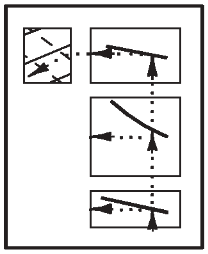
ONE ENGINE OPERATING

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

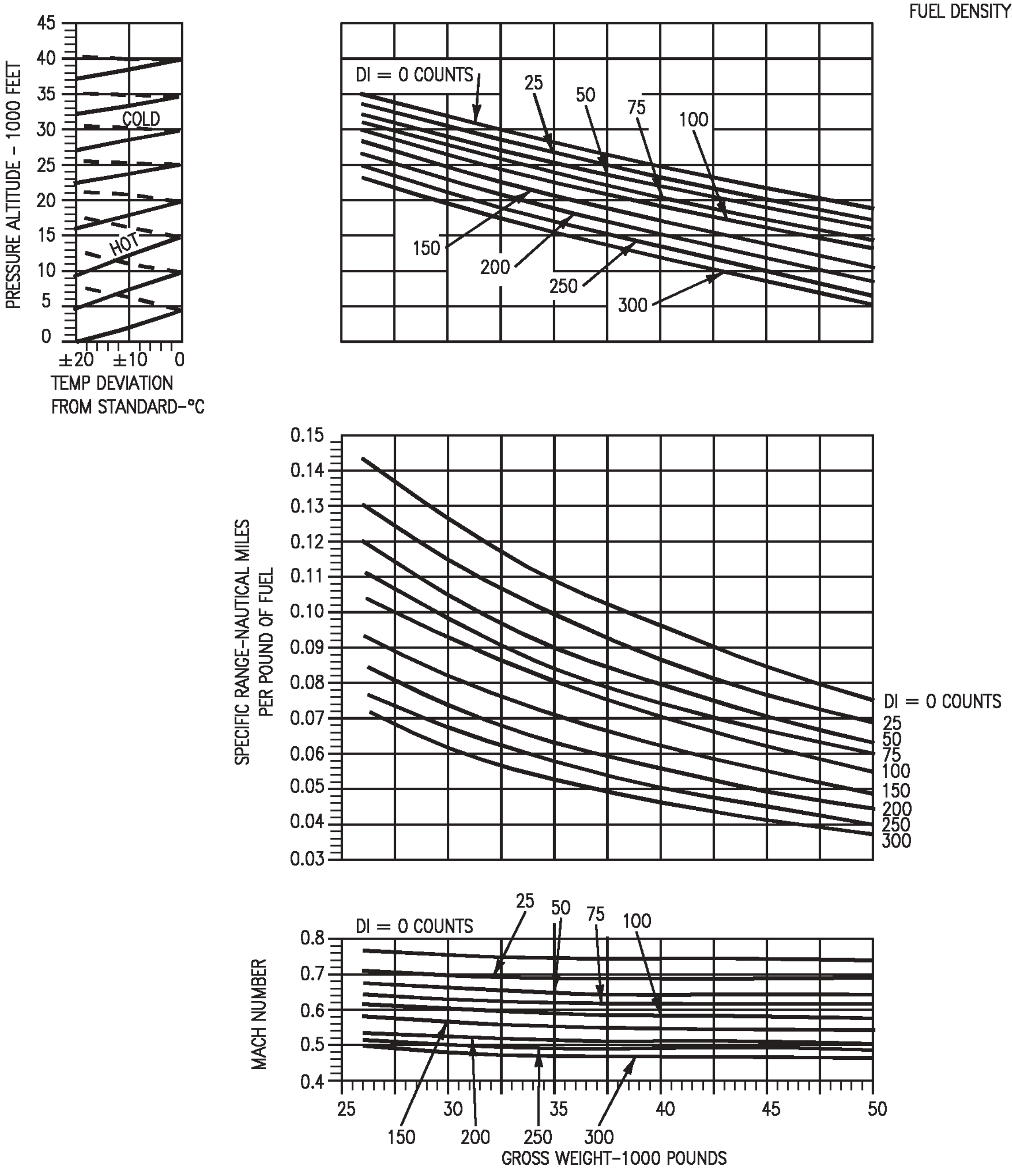
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(171–1)12–CATI

Figure 11-35. Optimum Cruise - One Engine Operating - F404-GE-400

SPECIFIC RANGE

F404-GE-400

SEA LEVEL – 26,000 POUNDS

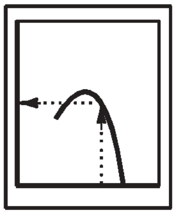
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.=15°C

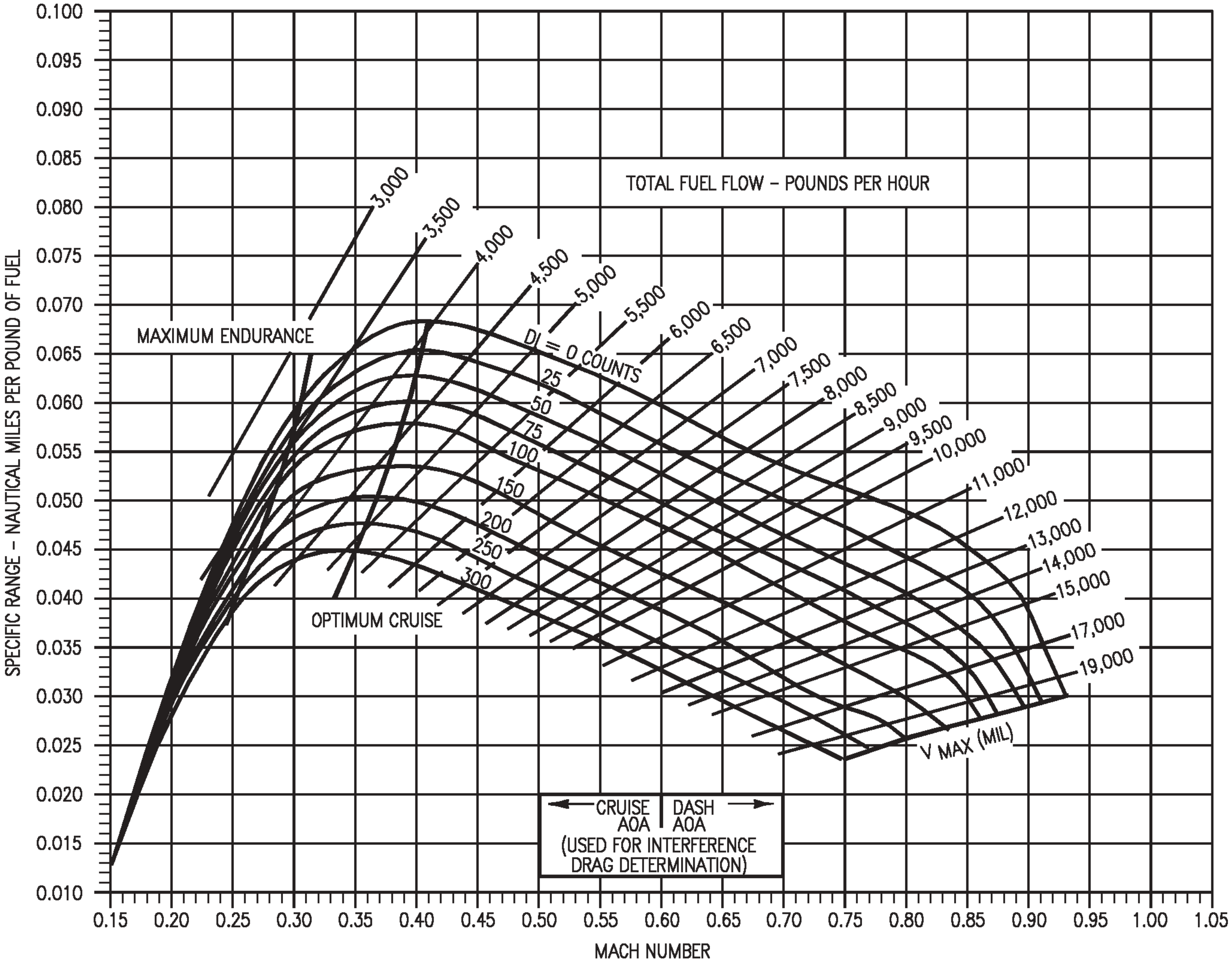
TEMPERATURE EFFECTS	
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.02
-10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(172-1)12-CATI

Figure 11-36. Specific Range - Sea Level - 26,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

SEA LEVEL – 30,000 POUNDS

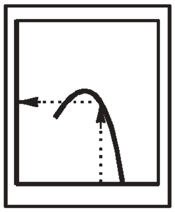
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.=15°C

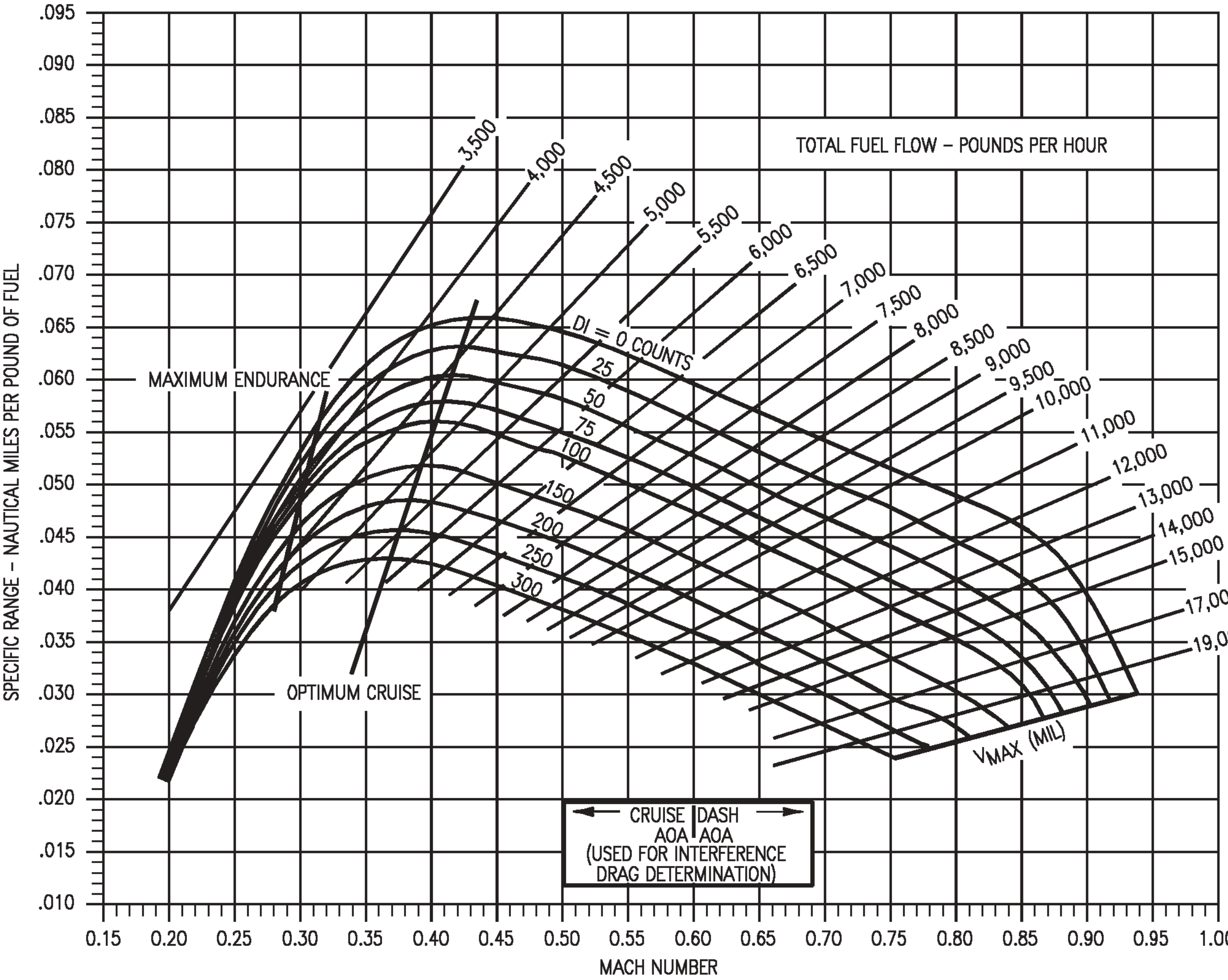
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(173–1)12–CATI

Figure 11-37. Specific Range - Sea Level - 30,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

SEA LEVEL - 34,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

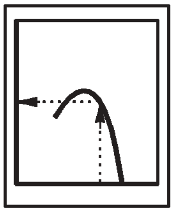
REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.=15°C

TEMPERATURE EFFECTS

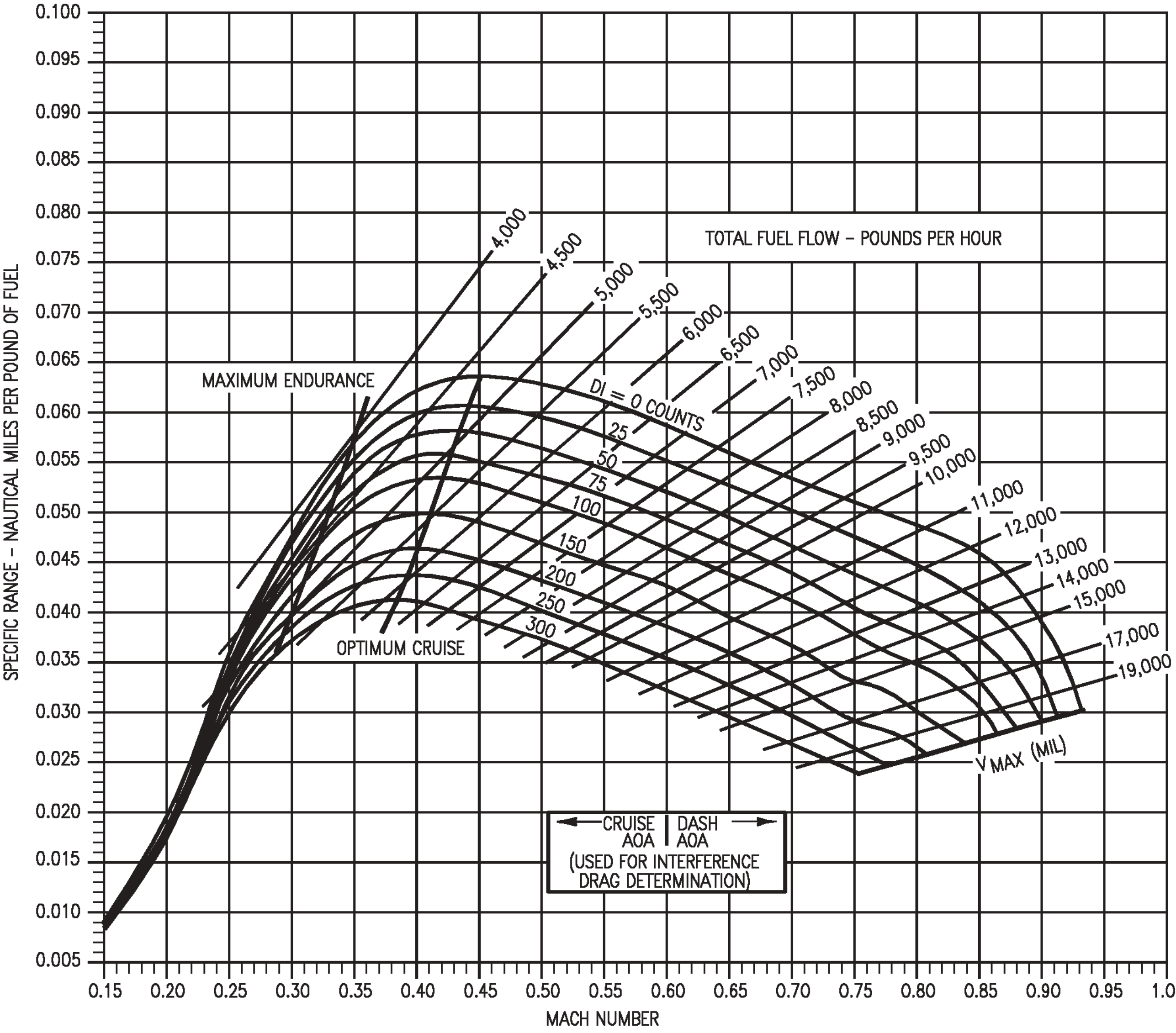
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.02
-10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(174-1)12-CATI

Figure 11-38. Specific Range - Sea Level - 34,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

SEA LEVEL – 38,000 POUNDS

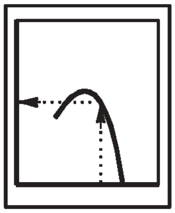
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.=15°C

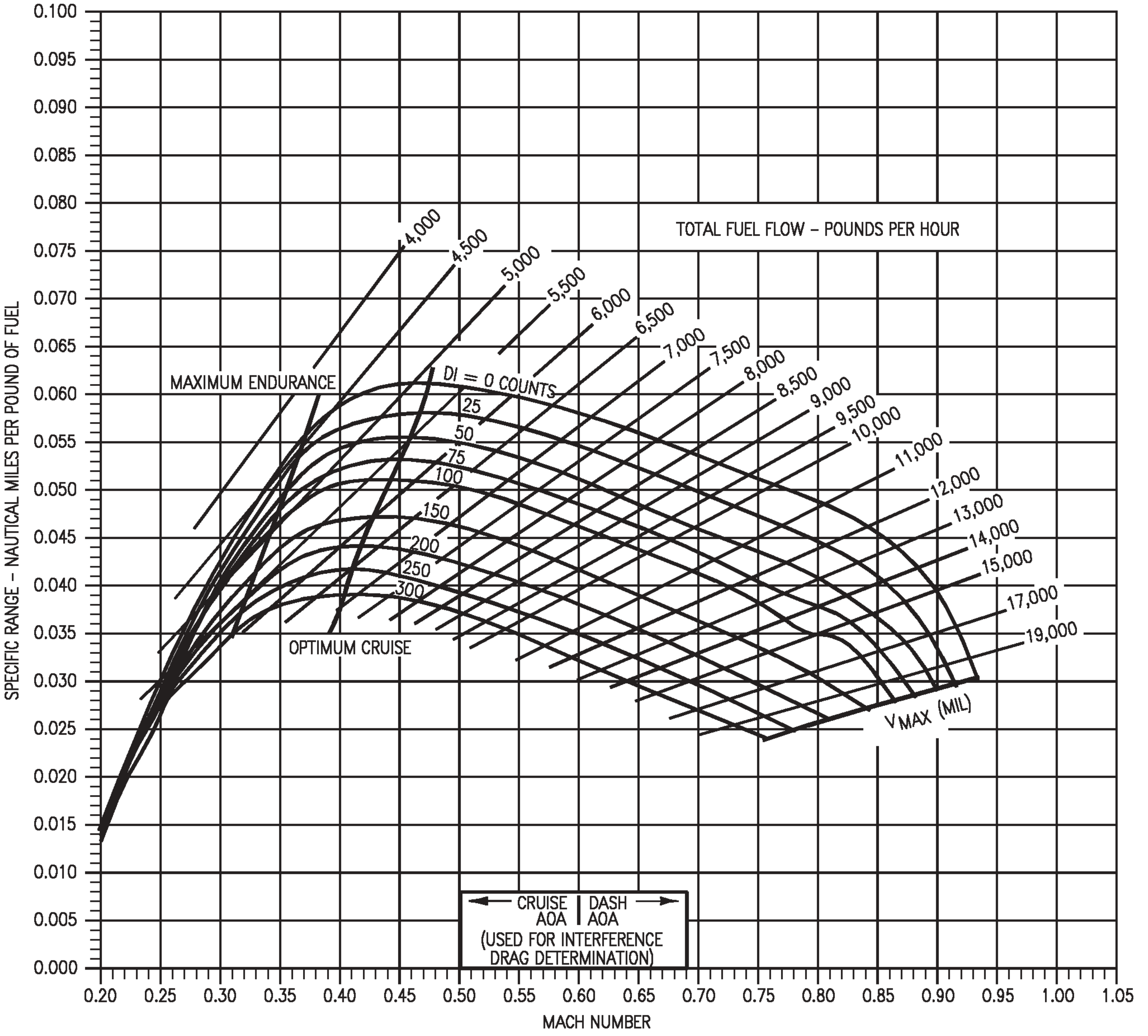
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
−20	1.02
−10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(175–1)12–CATI

Figure 11-39. Specific Range - Sea Level - 38,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

SEA LEVEL – 42,000 POUNDS

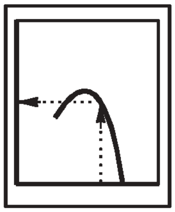
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.=15°C

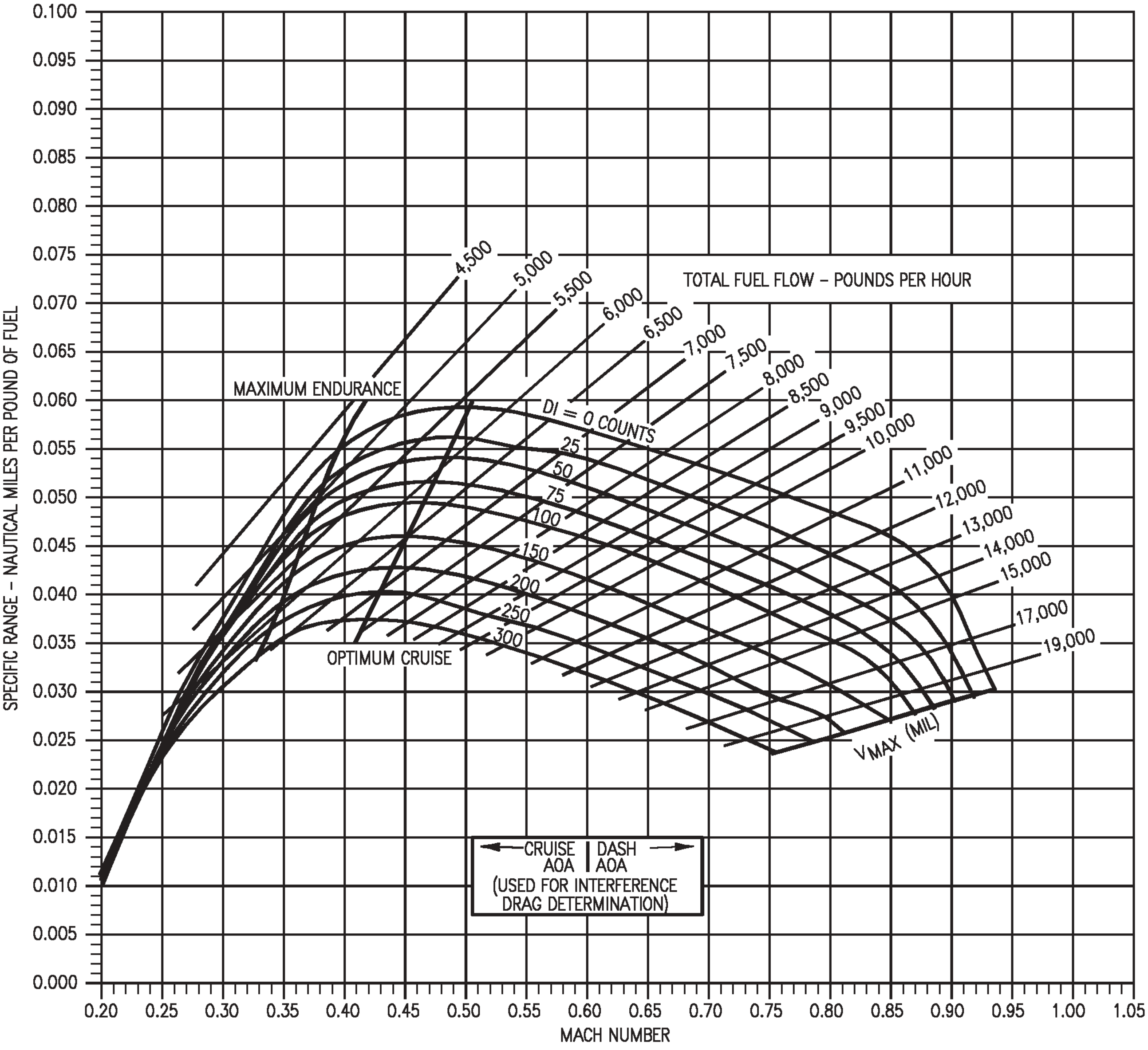
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(176–1)12–CATI

Figure 11-40. Specific Range - Sea Level - 42,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

SEA LEVEL – 46,000 POUND

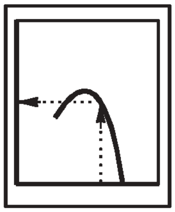
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.=15°C

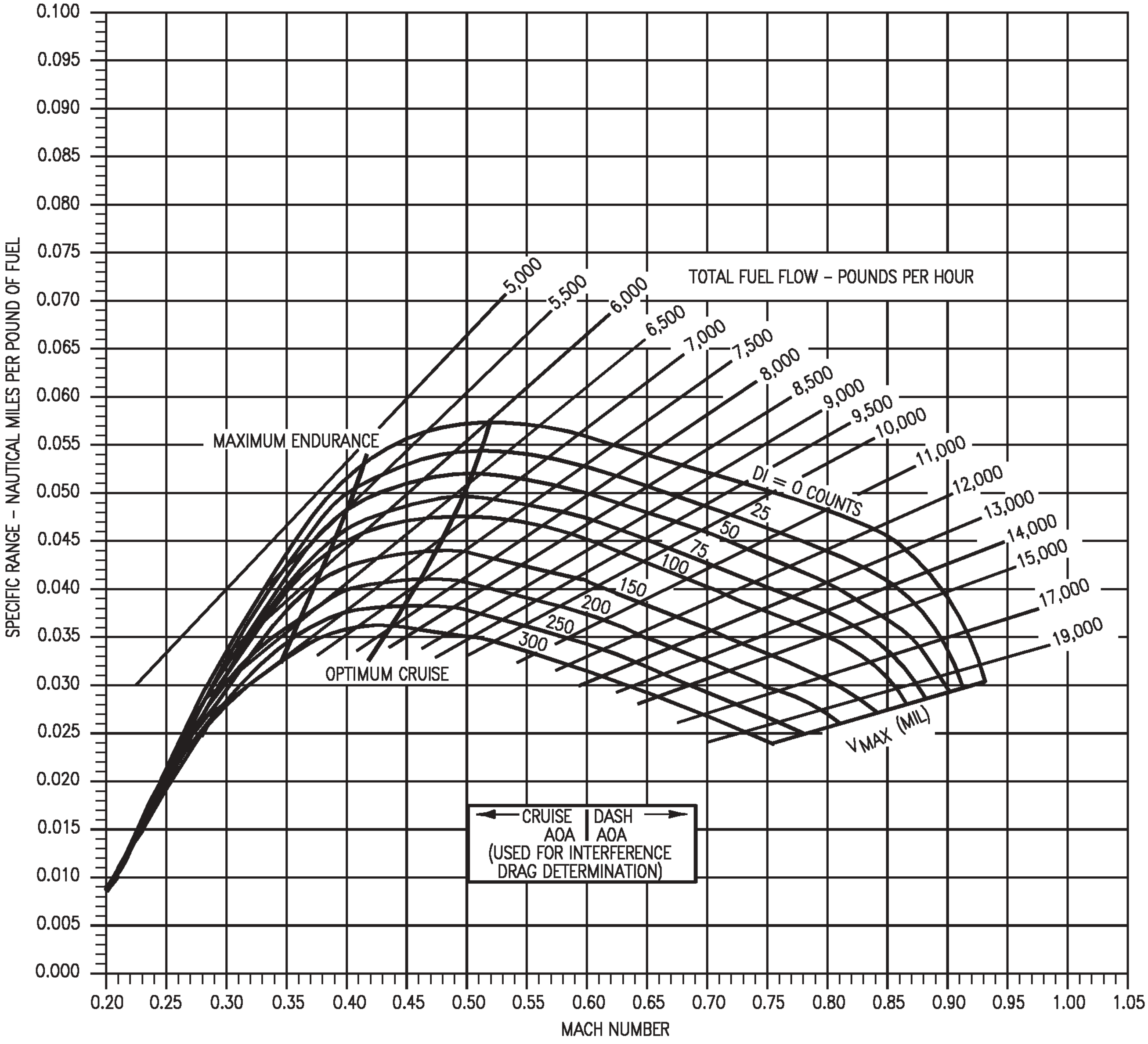
TEMPERATURE EFFECTS	
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.02
-10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(177-1)12-CATI

Figure 11-41. Specific Range - Sea Level - 46,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

SEA LEVEL – 50,000 POUND

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

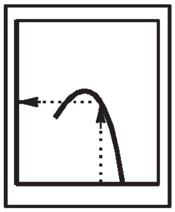
NOTE: STD TEMP.=15°C

TEMPERATURE EFFECTS

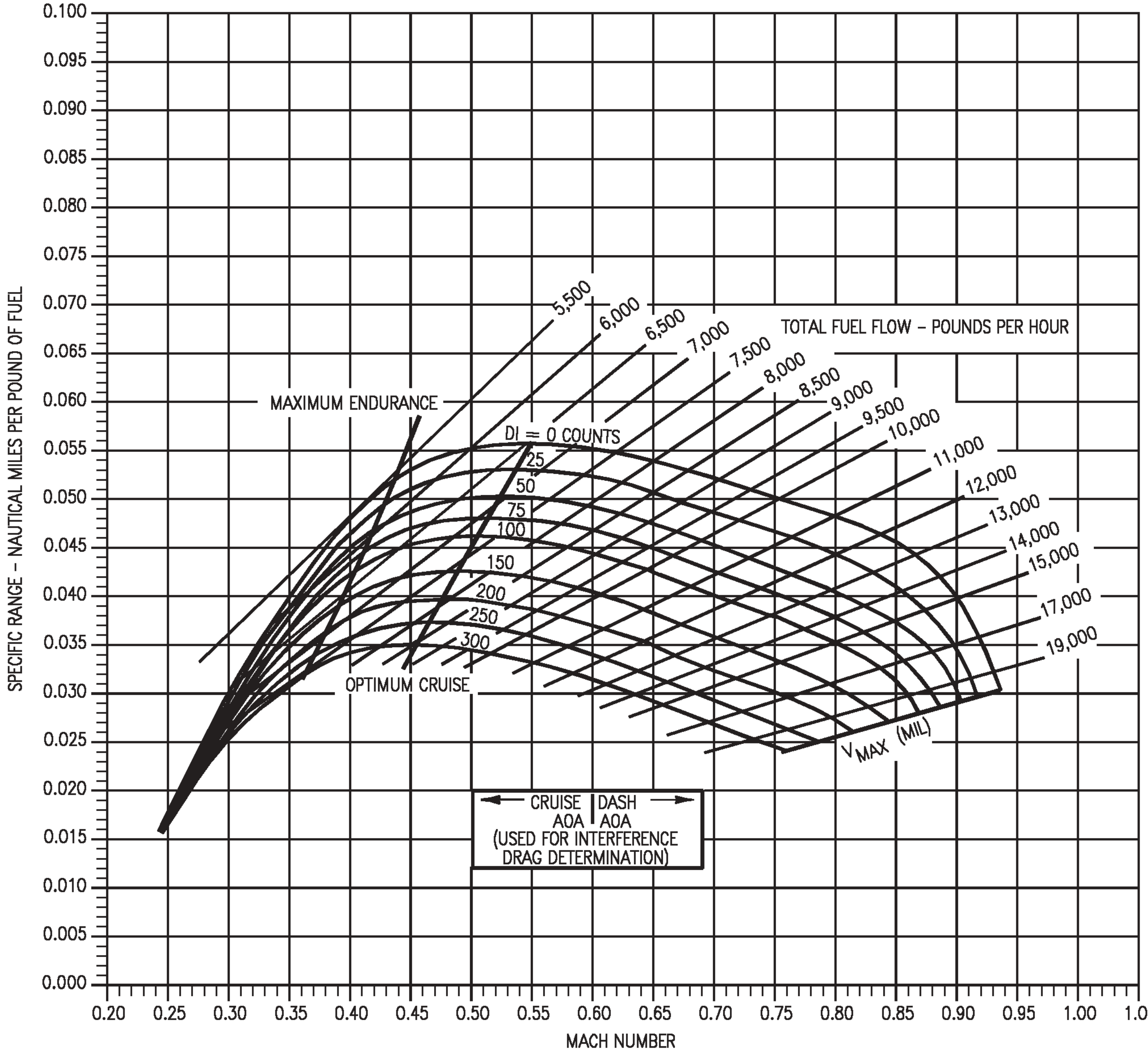
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.02
-10	1.01
0	1.00
+10	.98
+20	.96

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(178–1)12–CATI

Figure 11-42. Specific Range - Sea Level - 50,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

5,000 FEET – 26,000 POUNDS

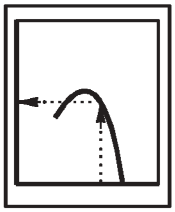
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.=5°C

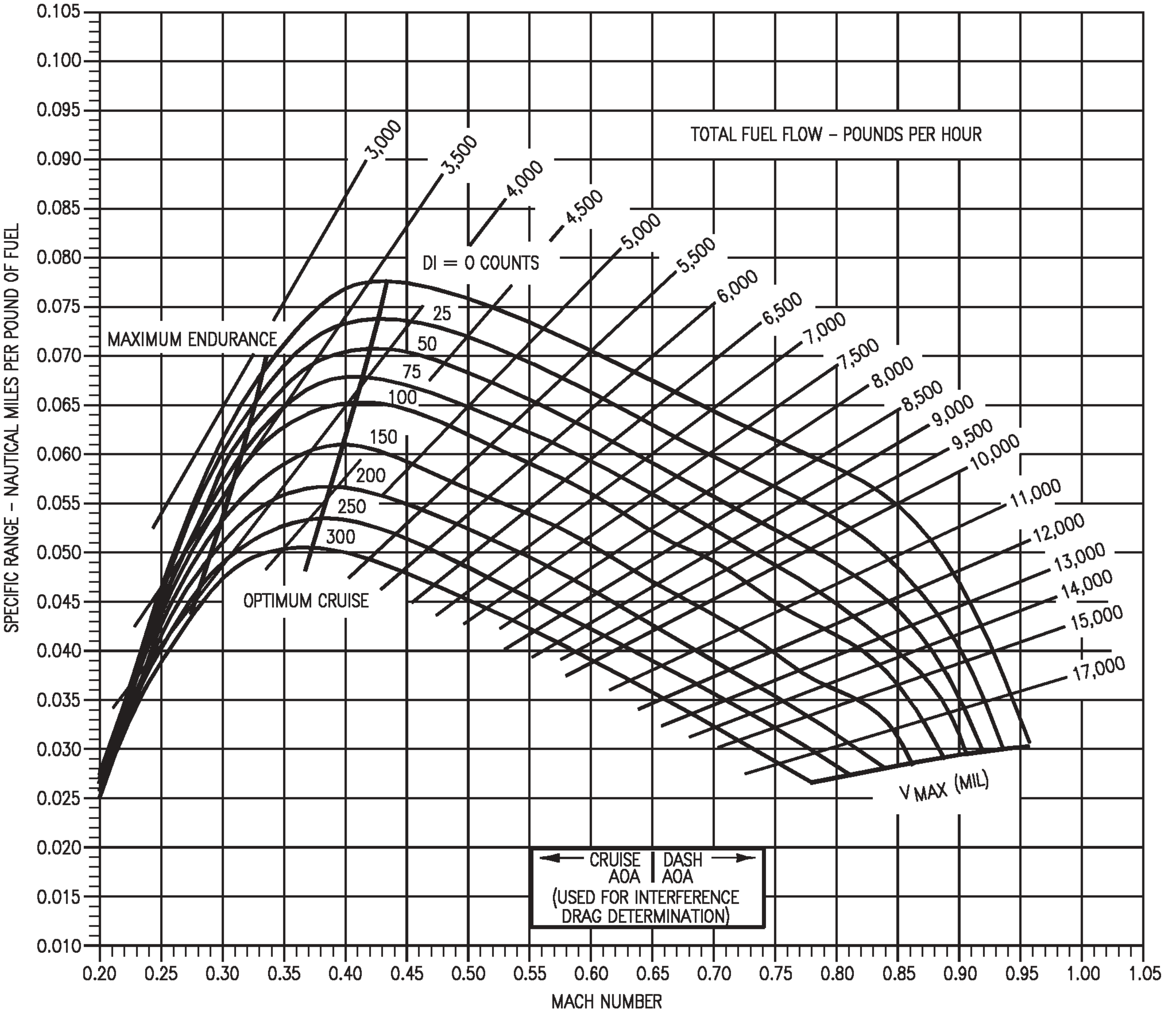
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(273–1)12–CATI

Figure 11-43. Specific Range - 5,000 Feet - 26,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400
5,000 FEET – 30,000 POUNDS

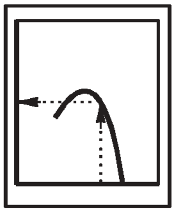
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.=5°C

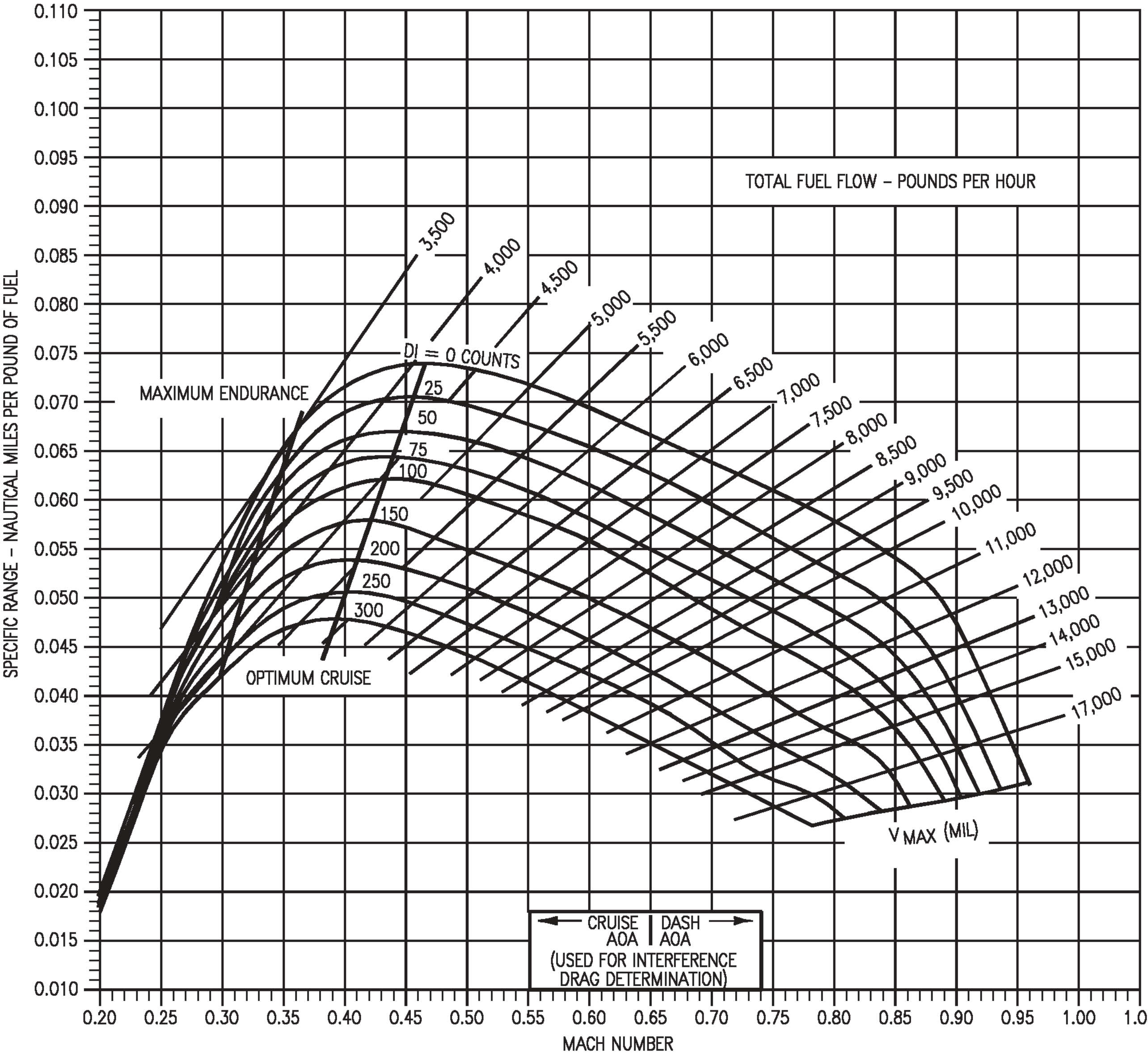
TEMPERATURE EFFECTS	
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.02
-10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(274-1)12-CATI

Figure 11-44. Specific Range - 5,000 Feet - 30,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

5,000 FEET – 34,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

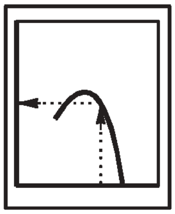
REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.=5°C

TEMPERATURE EFFECTS

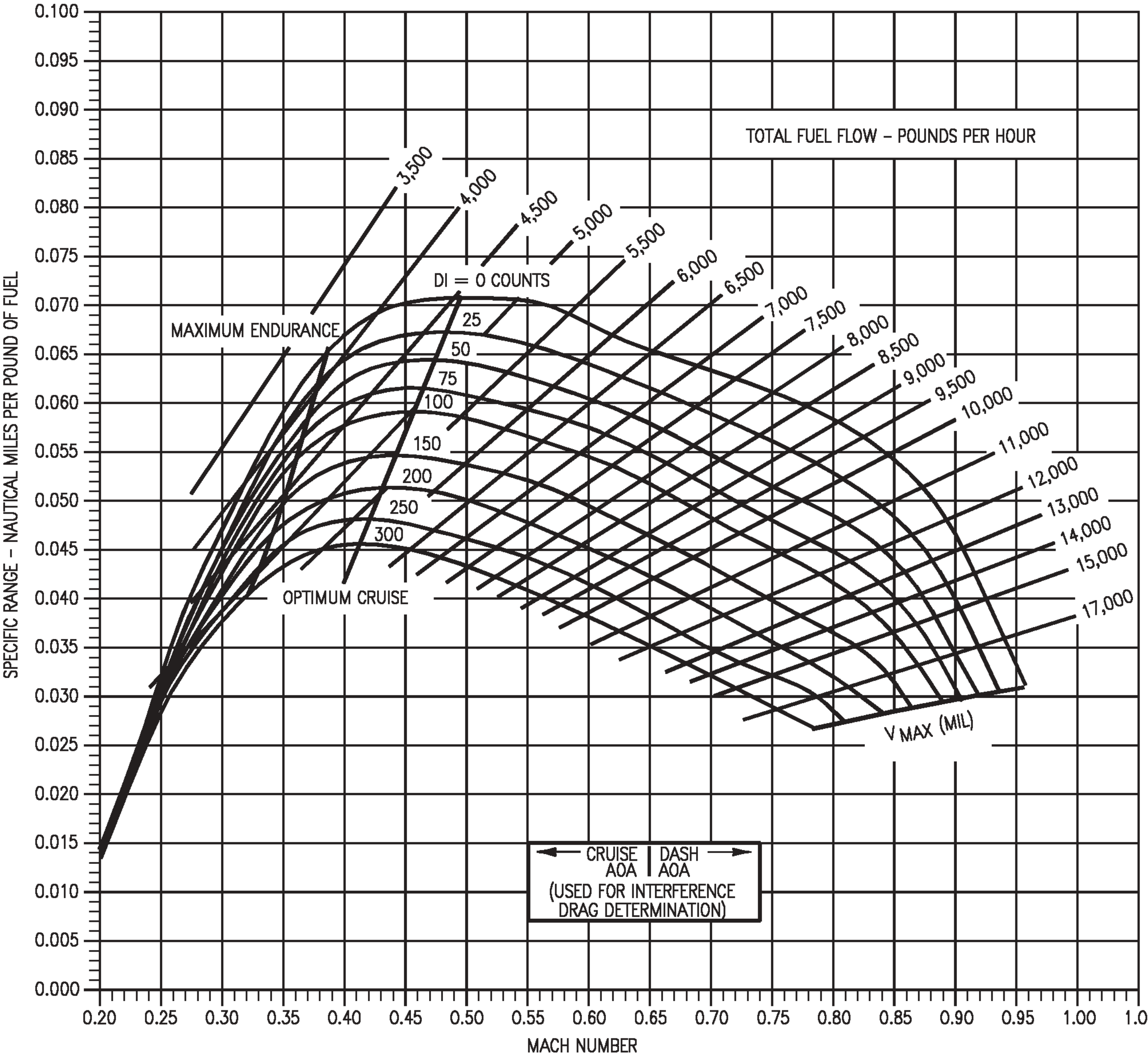
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.02
-10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(275-1)12-CATI

Figure 11-45. Specific Range - 5,000 Feet - 34,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

5,000 FEET – 38,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

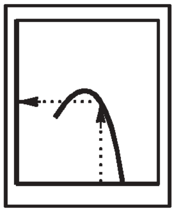
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.=5°C

TEMPERATURE EFFECTS

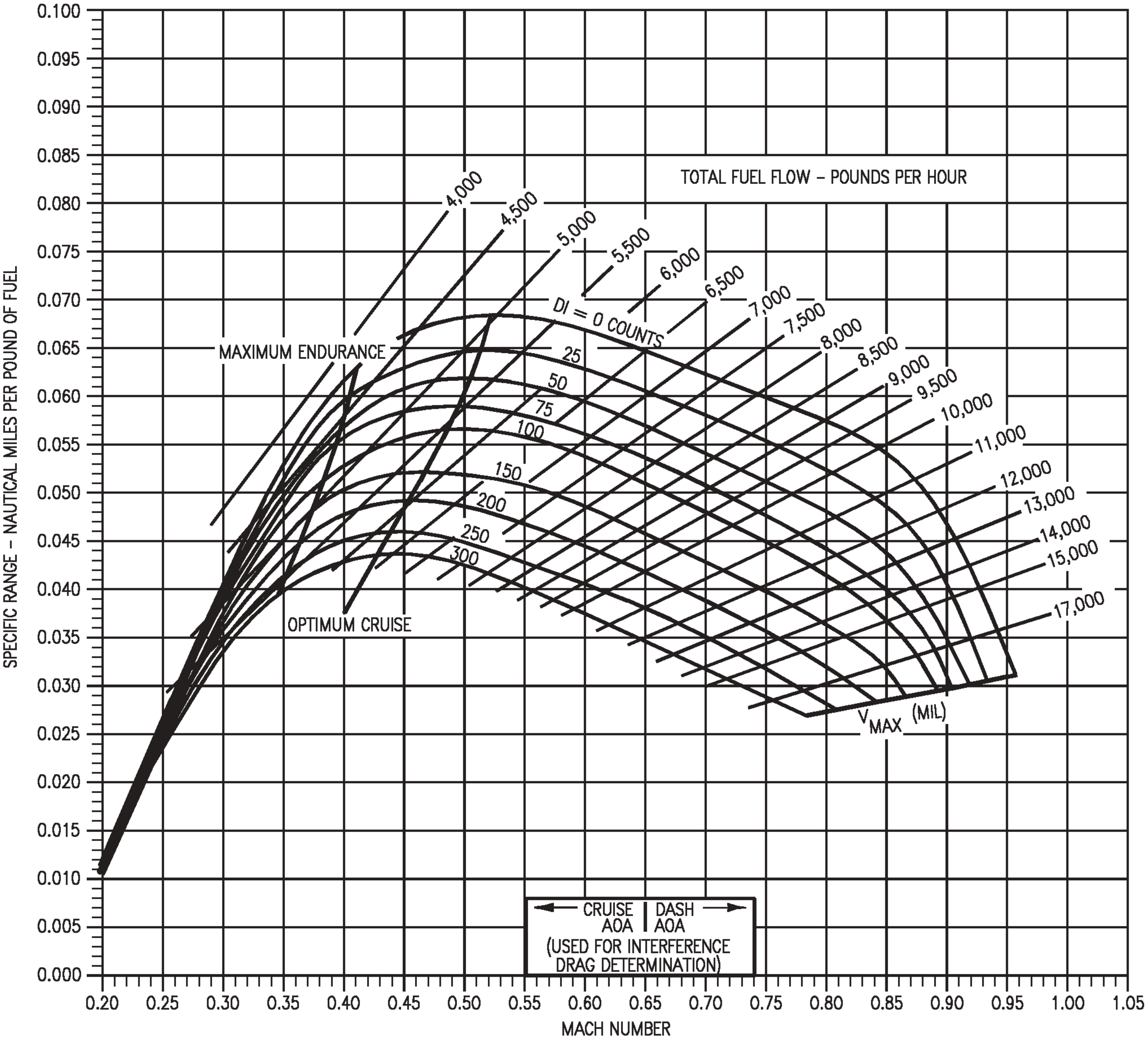
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(276–1)12–CATI

Figure 11-46. Specific Range - 5,000 Feet - 38,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

5,000 FEET – 42,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

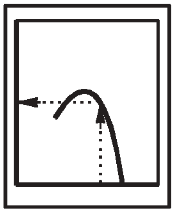
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.=5°C

TEMPERATURE EFFECTS

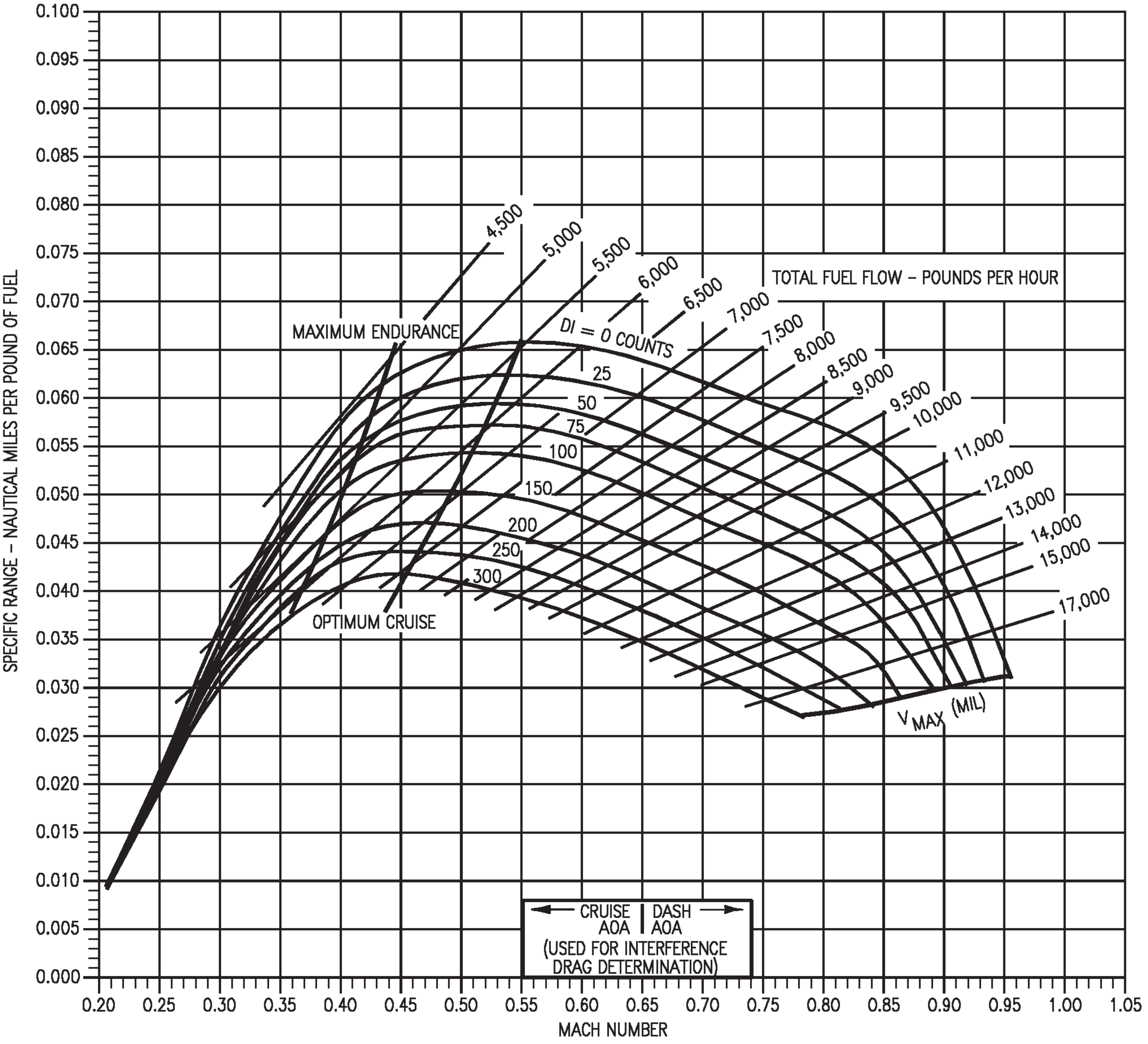
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(277–1)12–CATI

Figure 11-47. Specific Range - 5,000 Feet - 42,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

5,000 FEET – 46,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

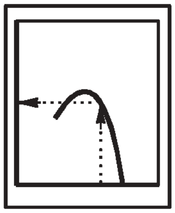
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.=5°C

TEMPERATURE EFFECTS

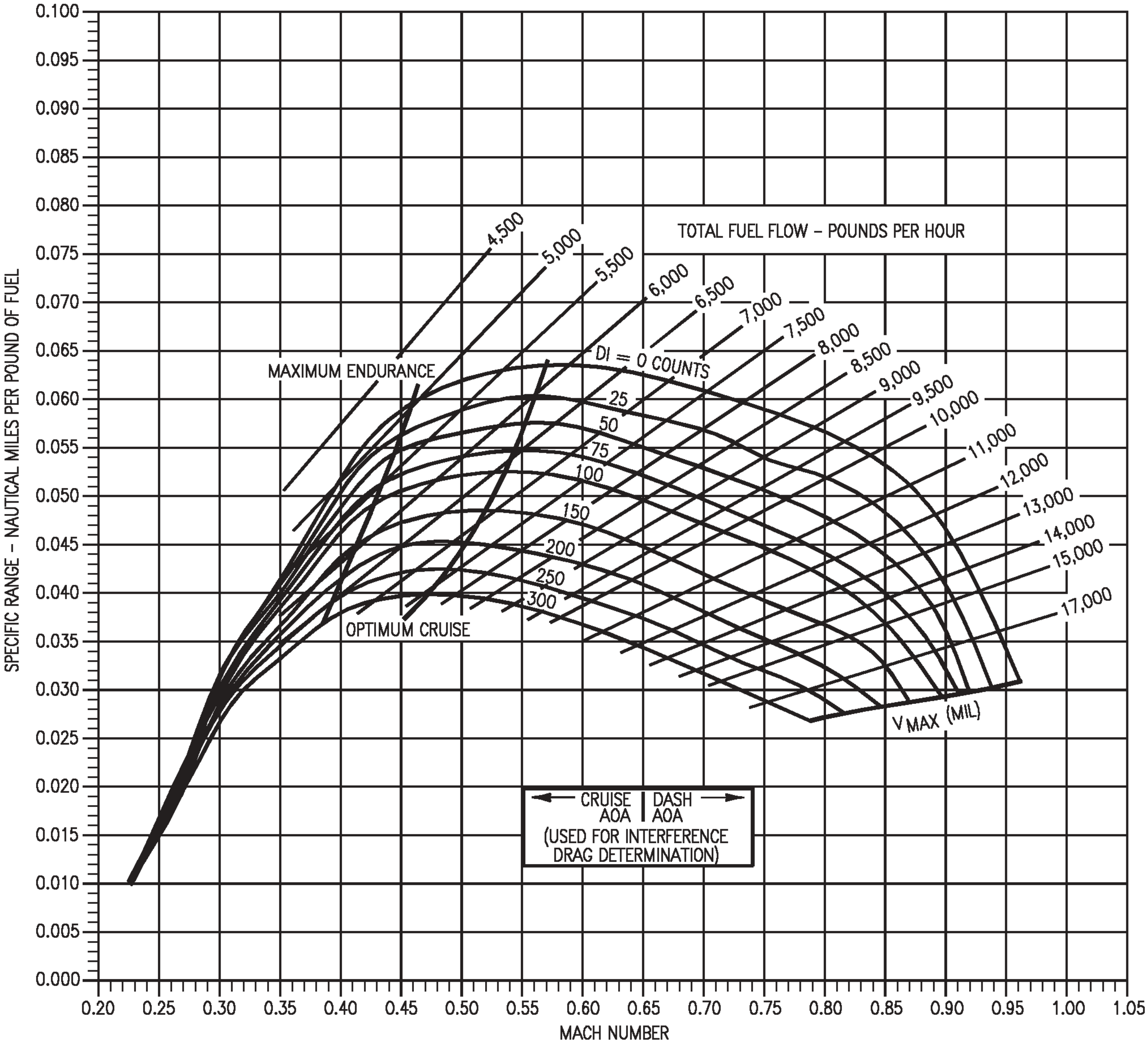
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(278–1)12–CATI

Figure 11-48. Specific Range - 5,000 Feet - 46,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

5,000 FEET – 50,000 POUNDS

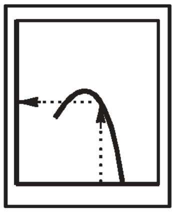
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.=5°C

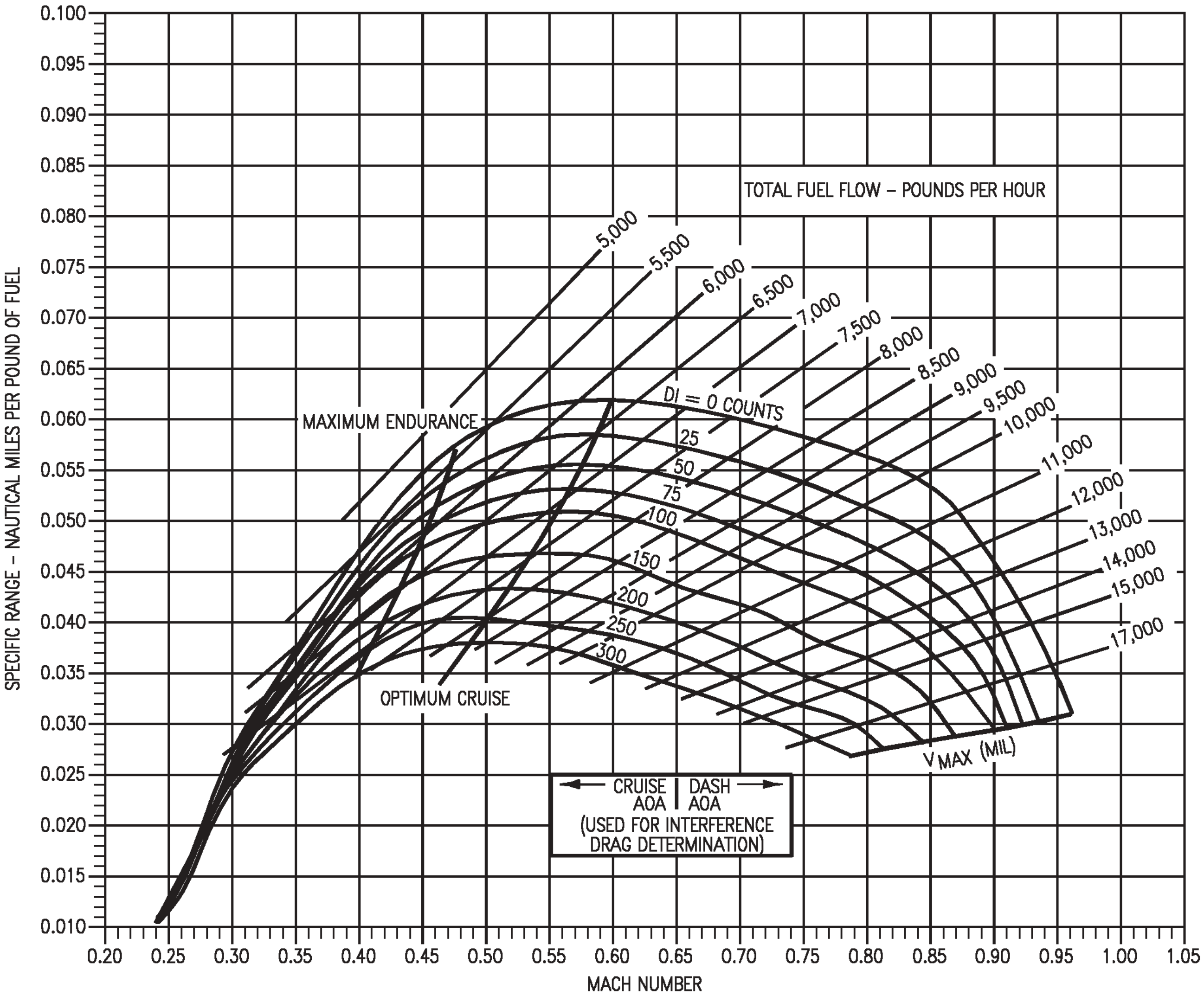
TEMPERATURE EFFECTS	
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
−20	1.02
−10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(279-1)12-CATI

Figure 11-49. Specific Range - 5,000 Feet - 50,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

10,000 FEET – 26,000 POUNDS

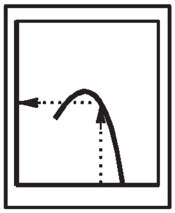
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.=5°C

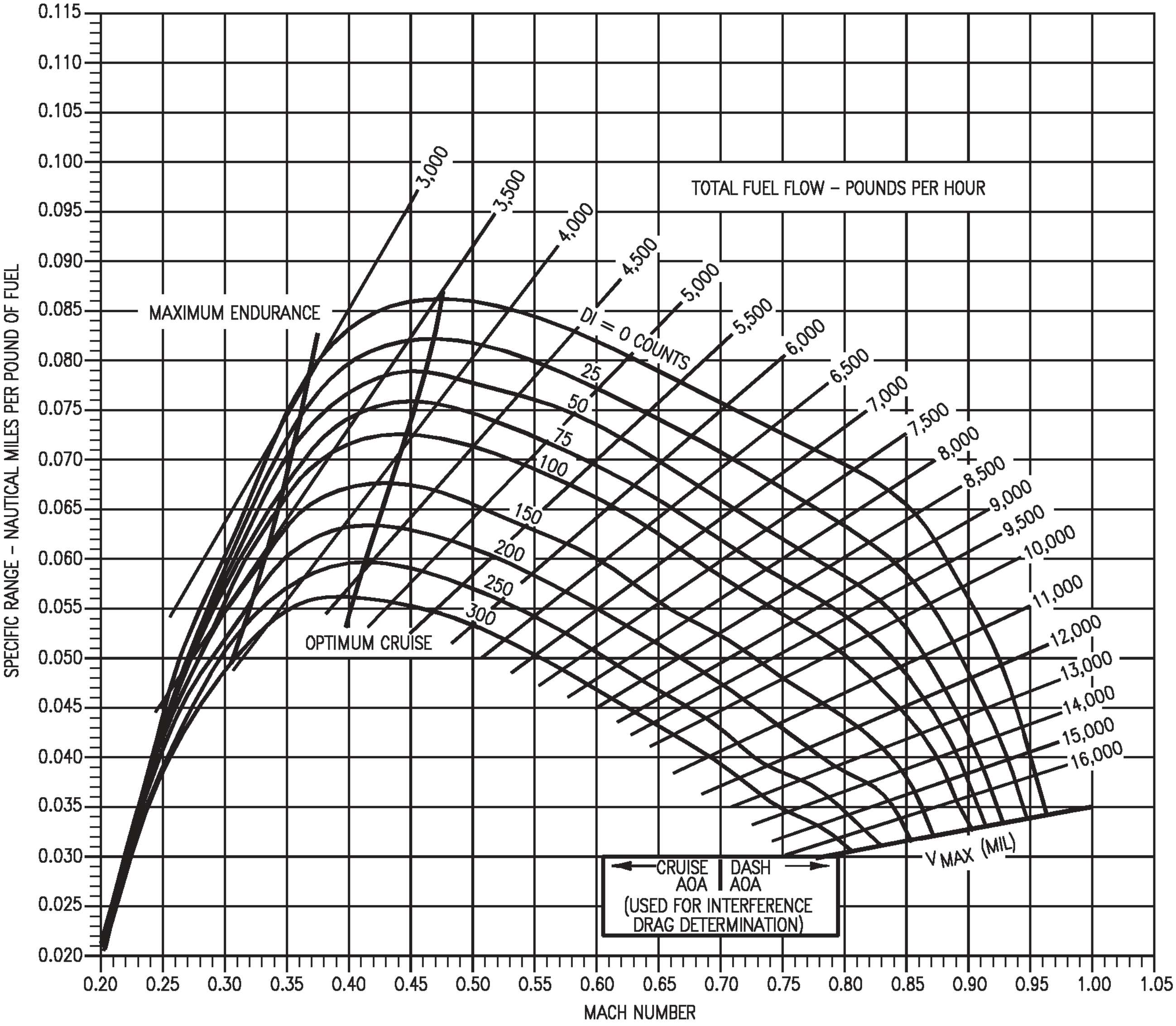
TEMPERATURE EFFECTS	
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.02
-10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(179-1)12-CATI

Figure 11-50. Specific Range - 10,000 Feet - 26,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

10,000 FEET – 30,000 POUND

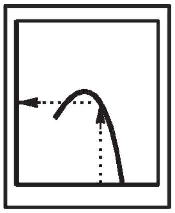
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –5°C

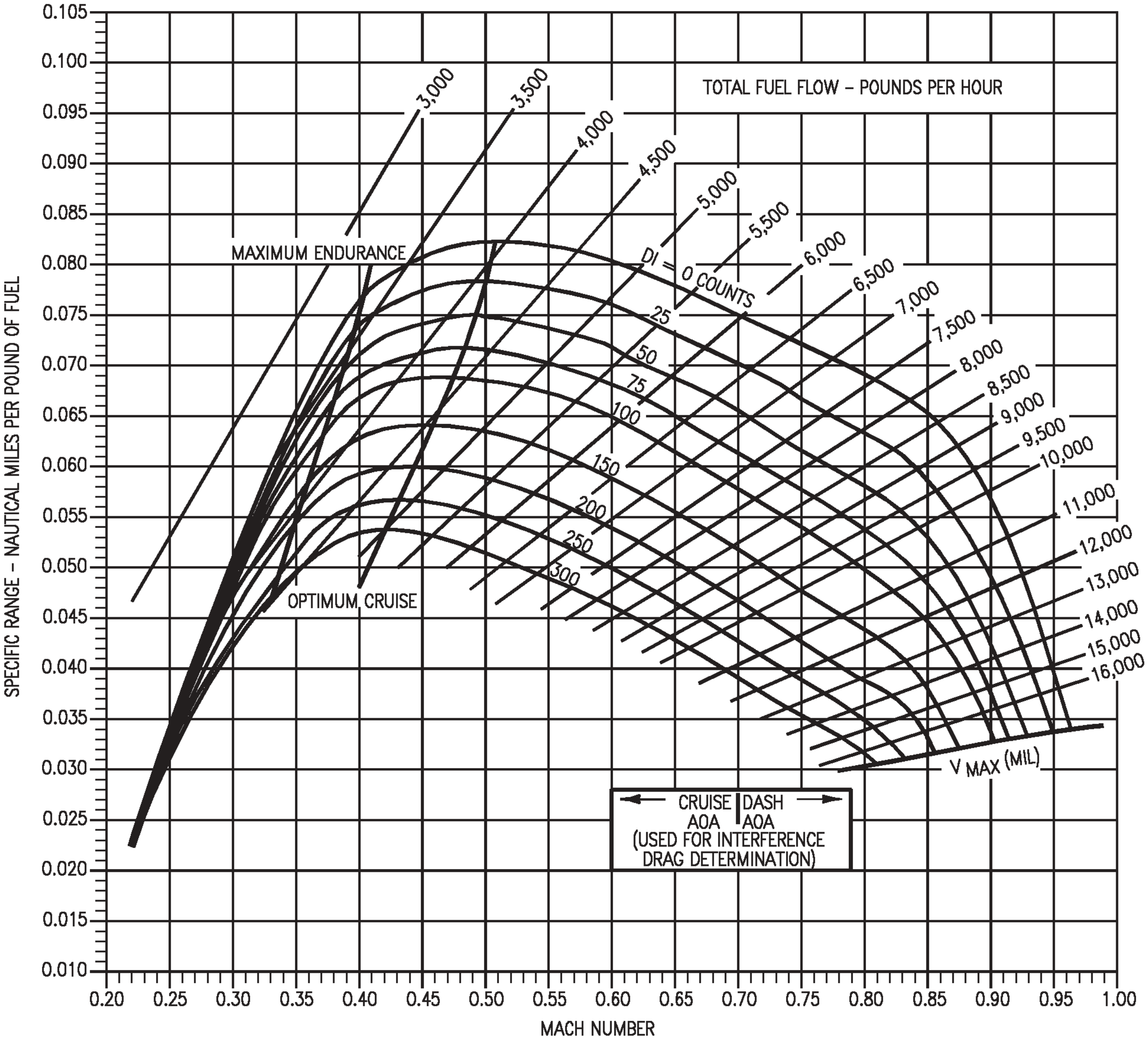
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(180–1)12–CATI

Figure 11-51. Specific Range - 10,000 Feet - 30,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

10,000 FEET - 34,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

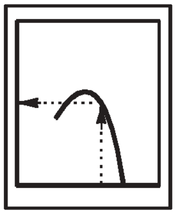
REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= -5°C

TEMPERATURE EFFECTS

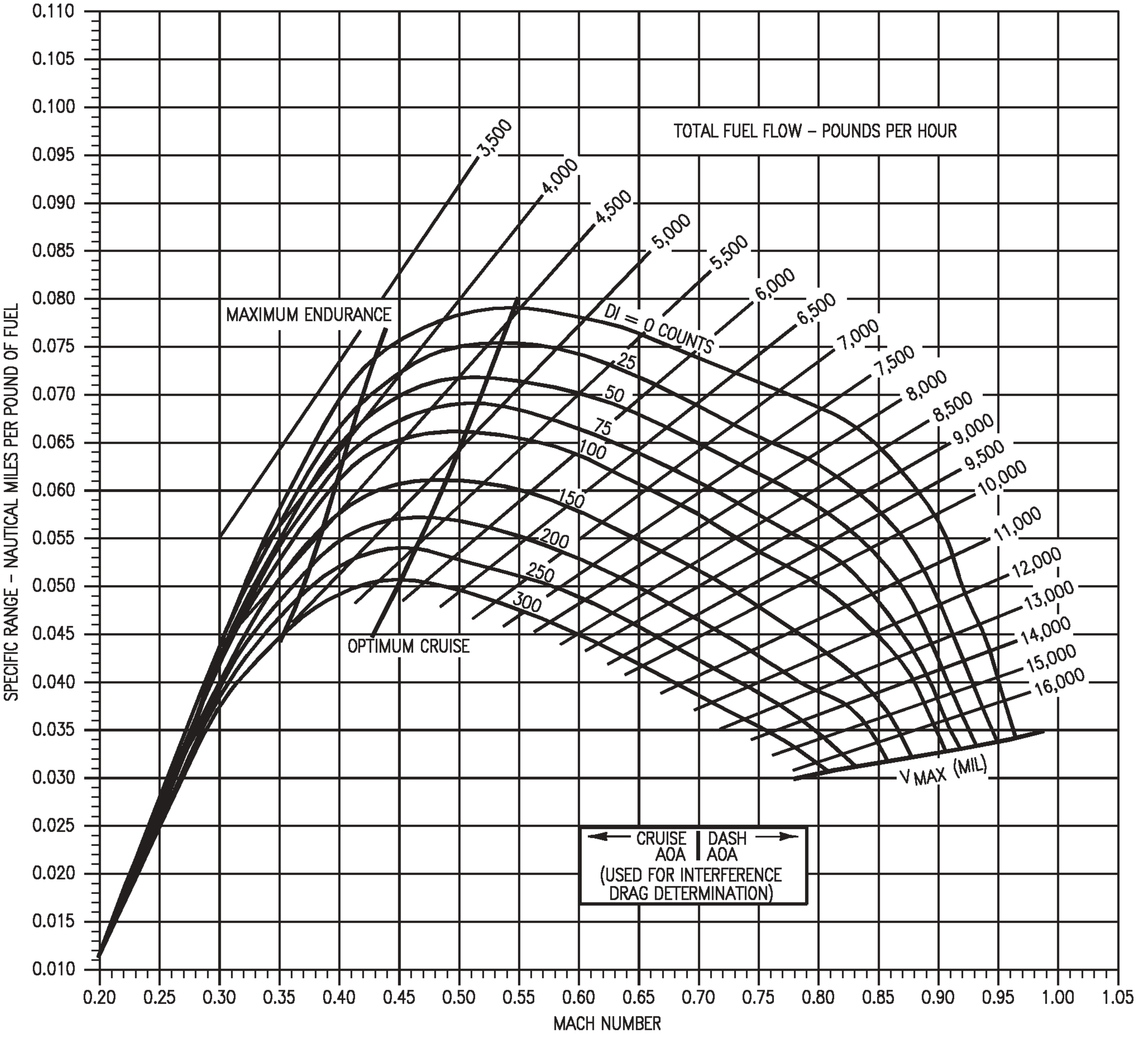
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.02
-10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(181-1)12-CATI

Figure 11-52. Specific Range - 10,000 Feet - 34,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

10,000 FEET - 38,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

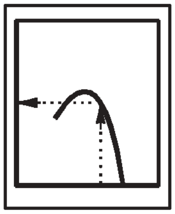
REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= -5°C

TEMPERATURE EFFECTS

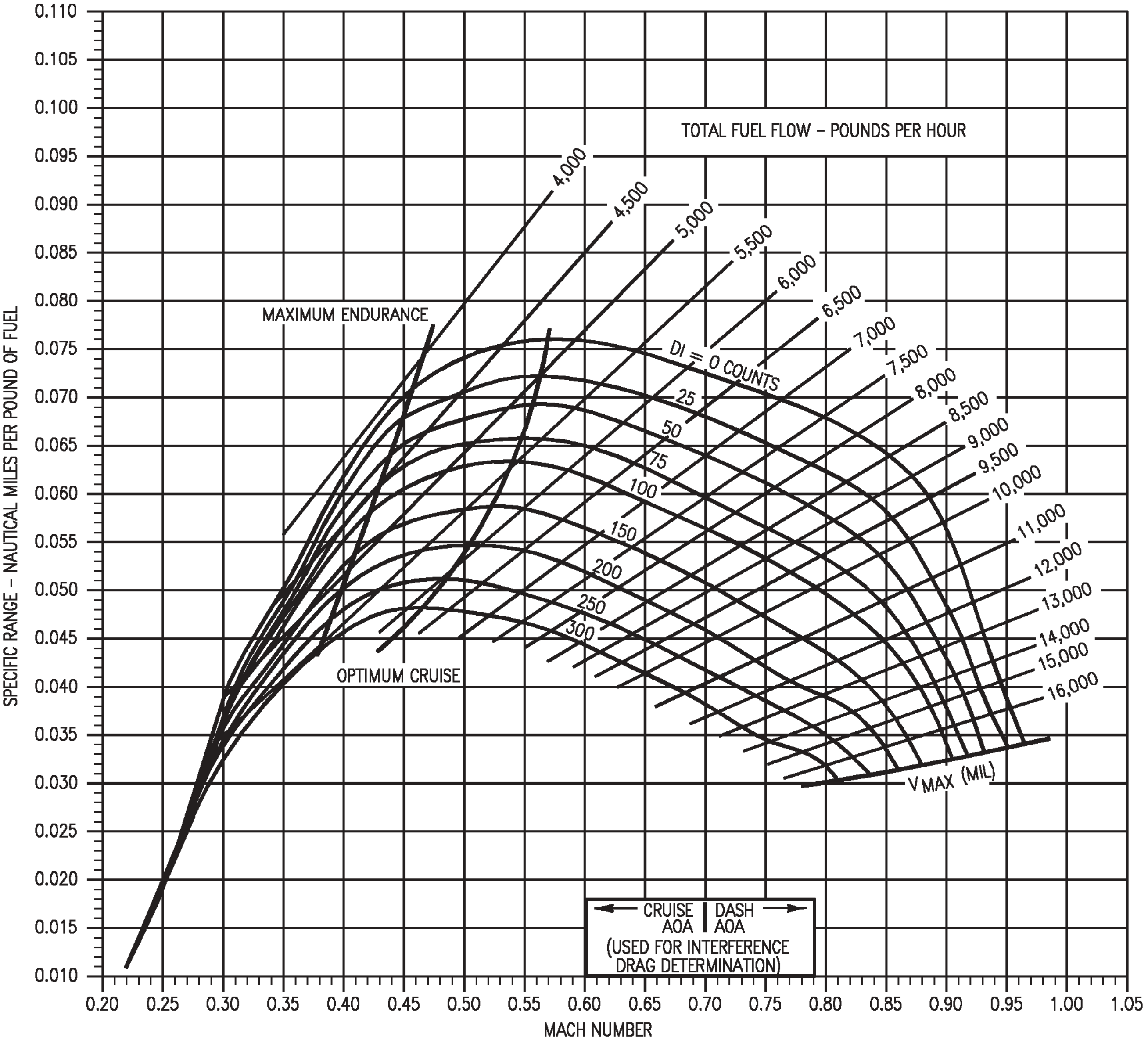
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.02
-10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(182-1)12-CATI

Figure 11-53. Specific Range - 10,000 Feet - 38,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

10,000 FEET - 42,000 POUNDS

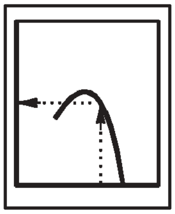
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= -5°C

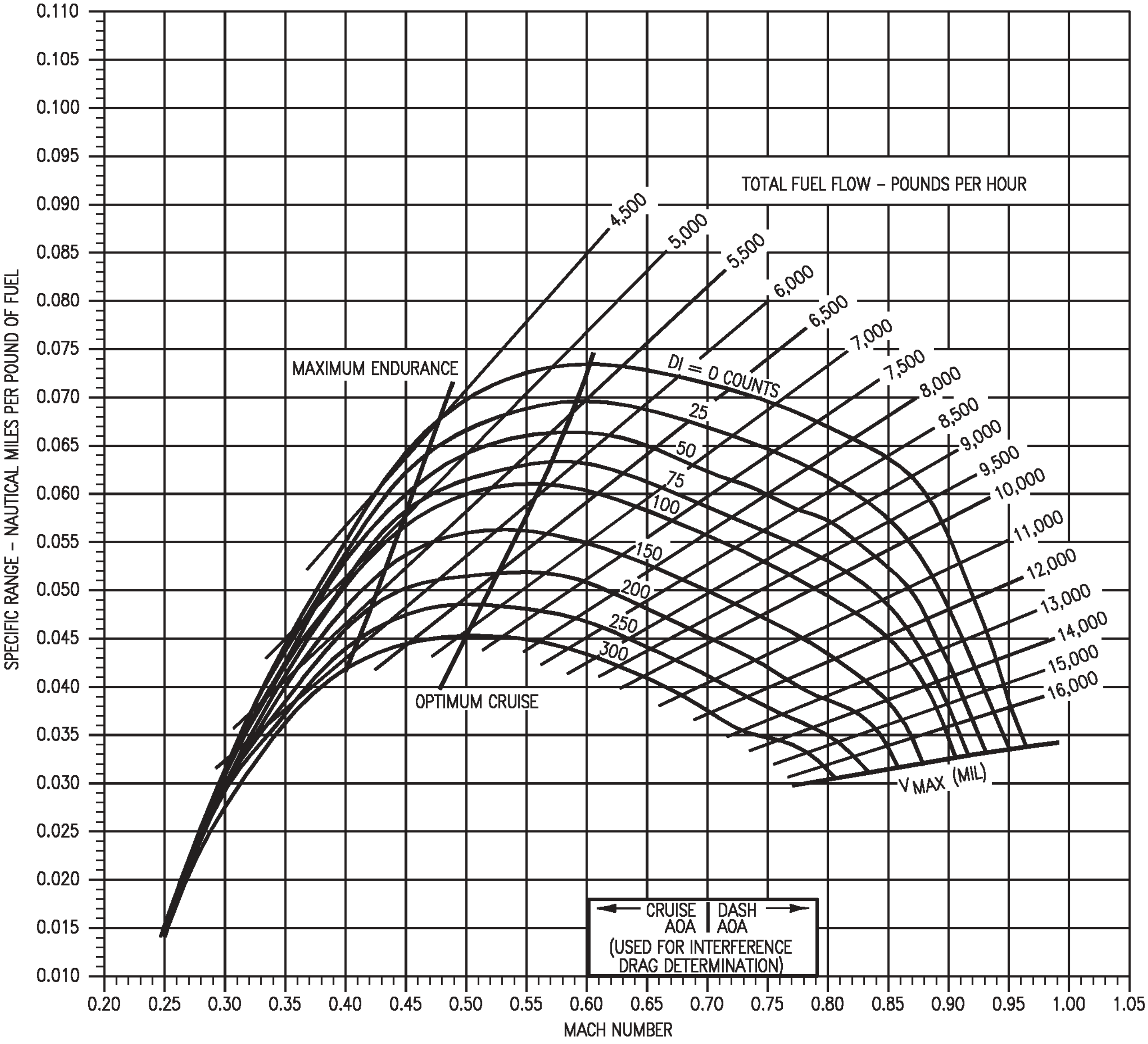
TEMPERATURE EFFECTS	
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.02
-10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(183-1)12-CATI

Figure 11-54. Specific Range - 10,000 Feet - 42,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

10,000 FEET – 46,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

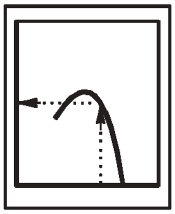
REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= −5°C

TEMPERATURE EFFECTS

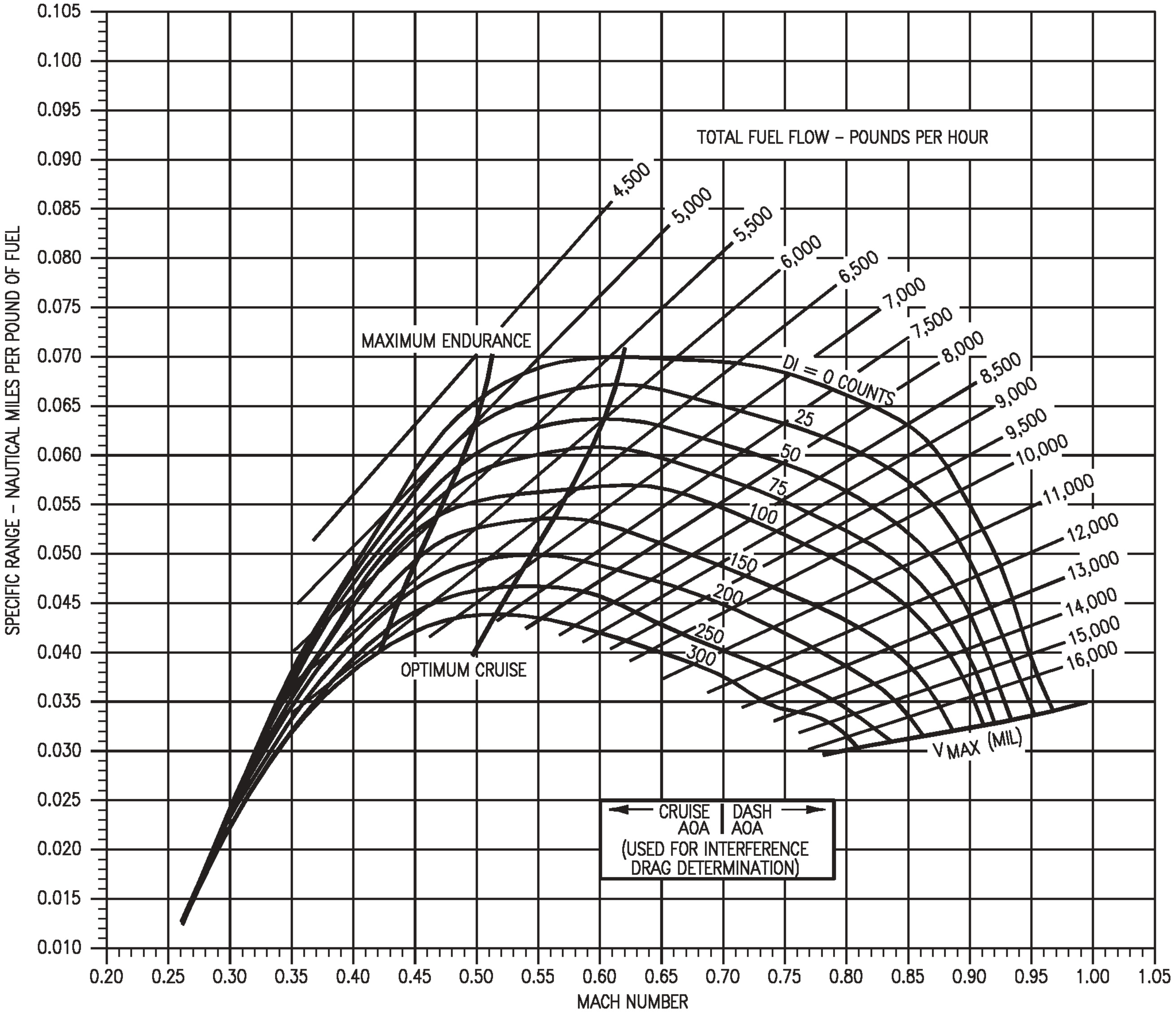
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
−20	1.02
−10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(184-1)12-CATI

Figure 11-55. Specific Range - 10,000 Feet - 46,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

10,000 FEET – 50,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

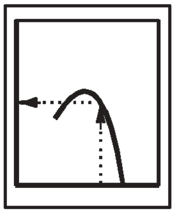
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= −5°C

TEMPERATURE EFFECTS

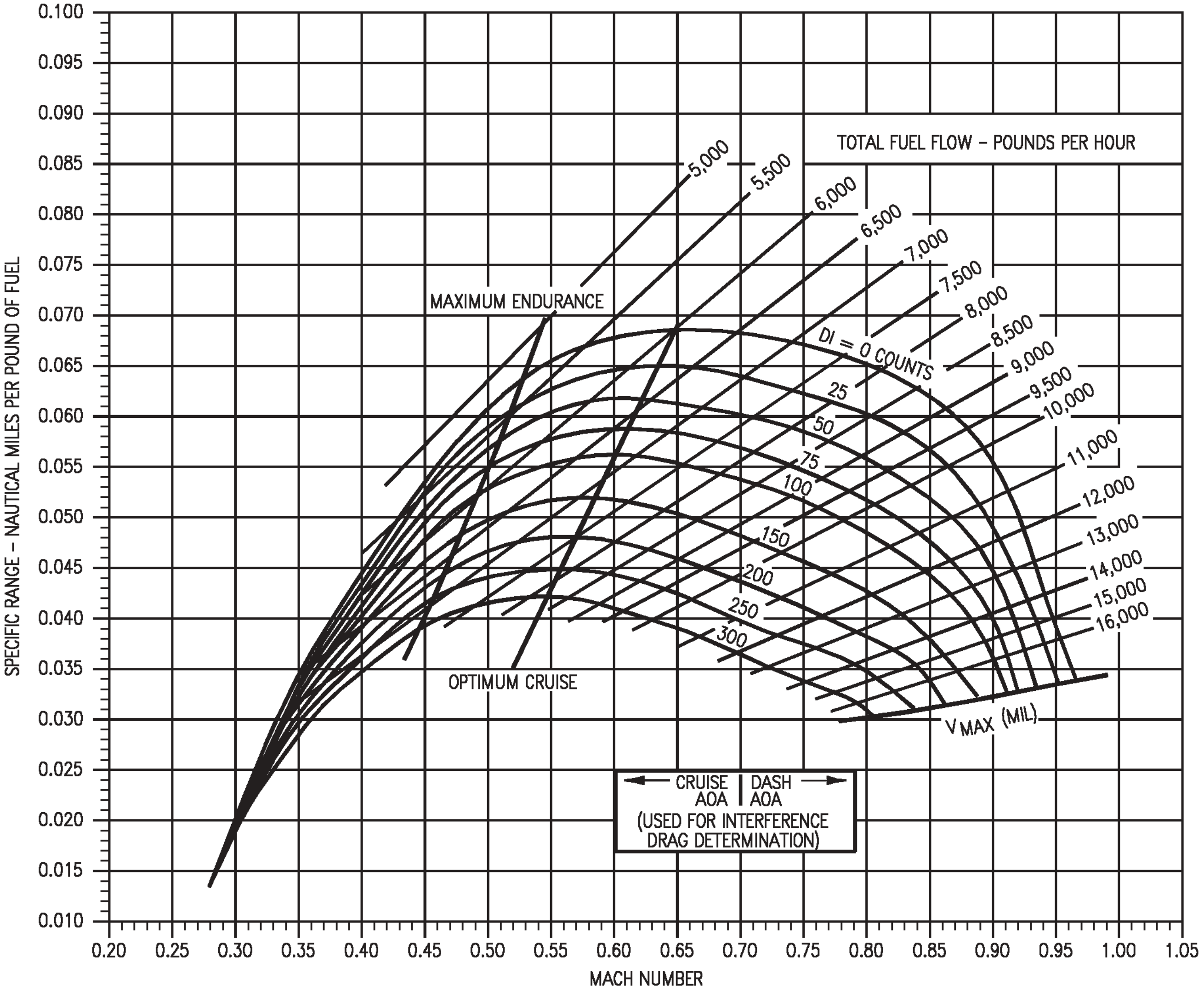
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
−20	1.02
−10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(185–1)12–CATI

Figure 11-56. Specific Range - 10,000 Feet - 50,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

15,000 FEET – 26,000 POUNDS

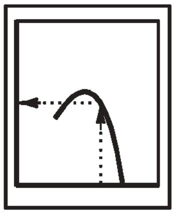
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= −15°C

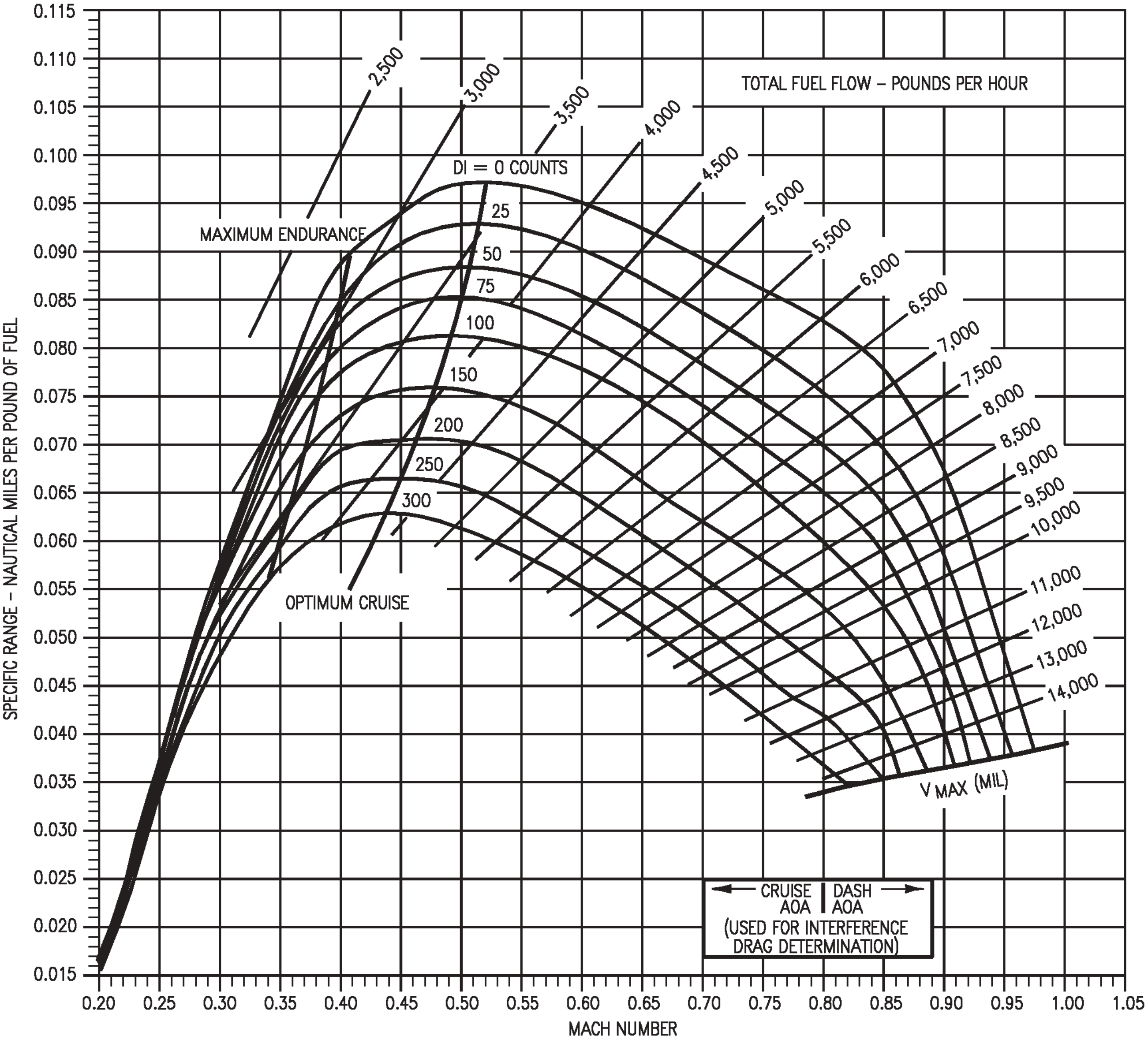
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
−20	1.02
−10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(280–1)12–CATI

Figure 11-57. Specific Range - 15,000 Feet - 26,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

15,000 FEET – 30,000 POUNDS

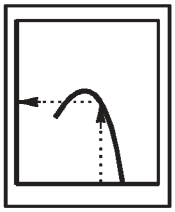
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –15°C

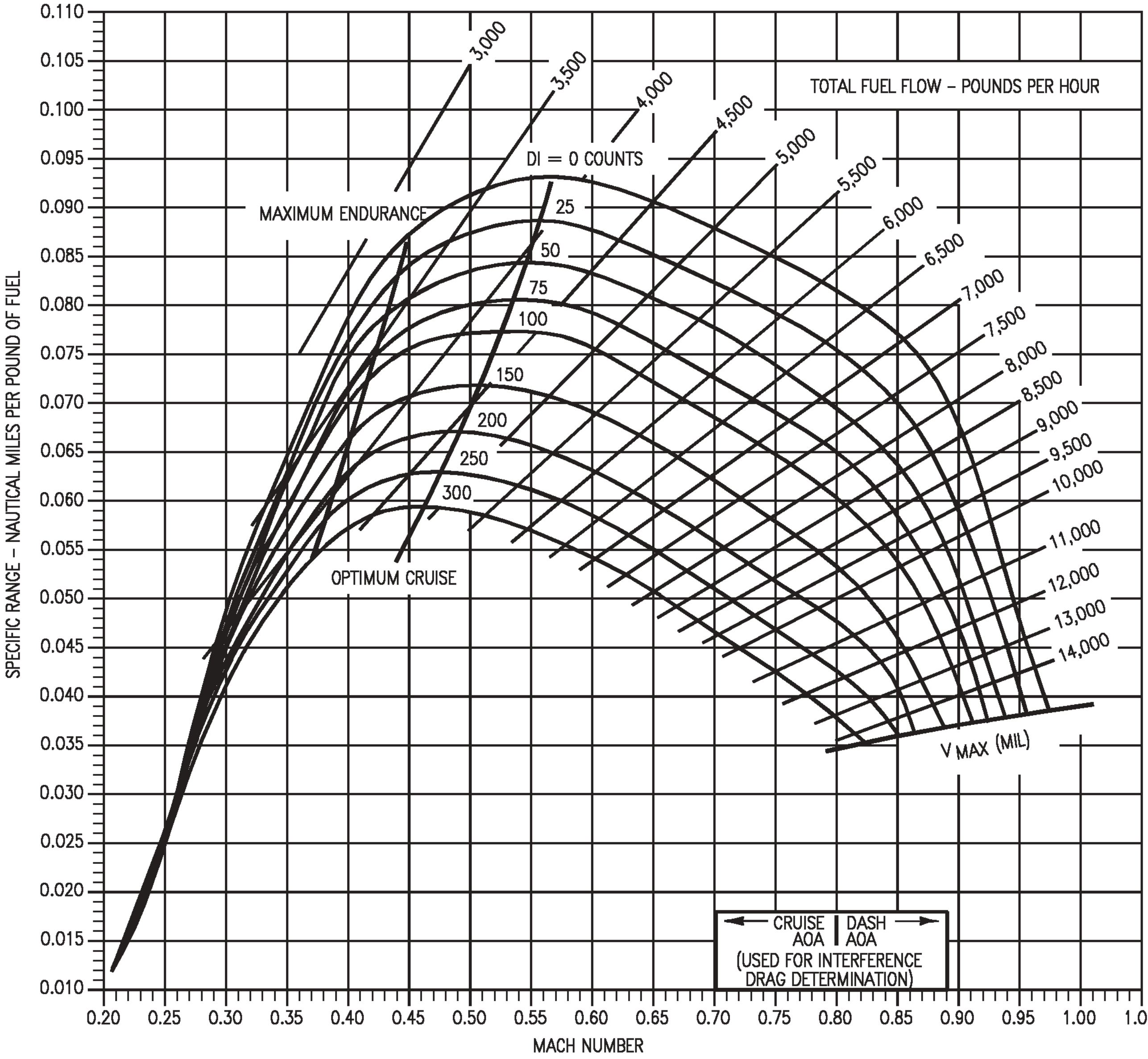
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(281–1)12–CATI

Figure 11-58. Specific Range - 15,000 Feet - 30,000 Pounds - F404-GE-400

SPECIFIC RANGE
F404–GE–400
15,000 FEET – 34,000 POUND

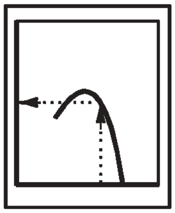
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –15°C

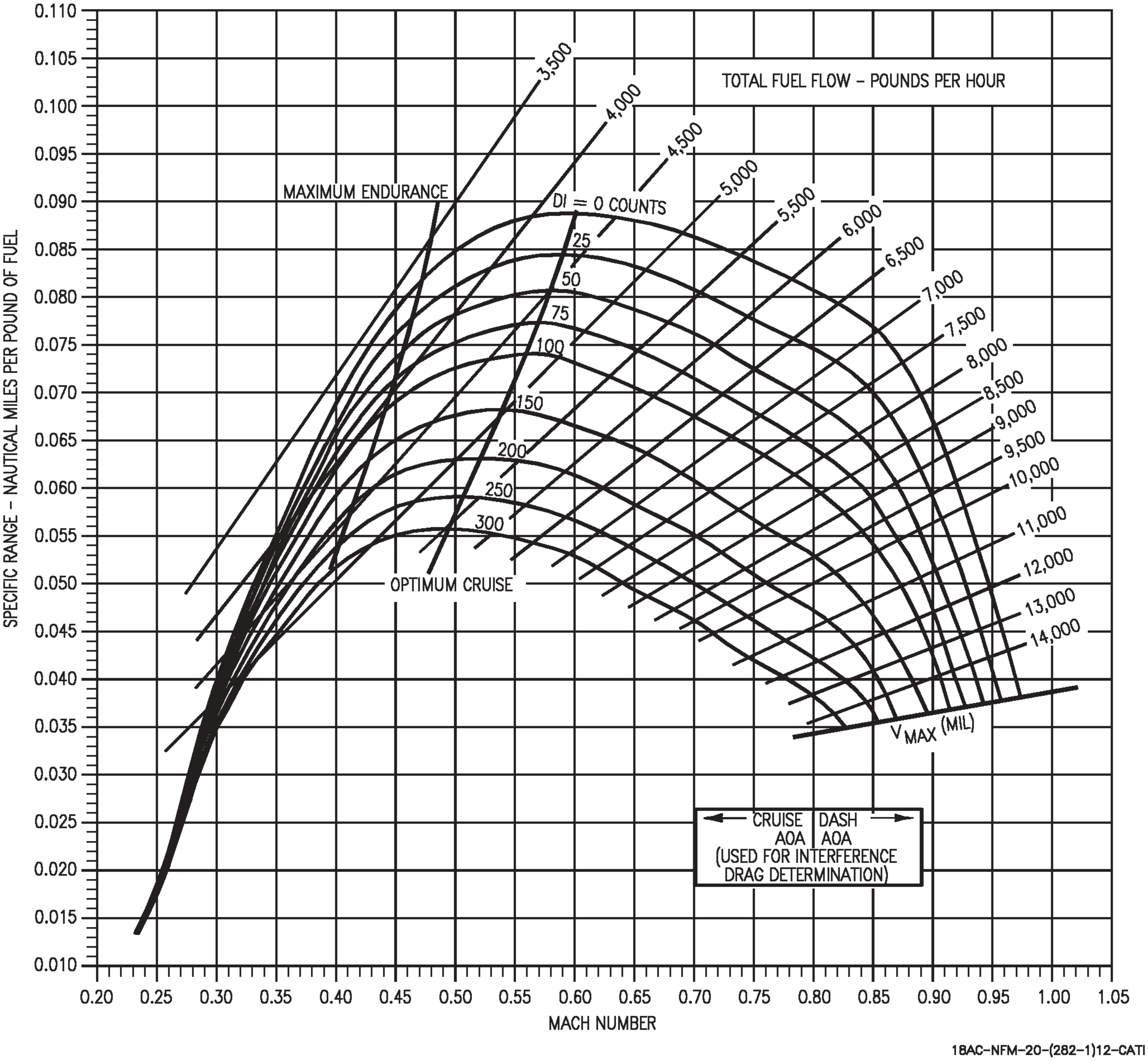
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(282–1)12–CATI

Figure 11-59. Specific Range - 15,000 Feet - 34,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

15,000 FEET – 38,000 POUND

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

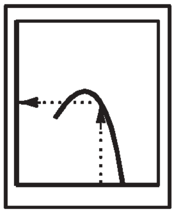
REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= −15°C

TEMPERATURE EFFECTS

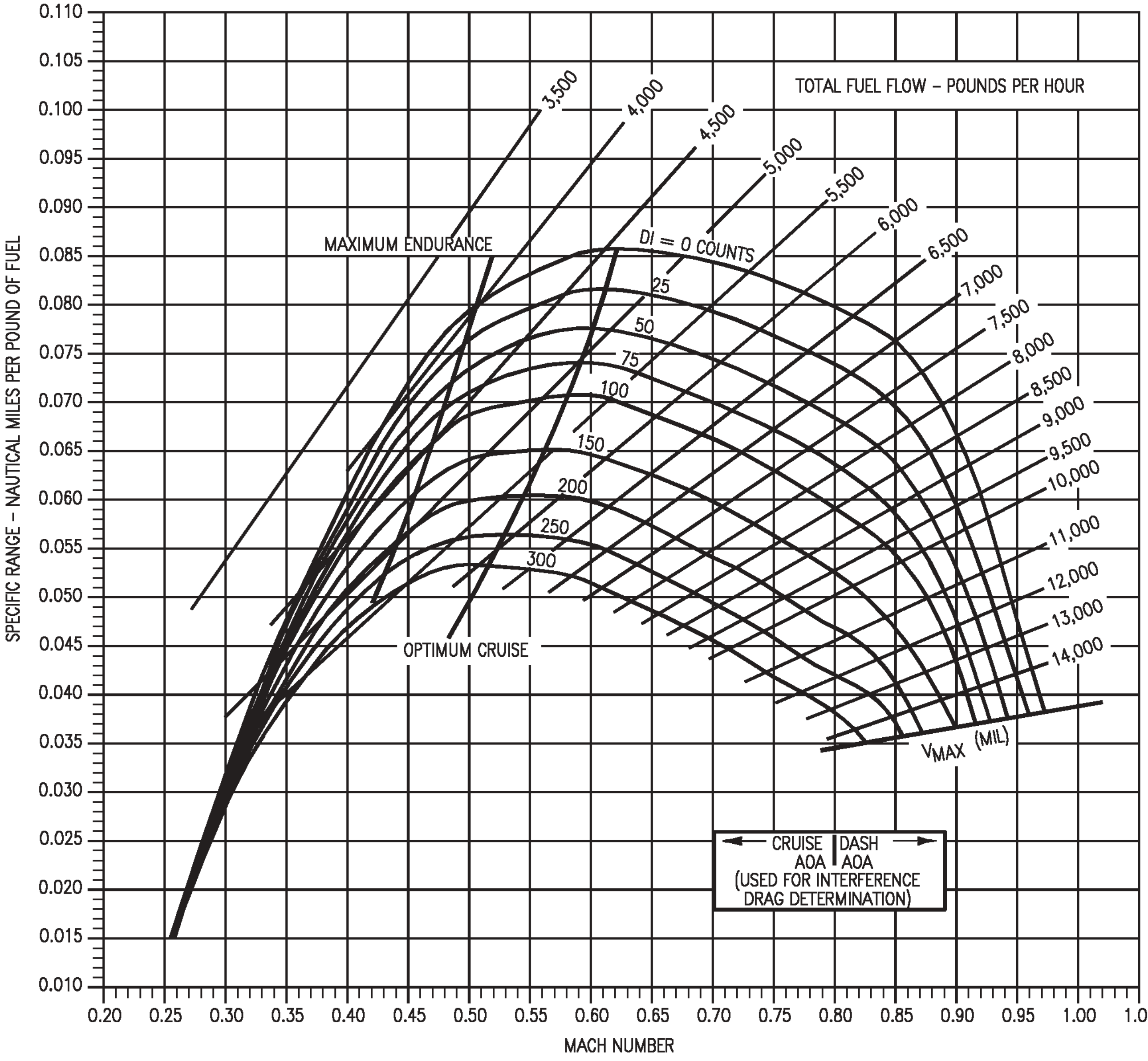
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.02
-10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(283-1)12-CATI

Figure 11-60. Specific Range - 15,000 Feet - 38,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

15,000 FEET – 42,000 POUND

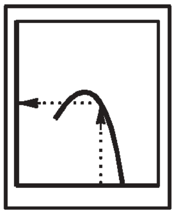
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –15°C

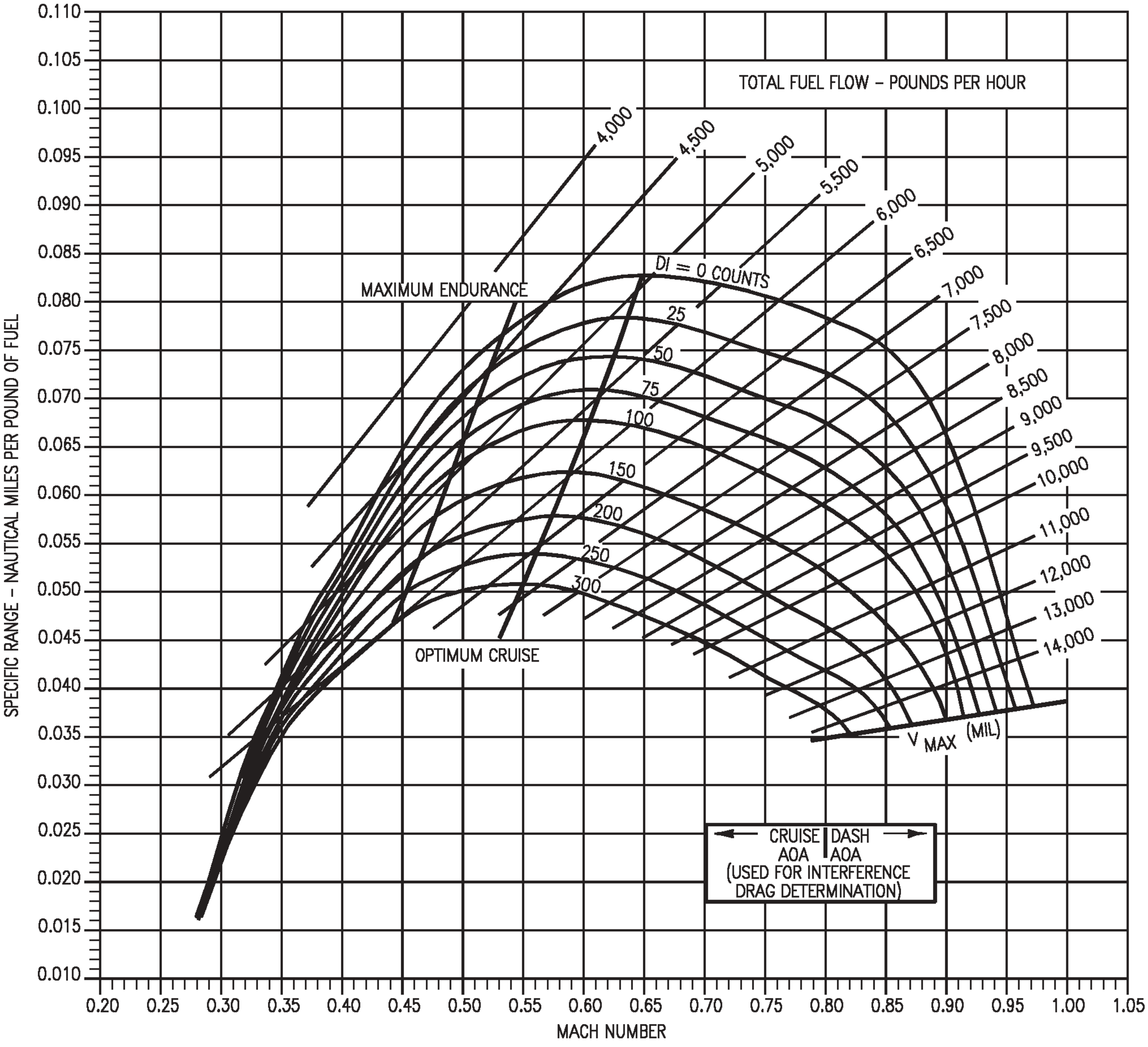
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(284–1)12–CATI

Figure 11-61. Specific Range - 15,000 Feet - 42,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

15,000 FEET – 46,000 POUND

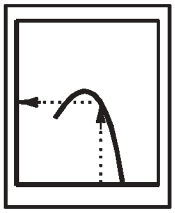
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –15°C

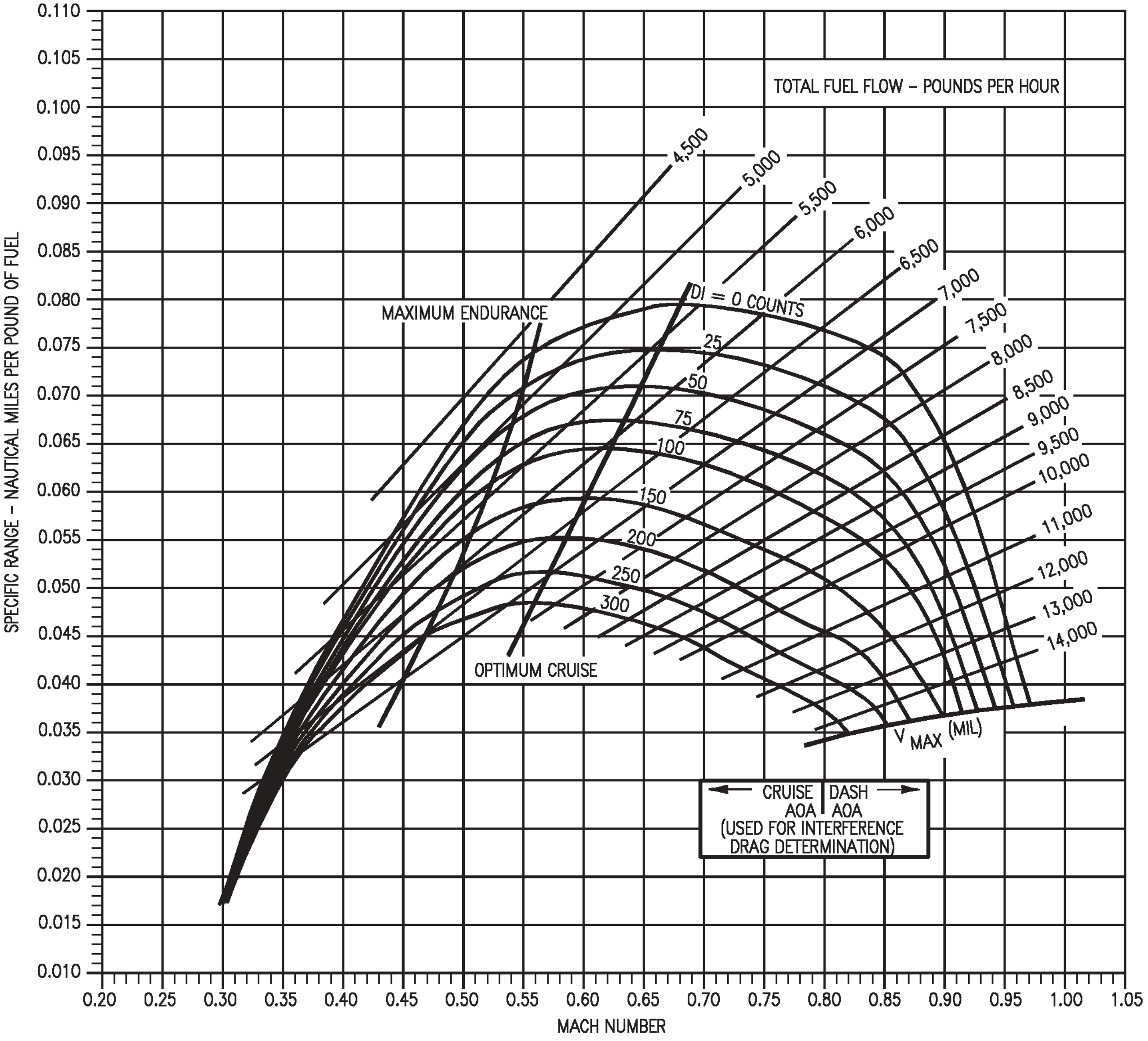
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(285–1)12–CATI

Figure 11-62. Specific Range - 15,000 Feet - 46,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

15,000 FEET - 50,000 POUND

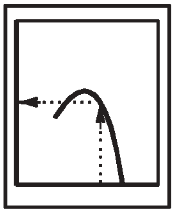
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.=5°C

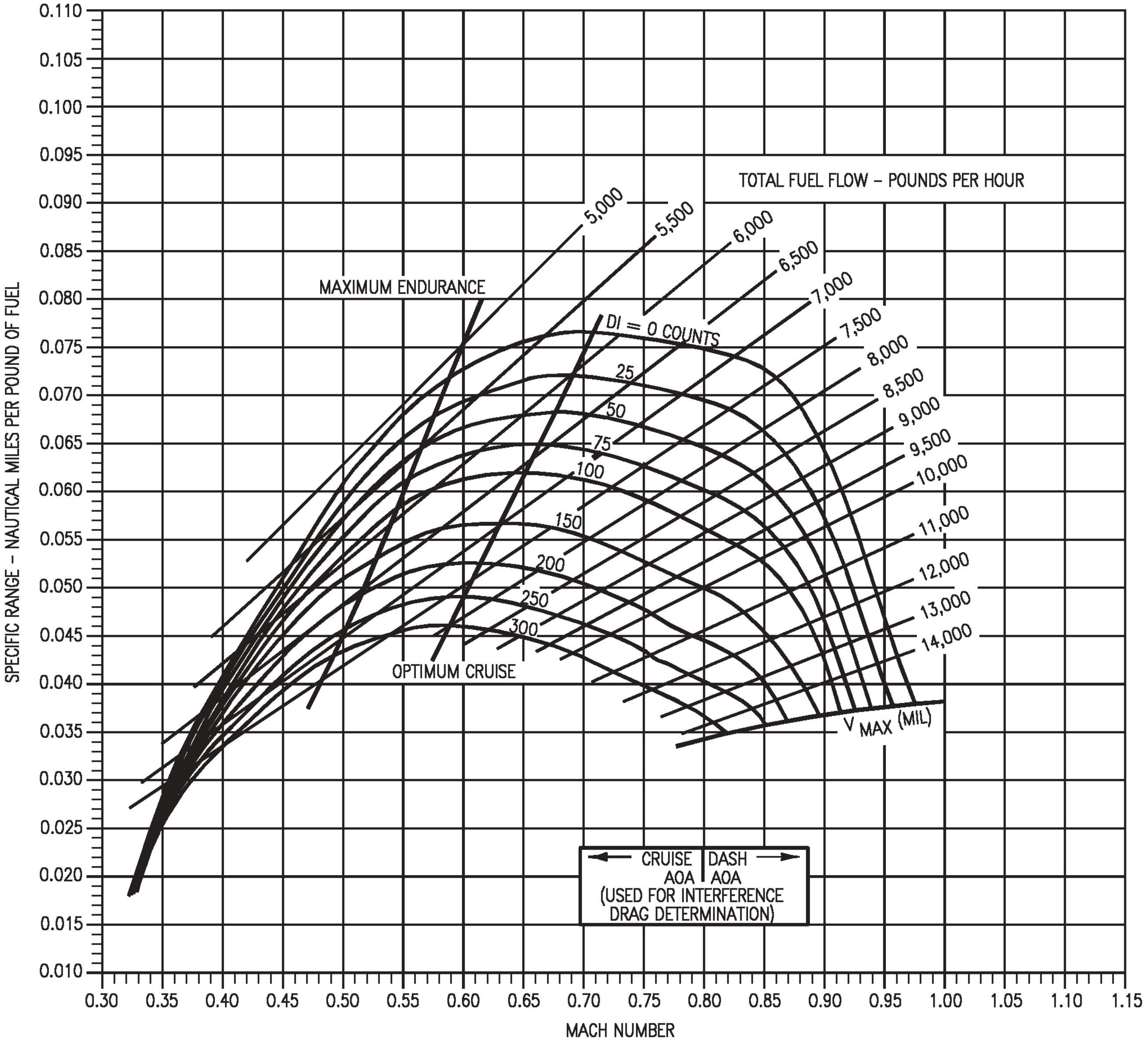
TEMPERATURE EFFECTS	
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.02
-10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(286-1)12-CATI

Figure 11-63. Specific Range - 15,000 Feet - 50,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

20,000 FEET – 26,000 POUND

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

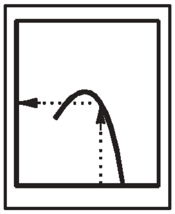
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –25°C

TEMPERATURE EFFECTS

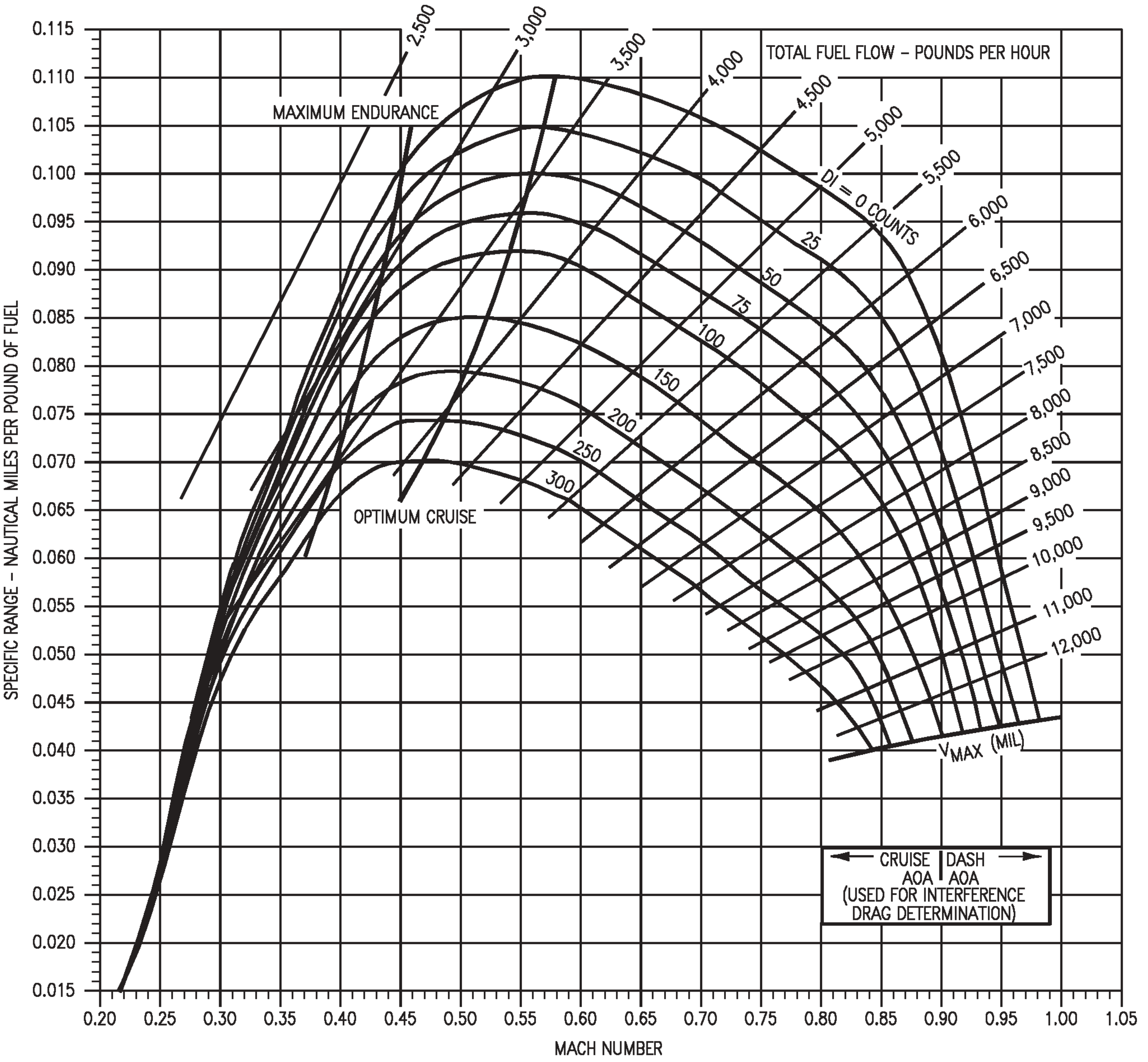
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(186–1)12–CATI

Figure 11-64. Specific Range - 20,000 Feet - 26,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

20,000 FEET – 30,000 POUND

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

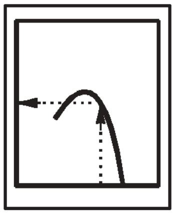
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –25°C

TEMPERATURE EFFECTS

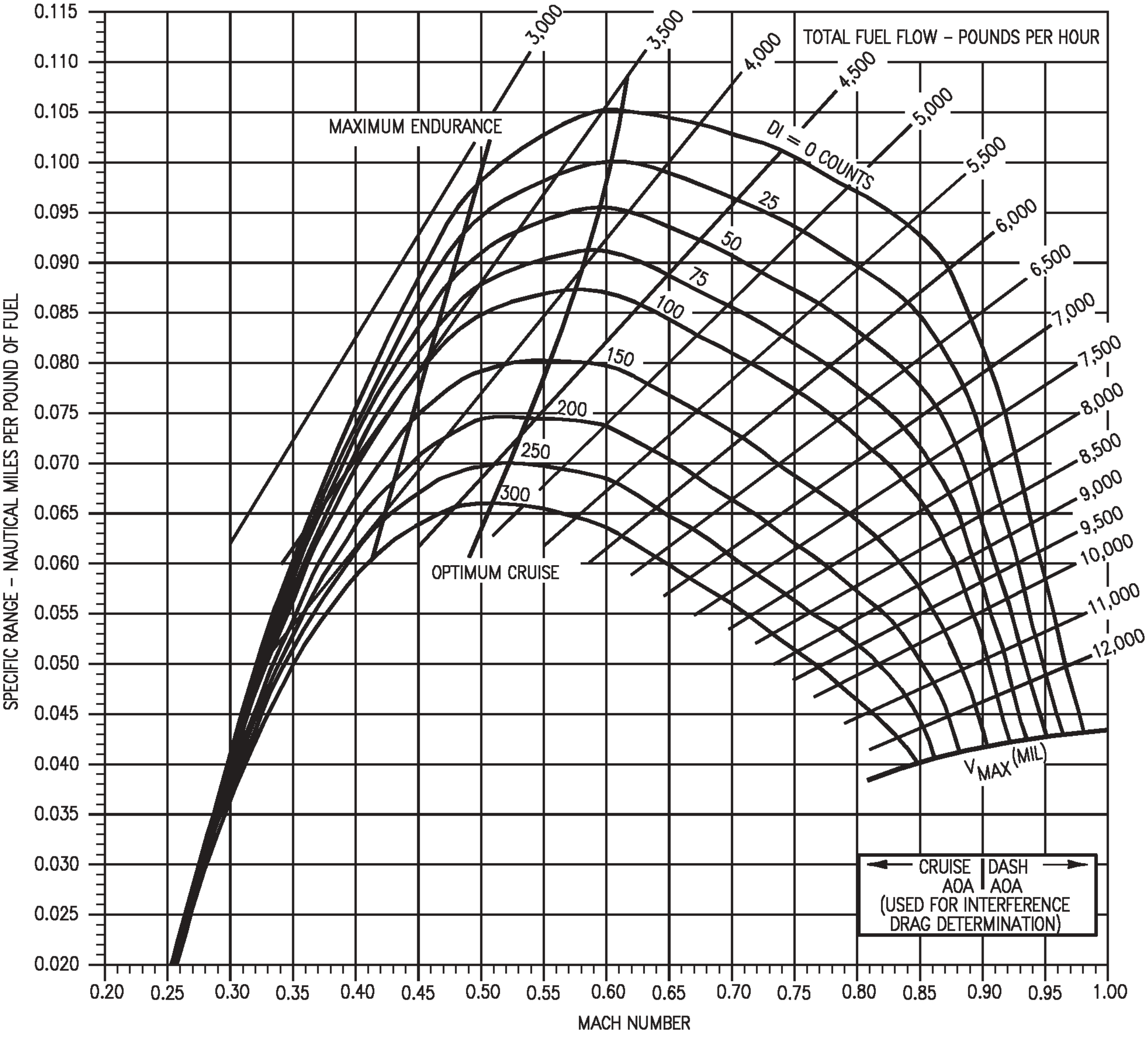
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(187–1)12–CATI

Figure 11-65. Specific Range - 20,000 Feet - 30,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

20,000 FEET – 34,000 POUND

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

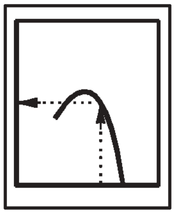
REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= −25°C

TEMPERATURE EFFECTS

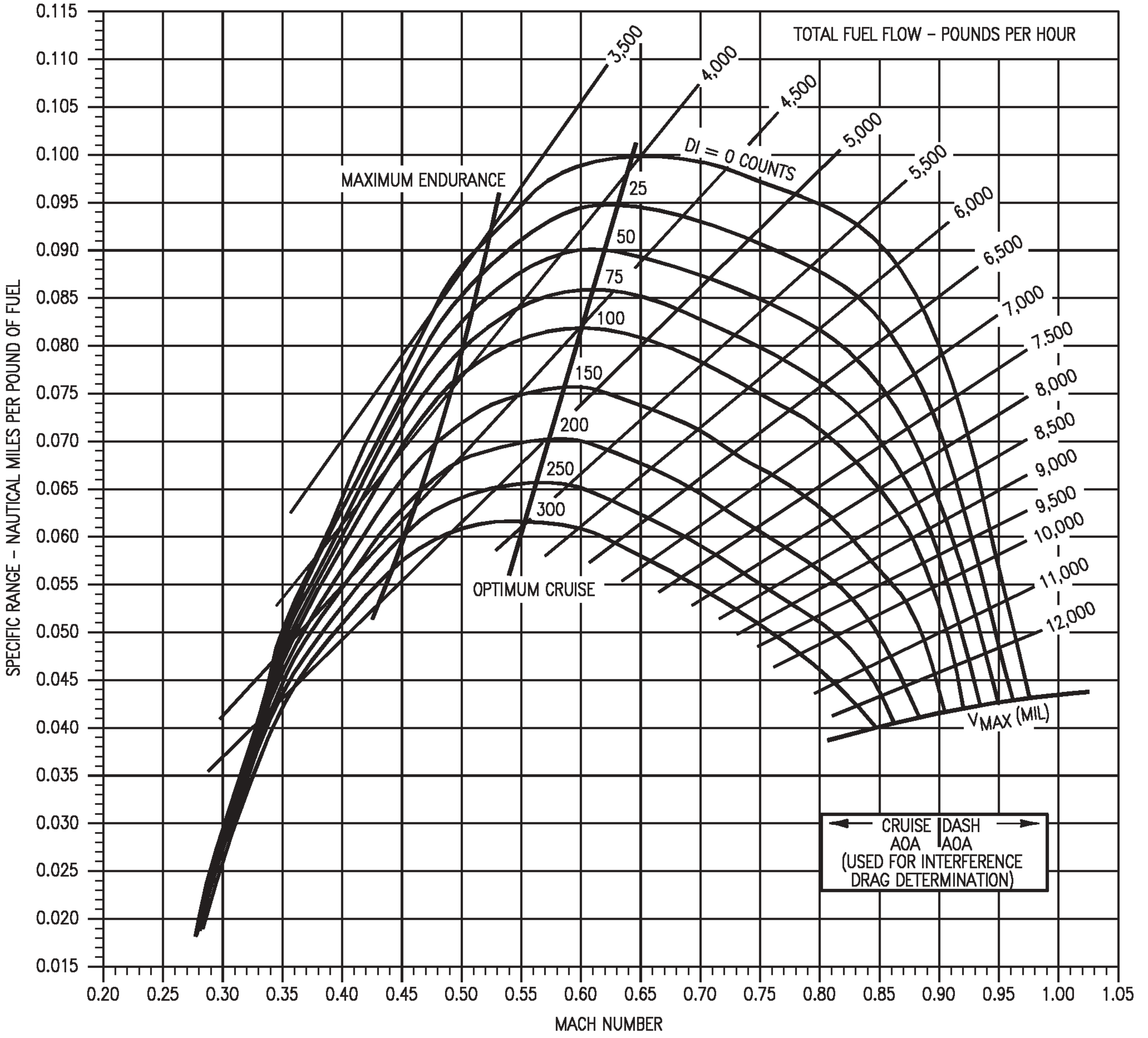
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
−20	1.02
−10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(188–1)12–CATI

Figure 11-66. Specific Range - 20,000 Feet - 34,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

20,000 FEET – 38,000 POUND

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS

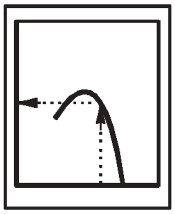
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –25°C

TEMPERATURE EFFECTS

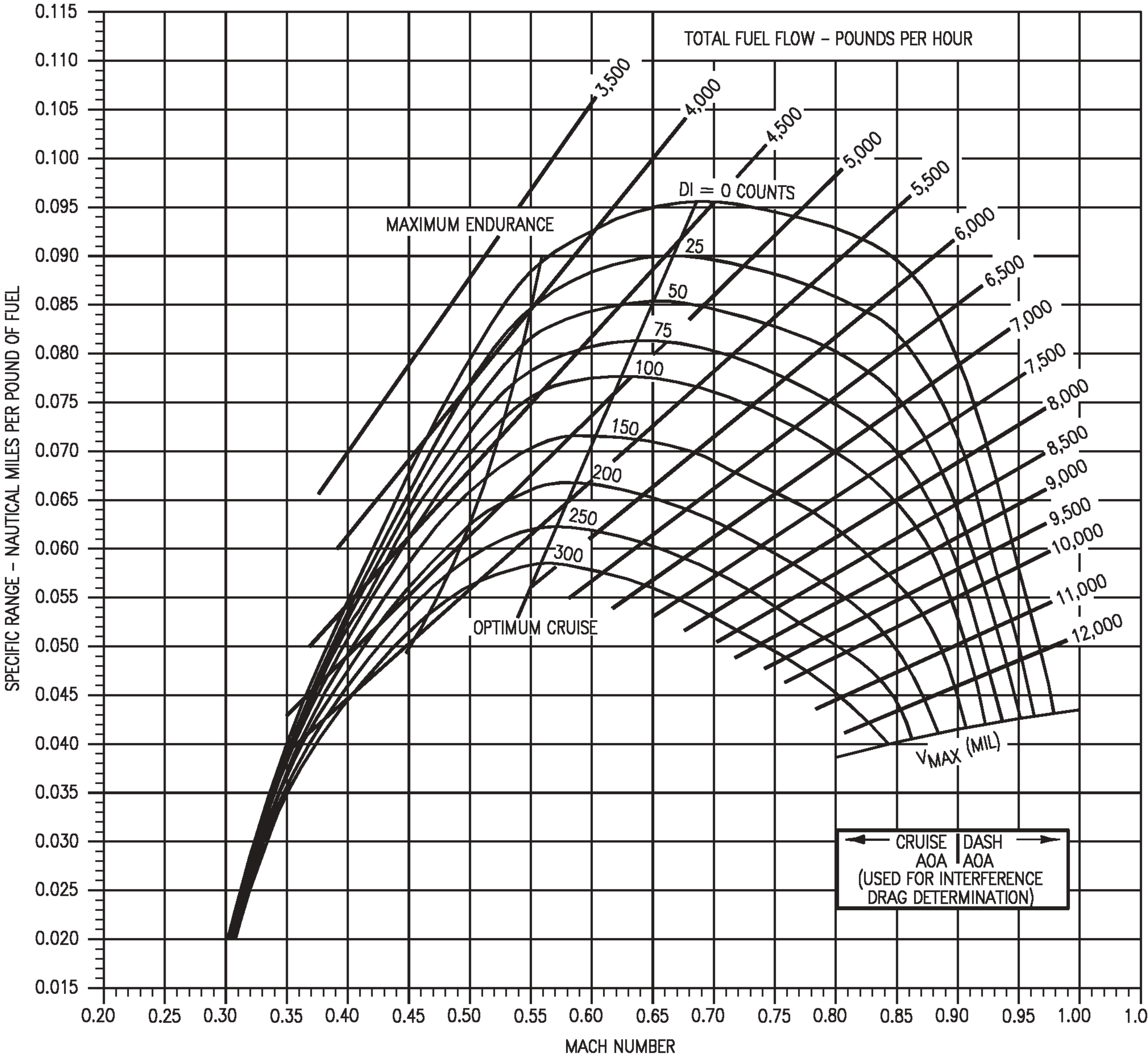
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(189–1)12–CATI

Figure 11-67. Specific Range - 20,000 Feet - 38,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

20,000 FEET – 42,000 POUND

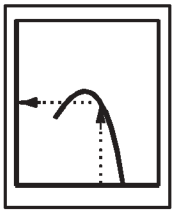
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= −25°C

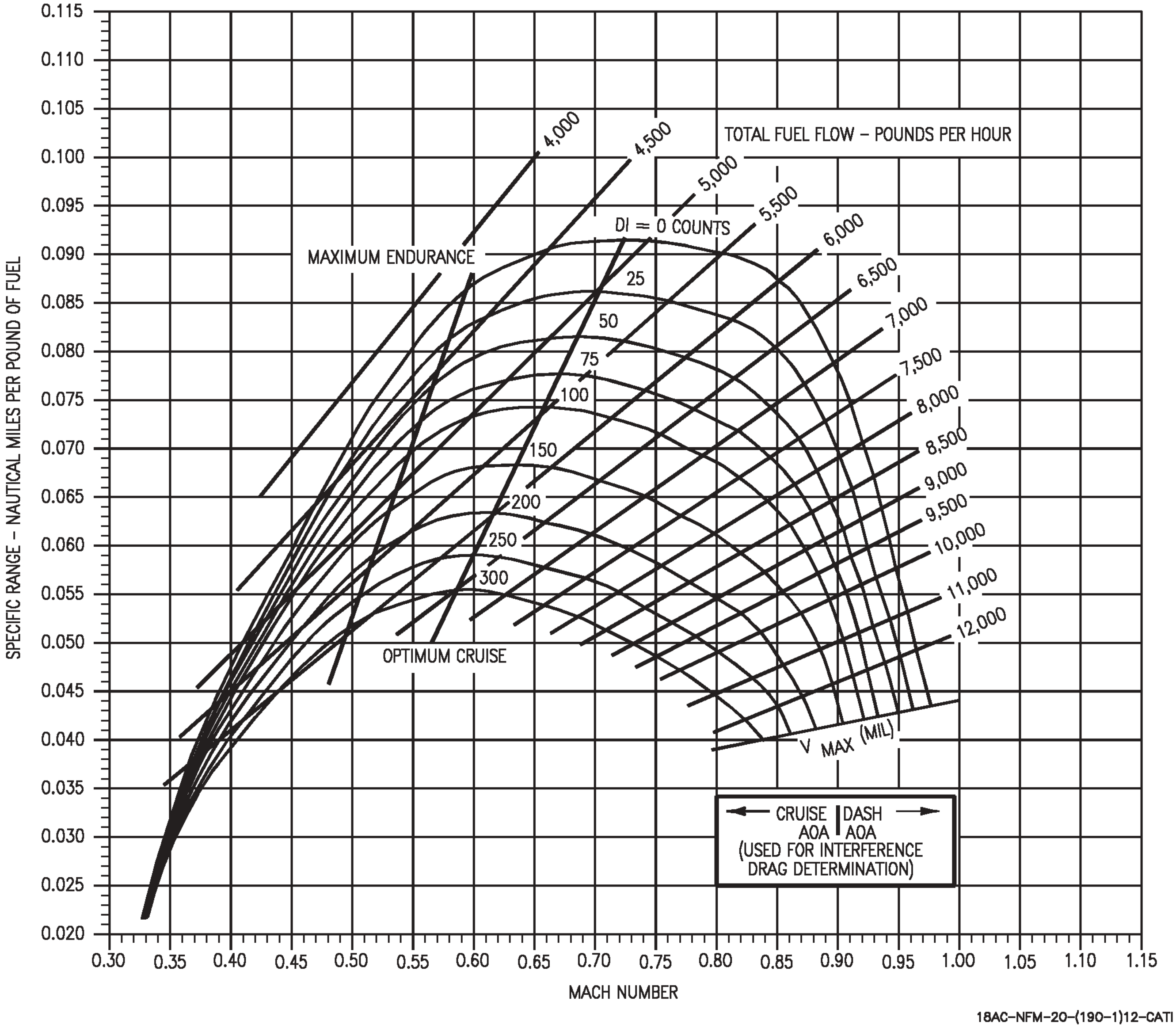
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
−20	1.02
−10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(190–1)12–CATI

Figure 11-68. Specific Range - 20,000 Feet - 42,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

20,000 FEET – 46,000 POUND

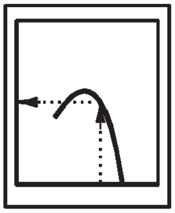
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –25°C

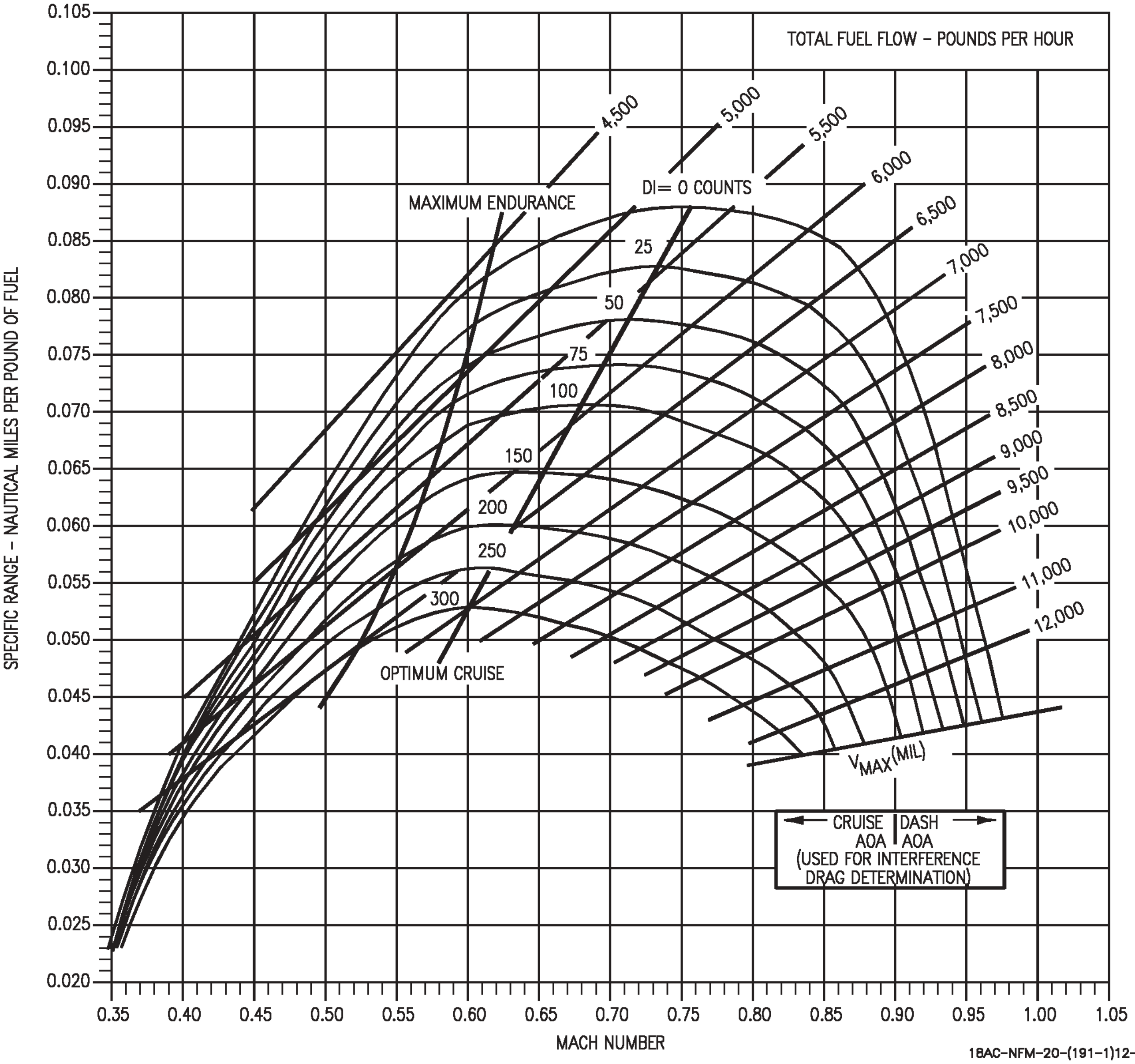
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(191–1)12–CATI

Figure 11-69. Specific Range - 20,000 Feet - 46,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

20,000 FEET - 50,000 POUND

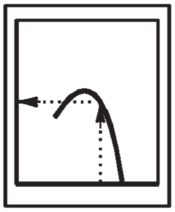
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= -25°C

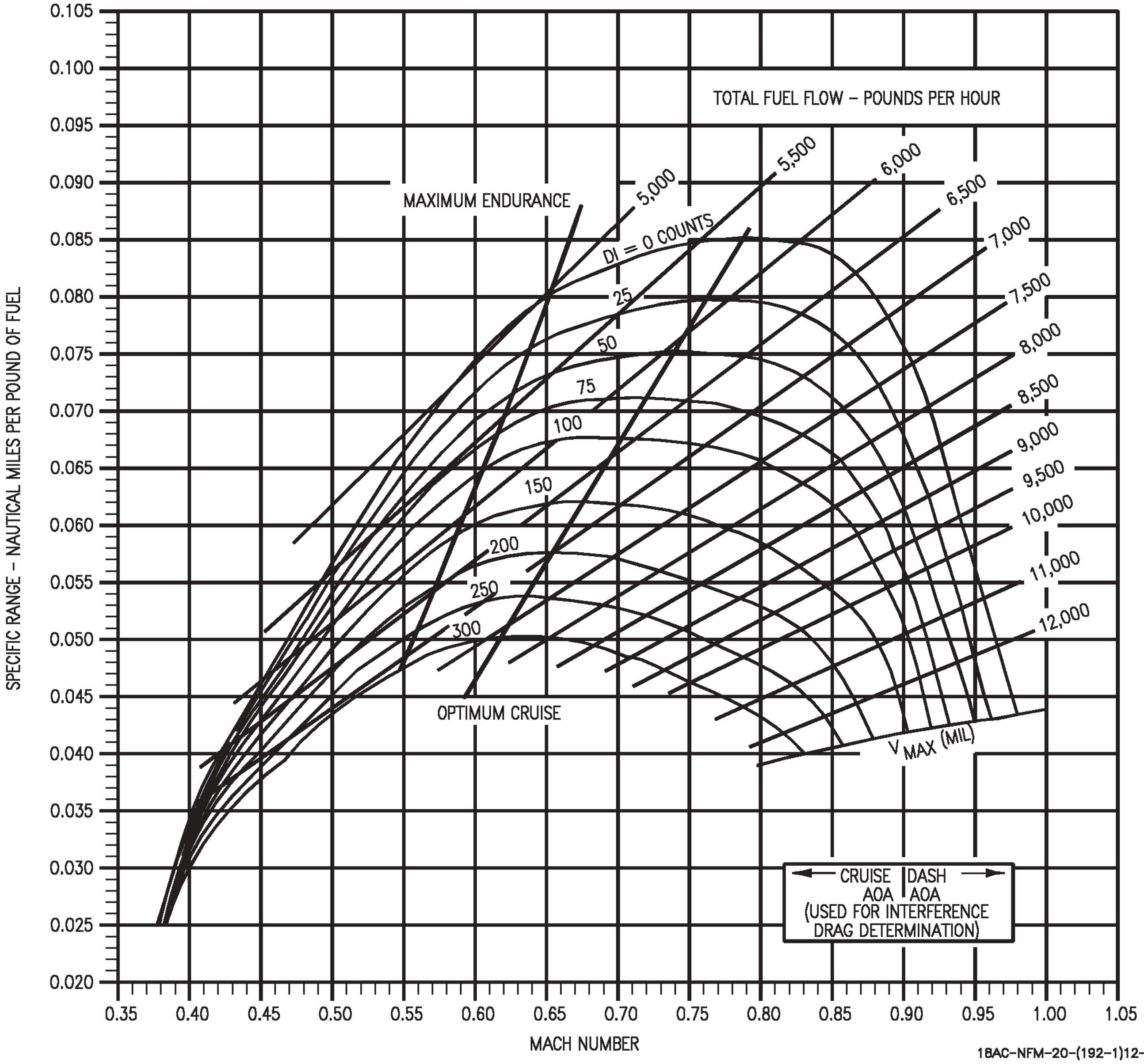
TEMPERATURE EFFECTS	
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.02
-10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(192-1)12-CATI

Figure 11-70. Specific Range - 20,000 Feet - 50,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

25,000 FEET – 26,000 POUND

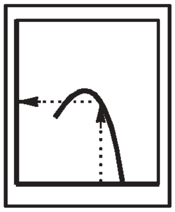
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –35°C

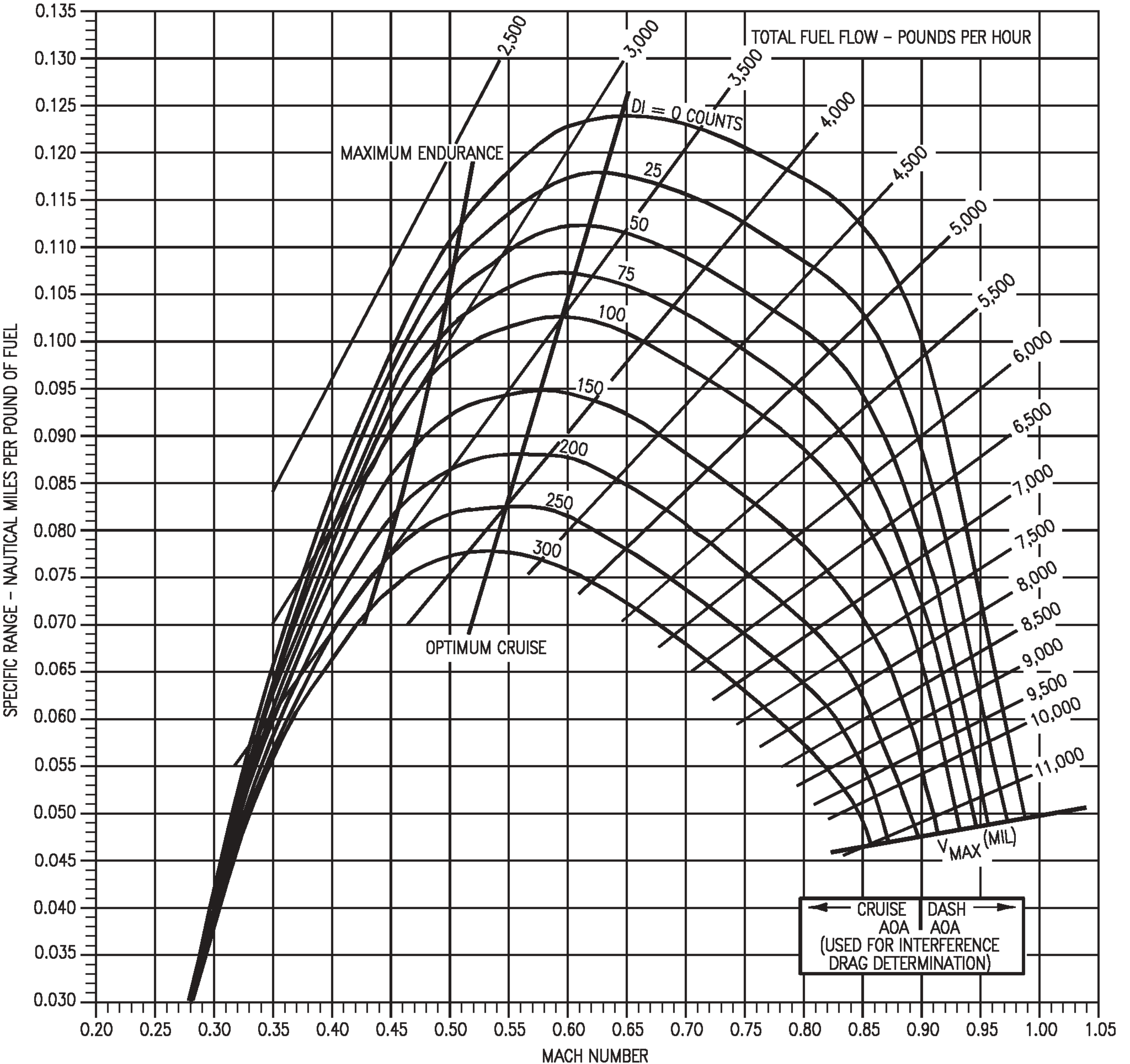
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(287–1)12–CATI

Figure 11-71. Specific Range - 25,000 Feet - 26,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

25,000 FEET – 30,000 POUND

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

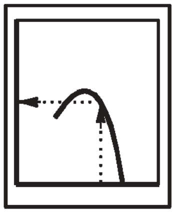
REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= −35°C

TEMPERATURE EFFECTS

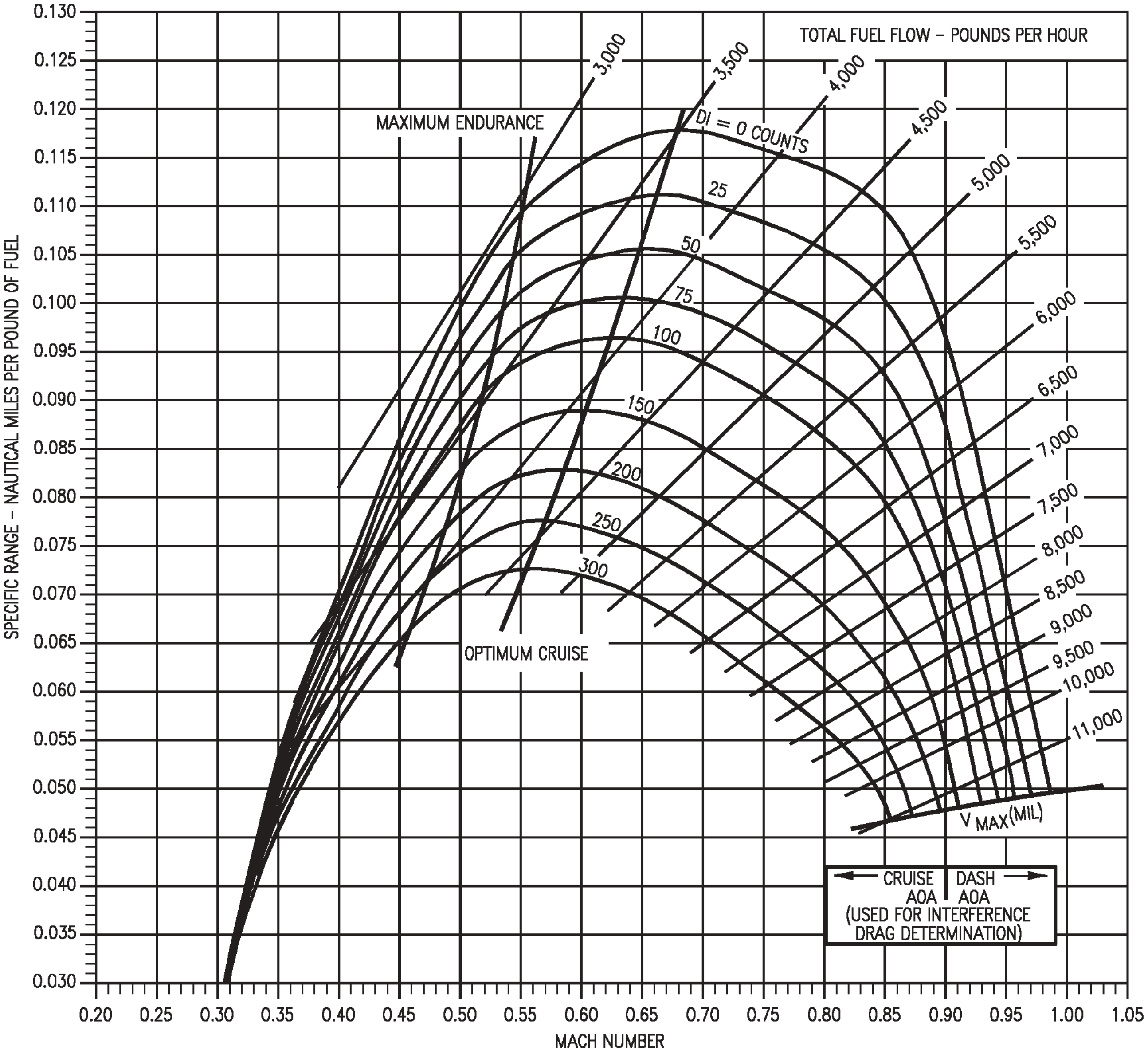
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
−20	1.02
−10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(288-1)12-CATI

Figure 11-72. Specific Range - 25,000 Feet - 30,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

25,000 FEET – 34,000 POUND

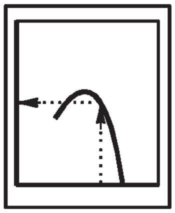
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –35°C

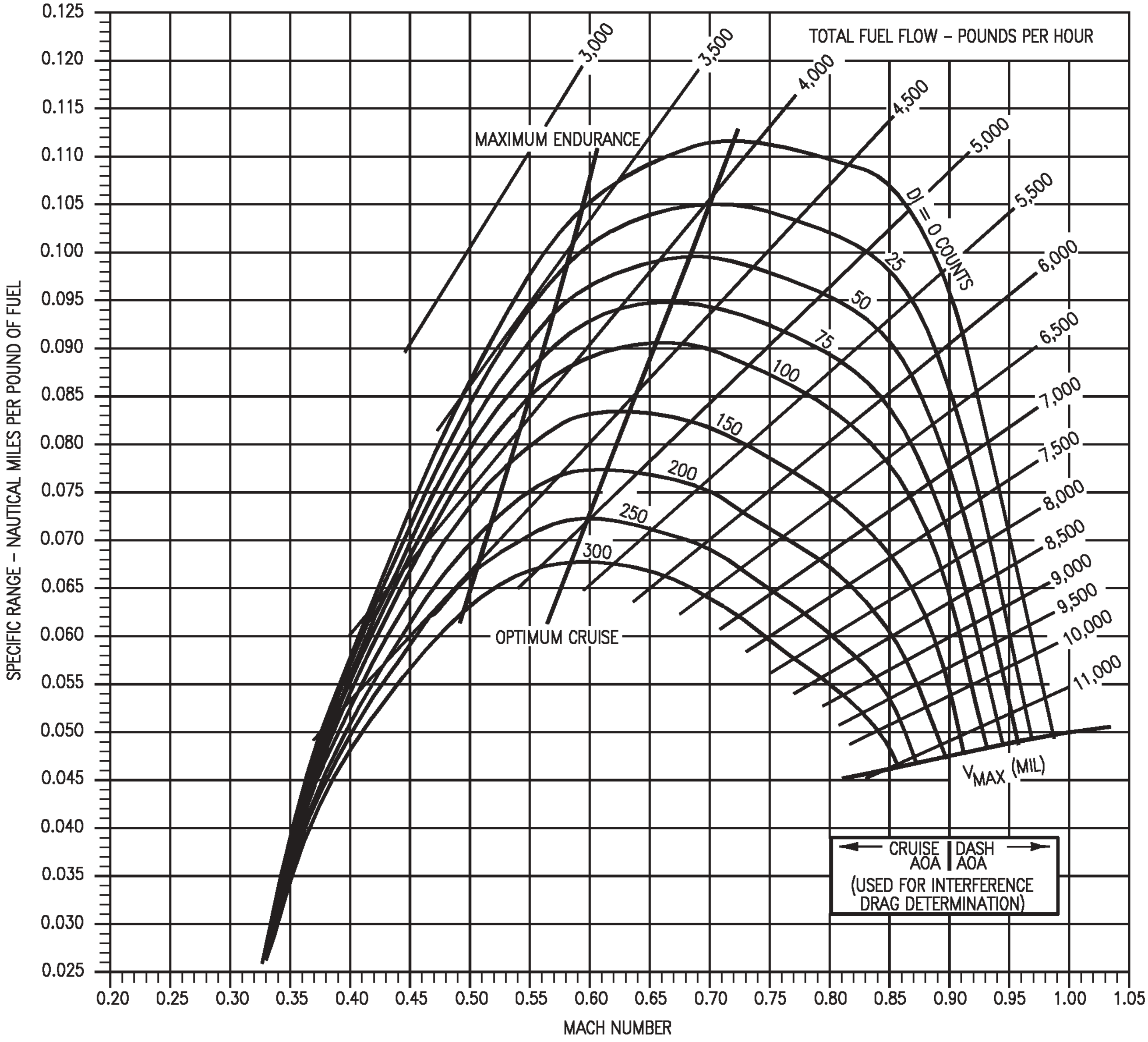
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(289–1)12–CATI

Figure 11-73. Specific Range - 25,000 Feet - 34,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

25,000 FEET – 38,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

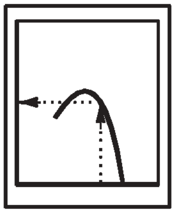
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –35°C

TEMPERATURE EFFECTS

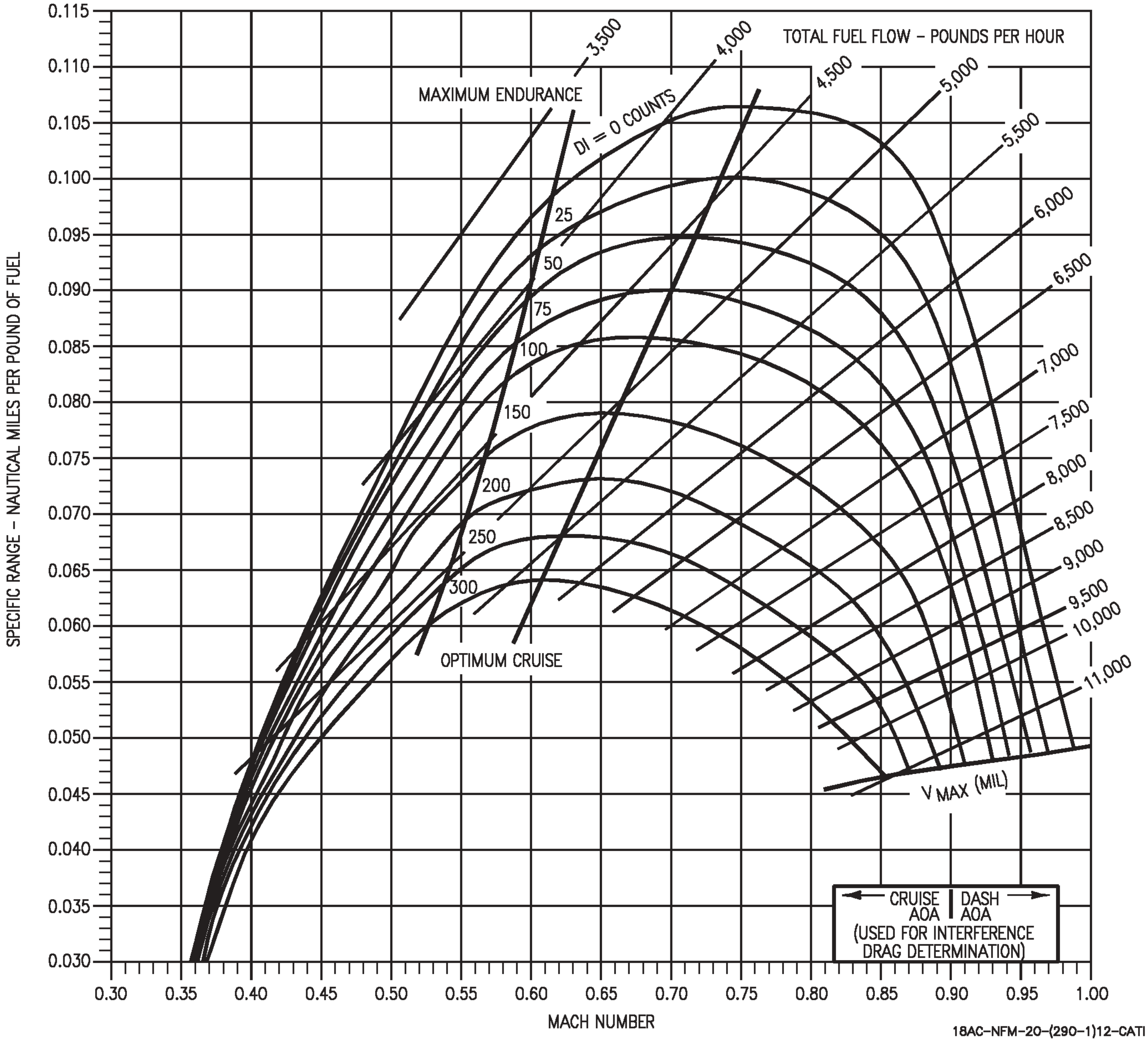
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(290–1)12–CATI

Figure 11-74. Specific Range - 25,000 Feet - 38,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

25,000 FEET – 42,000 POUNDS

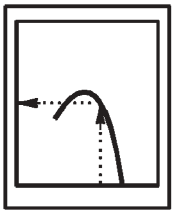
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –35°C

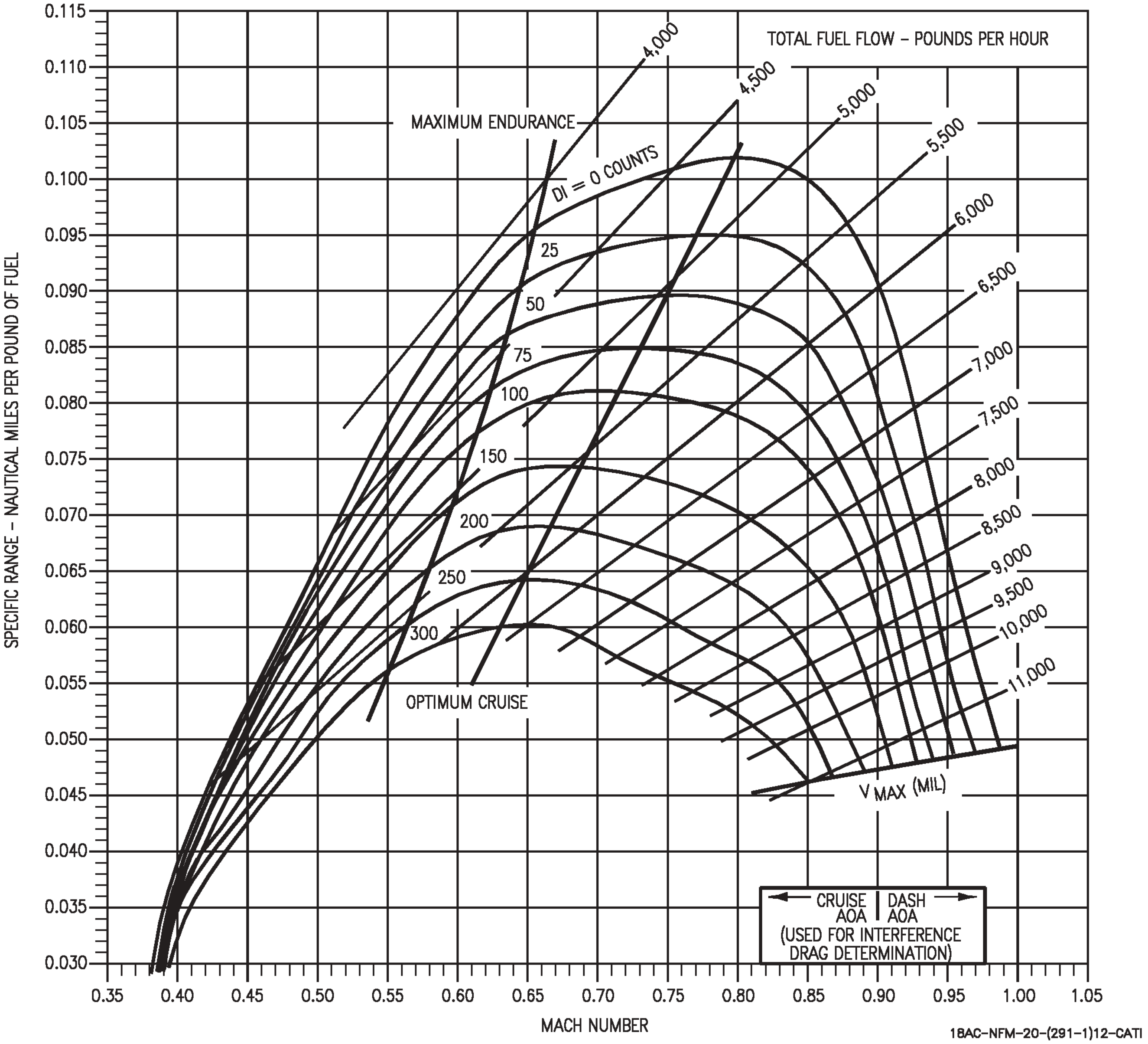
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(291–1)12–CATI

Figure 11-75. Specific Range - 25,000 Feet - 42,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

25,000 FEET - 46,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

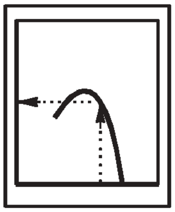
REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= -35°C

TEMPERATURE EFFECTS

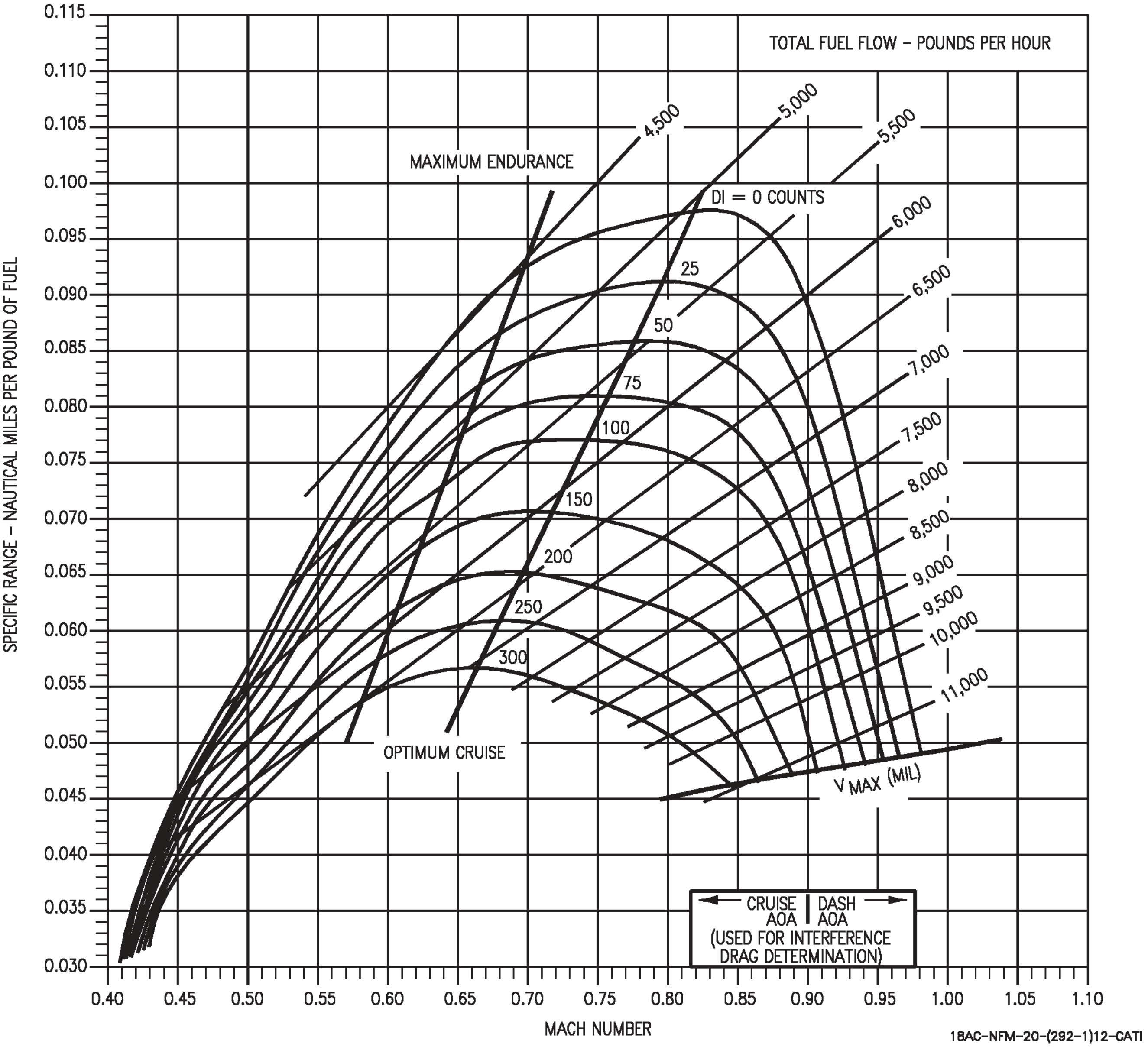
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.02
-10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(292-1)12-CATI

Figure 11-76. Specific Range - 25,000 Feet - 46,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

25,000 FEET - 50,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

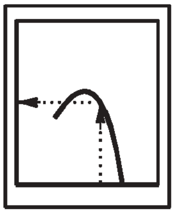
REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= -35°C

TEMPERATURE EFFECTS

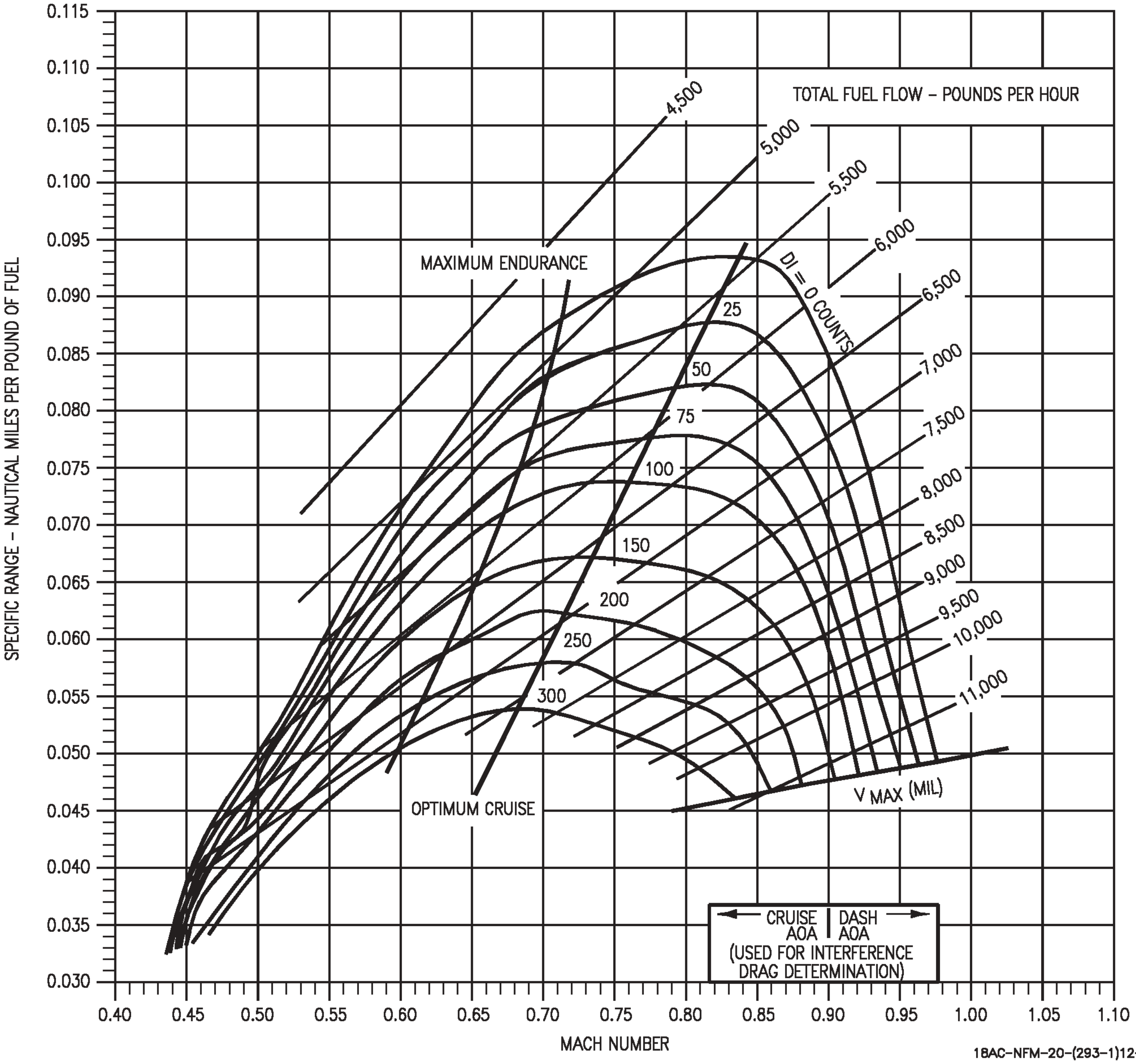
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.02
-10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(293-1)12-CATI

Figure 11-77. Specific Range - 25,000 Feet - 50,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

30,000 FEET – 26,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

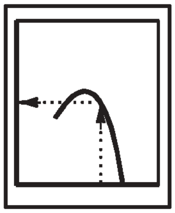
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –44°C

TEMPERATURE EFFECTS

ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

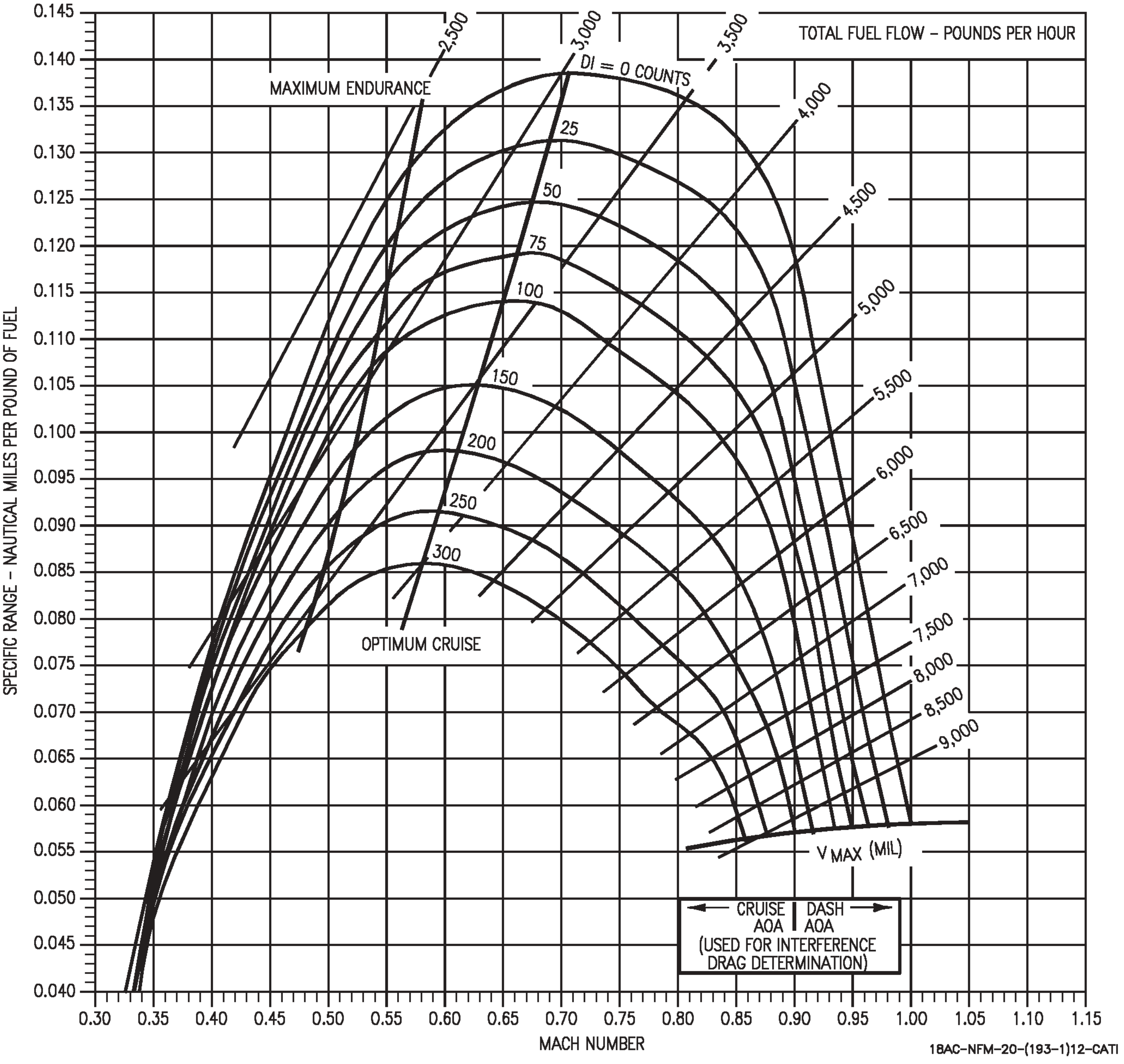


Figure 11-78. Specific Range - 30,000 Feet - 26,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

30,000 FEET - 30,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

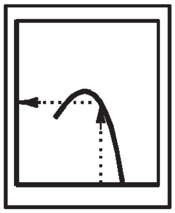
REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= -44°C

TEMPERATURE EFFECTS

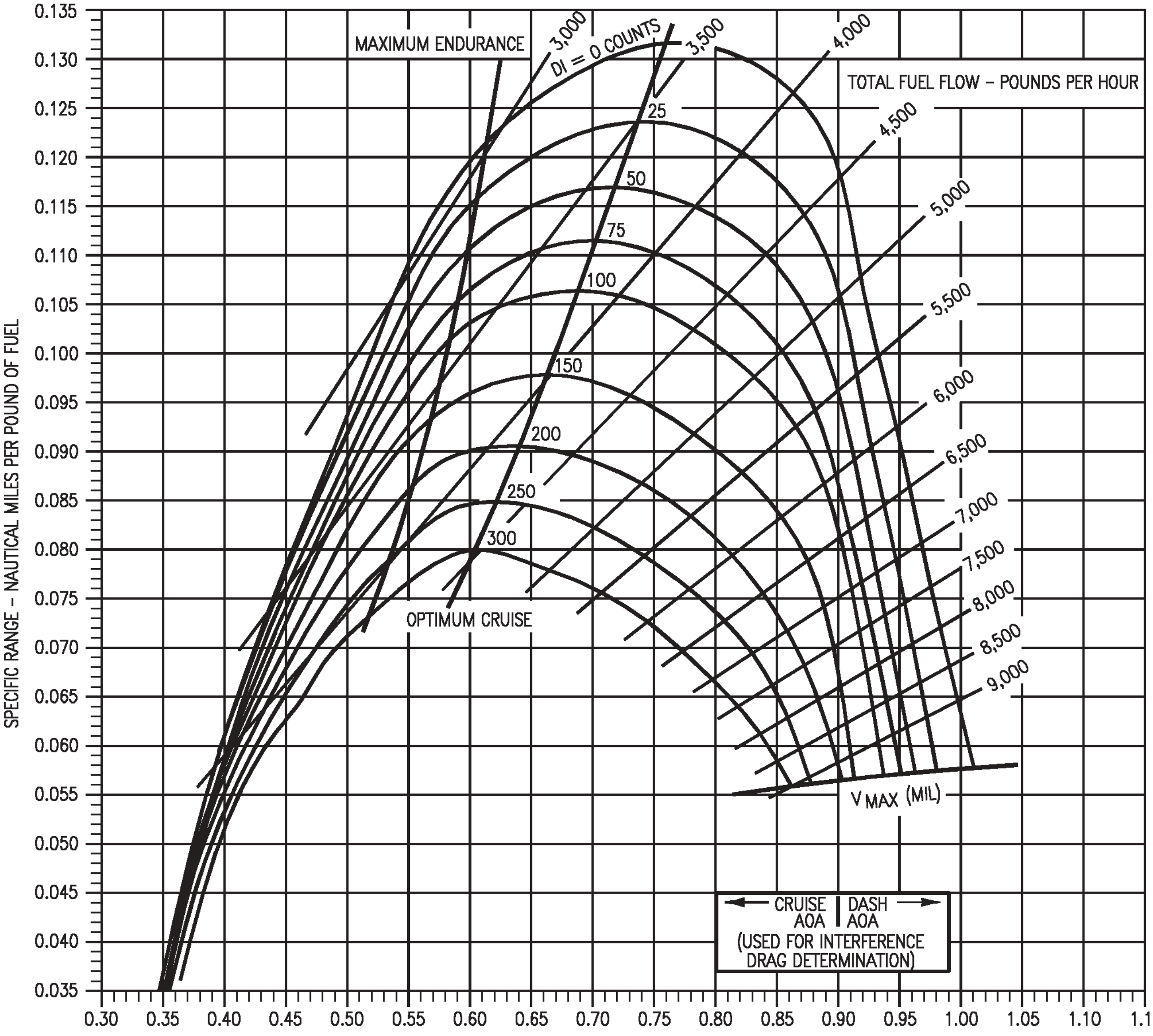
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.02
-10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(194-1)12-CATI

Figure 11-79. Specific Range - 30,000 Feet - 30,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

30,000 FEET - 34,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

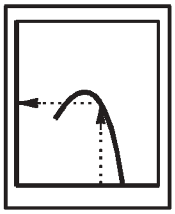
REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= -44°C

TEMPERATURE EFFECTS

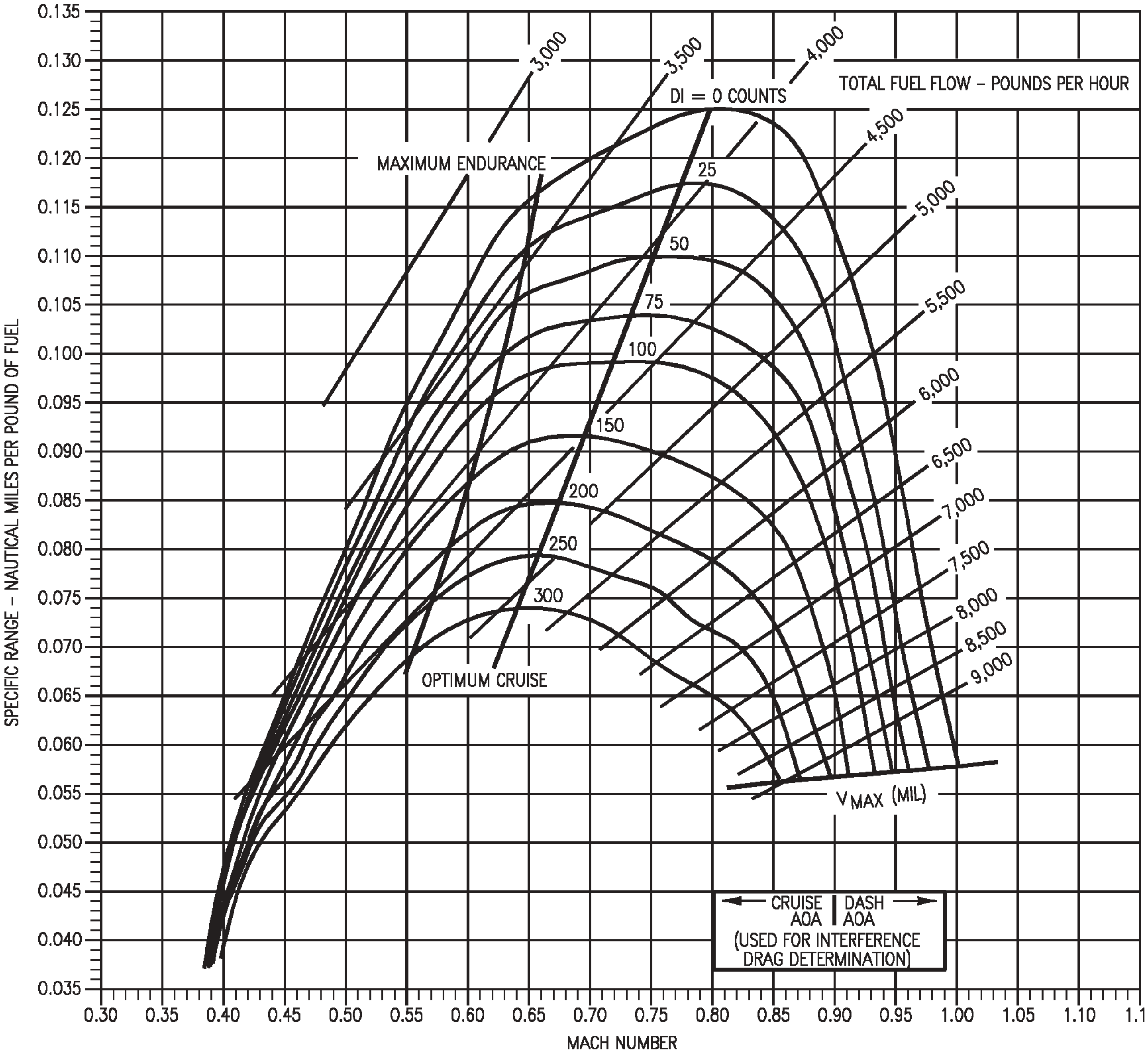
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.02
-10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(195-1)12-CATI

Figure 11-80. Specific Range - 30,000 Feet - 34,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

30,000 FEET – 38,000 POUND

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

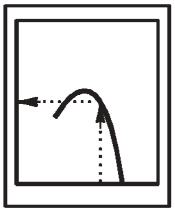
REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= −44°C

TEMPERATURE EFFECTS

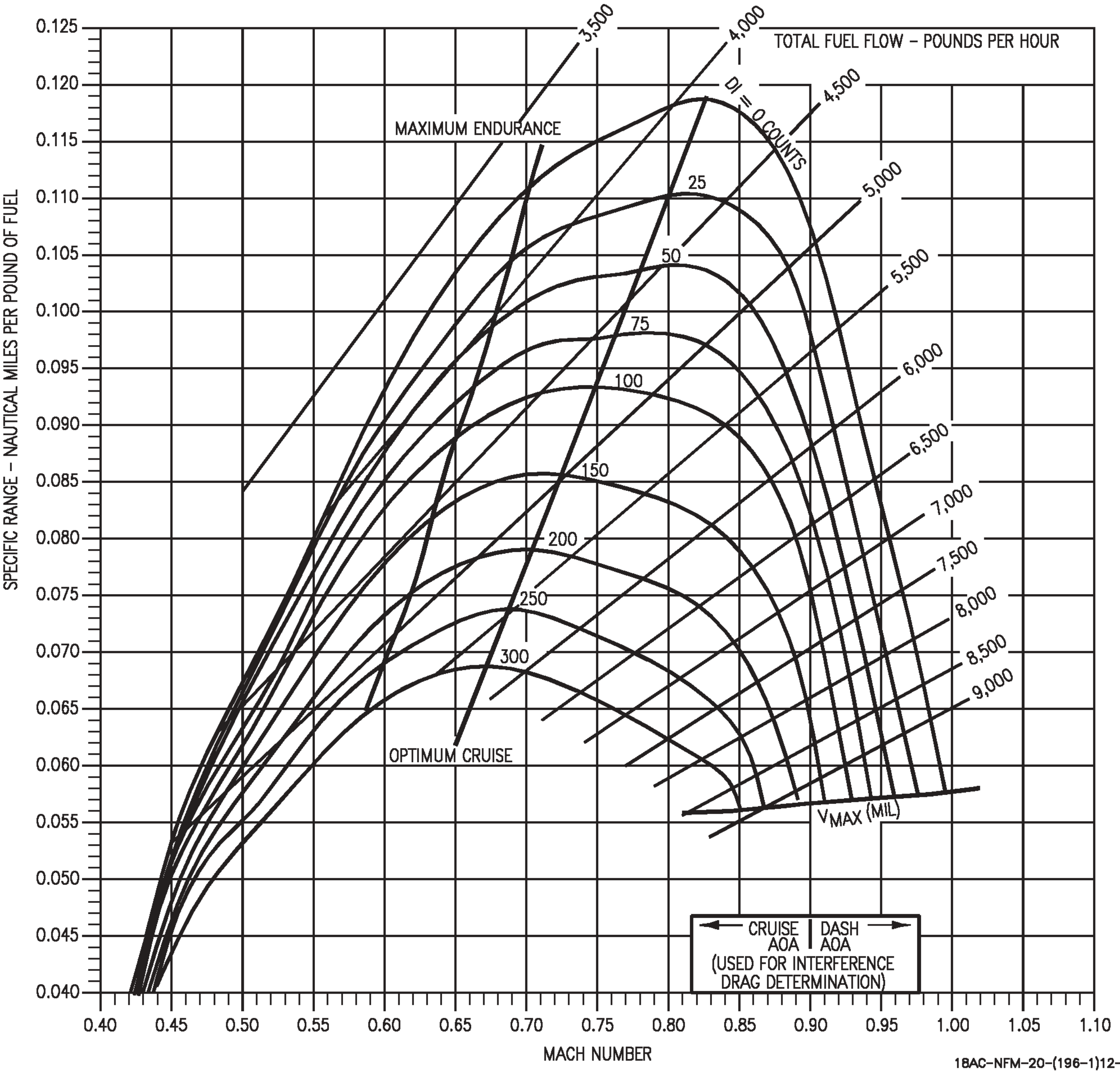
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
−20	1.02
−10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(196–1)12–CATI

Figure 11-81. Specific Range - 30,000 Feet - 38,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

30,000 FEET – 42,000 POUND

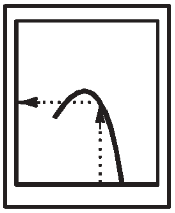
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –44°C

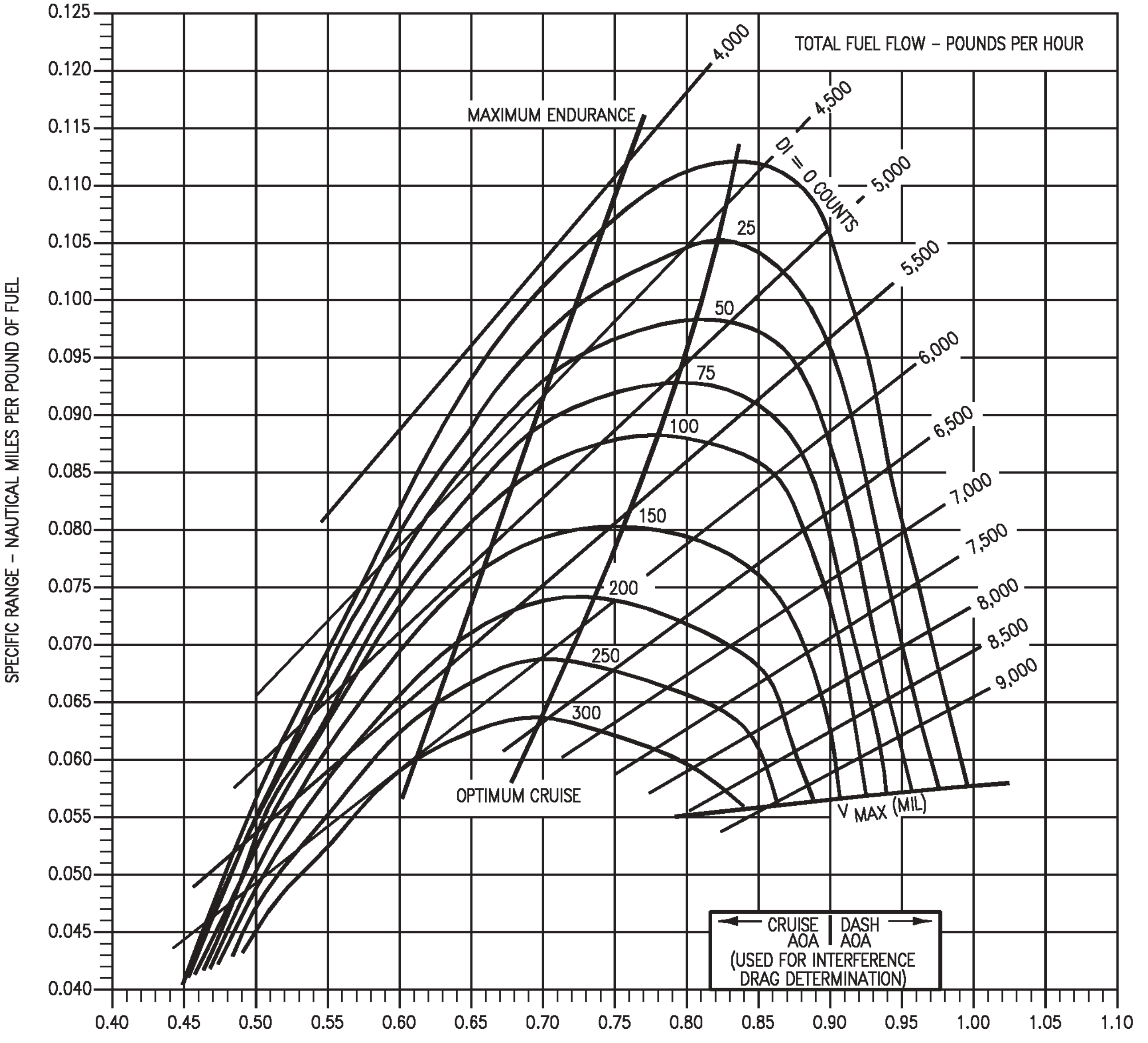
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(197-1)12-CATI

Figure 11-82. Specific Range - 30,000 Feet - 42,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

30,000 FEET – 46,000 POUND

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

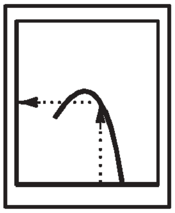
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –44°C

TEMPERATURE EFFECTS

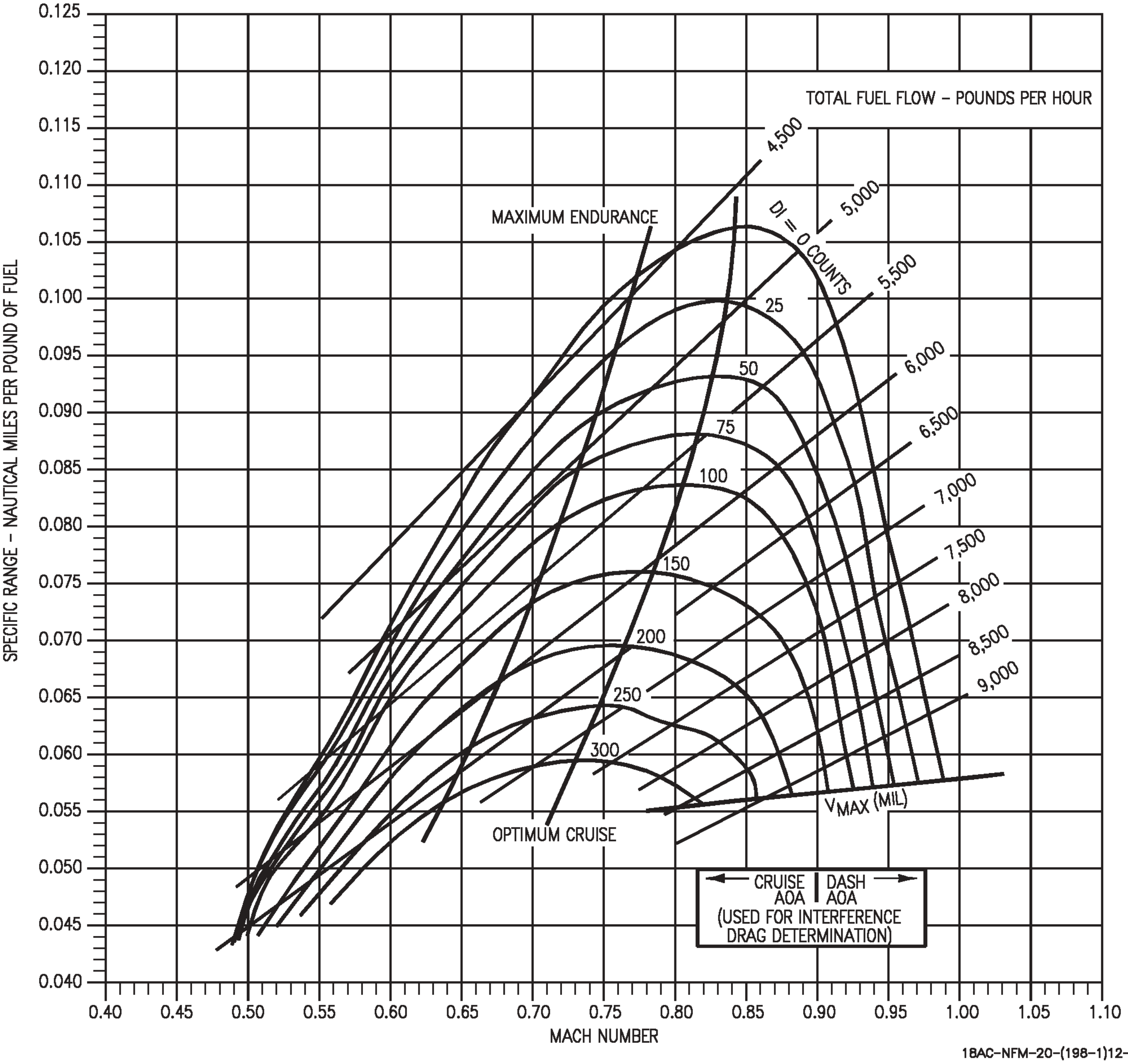
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(198–1)12–CATI

Figure 11-83. Specific Range - 30,000 Feet - 46,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

30,000 FEET – 50,000 POUND

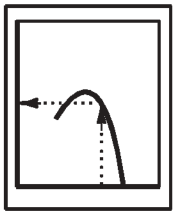
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –44°C

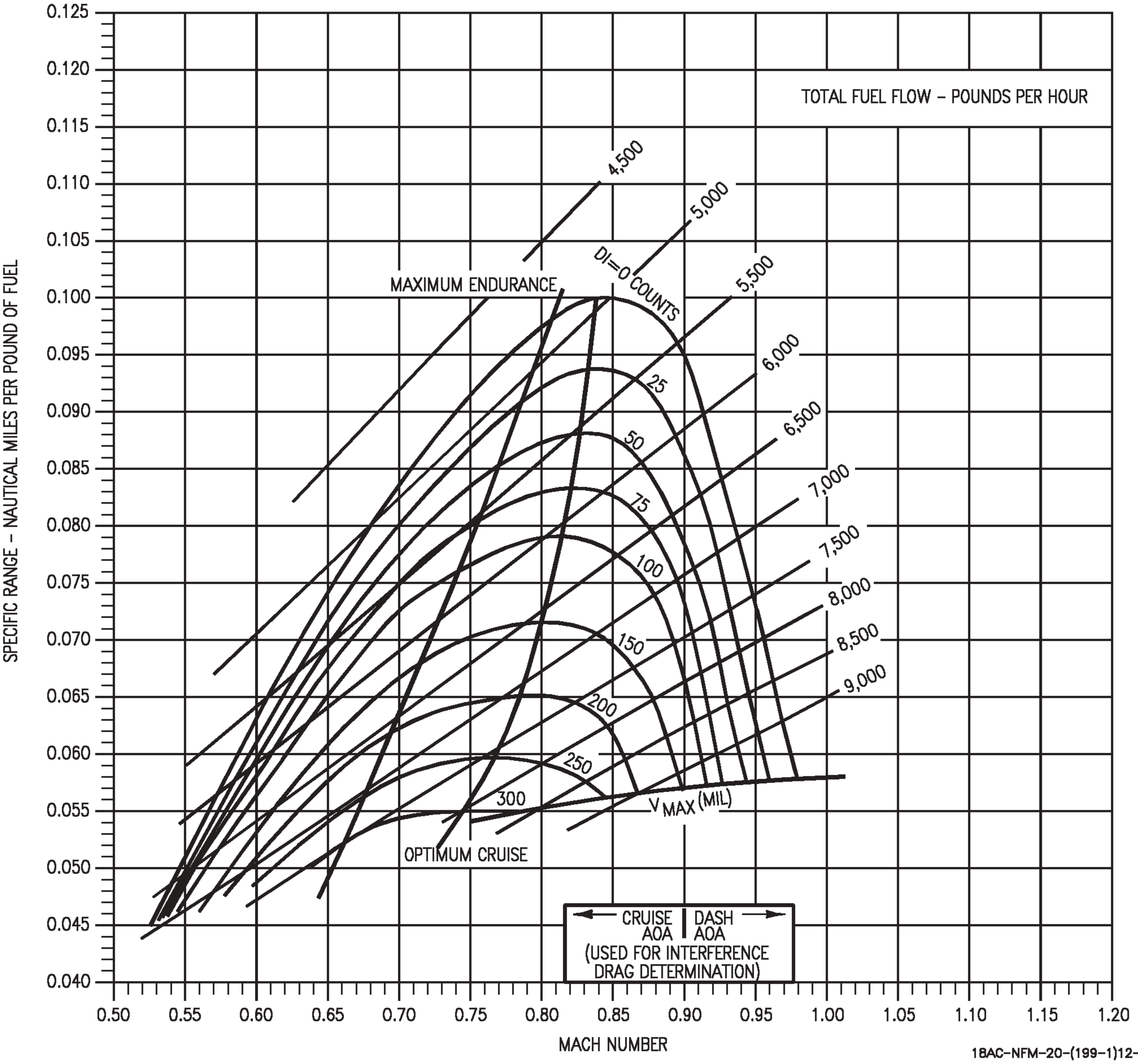
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(199–1)12–CATI

Figure 11-84. Specific Range - 30,000 Feet - 50,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

35,000 FEET – 26,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

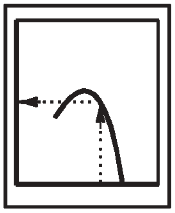
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –54°C

TEMPERATURE EFFECTS

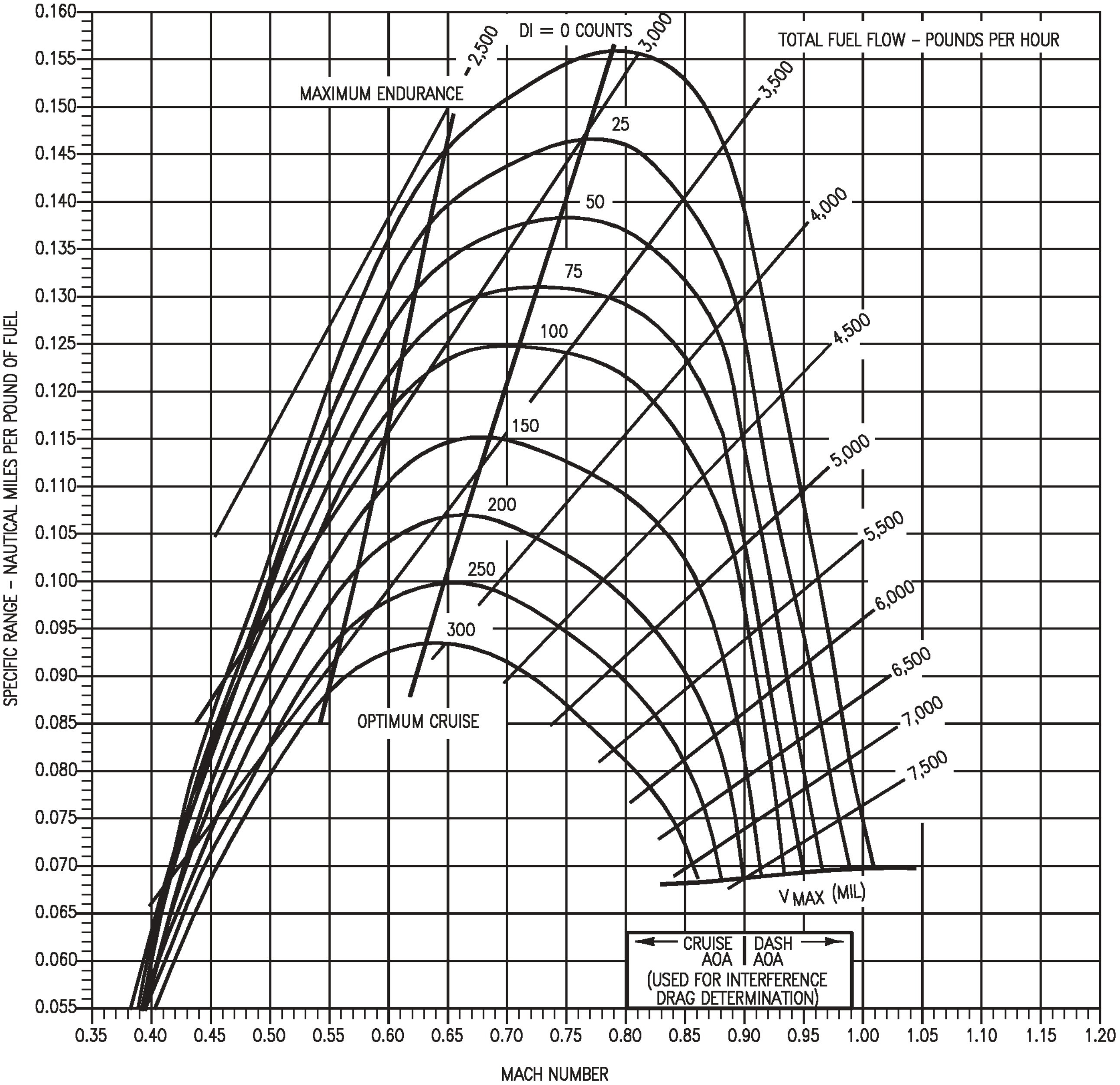
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(200–1)12–CATI

Figure 11-85. Specific Range - 35,000 Feet - 26,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

35,000 FEET – 30,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

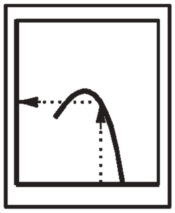
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –54°C

TEMPERATURE EFFECTS

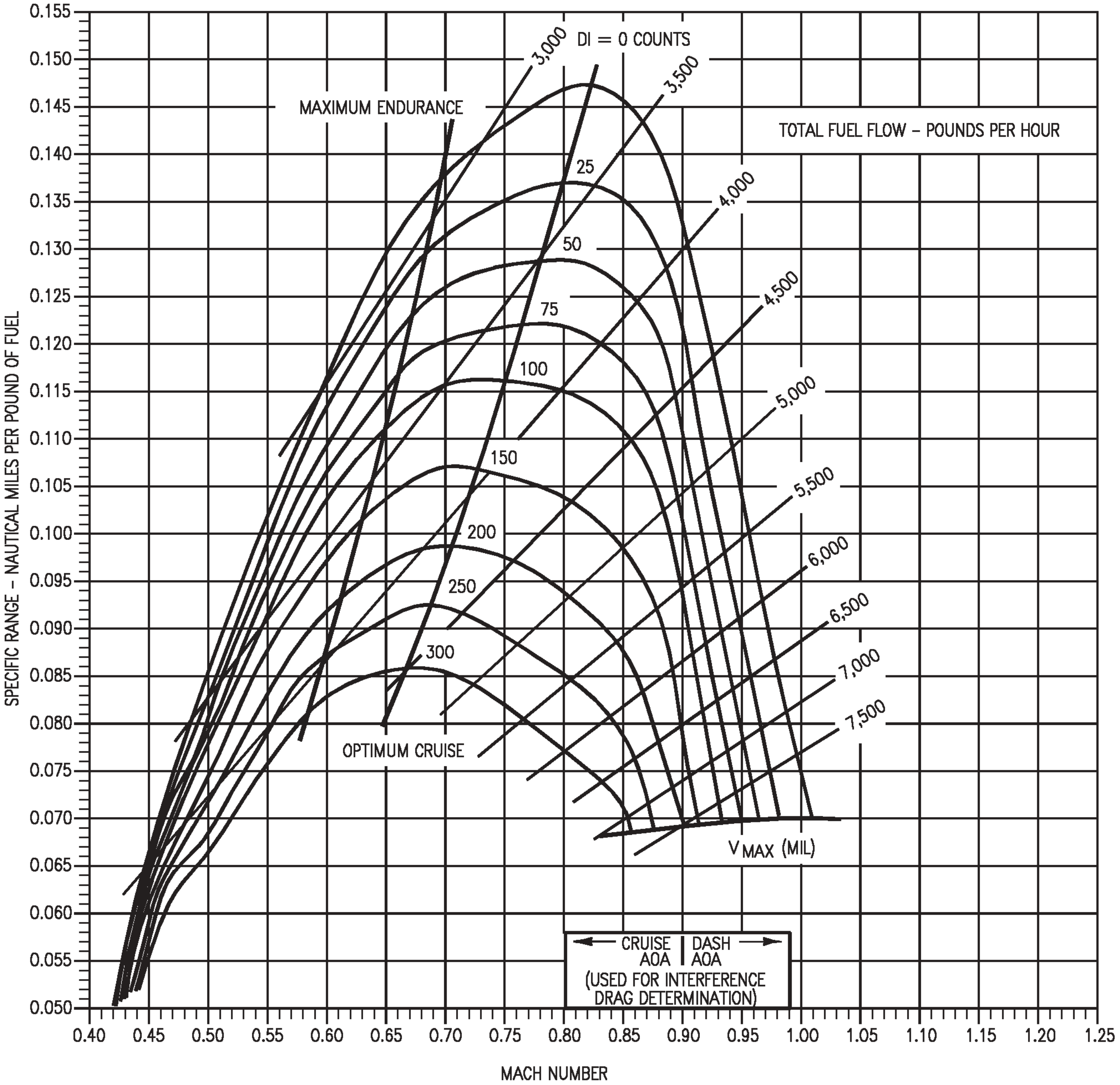
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(201–1)12–CATI

Figure 11-86. Specific Range - 35,000 Feet - 30,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

35,000 FEET – 34,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

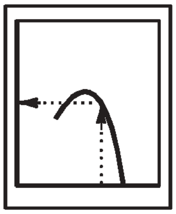
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –54°C

TEMPERATURE EFFECTS

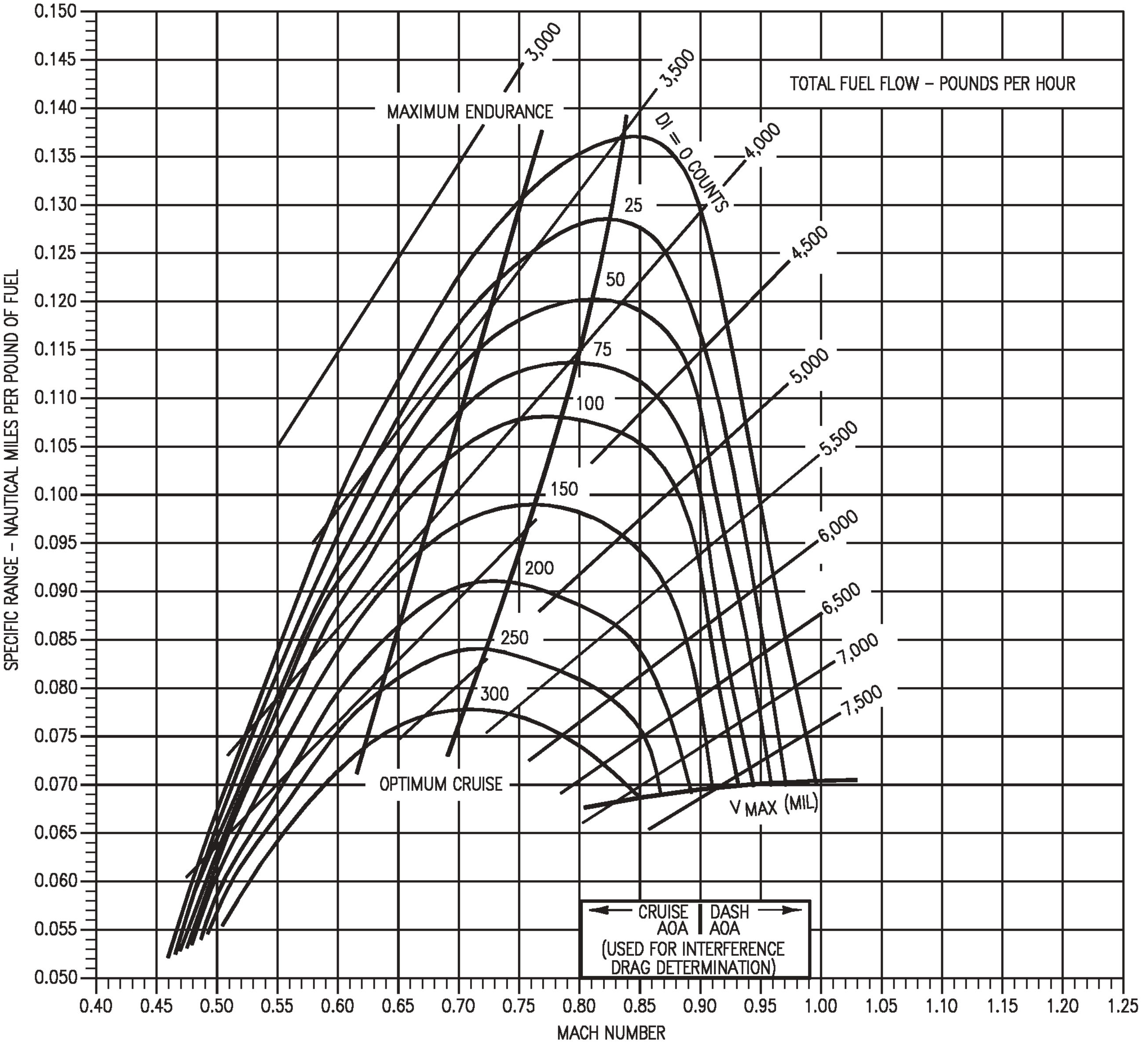
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(202–1)12–CATI

Figure 11-87. Specific Range - 35,000 Feet - 34,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400
35,000 FEET – 38,000 POUND

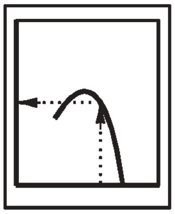
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –54°C

TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

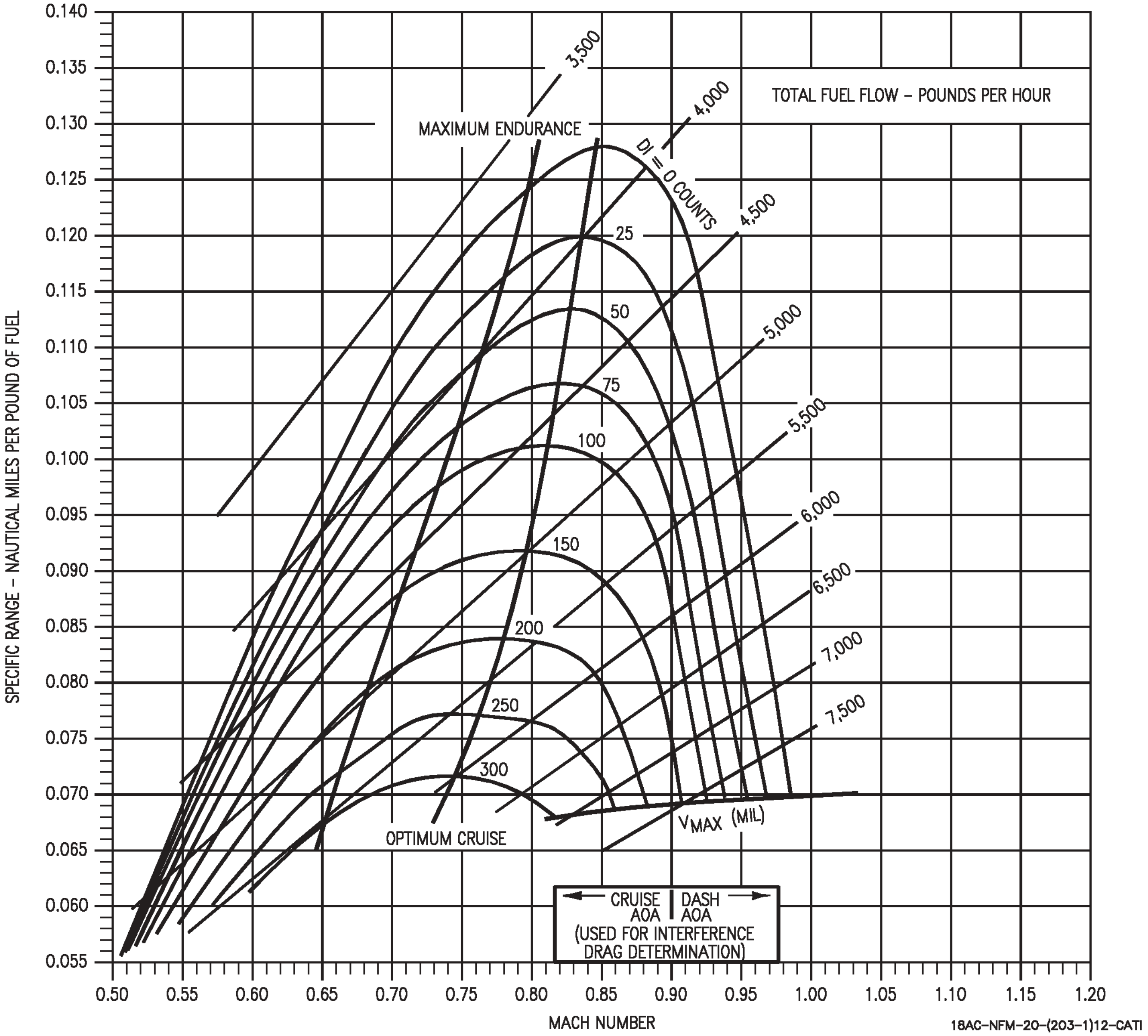


Figure 11-88. Specific Range - 35,000 Feet - 38,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

35,000 FEET – 42,000 POUND

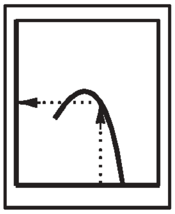
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –54°C

TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

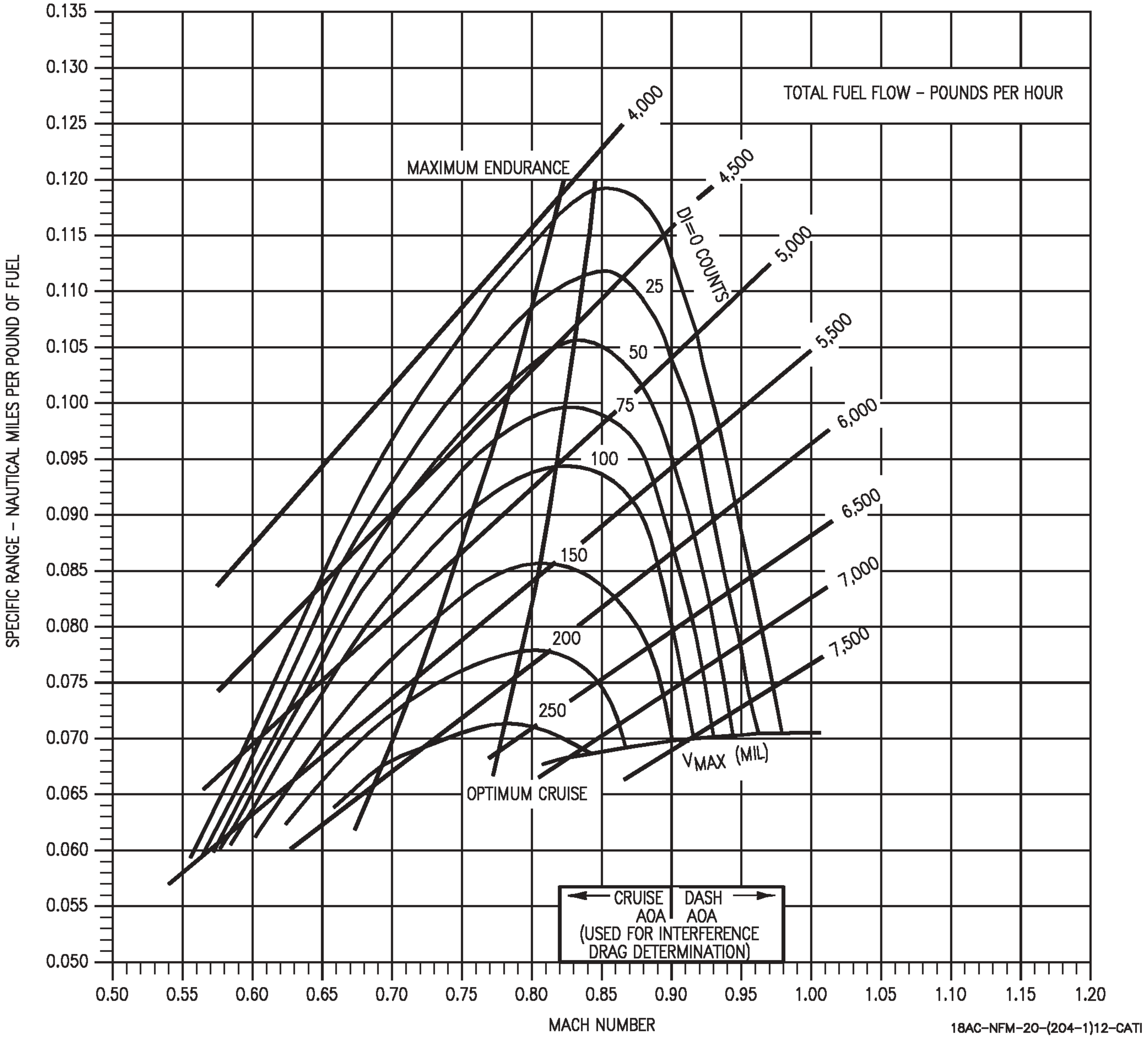


Figure 11-89. Specific Range - 35,000 Feet - 42,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

35,000 FEET – 46,000 POUND

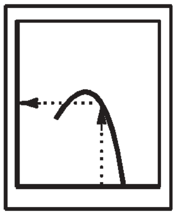
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= -54°C

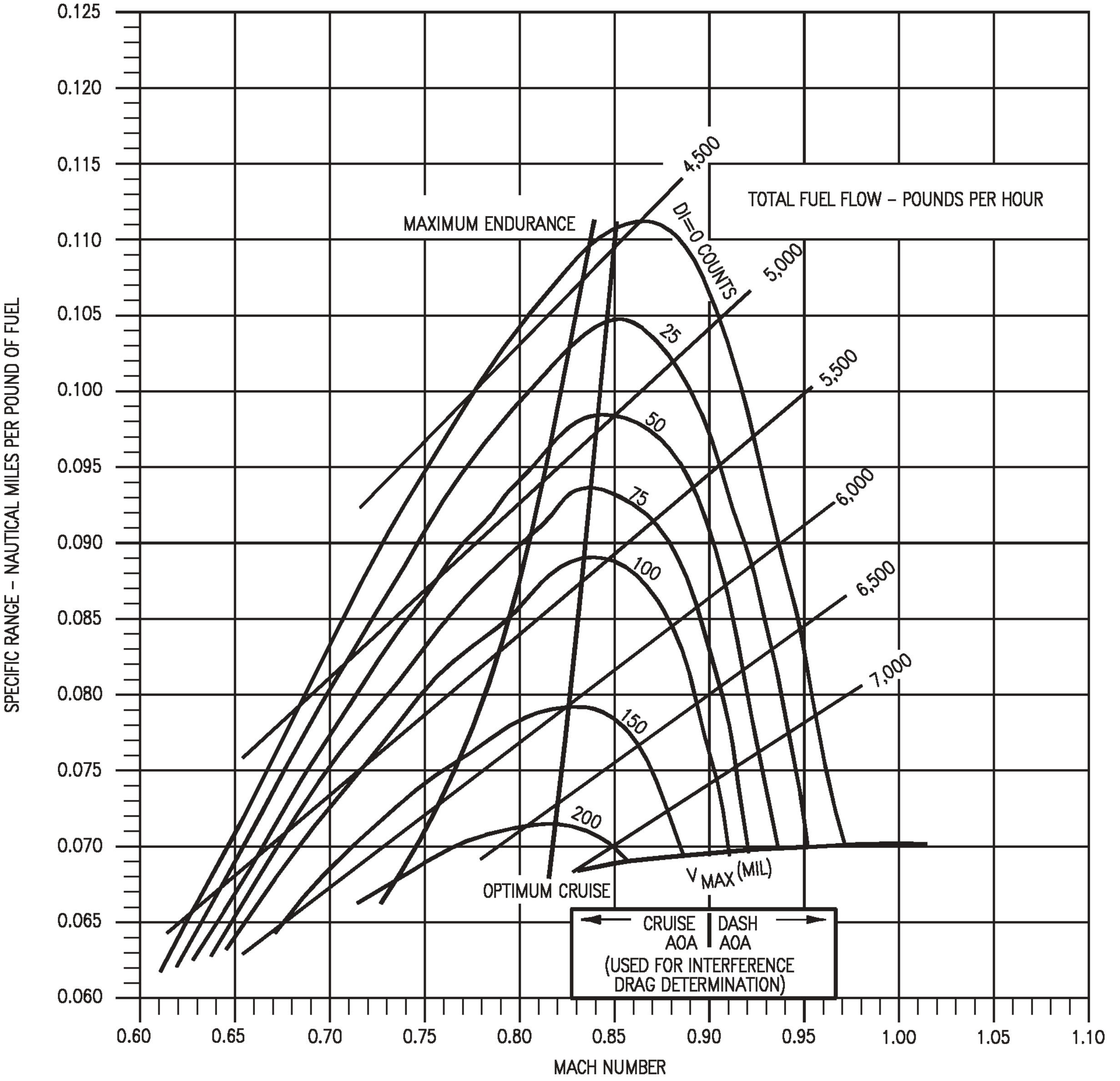
TEMPERATURE EFFECTS	
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.02
-10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(205-1)12-CATI

Figure 11-90. Specific Range - 35,000 Feet - 46,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

35,000 FEET – 50,000 POUND

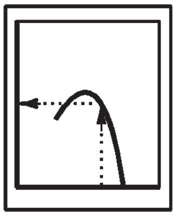
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= -54°C

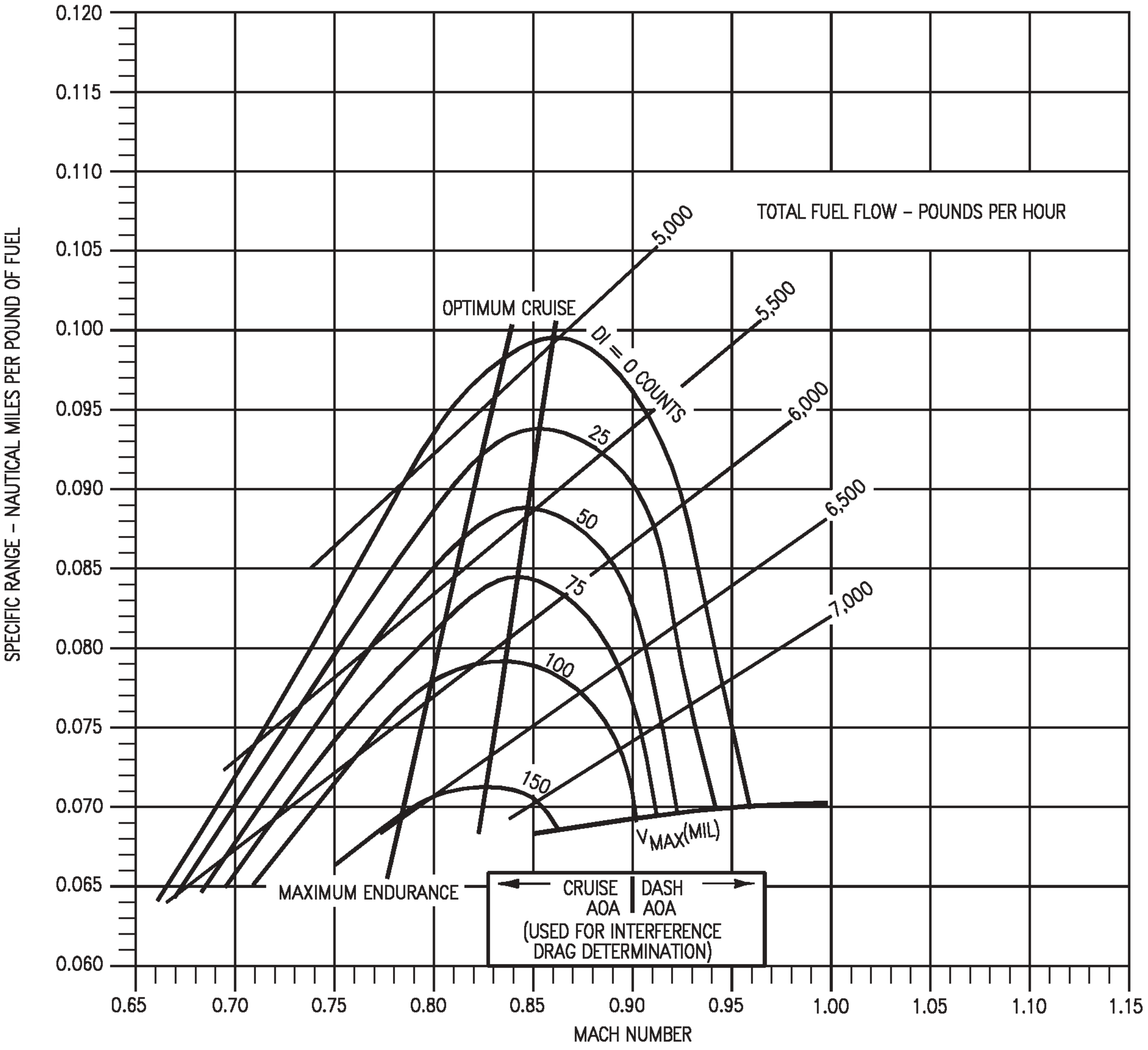
TEMPERATURE EFFECTS	
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.02
-10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(206-1)12-CATI

Figure 11-91. Specific Range - 35,000 Feet - 50,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

40,000 FEET - 26,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

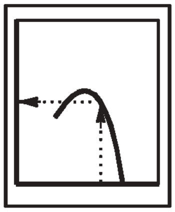
REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= -57°C

TEMPERATURE EFFECTS

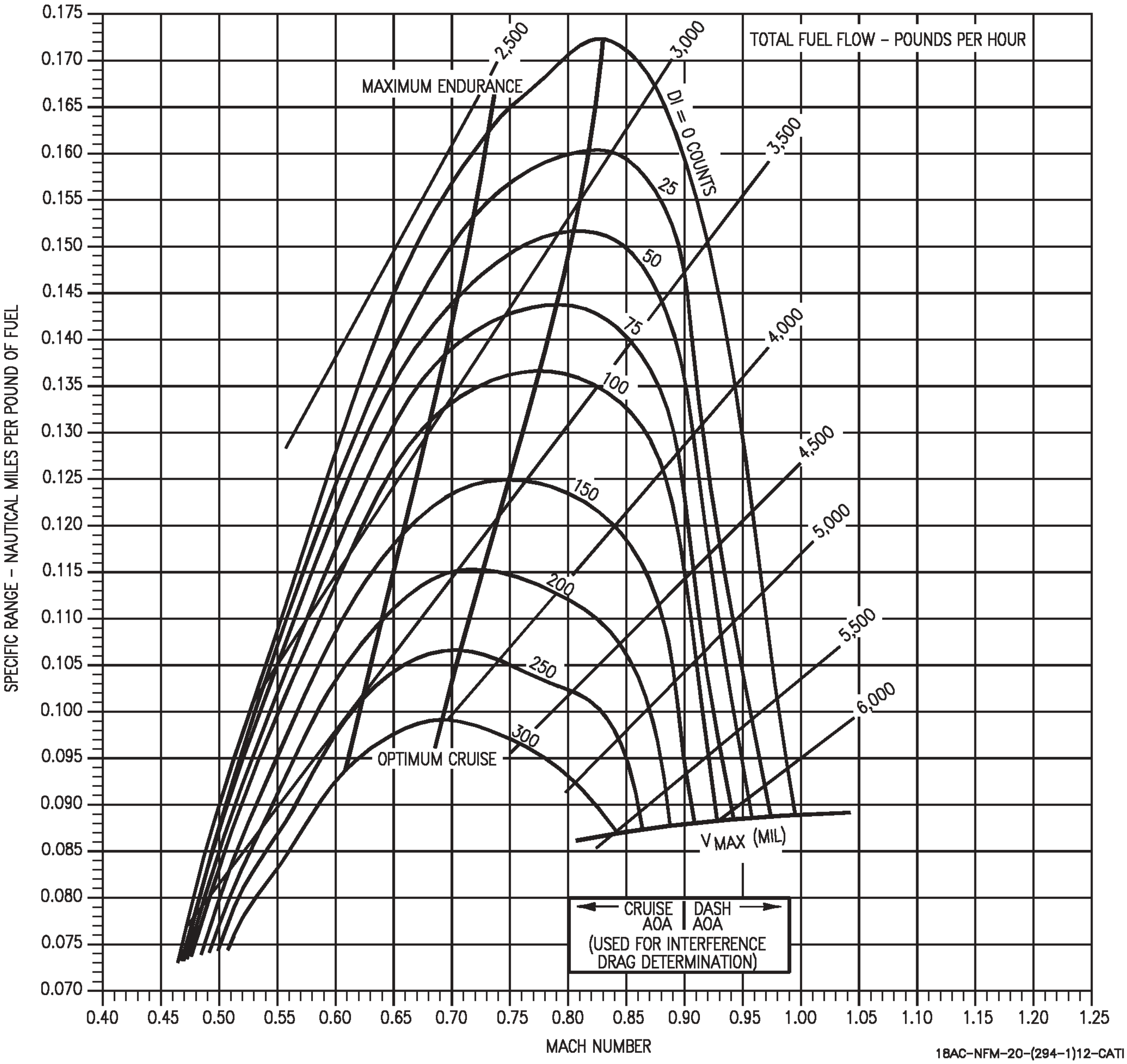
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.02
-10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(294-1)12-CATI

Figure 11-92. Specific Range - 40,000 Feet - 26,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

40,000 FEET - 30,000 POUNDS

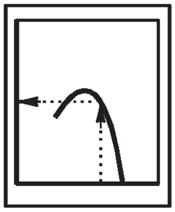
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= -57°C

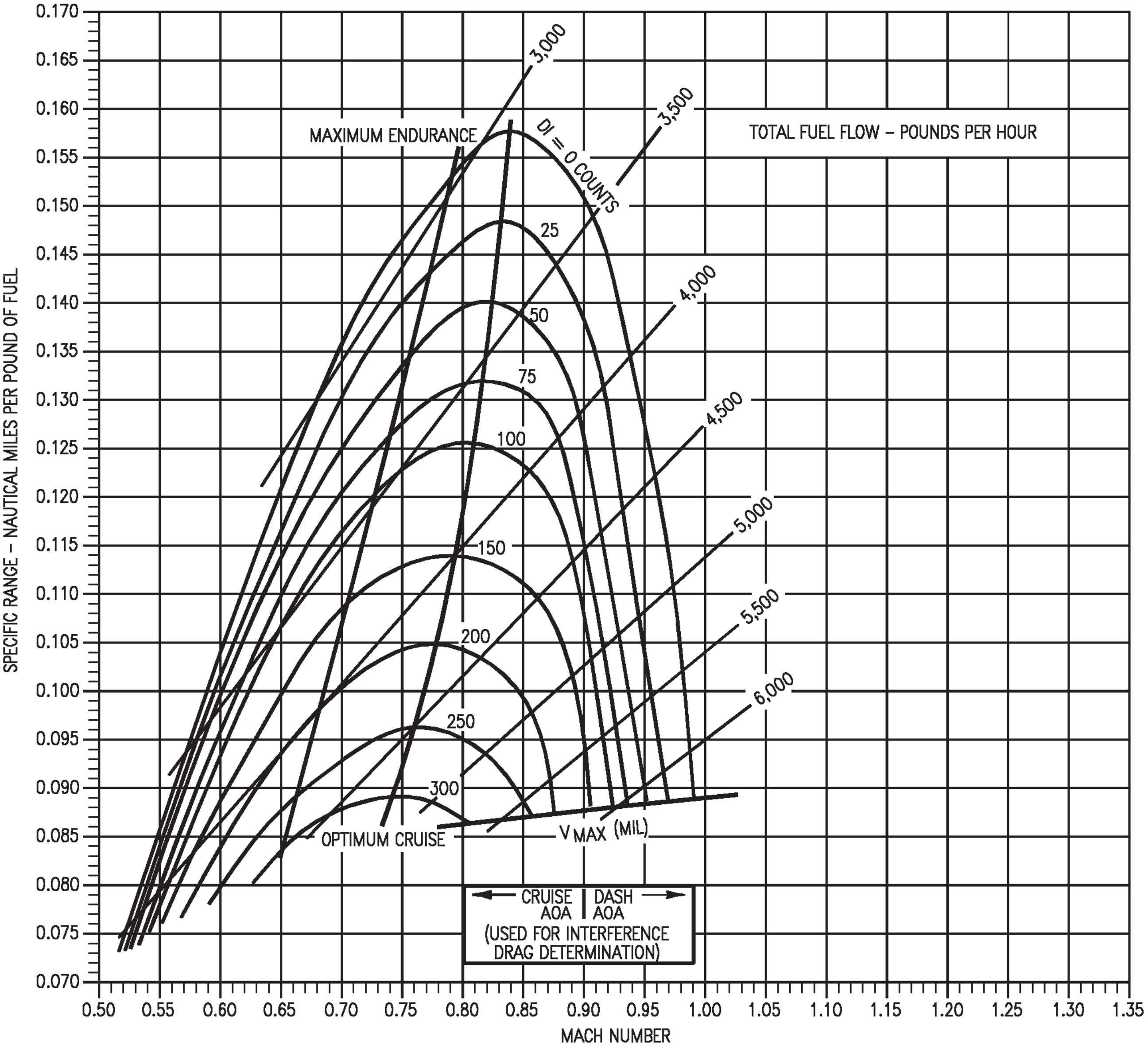
TEMPERATURE EFFECTS	
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.02
-10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(295-1)12-CATI

Figure 11-93. Specific Range - 40,000 Feet - 30,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

40,000 FEET – 34,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

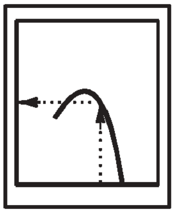
REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –57°C

TEMPERATURE EFFECTS

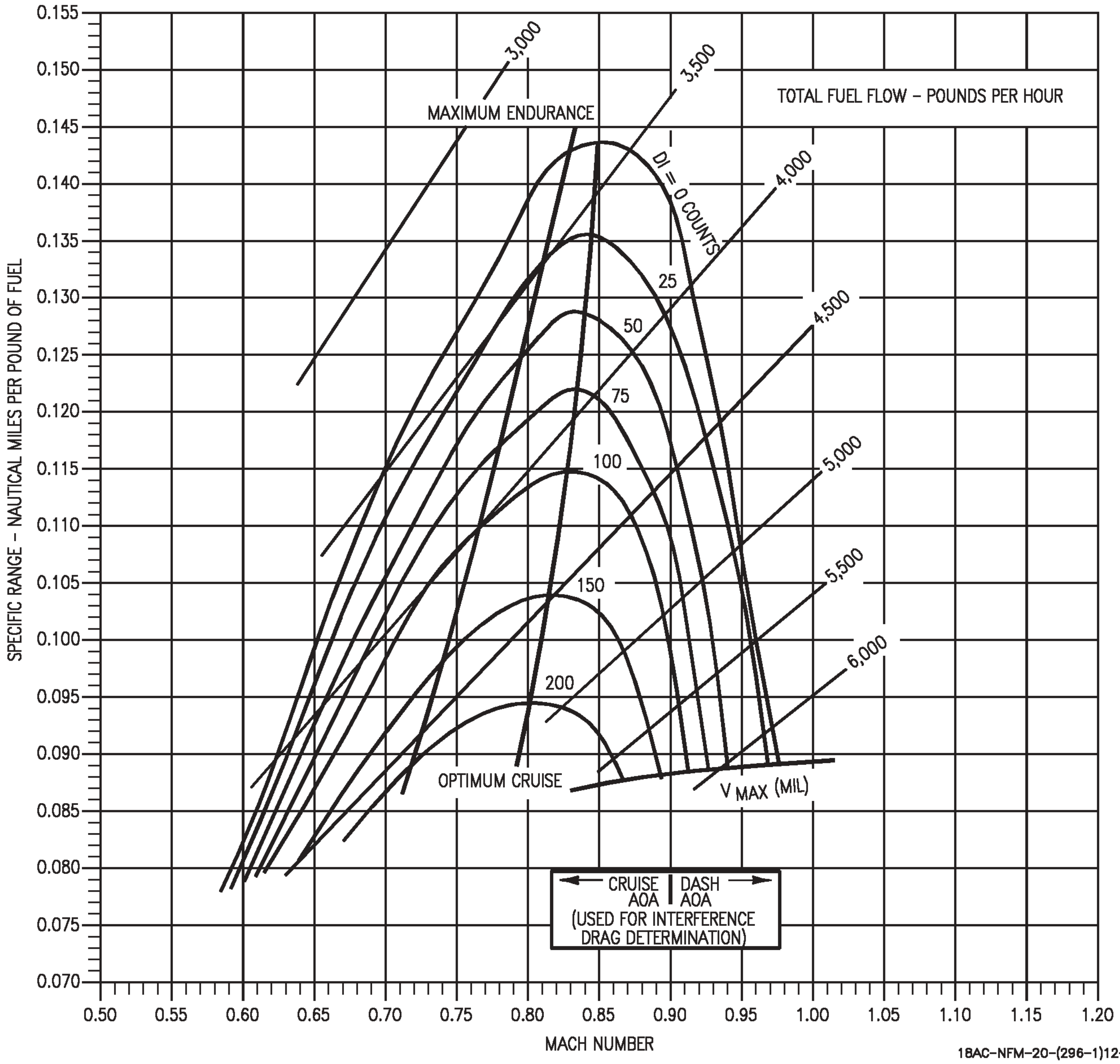
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(296-1)12-CATI

Figure 11-94. Specific Range - 40,000 Feet - 34,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

40,000 FEET – 38,000 POUNDS

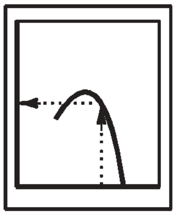
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –57°C

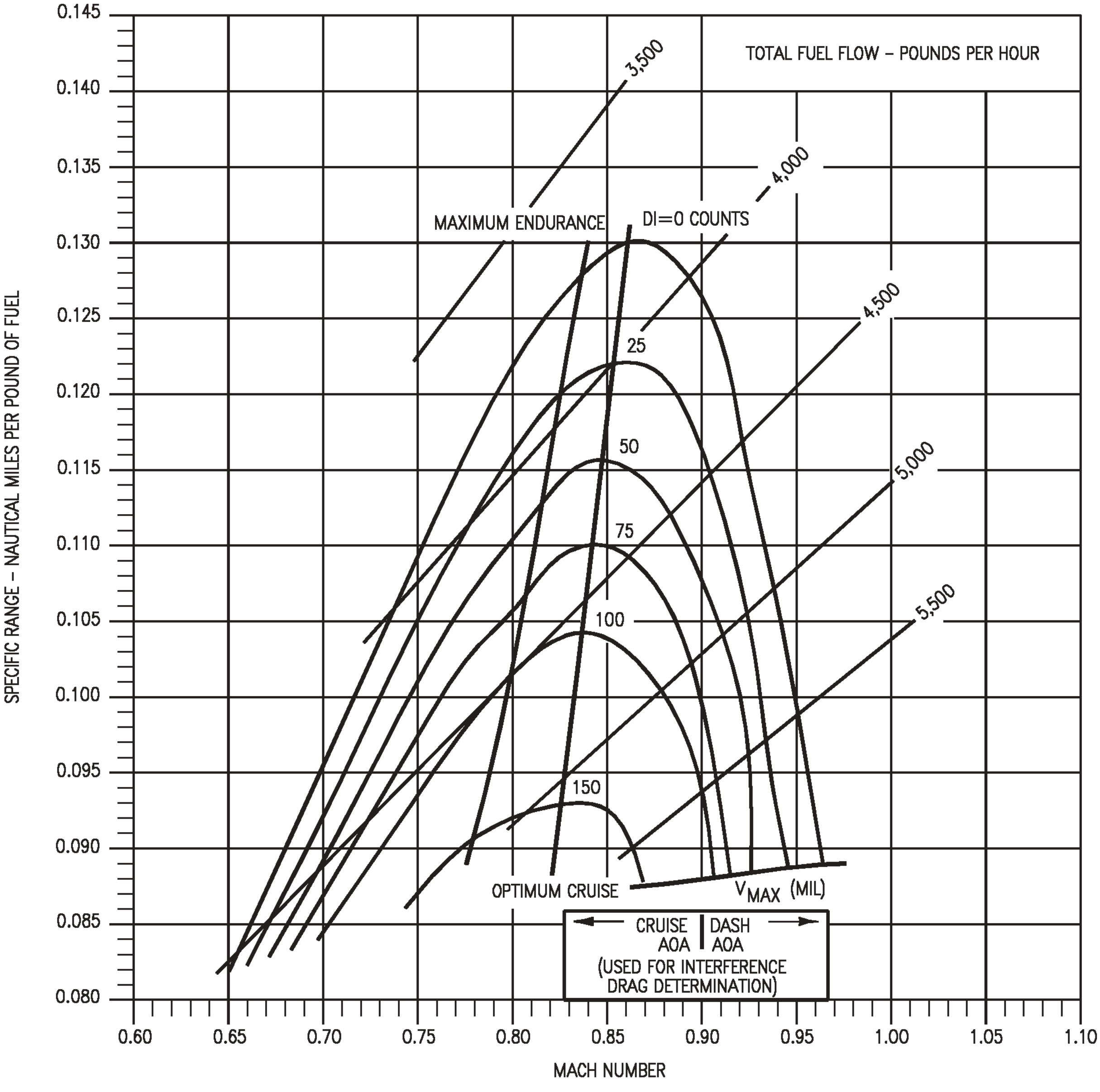
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(297–1)12–CATI

Figure 11-95. Specific Range - 40,000 Feet - 38,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

40,000 FEET – 42,000 POUNDS

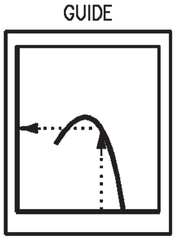
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= −57°C

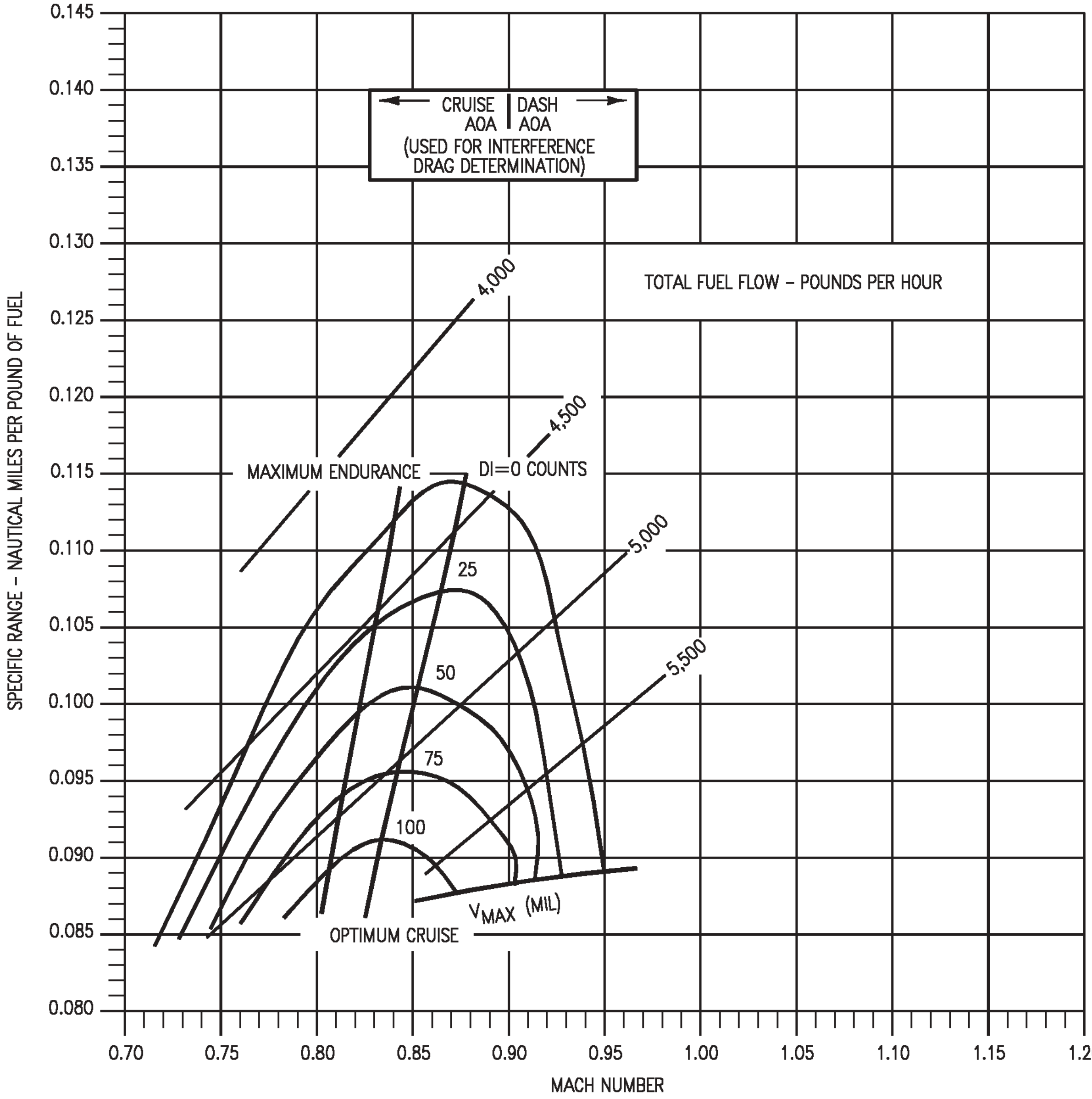
TEMPERATURE EFFECTS	
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
−20	1.02
−10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(298-1)12-CATI

Figure 11-96. Specific Range - 40,000 Feet - 42,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

40,000 FEET – 46,000 POUNDS

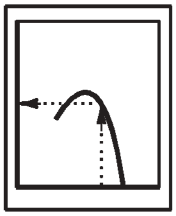
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –57°C

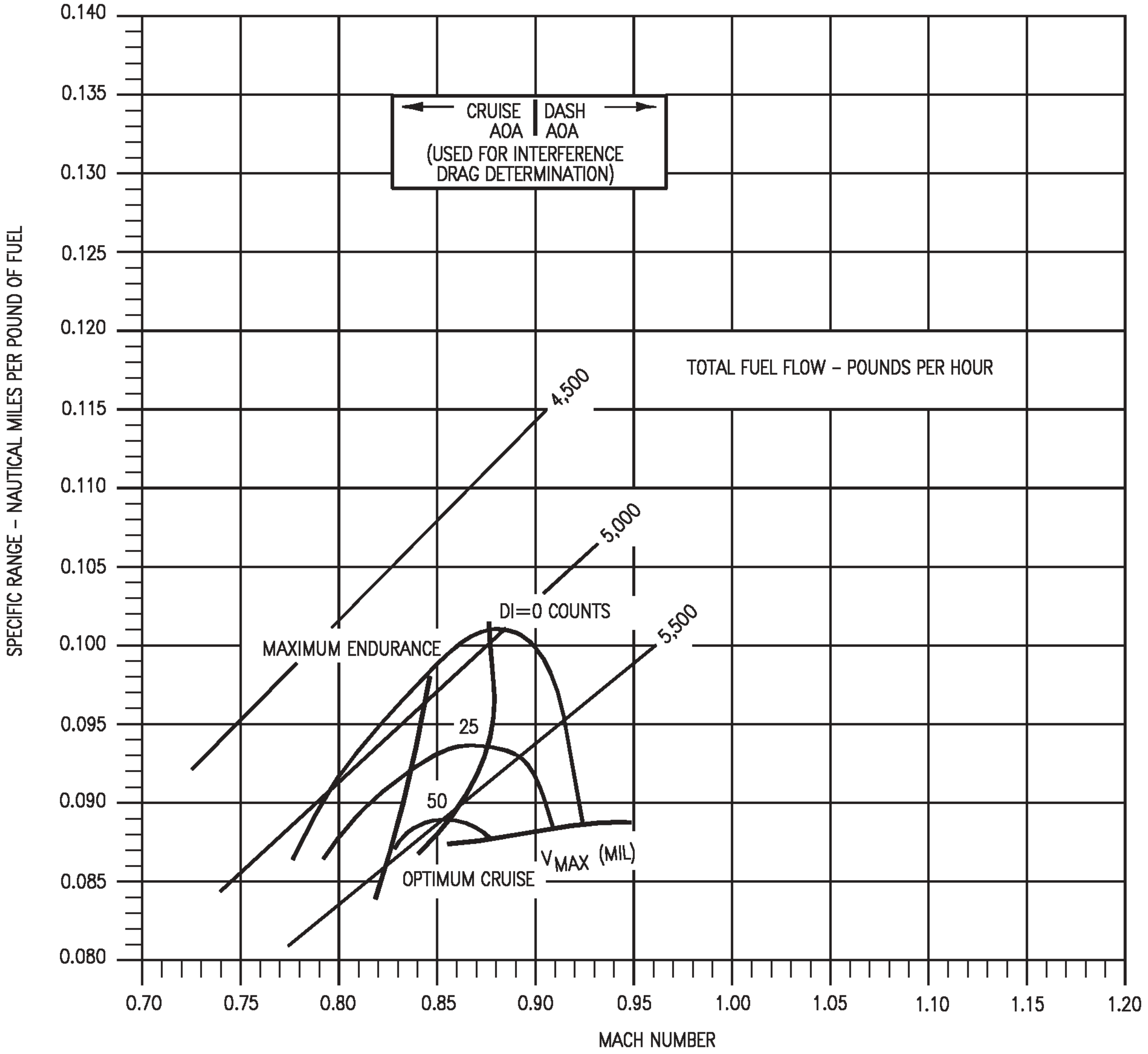
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(299–1)12–CATI

Figure 11-97. Specific Range - 40,000 Feet - 46,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

45,000 FEET – 26,000 POUND

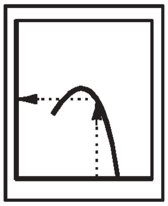
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –57°C

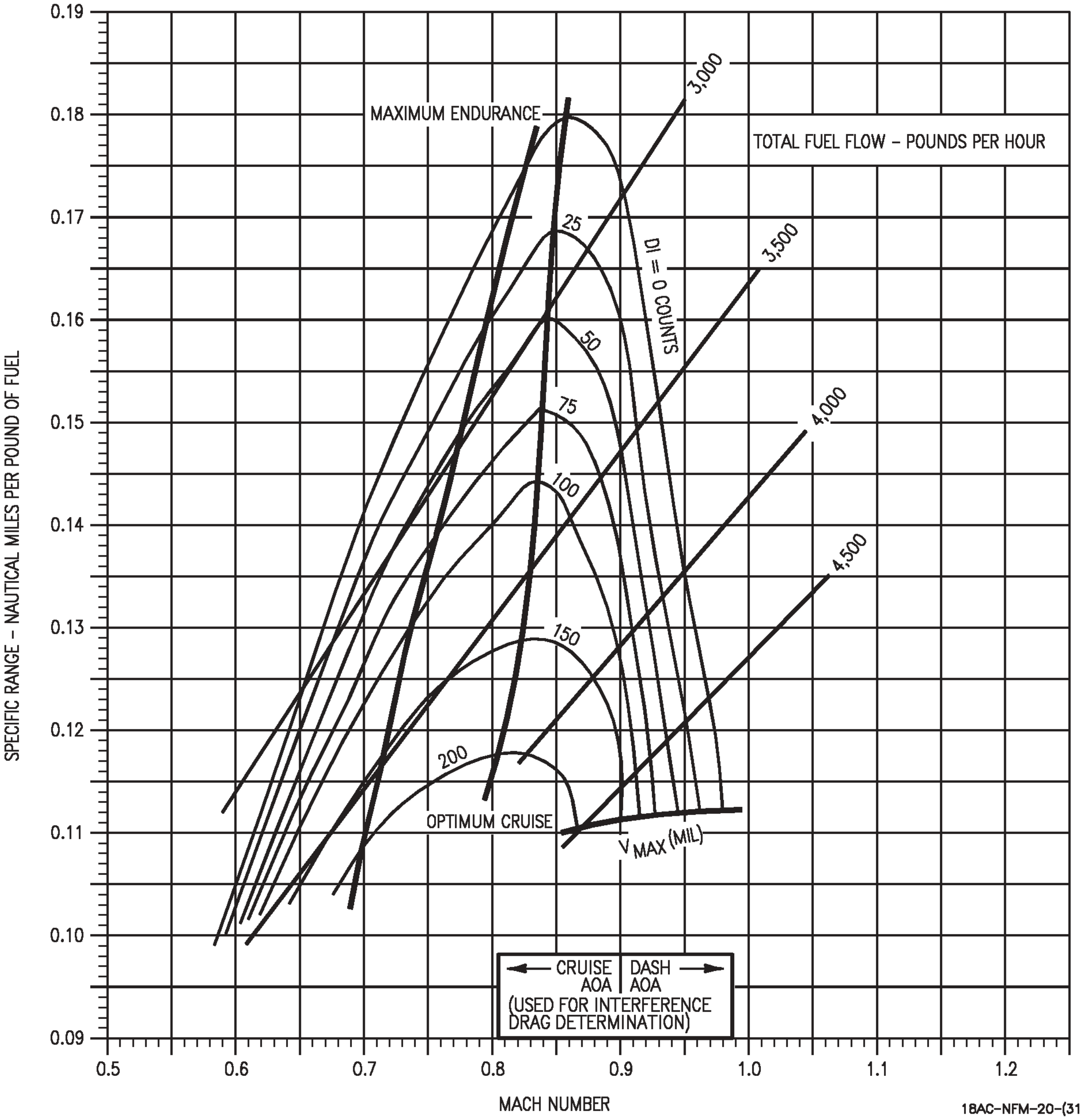
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 16 NOVEMBER 1989
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(319–1)12–CATI

Figure 11-98. Specific Range - 45,000 Feet - 26,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

45,000 FEET – 30,000 POUND

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

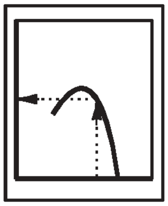
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –57°C

TEMPERATURE EFFECTS

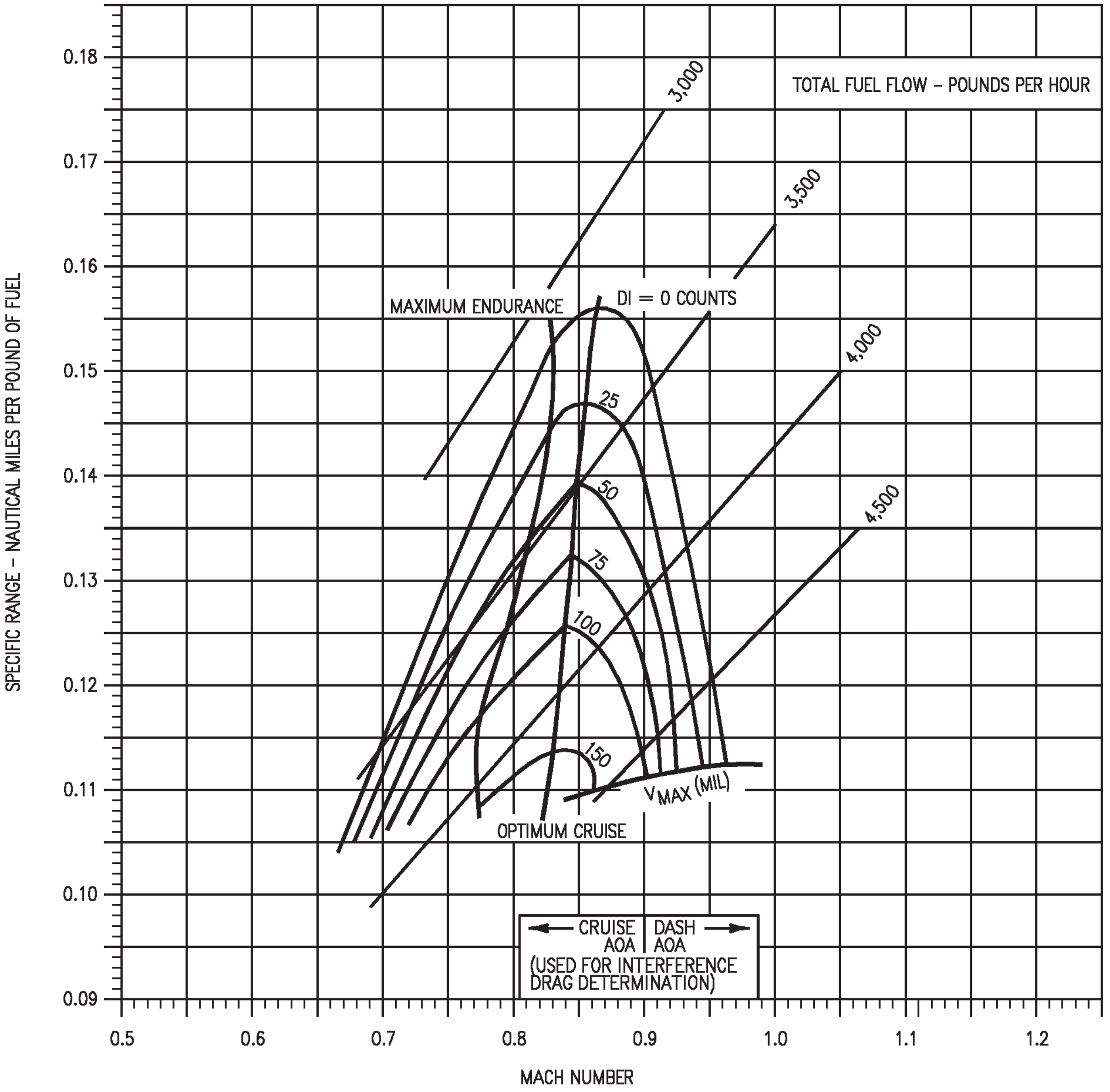
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 16 NOVEMBER 1989
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(320–1)12–CATI

Figure 11-99. Specific Range - 45,000 Feet - 30,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

45,000 FEET – 34,000 POUND

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

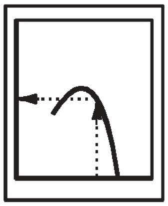
REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= −57°C

TEMPERATURE EFFECTS

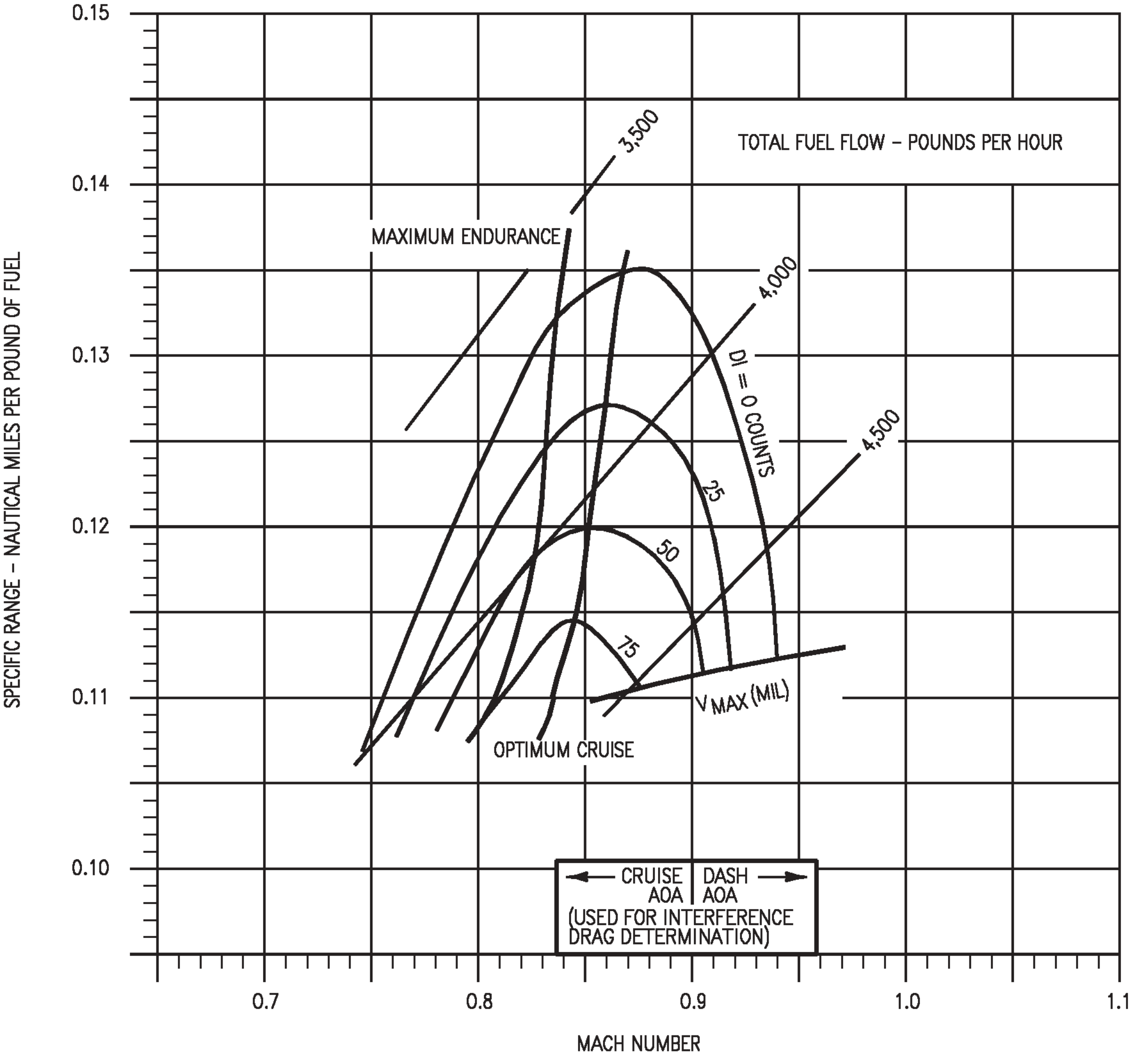
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
−20	1.02
−10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 16 NOVEMBER 1989
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(321-1)12-CATI

Figure 11-100. Specific Range - 45,000 Feet - 34,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

45,000 FEET – 38,000 POUND

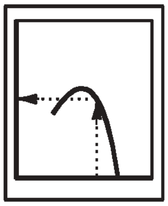
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

NOTE: STD TEMP.= –57°C

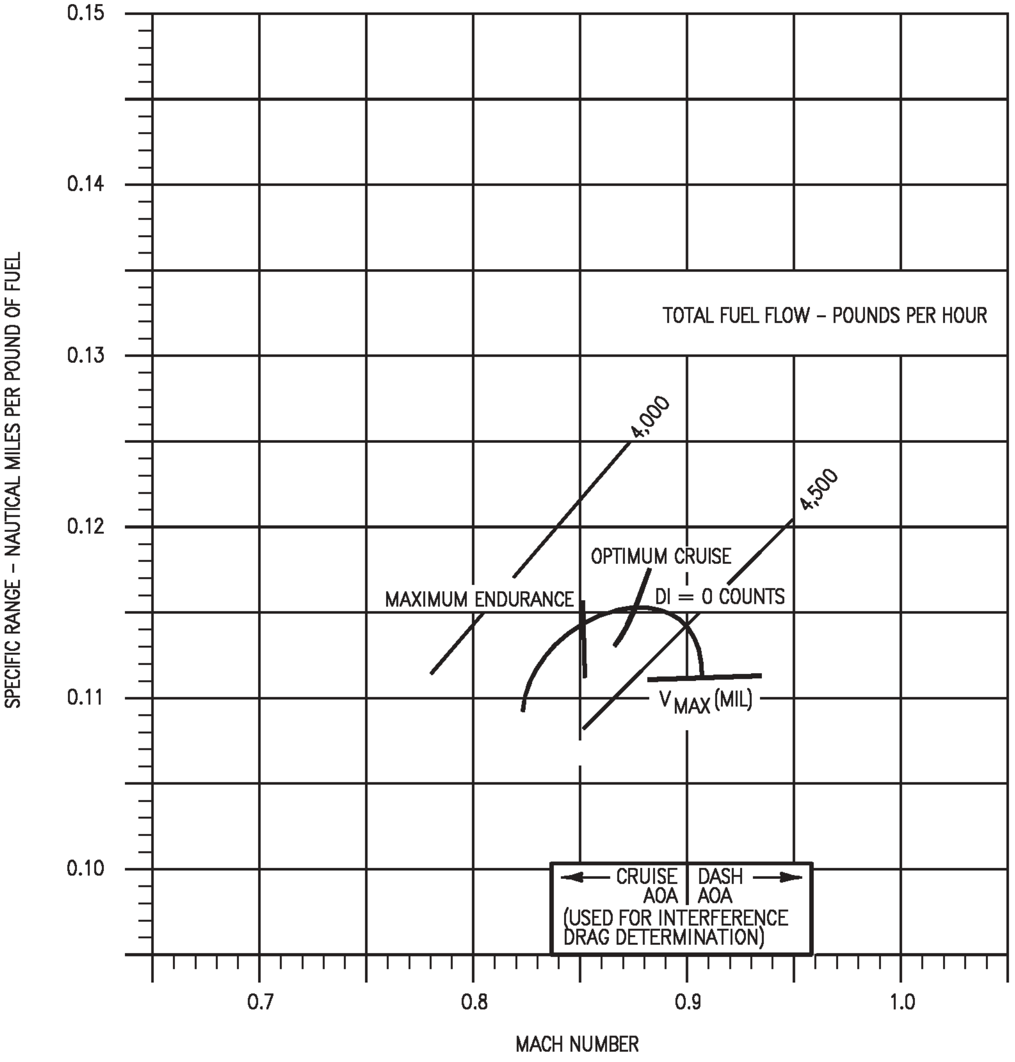
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.02
–10	1.01
0	1.00
+10	.98
+20	.96

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 16 NOVEMBER 1989
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(322–1)12–CATI

Figure 11-101. Specific Range - 45,000 Feet - 38,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

ONE ENGINE OPERATING
SEA LEVEL – 26,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

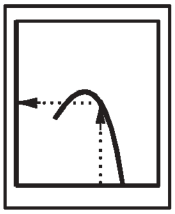
REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= 15°C

TEMPERATURE EFFECTS

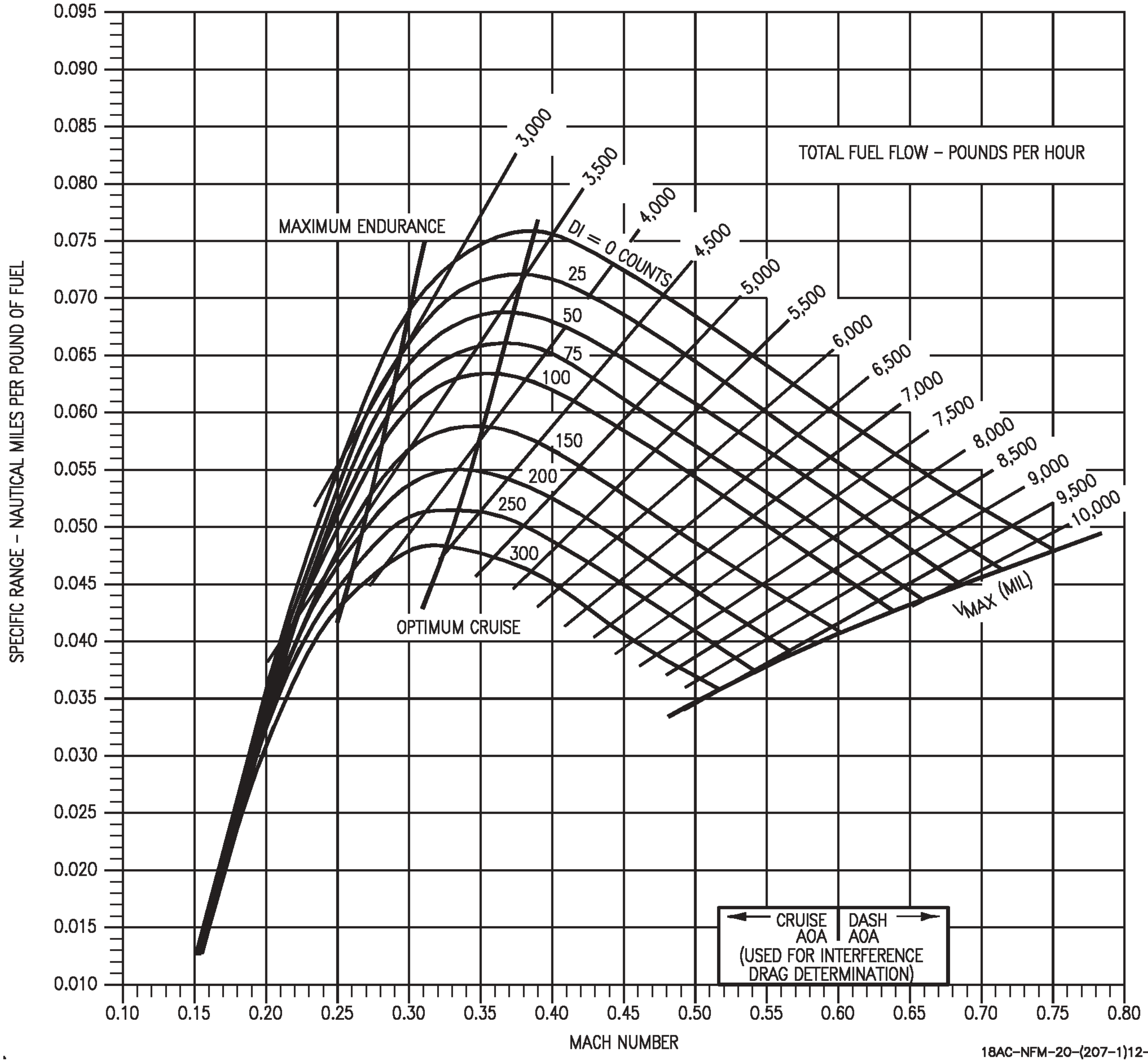
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
−20	1.07
−10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(207–1)12–CATI

Figure 11-102. Specific Range - One Engine Operating - Sea Level - 26,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

ONE ENGINE OPERATING
SEA LEVEL – 30,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

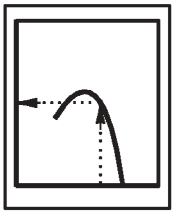
DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

NOTE: STD TEMP.= 15°C

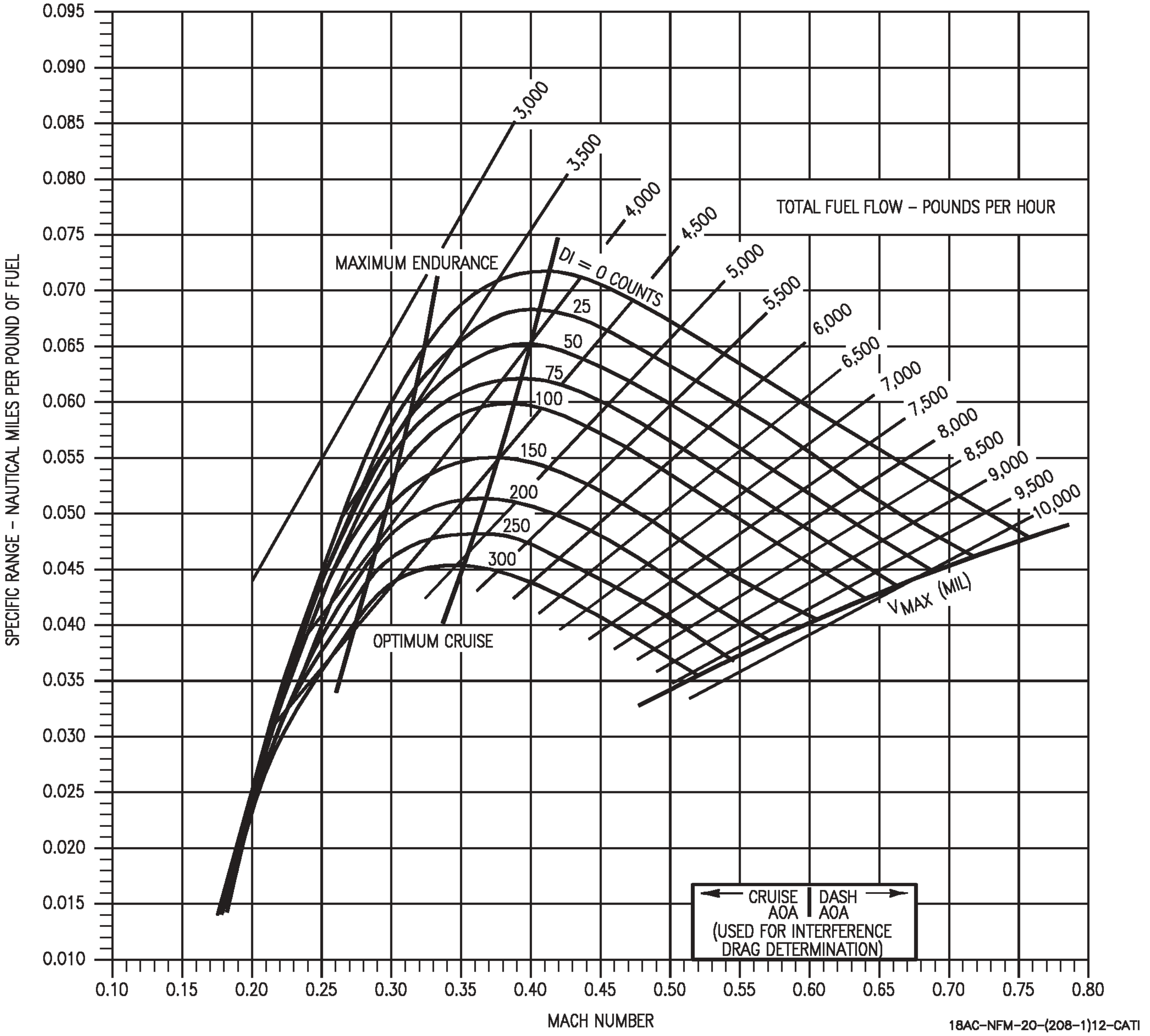
TEMPERATURE EFFECTS

ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.07
-10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(208-1)12-CATI

Figure 11-103. Specific Range - One Engine Operating - Sea Level - 30,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

ONE ENGINE OPERATING
SEA LEVEL – 34,000 POUNDS

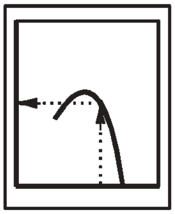
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= 15°C

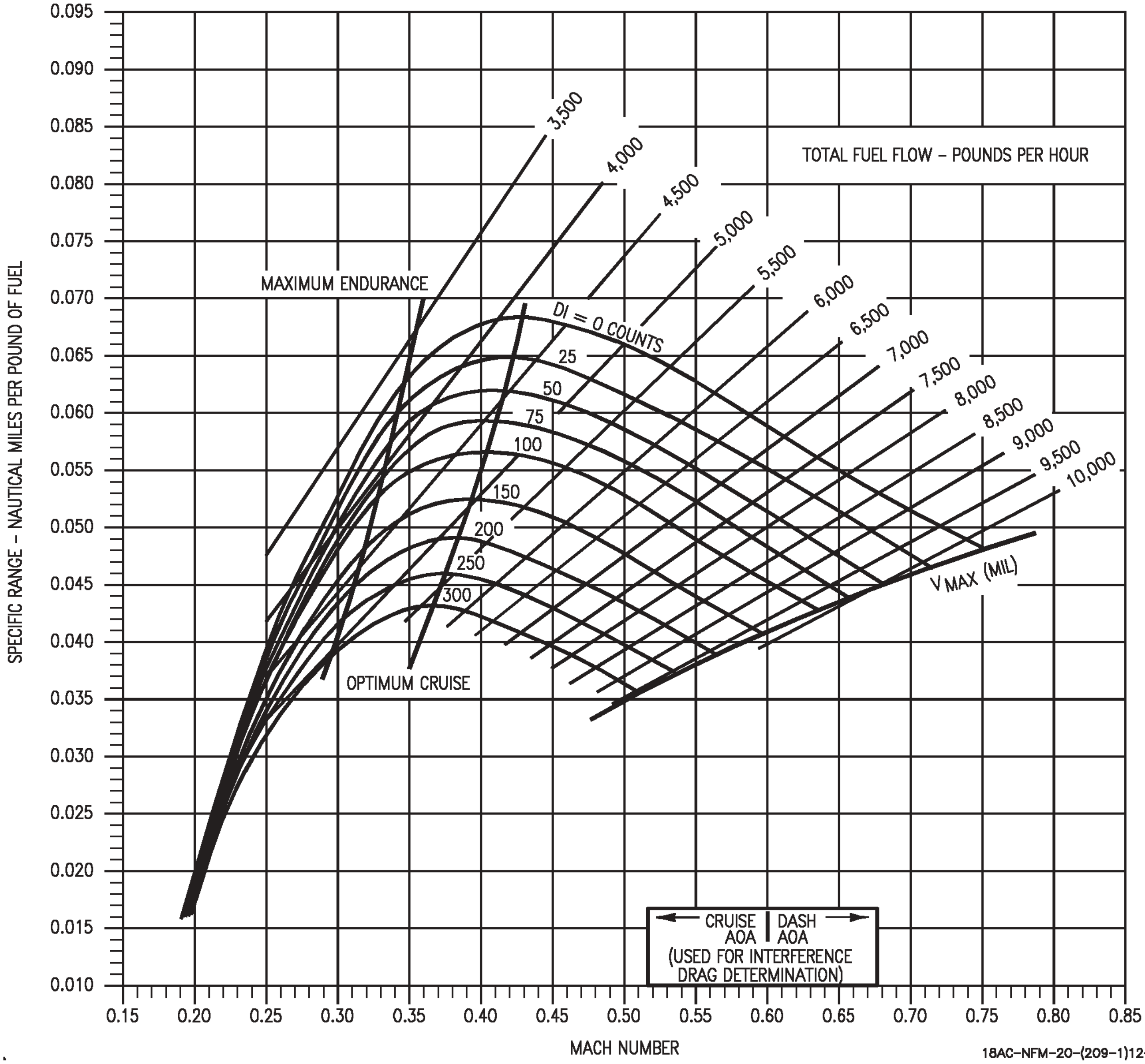
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.07
–10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(209–1)12–CATI

Figure 11-104. Specific Range - One Engine Operating - Sea Level - 34,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

ONE ENGINE OPERATING
SEA LEVEL – 38,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

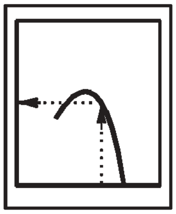
REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= 15°C

TEMPERATURE EFFECTS

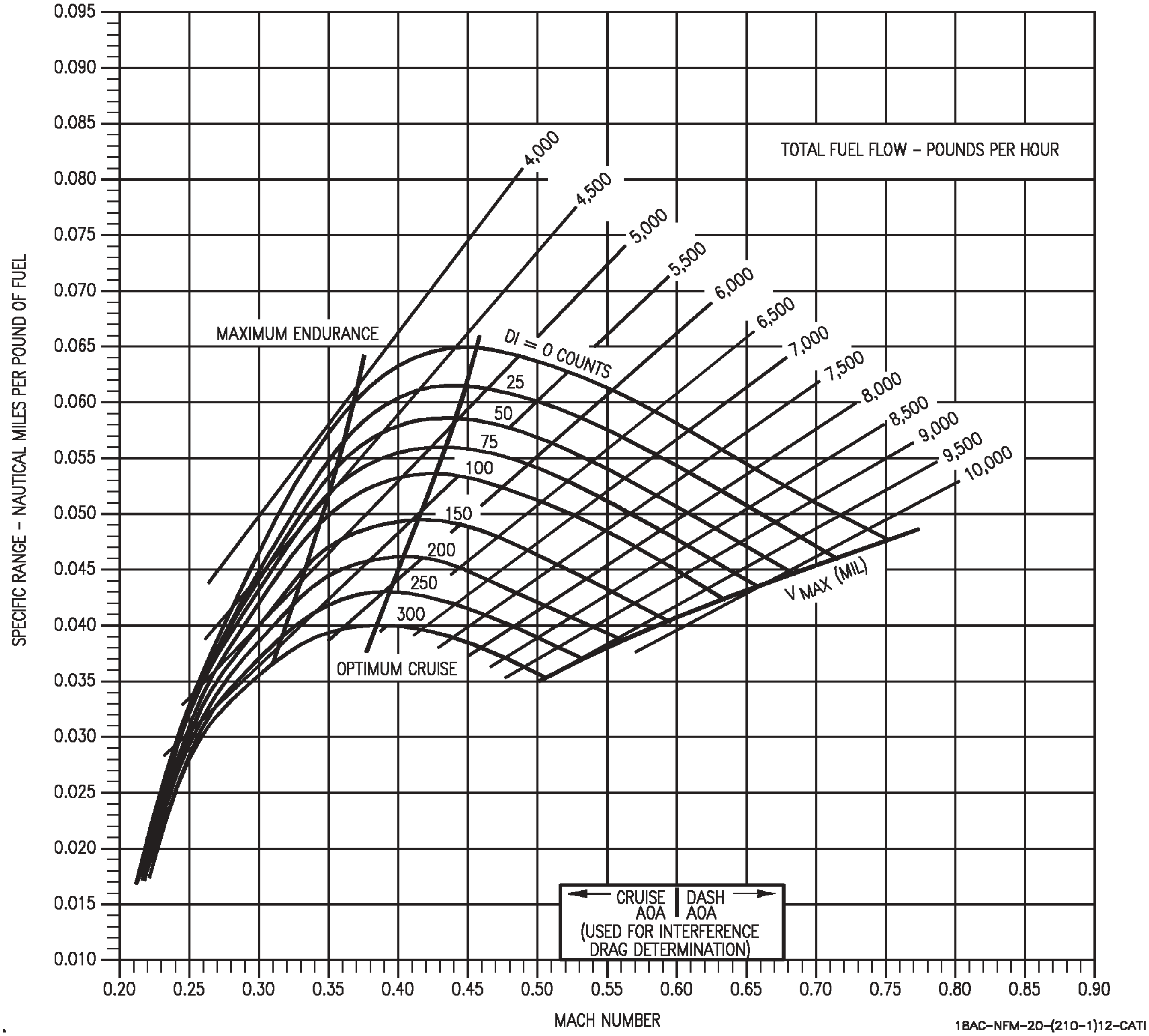
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.07
-10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



1BAC–NFM–20–(210–1)12–CATI

Figure 11-105. Specific Range - One Engine Operating - Sea Level - 38,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

ONE ENGINE OPERATING
SEA LEVEL - 42,000 POUNDS

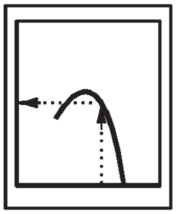
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= 15°C

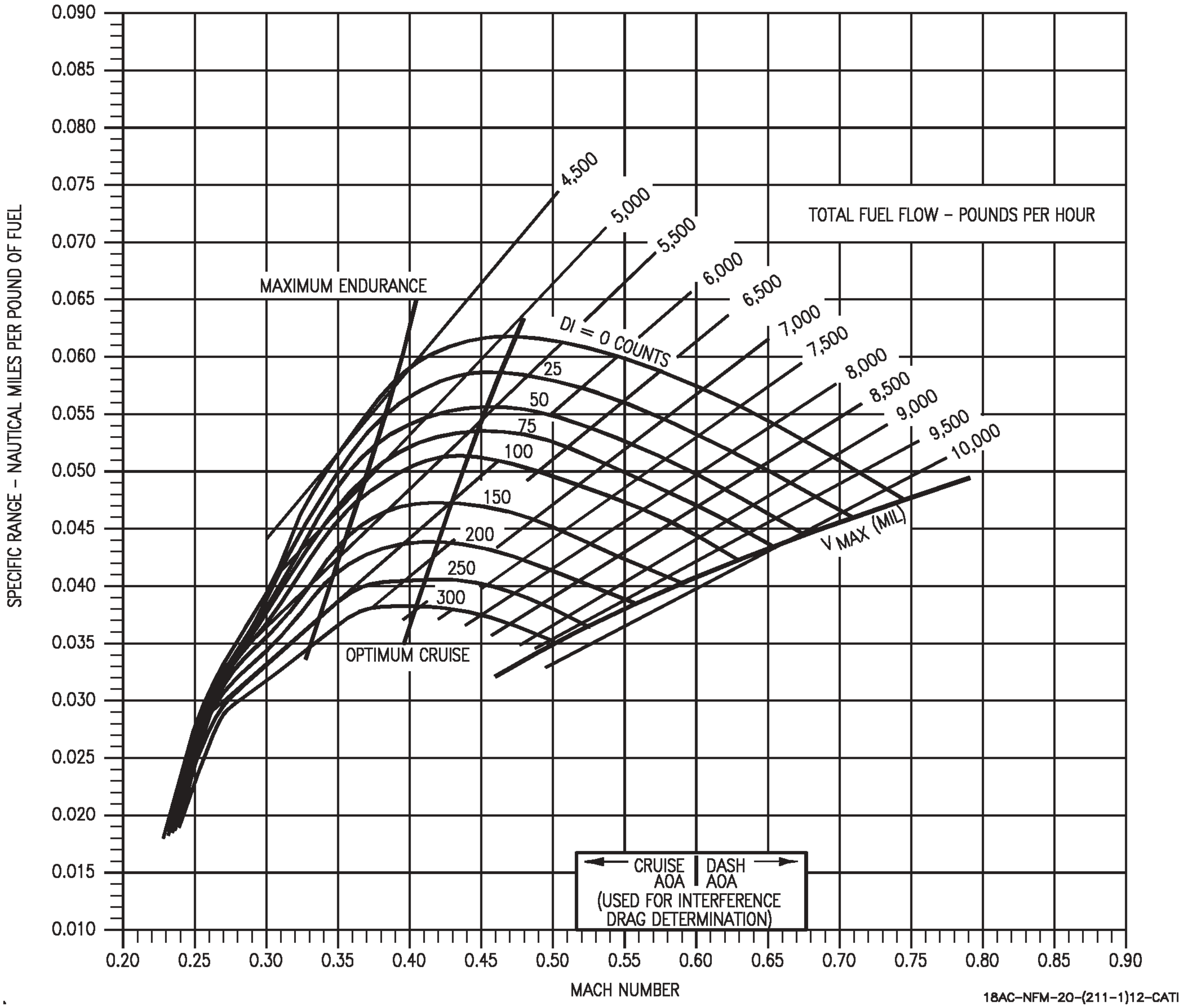
TEMPERATURE EFFECTS	
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.07
-10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(211-1)12-CATI

Figure 11-106. Specific Range - One Engine Operating - Sea Level - 42,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

ONE ENGINE OPERATING
SEA LEVEL – 46,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

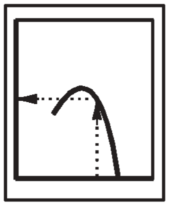
REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= 15°C

TEMPERATURE EFFECTS

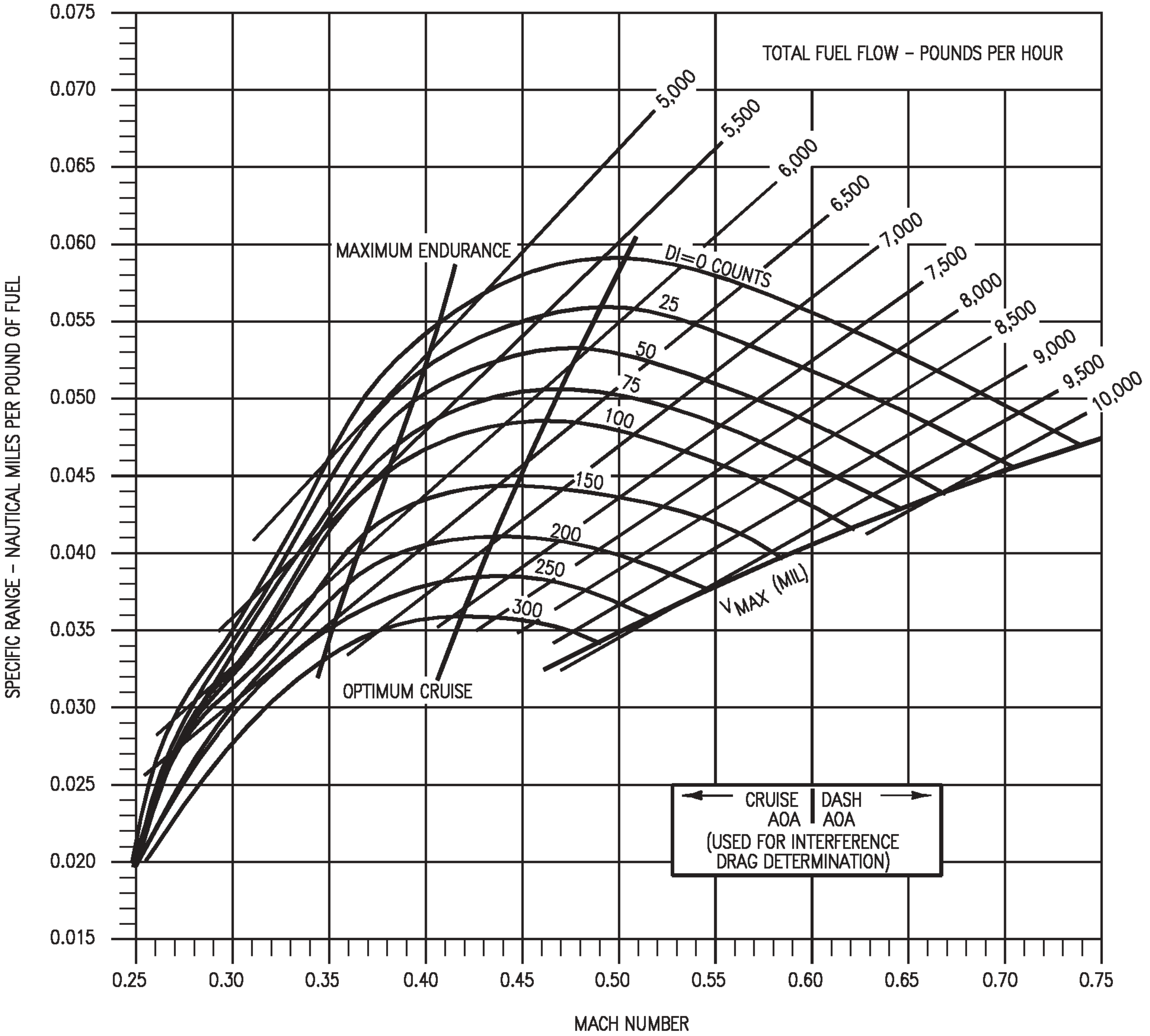
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
−20	1.07
−10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(212-1)12-CATI

Figure 11-107. Specific Range - One Engine Operating - Sea Level - 46,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

ONE ENGINE OPERATING
SEA LEVEL – 50,000 POUNDS

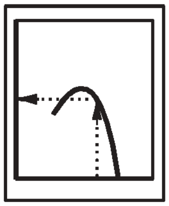
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= 15°C

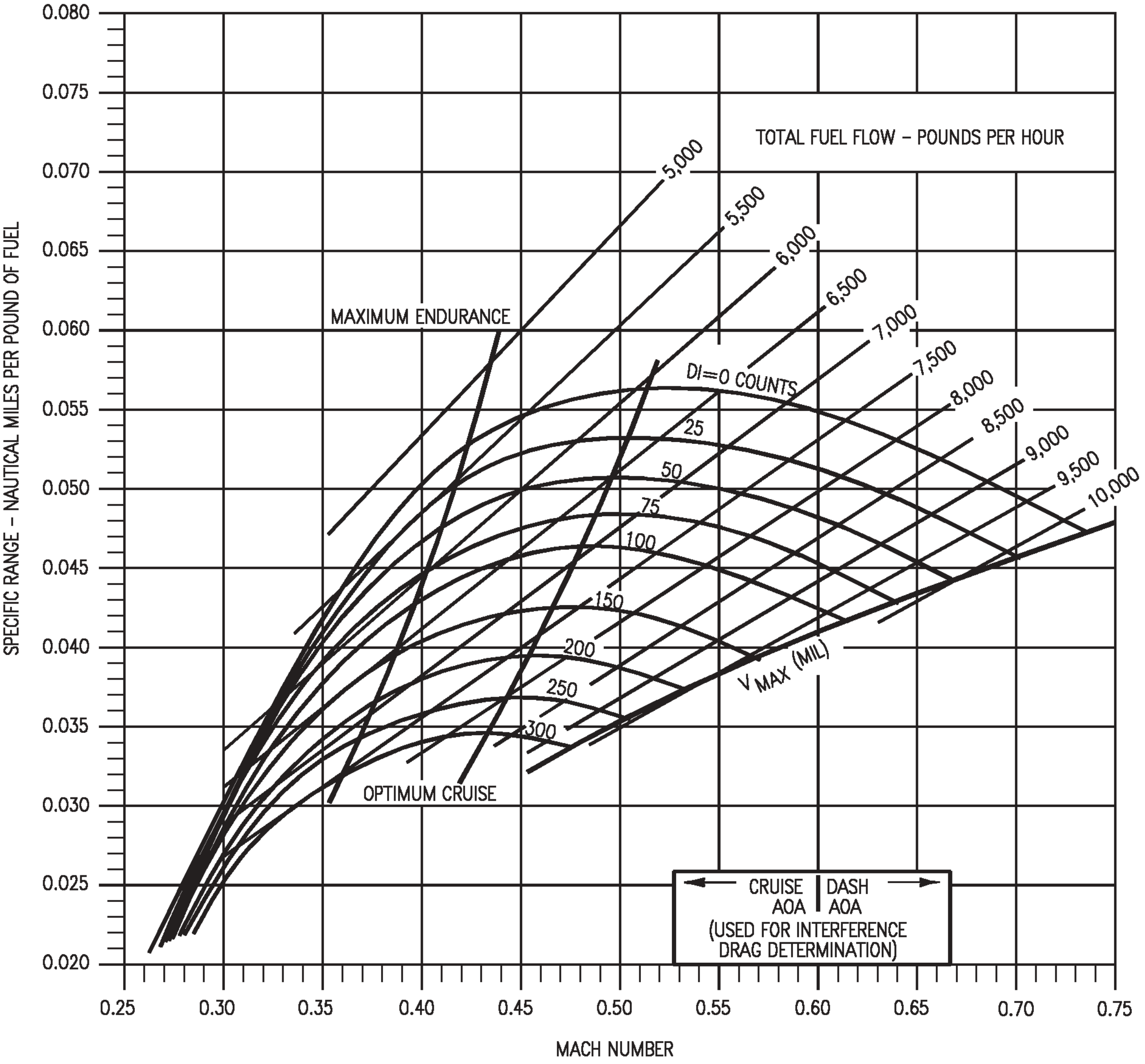
TEMPERATURE EFFECTS	
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.07
-10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(213-1)12-CATI

Figure 11-108. Specific Range - One Engine Operating - Sea Level - 50,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

ONE ENGINE OPERATING
5,000 FEET – 26,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

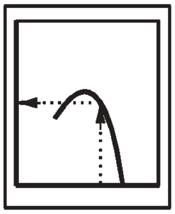
REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= 5°C

TEMPERATURE EFFECTS

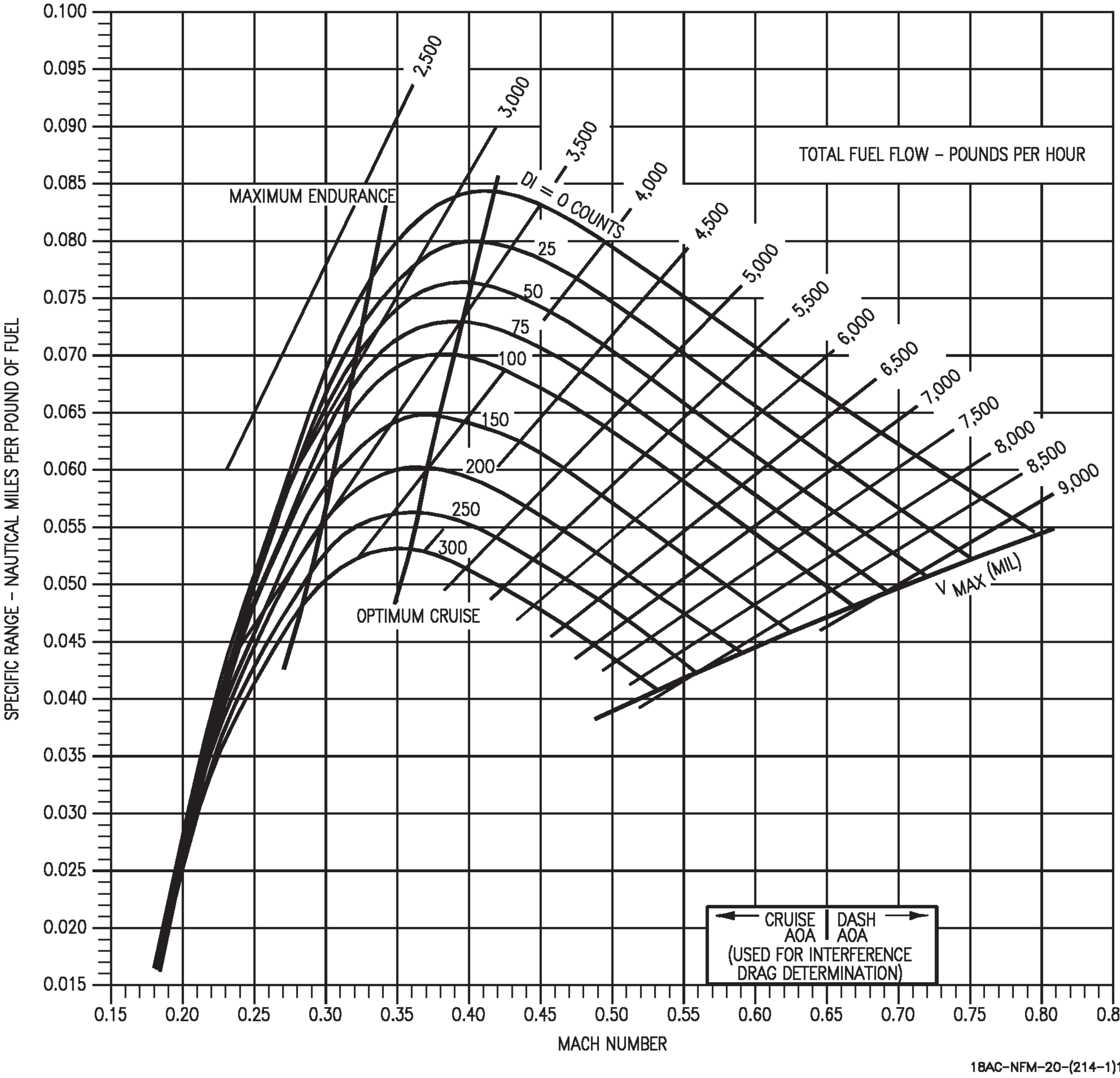
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.07
-10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(214-1)12-CATI

Figure 11-109. Specific Range - One Engine Operating - 5,000 Feet - 26,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

ONE ENGINE OPERATING
5,000 FEET – 30,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

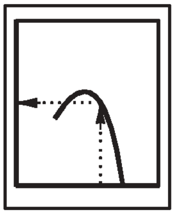
REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= 5°C

TEMPERATURE EFFECTS

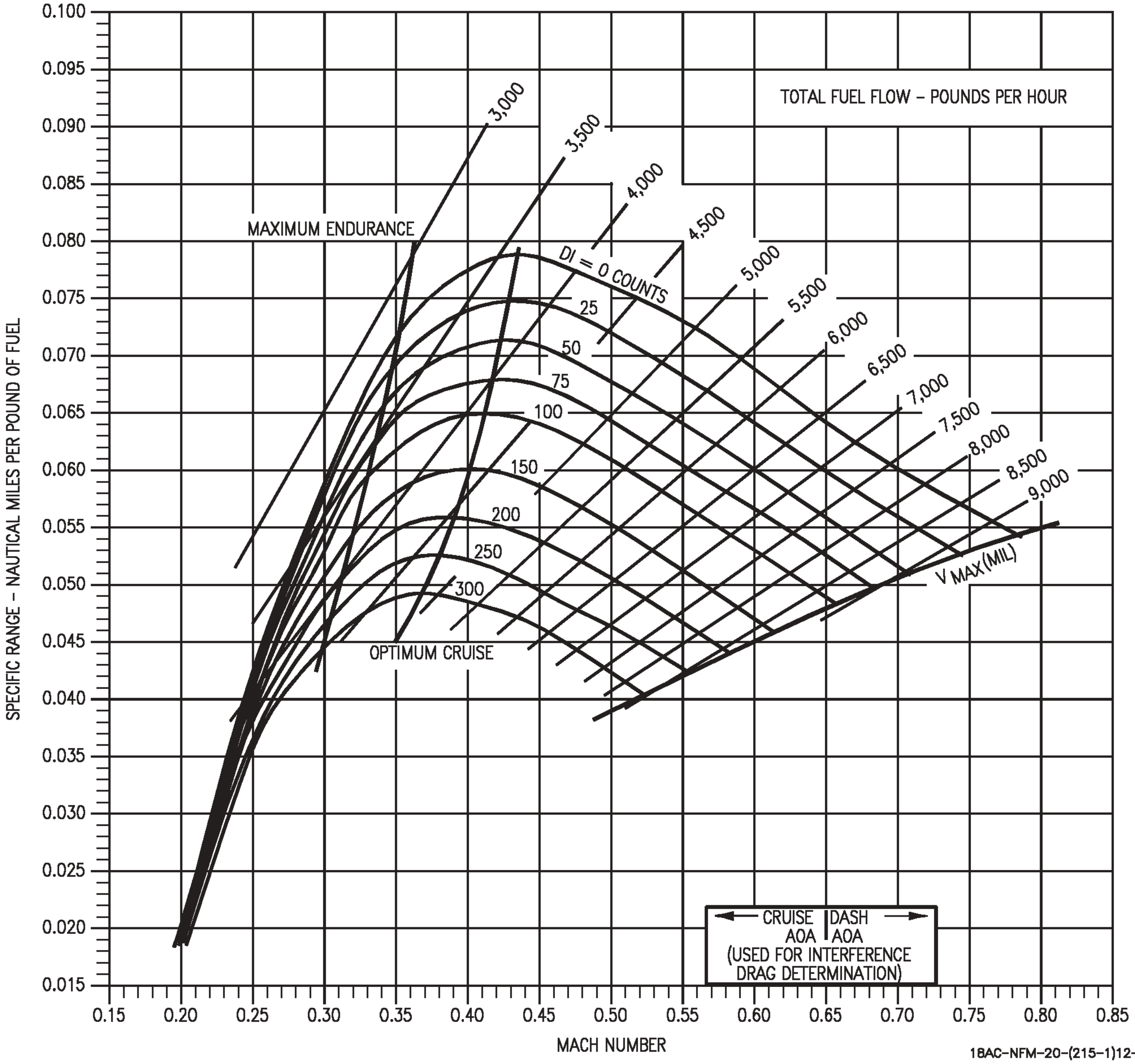
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.07
-10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(215-1)12-CATI

Figure 11-110. Specific Range - One Engine Operating - 5,000 Feet - 30,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

ONE ENGINE OPERATING
5,000 FEET – 34,000 POUNDS

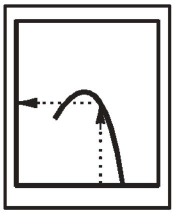
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= 5°C

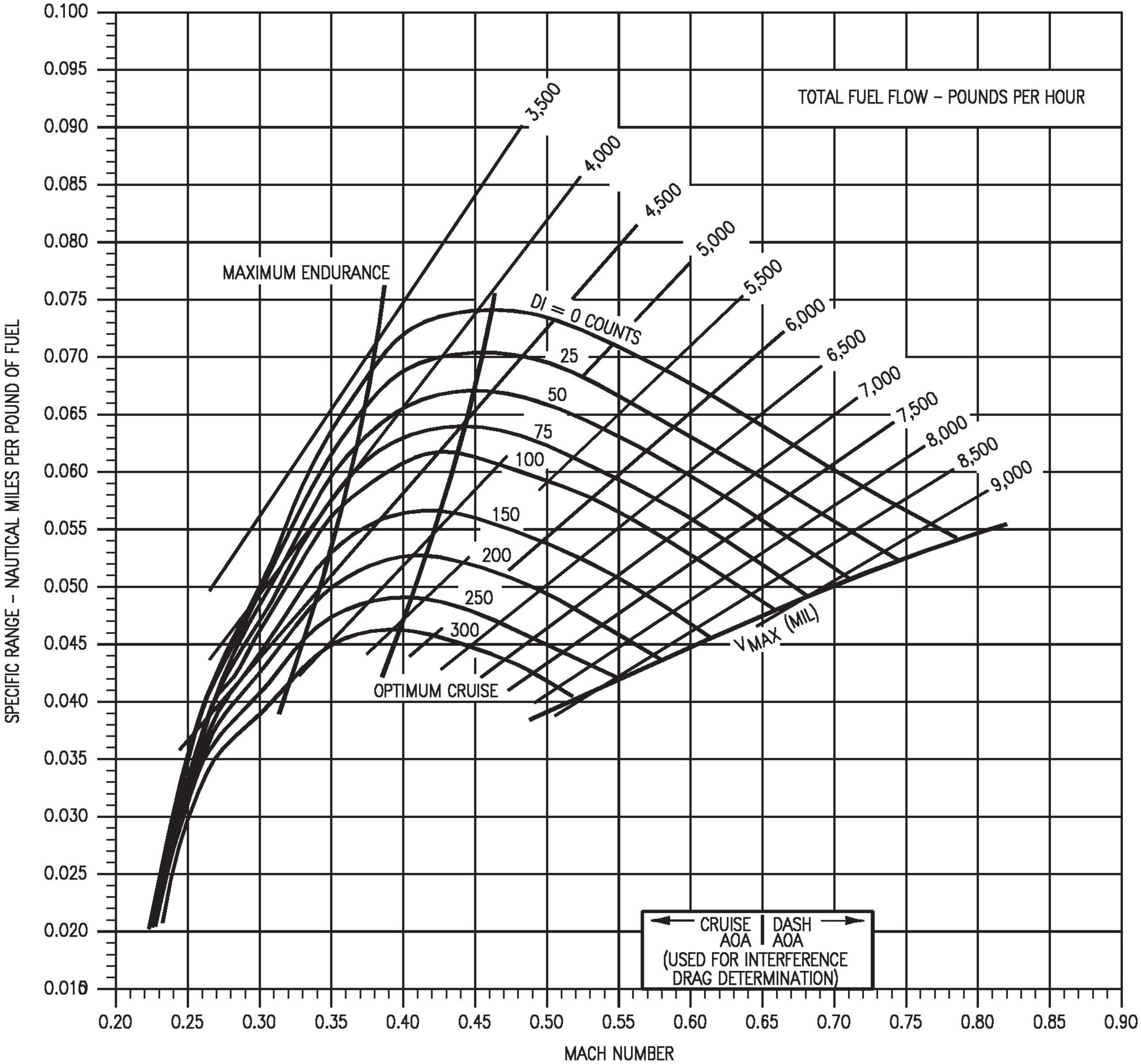
TEMPERATURE EFFECTS	
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.07
-10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(216-1)12-CATI

Figure 11-111. Specific Range - One Engine Operating - 5,000 Feet - 34,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400
ONE ENGINE OPERATING
5,000 FEET – 38,000 POUNDS

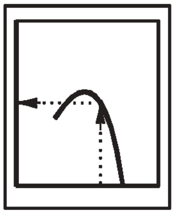
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= 5°C

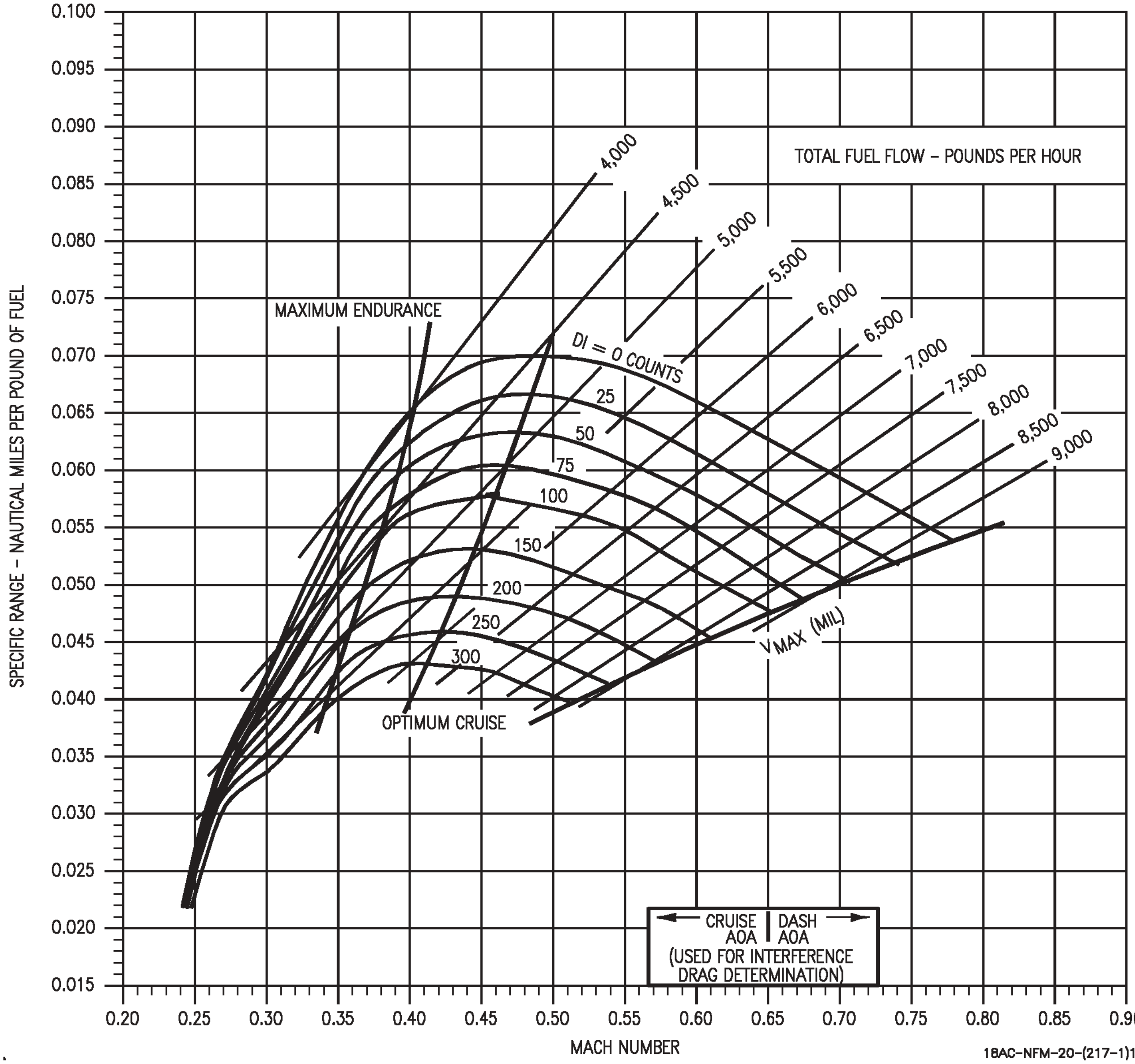
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
−20 −10 0 +10 +20	1.07 1.04 1.00 .95 .89

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(217–1)12–CATI

Figure 11-112. Specific Range - One Engine Operating - 5,000 Feet - 38,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400
ONE ENGINE OPERATING
5,000 FEET – 42,000 POUNDS

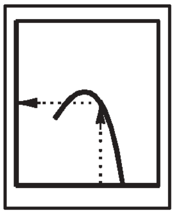
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= 5°C

TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.07
–10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

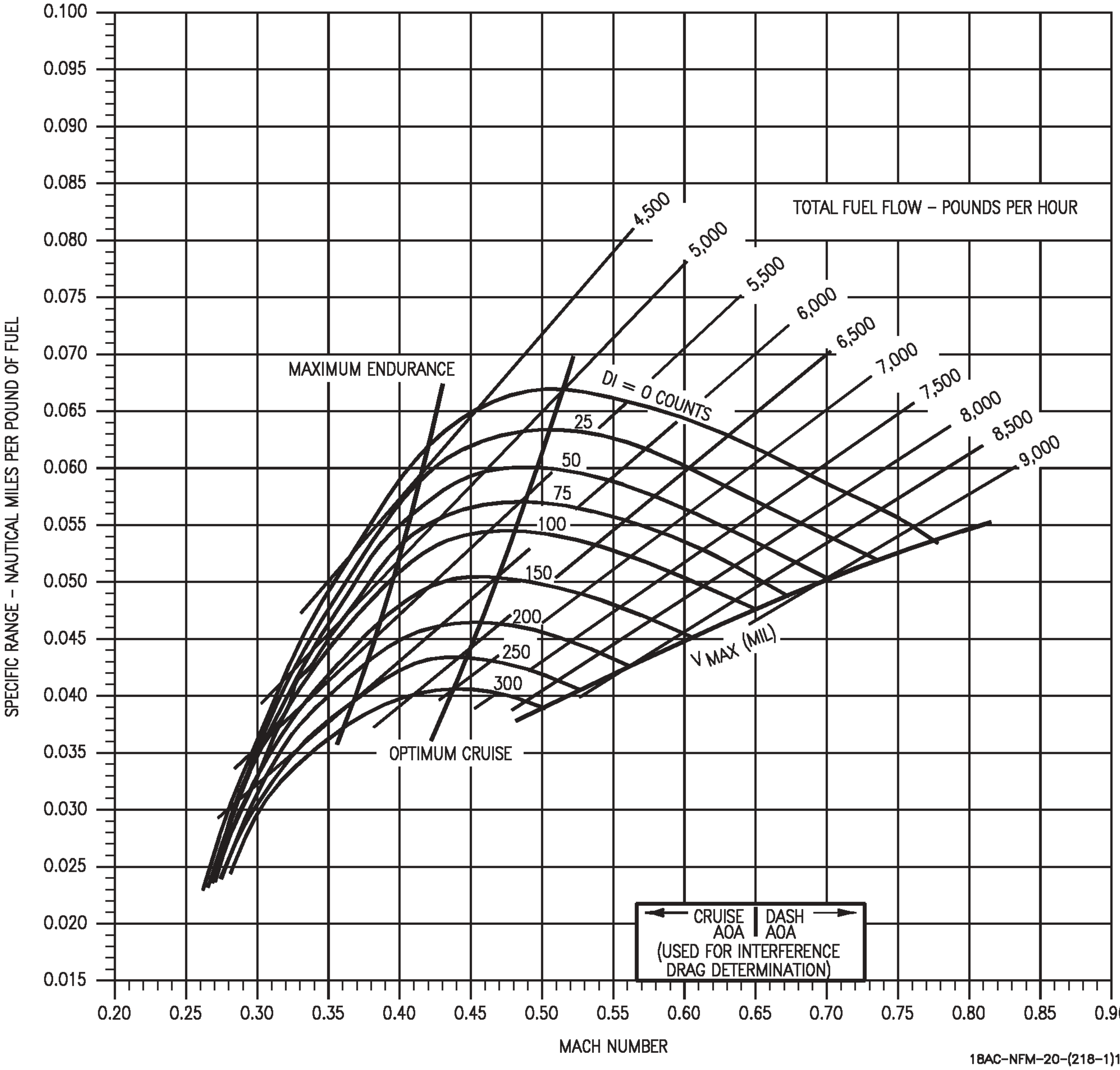


Figure 11-113. Specific Range - One Engine Operating - 5,000 Feet - 42,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

ONE ENGINE OPERATING
5,000 FEET – 46,000 POUNDS

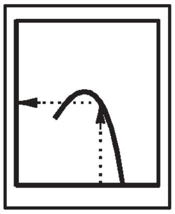
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= 5°C

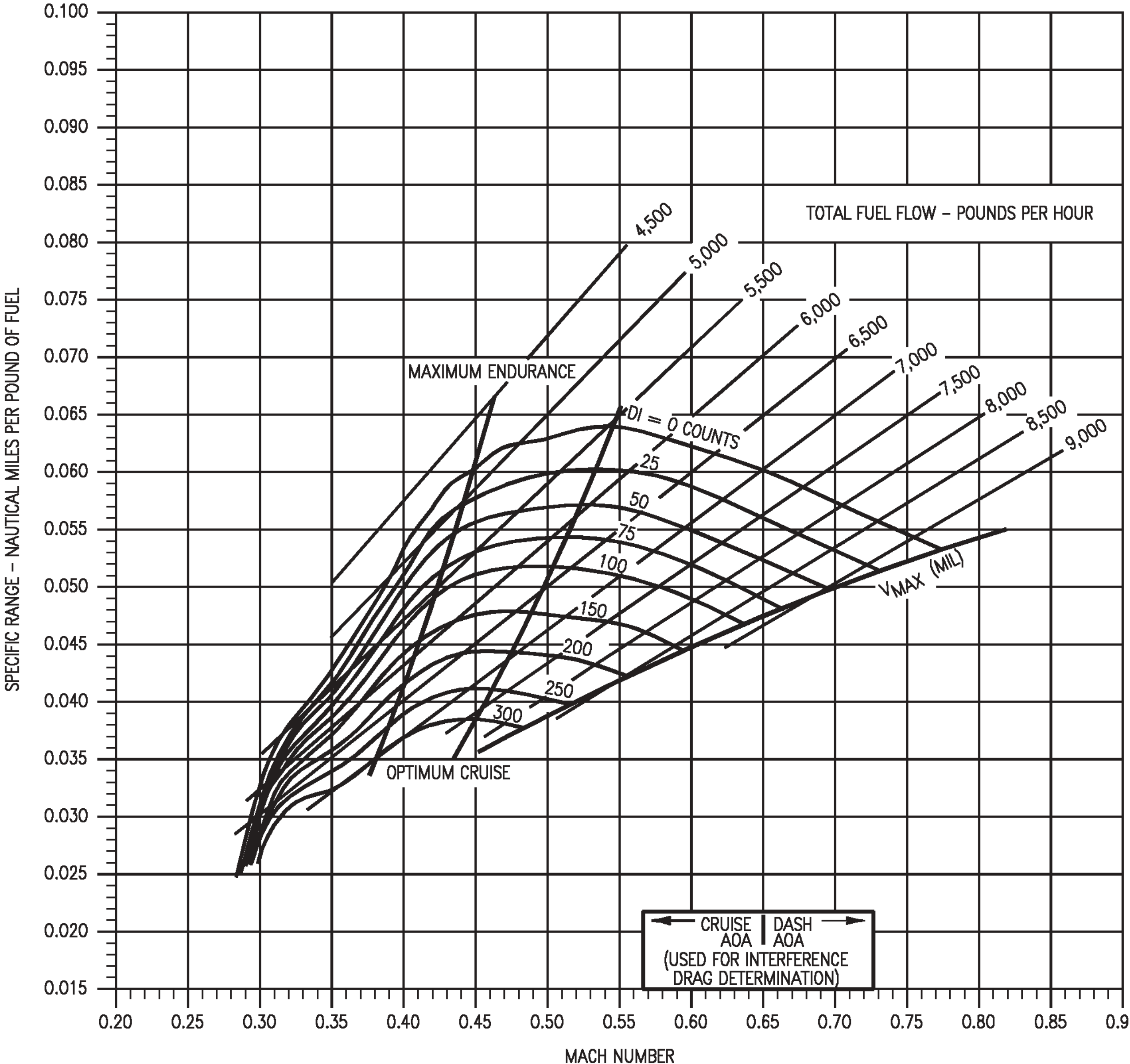
TEMPERATURE EFFECTS	
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.07
-10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(219-1)12-CATI

Figure 11-114. Specific Range - One Engine Operating - 5,000 Feet - 46,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

ONE ENGINE OPERATING
5,000 FEET – 50,000 POUNDS

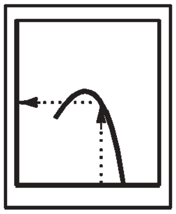
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= 5°C

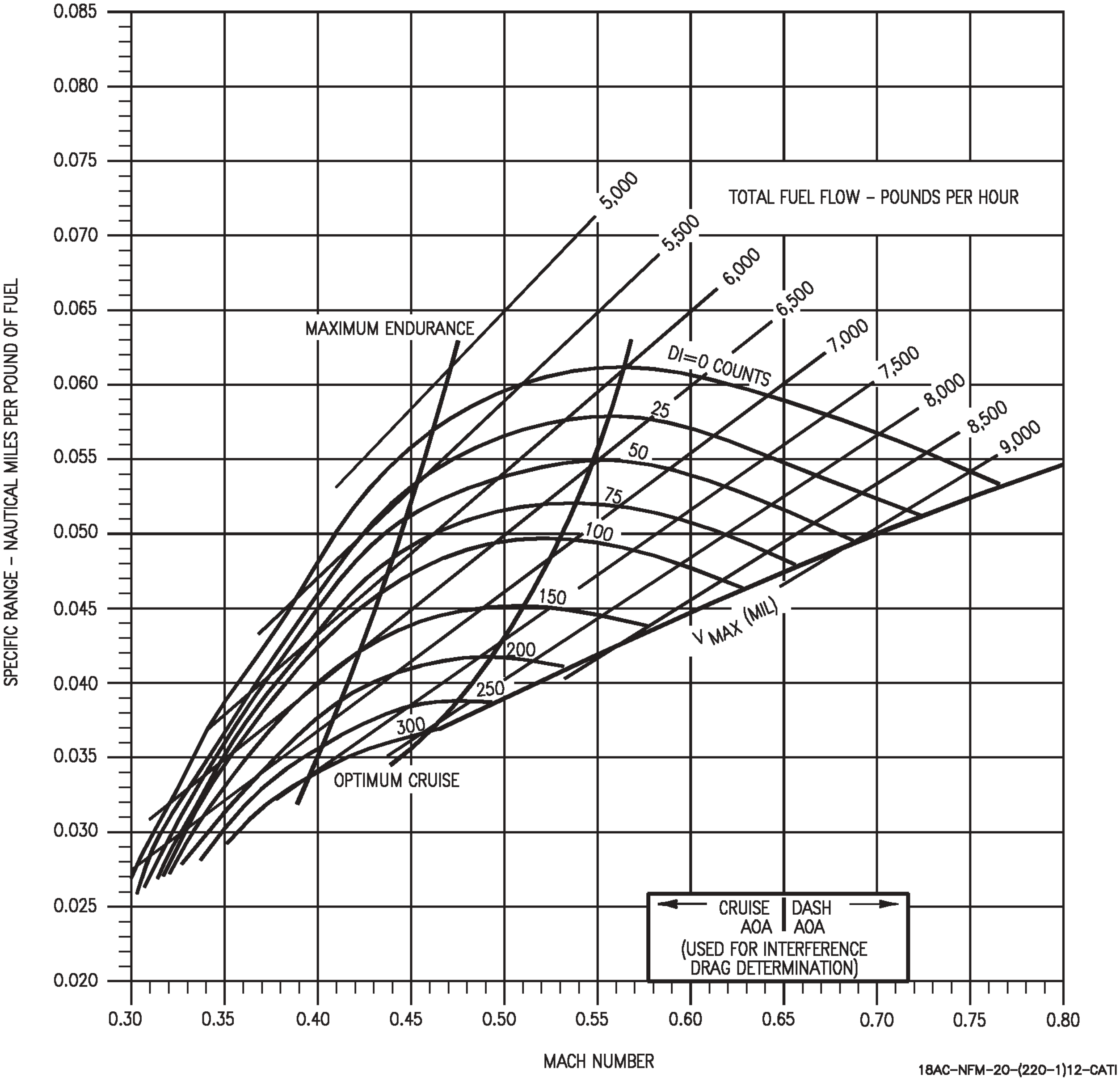
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.07
–10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(220–1)12–CATI

Figure 11-115. Specific Range - One Engine Operating - 5,000 Feet - 50,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

ONE ENGINE OPERATING
10,000 FEET – 26,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

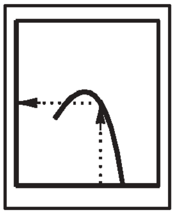
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= –5°C

TEMPERATURE EFFECTS

ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.07
–10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

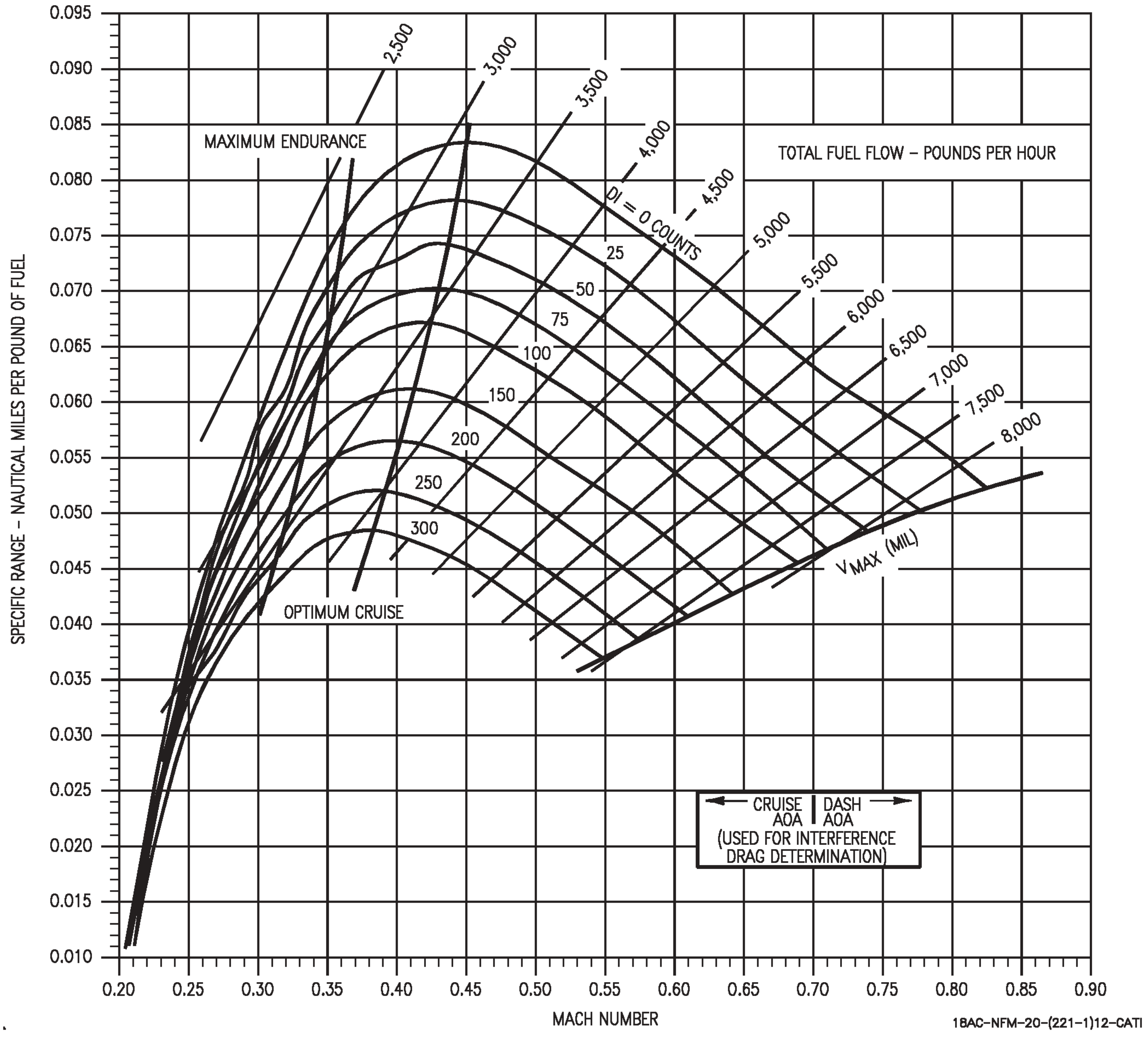


Figure 11-116. Specific Range - One Engine Operating - 10,000 Feet - 26,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400
ONE ENGINE OPERATING
10,000 FEET – 30,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

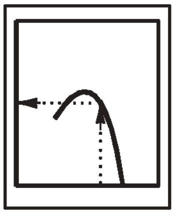
REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= −5°C

TEMPERATURE EFFECTS

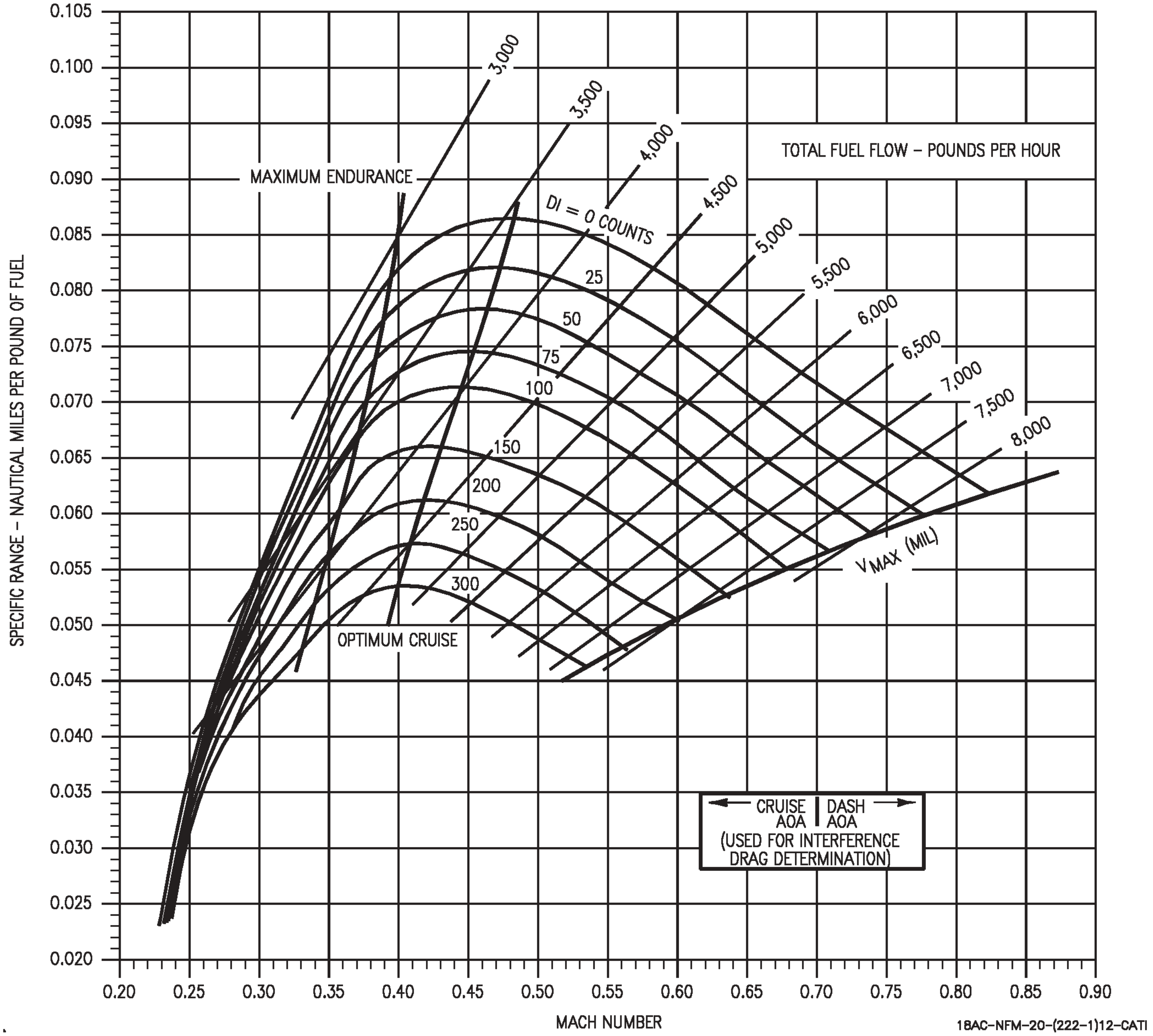
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
−20	1.07
−10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(222-1)12-CATI

Figure 11-117. Specific Range - One Engine Operating - 10,000 Feet - 30,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

ONE ENGINE OPERATING
10,000 FEET – 34,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

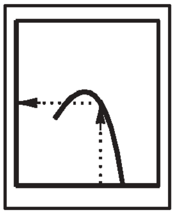
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= –5°C

TEMPERATURE EFFECTS

ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.07
–10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

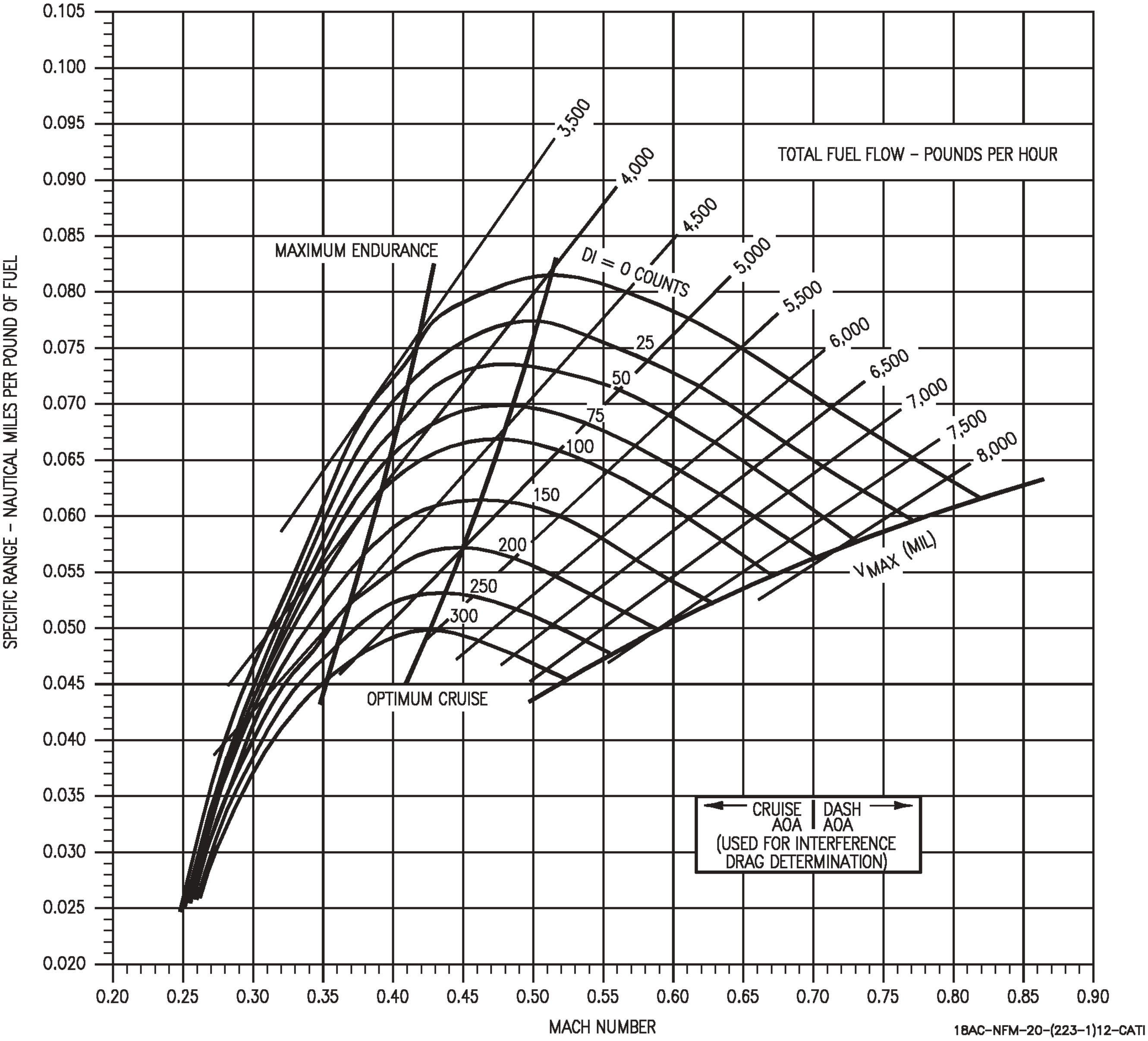


Figure 11-118. Specific Range - One Engine Operating - 10,000 Feet - 34,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400
ONE ENGINE OPERATING
10,000 FEET – 38,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

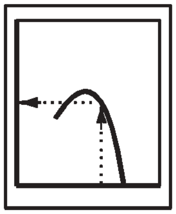
REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= −5°C

TEMPERATURE EFFECTS

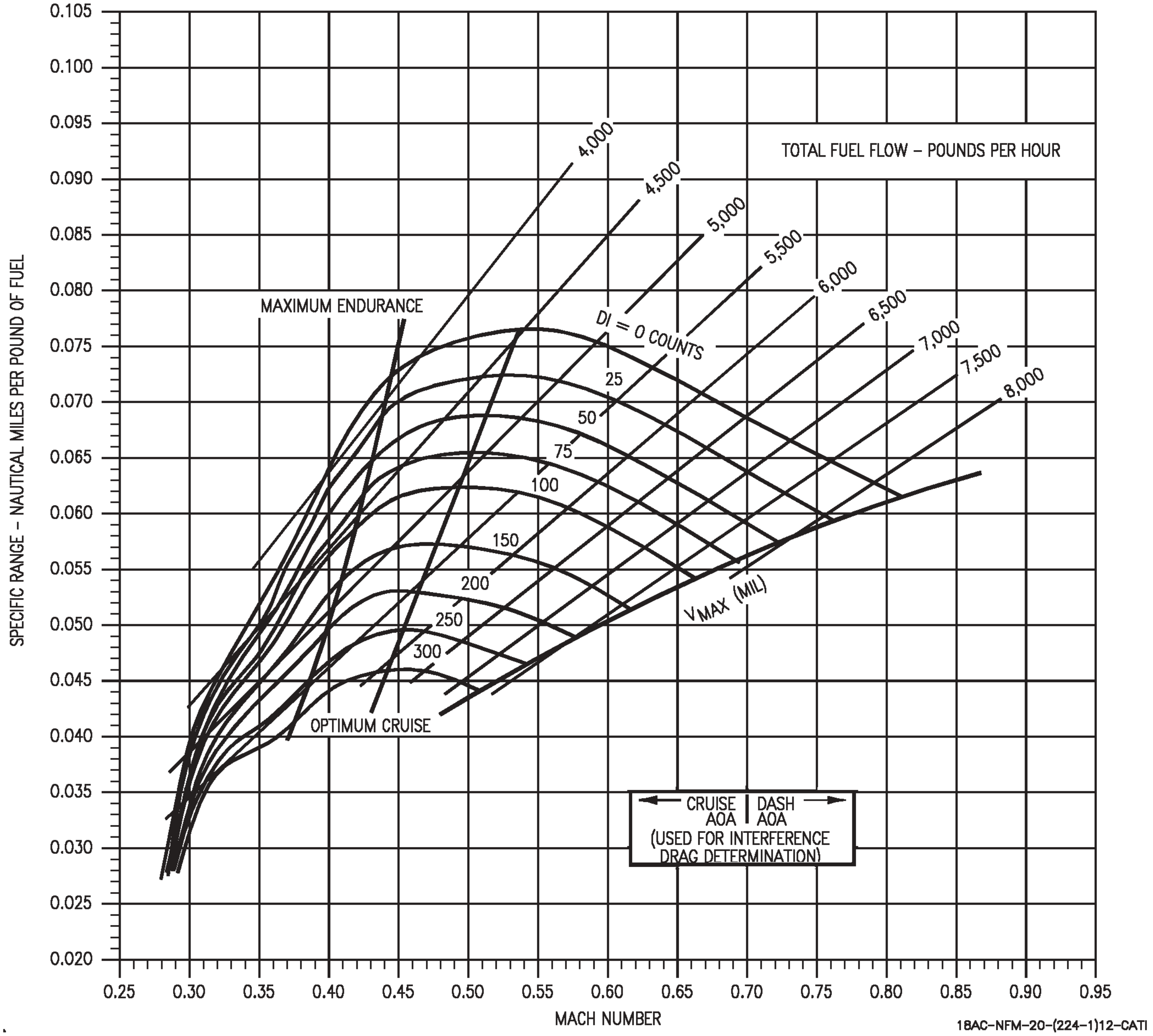
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
−20	1.07
−10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(224-1)12-CATI

Figure 11-119. Specific Range - One Engine Operating - 10,000 Feet - 38,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400
ONE ENGINE OPERATING
10,000 FEET – 42,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

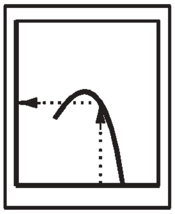
DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

NOTE: STD TEMP.= –5°C

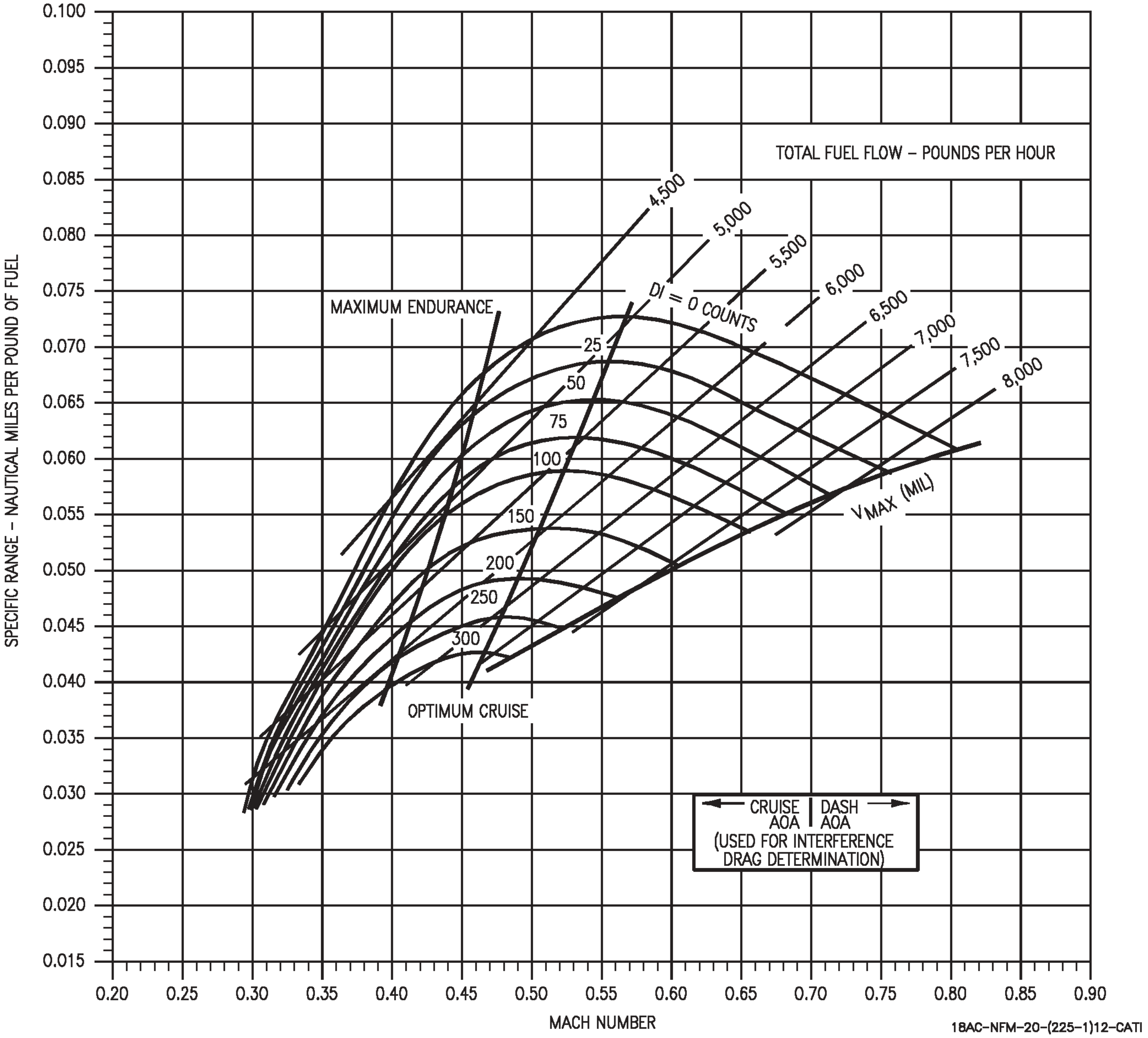
TEMPERATURE EFFECTS

ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.07
–10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(225–1)12–CATI

Figure 11-120. Specific Range - One Engine Operating - 10,000 Feet - 42,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

ONE ENGINE OPERATING
10,000 FEET – 46,000 POUNDS

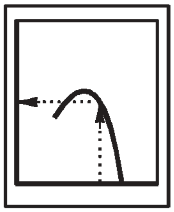
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= –5°C

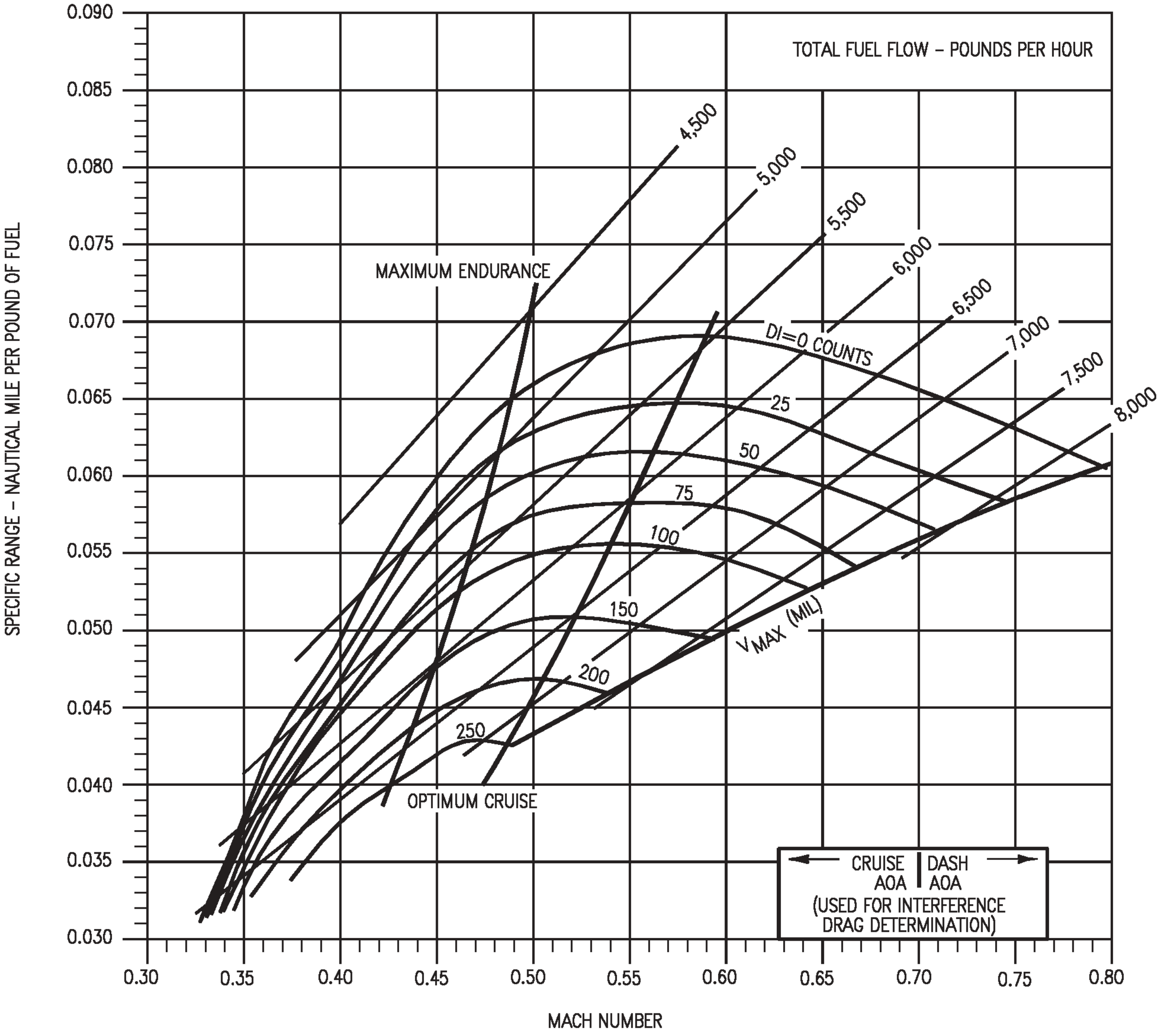
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.07
–10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(226–1)12–CATI

Figure 11-121. Specific Range - One Engine Operating - 10,000 Feet - 46,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400
ONE ENGINE OPERATING
10,000 FEET – 50,000 POUNDS

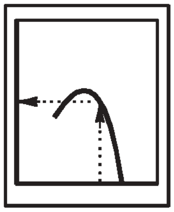
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= –5°C

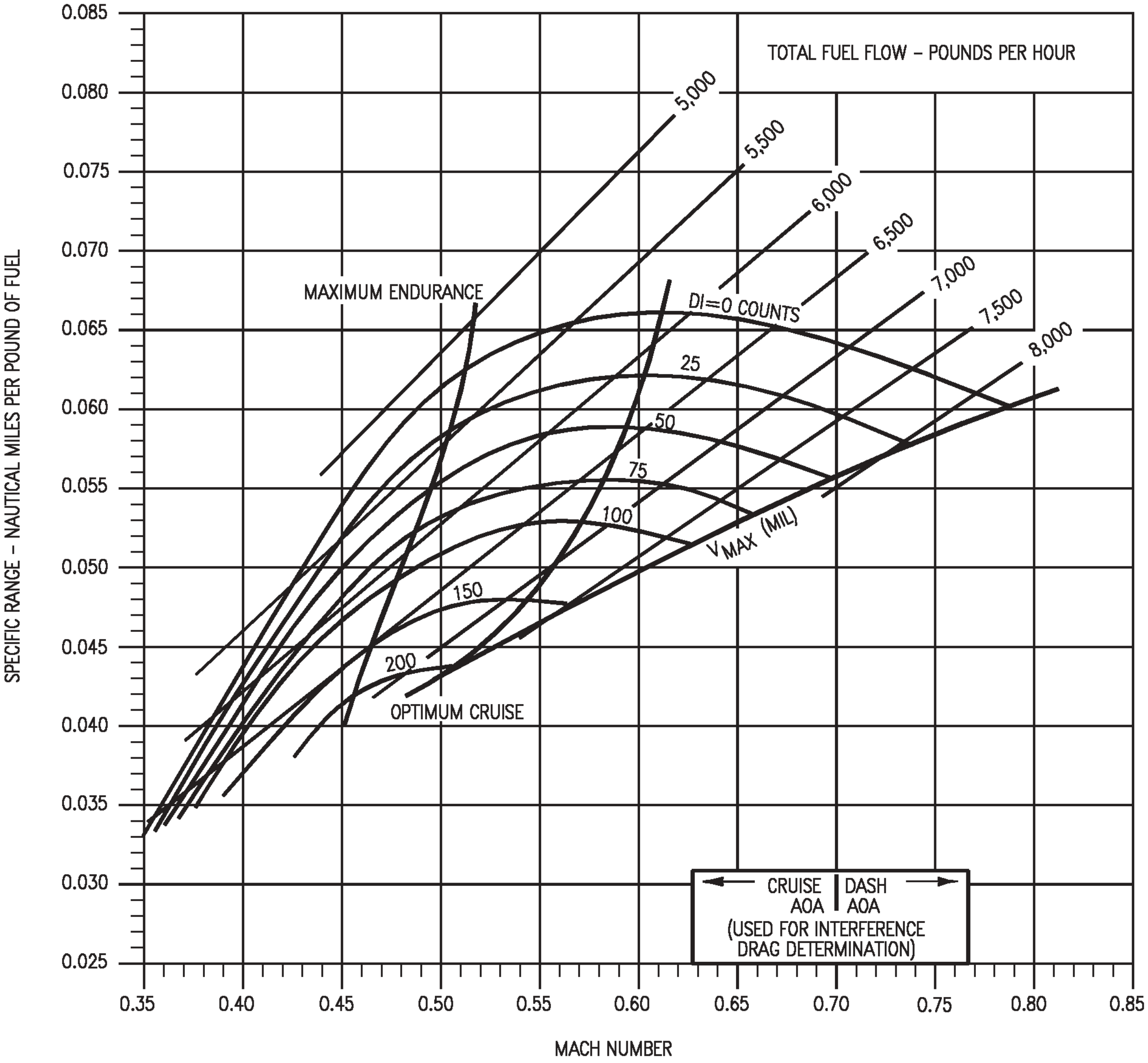
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.07
–10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(227–1)12–CATI

Figure 11-122. Specific Range - One Engine Operating - 10,000 Feet - 50,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

ONE ENGINE OPERATING

15,000 FEET – 26,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

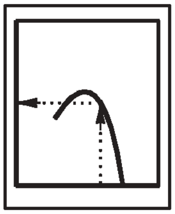
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= –15°C

TEMPERATURE EFFECTS

ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.07
–10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

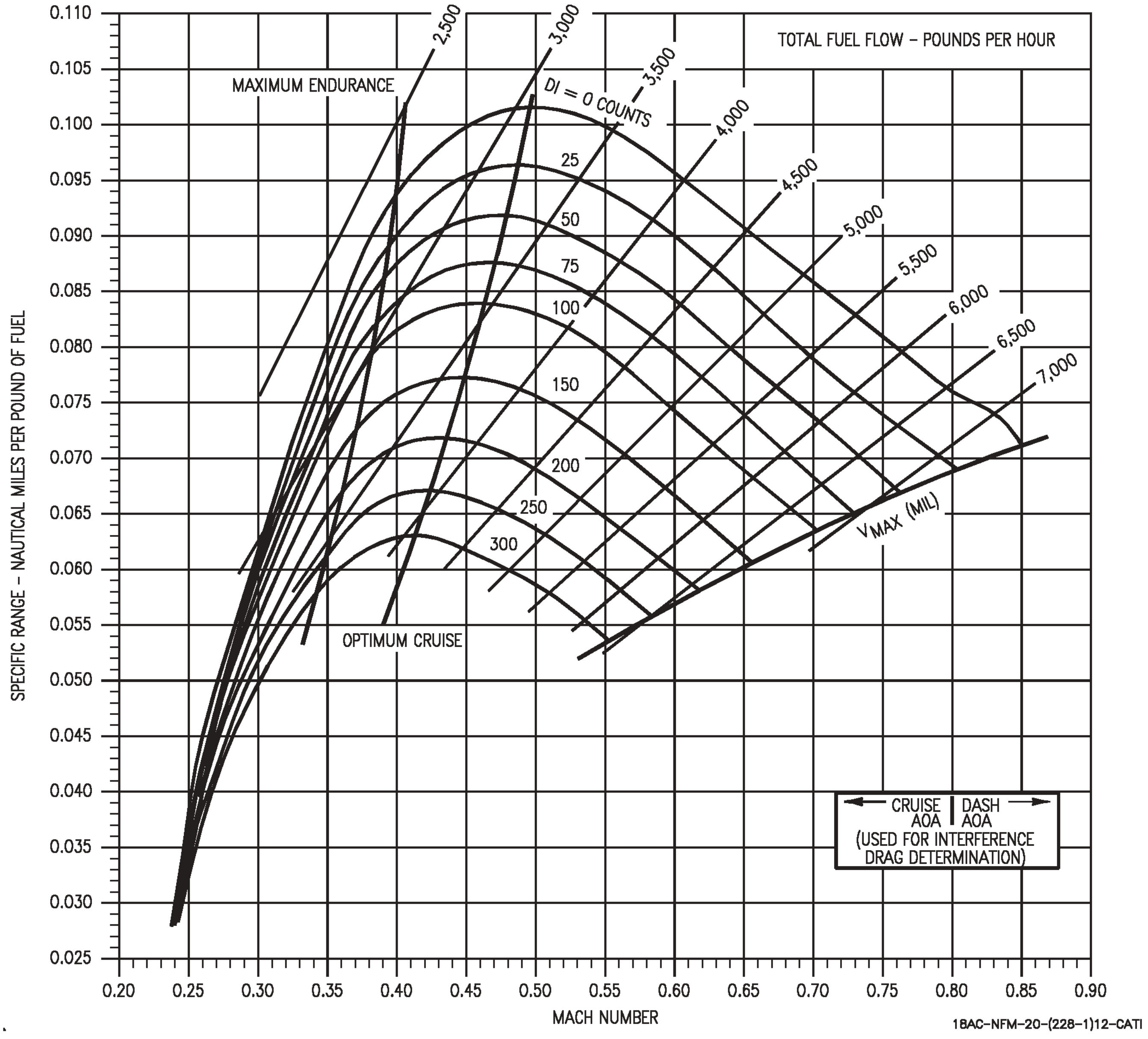


Figure 11-123. Specific Range - One Engine Operating - 15,000 Feet - 26,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

ONE ENGINE OPERATING
15,000 FEET – 30,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

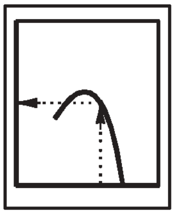
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= –15°C

TEMPERATURE EFFECTS

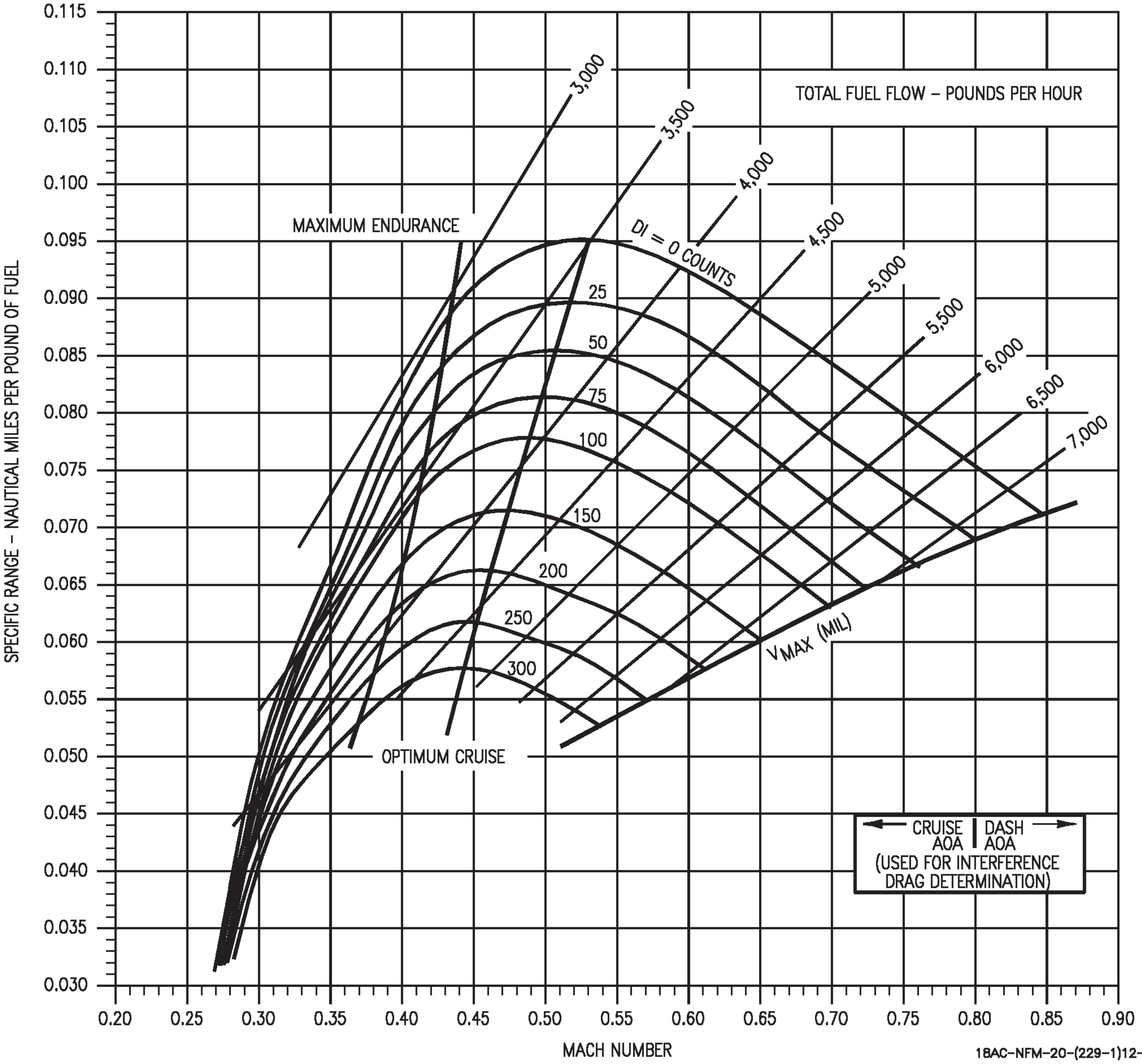
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.07
–10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(229–1)12–CATI

Figure 11-124. Specific Range - One Engine Operating - 15,000 Feet - 30,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

ONE ENGINE OPERATING
15,000 FEET – 34,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

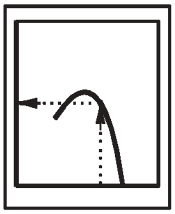
DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

NOTE: STD TEMP.= −15°C

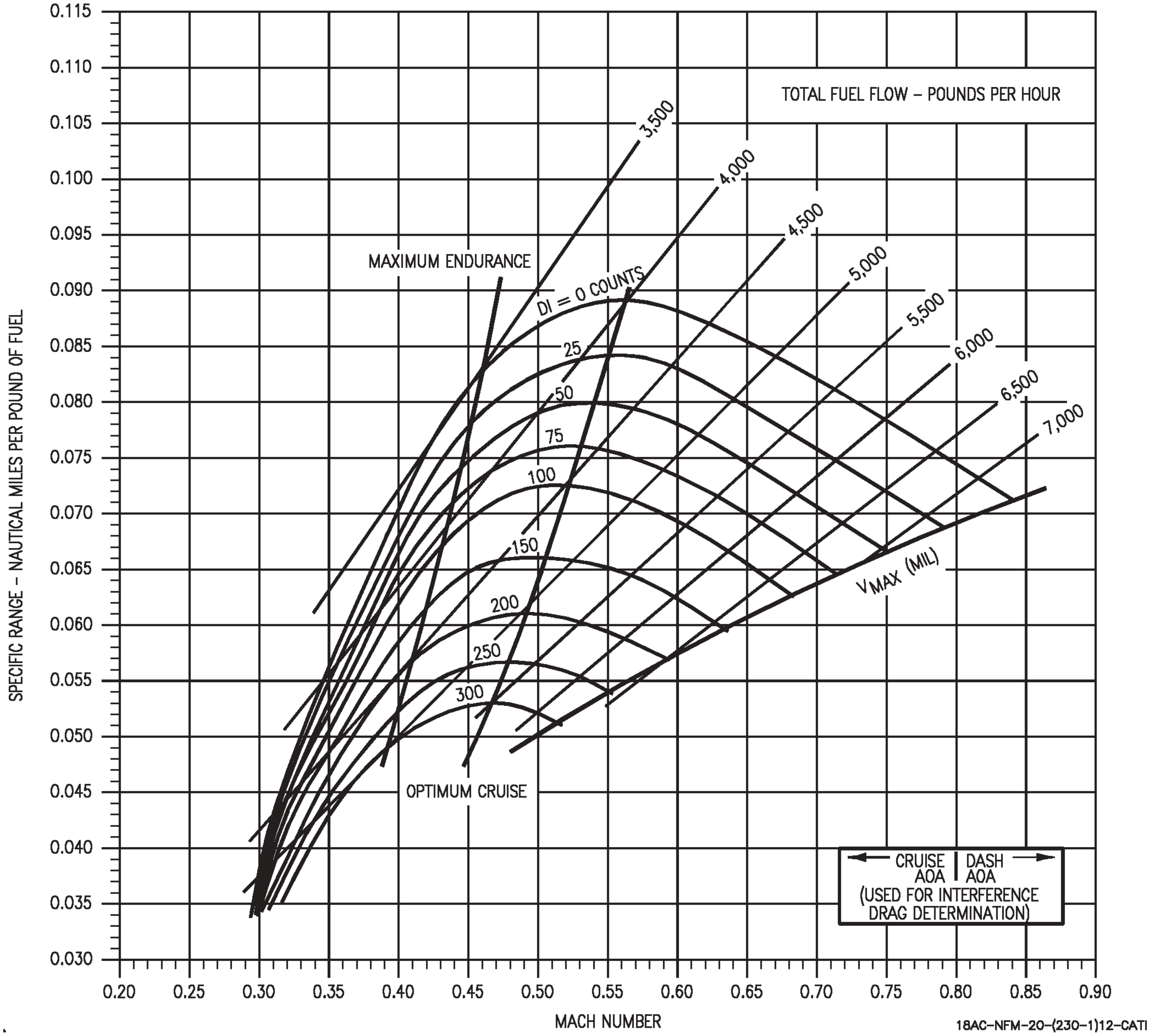
TEMPERATURE EFFECTS

ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
−20	1.07
−10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(230-1)12-CATI

Figure 11-125. Specific Range - One Engine Operating - 15,000 Feet - 34,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

ONE ENGINE OPERATING
15,000 FEET – 38,000 POUNDS

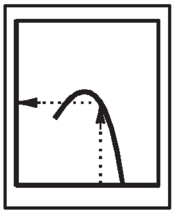
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= -15°C

TEMPERATURE EFFECTS	
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.07
-10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

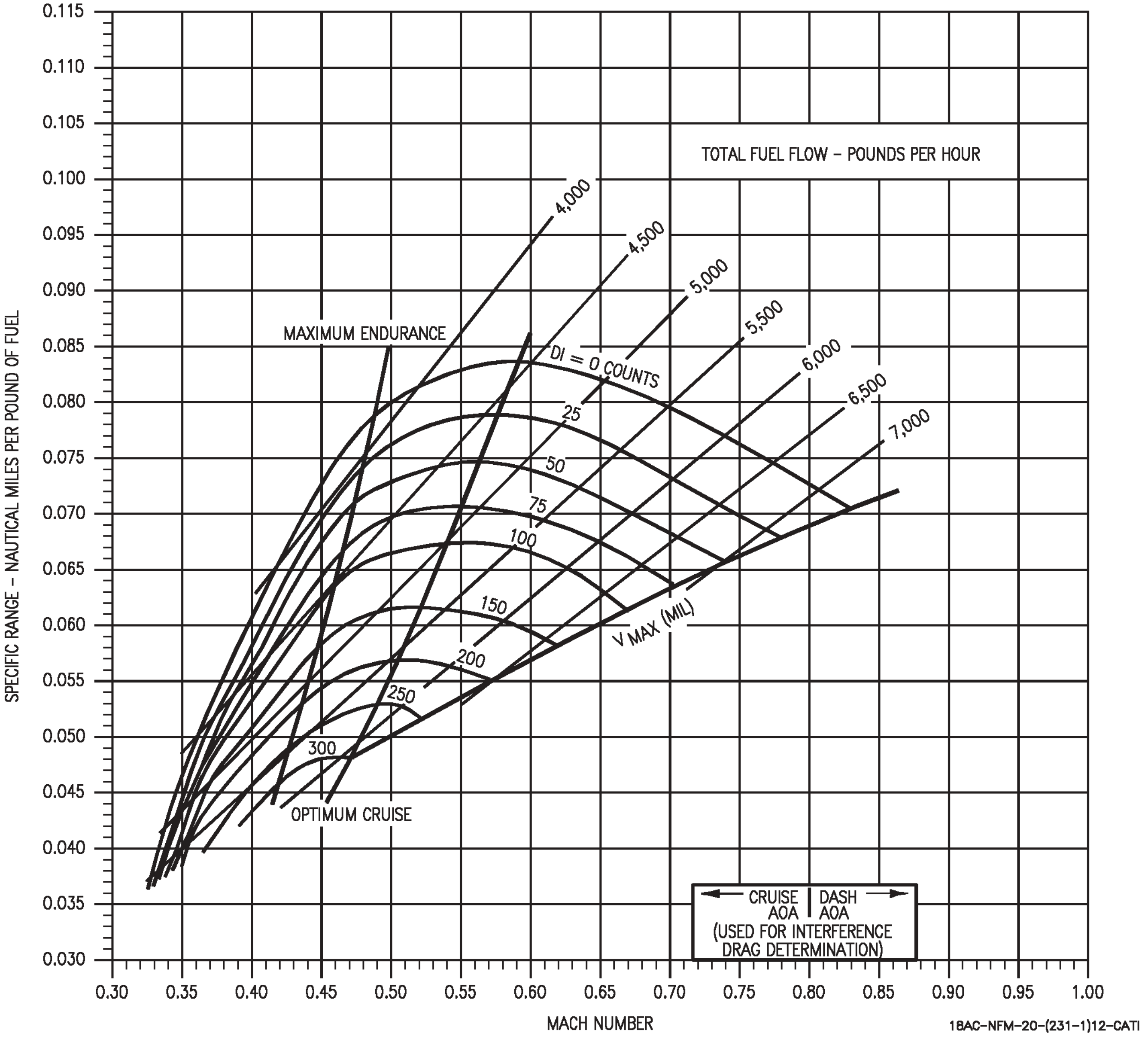


Figure 11-126. Specific Range - One Engine Operating - 15,000 Feet - 38,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400
ONE ENGINE OPERATING
15,000 FEET – 42,000 POUNDS

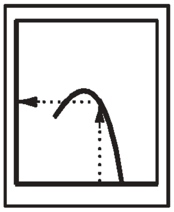
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= –15°C

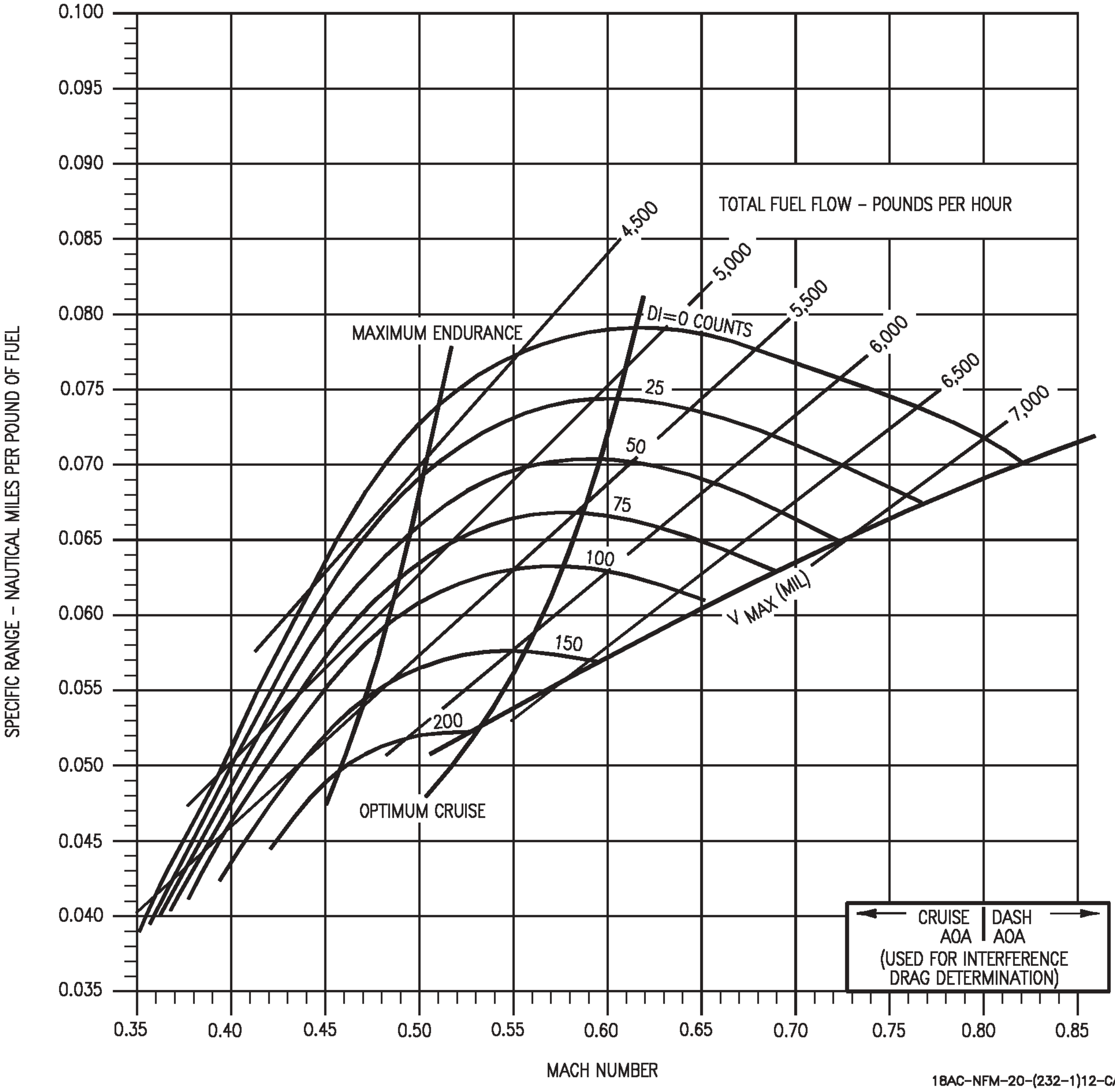
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.07
–10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(232–1)12–CATI

Figure 11-127. Specific Range - One Engine Operating - 15,000 Feet - 42,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

ONE ENGINE OPERATING
15,000 FEET – 46,000 POUNDS

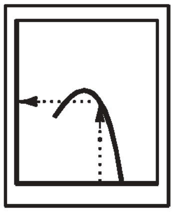
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= –15°C

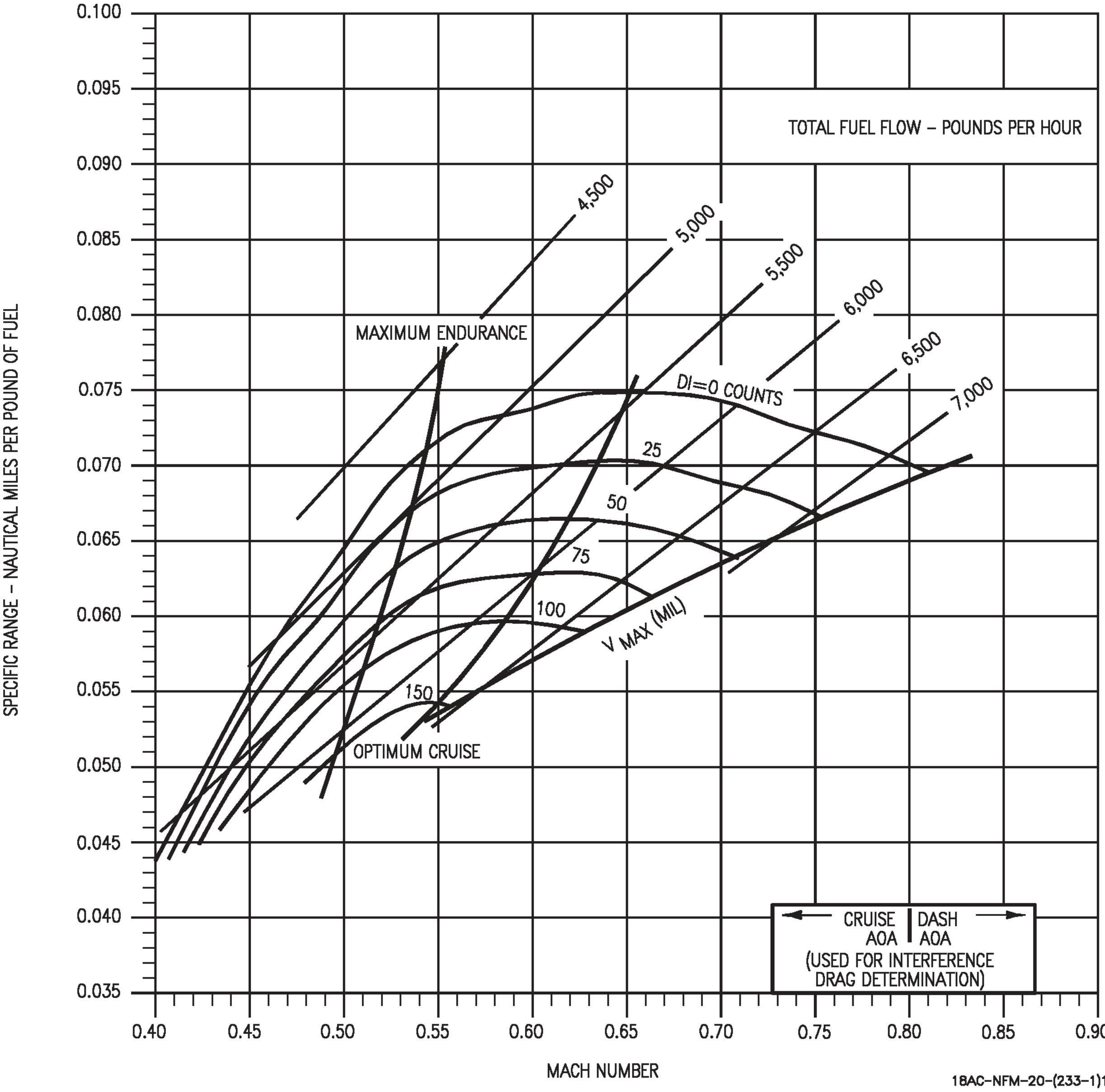
TEMPERATURE EFFECTS	
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.07
–10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(233-1)12-CATI

Figure 11-128. Specific Range - One Engine Operating - 15,000 Feet - 46,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

ONE ENGINE OPERATING
15,000 FEET – 50,000 POUNDS

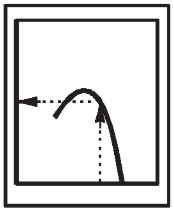
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= −15°C

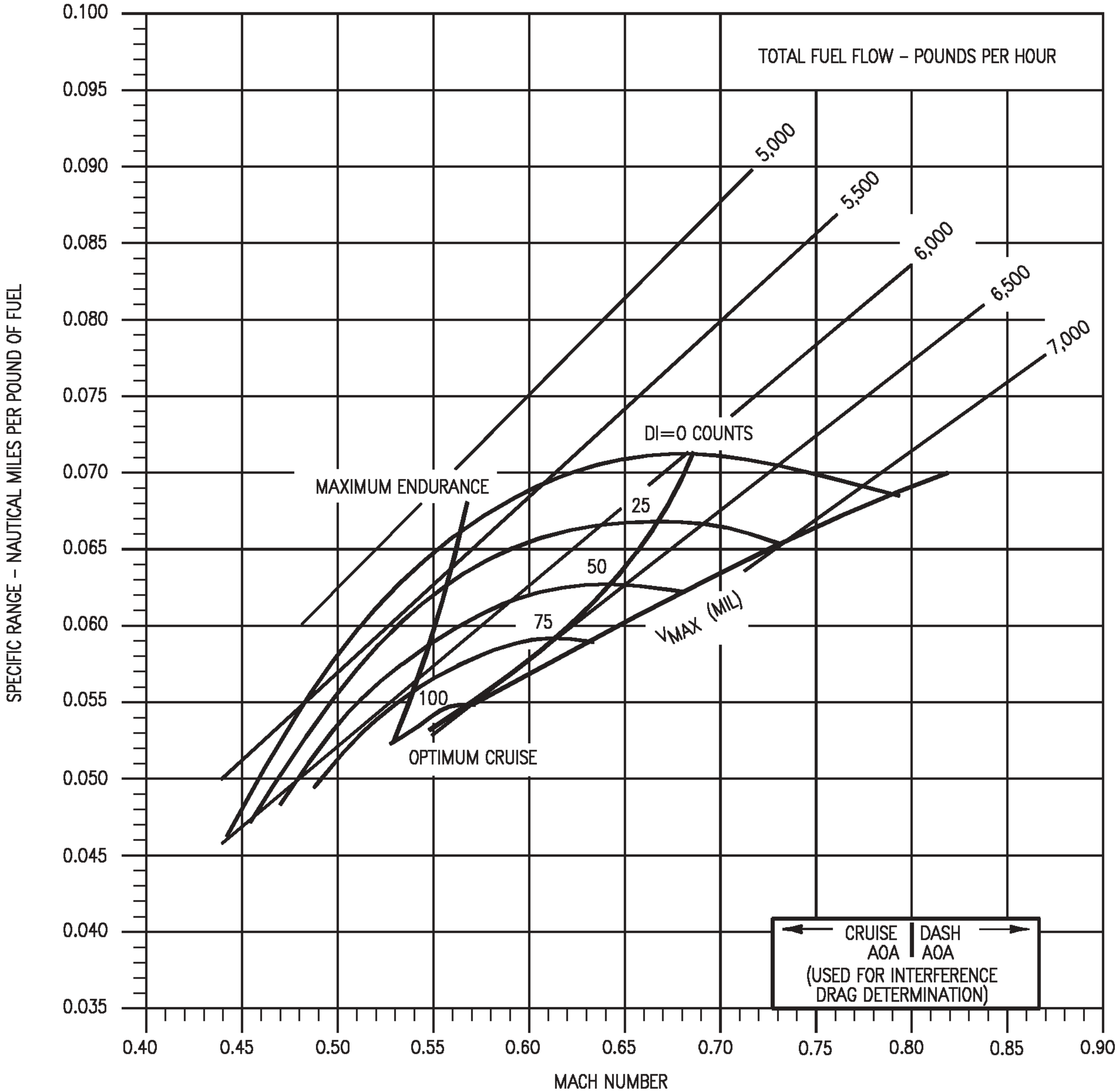
TEMPERATURE EFFECTS	
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
−20	1.07
−10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(234-1)12-CATI

Figure 11-129. Specific Range - One Engine Operating - 15,000 Feet - 50,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400
ONE ENGINE OPERATING
20,000 FEET – 26,000 POUNDS

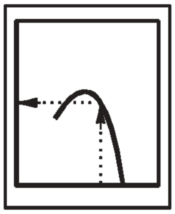
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= −25°C

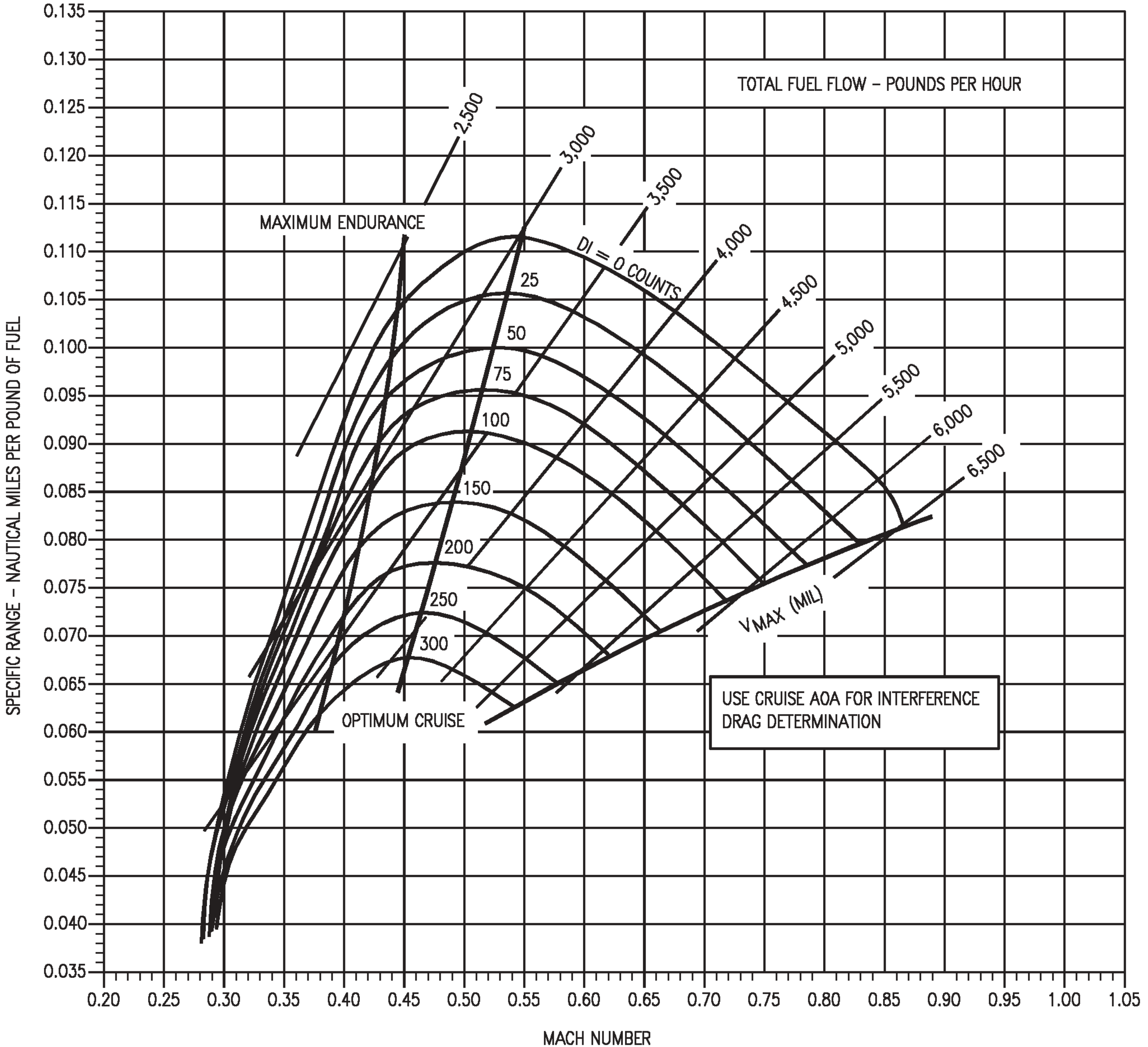
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
−20	1.07
−10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



USE CRUISE AOA FOR INTERFERENCE DRAG DETERMINATION

18AC–NFM–20–(235–1)12–CATI

Figure 11-130. Specific Range - One Engine Operating - 20,000 Feet - 26,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

ONE ENGINE OPERATING
20,000 FEET – 30,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

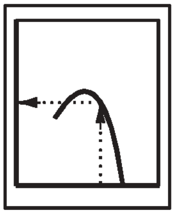
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= –25°C

TEMPERATURE EFFECTS

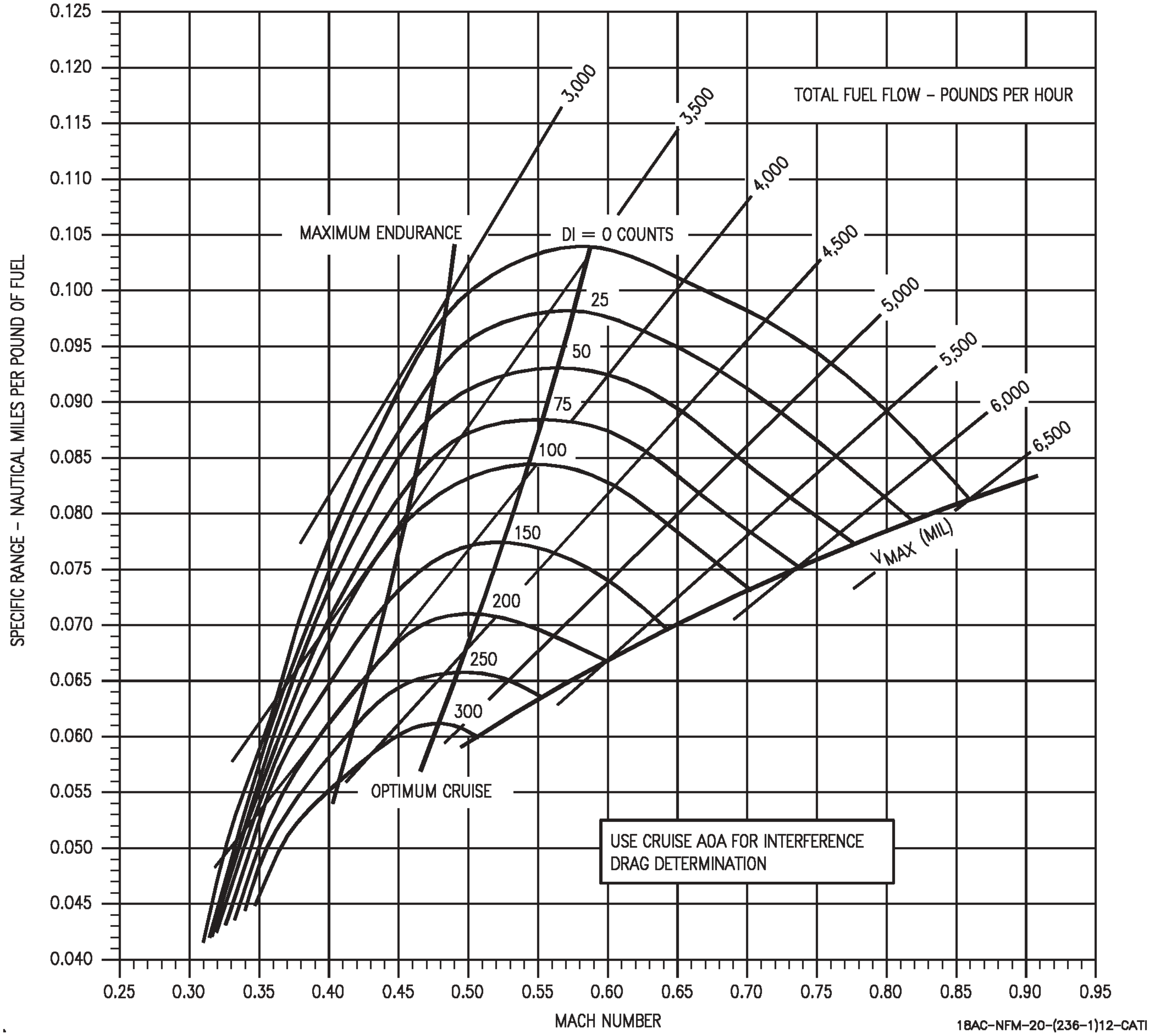
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.07
–10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(236–1)12–CATI

Figure 11-131. Specific Range - One Engine Operating - 20,000 Feet - 30,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

ONE ENGINE OPERATING
20,000 FEET – 34,000 POUNDS

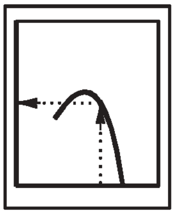
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= –25°C

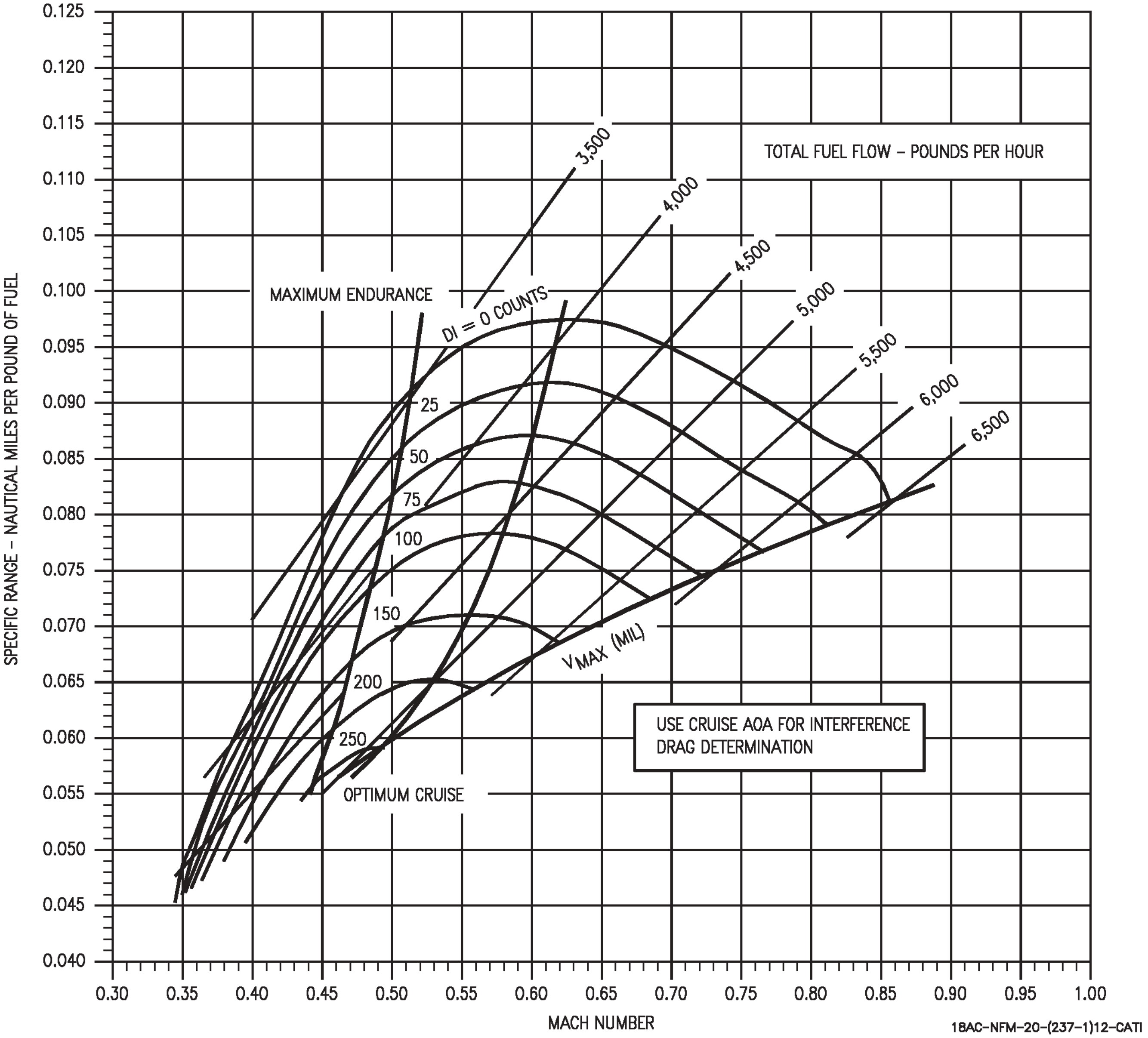
TEMPERATURE EFFECTS	
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.07
–10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(237–1)12–CATI

Figure 11-132. Specific Range - One Engine Operating - 20,000 Feet - 34,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400
ONE ENGINE OPERATING
20,000 FEET – 38,000 POUNDS

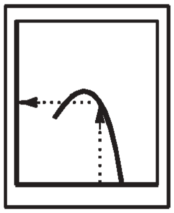
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= –25°C

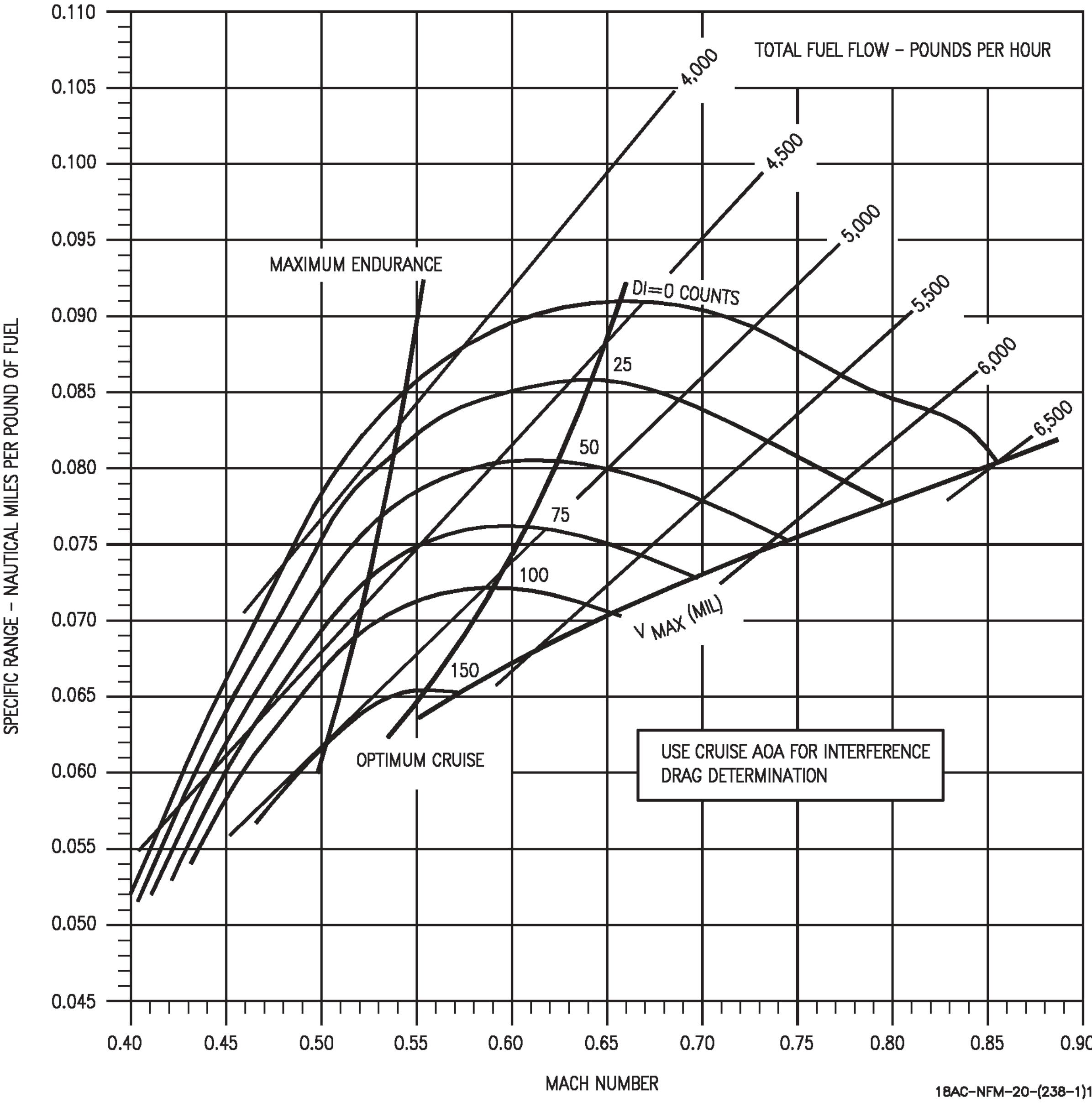
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.07
–10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(238–1)12–CATI

Figure 11-133. Specific Range - One Engine Operating - 20,000 Feet - 38,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

ONE ENGINE OPERATING
20,000 FEET – 42,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

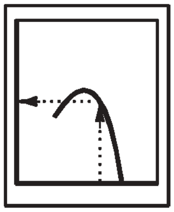
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= –25°C

TEMPERATURE EFFECTS

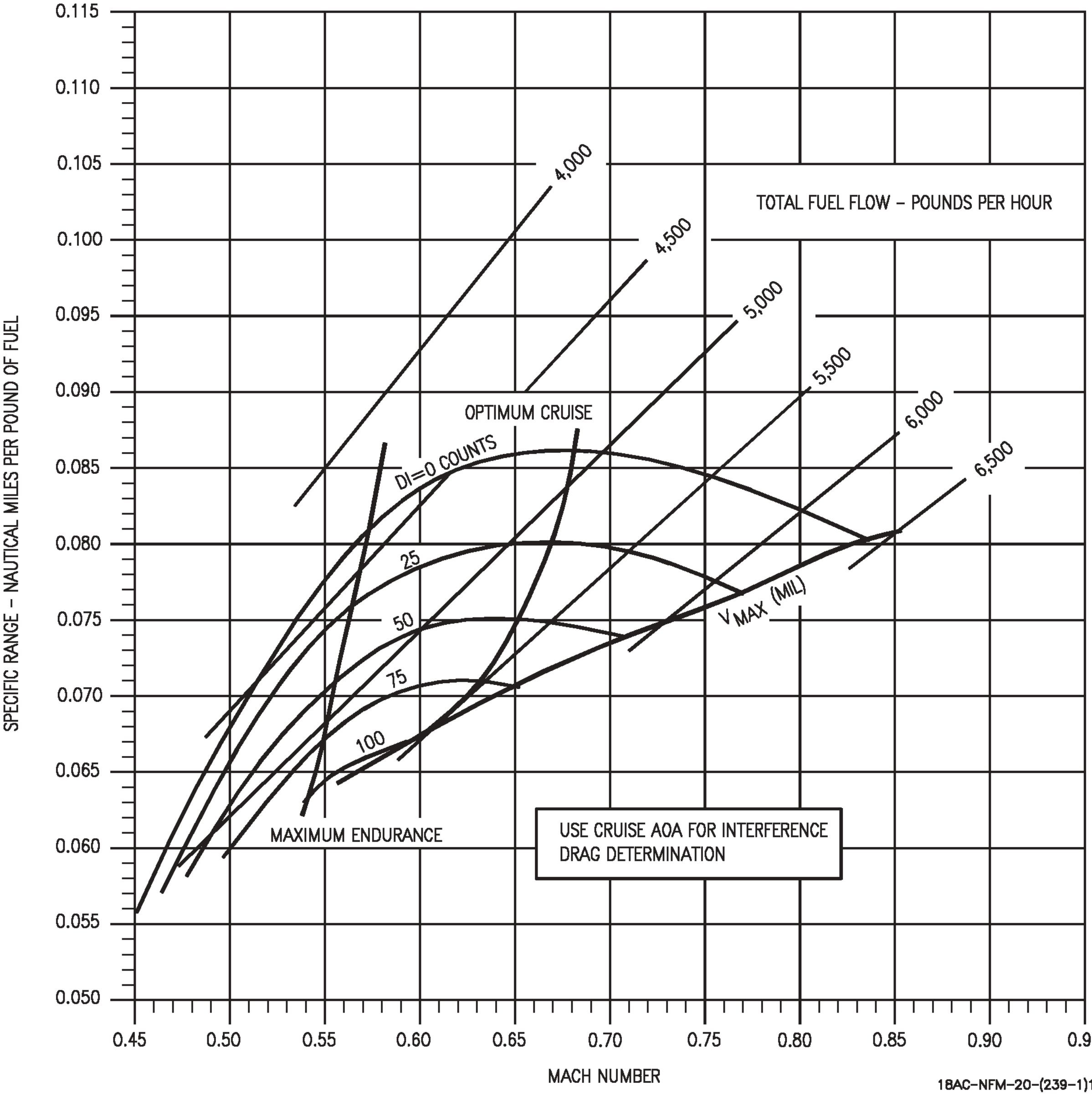
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.07
–10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(239–1)12–CATI

Figure 11-134. Specific Range - One Engine Operating - 20,000 Feet - 42,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

ONE ENGINE OPERATING
20,000 FEET – 46,000 POUNDS

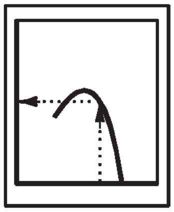
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= –25°C

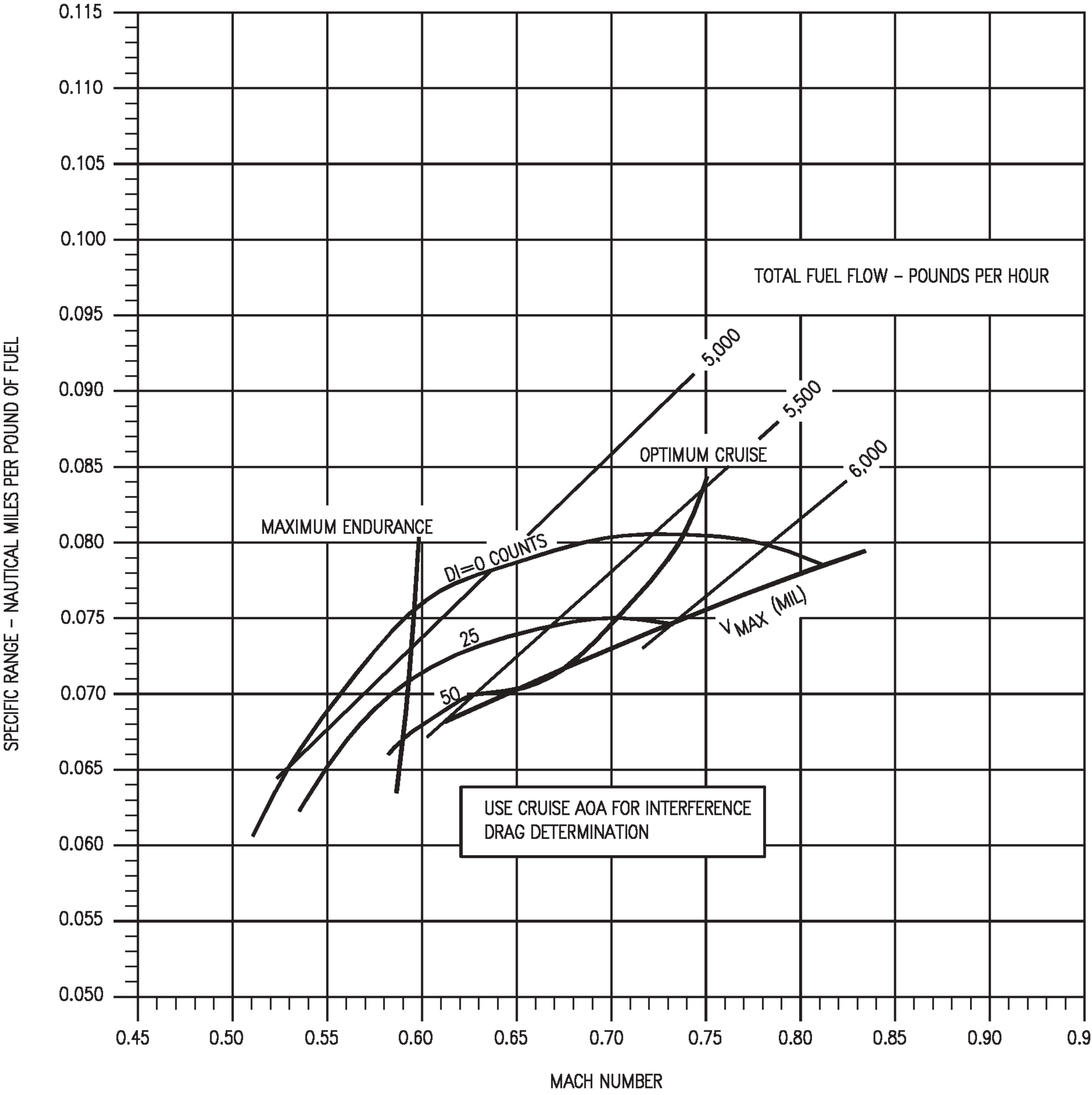
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.07
–10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



TOTAL FUEL FLOW – POUNDS PER HOUR

USE CRUISE AOA FOR INTERFERENCE DRAG DETERMINATION

18AC–NFM–20–(240–1)12–CATI

Figure 11-135. Specific Range - One Engine Operating - 20,000 Feet - 46,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404−GE−400
ONE ENGINE OPERATING
25,000 FEET − 26,000 POUNDS

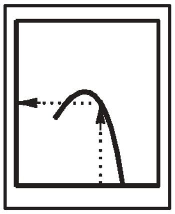
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404−GE−400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= −35°C

TEMPERATURE EFFECTS	
ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
−20	1.07
−10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP−5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

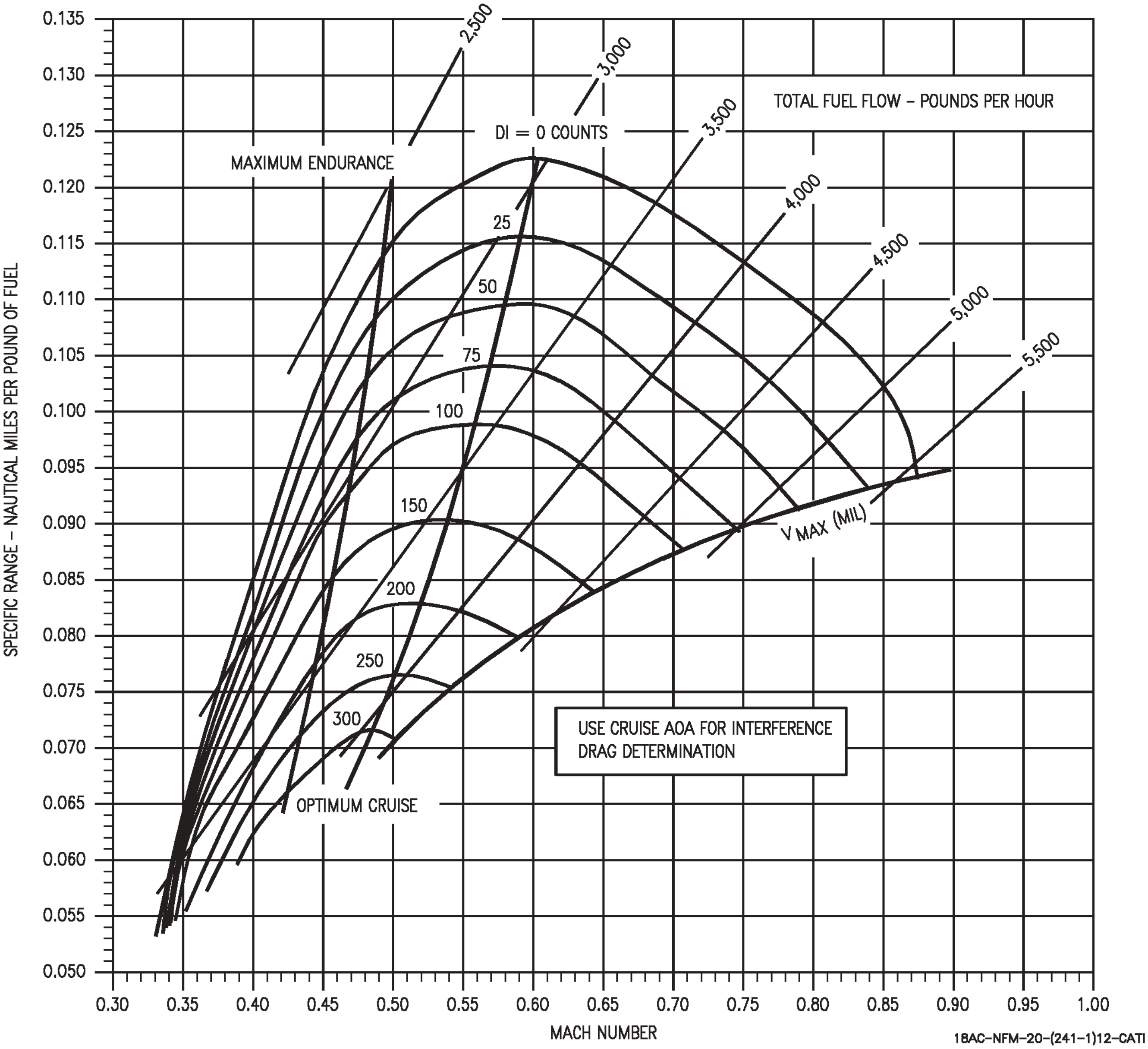


Figure 11-136. Specific Range - One Engine Operating - 25,000 Feet - 26,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

ONE ENGINE OPERATING
25,000 FEET – 30,000 POUNDS

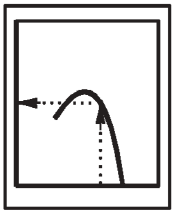
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= −35°C

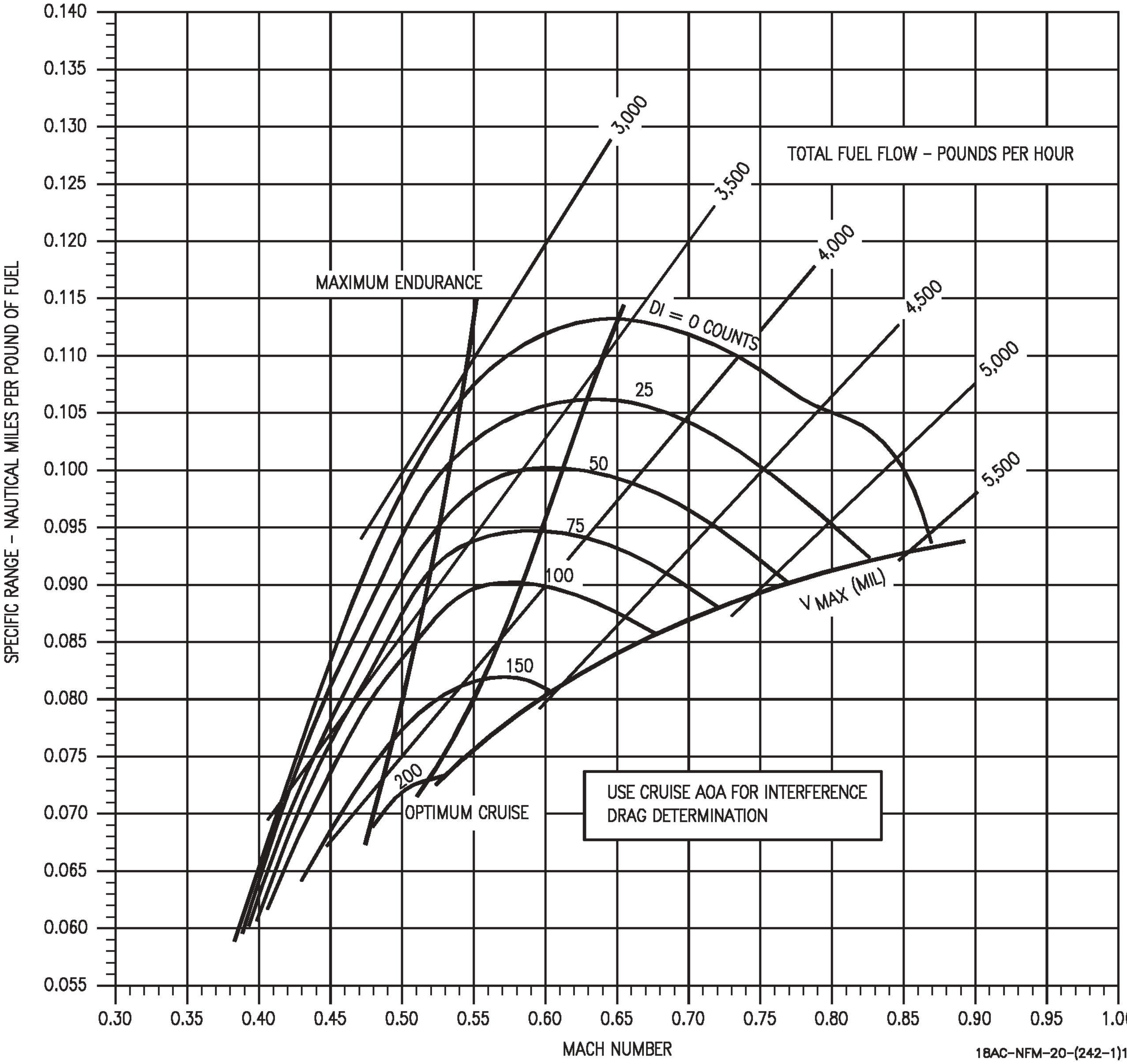
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
−20	1.07
−10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



USE CRUISE AOA FOR INTERFERENCE DRAG DETERMINATION

18AC–NFM–20–(242–1)12–CATI

Figure 11-137. Specific Range - One Engine Operating - 25,000 Feet - 30,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400
ONE ENGINE OPERATING
25,000 FEET – 34,000 POUNDS

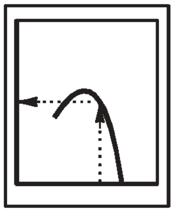
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

NOTE: STD TEMP.= –35°C

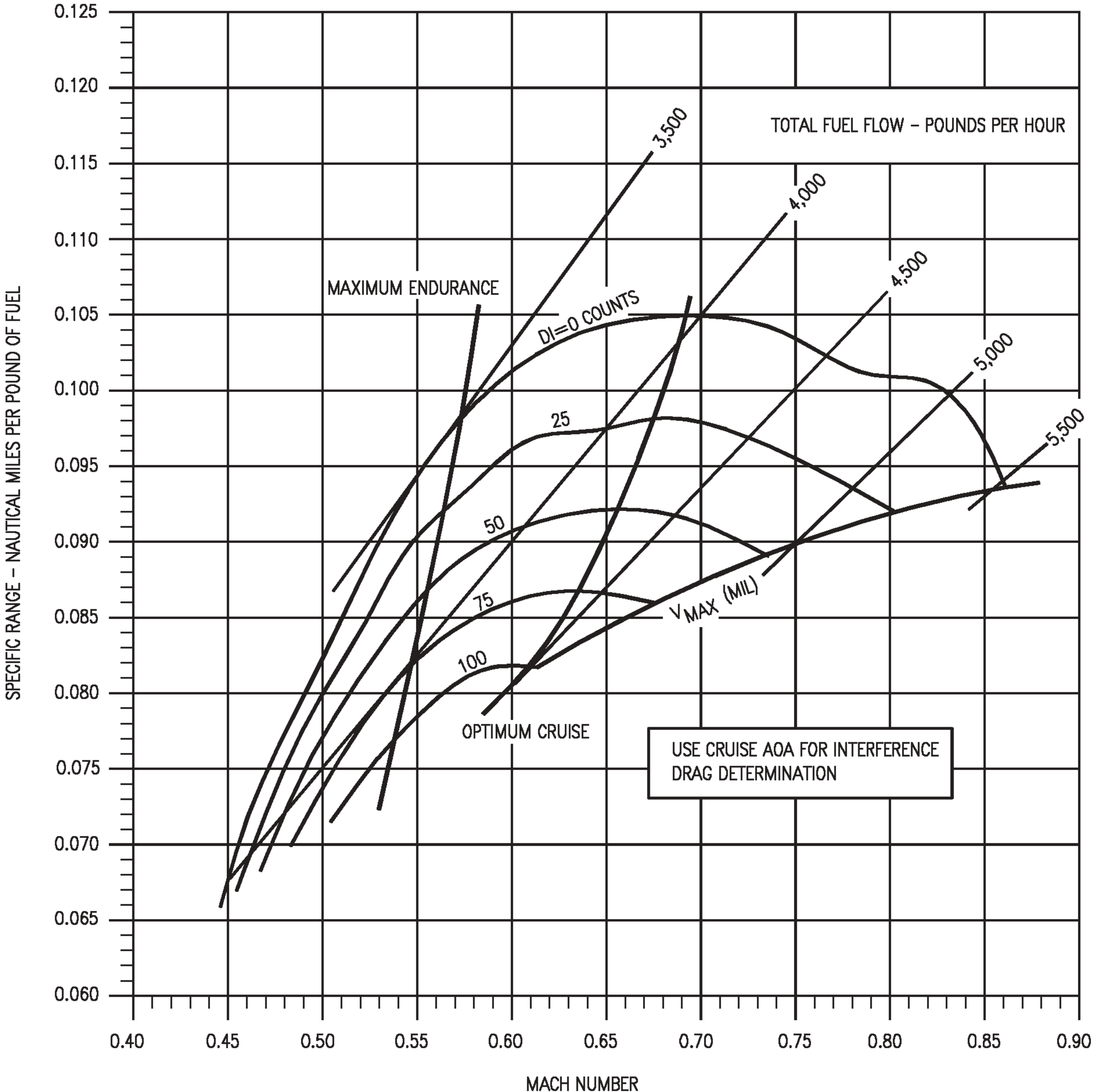
TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.07
–10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(243–1)12–CATI

Figure 11-138. Specific Range - One Engine Operating - 25,000 Feet - 34,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400

ONE ENGINE OPERATING
25,000 FEET – 38,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

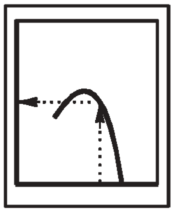
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

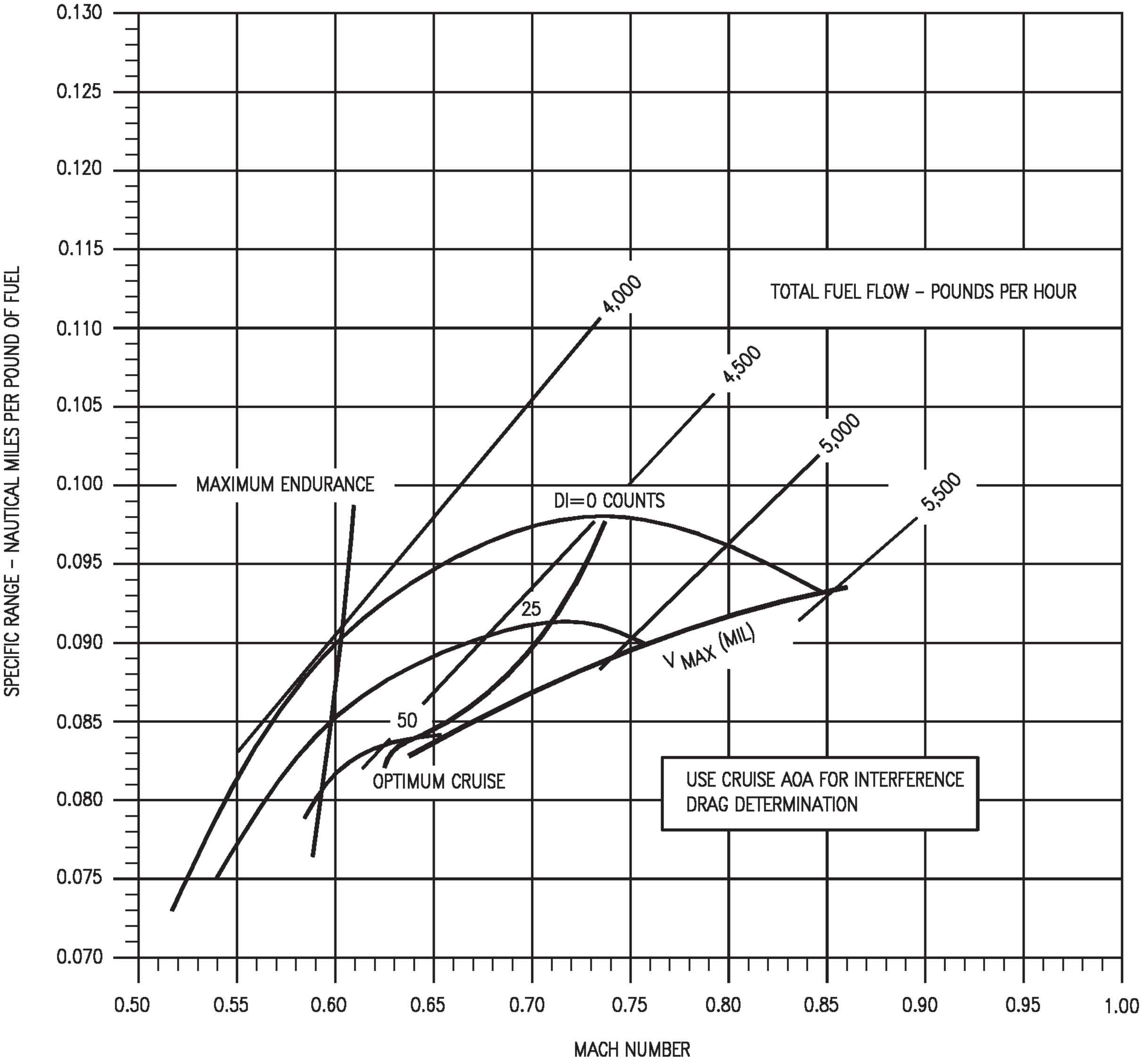
NOTE: STD TEMP.= –35°C

TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.07
–10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(244–1)12–CATI

Figure 11-139. Specific Range - One Engine Operating - 25,000 Feet - 38,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404–GE–400
ONE ENGINE OPERATING
30,000 FEET – 26,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

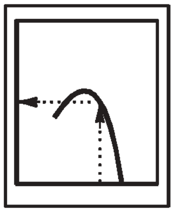
REMARKS
ENGINE(S): (2) F404–GE–400
U.S STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

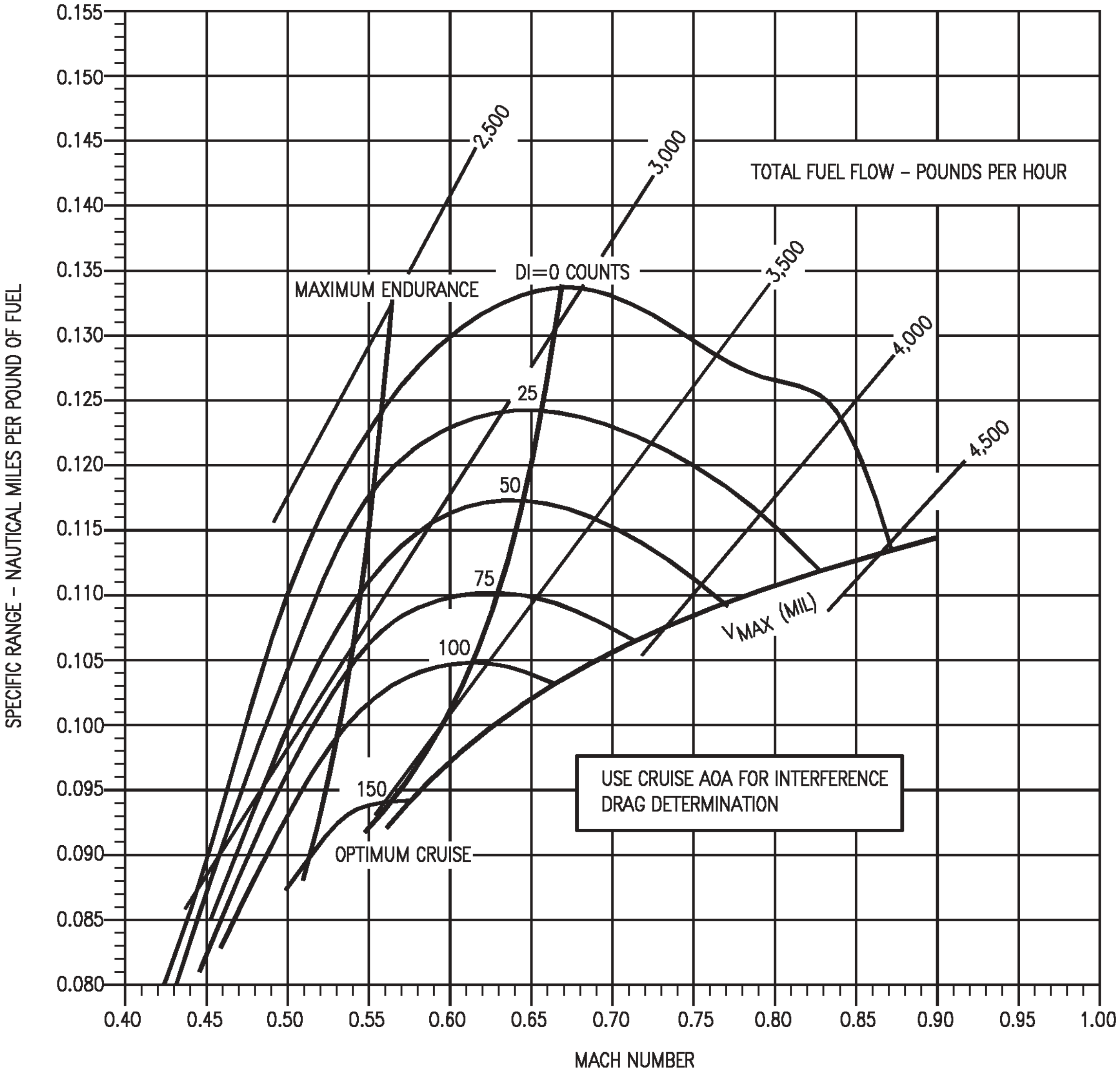
NOTE: STD TEMP.= –44°C

TEMPERATURE EFFECTS	
ΔT–°C FROM STD. DAY	V_{MAX} FACTOR
–20	1.07
–10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(245–1)12–CATI

Figure 11-140. Specific Range - One Engine Operating - 30,000 Feet - 26,000 Pounds - F404-GE-400

SPECIFIC RANGE

F404-GE-400

ONE ENGINE OPERATING
30,000 FEET – 30,000 POUNDS

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

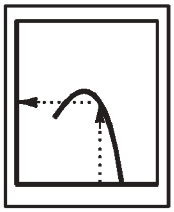
DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

NOTE: STD TEMP.= -44°C

TEMPERATURE EFFECTS

ΔT-°C FROM STD. DAY	V_{MAX} FACTOR
-20	1.07
-10	1.04
0	1.00
+10	.95
+20	.89

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

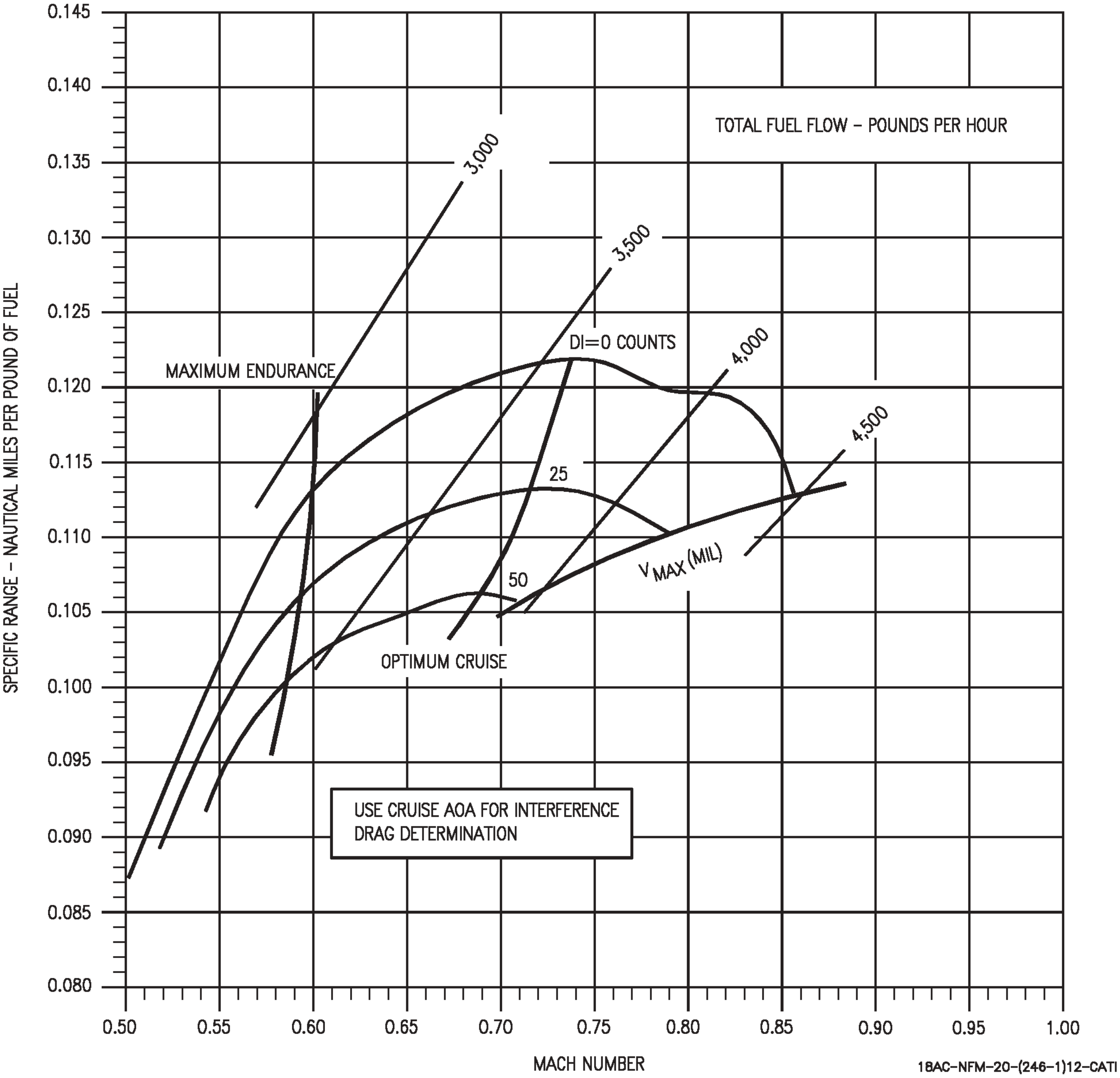


Figure 11-141. Specific Range - One Engine Operating - 30,000 Feet - 30,000 Pounds - F404-GE-400

COMBAT SPECIFIC RANGE

F404-GE-400
STABILIZED LEVEL FLIGHT
GROSS WEIGHT = 34,000 POUNDS

AIRCRAFT CONFIGURATION
(2) AIM-9 + (2) AIM-7

REMARKS
ENGINE(S): (2) F404-GE-400
U.S. STANDARD DAY, 1962

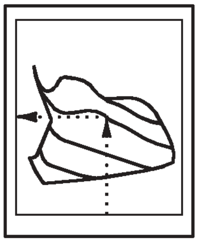
NOTE

CHANGE IN GROSS WEIGHT HAS NO APPRECIABLE EFFECT ON FUEL FLOW

——— STANDARD DAY
– — — STANDARD DAY + 10° C

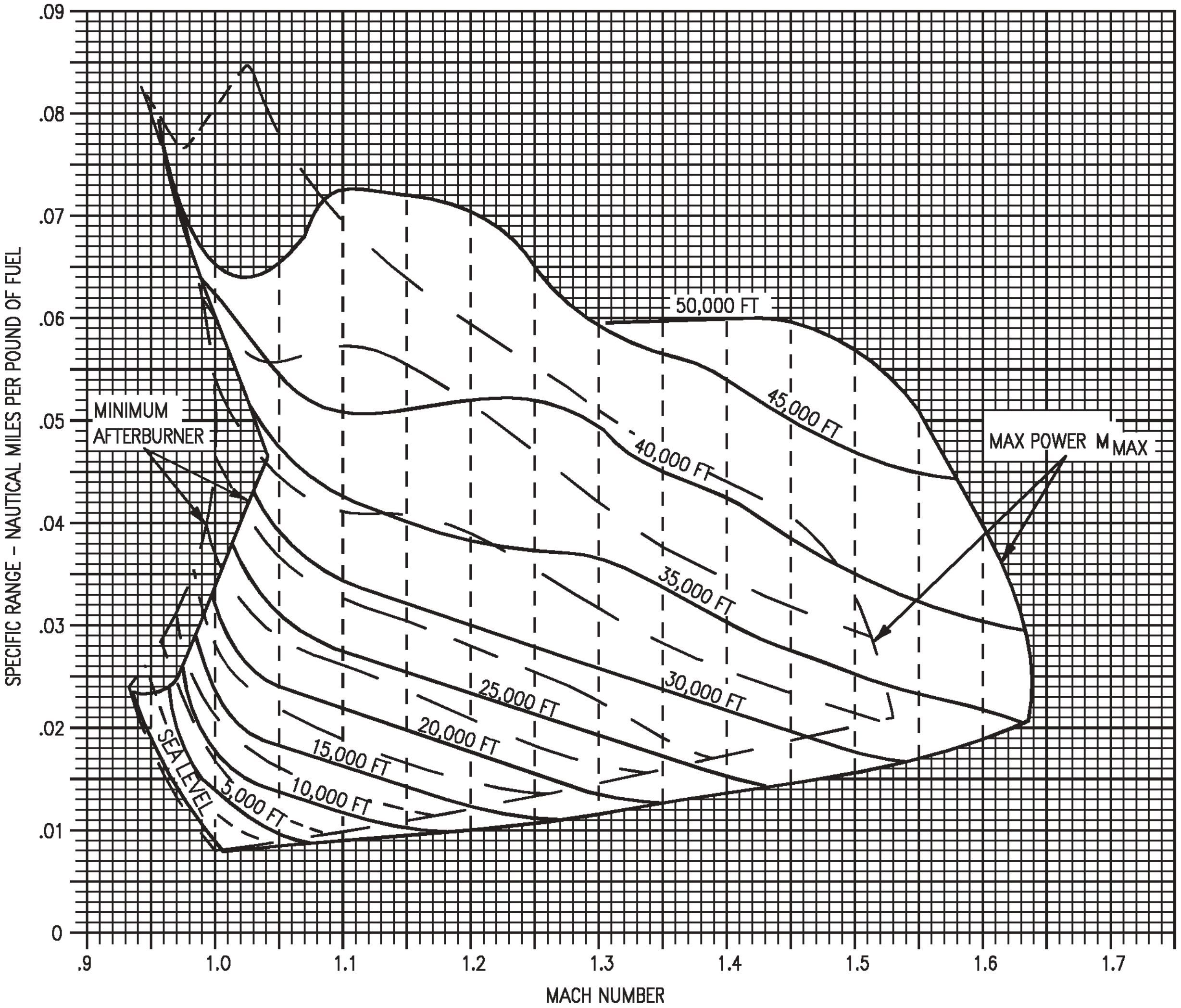
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	−5	12
15,000	−15	6
20,000	−25	−12
25,000	−35	−30
30,000	−44	−48
35,000	−54	−66
40,000	−57	−70
70,000	−57	−70

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(315-2)12-CATI

Figure 11-142. Combat Specific Range - Stabilized Level Flight - 34,000 Pounds - F404-GE-400
(Sheet 1 of 4)

COMBAT SPECIFIC RANGE

F404-GE-400

STABILIZED LEVEL FLIGHT
GROSS WEIGHT = 34,000 POUNDS

AIRCRAFT CONFIGURATION
(2) AIM-9 + (2) AIM-7
+ ℄ TANK

REMARKS
ENGINE(S): (2) F404-GE-400
U.S. STANDARD DAY, 1962

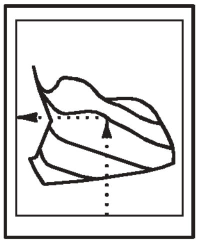
NOTE

CHANGE IN GROSS WEIGHT HAS NO APPRECIABLE EFFECT ON FUEL FLOW

——— STANDARD DAY
— — - STANDARD DAY + 10° C

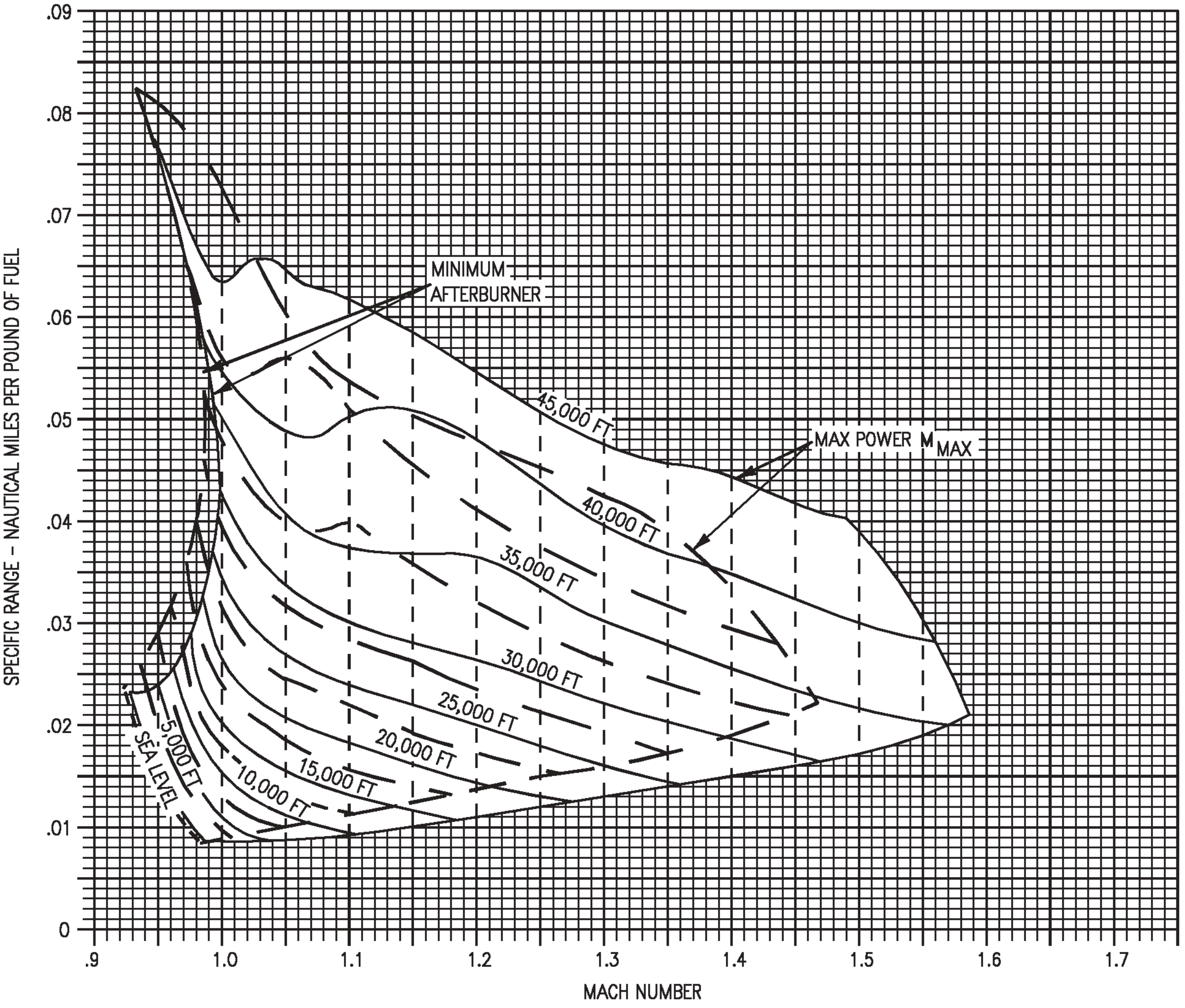
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	-5	12
15,000	-15	6
20,000	-25	-12
25,000	-35	-30
30,000	-44	-48
35,000	-54	-66
40,000	-57	-70
70,000	-57	-70

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(315-3)12-CATI

Figure 11-142. Combat Specific Range - Stabilized Level Flight - 34,000 Pounds - F404-GE-400
(Sheet 2 of 4)

COMBAT SPECIFIC RANGE

F404-GE-400

STABILIZED LEVEL FLIGHT
GROSS WEIGHT = 34,000 POUNDS

AIRCRAFT CONFIGURATION
(4) AIM-9 + (2) AIM-7
+ FLIR

REMARKS
ENGINE(S): (2) F404-GE-400
U.S. STANDARD DAY, 1962

NOTE

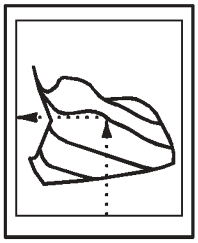
CHANGE IN GROSS WEIGHT HAS NO APPRECIABLE EFFECT ON FUEL FLOW

———— STANDARD DAY
— — - STANDARD DAY + 10° C

STANDARD TEMPERATURE

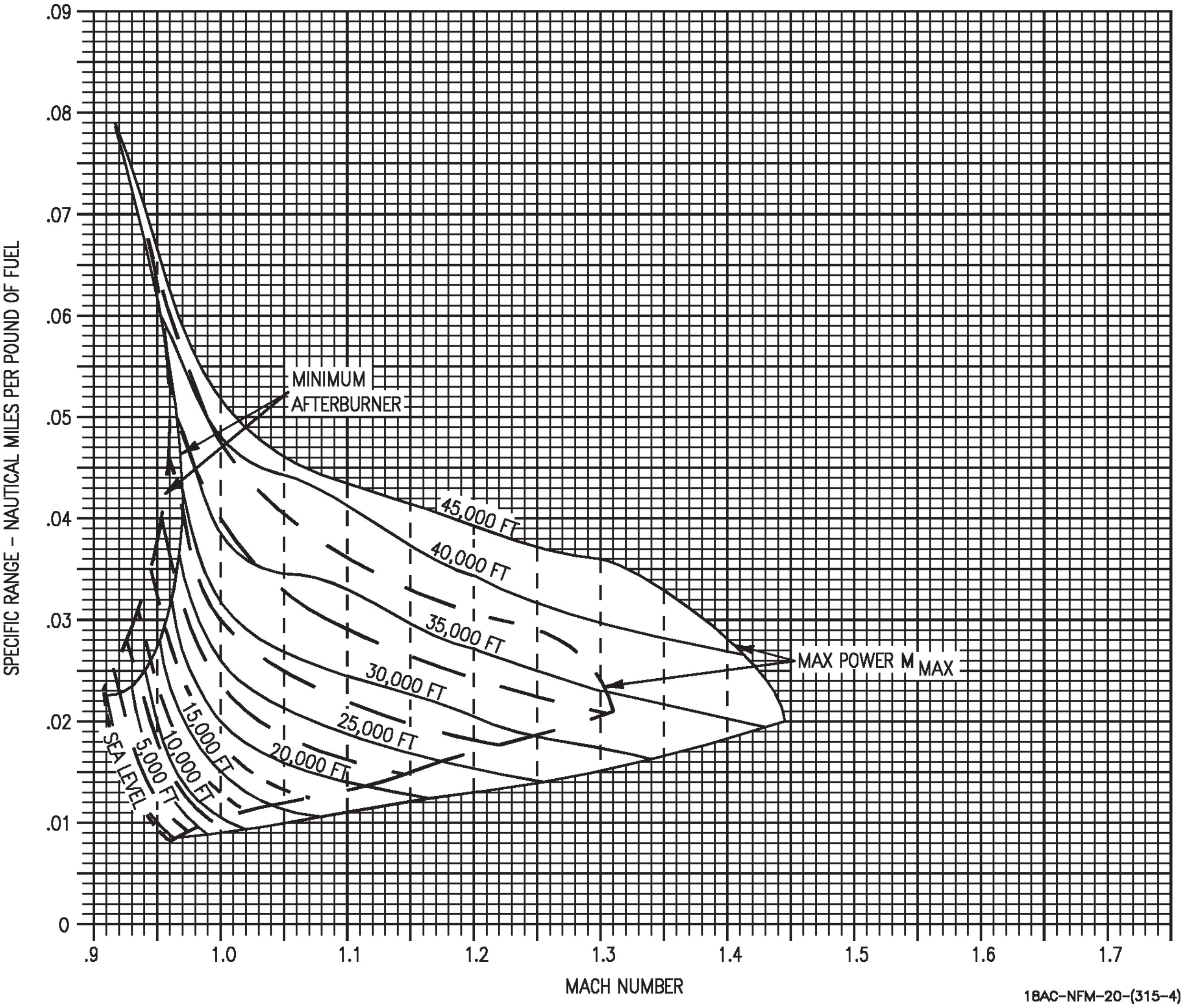
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	-5	12
15,000	-15	6
20,000	-25	-12
25,000	-35	-30
30,000	-44	-48
35,000	-54	-66
40,000	-57	-70
70,000	-57	-70

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(315-4)12-CATI

Figure 11-142. Combat Specific Range - Stabilized Level Flight - 34,000 Pounds - F404-GE-400 (Sheet 3 of 4)

COMBAT SPECIFIC RANGE

F404–GE–400

STABILIZED LEVEL FLIGHT
GROSS WEIGHT = 34,000 POUNDS

AIRCRAFT CONFIGURATION
(4) AIM–9 + (2) AIM–7
+ ℄ TANK + FLIR

REMARKS
ENGINE(S): (2) F404–GE–400
U.S. STANDARD DAY, 1962

NOTE

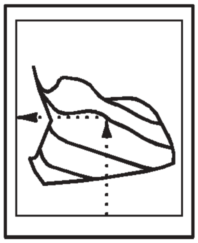
CHANGE IN GROSS WEIGHT HAS NO APPRECIABLE EFFECT ON FUEL FLOW

——— STANDARD DAY

– — — STANDARD DAY + 10° C

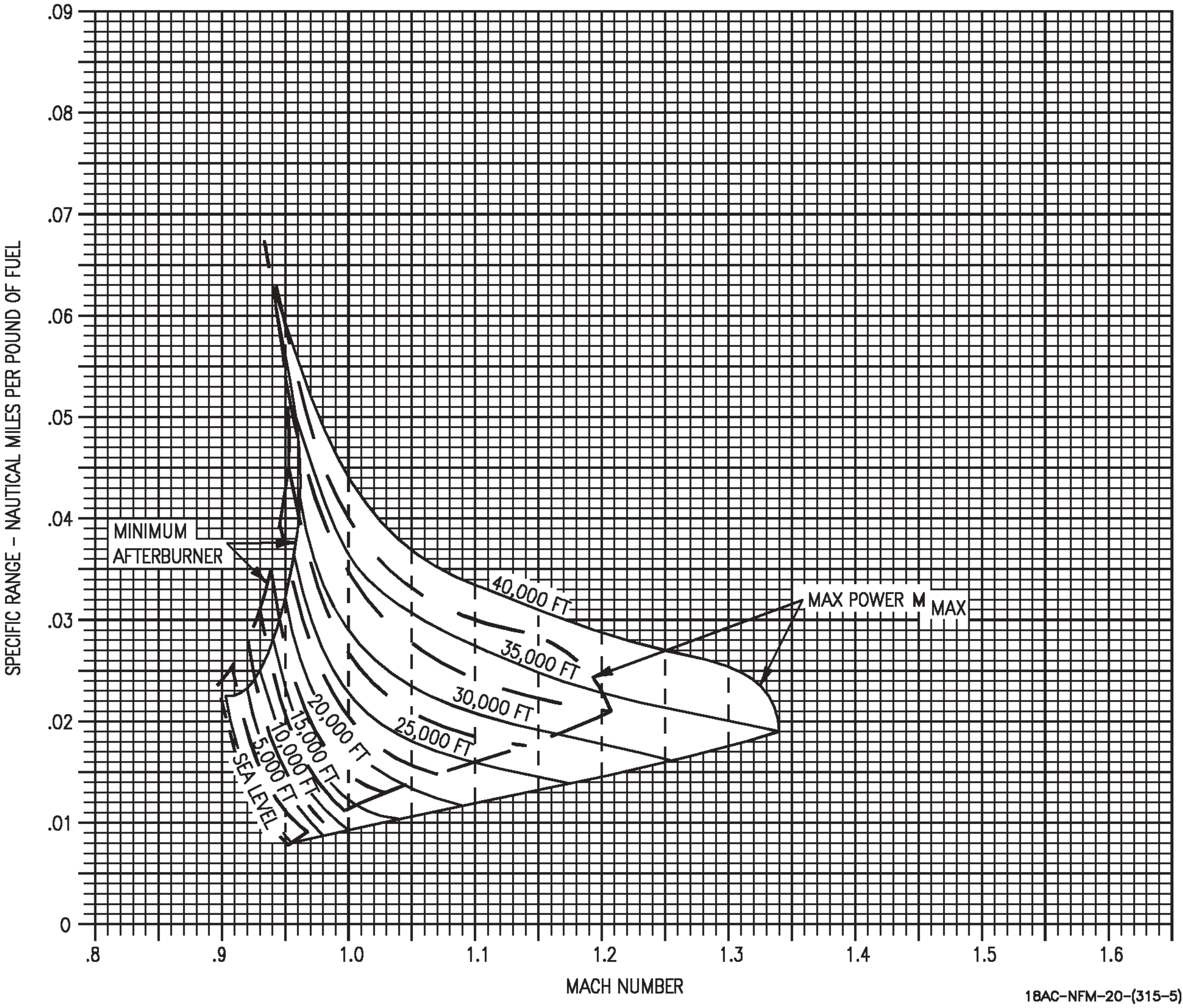
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(315–5)12–CATI

Figure 11-142. Combat Specific Range - Stabilized Level Flight - 34,000 Pounds - F404-GE-400 (Sheet 4 of 4)

COMBAT FUEL FLOW

F404-GE-400

AIRCRAFT CONFIGURATION
(2) AIM-9 + (2) AIM-7

STABILIZED LEVEL FLIGHT
GROSS WEIGHT = 34,000 POUNDS

REMARKS
ENGINE(S): (2) F404-GE-400
U.S. STANDARD DAY, 1962

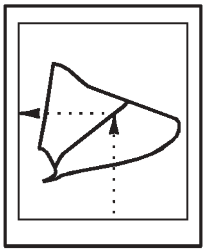
NOTE

CHANGE IN GROSS WEIGHT HAS NO APPRECIABLE EFFECT ON FUEL FLOW

——— STANDARD DAY
- — — STANDARD DAY + 10° C

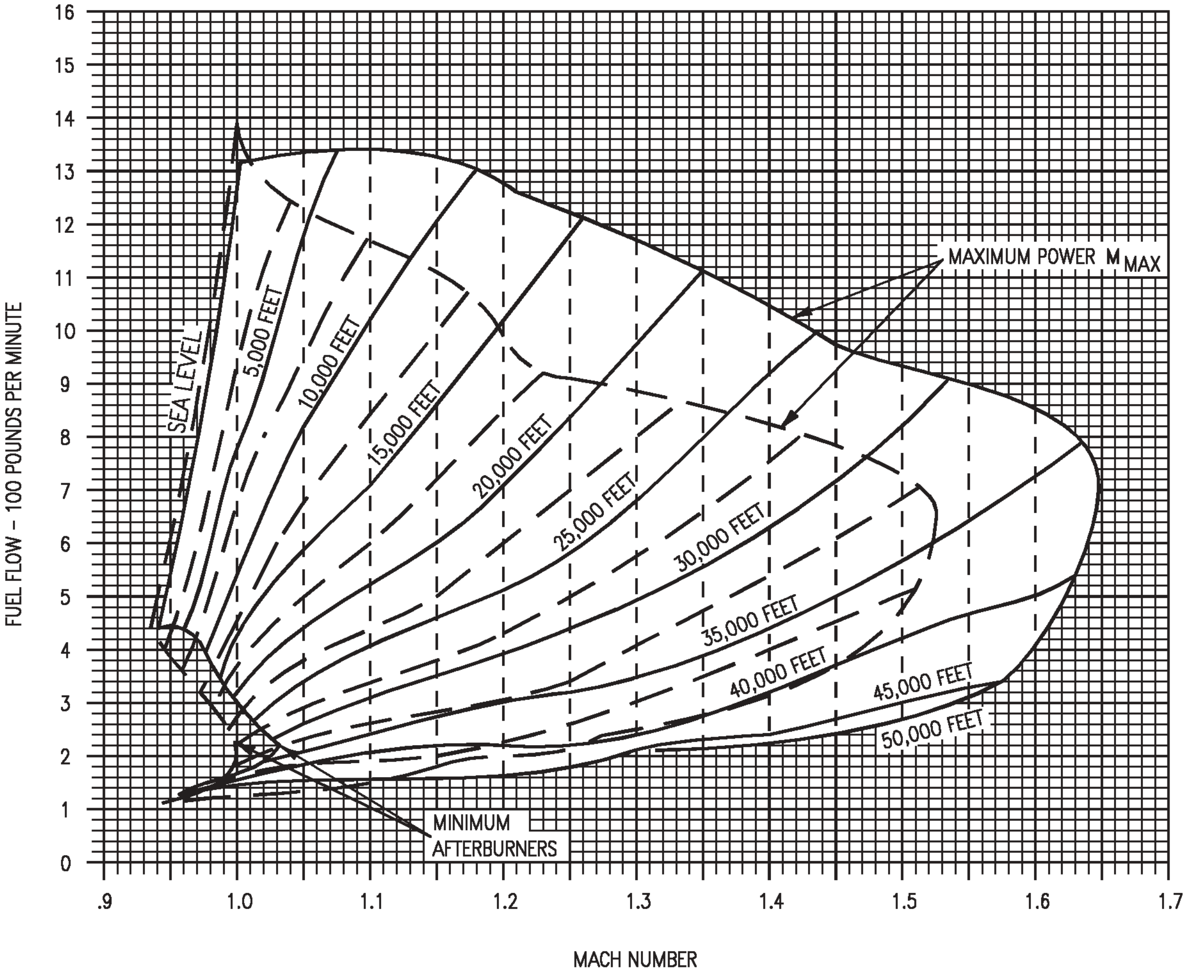
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	-5	12
15,000	-15	6
20,000	-25	-12
25,000	-35	-30
30,000	-44	-48
35,000	-54	-66
40,000	-57	-70
70,000	-57	-70

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(316-2)12-CATI

Figure 11-143. Combat Fuel Flow - Stabilized Level Flight - 34,000 Pounds - F404-GE-400
(Sheet 1 of 4)

COMBAT FUEL FLOW

F404–GE–400

STABILIZED LEVEL FLIGHT
GROSS WEIGHT = 34,000 POUNDS

AIRCRAFT CONFIGURATION
(2) AIM–9 + (2) AIM–7
+ ℄ TANK

REMARKS
ENGINE(S): (2) F404–GE–400
U.S. STANDARD DAY, 1962

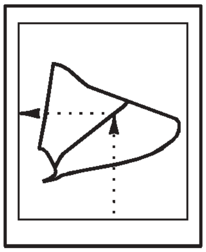
NOTE

CHANGE IN GROSS WEIGHT HAS NO APPRECIABLE EFFECT ON FUEL FLOW

——— STANDARD DAY
– — — STANDARD DAY + 10° C

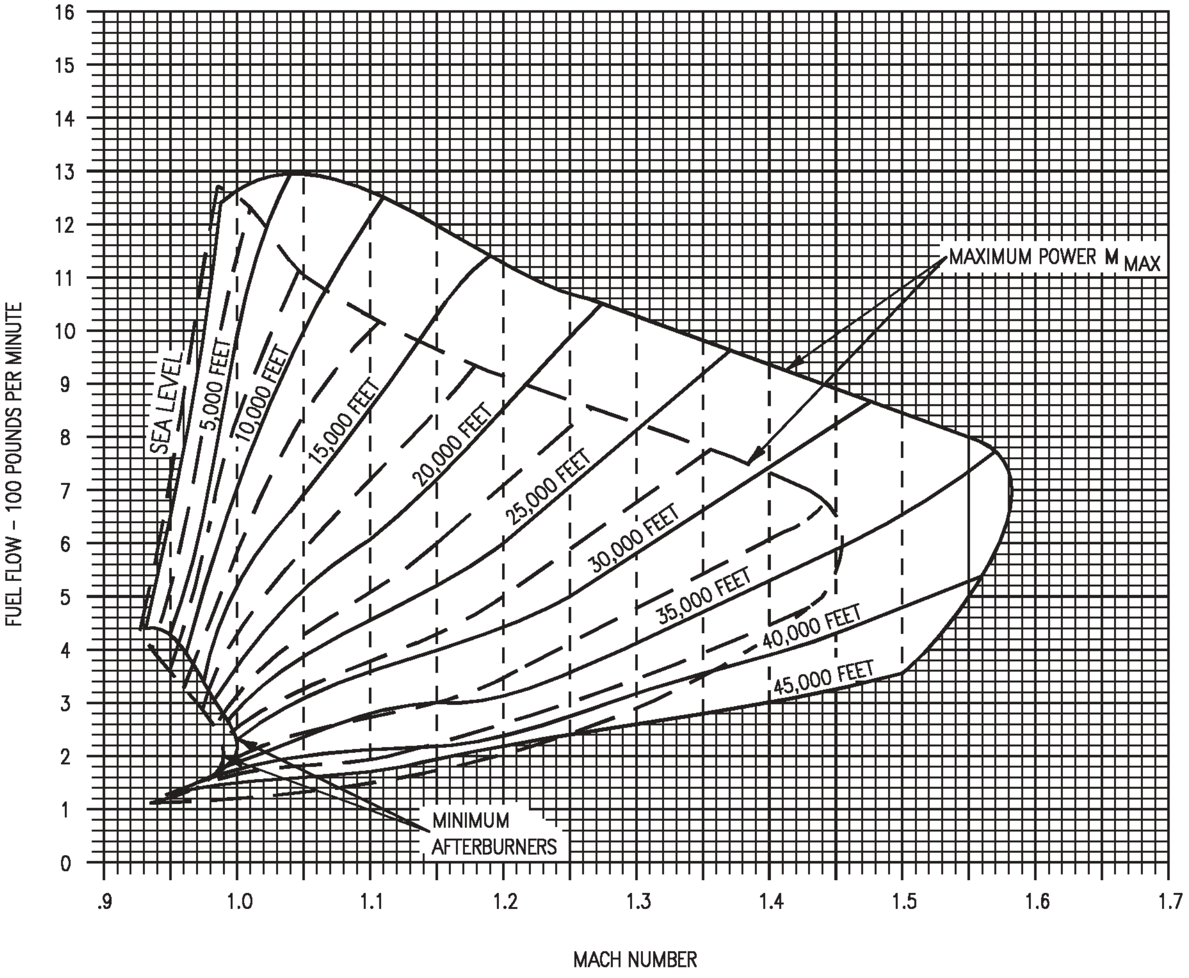
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(316–3)12–CATI

Figure 11-143. Combat Fuel Flow - Stabilized Level Flight - 34,000 Pounds - F404-GE-400 (Sheet 2 of 4)

COMBAT FUEL FLOW

F404–GE–400

STABILIZED LEVEL FLIGHT
GROSS WEIGHT = 34,000 POUNDS

AIRCRAFT CONFIGURATION
(4) AIM–9 + (2) AIM–7
+ FLIR

REMARKS
ENGINE(S): (2) F404–GE–400
U.S. STANDARD DAY, 1962

NOTE

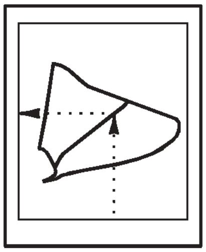
CHANGE IN GROSS WEIGHT HAS NO APPRECIABLE EFFECT ON FUEL FLOW

———— STANDARD DAY
– — — STANDARD DAY + 10° C

STANDARD TEMPERATURE

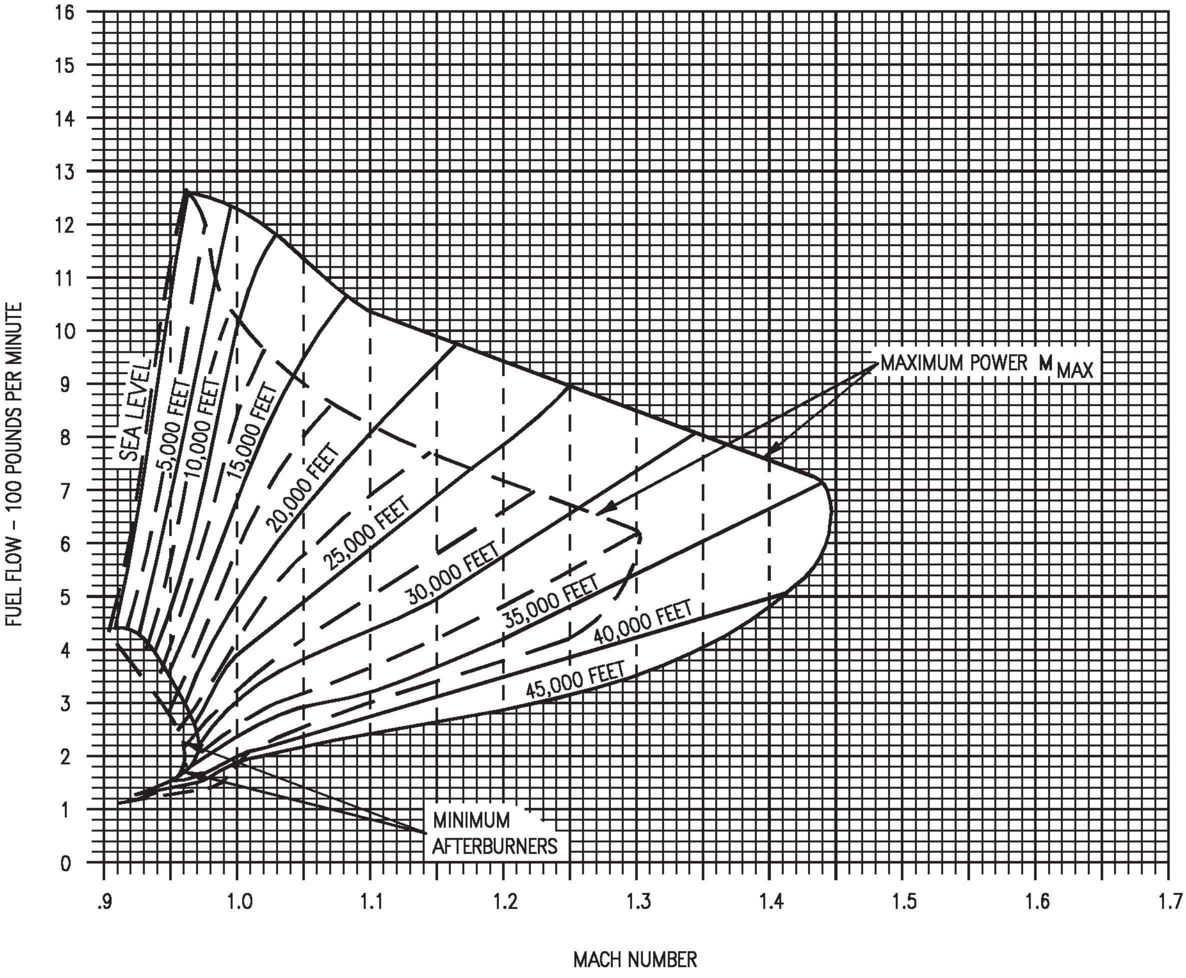
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(316–4)12–CATI

Figure 11-143. Combat Fuel Flow - Stabilized Level Flight - 34,000 Pounds - F404-GE-400
(Sheet 3 of 4)

COMBAT FUEL FLOW

F404-GE-400

STABILIZED LEVEL FLIGHT
GROSS WEIGHT = 34,000 POUNDS

AIRCRAFT CONFIGURATION
(4) AIM-9 + (2) AIM-7
+ FLIR + ℄ TANK

REMARKS
ENGINE(S): (2) F404-GE-400
U.S. STANDARD DAY, 1962

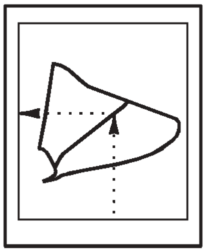
NOTE

CHANGE IN GROSS WEIGHT HAS NO APPRECIABLE EFFECT ON FUEL FLOW

———— STANDARD DAY
– — — STANDARD DAY + 10° C

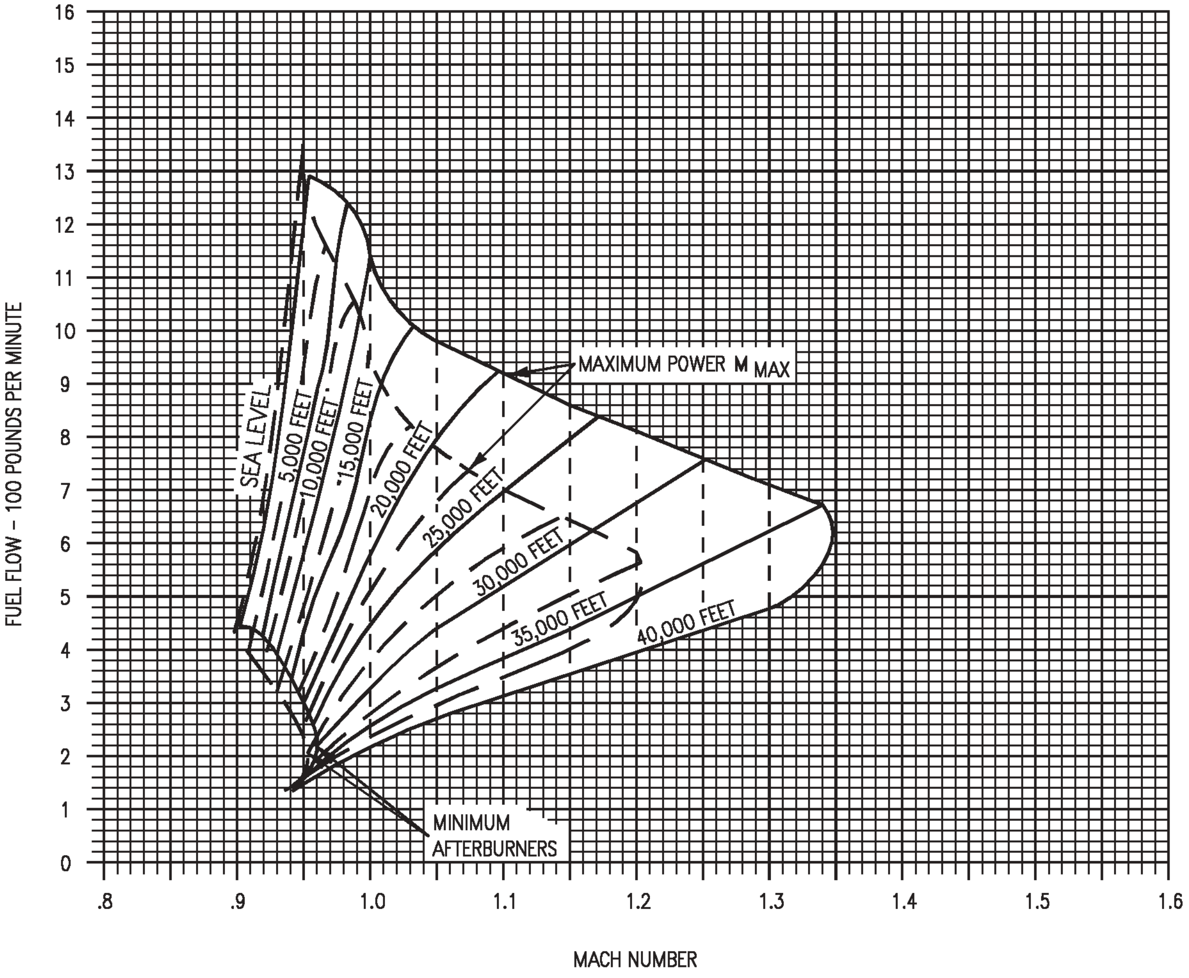
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	-5	12
15,000	-15	6
20,000	-25	-12
25,000	-35	-30
30,000	-44	-48
35,000	-54	-66
40,000	-57	-70
70,000	-57	-70

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(316-5)12-CATI

Figure 11-143. Combat Fuel Flow - Stabilized Level Flight - 34,000 Pounds - F404-GE-400 (Sheet 4 of 4)

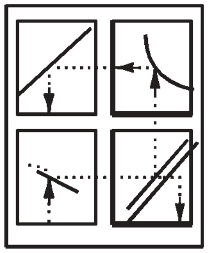
CONSTANT ALTITUDE/LONG RANGE CRUISE

SPEED – TIME – FUEL

AIRCRAFT CONFIGURATION
ALL DRAG INDEXES

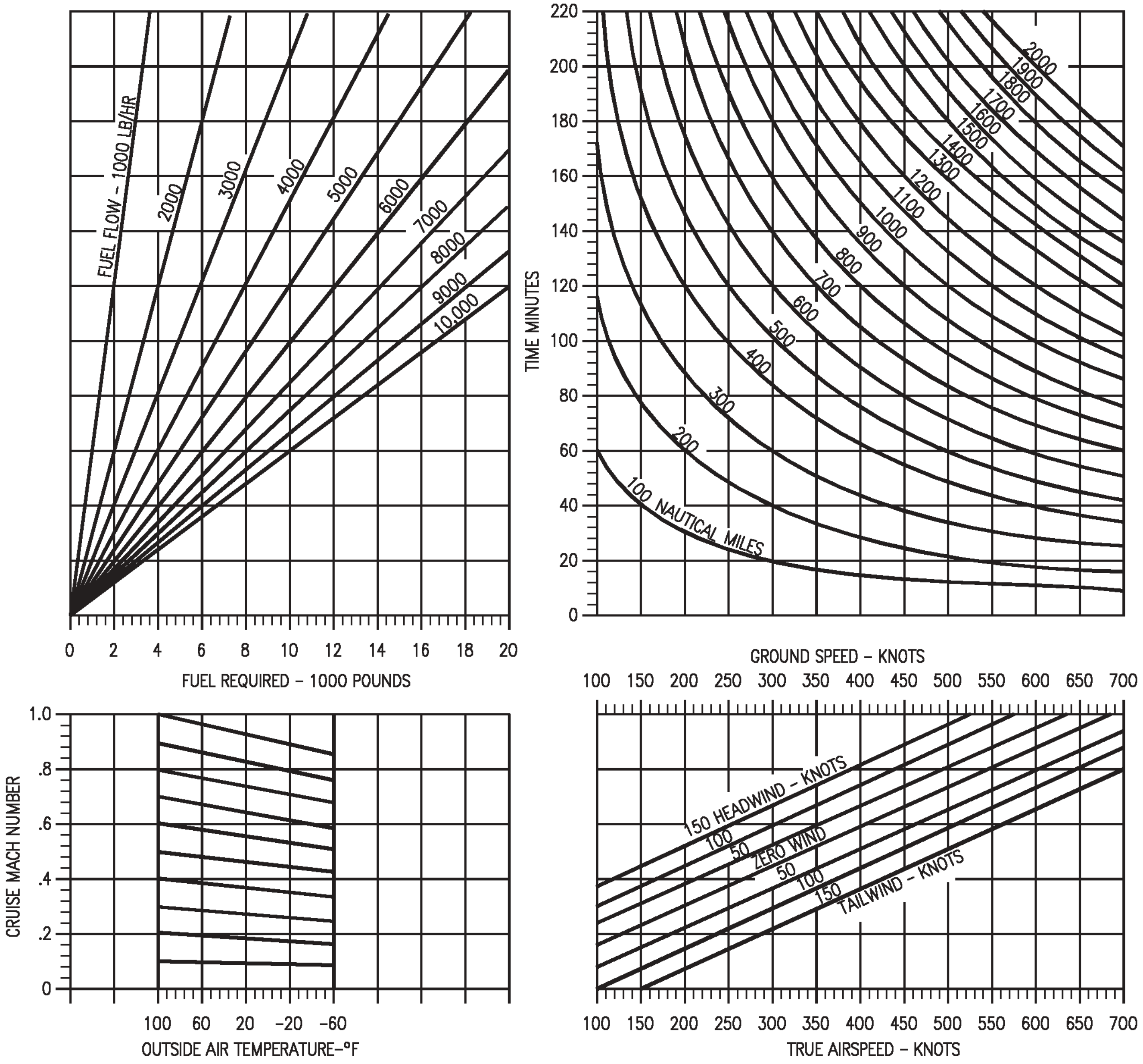
REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(249-1)11-CATI

Figure 11-144. Constant Altitude/Long Range Cruise
(Sheet 1 of 2)

CONSTANT ALTITUDE/LONG RANGE CRUISE

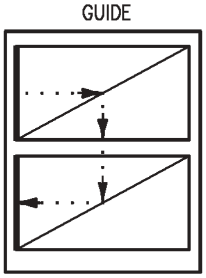
TRUE AIRSPEED AND FUEL FLOW

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
U.S. STANDARD DAY, 1962

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



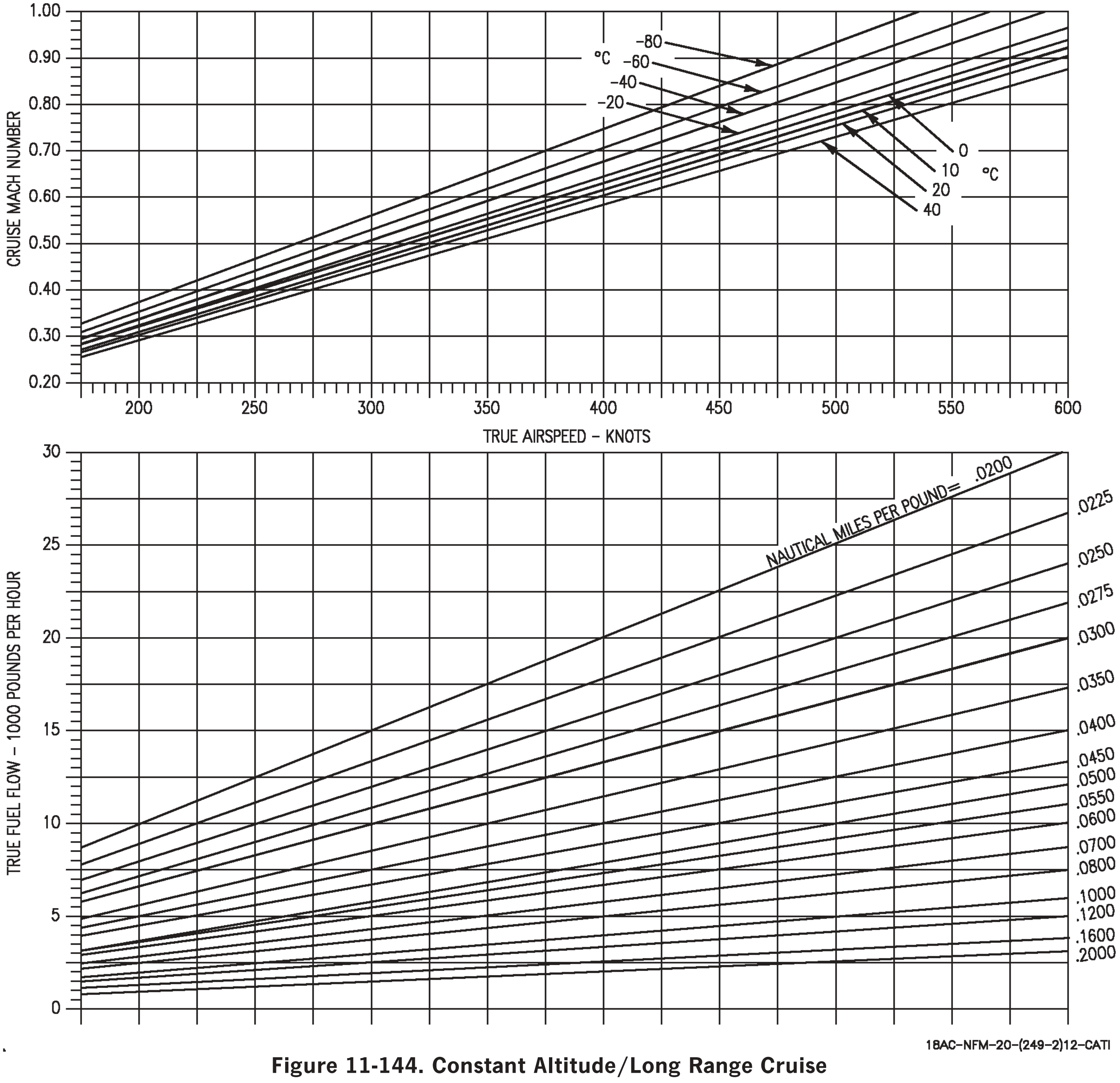


Figure 11-144. Constant Altitude/Long Range Cruise
(Sheet 2 of 2)

RANGEWIND CORRECTION

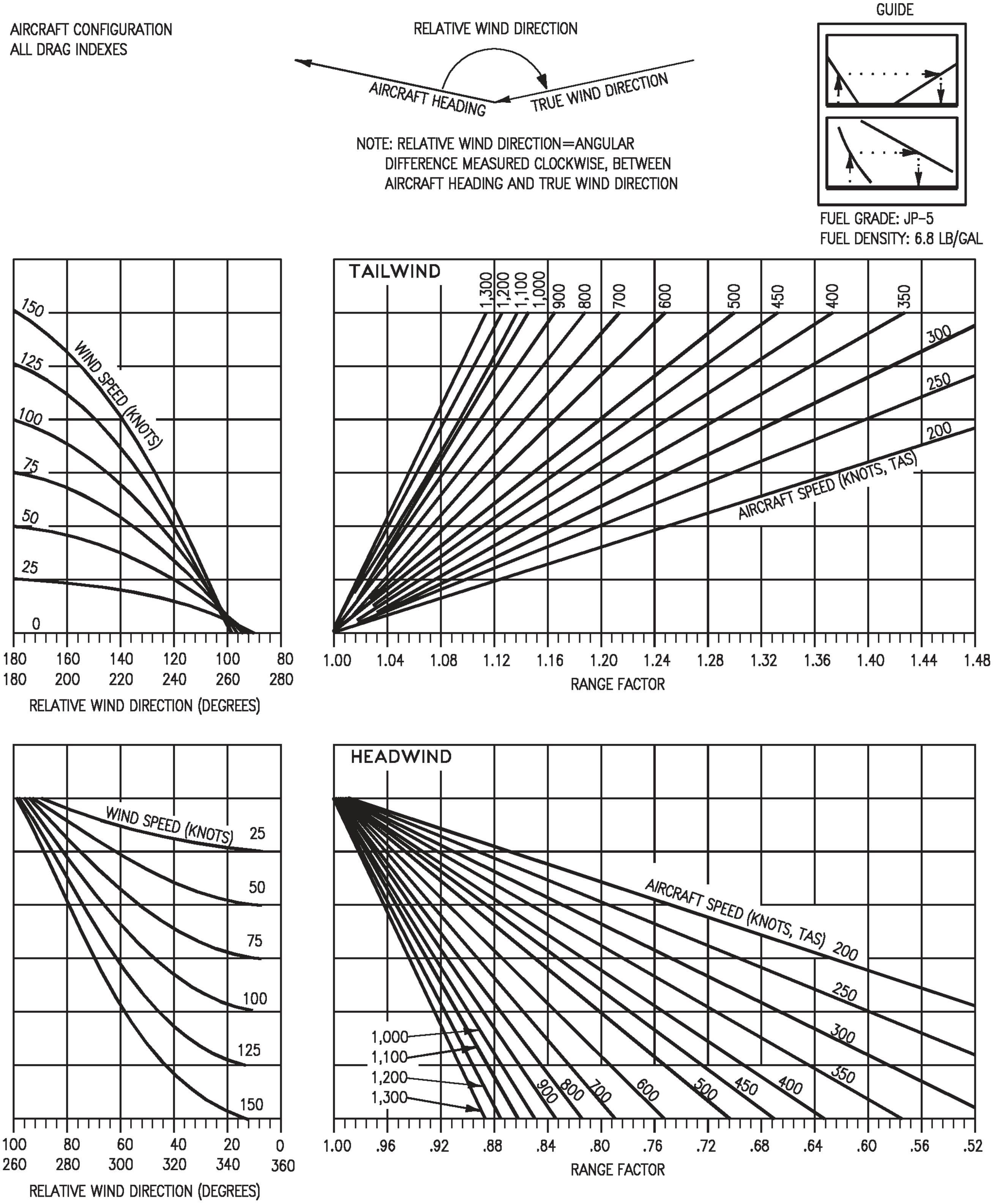


Figure 11-145. Rangewind Correction

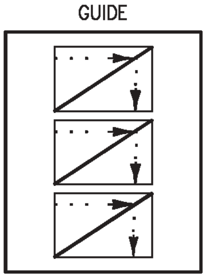
HEADWIND EFFECTS ON BINGO FUEL

F404–GE–400

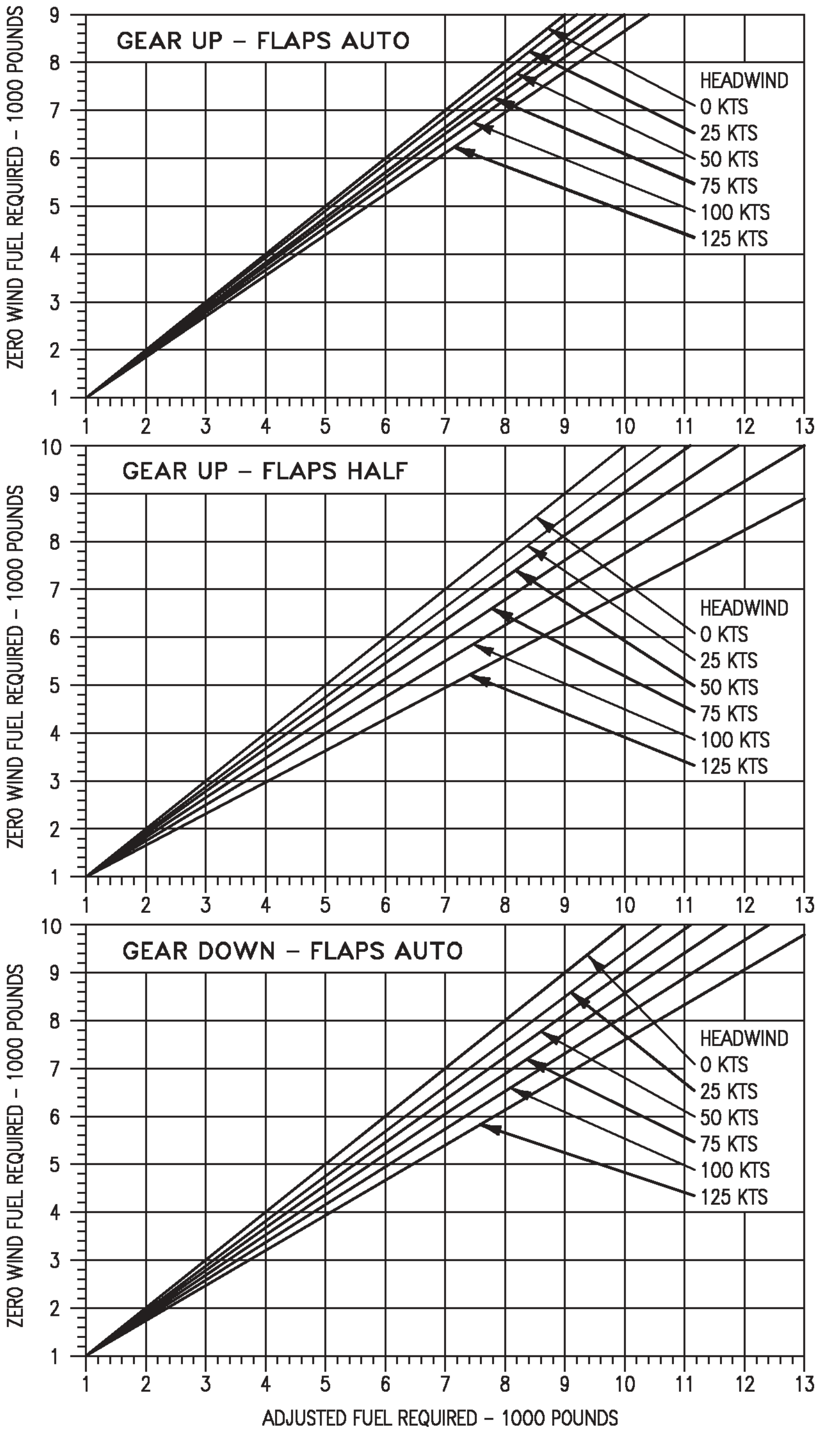
CRUISE AT BEST ALTITUDE

DATE: 16 NOVEMBER 1989
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(486–1)13–CATI

Figure 11-145a. Headwind Effects on Bingo Fuel - Cruise at Best Altitude - F404-GE-400

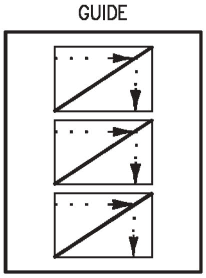
HEADWIND EFFECTS ON BINGO FUEL

F404–GE–400

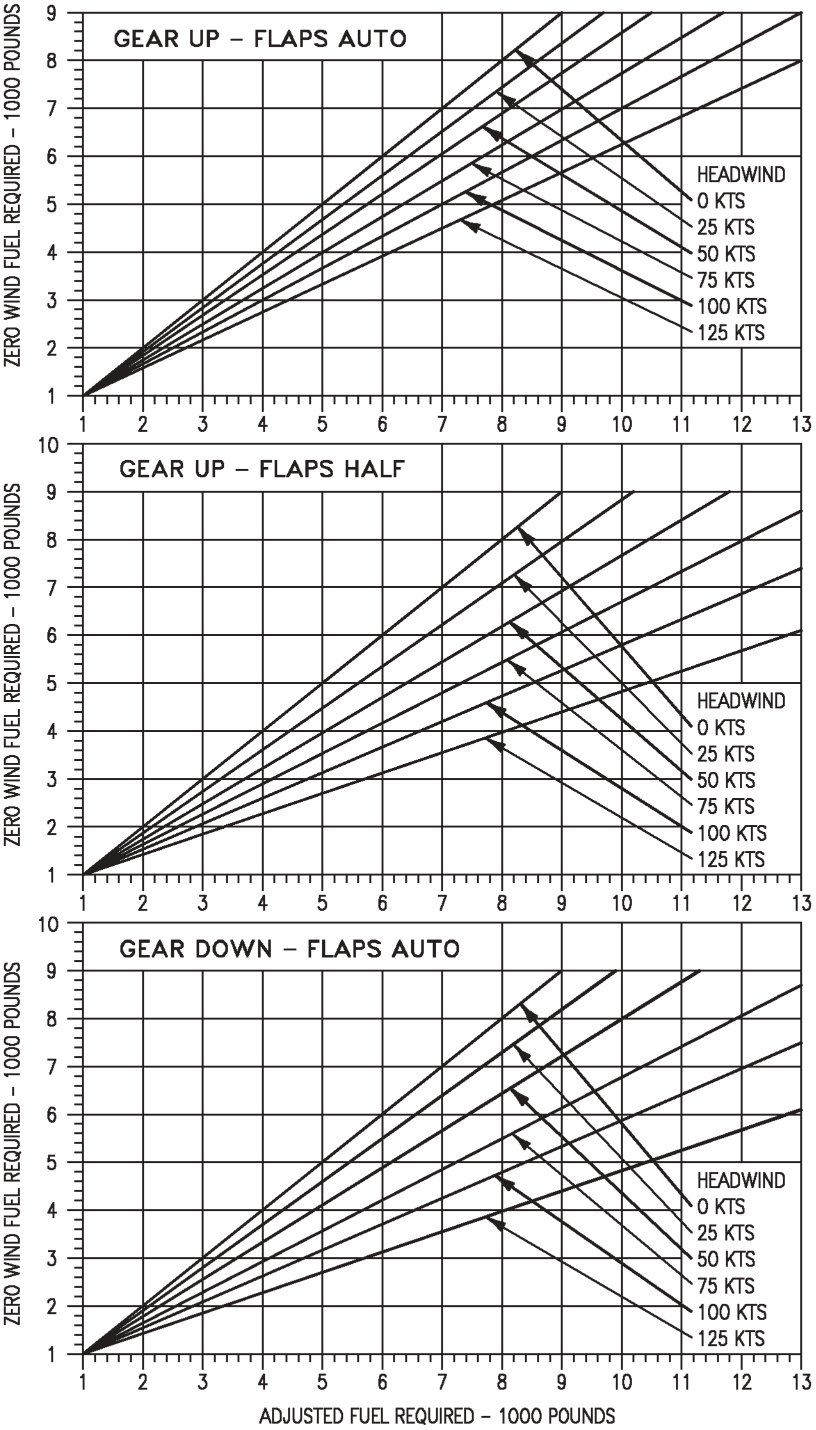
CRUISE AT SEA LEVEL

DATE: 16 NOVEMBER 1989
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(486–2)13–CATI

Figure 11-145b. Headwind Effects on Bingo Fuel - Cruise at Sea Level - F404-GE-400

BINGO
F404-GE-400
GEAR UP - FLAPS AUTO
WEIGHT - 26,000 POUNDS
(WEIGHT = ZERO FUEL WEIGHT)

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

		CLIMB	CRUISE		DESCEND			SEA LEVEL CRUISE		
	INBD DIST NM	MACH OR KCAS	ALT FEET	SPEED CAS KNOTS	DIST NM	FUEL REQD LB	TIME REQD MIN	FUEL REQD LB	SPEED CAS KNOTS	TIME REQD MIN
DRAG INDEX 0 COUNTS	200	505 KCAS to M = 0.86	40,000	258	73	3,090	29	4,480	279	43
	180		40,000	258	73	2,970	26	4,170	279	39
	160		40,000	258	73	2,840	24	3,880	279	34
	140		40,000	258	73	2,720	21	3,580	278	30
	120		39,000	263	71	2,600	19	3,280	278	26
	100		37,000	272	66	2,470	16	2,980	278	22
	80		33,000	280	58	2,340	14	2,680	277	17
	60		26,000	278	44	2,190	11	2,390	277	13
	40		18,000	277	30	2,010	8	2,090	277	9
	20		7,000	278	12	1,790	4	1,800	276	4
DRAG INDEX 50 COUNTS	200	475 KCAS to M = 0.82	40,000	254	65	3,270	29	4,760	275	44
	180		40,000	254	65	3,130	26	4,430	275	39
	160		40,000	253	65	2,990	24	4,100	274	35
	140		40,000	253	65	2,850	21	3,770	274	31
	120		40,000	253	65	2,710	19	3,450	274	26
	100		39,000	258	62	2,570	16	3,120	273	22
	80		33,000	268	51	2,430	13	2,800	273	18
	60		28,000	268	42	2,260	11	2,470	272	13
	40		18,000	269	27	2,070	7	2,150	272	9
	20		3,000	270	5	1,820	4	1,830	272	4
DRAG INDEX 100 COUNTS	200	450 KCAS to M = 0.78	40,000	259	57	3,470	28	5,040	271	44
	180		40,000	259	57	3,310	26	4,680	270	40
	160		40,000	259	57	3,150	23	4,330	270	36
	140		40,000	259	57	2,990	21	3,970	269	31
	120		40,000	258	57	2,830	18	3,610	269	27
	100		39,000	256	56	2,670	16	3,260	268	22
	80		35,000	259	48	2,510	13	2,910	268	18
	60		28,000	260	38	2,330	10	2,550	267	13
	40		19,000	262	25	2,120	7	2,200	267	9
	20		3,000	262	4	1,850	4	1,850	266	5
DRAG INDEX 150 COUNTS	200	330 KCAS to M = 0.76	40,000	243	52	3,660	29	5,330	266	45
	180		40,000	243	52	3,490	27	4,940	265	41
	160		40,000	243	52	3,310	24	4,550	265	36
	140		40,000	242	52	3,140	21	4,160	264	32
	120		40,000	242	52	2,960	19	3,780	264	27
	100		39,000	245	50	2,790	16	3,400	263	23
	80		35,000	248	44	2,610	14	3,020	263	18
	60		29,000	252	35	2,410	11	2,640	262	14
	40		17,000	256	20	2,160	8	2,260	262	9
	20		7,000	254	8	1,860	4	1,880	261	5

DATA BASED ON:
1. INITIAL ALTITUDE IS SEA LEVEL.
2. MILITARY THRUST CLIMB TO INDICATED ALTITUDE.
3. 250 KCAS IDLE THRUST DESCENT TO SEA LEVEL (SPEEDBRAKE RETRACTED).
4. FUEL REQUIRED INCLUDES 1500 POUNDS RESERVE FUEL.
5. NO WIND. SEE HEADWIND EFFECTS CHART, FIGURE 11-145.

Figure 11-146. Bingo - Gear Up - Flaps Auto - 26,000 Pounds - F404-GE-400 (Sheet 1 of 2)

BINGO

F404-GE-400

GEAR UP - FLAPS AUTO
WEIGHT - 26,000 POUNDS
(WEIGHT = ZERO FUEL WEIGHT)

REMARKS
ENGINE(S): (2)F4O4-GE-4OO
U.S. STANDARD DAY, 1962

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

		CLIMB	CRUISE		DESCEND			SEA LEVEL CRUISE		
	INBD DIST NM	MACH OR KCAS	ALT FEET	SPEED CAS KNOTS	DIST NM	FUEL REQD LB	TIME REQD MIN	FUEL REQD LB	SPEED CAS KNOTS	TIME REQD MIN
DRAG INDEX 200 COUNTS	200	320 KCAS to M = 0.75	40,000	238	47	3,840	29	5,620	262	46
	180		40,000	238	47	3,650	27	5,200	261	41
	160		40,000	238	47	3,460	24	4,780	260	37
	140		40,000	237	47	3,260	21	4,360	260	32
	120		40,000	237	47	3,070	19	3,950	259	28
	100		40,000	237	47	2,880	16	3,540	258	23
	80		35,000	240	40	2,690	13	3,130	258	19
	60		28,000	246	31	2,470	11	2,720	257	14
	40		17,000	250	19	2,210	8	2,310	256	9
	20		7,000	250	8	1,890	4	1,910	256	5
DRAG INDEX 250 COUNTS	200	300 KCAS to M = 0.72	40,000	232	43	4,030	30	5,910	258	47
	180		40,000	232	43	3,820	27	5,450	257	42
	160		40,000	232	43	3,600	25	5,010	256	37
	140		40,000	231	43	3,390	22	4,560	256	33
	120		40,000	231	43	3,180	19	4,120	255	28
	100		38,000	229	40	2,970	16	3,680	254	24
	80		34,000	236	35	2,760	14	3,240	253	19
	60		28,000	240	29	2,530	11	2,800	253	14
	40		17,000	244	17	2,250	8	2,370	252	10
	20		7,000	245	7	1,910	4	1,940	251	5
DRAG INDEX 300 COUNTS	200	280 KCAS to M = 0.68	39,000	226	39	4,220	31	6,190	254	47
	180		39,000	226	39	3,990	28	5,710	253	43
	160		39,000	226	39	3,750	25	5,230	252	38
	140		39,000	225	39	3,520	23	4,750	252	33
	120		39,000	225	39	3,300	20	4,280	251	29
	100		38,000	225	37	3,070	17	3,810	250	24
	80		34,000	230	33	2,830	14	3,350	249	19
	60		28,000	235	26	2,590	11	2,880	248	15
	40		17,000	238	16	2,290	8	2,420	247	10
	20		7,000	241	6	1,940	5	1,960	246	5

DATA BASED ON:
1. INITIAL ALTITUDE IS SEA LEVEL.
2. MILITARY THRUST CLIMB TO INDICATED ALTITUDE.
3. 250 KCAS IDLE THRUST DESCENT TO SEA LEVEL (SPEEDBRAKE RETRACTED).
4. FUEL REQUIRED INCLUDES 1500 POUNDS RESERVE FUEL.
5. NO WIND. SEE HEADWIND EFFECTS CHART, FIGURE 11-145.

Figure 11-146. Bingo - Gear Up - Flaps Auto - 26,000 Pounds - F404-GE-400 (Sheet 2 of 2)

BINGO
F404-GE-400

GEAR UP - FLAPS AUTO
WEIGHT - 30,000 POUNDS
(WEIGHT = ZERO FUEL WEIGHT)

REMARKS
ENGINE(S): (2)F4O4-GE-4OO
U.S. STANDARD DAY, 1962

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

		CLIMB	CRUISE		DESCEND			SEA LEVEL CRUISE		
	INBD DIST NM	MACH OR KCAS	ALT FEET	SPEED CAS KNOTS	DIST NM	FUEL REQD LB	TIME REQD MIN	FUEL REQD LB	SPEED CAS KNOTS	TIME REQD MIN
DRAG INDEX 0 COUNTS	200	505 KCAS to M = 0.86	40,000	262	74	3,230	29	4,610	302	40
	180		40,000	262	74	3,100	26	4,290	302	36
	160		39,000	266	72	2,960	24	3,980	301	32
	140		39,000	266	72	2,820	21	3,670	301	28
	120		38,000	271	69	2,680	19	3,360	300	24
	100		35,000	286	62	2,540	16	3,050	299	20
	80		32,000	295	56	2,400	14	2,740	299	16
	60		24,000	297	42	2,230	11	2,430	298	12
	40		17,000	294	29	2,040	8	2,120	297	8
	20		3,000	296	5	1,800	4	1,810	297	4
DRAG INDEX 50 COUNTS	200	475 KCAS to M = 0.82	40,000	256	66	3,430	29	4,920	293	41
	180		40,000	256	66	3,280	26	4,570	292	37
	160		40,000	256	66	3,120	24	4,230	291	33
	140		39,000	261	64	2,970	21	3,880	290	29
	120		38,000	286	62	2,810	19	3,540	289	25
	100		36,000	278	58	2,650	16	3,200	289	21
	80		32,000	288	50	2,490	13	2,860	288	17
	60		26,000	287	40	2,310	11	2,520	287	13
	40		18,000	285	28	2,100	7	2,180	286	8
	20		3,000	285	5	1,830	4	1,840	285	4
DRAG INDEX 100 COUNTS	200	450 KCAS to M = 0.78	40,000	253	60	3,630	29	5,220	282	43
	180		40,000	253	60	3,460	26	4,830	281	38
	160		40,000	253	60	3,280	24	4,460	280	34
	140		40,000	254	60	3,110	21	4,080	280	30
	120		40,000	254	60	2,940	19	3,710	279	26
	100		36,000	269	52	2,760	16	3,340	279	22
	80		33,000	273	47	2,580	13	2,970	279	17
	60		27,000	277	38	2,380	10	2,600	278	13
	40		18,000	278	25	2,150	7	2,230	278	9
	20		3,000	278	4	1,860	4	1,870	277	4
DRAG INDEX 150 COUNTS	200	330 KCAS to M = 0.76	40,000	259	54	3,870	29	5,520	277	43
	180		40,000	259	54	3,670	26	5,110	277	39
	160		40,000	259	54	3,480	24	4,700	276	35
	140		40,000	259	54	3,280	21	4,290	276	30
	120		38,000	258	51	3,090	19	3,890	275	26
	100		37,000	259	49	2,890	16	3,490	275	22
	80		33,000	265	43	2,690	14	3,090	274	18
	60		28,000	267	36	2,470	11	2,690	273	13
	40		14,000	274	18	2,200	8	2,290	273	9
	20		7,000	273	9	1,880	4	1,900	272	4

DATA BASED ON:

1. INITIAL ALTITUDE IS SEA LEVEL.
2. MILITARY THRUST CLIMB TO INDICATED ALTITUDE.
3. 250 KCAS IDLE THRUST DESCENT TO SEA LEVEL (SPEEDBRAKE RETRACTED).
4. FUEL REQUIRED INCLUDES 1500 POUNDS RESERVE FUEL.
5. NO WIND. SEE HEADWIND EFFECTS CHART, FIGURE 11-145.

Figure 11-147. Bingo - Gear Up - Flaps Auto - 30,000 Pounds - F404-GE-400 (Sheet 1 of 2)

BINGO

F404-GE-400

GEAR UP - FLAPS AUTO
WEIGHT - 30,000 POUNDS
(WEIGHT = ZERO FUEL WEIGHT)

REMARKS
ENGINE(S): (2)F4O4-GE-4OO
U.S. STANDARD DAY, 1962

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

		CLIMB	CRUISE		DESCEND			SEA LEVEL CRUISE		
	INBD DIST	MACH OR KCAS	ALT	SPEED CAS	DIST	FUEL REQD	TIME REQD	FUEL REQD	SPEED CAS	TIME REQD
	NM		FEET	KNOTS	NM	LB	MIN	LB	KNOTS	MIN
DRAG INDEX 200 COUNTS	200	320 KCAS to M = 0.75	40,000	243	50	4,070	29	5,820	274	44
	180		40,000	243	50	3,860	27	5,380	273	40
	160		40,000	243	50	3,640	24	4,940	272	35
	140		39,000	247	48	3,430	22	4,500	272	31
	120		38,000	250	47	3,210	19	4,070	271	27
	100		37,000	253	45	3,000	16	3,640	270	22
	80		33,000	256	40	2,770	14	3,210	270	18
	60		27,000	259	32	2,540	11	2,780	269	13
	40		14,000	266	16	2,250	8	2,350	269	9
	20		7,000	267	8	1,910	4	1,930	268	4
DRAG INDEX 250 COUNTS	200	300 KCAS to M = 0.72	39,000	242	45	4,280	30	6,120	270	45
	180		39,000	242	45	4,050	27	5,650	269	40
	160		39,000	242	45	3,810	25	5,180	268	36
	140		38,000	245	43	3,570	22	4,710	268	31
	120		38,000	245	43	3,340	19	4,240	267	27
	100		36,000	248	40	3,100	17	3,780	266	23
	80		33,000	248	37	2,860	14	3,320	266	18
	60		28,000	254	31	2,600	11	2,860	265	14
	40		14,000	261	15	2,300	8	2,410	265	9
	20		7,000	261	7	1,930	4	1,960	264	5
DRAG INDEX 300 COUNTS	200	280 KCAS to M = 0.68	37,000	240	39	4,510	31	6,410	266	45
	180		37,000	240	39	4,240	28	5,910	265	41
	160		37,000	240	39	3,980	25	5,410	265	36
	140		37,000	240	39	3,720	23	4,910	264	32
	120		36,000	241	37	3,460	20	4,420	263	27
	100		36,000	241	37	3,210	17	3,930	262	23
	80		33,000	243	34	2,940	14	3,440	262	18
	60		27,000	249	27	2,670	11	2,950	261	14
	40		15,000	255	15	2,350	8	2,470	260	9
	20		7,000	255	7	1,960	4	1,980	260	5

DATA BASED ON:

1. INITIAL ALTITUDE IS SEA LEVEL.
2. MILITARY THRUST CLIMB TO INDICATED ALTITUDE.
3. 250 KCAS IDLE THRUST DESCENT TO SEA LEVEL (SPEEDBRAKE RETRACTED).
4. FUEL REQUIRED INCLUDES 1500 POUNDS RESERVE FUEL.
5. NO WIND. SEE HEADWIND EFFECTS CHART, FIGURE 11-145.

Figure 11-147. Bingo - Gear Up - Flaps Auto - 30,000 Pounds - F404-GE-400 (Sheet 2 of 2)

BINGO
F404-GE-400
GEAR UP - HALF FLAPS
WEIGHT - 26,000 POUNDS
(WEIGHT = ZERO FUEL WEIGHT)

REMARKS
ENGINE(S): (2)F4O4-GE-4OO
U.S. STANDARD DAY, 1962

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

		CLIMB	CRUISE		DESCEND			SEA LEVEL CRUISE		
	INBD DIST	MACH OR KCAS	ALT	SPEED CAS	DIST	FUEL REQD	TIME REQD	FUEL REQD	SPEED CAS	TIME REQD
	NM		FEET	KNOTS	NM	LB	MIN	LB	KNOTS	MIN
DRAG INDEX 0 COUNTS	200	225 KCAS to M = 0.47	34,000	198	22	5,360	38	7,680	207	58
	180		34,000	198	22	5,020	34	7,040	207	52
	160		34,000	198	22	4,670	31	6,400	206	47
	140		34,000	198	22	4,330	27	5,770	206	41
	120		34,000	198	22	3,990	24	5,150	205	35
	100		32,000	198	20	3,660	20	4,530	205	29
	80		30,000	198	19	3,310	16	3,920	204	24
	60		28,000	197	17	2,960	13	3,310	204	18
	40		18,000	197	11	2,570	9	2,700	203	12
	20		7,000	200	4	2,090	5	2,100	203	6
DRAG INDEX 50 COUNTS	200	225 KCAS to M = 0.46	33,000	192	20	5,580	39	7,910	206	58
	180		33,000	193	20	5,200	35	7,240	205	53
	160		33,000	194	20	4,830	32	6,570	204	47
	140		33,000	194	20	4,460	28	5,920	204	41
	120		33,000	195	20	4,100	24	5,280	203	35
	100		33,000	195	20	3,740	20	4,640	203	30
	80		30,000	196	18	3,380	17	4,010	202	24
	60		27,000	195	16	3,010	13	3,370	202	18
	40		19,000	194	11	2,600	9	2,750	201	12
	20		7,000	197	4	2,110	5	2,120	201	6
DRAG INDEX 100 COUNTS	200	220 KCAS to M = 0.46	32,000	187	18	5,780	40	8,140	204	59
	180		32,000	187	18	5,390	37	7,440	203	53
	160		32,000	187	18	5,000	33	6,750	202	47
	140		32,000	187	18	4.610	29	6,080	202	42
	120		32,000	187	18	4,230	25	5,410	201	36
	100		32,000	187	18	3,850	21	4,750	201	30
	80		30,000	191	17	3,460	17	4,090	200	24
	60		27,000	190	15	3,070	13	3,440	200	18
	40		18,000	192	10	2,650	9	2,790	199	12
	20		7,000	194	4	2,130	5	2,140	199	6
DRAG INDEX 150 COUNTS	200	210 KCAS to M = 0.43	30,000	196	16	6,000	40	8,360	202	60
	180		30,000	194	16	5,580	37	7,640	201	54
	160		30,000	192	16	5,170	33	6,930	200	48
	140		30,000	190	16	4,760	29	6,230	200	42
	120		30,000	189	16	4,350	25	5,540	199	36
	100		30,000	187	16	3,940	21	4,850	199	30
	80		29,000	186	15	3,540	18	4,170	198	24
	60		27,000	186	14	3,130	13	3,500	198	18
	40		18,000	190	9	2,690	10	2,830	197	12
	20		7,000	191	4	2,160	6	2,170	197	6

DATA BASED ON:
1. INITIAL ALTITUDE IS SEA LEVEL
2. MILITARY THRUST CLIMB TO INDICATED ALTITUDE
3. 250 KCAS IDLE THRUST DESCENT TO SEA LEVEL (SPEEDBRAKE RETRACTED)
4. FUEL REQUIRED INCLUDES 1500 POUNDS RESERVE FUEL
5. NO WIND. SEE HEADWIND EFFECTS CHART, FIGURE 11-145.

Figure 11-148. Bingo - Gear Up - Half Flaps - 26,000 Pounds - F404-GE-400 (Sheet 1 of 2)

BINGO

F404-GE-400

GEAR UP - HALF FLAPS
WEIGHT - 26,000 POUNDS
(WEIGHT = ZERO FUEL WEIGHT)

REMARKS
ENGINE(S): (2)F4O4-GE-4OO
U.S. STANDARD DAY, 1962

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

		CLIMB	CRUISE		DESCEND			SEA LEVEL CRUISE		
	INBD DIST NM	MACH OR KCAS	ALT FEET	SPEED CAS KNOTS	DIST NM	FUEL REQD LB	TIME REQD MIN	FUEL REQD LB	SPEED CAS KNOTS	TIME REQD MIN
DRAG INDEX 200 COUNTS	200	210 KCAS to M=0.43	30,000	194	15	6,170	41	8,530	199	60
	180		30,000	192	15	5,730	37	7,840	199	54
	160		30,000	189	15	5,300	33	7,100	198	48
	140		30,000	187	15	4,880	30	6,370	198	43
	120		30,000	184	15	4,450	26	5,660	197	37
	100		30,000	182	15	4,030	22	4,960	197	31
	80		29,000	181	15	3,610	18	4,260	196	25
	60		27,000	181	14	3,180	14	3,560	195	18
	40		18,000	187	9	2,720	10	2,870	195	12
	20		7,000	189	3	2,180	6	2,190	194	6
DRAG INDEX 250 COUNTS	200	200 KCAS to M=0.43	30,000	175	15	6,360	44	8,810	197	61
	180		30,000	173	15	5,900	40	8,030	197	55
	160		30,000	173	15	5,450	36	7,270	196	49
	140		30,000	174	15	5,000	31	6,520	196	43
	120		30,000	174	15	4,560	27	5,790	195	37
	100		30,000	174	15	4,120	22	5,060	194	31
	80		29,000	175	14	3,690	18	4,340	194	25
	60		26,000	176	13	3,240	14	3,620	193	19
	40		18,000	184	9	2,770	10	2,910	192	12
	20		3,000	188	1	2,200	6	2,210	192	6
DRAG INDEX 300 COUNTS	200	200 KCAS to M=0.42	30,000	172	14	6,520	45	9,020	195	62
	180		30,000	171	14	6,050	40	8,230	194	56
	160		30,000	171	14	5,580	36	7,440	194	49
	140		30,000	171	14	5,120	32	6,670	194	43
	120		30,000	171	14	4,660	27	5,910	193	37
	100		30,000	171	14	4,210	23	5,160	192	31
	80		29,000	172	13	3,750	19	4,420	192	25
	60		26,000	173	12	3,290	14	3,680	191	19
	40		18,000	180	8	2,800	10	2,950	190	13
	20		3,000	185	1	2,220	6	2,230	190	6

DATA BASED ON:
1. INITIAL ALTITUDE IS SEA LEVEL
2. MILITARY THRUST CLIMB TO INDICATED ALTITUDE
3. 250 KCAS IDLE THRUST DESCENT TO SEA LEVEL (SPEEDBRAKE RETRACTED)
4. FUEL REQUIRED INCLUDES 1500 POUNDS RESERVE FUEL
5. NO WIND. SEE HEADWIND EFFECTS CHART, FIGURE 11-145.

Figure 11-148. Bingo - Gear Up - Half Flaps - 26,000 Pounds - F404-GE-400 (Sheet 2 of 2)

BINGO
F404-GE-400
GEAR UP - HALF FLAPS
WEIGHT - 30,000 POUNDS
(WEIGHT = ZERO FUEL WEIGHT)

REMARKS
ENGINE(S): (2)F4O4-GE-4OO
U.S. STANDARD DAY, 1962

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

		CLIMB	CRUISE		DESCEND			SEA LEVEL CRUISE		
	INBD DIST NM	MACH OR KCAS	ALT FEET	SPEED CAS KNOTS	DIST NM	FUEL REQD LB	TIME REQD MIN	FUEL REQD LB	SPEED CAS KNOTS	TIME REQD MIN
DRAG INDEX 0 COUNTS	200	225 KCAS to M=0.47	30,000	211	21	5,840	38	8,080	226	53
	180		30,000	210	21	5,440	35	7,400	225	48
	160		30,000	209	21	5,040	31	6,730	224	43
	140		30,000	208	21	4,640	27	6,060	222	38
	120		30,000	207	21	4,250	24	5,390	220	33
	100		30,000	206	21	3,860	20	4,730	219	27
	80		28,000	207	19	3,470	16	4,080	217	22
	60		26,000	207	18	3,070	13	3,420	215	17
	40		17,000	206	11	2,640	9	2,770	213	11
	20		4,000	213	3	2,120	5	2,140	212	6
DRAG INDEX 50 COUNTS	200	225 KCAS to M=0.46	30,000	208	20	6,040	39	8,330	224	54
	180		30,000	207	20	5,620	35	7,620	222	49
	160		30,000	206	20	5,200	31	6,920	221	44
	140		30,000	206	20	4,780	28	6,220	219	38
	120		30,000	205	20	4,370	24	5,530	217	33
	100		29,000	205	19	3,960	20	4,840	215	28
	80		27,000	206	18	3,550	17	4,160	213	23
	60		26,000	206	17	3,130	13	3,490	212	17
	40		18,000	205	12	2,680	9	2,820	210	11
	20		4,000	211	3	2,140	5	2,160	209	6
DRAG INDEX 100 COUNTS	200	220 KCAS to M=0.46	29,000	207	18	6,260	39	8,580	221	54
	180		29,000	206	18	5,810	36	7,840	219	49
	160		29,000	205	18	5,370	32	7,120	217	44
	140		29,000	205	18	4,930	28	6,390	216	39
	120		29,000	204	18	4,490	24	5,670	214	34
	100		29,000	203	18	4,060	21	4,960	212	28
	80		27,000	204	17	3,630	17	4,250	211	23
	60		24,000	204	15	3,190	13	3,550	209	17
	40		17,000	202	10	2,720	9	2,860	208	12
	20		4,000	208	2	2,170	5	2,180	207	6
DRAG INDEX 150 COUNTS	200	210 KCAS to M=0.43	28,000	202	17	6,510	41	8,830	217	55
	180		28,000	201	17	6,030	37	8,070	215	50
	160		28,000	201	17	5,560	33	7,310	213	45
	140		28,000	201	17	5,090	29	6,560	212	40
	120		28,000	201	17	4,630	25	5,810	210	34
	100		28,000	201	17	4,180	21	5,070	208	29
	80		26,000	202	15	3,720	17	4,340	207	23
	60		22,000	202	13	3,250	13	3,620	206	17
	40		18,000	201	10	2,770	9	2,910	205	12
	20		4,000	206	2	2,190	5	2,200	204	6

DATA BASED ON:
1. INITIAL ALTITUDE IS SEA LEVEL
2. MILITARY THRUST CLIMB TO INDICATED ALTITUDE
3. 250 KCAS IDLE THRUST DESCENT TO SEA LEVEL (SPEEDBRAKE RETRACTED)
4. FUEL REQUIRED INCLUDES 1500 POUNDS RESERVE FUEL
5. NO WIND. SEE HEADWIND EFFECTS CHART, FIGURE 11-145.

Figure 11-149. Bingo - Gear Up - Half Flaps - 30,000 Pounds - F404-GE-400 (Sheet 1 of 2)

BINGO

F404-GE-400

GEAR UP - HALF FLAPS
WEIGHT - 30,000 POUNDS
(WEIGHT = ZERO FUEL WEIGHT)

REMARKS
ENGINE(S): (2)F4O4-GE-4OO
U.S. STANDARD DAY, 1962

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

		CLIMB	CRUISE		DESCEND			SEA LEVEL CRUISE		
	INBD DIST NM	MACH OR KCAS	ALT FEET	SPEED CAS KNOTS	DIST NM	FUEL REQD LB	TIME REQD MIN	FUEL REQD LB	SPEED CAS KNOTS	TIME REQD MIN
DRAG INDEX 200 COUNTS	200	210 KCAS to M=0.43	28,000	198	16	6,710	41	9,080	213	56
	180		28,000	199	16	6,210	37	8,290	211	51
	160		28,000	199	16	5,710	33	7,500	210	46
	140		28,000	199	16	5,220	29	6,720	208	40
	120		28,000	198	16	4,740	25	5,950	206	35
	100		28,000	198	16	4,270	21	5,190	205	29
	80		26,000	200	15	3,790	17	4,430	204	24
	60		23,000	201	13	3,310	13	3,690	203	18
	40		17,000	198	9	2,800	10	2,950	202	12
	20		4,000	203	2	2,210	6	2,220	201	6
DRAG INDEX 250 COUNTS	200	200 KCAS to M=0.43	27,000	192	15	6,950	43	9,330	209	57
	180		27,000	193	15	6,430	39	8,510	207	52
	160		27,000	194	15	5,910	34	7,690	206	47
	140		27,000	195	15	5,400	30	6,880	204	41
	120		27,000	195	15	4,890	26	6,080	203	35
	100		27,000	196	15	4,390	22	5,300	202	30
	80		26,000	198	14	3,900	18	4,520	201	24
	60		22,000	199	12	3,390	14	3,750	200	18
	40		17,000	196	9	2,860	10	2,990	199	12
	20		3,000	201	2	2,240	6	2,240	198	6
DRAG INDEX 300 COUNTS	200	200 KCAS to M=0.42	26,000	189	13	7,170	44	9,570	206	58
	180		26,000	190	13	6,620	40	8,720	204	53
	160		26,000	191	13	6,080	35	7,870	202	47
	140		26,000	191	13	5,540	31	7,040	201	42
	120		26,000	191	13	5,010	27	6,220	200	36
	100		26,000	192	13	4,490	22	5,410	199	30
	80		26,000	192	13	3,970	18	4,610	198	24
	60		22,000	196	11	3,450	14	3,810	197	18
	40		17,000	194	9	2,900	10	3,030	197	12
	20		3,000	198	2	2,260	6	2,260	196	6

DATA BASED ON:
1. INITIAL ALTITUDE IS SEA LEVEL
2. MILITARY THRUST CLIMB TO INDICATED ALTITUDE
3. 250 KCAS IDLE THRUST DESCENT TO SEA LEVEL (SPEEDBRAKE RETRACTED)
4. FUEL REQUIRED INCLUDES 1500 POUNDS RESERVE FUEL
5. NO WIND. SEE HEADWIND EFFECTS CHART, FIGURE 11-145.

Figure 11-149. Bingo - Gear Up - Half Flaps - 30,000 Pounds - F404-GE-400 (Sheet 2 of 2)

BINGO
F404-GE-400
GEAR DOWN - FLAPS AUTO
WEIGHT - 26,000 POUNDS
(WEIGHT = ZERO FUEL WEIGHT)

REMARKS
ENGINE(S): (2)F4O4-GE-4OO
U.S. STANDARD DAY, 1962

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

		CLIMB	CRUISE		DESCEND			SEA LEVEL CRUISE		
	INBD DIST NM	MACH OR KCAS	ALT FEET	SPEED CAS KNOTS	DIST NM	FUEL REQD LB	TIME REQD MIN	FUEL REQD LB	SPEED CAS KNOTS	TIME REQD MIN
DRAG INDEX 0 COUNTS	200	220 KCAS to M=0.52	35,000	201	24	5,140	37	7,510	218	55
	180		35,000	200	24	4,810	33	6,890	217	50
	160		35,000	199	24	4,490	30	6,270	216	45
	140		35,000	198	24	4,180	27	5,650	215	39
	120		35,000	197	24	3,860	23	5,040	214	34
	100		34,000	198	23	3,550	20	4,440	213	28
	80		32,000	199	22	3,230	16	3,840	212	23
	60		28,000	201	19	2,900	12	3,250	211	17
	40		18,000	201	12	2,520	9	2,670	210	11
	20		7,000	207	4	2,070	5	2,080	209	6
DRAG INDEX 50 COUNTS	200	220 KCAS to M=0.51	33,000	198	21	5,340	38	7,760	204	59
	180		33,000	198	21	4,990	34	7,090	209	52
	160		33,000	197	21	4,650	31	6,430	213	45
	140		33,000	196	21	4,310	27	5,800	212	40
	120		33,000	195	21	3,970	23	5,170	211	34
	100		33,000	195	21	3,630	20	4,450	210	29
	80		32,000	195	20	3,300	16	3,930	210	23
	60		28,000	197	18	2,950	13	3,320	209	17
	40		18,000	197	11	2,560	9	2,710	208	12
	20		7,000	203	4	2,090	5	2,100	207	6
DRAG INDEX 100 COUNTS	200	220 KCAS to M=0.50	33,000	194	20	5,510	39	7,940	212	57
	180		33,000	194	20	5,140	35	7,280	211	51
	160		33,000	193	20	4,780	31	6,620	211	46
	140		33,000	193	20	4,420	27	5,960	210	40
	120		33,000	192	20	4,070	24	5,310	209	34
	100		32,000	193	19	3,720	20	4,660	208	29
	80		32,000	192	19	3,360	16	4,020	207	23
	60		27,000	194	16	3,000	13	3,380	206	17
	40		18,000	194	10	2,600	9	2,750	205	12
	20		7,000	200	4	2,110	5	2,130	204	6
DRAG INDEX 150 COUNTS	200	220 KCAS to M=0.47	32,000	186	18	5,720	40	8,170	210	57
	180		32,000	186	18	5,330	36	7,480	209	52
	160		32,000	187	18	4,940	32	6,800	209	46
	140		32,000	187	18	4,560	29	6,120	208	40
	120		32,000	188	18	4,180	25	5,440	207	35
	100		32,000	188	18	3,810	21	4,770	206	29
	80		30,000	190	17	3,430	17	4,110	205	23
	60		27,000	191	15	3,050	13	3,450	204	18
	40		18,000	191	10	2,630	9	2,790	203	12
	20		7,000	197	4	2,130	5	2,150	202	6

DATA BASED ON:
1. INITIAL ALTITUDE IS SEA LEVEL
2. MILITARY THRUST CLIMB TO INDICATED ALTITUDE
3. 250 KCAS IDLE THRUST DESCENT TO SEA LEVEL (SPEEDBRAKE RETRACTED)
4. FUEL REQUIRED INCLUDES 1500 POUNDS RESERVE FUEL
5. NO WIND. SEE HEADWIND EFFECTS CHART, FIGURE 11-145.

Figure 11-150. Bingo - Gear Down - Flaps Auto - 26,000 Pounds - F404-GE-400 (Sheet 1 of 2)

BINGO

F404-GE-400

GEAR DOWN - FLAPS AUTO
WEIGHT - 26,000 POUNDS
(WEIGHT = ZERO FUEL WEIGHT)

REMARKS
ENGINE(S): (2)F4O4-GE-4OO
U.S. STANDARD DAY, 1962

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

		CLIMB	CRUISE		DESCEND			SEA LEVEL CRUISE		
	INBD DIST NM	MACH OR KCAS	ALT FEET	SPEED CAS KNOTS	DIST NM	FUEL REQD LB	TIME REQD MIN	FUEL REQD LB	SPEED CAS KNOTS	TIME REQD MIN
DRAG INDEX 200 COUNTS	200	220 KCAS to M=0.45	30,000	189	16	5,920	41	8,400	208	58
	180		30,000	189	16	5,510	37	7,680	207	52
	160		30,000	188	16	5,100	33	6,970	206	47
	140		30,000	188	16	4,700	29	6,270	206	41
	120		30,000	188	16	4,290	25	5,570	205	35
	100		30,000	187	16	3,900	21	4,880	204	29
	80		29,000	188	16	3,500	17	4,190	203	24
	60		27,000	188	14	3,100	13	3,510	201	18
	40		19,000	189	10	2,670	9	2,840	200	12
	20		6,000	194	3	2,150	6	2,170	199	6
DRAG INDEX 250 COUNTS	200	220 KCAS to M=0.45	30,000	187	15	6,100	41	8,620	205	58
	180		30,000	187	15	5,670	37	7,880	205	53
	160		30,000	187	15	5,240	33	7,150	204	47
	140		30,000	186	15	4,820	29	6,420	203	41
	120		30,000	186	15	4,400	25	5,700	202	36
	100		30,000	185	15	3,990	21	4,990	201	30
	80		29,000	186	15	3,580	17	4,280	200	24
	60		27,000	186	14	3,160	13	3,570	199	18
	40		18,000	188	9	2,710	10	2,880	198	12
	20		6,000	192	3	2,170	6	2,190	196	6
DRAG INDEX 300 COUNTS	200	220 KCAS to M=0.44	30,000	186	15	6,280	42	8,850	203	59
	180		30,000	185	15	5,840	38	8,080	202	53
	160		30,000	185	15	5,390	34	7,330	201	48
	140		30,000	184	15	4,950	30	6,580	201	42
	120		30,000	184	15	4,510	26	5,830	199	36
	100		30,000	183	15	4,080	22	5,090	198	30
	80		29,000	184	14	3,650	18	4,360	197	24
	60		26,000	184	13	3,220	13	3,640	196	18
	40		19,000	186	9	2,750	10	2,920	195	12
	20		6,000	190	3	2,190	6	2,210	194	6

DATA BASED ON:
1. INITIAL ALTITUDE IS SEA LEVEL
2. MILITARY THRUST CLIMB TO INDICATED ALTITUDE
3. 250 KCAS IDLE THRUST DESCENT TO SEA LEVEL (SPEEDBRAKE RETRACTED)
4. FUEL REQUIRED INCLUDES 1500 POUNDS RESERVE FUEL
5. NO WIND. SEE HEADWIND EFFECTS CHART, FIGURE 11-145.

Figure 11-150. Bingo - Gear Down - Flaps Auto - 26,000 Pounds - F404-GE-400 (Sheet 2 of 2)

BINGO
F404-GE-400
ONE ENGINE OPERATING
GEAR UP - FLAPS AUTO
WEIGHT - 26,000 POUNDS
(WEIGHT = ZERO FUEL WEIGHT)

REMARKS
ENGINE(S): (2)F4O4-GE-4OO
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

		CLIMB	CRUISE		DESCEND			SEA LEVEL CRUISE		
	INBD DIST	MACH OR KCAS	ALT	SPEED CAS	DIST	FUEL REQD	TIME REQD	FUEL REQD	SPEED CAS	TIME REQD
	NM		FEET	KNOTS	NM	LB	MIN	LB	KNOTS	MIN
DRAG INDEX 0 COUNTS	200	315 KCAS to M = 0.75	33,000	275	52	3,380	31	4,210	271	44
	180		33,000	275	52	3,230	28	3,940	271	40
	160		33,000	274	52	3,080	25	3,660	270	36
	140		31,000	273	48	2,930	23	3,390	270	31
	120		28,000	272	43	2,770	20	3,120	269	27
	100		22,000	268	33	2,600	18	2,840	269	22
	80		18,000	266	27	2,410	15	2,570	269	18
	60		14,000	264	21	2,210	12	2,300	268	13
	40		9,000	264	13	2,000	8	2,040	268	9
	20		4,000	264	6	1,760	4	1,770	267	4
DRAG INDEX 50 COUNTS	200	310 KCAS to M = 0.70	30,000	263	41	3,680	32	4,500	266	45
	180		30,000	263	41	3,490	29	4,200	265	41
	160		30,000	262	41	3,310	26	3,890	265	36
	140		27,000	262	37	3,130	23	3,590	264	32
	120		23,000	261	31	2,930	21	3,290	264	27
	100		22,000	260	30	2,730	18	2,990	263	23
	80		17,000	258	23	2,520	15	2,690	263	18
	60		13,000	258	17	2,290	12	2,390	262	14
	40		9,000	257	12	2,050	8	2,090	262	9
	20		3,000	257	4	1,790	4	1,800	261	5
DRAG INDEX 100 COUNTS	200	300 KCAS to M = 0.70	23,000	254	28	4,000	34	4,800	260	46
	180		23,000	254	28	3,780	31	4,470	260	42
	160		23,000	253	28	3,560	27	4,130	259	37
	140		22,000	253	27	3,330	24	3,800	258	33
	120		21,000	253	26	3,100	21	3,460	258	28
	100		18,000	253	22	2,870	18	3,130	257	23
	80		17,000	252	21	2,630	15	2,800	257	19
	60		13,000	252	16	2,370	12	2,480	256	14
	40		8,000	251	10	2,110	8	2,150	256	9
	20		3,000	252	4	1,820	4	1,820	255	5
DRAG INDEX 150 COUNTS	200	290 KCAS to M = 0.70	20,000	248	22	4,300	36	5,110	255	47
	180		20,000	248	22	4,040	33	4,740	255	42
	160		20,000	247	22	3,780	29	4,370	254	38
	140		20,000	247	22	3,520	25	4,000	253	33
	120		19,000	247	21	3,260	22	3,640	252	29
	100		17,000	247	19	3,000	19	3,280	251	24
	80		16,000	246	18	2,730	15	2,920	250	19
	60		13,000	246	14	2,450	12	2,560	250	14
	40		8,000	245	9	2,160	9	2,210	249	10
	20		3,000	247	3	1,840	5	1,850	248	5

DATA BASED ON:
1. INITIAL ALTITUDE IS SEA LEVEL.
2. MILITARY THRUST CLIMB TO INDICATED ALTITUDE.
3. 250 KCAS IDLE THRUST DESCENT TO SEA LEVEL (SPEEDBRAKE RETRACTED).
4. FUEL REQUIRED INCLUDES 1500 POUNDS RESERVE FUEL.
5. NO WIND. SEE HEADWIND EFFECTS CHART, FIGURE 11-145.

Figure 11-151. Bingo - One Engine Operating - Gear Up - Flaps Auto - 26,000 Pounds - F404-GE-400 (Sheet 1 of 2)

BINGO
F404-GE-400

ONE ENGINE OPERATING
GEAR UP - FLAPS AUTO
WEIGHT - 26,000 POUNDS
(WEIGHT = ZERO FUEL WEIGHT)

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

		CLIMB	CRUISE		DESCEND			SEA LEVEL CRUISE		
	INBD DIST	MACH OR KCAS	ALT	SPEED CAS	DIST	FUEL REQD	TIME REQD	FUEL REQD	SPEED CAS	TIME REQD
	NM		FEET	KNOTS	NM	LB	MIN	LB	KNOTS	MIN
DRAG INDEX 200 COUNTS	200	275 KCAS to M = 0.70	19,000	242	19	4,550	38	5,410	250	48
	180		19,000	241	19	4,260	34	5,000	250	43
	160		19,000	241	19	3,970	30	4,600	249	39
	140		19,000	240	19	3,690	26	4,210	248	34
	120		18,000	240	18	3,400	23	3,810	247	29
	100		17,000	240	17	3,120	19	3,420	246	24
	80		16,000	239	16	2,830	16	3,030	245	20
	60		13,000	239	13	2,530	12	2,650	245	15
	40		8,000	240	8	2,210	9	2,260	244	10
	20		3,000	242	3	1,870	5	1,880	243	5
DRAG INDEX 250 COUNTS	200	260 KCAS to M = 0.70	18,000	236	17	4,820	39	5,690	246	49
	180		18,000	236	17	4,500	35	5,260	245	44
	160		18,000	235	17	4,180	32	4,830	244	39
	140		18,000	234	17	3,860	28	4,400	244	35
	120		18,000	234	17	3,550	24	3,980	243	30
	100		18,000	233	17	3,240	20	3,560	242	25
	80		17,000	233	16	2,920	16	3,140	241	20
	60		13,000	234	12	2,600	13	2,730	240	15
	40		9,000	235	8	2,260	9	2,320	239	10
	20		3,000	237	3	1,900	5	1,910	238	5
DRAG INDEX 300 COUNTS	200	240 KCAS to M = 0.70	17,000	232	15	5,100	41	5,980	241	50
	180		17,000	231	15	4,740	37	5,510	240	45
	160		17,000	231	15	4,390	33	5,060	240	40
	140		17,000	230	15	4,050	29	4,600	239	35
	120		17,000	229	15	3,700	25	4,150	238	30
	100		17,000	229	15	3,360	21	3,700	237	25
	80		17,000	228	15	3,020	17	3,250	236	20
	60		14,000	228	12	2,680	13	2,810	235	15
	40		9,000	230	8	2,320	9	2,370	234	10
	20		3,000	232	3	1,930	5	1,930	233	5

DATA BASED ON:
1. INITIAL ALTITUDE IS SEA LEVEL.
2. MILITARY THRUST CLIMB TO INDICATED ALTITUDE.
3. 250 KCAS IDLE THRUST DESCENT TO SEA LEVEL (SPEEDBRAKE RETRACTED).
4. FUEL REQUIRED INCLUDES 1500 POUNDS RESERVE FUEL.
5. NO WIND. SEE HEADWIND EFFECTS CHART, FIGURE 11-145.

Figure 11-151. Bingo - One Engine Operating - Gear Up - Flaps Auto - 26,000 Pounds - F404-GE-400 (Sheet 2 of 2)

BINGO

F404-GE-400

ONE ENGINE OPERATING
GEAR UP - FLAPS AUTO
WEIGHT - 30,000 POUNDS
(WEIGHT = ZERO FUEL WEIGHT)

REMARKS

ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

		CLIMB	CRUISE		DESCEND			SEA LEVEL CRUISE		
	INBD DIST NM	MACH OR KCAS	ALT FEET	SPEED CAS KNOTS	DIST NM	FUEL REQD LB	TIME REQD MIN	FUEL REQD LB	SPEED CAS KNOTS	TIME REQD MIN
DRAG INDEX 0 COUNTS	200	315 KCAS to M = 0.75	30,000	295	48	3,560	31	4,380	287	42
	180		30,000	294	48	3,390	28	4,090	286	38
	160		29,000	293	46	3,220	26	3,800	285	34
	140		28,000	293	44	3,050	23	3,510	285	30
	120		23,000	288	36	2,870	20	3,220	284	25
	100		21,000	285	33	2,680	17	2,930	283	21
	80		18,000	284	28	2,480	14	2,640	283	17
	60		13,000	283	20	2,260	11	2,350	282	13
	40		8,000	282	12	2,030	8	2,070	282	9
	20		3,000	281	5	1,780	4	1,780	281	4
DRAG INDEX 50 COUNTS	200	310 KCAS to M = 0.71	26,000	278	37	3,890	32	4,700	278	43
	180		26,000	277	37	3,680	29	4,370	278	39
	160		26,000	277	37	3,470	26	4,040	277	35
	140		24,000	279	34	3,260	23	3,720	277	30
	120		22,000	278	31	3,040	20	3,400	276	26
	100		19,000	277	27	2,820	18	3,080	276	22
	80		17,000	277	24	2,590	15	2,760	275	17
	60		13,000	277	18	2,350	11	2,440	275	13
	40		9,000	276	13	2,090	8	2,130	274	9
	20		3,000	275	4	1,810	4	1,810	274	4
DRAG INDEX 100 COUNTS	200	300 KCAS to M = 0.70	21,000	272	27	4,220	34	5,020	274	44
	180		21,000	271	27	3,970	31	4,660	273	40
	160		21,000	271	27	3,720	27	4,300	273	35
	140		21,000	271	27	3,470	24	3,940	272	31
	120		19,000	270	24	3,220	21	3,590	271	27
	100		18,000	270	23	2,970	18	3,240	271	22
	80		16,000	270	20	2,700	15	2,890	270	18
	60		13,000	270	17	2,430	12	2,540	270	13
	40		8,000	270	10	2,150	8	2,190	269	9
	20		3,000	269	4	1,840	4	1,840	269	4
DRAG INDEX 150 COUNTS	200	290 KCAS to M = 0.70	19,000	264	22	4,530	35	5,340	270	45
	180		19,000	264	22	4,250	32	4,940	269	40
	160		19,000	263	22	3,960	29	4,550	268	36
	140		19,000	263	22	3,680	25	4,170	268	31
	120		18,000	263	21	3,400	22	3,780	267	27
	100		17,000	262	20	3,110	18	3,390	266	23
	80		16,000	262	19	2,820	15	3,010	266	18
	60		12,000	263	14	2,520	12	2,630	265	14
	40		8,000	264	9	2,200	8	2,250	264	9
	20		3,000	263	3	1,870	4	1,880	264	5

DATA BASED ON:

1. INITIAL ALTITUDE IS SEA LEVEL.
2. MILITARY THRUST CLIMB TO INDICATED ALTITUDE.
3. 250 KCAS IDLE THRUST DESCENT TO SEA LEVEL (SPEEDBRAKE RETRACTED).
4. FUEL REQUIRED INCLUDES 1500 POUNDS RESERVE FUEL.
5. NO WIND. SEE HEADWIND EFFECTS CHART, FIGURE 11-145.

Figure 11-152. Bingo - One Engine Operating - Gear Up - Flaps Auto - 30,000 Pounds - F404-GE-400 (Sheet 1 of 2)

BINGO

F404-GE-400

ONE ENGINE OPERATING
GEAR UP - FLAPS AUTO
WEIGHT - 30,000 POUNDS
(WEIGHT = ZERO FUEL WEIGHT)

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

		CLIMB	CRUISE		DESCEND			SEA LEVEL CRUISE		
	INBD DIST NM	MACH OR KCAS	ALT FEET	SPEED CAS KNOTS	DIST NM	FUEL REQD LB	TIME REQD MIN	FUEL REQD LB	SPEED CAS KNOTS	TIME REQD MIN
DRAG INDEX 200 COUNTS	200	275 KCAS to M = 0.70	17,000	259	18	4,860	37	5,650	265	45
	180		17,000	259	18	4,530	34	5,230	264	41
	160		17,000	258	18	4,210	30	4,800	263	37
	140		17,000	258	18	3,890	26	4,380	262	32
	120		17,000	257	18	3,570	23	3,960	262	28
	100		17,000	257	18	3,250	19	3,550	261	23
	80		14,000	257	18	2,930	16	3,130	260	18
	60		12,000	258	13	2,600	12	2,720	260	14
	40		8,000	257	9	2,260	8	2,310	259	9
	20		3,000	256	3	1,890	4	1,900	258	5
DRAG INDEX 250 COUNTS	200	260 KCAS to M = 0.70	15,000	253	15	5,190	39	5,960	259	46
	180		15,000	253	15	4,830	35	5,500	259	42
	160		15,000	252	15	4,470	32	5,050	258	37
	140		15,000	252	15	4,110	28	4,590	257	33
	120		15,000	251	15	3,750	24	4,140	257	28
	100		15,000	250	15	3,400	20	3,700	256	23
	80		14,000	250	14	3,040	16	3,250	255	19
	60		12,000	250	12	2,690	13	2,810	254	14
	40		8,000	250	8	2,320	9	2,370	254	9
	20		3,000	251	3	1,920	5	1,930	253	5
DRAG INDEX 300 COUNTS	200	240 KCAS to M = 0.70	14,000	248	13	5,520	41	6,280	254	47
	180		14,000	247	13	5,120	37	5,790	253	43
	160		14,000	246	13	4,730	33	5,300	252	38
	140		14,000	246	13	4,330	29	4,810	251	33
	120		14,000	245	13	3,940	25	4,330	250	29
	100		14,000	245	13	3,550	21	3,850	250	24
	80		14,000	244	13	3,170	17	3,370	250	19
	60		12,000	244	11	2,780	13	2,900	248	15
	40		8,000	244	7	2,380	9	2,430	247	10
	20		3,000	246	3	1,960	5	1,960	247	5

DATA BASED ON:
1. INITIAL ALTITUDE IS SEA LEVEL.
2. MILITARY THRUST CLIMB TO INDICATED ALTITUDE.
3. 250 KCAS IDLE THRUST DESCENT TO SEA LEVEL (SPEEDBRAKE RETRACTED).
4. FUEL REQUIRED INCLUDES 1500 POUNDS RESERVE FUEL.
5. NO WIND. SEE HEADWIND EFFECTS CHART, FIGURE 11-145.

Figure 11-152. Bingo - One Engine Operating - Gear Up - Flaps Auto - 30,000 Pounds
F404-GE-400 (Sheet 2 of 2)

BINGO
F404-GE-400
ONE ENGINE OPERATING
GEAR UP - HALF FLAPS
WEIGHT - 26,000 POUNDS
(WEIGHT = ZERO FUEL WEIGHT)

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

		CLIMB	CRUISE		DESCEND			SEA LEVEL CRUISE		
	INBD DIST NM	MACH OR KCAS	ALT FEET	SPEED CAS KNOTS	DIST NM	FUEL REQD LB	TIME REQD MIN	FUEL REQD LB	SPEED CAS KNOTS	TIME REQD MIN
DRAG INDEX 0 COUNTS	200	175 KCAS to M=0.33	13,000	197	7	6,680	52	7,430	198	61
	180		13,000	197	7	6,160	47	6,790	198	55
	160		13,000	197	7	5,640	42	6,180	197	49
	140		13,000	197	7	5,140	37	5,580	197	43
	120		13,000	197	7	4,640	32	4,980	196	37
	100		13,000	197	7	4,140	27	4,390	196	31
	80		12,000	195	7	3,640	22	3,800	195	25
	60		10,000	190	6	3,140	17	3,220	195	18
	40		7,000	189	4	2,630	12	2,640	194	12
	20		1,000	193	1	2,070	6	2,070	194	6
DRAG INDEX 50 COUNTS	200	175 KCAS to M=0.32	13,000	192	7	6,930	54	7,680	196	61
	180		13,000	193	7	6,380	48	7,020	195	55
	160		13,000	194	7	5,840	43	6,380	195	49
	140		13,000	194	7	5,310	38	5,750	194	43
	120		13,000	195	7	4,780	32	5,130	194	37
	100		13,000	195	7	4,250	27	4,510	193	31
	80		11,000	191	6	3,730	22	3,900	193	25
	60		10,000	188	5	3,210	17	3,290	192	19
	40		7,000	186	4	2,680	12	2,690	192	13
	20		1,000	190	1	2,090	6	2,090	191	6
DRAG INDEX 100 COUNTS	200	175 KCAS to M=0.32	11,000	186	6	7,270	57	7,930	193	62
	180		11,000	186	6	6,650	51	7,250	193	56
	160		11,000	186	6	6,070	45	6,570	193	50
	140		11,000	186	6	5,490	39	5,920	192	44
	120		11,000	186	6	4,930	34	5,270	191	38
	100		11,000	186	6	4,380	28	4,630	191	31
	80		10,000	186	5	3,830	23	3,990	190	25
	60		9,000	185	5	3,280	18	3,360	190	19
	40		7,000	184	4	2,720	12	2,740	189	13
	20		1,000	187	1	2,120	6	2,120	188	6
DRAG INDEX 150 COUNTS	200	175 KCAS to M=0.32	10,000	184	5	7,550	58	8,180	191	63
	180		10,000	183	5	6,860	52	7,470	191	57
	160		10,000	183	5	6,260	46	6,760	190	50
	140		10,000	183	5	5,660	40	6,080	190	44
	120		10,000	183	5	5,070	35	5,410	189	38
	100		10,000	183	5	4,490	29	4,740	188	32
	80		10,000	183	5	3,910	23	4,080	187	26
	60		9,000	182	4	3,340	18	3,430	187	19
	40		7,000	181	3	2,760	12	2,780	186	13
	20		1,000	184	0	2,140	6	2,140	185	6

DATA BASED ON:

1. INITIAL ALTITUDE IS SEA LEVEL.
2. MILITARY THRUST CLIMB TO INDICATED ALTITUDE.
3. 250 KCAS IDLE THRUST DESCENT TO SEA LEVEL (SPEEDBRAKE RETRACTED).
4. FUEL REQUIRED INCLUDES 1500 POUNDS RESERVE FUEL.
5. NO WIND. SEE HEADWIND EFFECTS CHART, FIGURE 11-145.

Figure 11-153. Bingo - One Engine Operating - Gear Up - Half Flaps - 26,000 Pounds F404-GE-400 (Sheet 1 of 2)

BINGO

F404-GE-400

ONE ENGINE OPERATING
GEAR UP - HALF FLAPS
WEIGHT - 26,000 POUNDS
(WEIGHT = ZERO FUEL WEIGHT)

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

		CLIMB	CRUISE		DESCEND			SEA LEVEL CRUISE		
	INBD DIST NM	MACH OR KCAS	ALT FEET	SPEED CAS KNOTS	DIST NM	FUEL REQD LB	TIME REQD MIN	FUEL REQD LB	SPEED CAS KNOTS	TIME REQD MIN
DRAG INDEX 200 COUNTS	200	175 KCAS to M=0.32	9,000	189	4	7,880	57	8,430	189	64
	180		9,000	189	4	7,210	52	7,690	189	57
	160		9,000	191	4	6,510	45	6,960	188	51
	140		9,000	190	4	5,870	40	6,250	188	45
	120		9,000	190	4	5,240	34	5,550	187	39
	100		9,000	190	4	4,630	29	4,860	187	33
	80		9,000	190	4	4,020	23	4,180	188	26
	60		8,000	187	4	3,410	18	3,510	192	19
	40		6,000	180	3	2,810	12	2,840	193	13
	20		1,000	188	0	2,160	6	2,170	193	6
DRAG INDEX 250 COUNTS	200	160 KCAS to M=0.31	9,000	188	4	8,140	59	8,670	187	64
	180		9,000	190	4	7,380	52	7,900	186	58
	160		9,000	190	4	6,710	46	7,150	186	52
	140		9,000	190	4	6,040	41	6,410	186	45
	120		9,000	190	4	5,390	35	5,690	185	39
	100		9,000	190	4	4,750	29	4,970	184	33
	80		9,000	190	4	4,110	24	4,270	181	27
	60		8,000	186	4	3,490	18	3,570	175	21
	40		6,000	177	3	2,860	13	2,880	169	14
	20		1,000	167	0	2,190	7	2,190	165	7
DRAG INDEX 300 COUNTS	200	160 KCAS to M=0.31	9,000	175	4	8,500	64	8,890	184	65
	180		9,000	168	4	7,640	58	8,120	187	58
	160		9,000	166	4	6,890	51	7,360	192	50
	140		9,000	166	4	6,200	45	6,610	198	42
	120		9,000	168	4	5,520	38	5,860	188	38
	100		9,000	171	4	4,850	32	5,120	176	34
	80		9,000	174	4	4,190	25	4,380	165	29
	60		8,000	175	3	3,540	19	3,640	165	22
	40		6,000	172	3	2,890	13	2,920	165	15
	20		1,000	168	0	2,200	7	2,200	167	7

DATA BASED ON:
1. INITIAL ALTITUDE IS SEA LEVEL.
2. MILITARY THRUST CLIMB TO INDICATED ALTITUDE.
3. 250 KCAS IDLE THRUST DESCENT TO SEA LEVEL (SPEEDBRAKE RETRACTED).
4. FUEL REQUIRED INCLUDES 1500 POUNDS RESERVE FUEL.
5. NO WIND. SEE HEADWIND EFFECTS CHART, FIGURE 11-145.

Figure 11-153. Bingo - One Engine Operating - Gear Up - Half Flaps - 26,000 Pounds - F404-GE-400 (Sheet 2 of 2)

BINGO
F404-GE-400
ONE ENGINE OPERATING
GEAR DOWN - FLAPS AUTO
WEIGHT - 26,000 POUNDS
(WEIGHT = ZERO FUEL WEIGHT)

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

		CLIMB	CRUISE		DESCEND			SEA LEVEL CRUISE		
	INBD DIST NM	MACH OR KCAS	ALT FEET	SPEED CAS KNOTS	DIST NM	FUEL REQD LB	TIME REQD MIN	FUEL REQD LB	SPEED CAS KNOTS	TIME REQD MIN
DRAG INDEX 0 COUNTS	200	200 KCAS to M=0.35	14,000	197	8	6,400	51	7,250	206	58
	180		14,000	195	8	5,870	46	6,650	205	53
	160		14,000	195	8	5,390	41	5,050	204	47
	140		14,000	194	8	4,910	36	5,460	204	41
	120		14,000	194	8	4,440	31	4,880	203	36
	100		14,000	193	8	3,970	26	4,300	202	30
	80		14,000	193	8	3,510	21	3,730	201	24
	60		12,000	194	7	3,040	16	3,170	200	18
	40		8,000	191	5	2,570	11	2,610	200	12
	20		2,000	193	1	2,050	6	2,050	199	6
DRAG INDEX 50 COUNTS	200	200 KCAS to M=0.34	13,000	195	7	6,670	52	7,500	204	59
	180		13,000	194	7	6,140	47	6,880	203	53
	160		13,000	194	7	5,600	42	6,250	202	48
	140		13,000	195	7	5,090	36	5,640	201	42
	120		13,000	196	7	4,590	31	5,030	200	36
	100		13,000	197	7	4,100	26	4,430	199	30
	80		13,000	198	7	3,610	21	3,830	198	24
	60		12,000	195	7	3,110	16	3,240	198	18
	40		7,000	193	4	2,610	11	2,650	197	12
	20		2,000	195	1	2,070	6	2,070	196	6
DRAG INDEX 100 COUNTS	200	200 KCAS to M=0.31	12,000	194	7	6,960	53	7,760	202	60
	180		12,000	194	7	6,400	48	7,110	201	54
	160		12,000	195	7	5,850	43	6,460	200	48
	140		12,000	193	7	5,300	38	5,810	199	42
	120		12,000	192	7	4,760	33	5,180	198	36
	100		12,000	190	7	4,230	27	4,550	197	31
	80		12,000	189	7	3,710	22	3,920	196	25
	60		11,000	189	6	3,190	17	3,310	195	18
	40		7,000	190	4	2,650	11	2,700	194	12
	20		2,000	192	1	2,090	6	2,100	193	6
DRAG INDEX 150 COUNTS	200	195 KCAS to M=0.31	11,000	193	6	7,260	55	8,010	200	60
	180		11,000	190	6	6,640	50	7,330	199	54
	160		11,000	189	6	6,060	44	6,650	197	49
	140		11,000	188	6	5,480	39	5,980	196	43
	120		11,000	188	6	4,920	33	5,320	195	37
	100		11,000	187	6	4,360	28	4,670	194	31
	80		11,000	186	6	3,800	23	4,020	193	25
	60		11,000	185	6	3,260	17	3,380	192	19
	40		7,000	188	4	2,700	12	2,740	191	13
	20		2,000	189	1	2,110	6	2,120	190	6

DATA BASED ON:
1. INITIAL ALTITUDE IS SEA LEVEL.
2. MILITARY THRUST CLIMB TO INDICATED ALTITUDE.
3. 250 KCAS IDLE THRUST DESCENT TO SEA LEVEL (SPEEDBRAKE RETRACTED).
4. FUEL REQUIRED INCLUDES 1500 POUNDS RESERVE FUEL.
5. NO WIND. SEE HEADWIND EFFECTS CHART, FIGURE 11-145.

Figure 11-154. Bingo - One Engine Operating - Gear Down - Flaps Auto - 26,000 Pounds - F404-GE-400 (Sheet 1 of 2)

BINGO

F404-GE-400

ONE ENGINE OPERATING
GEAR DOWN - FLAPS AUTO
WEIGHT - 26,000 POUNDS
(WEIGHT = ZERO FUEL WEIGHT)

REMARKS

ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

		CLIMB	CRUISE		DESCEND			SEA LEVEL CRUISE		
	INBD DIST NM	MACH OR KCAS	ALT FEET	SPEED CAS KNOTS	DIST NM	FUEL REQD LB	TIME REQD MIN	FUEL REQD LB	SPEED CAS KNOTS	TIME REQD MIN
DRAG INDEX 200 COUNTS	200	195 KCAS to M=0.31	11,000	189	5	7,530	56	8,270	198	61
	180		11,000	187	5	6,870	51	7,560	197	55
	160		11,000	187	5	6,260	45	6,850	195	49
	140		11,000	184	5	5,640	40	6,160	194	43
	120		11,000	183	5	5,050	34	5,470	192	37
	100		11,000	182	5	4,470	28	4,780	191	31
	80		11,000	182	5	3,890	23	4,110	190	25
	60		9,000	184	4	3,330	17	3,450	188	19
	40		7,000	185	3	2,740	12	2,790	187	13
	20		2,000	186	1	2,140	6	2,140	186	6
DRAG INDEX 250 COUNTS	200	180 KCAS to M=0.31	9,000	188	4	7,880	58	8,520	196	61
	180		9,000	186	4	7,220	53	7,780	195	56
	160		9,000	185	4	6,490	46	7,050	193	50
	140		9,000	184	4	5,850	41	6,320	192	44
	120		9,000	184	4	5,230	35	5,610	190	38
	100		9,000	183	4	4,610	29	4,900	188	32
	80		9,000	182	4	4,000	24	4,200	187	26
	60		8,000	183	4	3,400	18	3,510	185	19
	40		6,000	184	3	2,790	12	2,830	184	13
	20		2,000	181	1	2,160	6	2,160	180	7
DRAG INDEX 300 COUNTS	200	165 KCAS to M=0.31	8,000	188	4	8,290	60	8,760	194	62
	180		8,000	189	4	7,530	53	8,000	193	56
	160		8,000	191	4	6,770	46	7,240	191	50
	140		8,000	191	4	6,100	41	6,490	190	44
	120		8,000	189	4	5,440	35	5,750	188	38
	100		8,000	184	4	4,780	30	5,020	186	32
	80		8,000	179	4	4,130	25	4,300	183	26
	60		7,000	178	3	3,490	19	3,590	176	20
	40		4,000	180	2	2,850	13	2,890	169	14
	20		1,000	169	0	2,190	7	2,190	165	7

DATA BASED ON:

1. INITIAL ALTITUDE IS SEA LEVEL.
2. MILITARY THRUST CLIMB TO INDICATED ALTITUDE.
3. 250 KCAS IDLE THRUST DESCENT TO SEA LEVEL (SPEEDBRAKE RETRACTED).
4. FUEL REQUIRED INCLUDES 1500 POUNDS RESERVE FUEL.
5. NO WIND. SEE HEADWIND EFFECTS CHART, FIGURE 11-145.

Figure 11-154. Bingo - One Engine Operating - Gear Down - Flaps Auto - 26,000 Pounds - F404-GE-400 (Sheet 2 of 2)

PART 5 - ENDURANCE F404-GE-400

TABLE OF CONTENTS

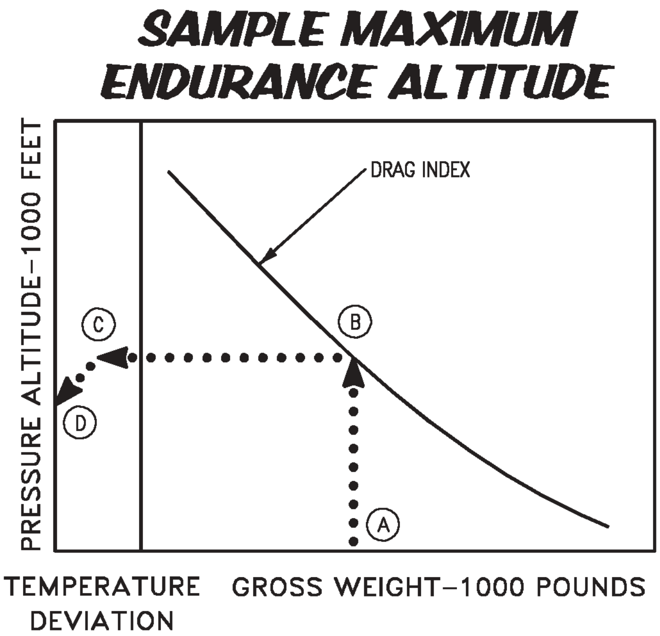
CHARTS

MAXIMUM ENDURANCE CHARTS

Maximum endurance charts (figures 11-155 and 11-156) are provided for both two-engine and single engine operation. Included are separate charts for maximum endurance altitude, Mach number and airspeed, fuel flow, and fuel required for various drag indexes at all gross weights and altitudes from sea level to 40,000 feet.

USE

MAXIMUM ENDURANCE ALTITUDE - Enter the chart with the effective gross weight and project up to the appropriate drag index curve, then horizontally left to the temperature baseline and parallel the appropriate temperature deviation guideline to the correct temperature deviation. Project horizontally left to read maximum endurance altitude.



18AC-NFM-20-(260-1)-CATI-21

Sample Problem

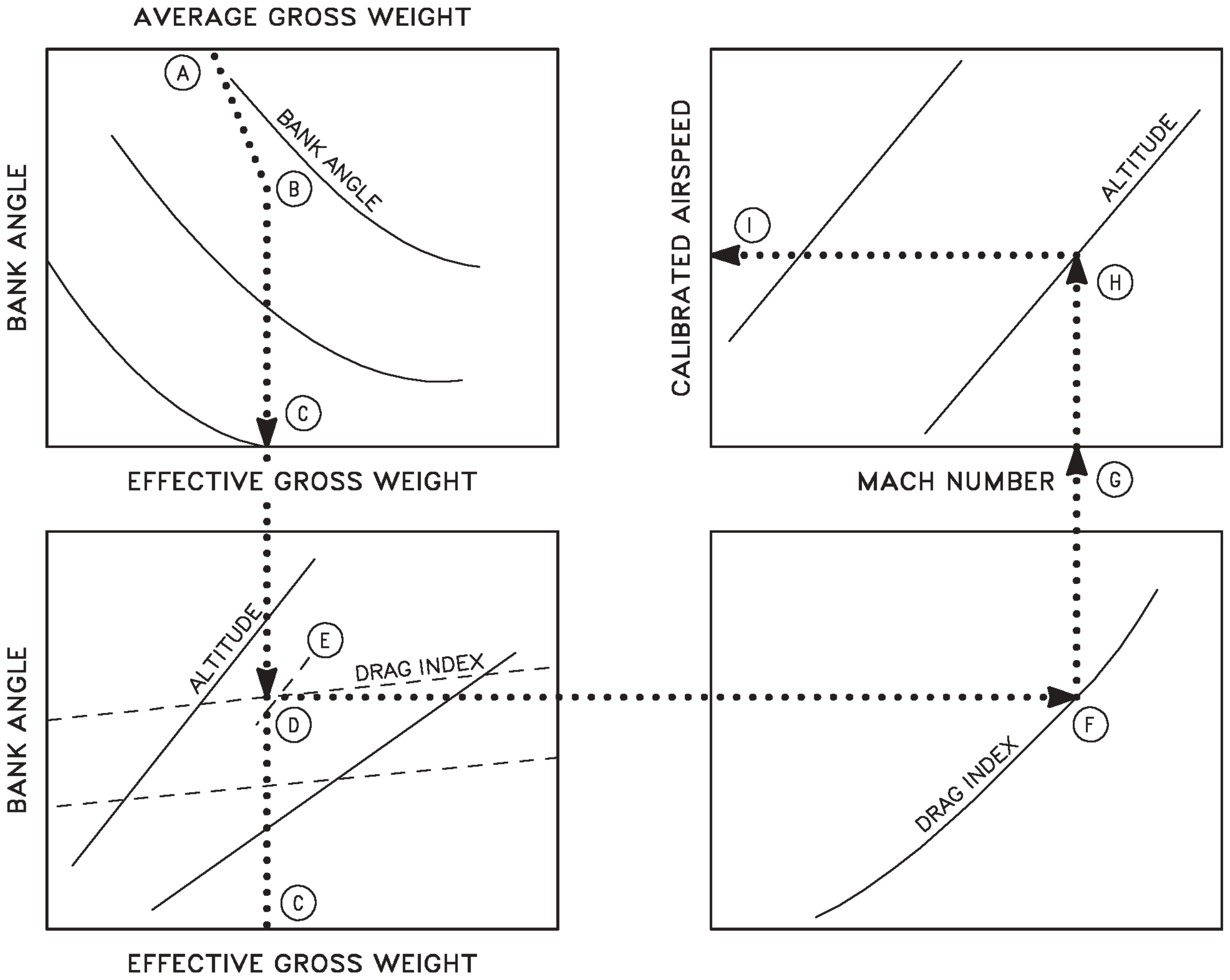
A. Effective gross weight	38,000 Lb.
B. Drag index	50
C. Temperature deviation from standard day	+10°C
D. Maximum endurance altitude	30,800 Ft.

MACH NUMBER AND AIRSPEED - Enter the chart with the average gross weight and follow the nearest guideline down to the desired bank angle. From this point, project vertically down to determine effective gross weight. With the effective gross weight, project vertically (up or down) to intersect the optimum endurance at the appropriate drag index line or desired altitude, then horizontally right to the appropriate drag index curve. From the point, project vertically up to read maximum endurance Mach number. To find calibrated airspeed, project vertically up from the Mach number to the endurance altitude, then horizontally left to find the maximum corresponding endurance calibrated airspeed.

Sample Problem

A. Average gross weight	30,000 Lb.
B. Bank angle	20°
C. Effective gross weight	32,000 Lb.
D. Drag index	50
E. Endurance altitude	35,000 Ft.
F. Drag Index	50
G. Mach number	0.663
H. Endurance altitude	35,000 Ft.
I. Calibrated airspeed	220 Kt.

SAMPLE MACH NUMBER AND AIRSPEED WITH EFFECTIVE GROSS WEIGHT



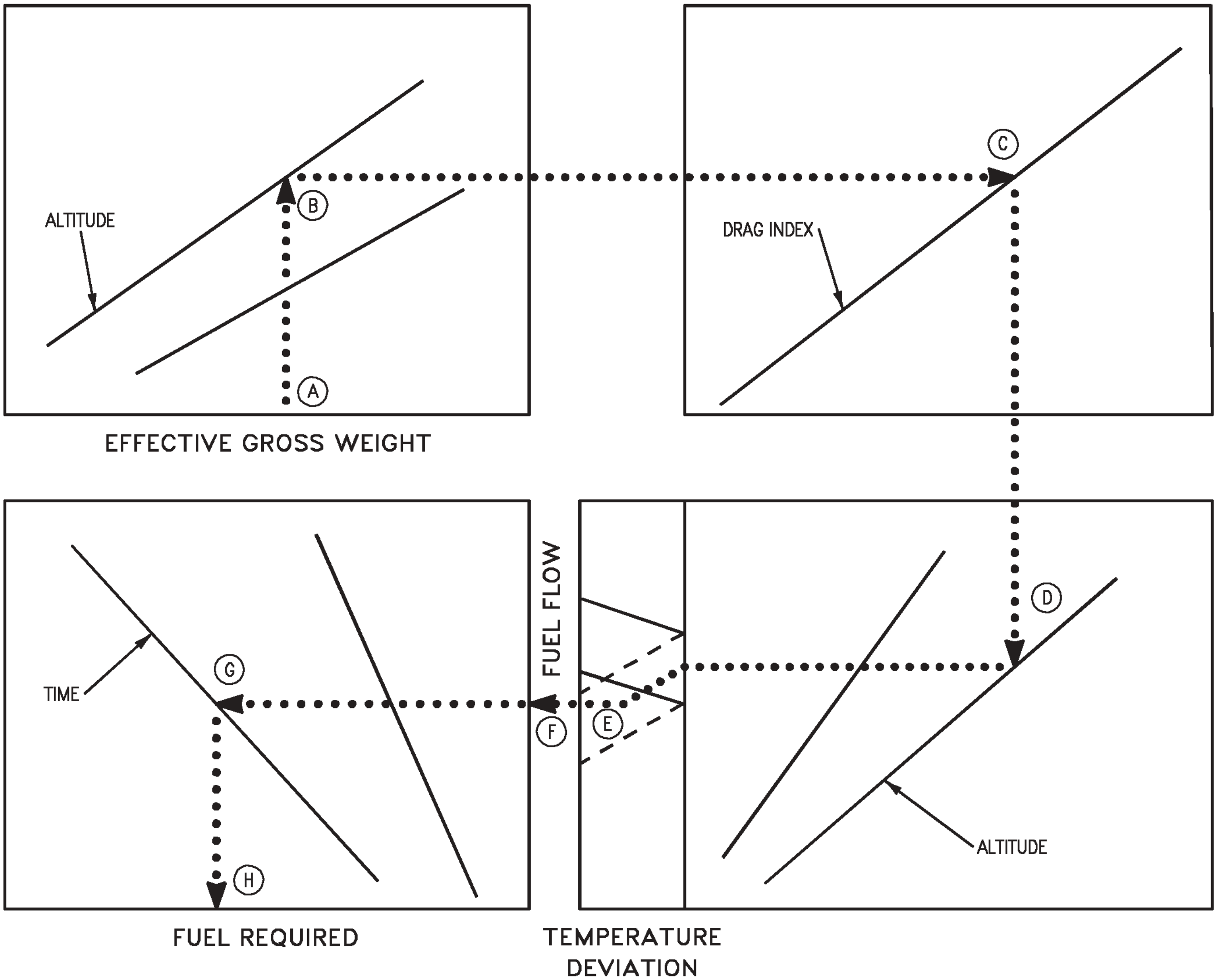
18AC–NFM–20–(261–1)11–CATI

FUEL FLOW AND FUEL REQUIRED - Enter the chart with the effective gross weight and project vertically up to intersect the desired altitude for endurance, then horizontally right to the appropriate drag index curve. From this point, project vertically down to the appropriate altitude, then horizontally left to the temperature baseline and parallel the appropriate temperature deviation guideline to the correct temperature deviation. From this point, project horizontally left to read fuel flow in pounds per hour. To find fuel required, continue to project horizontally left to intersect the desired endurance time, then vertically down to read fuel required.

Sample Problem

A. Effective gross weight	32,000 Lb.
B. Endurance altitude	35,000 Ft.
C. Drag index	100
D. Endurance altitude	35,000 Ft.
E. Temperature deviation from standard day	-10°C
F. Fuel flow	3,550 PPH
G. Endurance time	100 Min
H. Fuel required	5,920 Lb.

SAMPLE FUEL FLOW AND FUEL REQUIRED



MAXIMUM ENDURANCE

F404–GE–400

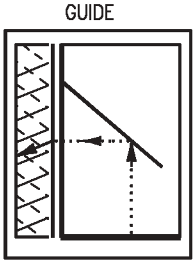
ALTITUDE
WITH EFFECTIVE GROSS WEIGHT

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

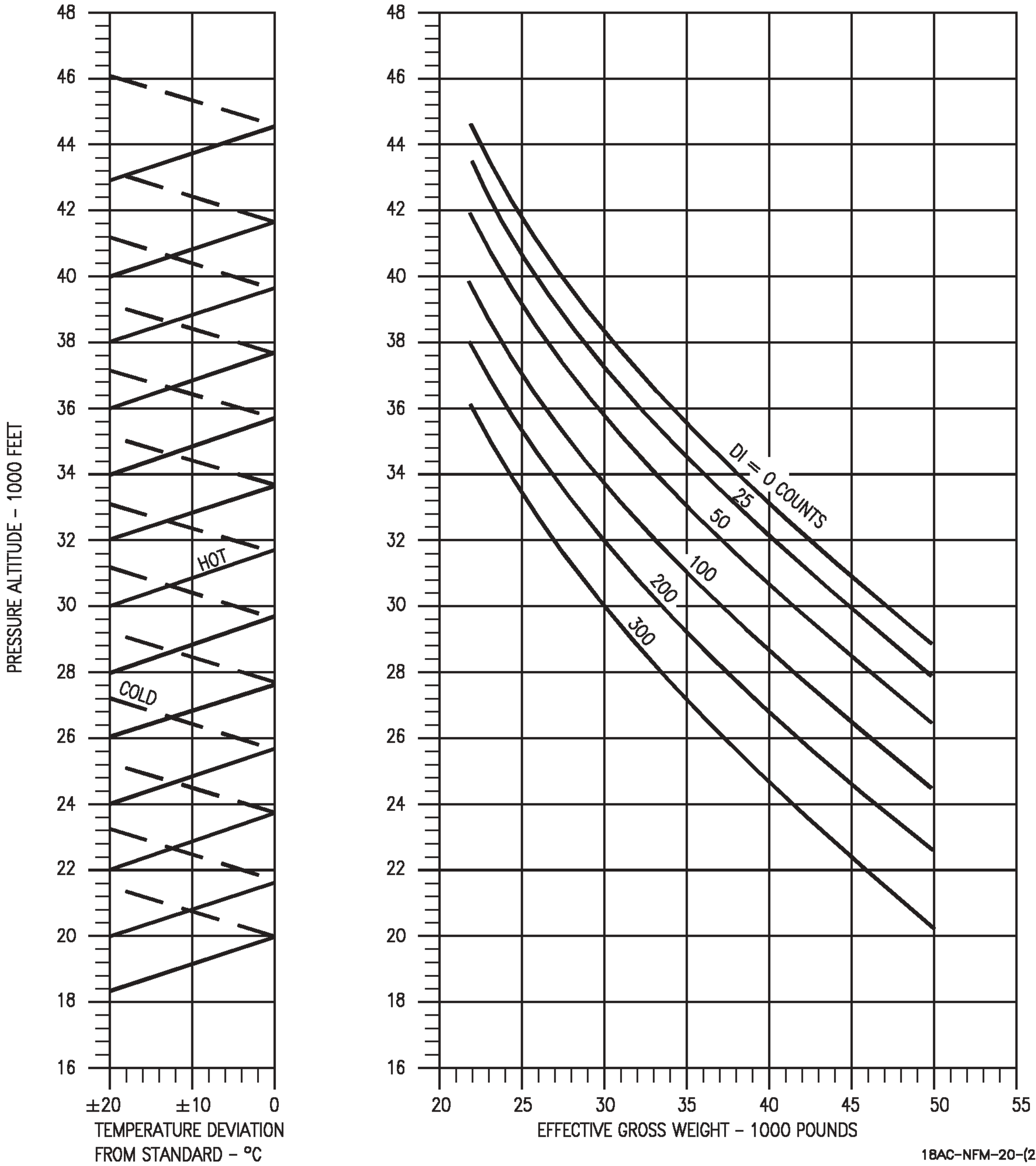


Figure 11-155. Maximum Endurance - F404-GE-400
(Sheet 1 of 3)

MAXIMUM ENDURANCE

F404–GE–400

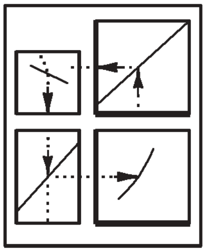
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

MACH NUMBER AND AIRSPEED
WITH EFFECTIVE GROSS WEIGHT

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

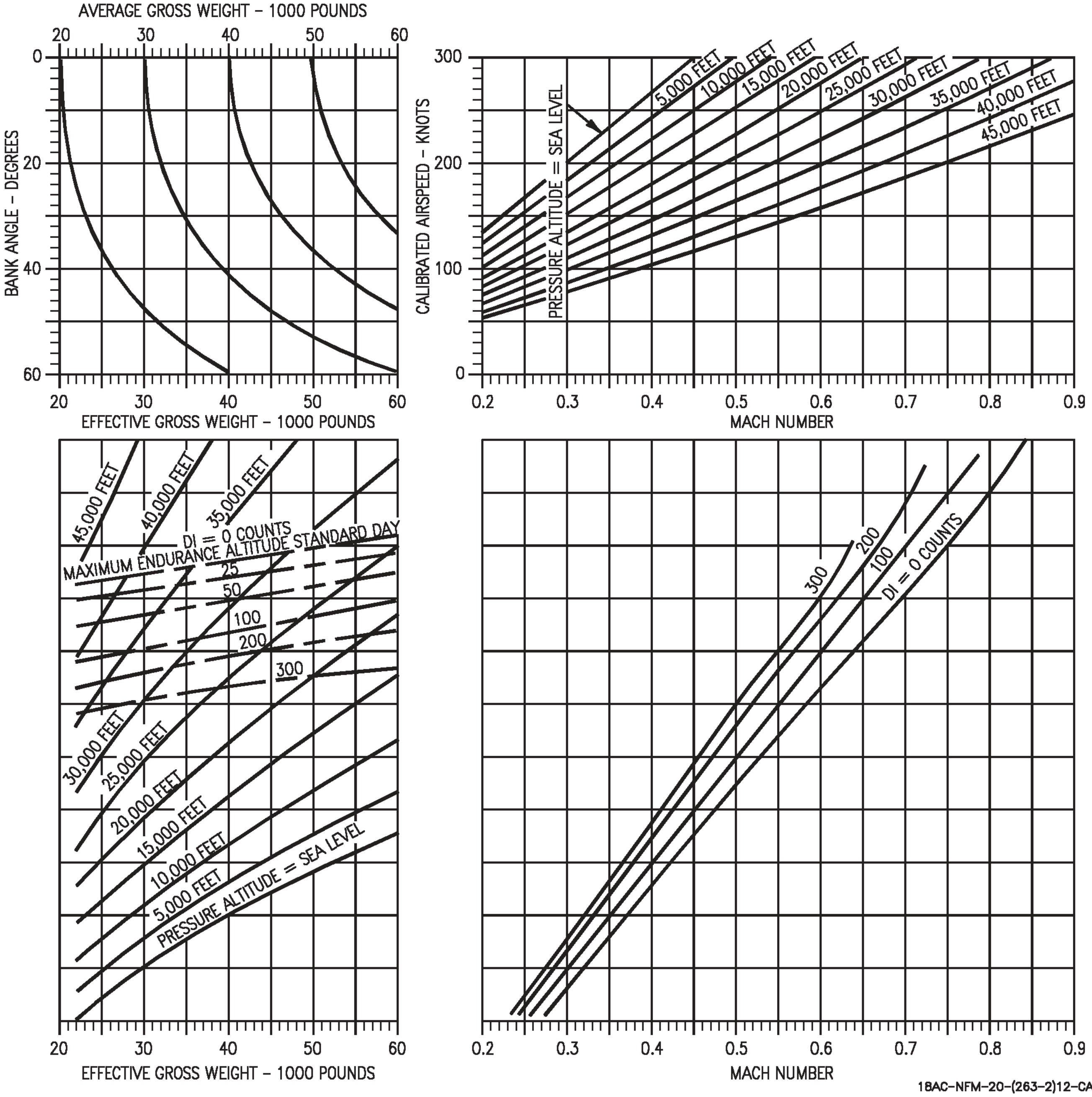


Figure 11-155. Maximum Endurance - F404-GE-400
(Sheet 2 of 3)

MAXIMUM ENDURANCE

F404–GE–400

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

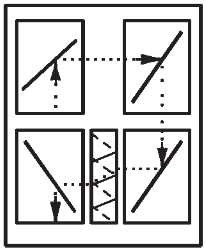
FUEL FLOW AND FUEL REQUIRED
WITH EFFECTIVE GROSS WEIGHT

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

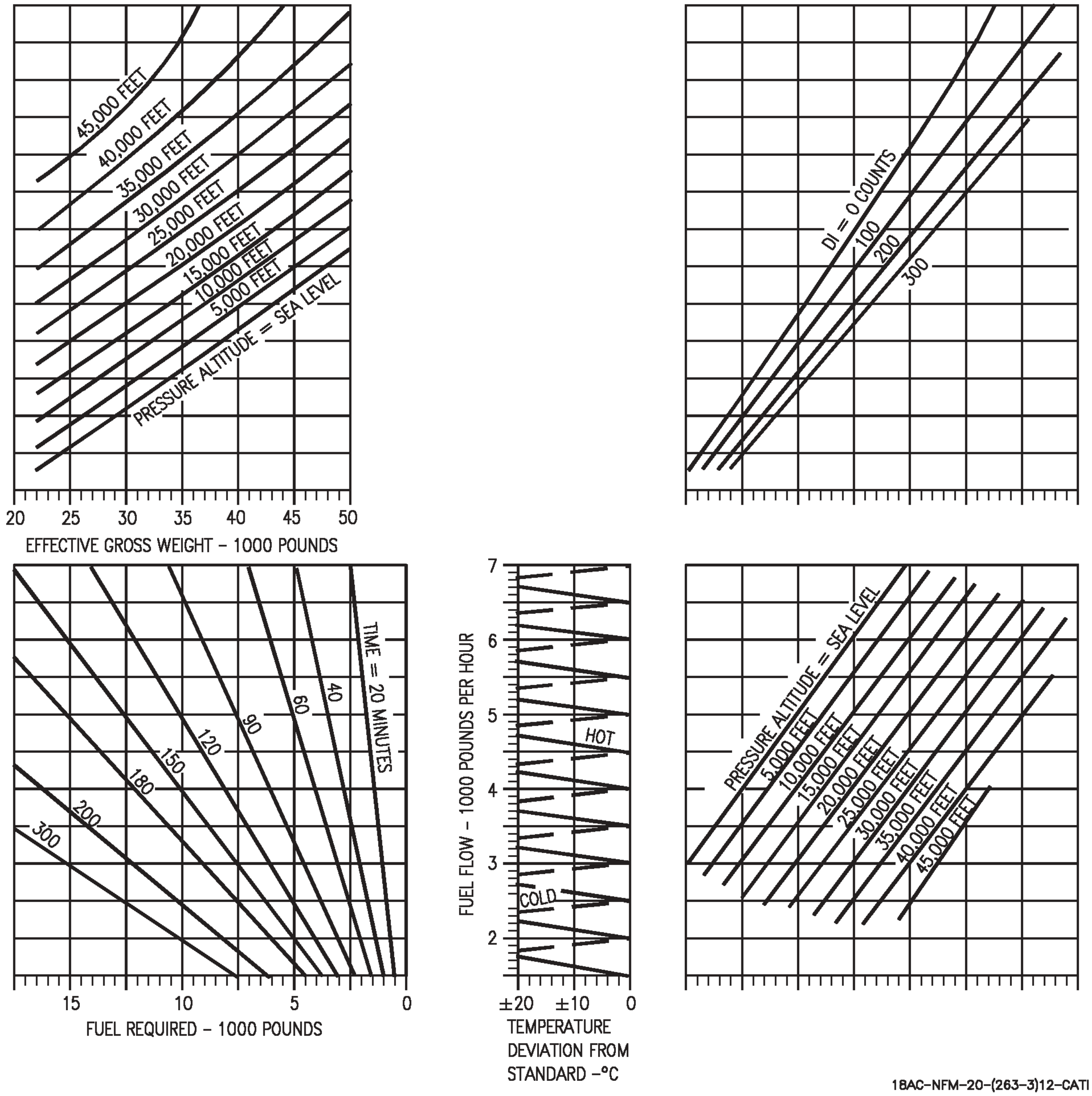
DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(263–3)12–CATI

Figure 11-155. Maximum Endurance - F404-GE-400
(Sheet 3 of 3)

MAXIMUM ENDURANCE

F404–GE–400

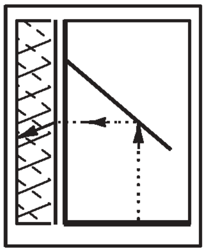
ONE ENGINE OPERATING
ALTITUDE
WITH EFFECTIVE GROSS WEIGHT

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

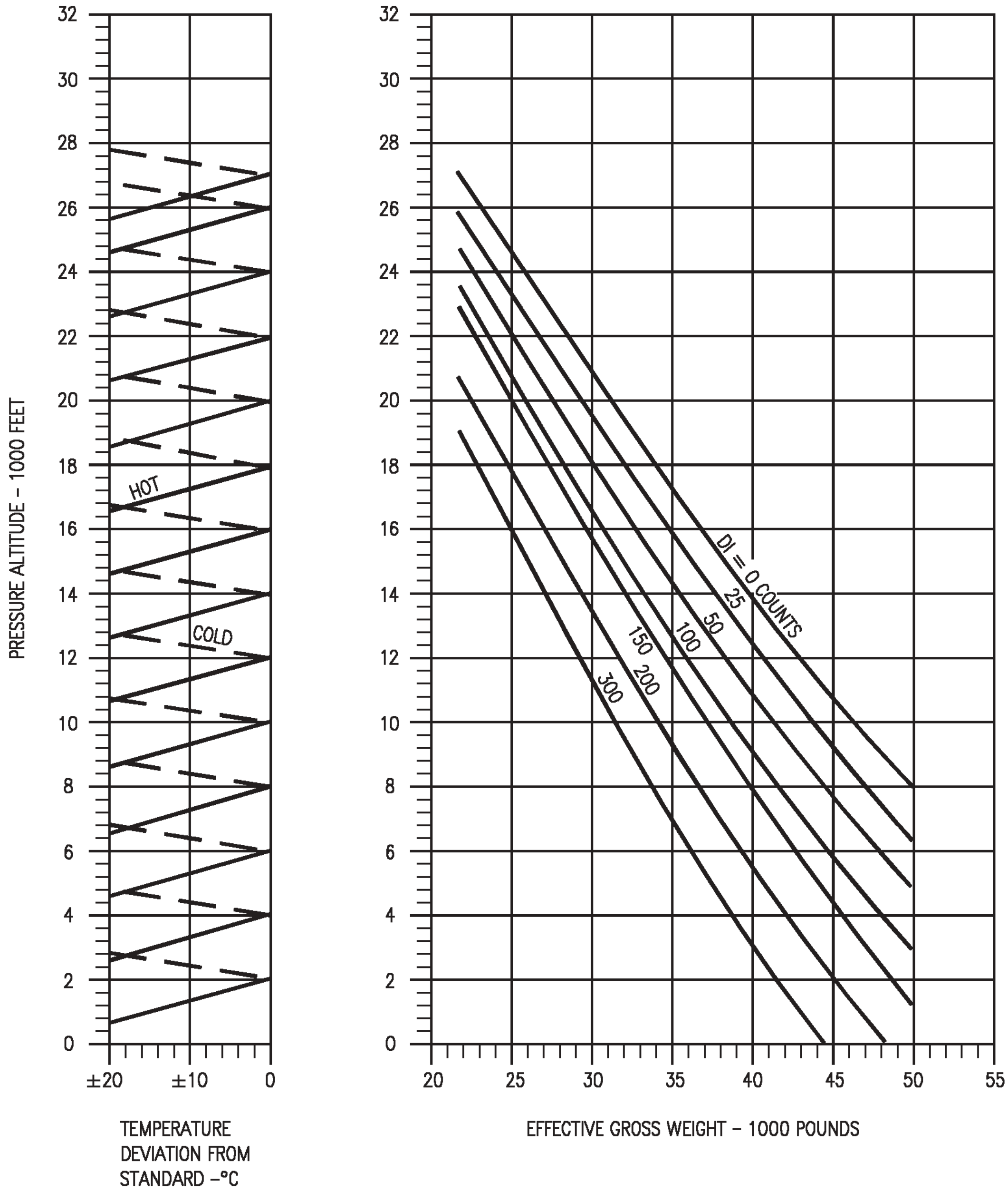
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(264–1)11–CATI

Figure 11-156. Maximum Endurance - One Engine Operating - F404-GE-400
(Sheet 1 of 3)

MAXIMUM ENDURANCE

F404–GE–400

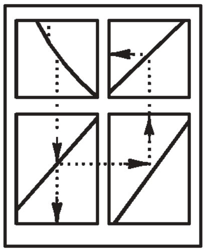
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

ONE ENGINE OPERATING
MACH NUMBER AND AIRSPEED
WITH EFFECTIVE GROSS WEIGHT

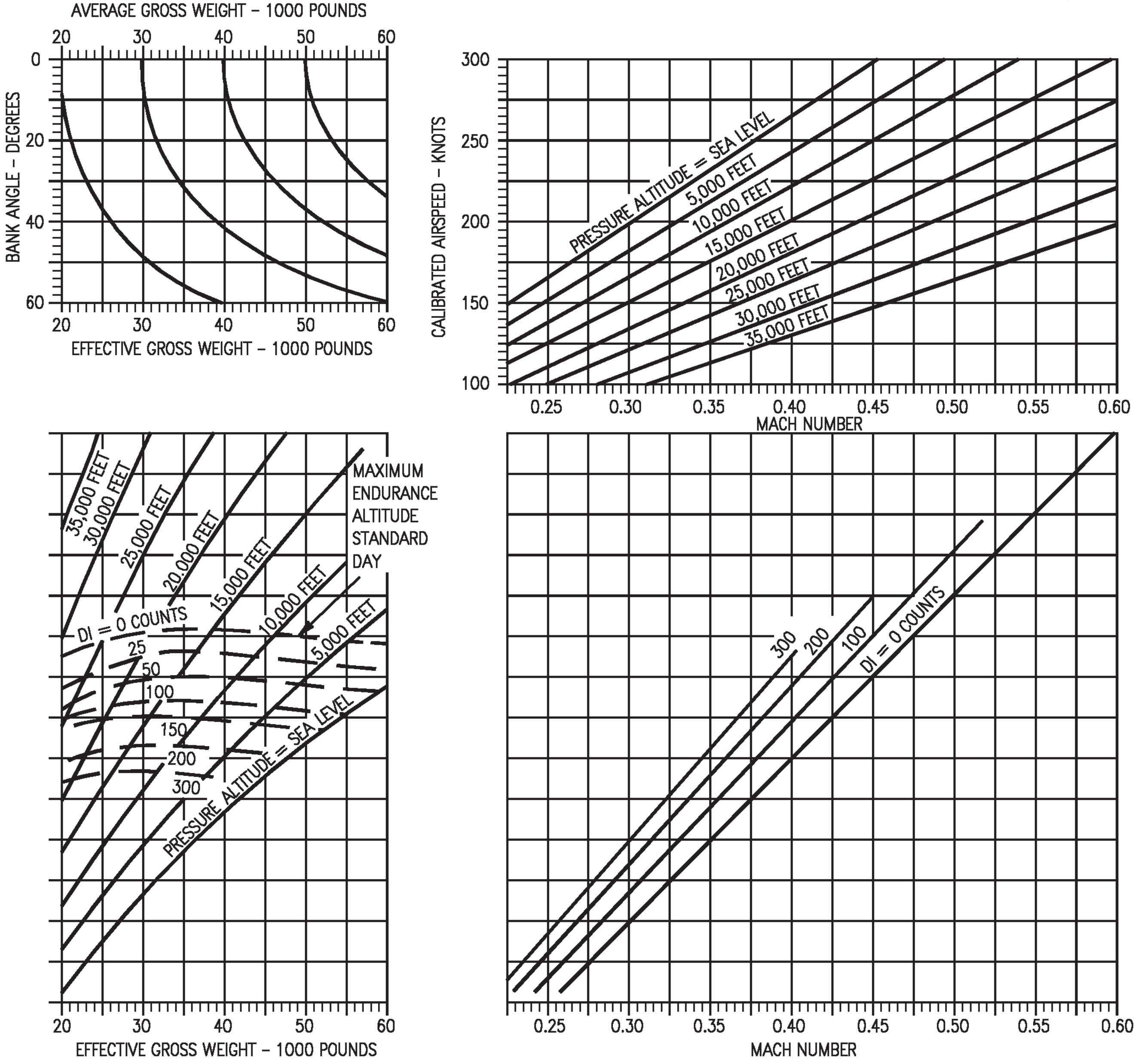
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(264–2)12–CATI

Figure 11-156. Maximum Endurance - One Engine Operating - F404-GE-400
(Sheet 2 of 3)

MAXIMUM ENDURANCE

F404–GE–400

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

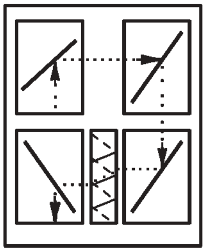
ONE ENGINE OPERATING
FUEL FLOW AND FUEL REQUIRED
WITH EFFECTIVE GROSS WEIGHT

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

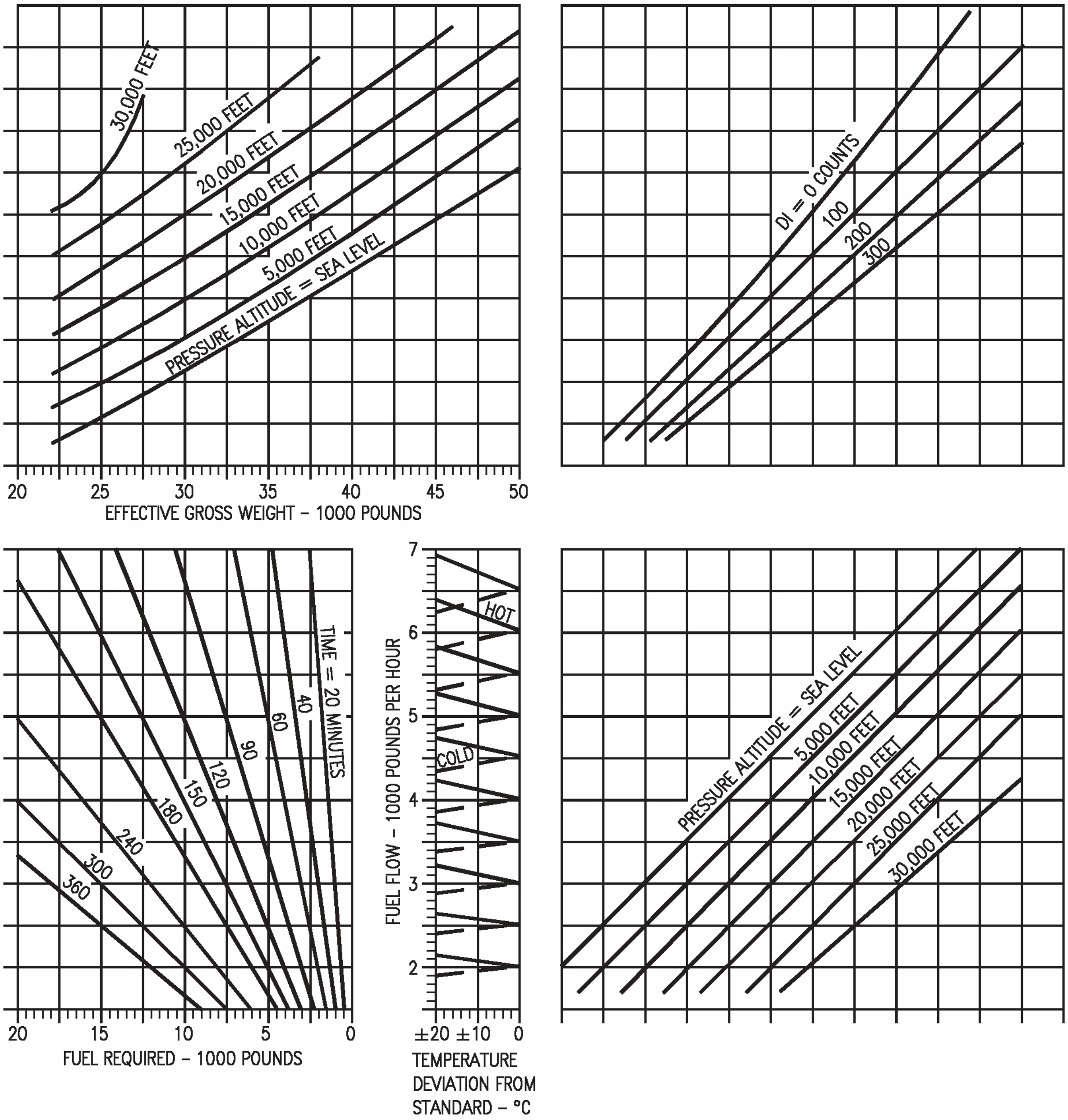
DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(264–3)12–CATI

Figure 11-156. Maximum Endurance - One Engine Operating - F404-GE-400
(Sheet 3 of 3)

PART 6 - INFLIGHT REFUELING F404-GE-400

To be supplied.

PART 7 - DESCENT F404-GE-400

TABLE OF CONTENTS

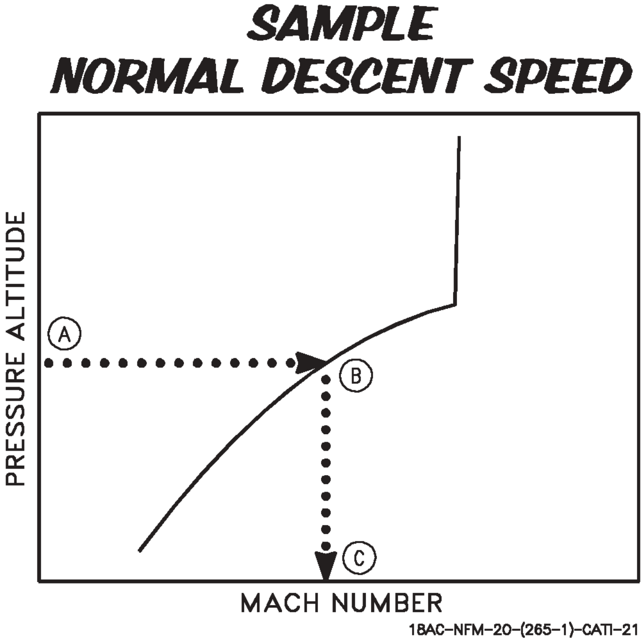
Charts

NORMAL DESCENT CHARTS

These charts (figures 11-157 and 11-158) provide speed, time, fuel required, and distance data for a normal descent with speed brake retracted. Included are separate charts for two-engine and single engine operation at various drag indexes. A descent speed of 250 KCAS is used. When cruise speed is below 250 KCAS, descend at the cruise Mach until 250 KCAS is reached. Optimum cruise altitudes are also depicted on the time, fuel, and distance charts.

USE

DESCENT SPEED - Enter the chart with the pressure altitude at start of descent and project horizontally right to the 250 KCAS curve, then vertically down to read the corresponding descent Mach number. If the cruise speed before descent is below 250 KCAS, maintain and descend at the cruise Mach number until 250 KCAS is reached.



18AC-NFM-20-(265-1)-CATI-21

Sample Problem

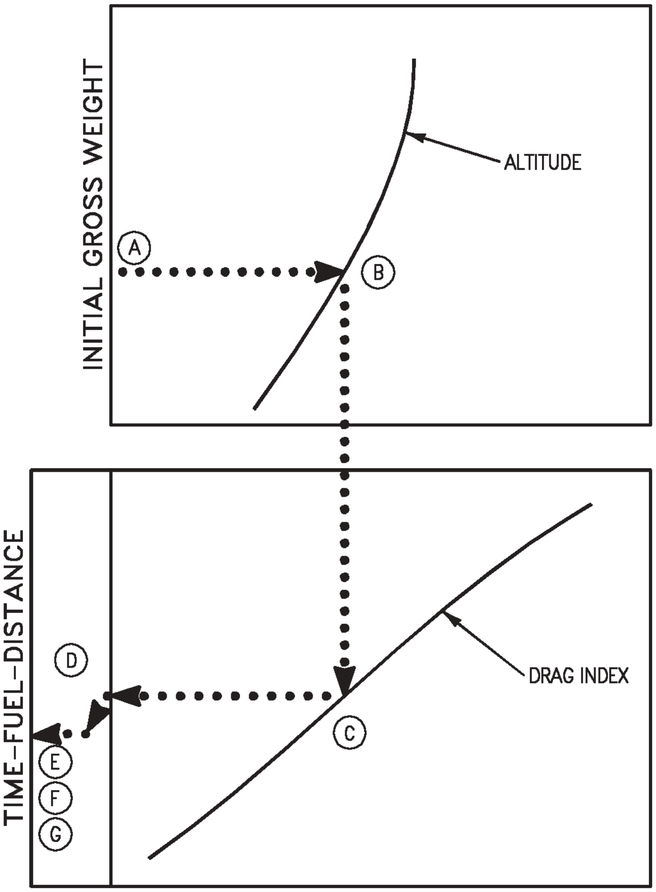
A. Pressure altitude	35,000 Ft.
B. Normal descent speed	250 KCAS
C. Descent Mach number	0.74

TIME, FUEL, AND DISTANCE REQUIRED - Presentation of these charts are identical; therefore, they are used in the same manner. Enter the appropriate chart with the initial gross weight at start of descent and project horizontally right to intersect the pressure altitude at the start of descent. From this point, project vertically down to the appropriate drag index curve, then horizontally left to the temperature baseline and follow the appropriate temperature deviation guideline to the appropriate temperature deviation. From this point project horizontally left to read time, fuel, and distance required during descent.

Sample Problem

A. Initial gross weight	34,000 Lb.
B. Pressure altitude	35,000 Ft.
C. Drag index	50
D. Temperature deviation from standard day	+10°C
E. Time	11.1 Min.
F. Fuel required	292 Lb.
G. Distance	61 NM

SAMPLE NORMAL DESCENT TIME-FUEL-DISTANCE



18AC-NFM-20-(266-1)-CATI-33

MAXIMUM RANGE DESCENT CHARTS

These charts (figures 11-159 thru 11-160) provide speed, time, fuel required, and distance data for a maximum range descent at idle thrust with speedbrake retracted. Included are separate charts for two-engine and single engine operation at various drag indexes. When cruise airspeed is below maximum descent airspeed, descend at the cruise Mach until the maximum range descent airspeed is reached. Optimum cruise altitudes are also depicted on the time, fuel, and distance charts.

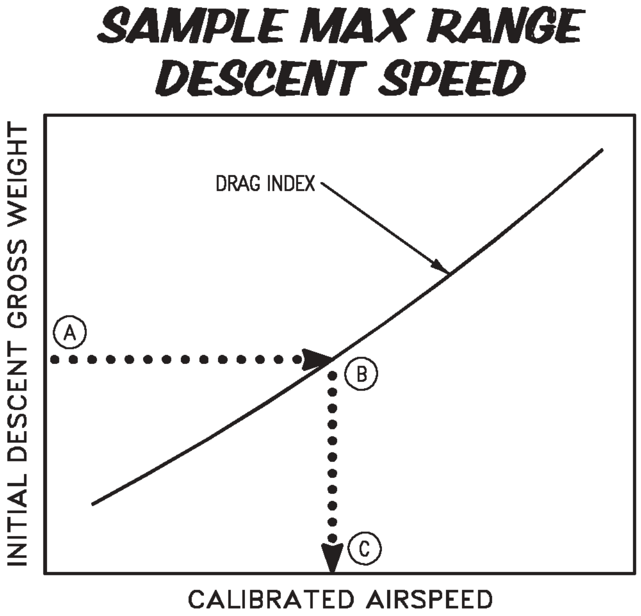
USE

DESCENT SPEED

Enter the chart with the initial descent gross weight and project horizontally right to the appropriate drag index curve and then vertically down to read the corresponding descent calibrated airspeed. If the cruise airspeed before descent is below the descent airspeed, maintain and descend at the cruise Mach number until the descent airspeed is reached.

Sample Problem

A. Initial Descent Gross Weight	35,000 Lb.
B. Drag Index	200
C. Maximum Range Descent Calibrated Airspeed	210 KCAS



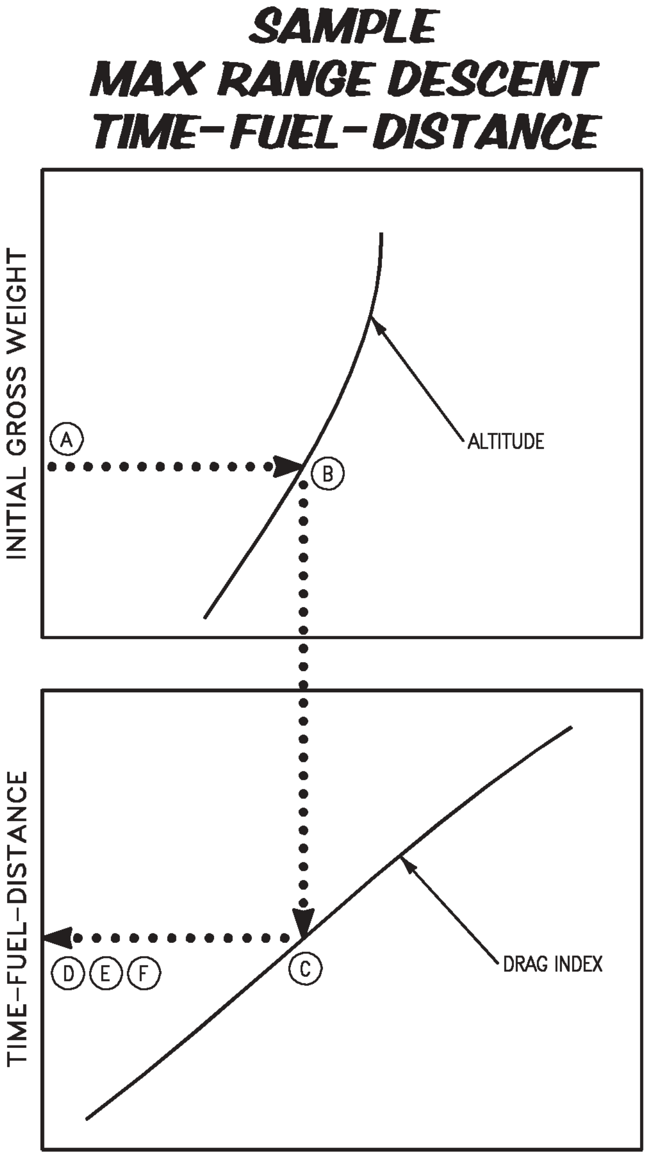
18AC-NFM-20-(306-1)-CATI-22

TIME, FUEL, AND DISTANCE REQUIRED

Presentation of these charts are identical; therefore, they are used in the same manner. Enter the appropriate chart with the initial gross weight at start of descent and project horizontally right to intersect the pressure altitude at the start of descent. From this point, project vertically down to the appropriate drag index curve, then horizontally left to read time, fuel, and distance required during descent.

Sample Problem

A. Initial Gross Weight	35,000 Lb.
B. Pressure Altitude	30,000 Ft.
C. Drag Index	100
D. Time	10.5 Min.
E. Fuel required	285 Lb.
F. Distance	48 NM



18AC-NFM-20-(307-1)-CATI-37

NORMAL DESCENT

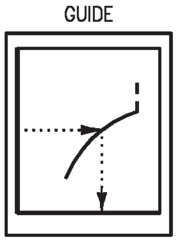
F404-GE-400

DESCENT SPEED
SPEEDBRAKE RETRACTED
IDLE THRUST

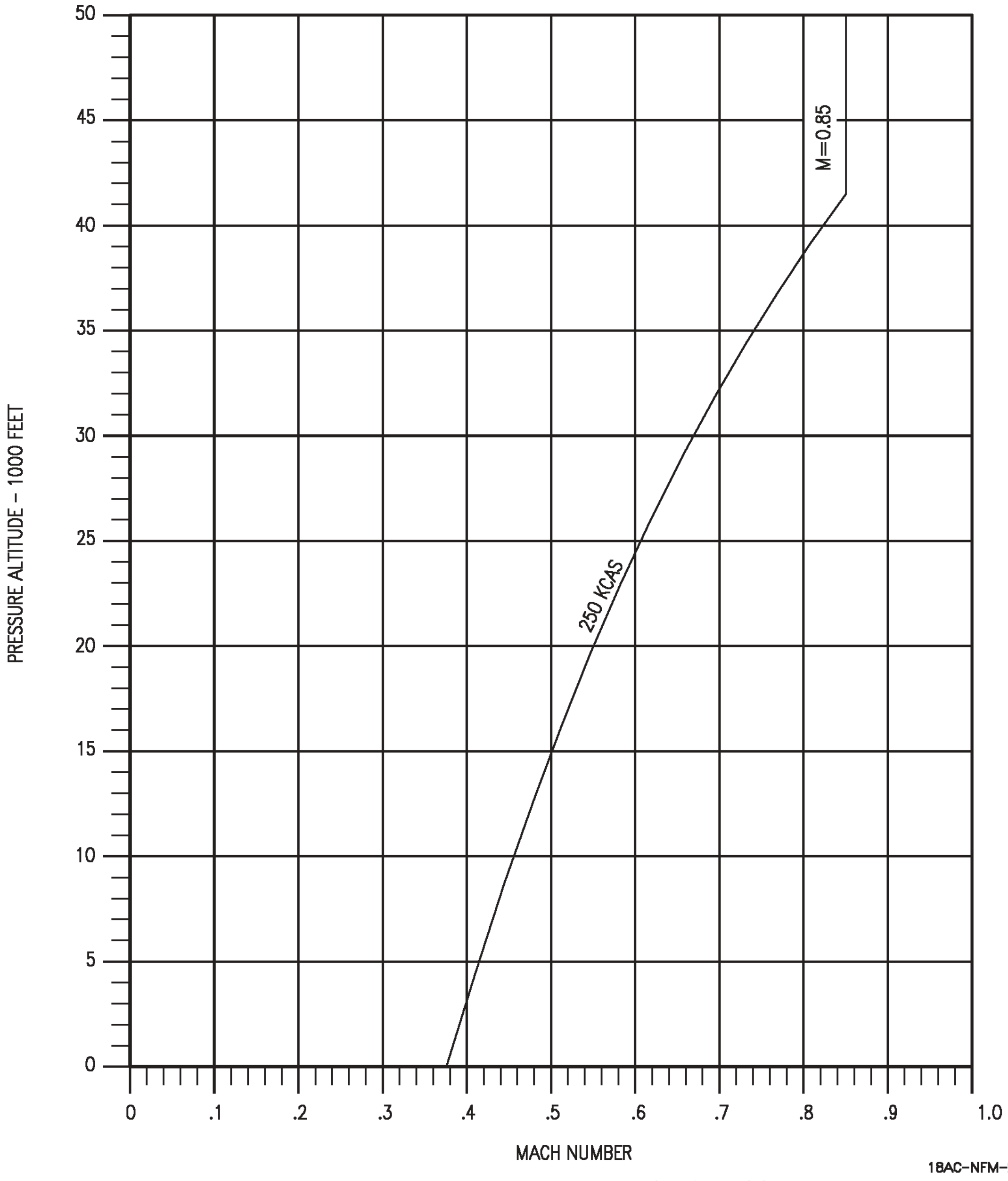
AIRCRAFT CONFIGURATION
ALL DRAG INDEXES
ALL GROSS WEIGHTS

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(267-1)12-CATI

Figure 11-157. Normal Descent - F404-GE-400
(Sheet 1 of 4)

NORMAL DESCENT

F404-GE-400

TIME REQUIRED TO DESCEND
SPEEDBRAKE RETRACTED
IDLE THRUST

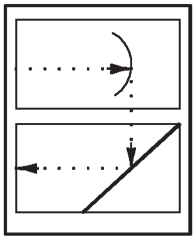
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

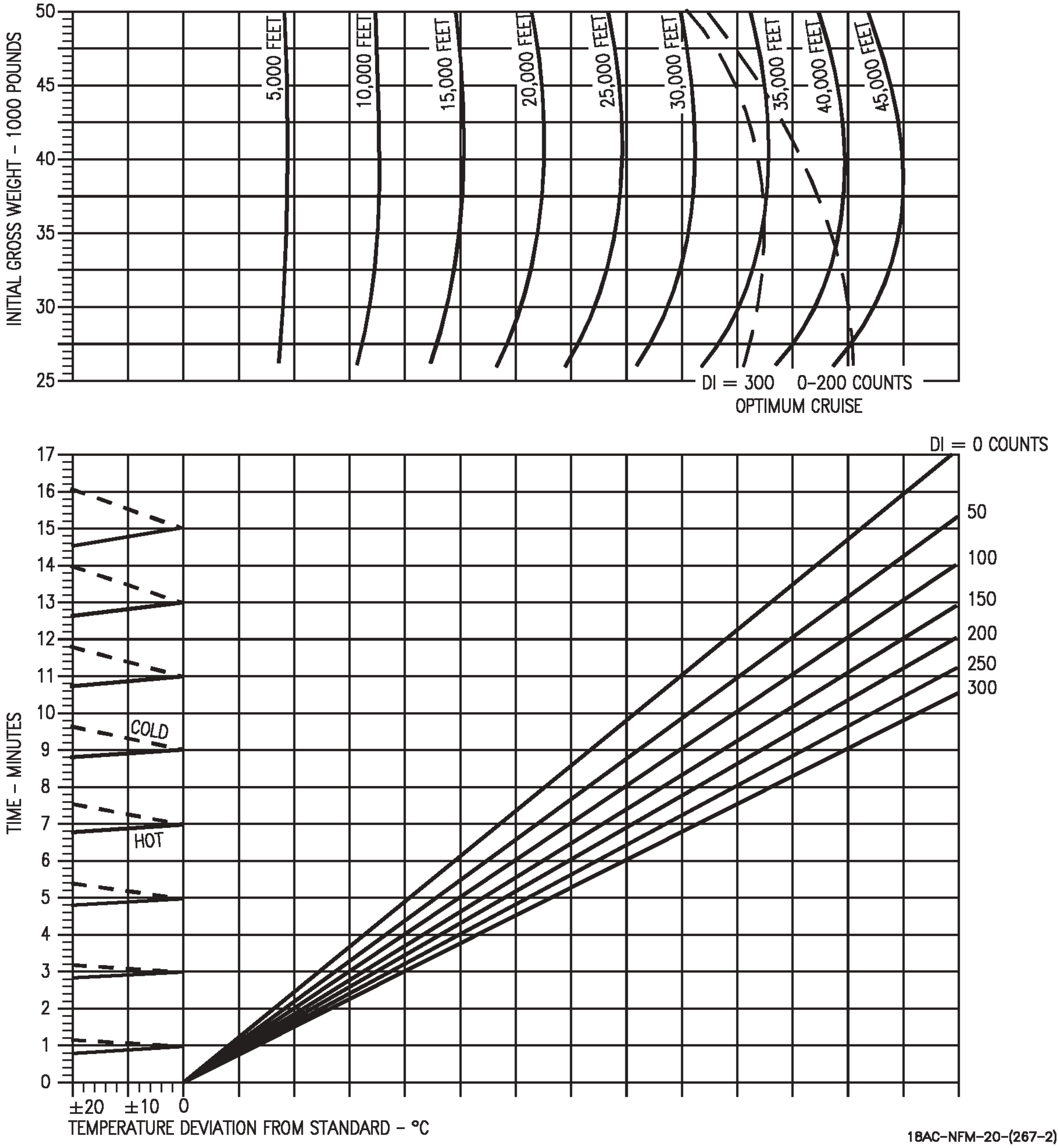
DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	-5	12
15,000	-15	6
20,000	-25	-12
25,000	-35	-30
30,000	-44	-48
35,000	-54	-66
40,000	-57	-70
70,000	-57	-70

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(267-2)12-CATI

Figure 11-157. Normal Descent - F404-GE-400
(Sheet 2 of 4)

NORMAL DESCENT

F404–GE–400

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

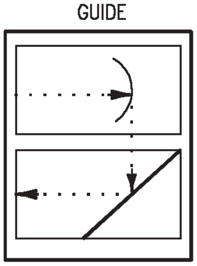
FUEL REQUIRED TO DESCEND
SPEEDBRAKE RETRACTED
IDLE THRUST

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

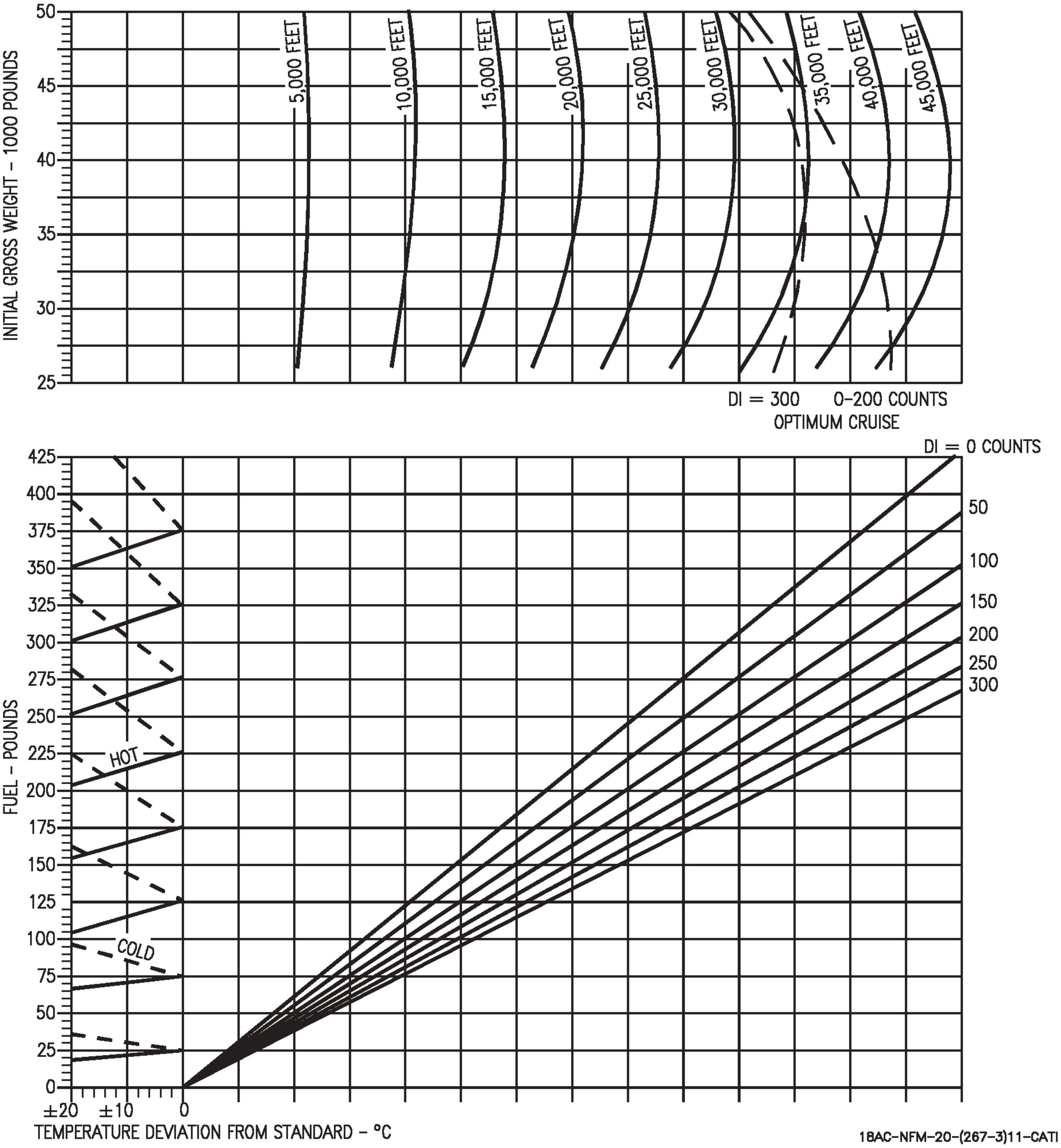
DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(267–3)11–CATI

Figure 11-157. Normal Descent - F404-GE-400
(Sheet 3 of 4)

NORMAL DESCENT

F404–GE–400

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

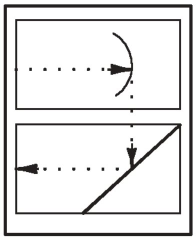
DISTANCE REQUIRED TO DESCEND
SPEEDBRAKE RETRACTED
IDLE THRUST

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

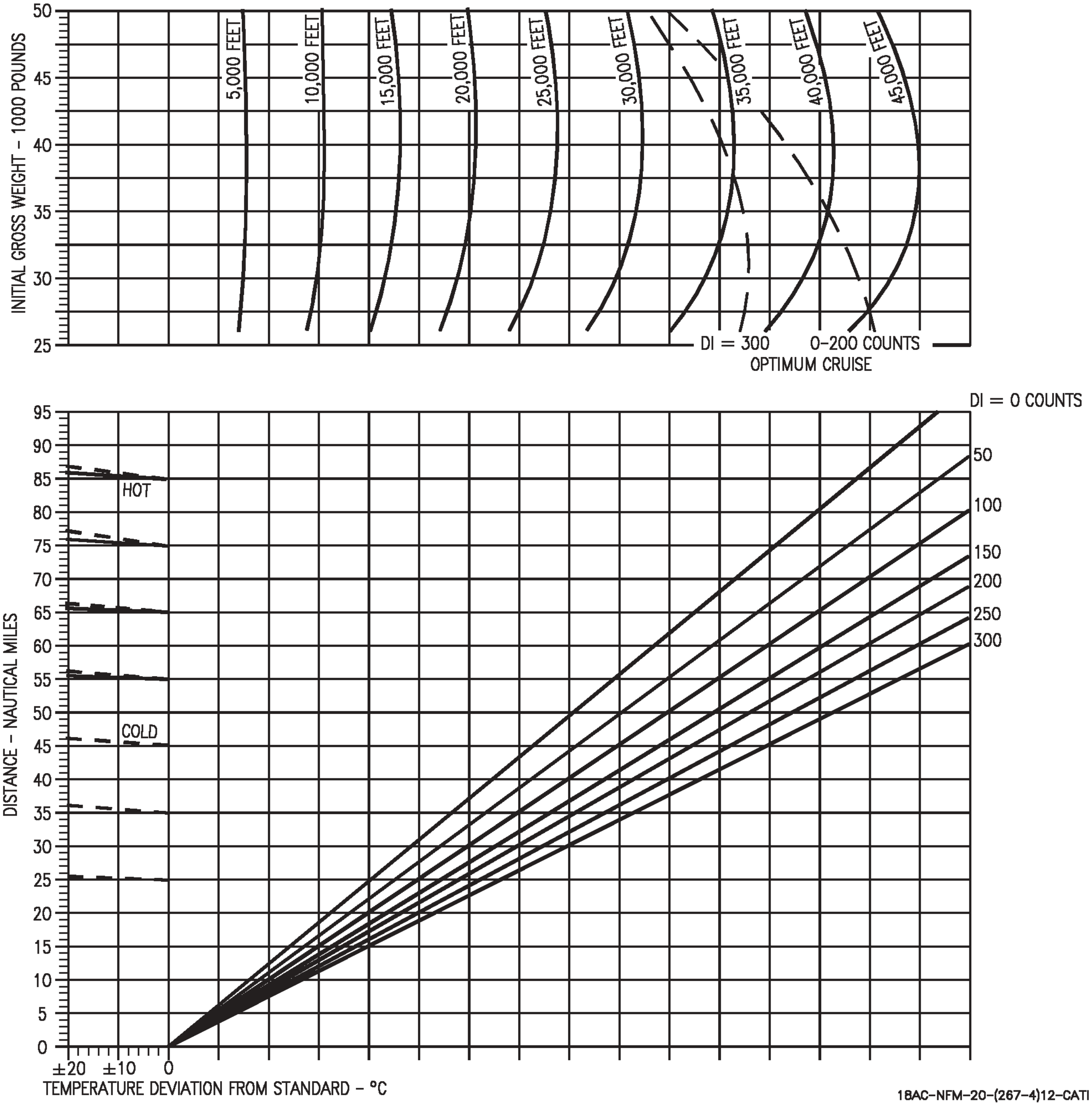
DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(267–4)12–CATI

Figure 11-157. Normal Descent - F404-GE-400
(Sheet 4 of 4)

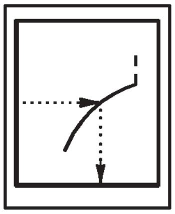
NORMAL DESCENT

F404–GE–400
ONE ENGINE OPERATING
DESCENT SPEED
SPEEDBRAKE RETRACTED
IDLE THRUST

AIRCRAFT CONFIGURATION
ALL DRAG INDEXES
ALL GROSS WEIGHTS

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

GUIDE



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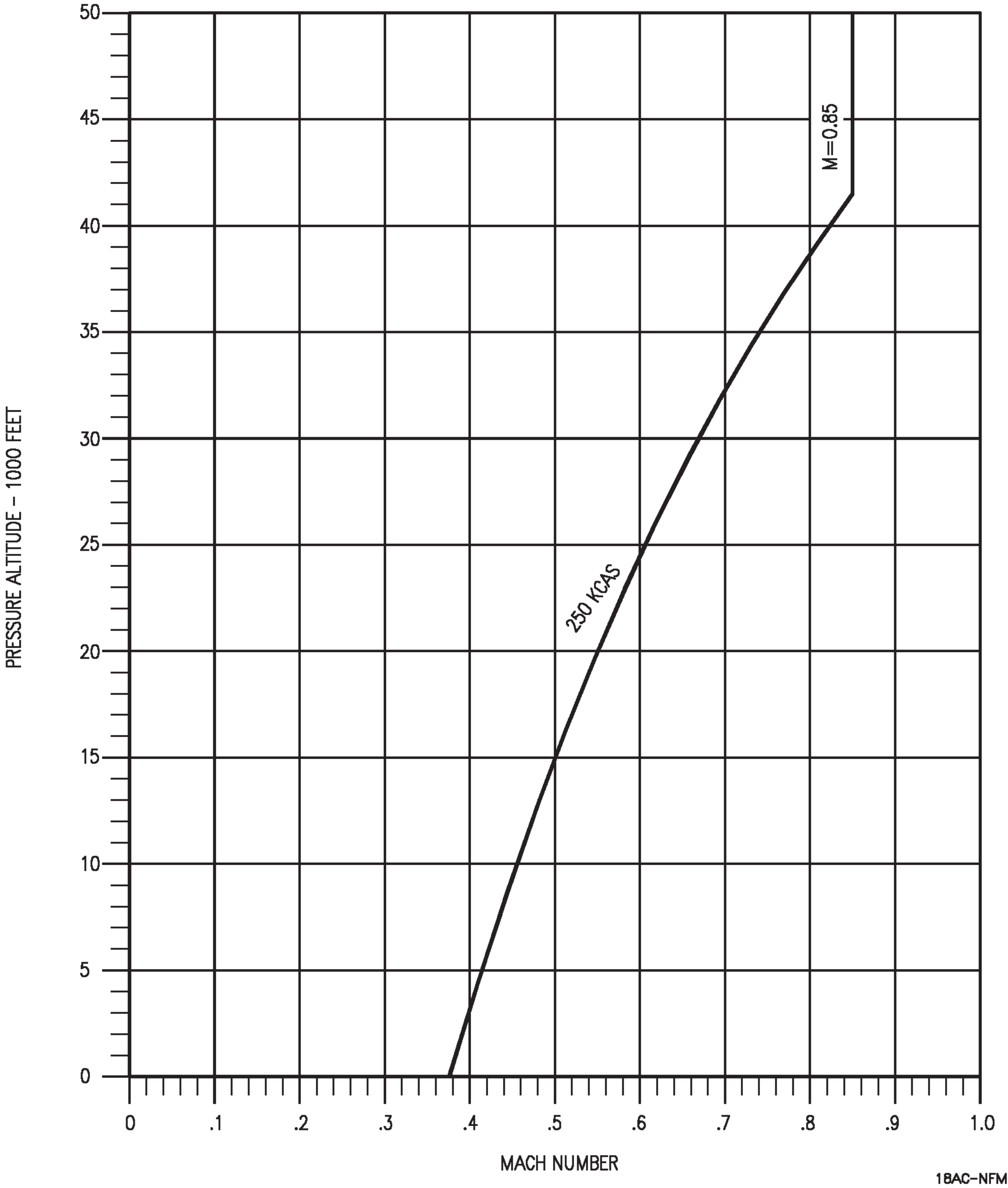
FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(268–1)12–CATI

Figure 11-158. Normal Descent - One Engine Operating - F404-GE-400
(Sheet 1 of 4)

NORMAL DESCENT

F404–GE–400

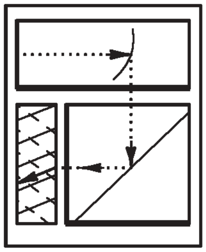
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

ONE ENGINE OPERATING
TIME REQUIRED TO DESCEND
SPEEDBRAKE RETRACTED
IDLE THRUST

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70

GUIDE



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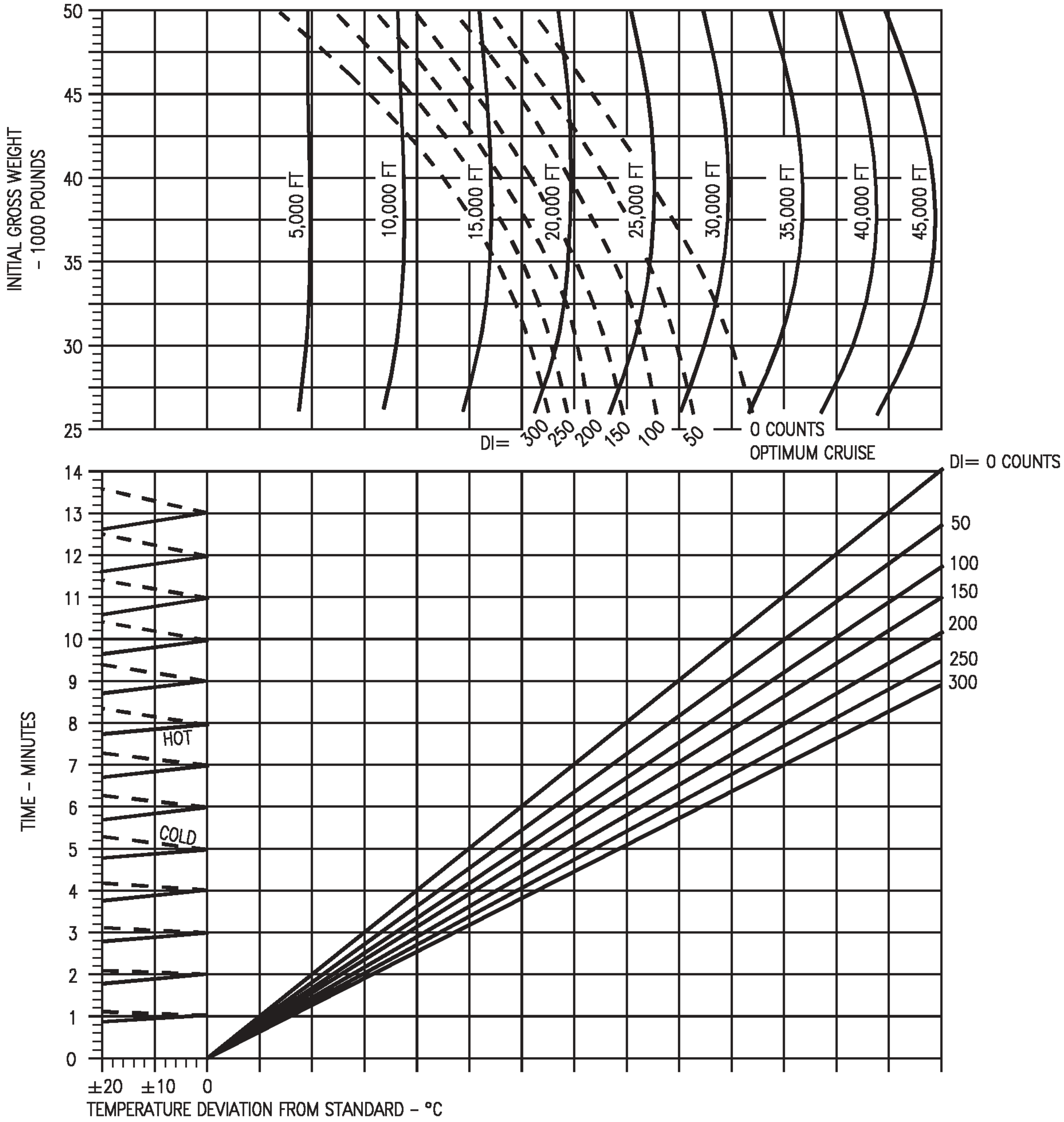
FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(268–2)12–CATI

Figure 11-158. Normal Descent - One Engine Operating - F404-GE-400
(Sheet 2 of 4)

NORMAL DESCENT

F404-GE-400

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

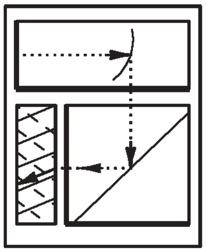
ONE ENGINE OPERATING
FUEL REQUIRED TO DESCEND
SPEEDBRAKE RETRACTED
IDLE THRUST

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

STANDARD TEMPERATURE

ALT	°C	°F
SL	15	59
5,000	5	41
10,000	-5	12
15,000	-15	6
20,000	-25	-12
25,000	-35	-30
30,000	-44	-48
35,000	-54	-66
40,000	-57	-70
70,000	-57	-70

GUIDE



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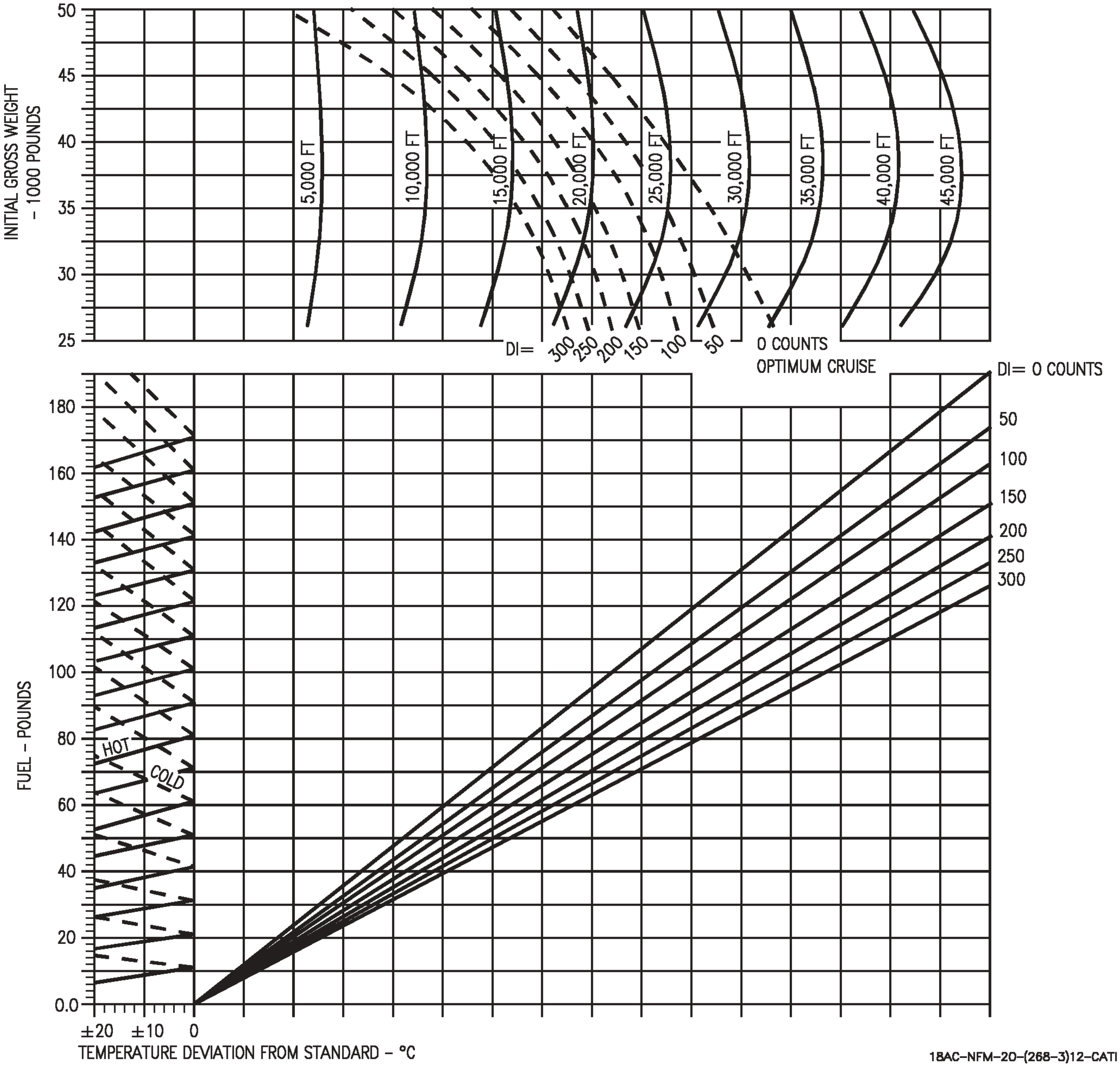
FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(268-3)12-CATI

Figure 11-158. Normal Descent - One Engine Operating - F404-GE-400
(Sheet 3 of 4)

NORMAL DESCENT

F404-GE-400

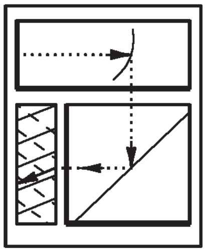
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

ONE ENGINE OPERATING
DISTANCE REQUIRED TO DESCEND
SPEEDBRAKE RETRACTED
IDLE THRUST

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

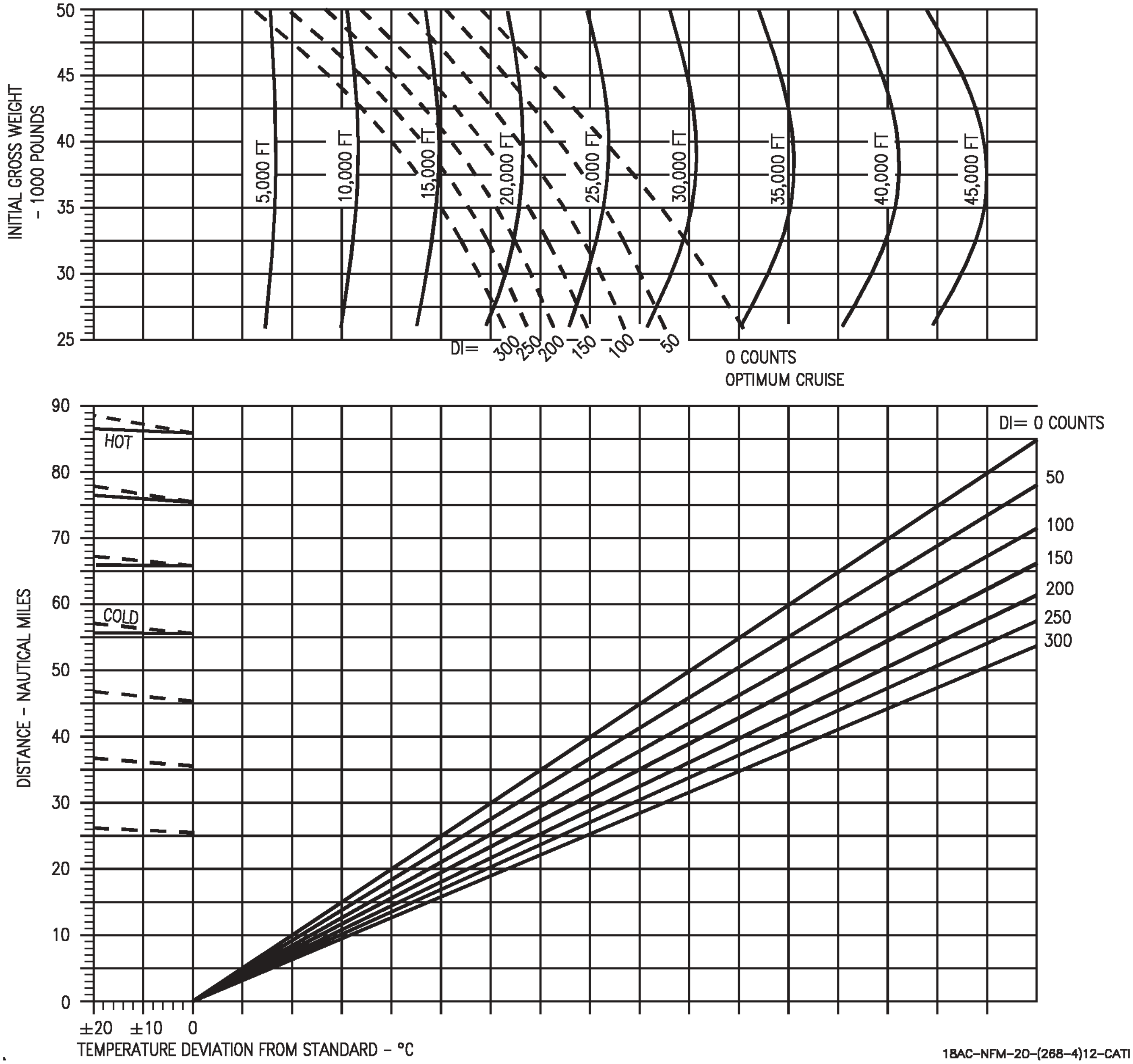
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	−5	12
15,000	−15	6
20,000	−25	−12
25,000	−35	−30
30,000	−44	−48
35,000	−54	−66
40,000	−57	−70
70,000	−57	−70

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(268–4)12–CATI

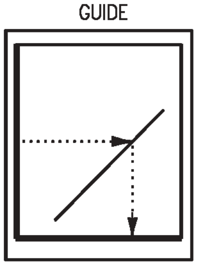
Figure 11-158. Normal Descent - One Engine Operating - F404-GE-400
(Sheet 4 of 4)

MAXIMUM RANGE DESCENT

F404–GE–400
DESCENT SPEED
SPEEDBRAKE RETRACTED
IDLE THRUST

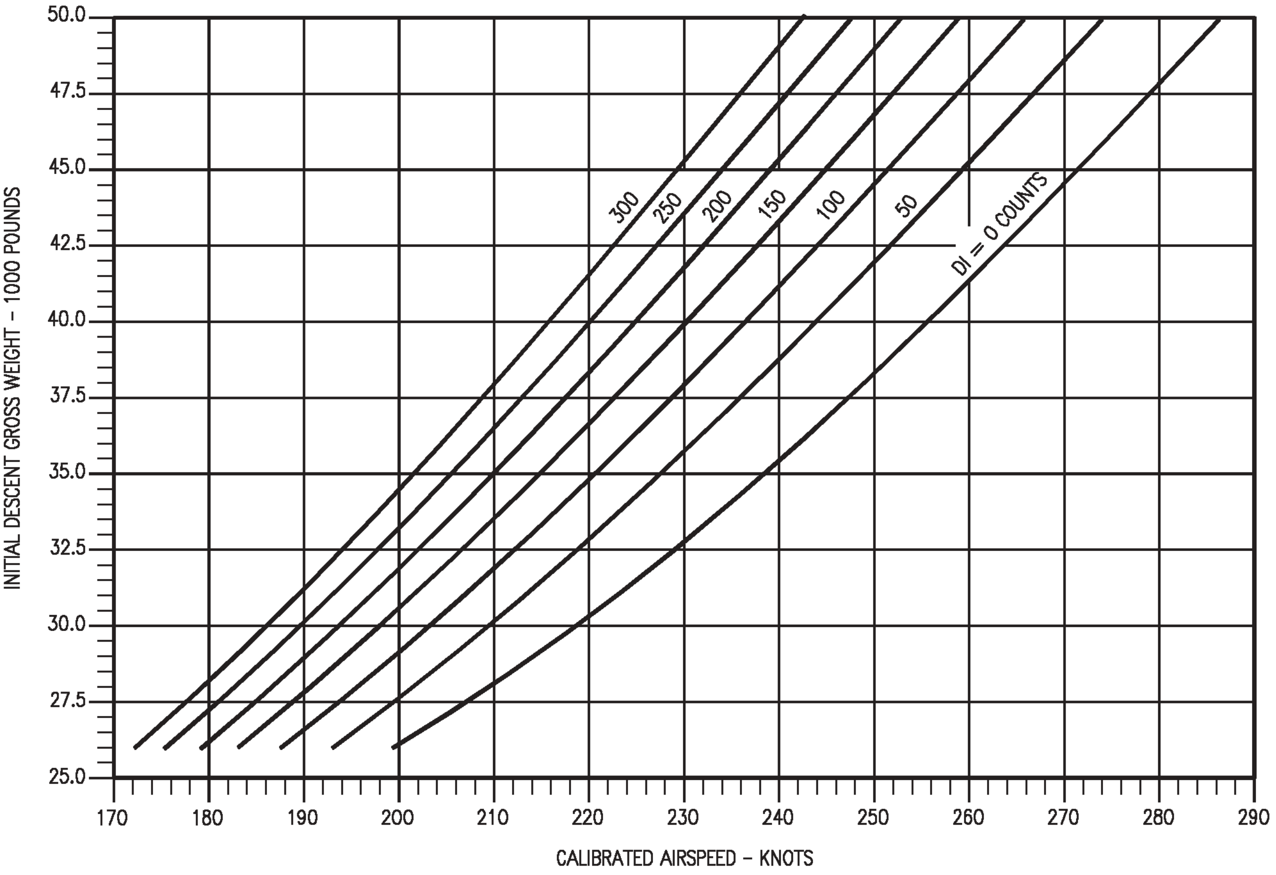
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(301–1)12–CATI

Figure 11-159. Maximum Range Descent - F404-GE-400
(Sheet 1 of 4)

MAXIMUM RANGE DESCENT

F404–GE–400

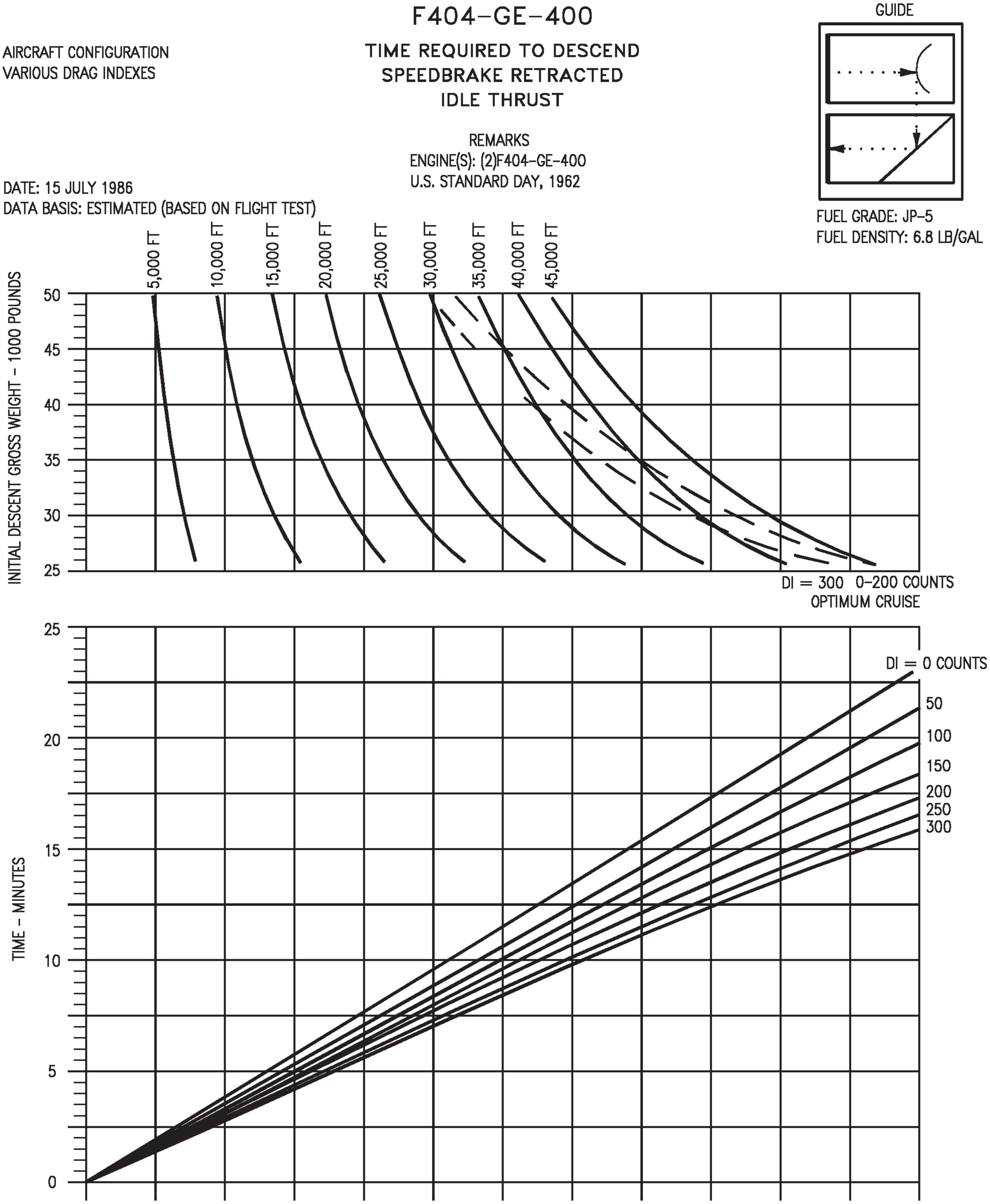
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

TIME REQUIRED TO DESCEND
SPEEDBRAKE RETRACTED
IDLE THRUST

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(301–2)12–CATI

Figure 11-159. Maximum Range Descent - F404-GE-400
(Sheet 2 of 4)

MAXIMUM RANGE DESCENT

F404–GE–400

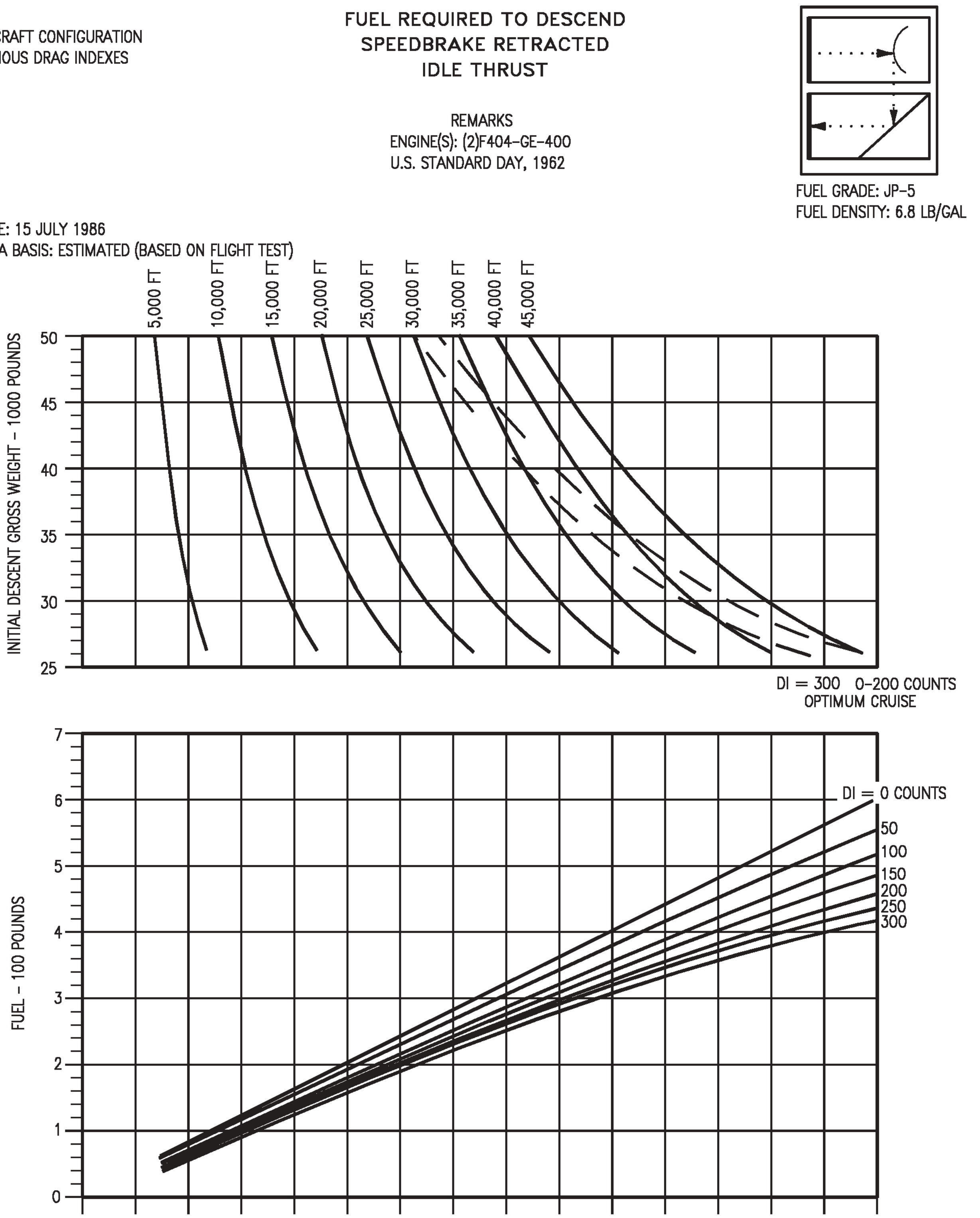
FUEL REQUIRED TO DESCEND
SPEEDBRAKE RETRACTED
IDLE THRUST

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(301–3)12–CATI

Figure 11-159. Maximum Range Descent - F404-GE-400
(Sheet 3 of 4)

MAXIMUM RANGE DESCENT

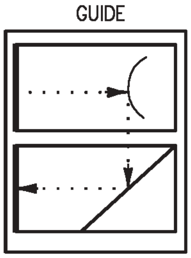
F404–GE–400

DISTANCE REQUIRED TO DESCEND
SPEEDBRAKE RETRACTED
IDLE THRUST

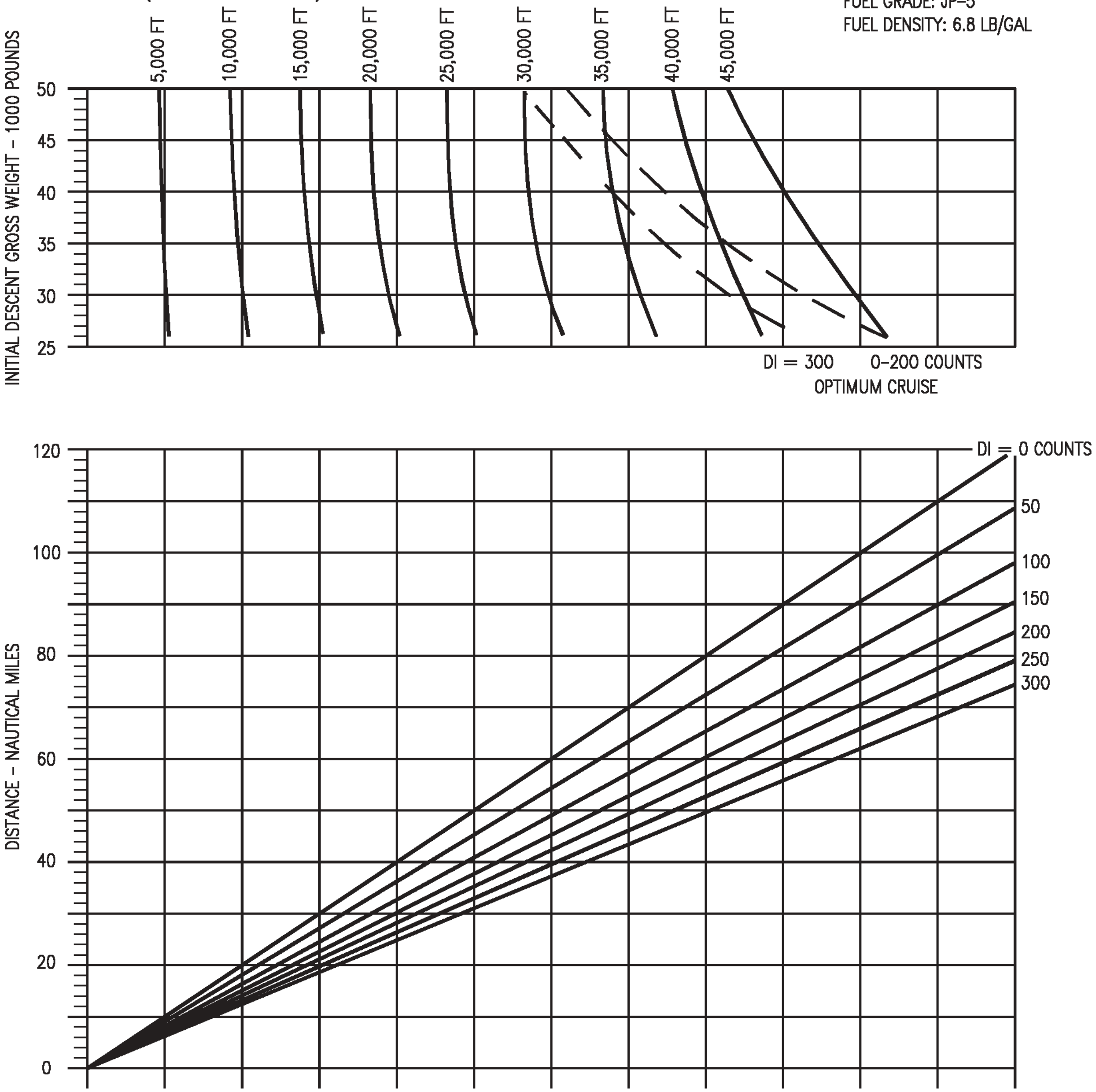
AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(301–4)12–CATI

Figure 11-159. Maximum Range Descent - F404-GE-400
(Sheet 4 of 4)

MAXIMUM RANGE DESCENT

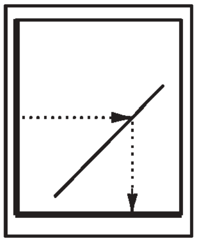
F404-GE-400

ONE ENGINE OPERATING
DESCENT SPEED
SPEEDBRAKE RETRACTED
IDLE THRUST

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

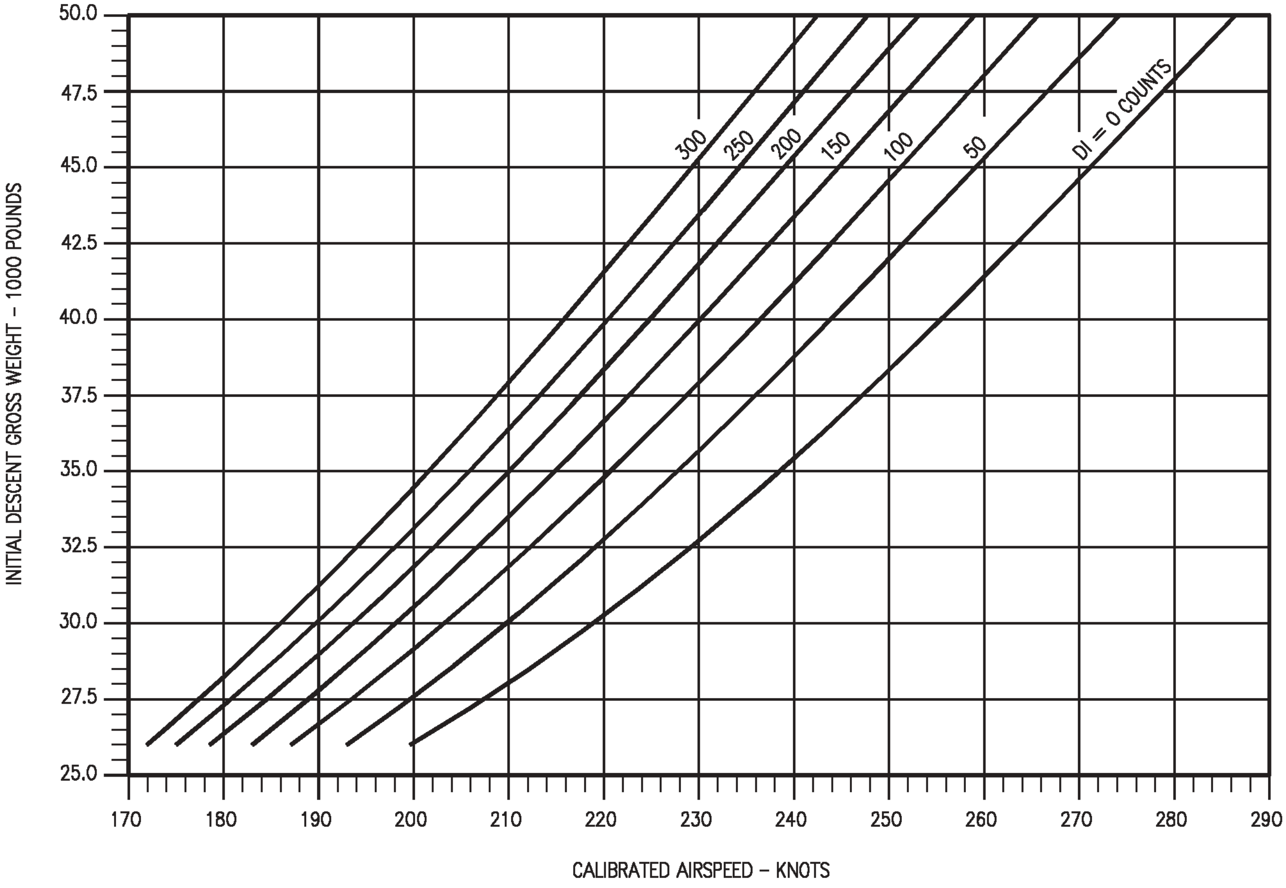
REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(302-1)12-CATI

Figure 11-160. Maximum Range Descent - One Engine Operating - F404-GE-400
(Sheet 1 of 4)

MAXIMUM RANGE DESCENT

F404–GE–400

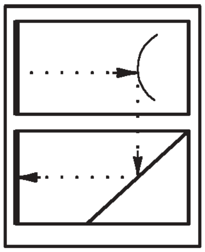
ONE ENGINE OPERATING
TIME REQUIRED TO DESCEND
SPEED BRAKE RETRACTED
IDLE THRUST

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

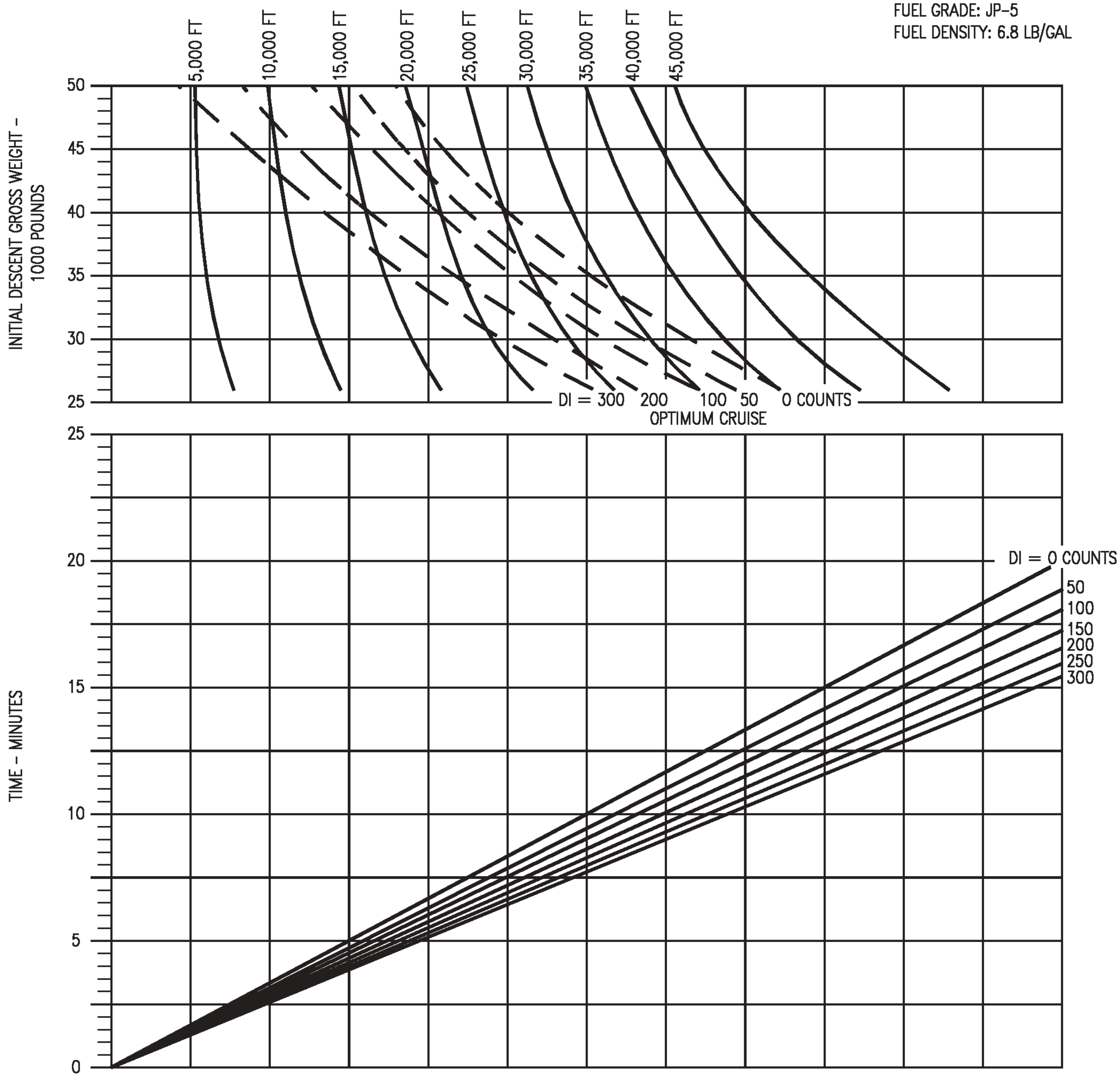
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(302–2)12–CATI

Figure 11-160. Maximum Range Descent - One Engine Operating - F404-GE-400
(Sheet 2 of 4)

MAXIMUM RANGE DESCENT

F404-GE-400

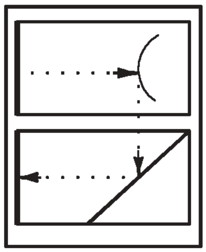
ONE ENGINE OPERATING
FUEL REQUIRED TO DESCEND
SPEED BRAKE RETRACTED
IDLE THRUST

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

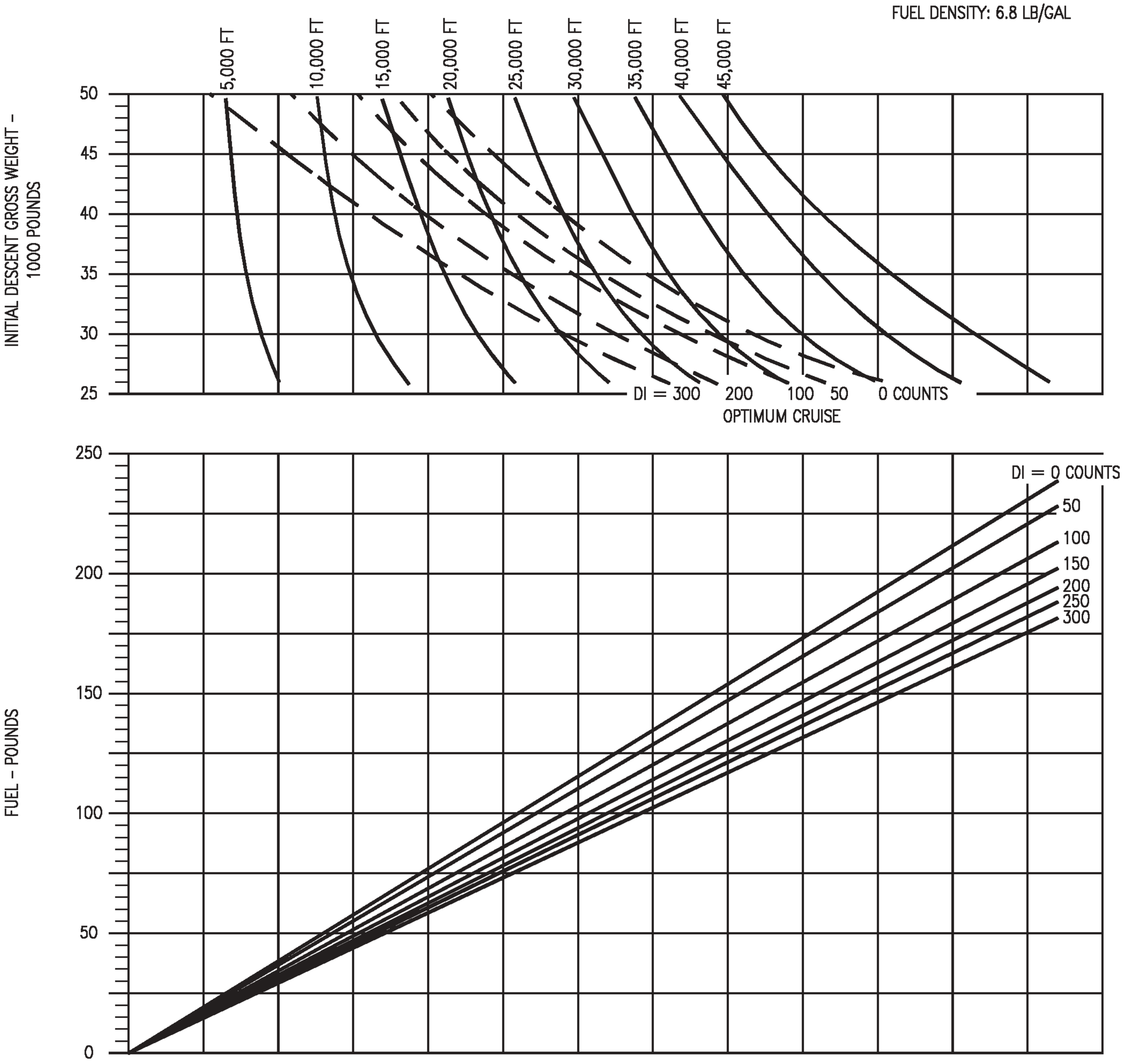
REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(302-3)12-CATI

Figure 11-160. Maximum Range Descent - One Engine Operating - F404-GE-400
(Sheet 3 of 4)

MAXIMUM RANGE DESCENT

AIRCRAFT CONFIGURATION
VARIOUS DRAG INDEXES

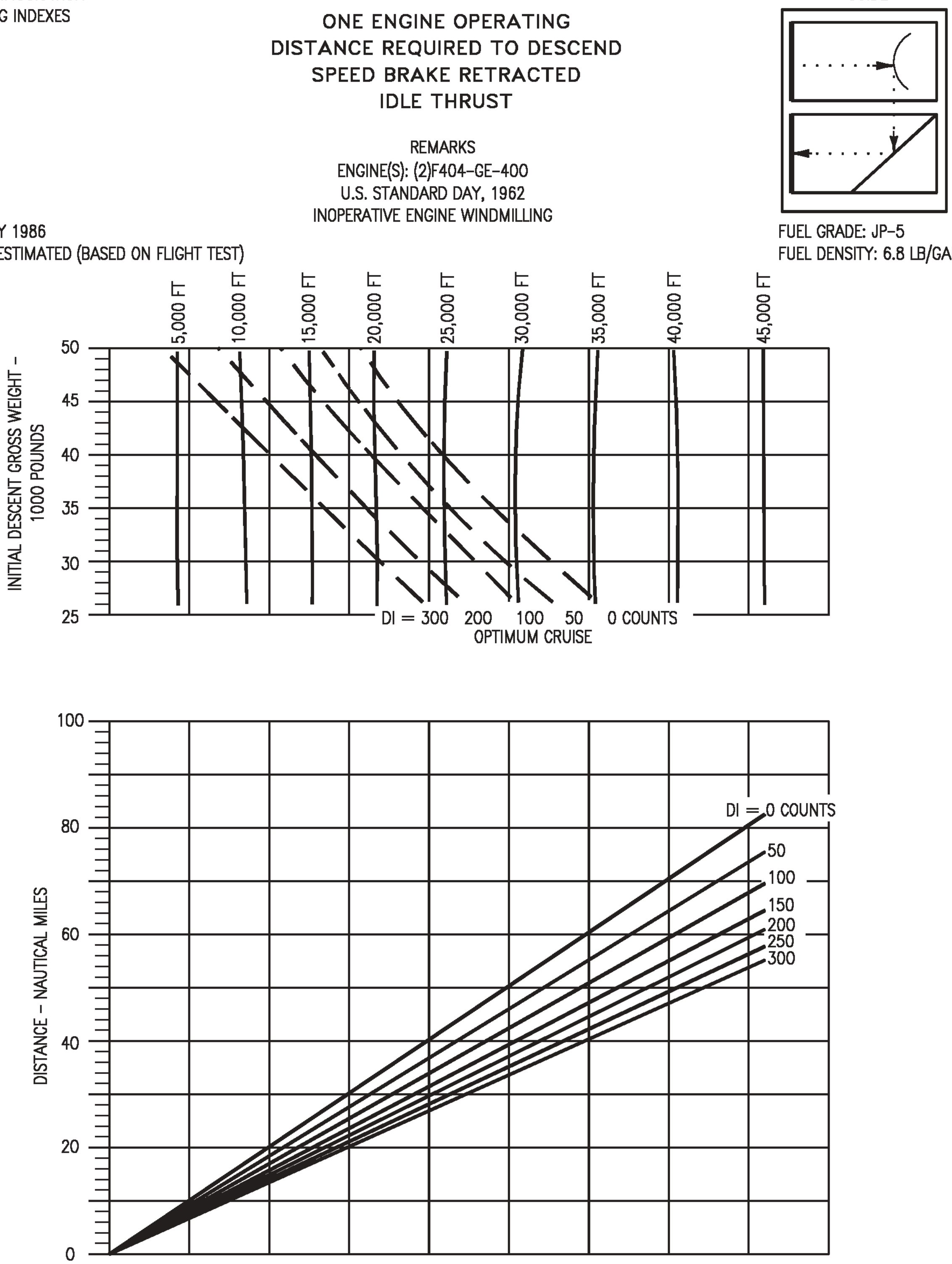
F404-GE-400

ONE ENGINE OPERATING
DISTANCE REQUIRED TO DESCEND
SPEED BRAKE RETRACTED
IDLE THRUST

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962
INOPERATIVE ENGINE WINDMILLING

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(302-4)12-CATI

Figure 11-160. Maximum Range Descent - One Engine Operating - F404-GE-400
(Sheet 4 of 4)

PART 8 - LANDING F404-GE-400

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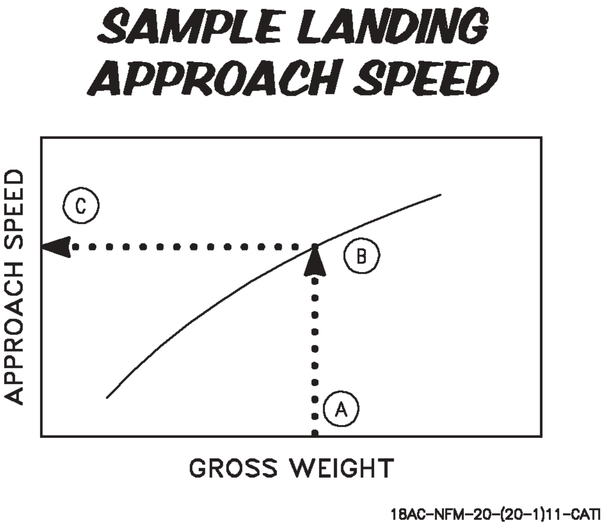
Charts

LANDING APPROACH SPEED CHART

The landing approach speed chart (figure 11-161) provides recommended approach speeds for various gross weights and landing configurations. The chart contains two curves for normal landing configurations (full and half flaps at 8.1° AOA), in addition to three curves for landing configurations with various flight control failures.

USE

Enter the chart at the estimated landing gross weight and project vertically up to the appropriate flap deflection curve. From this point, project horizontally left to read recommended approach speed.



Sample Problem

Configuration: Full flaps, 8.1° AOA

A. Estimated landing gross weight	32,000 Lb.
B. Full flaps, AOA curve	8.1°
C. Recommended approach speed	135 Kt.

LANDING DISTANCE CHART

This chart (figure 11-162) provides landing roll distance information for a dry hard runway and for various gross weights on a wet runway. The data are for a normal landing using full anti-skid braking. Variables of temperature, pressure altitude, gross weight and effective wind are taken into consideration.

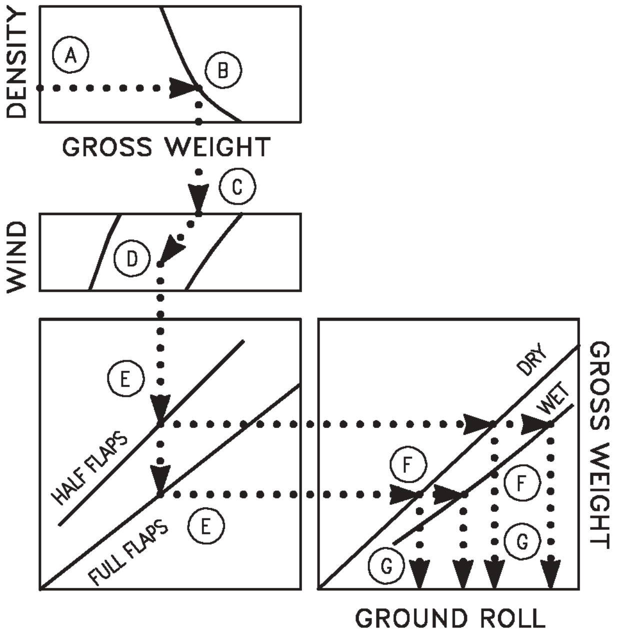
USE

Enter the chart with the prevailing density ratio and project horizontally right to intersect the appropriate gross weight curve. From this point, project vertically down to the wind baseline. Parallel the nearest guideline down to the effective headwind or tailwind. From this point project vertically down to read flap setting (half or full). Then project horizontally to read the landing ground roll for dry or wet runway. Increase landing ground rolls by 1.2 % for each knot that the approach speed exceeds that shown (25 % CG, no stores) on the landing approach speed chart. To determine total distance required from a height of 50 feet, add 720 feet for a –4° glide slope with no flare, add 820 feet for a –3.5° glide slope with no flare, or add 1200 feet with flare.

Sample Problem

A. Density ratio	0.98			
B. Gross weight	32,000 Lb.			
C. Wind baseline				
D. Effective headwind	10 Kt.			
E. Flaps	Half		Full	
F. Runway condition	Dry	Wet	Dry	Wet
G. Landing distance (Ft.)	4,100	6,700	2,700	4,400
G. Total Distance to clear 50 Ft. Obstacle (no flare, –4° glide slope) (G + 720)	4,820	7,420	3,420	5,120

SAMPLE LANDING DISTANCE



18AC–NFM–20–(21–1)12–CATI

LANDING APPROACH SPEED

F404-GE-400

AIRCRAFT CONFIGURATION
FLAPS AS NOTED
GEAR DOWN
SPEEDBRAKE IN

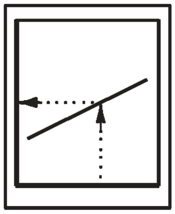
DATE: DECEMBER 1986
DATA BASIS: FLIGHT TEST

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

NOTE

CG AT 25% MAC. APPROACH SPEED INCREASES 1 KNOT FOR EACH 2% THE CG IS FORWARD OF 25% MAC AND DECREASES 1 KNOT FOR EACH 2% THE CG IS AFT OF 25% MAC. INCREASE APPROACH SPEED BY 2 KNOTS IF WINGTIP AIM-9'S ARE OFF. INCREASE APPROACH SPEED BY 2 KNOTS IF EXTERNAL STORES ARE ON.

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

MAIN GEAR TIRE LIMITATION 210 KNOTS GROUNDSPEED
NOSE GEAR TIRE LIMITATION 190 KNOTS GROUNDSPEED

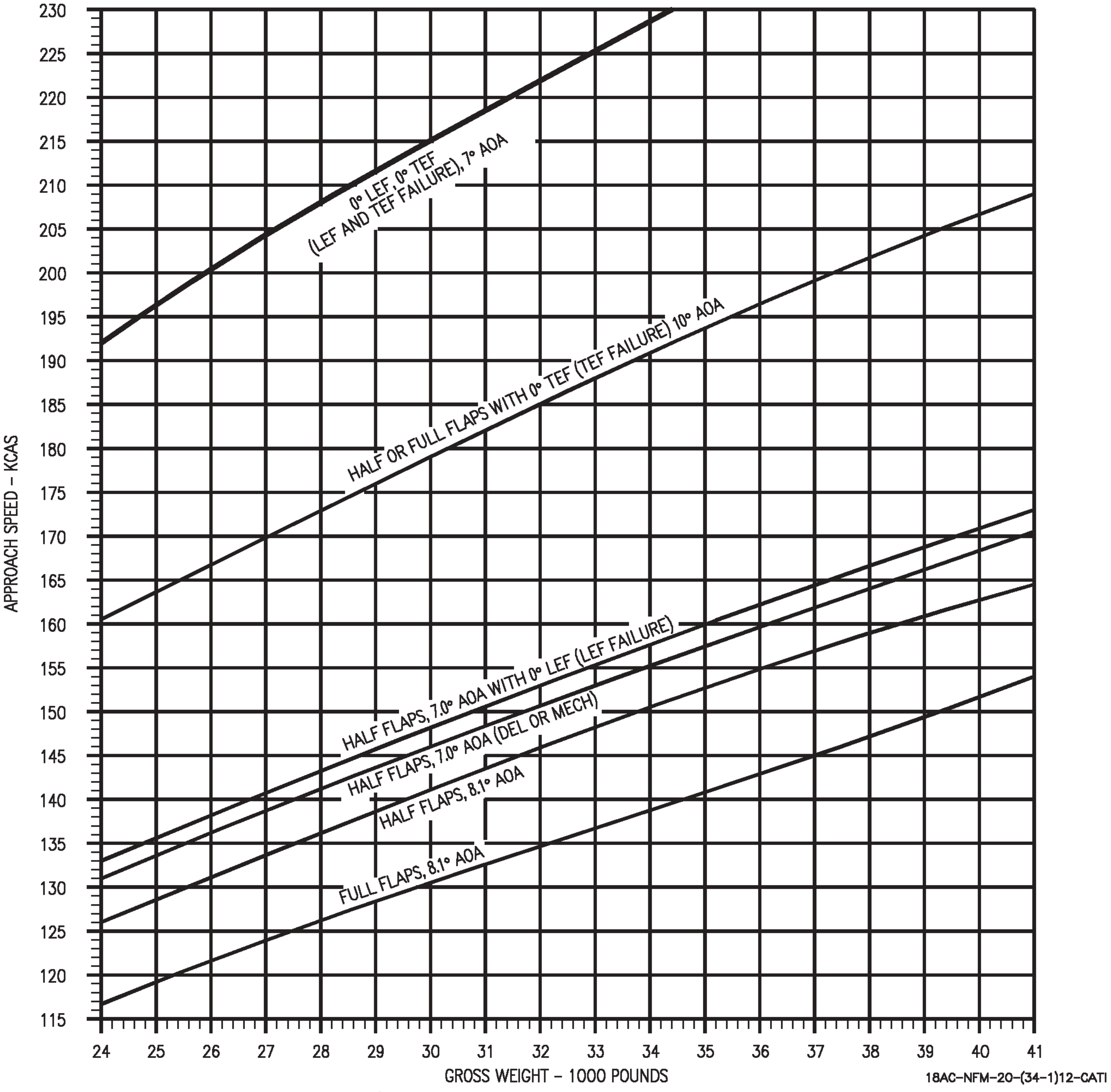


Figure 11-161. Landing Approach Speed - F404-GE-400

LANDING DISTANCE

F404-GE-400

IDLE THRUST

AIRCRAFT CONFIGURATION
T.E. FLAPS 45°
GEAR DOWN

REMARKS
ENGINE(S): (2)F404-GE-400
NOTE

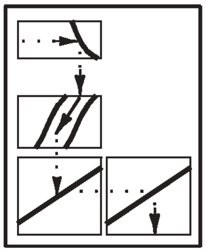
- LANDING GROUND ROLLS SHOWN CORRESPOND TO APROACH SPEEDS FOR FULL FLAPS AND 8.1° AOA AS SHOWN ON THE LANDING APPROACH SPEED CHART. INCREASE LANDING GROUND ROLLS BY 1.2% FOR EACH KNOT THAT THE APPROACH SPEED EXCEEDS THAT SHOWN (25% CG, NO STORES) ON THE LANDING APPROACH SPEED CHART.

- FOR TOTAL LANDING DISTANCE OVER A 50 FOOT OBSTACLE ADD THE FOLLOWING DISTANCE TO THE GROUND ROLL:

-NO FLARE, -4° GLIDE SLOPE: ADD 720 FEET
-NO FLARE, -3.5° GLIDE SLOPE: ADD 820 FEET
-WITH FLARE: ADD 1200 FEET

DATE: 15 JANUARY 1993
DATA BASIS: FLIGHT TEST
(ESTIMATED ON FLIGHT TEST)

GUIDE



FUEL GRADE:JP-5
FUEL DENSITY:6.8 LB/GAL

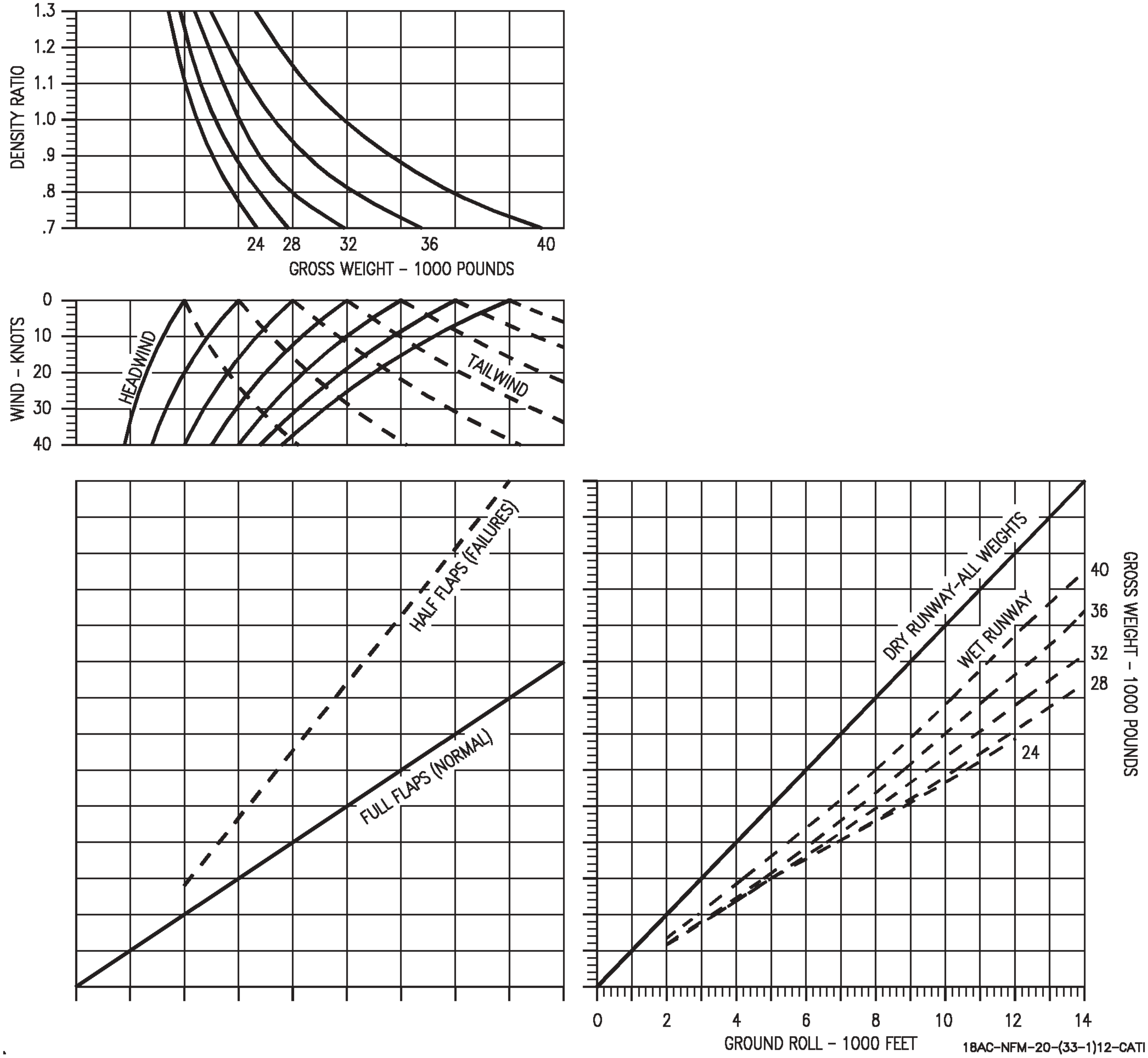


Figure 11-162. Landing Distance - F404-GE-400

PART 9 - MISSION PLANNING F404-GE-400

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Charts

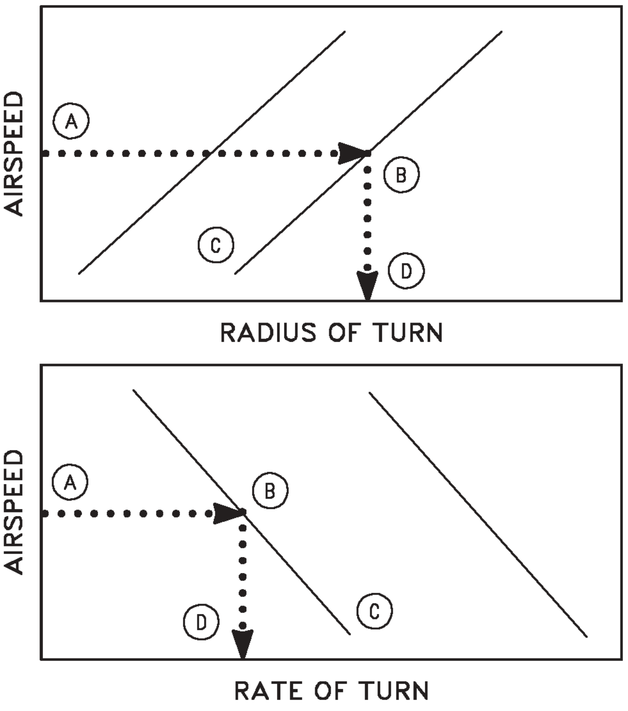
TURN CAPABILITIES CHART

This chart (figure 11-163) presents the radius of turn and the rate of turn for a constant altitude, constant speed turn. Turn data is available for various speeds and bank angles. Load factor is also included for each bank angle.

USE

Enter the radius of turn plot with the true airspeed. Proceed horizontally to the right to the desired bank angle. Note the load factor, then proceed vertically downward and read the radius of turn. Enter the rate of turn plot with the true airspeed. Proceed horizontally to the right to the bank angle, note the load factor and then proceed vertically downward to read the rate of turn.

SAMPLE TURN CAPABILITIES



18AC-NFM-20-(248-1)11-CATI

Sample Problem

Radius of Turn

A. True airspeed	420 Kt.
B. Bank angle	60°
C. Load factor	2.0 G
D. Radius of Turn	9000 Ft.

Rate of Turn

A. True airspeed	420 Kt.
B. Bank angle	60°
C. Load factor	2.0 G
D. Rate of turn	4.5°/sec

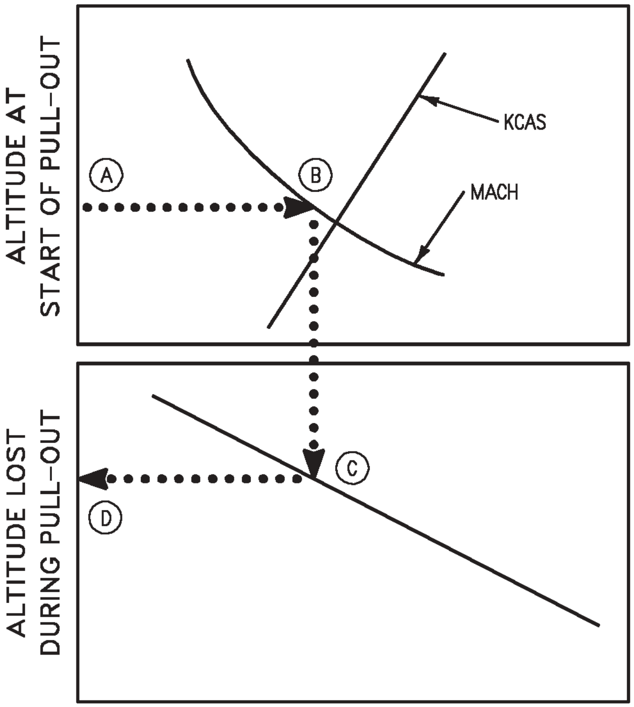
DIVE RECOVERY CHARTS

Subsonic dive recovery charts (figure 11-164) for two-engine operation are provided for the fighter escort configuration ((2)AIM-9 + (2)AIM-7) at a gross weight of 36,000 pounds and with the speedbrake retracted. Data is included for both military power and idle power settings. Two sets of dive recovery data are presented. The first set of charts show pull-ups limited by maximum lift or 4.0G, whichever occurs first, with entry rates of 4.0G and 2.0G per second. The second set of charts show pull-ups limited by maximum lift or 7.0G, whichever occurs first, with entry rate of 7.0G and 3.5G per second.

USE

Enter the chart with the altitude at the start of the pull-out and project horizontally right to intersect true Mach number or calibrated airspeed at the start of the pull-out. From this point project vertically down to intersect the dive angle at start of the pull-out then horizontally left to read altitude lost during pull-out.

SAMPLE DIVE RECOVERY



18AC–NFM–20–(303–1)–CATI–24

Sample Problem
Military Power, 3.5G per second

A. Altitude at start of pull-out	15,000 Ft.
B. Mach number at start of pull-out	0.70
C. Dive angle at start of pull-out	75°
D. Altitude lost during pull-out	2,900 Ft.

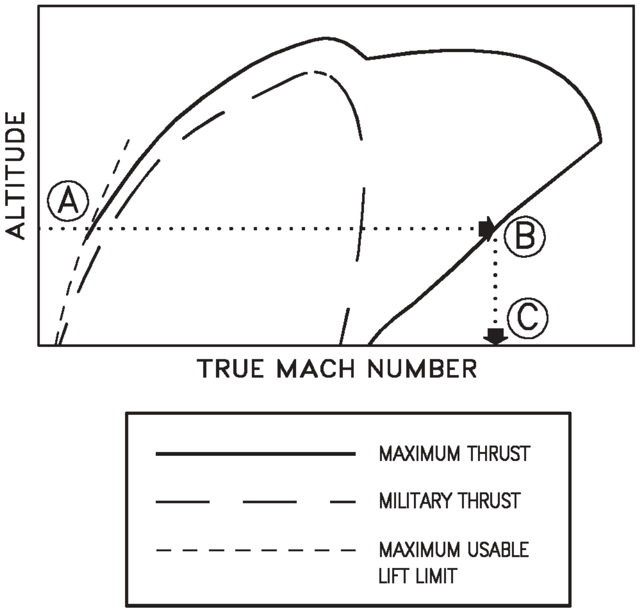
LEVEL FLIGHT ENVELOPE CHART

This chart (figure 11-165) presents the aircraft level flight speed envelope for various configurations at combat gross weights equal to 60 % total fuel. Parameters of the envelopes extend from the lift limit to V_{max} throughout the altitude range. Both maximum and military thrust flight envelopes are present.

USE

Enter the appropriate chart with the desired combat altitude. Proceed horizontally to intersect the applicable configuration power curve. From this point, proceed vertically downward to read the maximum attainable Mach number in level flight.

SAMPLE LEVEL FLIGHT ENVELOPE



18AC–NFM–20–(477–1)12–CATI

Sample Problem

A. Combat Altitude	36,000 Ft.
B. Configuration Line:	(2) AIM-9 + (2) AIM-7
C. Maximum attainable Mach number	1.60

LOW ALTITUDE ACCELERATION

These charts (figure 11-166 thru 11-175) present time and fuel required to accelerate from 360 KIAS to desired KIAS up thru 550 KIAS at altitudes of Sea Level, 2,000, 4,000, and 6,000 feet. Separate charts are provided for both maximum and military thrust for gross weights of 26,000, 30,000, 34,000, 38,000, and 42,000 pounds. The time and fuel values are calculated for U.S. Standard Day conditions; however, correction factors are given for nonstandard temperatures.

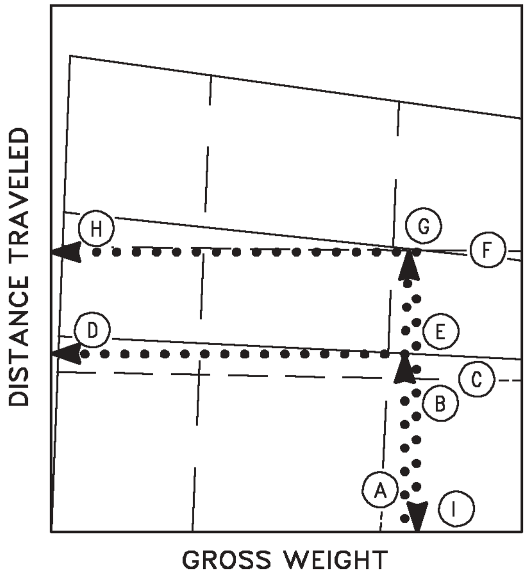
MAXIMUM THRUST ACCELERATION CHARTS

These charts (figure 11-176 thru figure 11-180) show the relationship of time, distance, and fuel required for level flight, maximum thrust accelerations. The Maximum Endurance Mach number (MAX END) for a given gross weight is provided across the bottom of the charts. This data is presented for various altitudes and configurations.

USE

Enter the applicable chart with the aircraft gross weight. Proceed vertically upward to the initial Mach number. Project from this point both horizontally to the left and note the time and distance; and proceed upwards parallel to the vertical guide lines to the Mach number desired at the end of the acceleration. Project from this point both horizontally to the left and note the time and distance; and vertically downwards and note gross weight. Subtract the time, distance, and gross weight corresponding to the initial Mach number from the time, distance and gross weight corresponding to the desired Mach number to determine the time, distance, and fuel required for acceleration.

SAMPLE MAXIMUM THRUST ACCELERATION



1BAC-NFM-20 -(317-1)01-CATI

Sample Problem

Configuration: (2)AIM-9 + (2)AIM-7; 10,000 Feet,

A. Gross weight	38,000 Lb.
B. Initial Mach number	0.7
C. Time	0.4 Min.
D. Distance	2.8 NM
E. Parallel guidelines	
F. Desired Mach number	0.95
G. Time corresponding to new Mach number	1.2 Min.
H. Distance corresponding to new Mach number	9.3 NM
I. Gross weight corresponding to new Mach number	37,750 Lb.
J. Time required for acceleration (G-C)	0.8 Min.
K. Distance required for acceleration (H-D)	6.5 NM
L. Fuel required for acceleration (A-I)	250 Lb.

TURN CAPABILITIES

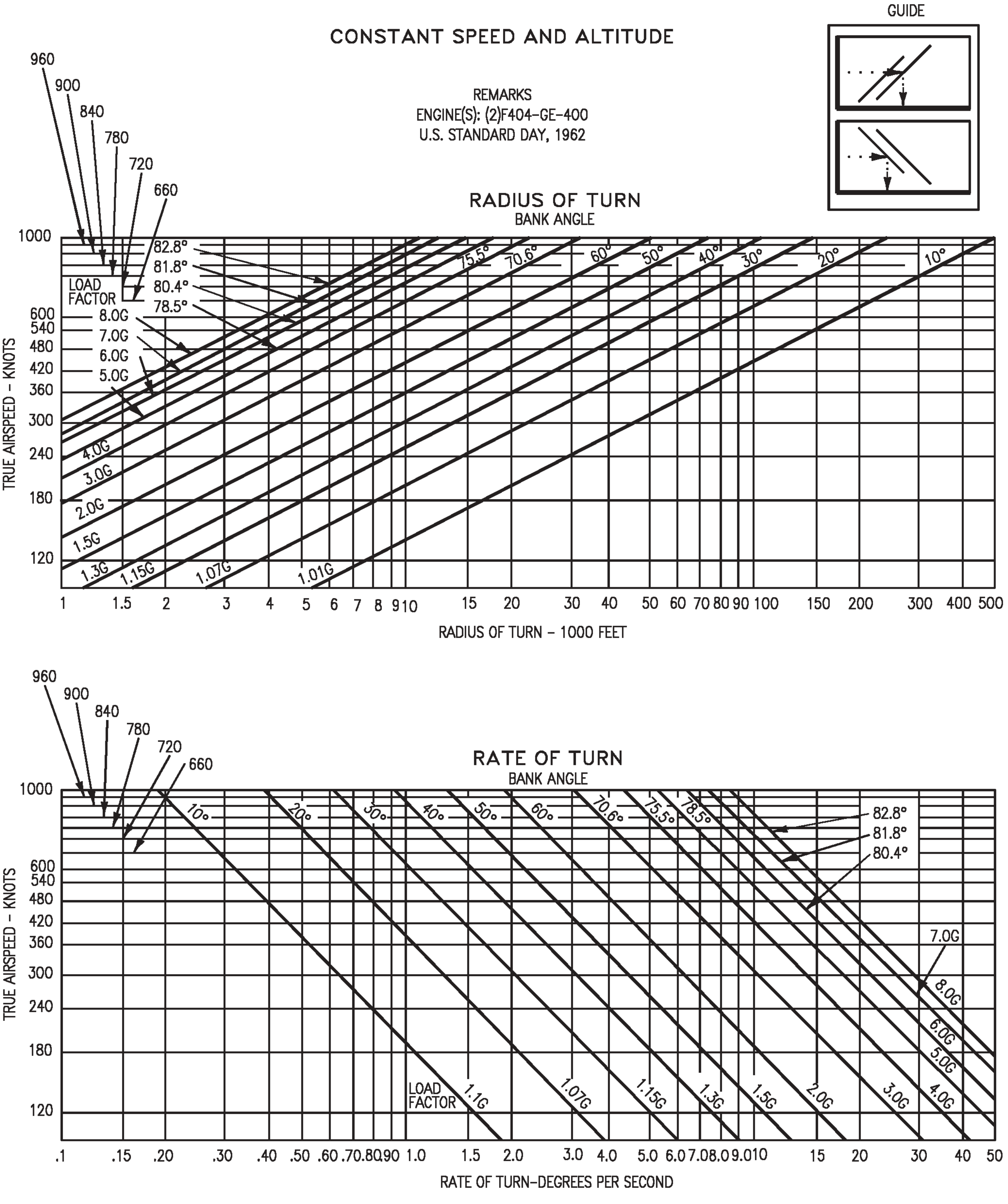


Figure 11-163. Turn Capabilities

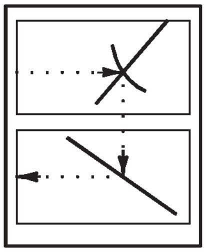
DIVE RECOVERY

F404–GE–400
4.0G PULL–OUT
SUBSONIC–SPEEDBRAKE RETRACTED
MILITARY POWER

AIRCRAFT CONFIGURATION
(2) AIM–9 +(2) AIM–7 MISSILES
G.W. = 36,000 POUNDS

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

GUIDE

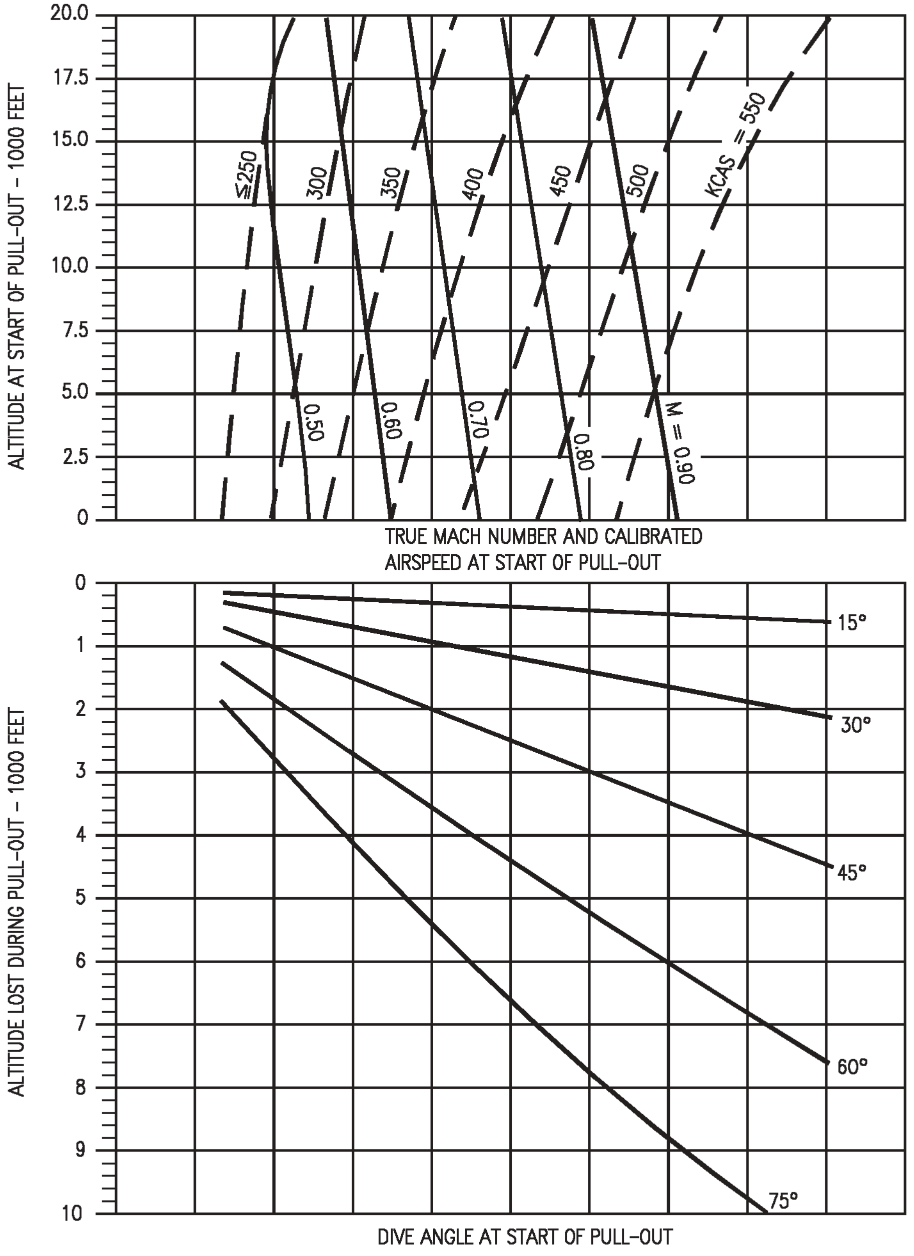


FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

NOTE

PULL–OUT BASED ON 4.0G PER SECOND ACCELERATION BUILDUP TO MAXIMUM LIFT/STABILATOR LIMIT OR 4.0G WHICHEVER OCCURS FIRST.



18AC–NFM–20–(304–1)12–CATI

Figure 11-164. Dive Recovery - F404-GE-400
(Sheet 1 of 8)

DIVE RECOVERY

F404–GE–400

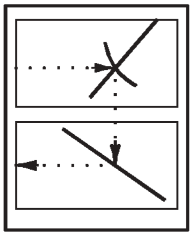
AIRCRAFT CONFIGURATION
(2) AIM–9 +(2) AIM–7 MISSILES
G.W. = 36,000 POUNDS

4.0G PULL–OUT
SUBSONIC–SPEEDBRAKE RETRACTED
MILITARY POWER

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

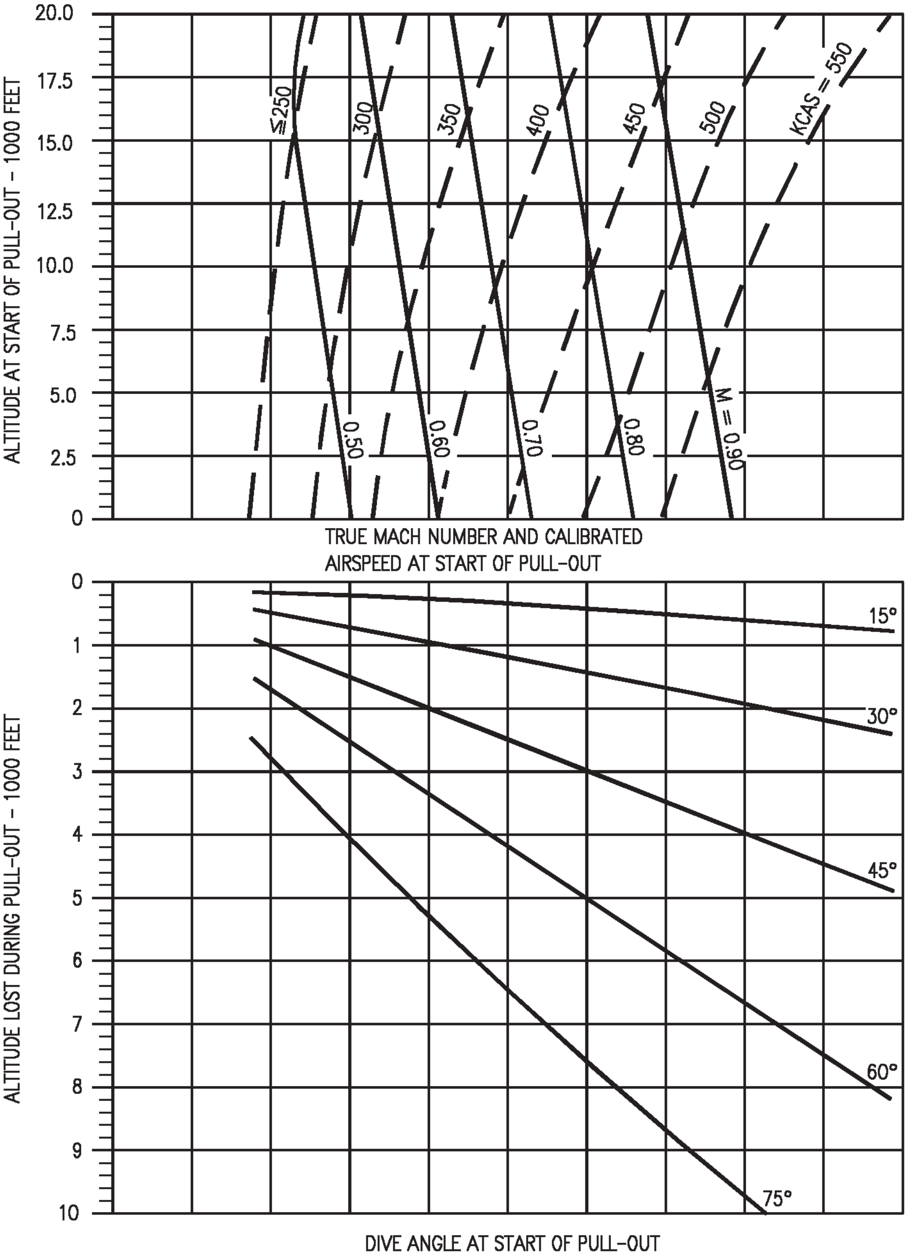
NOTE
PULL–OUT BASED ON 2.0G PER SECOND
ACCELERATION BUILDUP TO MAXIMUM LIFT/STABILATOR
LIMIT OR 4.0G WHICHEVER OCCURS FIRST.

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(304–2)12–CATI

Figure 11-164. Dive Recovery - F404-GE-400
(Sheet 2 of 8)

DIVE RECOVERY

F404–GE–400

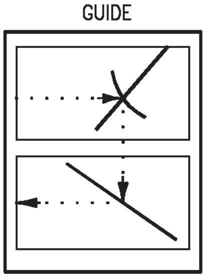
4.0G PULL–OUT
SUBSONIC–SPEEDBRAKE RETRACTED
IDLE POWER

AIRCRAFT CONFIGURATION
(2) AIM–9 +(2) AIM–7 MISSILES
G.W. = 36,000 POUNDS

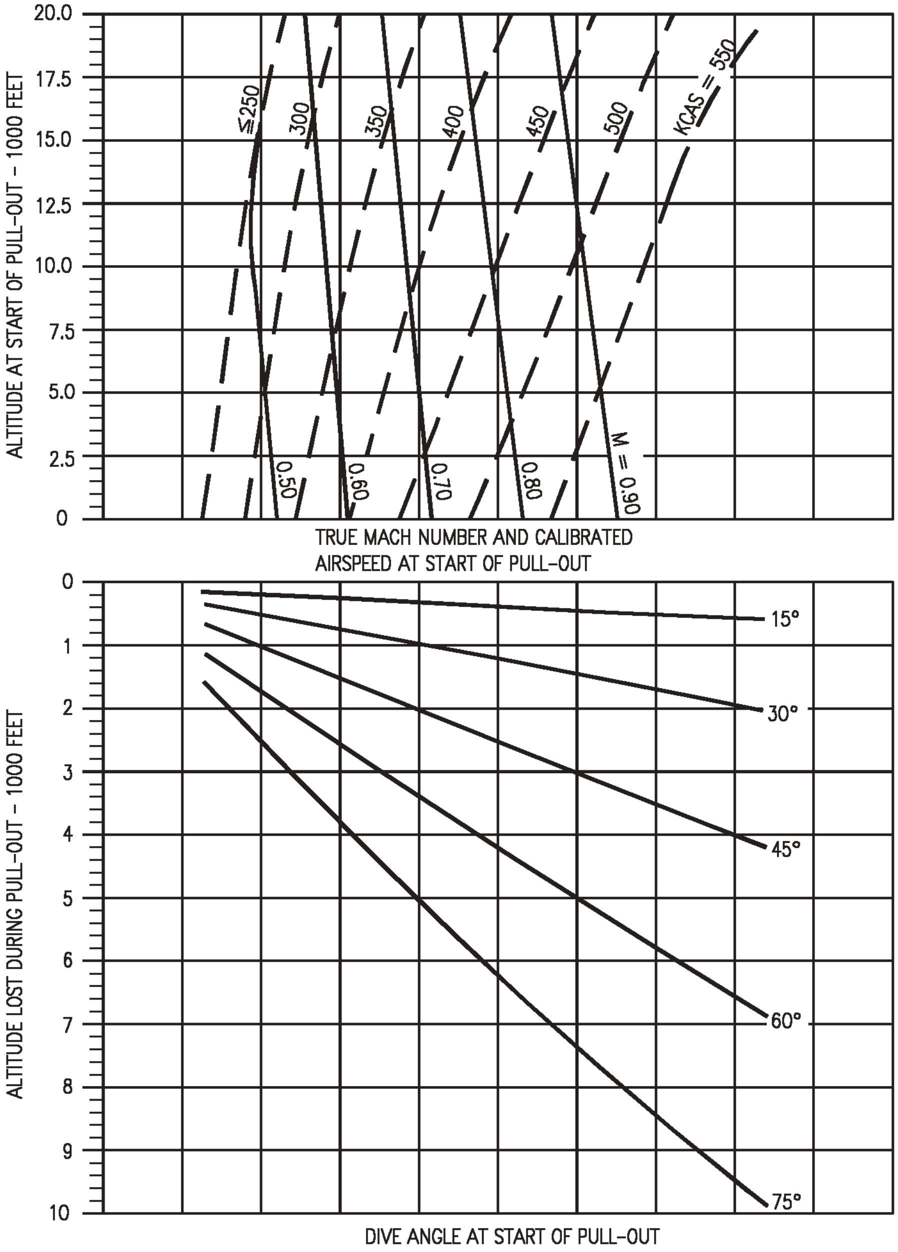
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

NOTE
PULL–OUT BASED ON 4.0G PER SECOND ACCELERATION BUILDUP TO MAXIMUM LIFT/STABILATOR LIMIT OR 4.0G WHICHEVER OCCURS FIRST.



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(304–3)12–CATI

Figure 11-164. Dive Recovery - F404-GE-400
(Sheet 3 of 8)

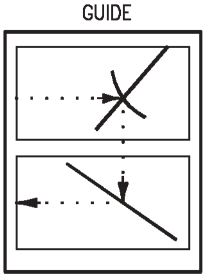
DIVE RECOVERY

F404–GE–400

4.0G PULL–OUT
SUBSONIC–SPEEDBRAKE RETRACTED
IDLE POWER

AIRCRAFT CONFIGURATION
(2) AIM–9 +(2) AIM–7 MISSILES
G.W. = 36,000 POUNDS

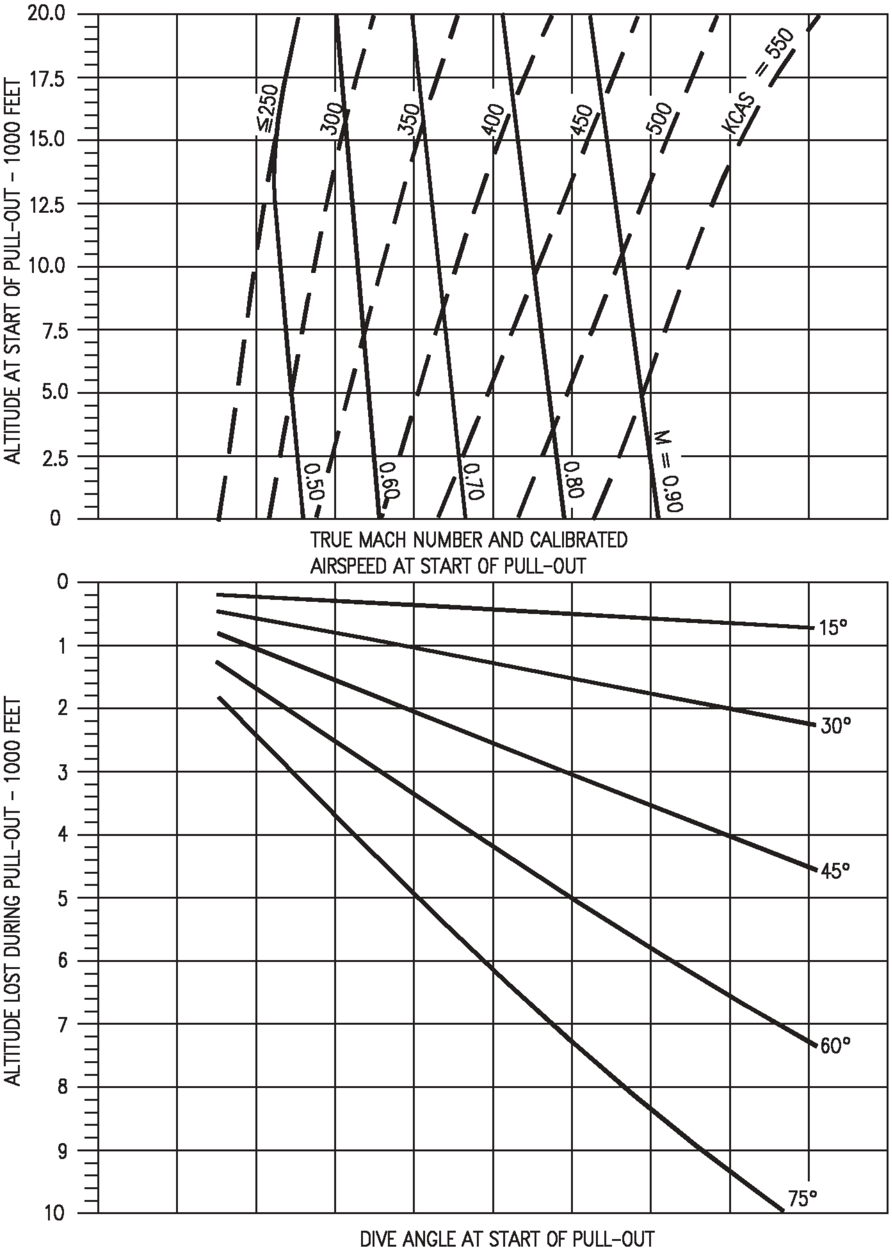
REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

NOTE
PULL–OUT BASED ON 2.0G PER SECOND
ACCELERATION BUILDUP TO MAXIMUM LIFT/STABILATOR
LIMIT OR 4.0G WHICHEVER OCCURS FIRST.

FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(304–4)12–CATI

Figure 11-164. Dive Recovery - F404-GE-400
(Sheet 4 of 8)

DIVE RECOVERY

F404–GE–400

7.0G PULL–OUT
SUBSONIC–SPEEDBRAKE RETRACTED
MILITARY POWER

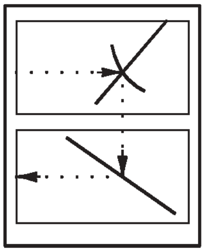
AIRCRAFT CONFIGURATION
(2) AIM–9 +(2) AIM–7 MISSILES
G.W. = 36,000 POUNDS

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

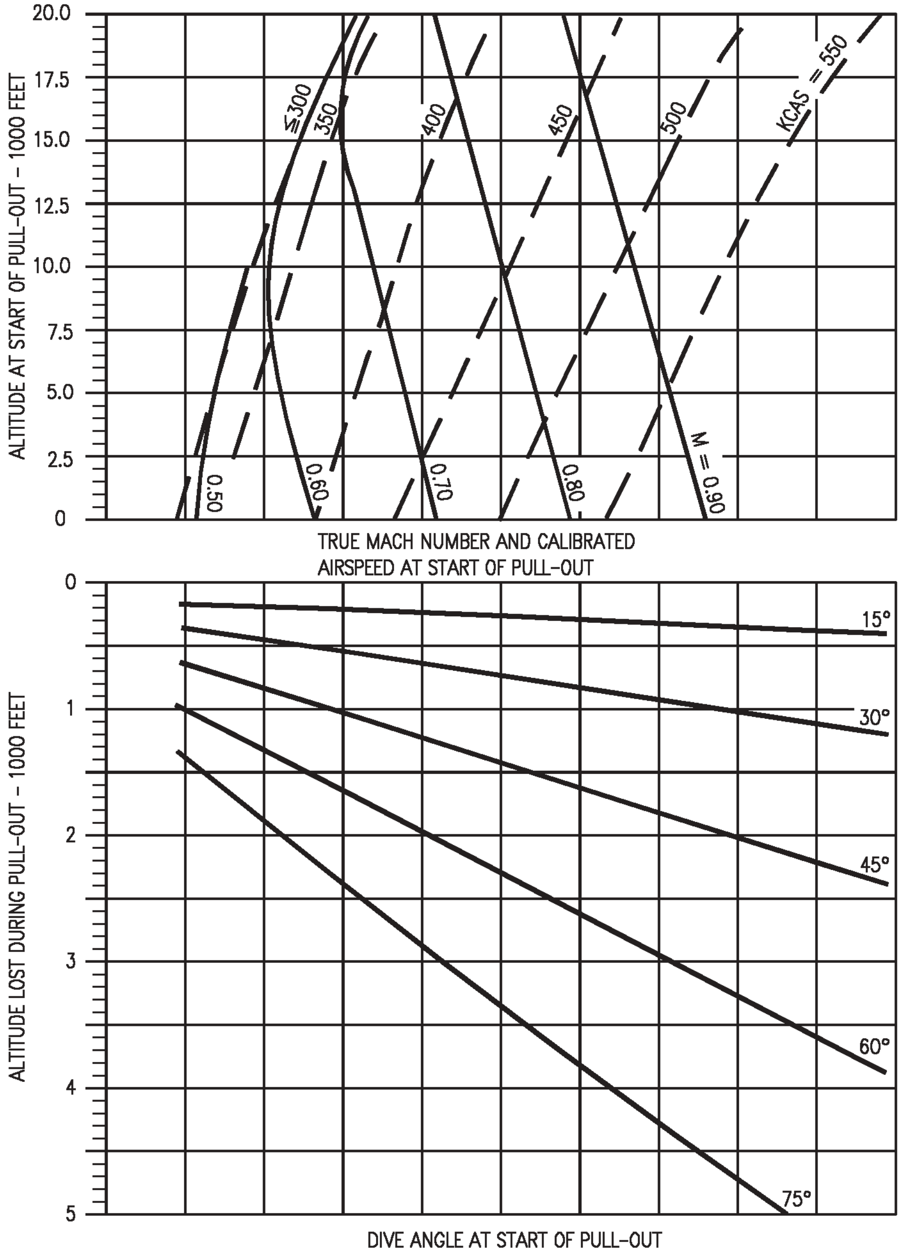
DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

NOTE
PULL–OUT BASED ON 7.0G PER SECOND
ACCELERATION BUILDUP TO MAXIMUM LIFT/STABILATOR
LIMIT OR 7.0G WHICHEVER OCCURS FIRST.

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(304–5)12–CATI

Figure 11-164. Dive Recovery - F404-GE-400
(Sheet 5 of 8)

DIVE RECOVERY

F404–GE–400

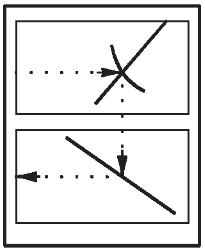
7.0G PULL–OUT
SUBSONIC–SPEEDBRAKE RETRACTED
MILITARY POWER

AIRCRAFT CONFIGURATION
(2) AIM–9 +(2) AIM–7 MISSILES
G.W. = 36,000 POUNDS

REMARKS
ENGINE(S): (2)F404–GE–400
U.S. STANDARD DAY, 1962

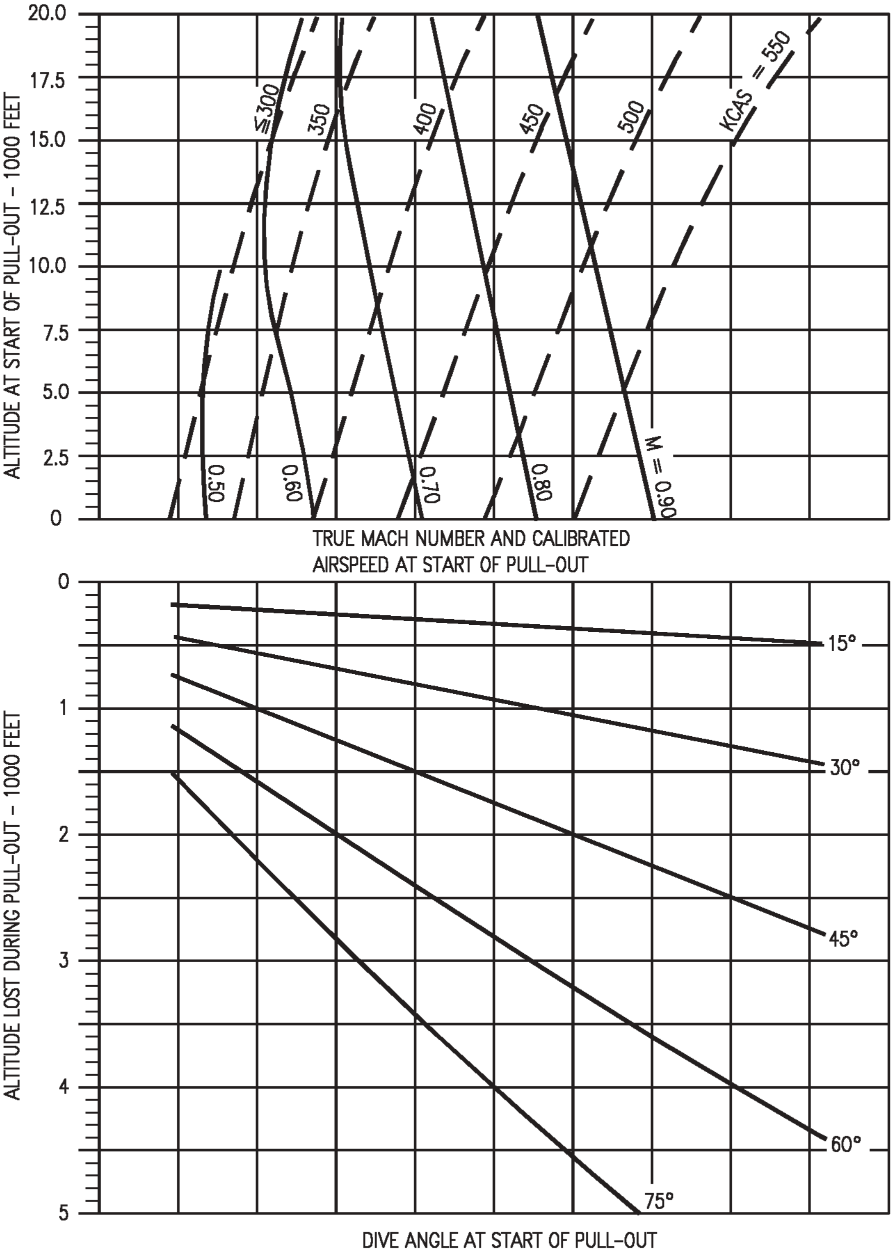
DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

NOTE
PULL–OUT BASED ON 3.5G PER SECOND ACCELERATION BUILDUP TO MAXIMUM LIFT/STABILATOR LIMIT OR 7.0G WHICHEVER OCCURS FIRST.



18AC–NFM–20–(304–6)12–CATI

Figure 11-164. Dive Recovery - F404-GE-400
(Sheet 6 of 8)

DIVE RECOVERY

F404-GE-400

7.0G PULL-OUT
SUBSONIC-SPEEDBRAKE RETRACTED
IDLE POWER

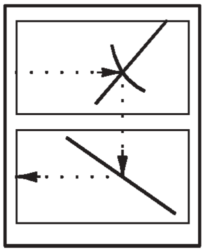
AIRCRAFT CONFIGURATION
(2) AIM-9 +(2) AIM-7 MISSILES
G.W. = 36,000 POUNDS

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

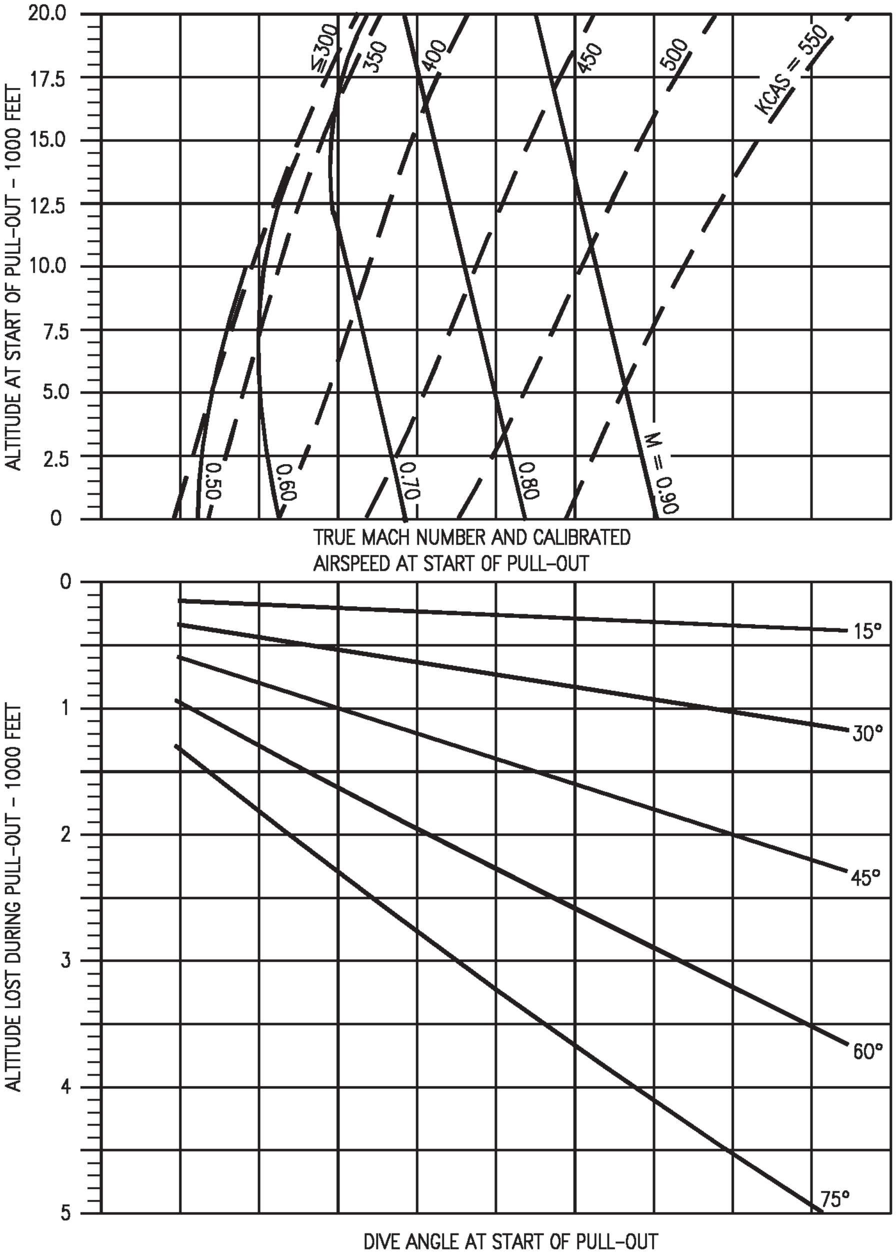
DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

NOTE
PULL-OUT BASED ON 7.0G PER SECOND
ACCELERATION BUILDUP TO MAXIMUM LIFT/STABILATOR
LIMIT OR 7.0G WHICHEVER OCCURS FIRST.

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(304-7)12-CATI

Figure 11-164. Dive Recovery - F404-GE-400
(Sheet 7 of 8)

DIVE RECOVERY

F404-GE-400

7.0G PULL-OUT
SUBSONIC-SPEEDBRAKE RETRACTED
IDLE POWER

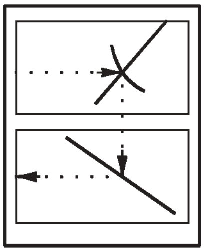
AIRCRAFT CONFIGURATION
(2) AIM-9 +(2) AIM-7 MISSILES
G.W. = 36,000 POUNDS

REMARKS
ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

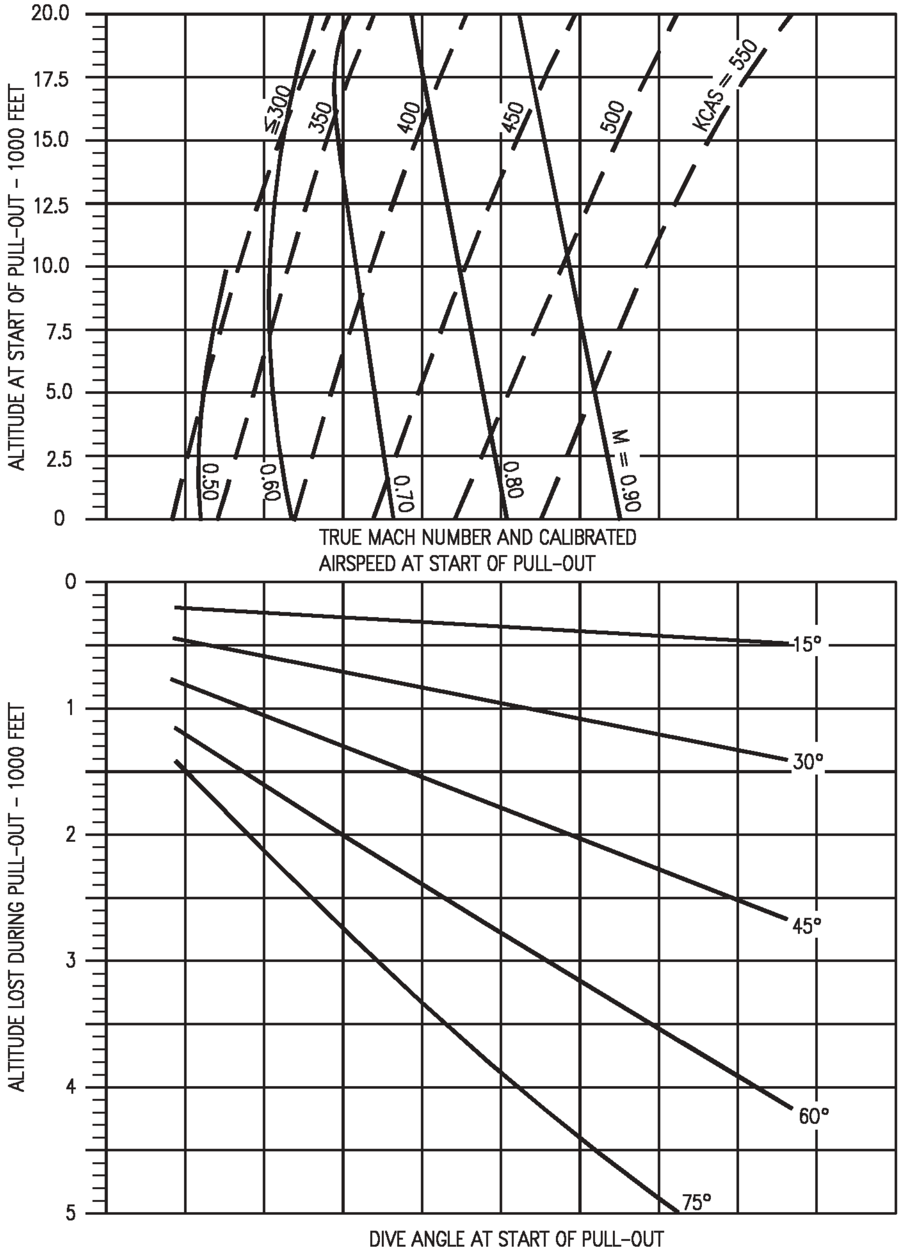
DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

NOTE
PULL-OUT BASED ON 3.5G PER SECOND ACCELERATION BUILDUP TO MAXIMUM LIFT/STABILATOR LIMIT OR 7.0G WHICHEVER OCCURS FIRST.

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(304-8)12-CATI

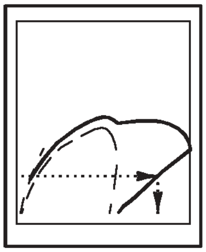
Figure 11-164. Dive Recovery - F404-GE-400
(Sheet 8 of 8)

LEVEL FLIGHT ENVELOPE

F404-GE-400
COMBAT GROSS WEIGHTS

REMARKS
ENGINE(S): (2) F404-GE-400
U.S. STANDARD DAY, 1962

GUIDE

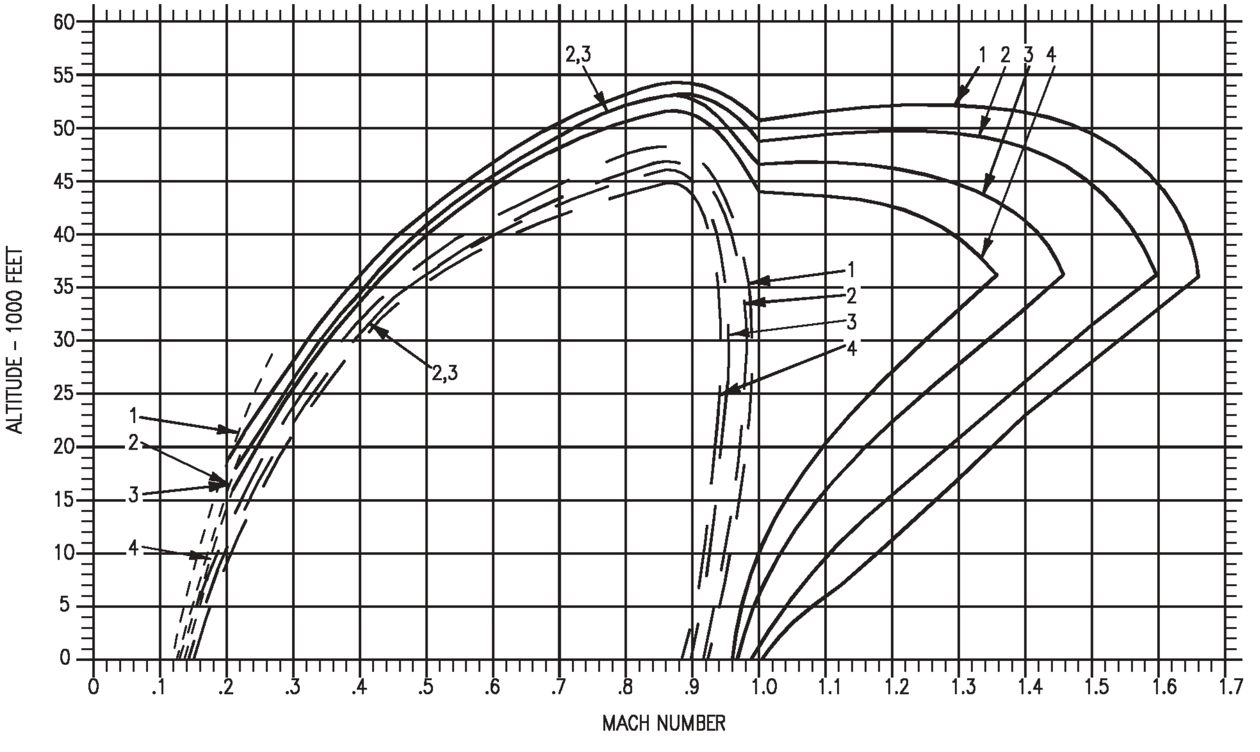


DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

CURVE NO.	CONFIGURATION	GROSS WEIGHT
1	(2) AIM-9 + (2) AIM-7	32,499 lb
2	(2) AIM-9 + (2) AIM-7 + (1) ℄ TANK	34,187 lb
3	(4) AIM-9 + (2) AIM-7 + (1) FLIR	34,102 lb
4	(4) AIM-9 + (2) AIM-7 + (1) FLIR + (1) ℄ TANK	35,790 lb

LEGEND	
━━━━━━	MAXIMUM THRUST
——— ———	MILITARY THRUST
– – – – – –	MAXIMUM USABLE LIFT LIMIT



18AC-NFM-20-(474-1)12-CATI

Figure 11-165. Level Flight Envelope - F404-GE-400

LOW ALTITUDE ACCELERATION

F404-GE-400

MAXIMUM THRUST
GROSS WEIGHT = 26,000 POUNDS

REMARKS

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

	SPEED (KIAS)	**TIME TO ACCELERATE (SEC) / FUEL TO ACCELERATE (LBS)**									**TEMP. EFFECT FACTORS**	
		DRAG INDEX										
		0	**25**	**50**	**75**	**100**	**150**	**200**	**250**	**300**	**+10°C**	**-10°C**
SEA LEVEL (15°C)	**360**	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	3/61	3/62	3/64	3/65	3/66	3/69	4/72	4/75	4/79	1.14/1.10	.89/.92
	480	6/126	6/129	6/133	7/136	7/139	7/147	8/155	8/165	9/175	1.16/1.11	.88/.92
	520	8/172	8/177	9/182	9/187	9/193	10/206	11/221	11/238	12/259	1.17/1.13	.91/.92
	550	10/209	10/216	11/223	11/231	11/239	12/258	13/282	15/312	17/352	1.19/1.14	.92/.93
2000 FEET (11°C)	**360**	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	3/62	3/63	3/64	3/66	3/67	4/70	4/73	4/77	4/81	1.14/1.10	.89/.92
	480	6/128	7/131	7/135	7/138	7/142	8/150	8/159	9/169	9/181	1.16/1.11	.89/.92
	520	9/175	9/180	9/185	10/191	10/198	11/211	11/228	12/247	13/271	1.18/1.13	.89/.92
	550	10/212	11/220	11/228	12/236	12/246	13/268	14/295	16/332	19/387	1.22/1.18	.89/.91
4000 FEET (7°C)	**360**	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	3/63	3/64	4/65	4/67	4/68	4/71	4/75	4/78	4/83	1.15/1.09	.89/.91
	480	7/130	7/134	7/137	7/141	8/145	8/154	9/164	9/175	10/189	1.17/1.11	.88/.91
	520	9/177	9/183	10/189	10/195	10/202	11/217	12/236	13/259	15/287	1.19/1.14	.87/.91
	550	11/215	11/224	12/233	12/243	13/254	14/281	16/319	19/379	—	1.21/1.16	.86/.89
6000 FEET (3°C)	**360**	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	4/65	4/66	4/68	4/69	4/71	4/74	4/78	5/82	5/87	1.15/1.10	.88/.91
	480	7/133	8/137	8/141	8/145	8/149	9/159	9/170	10/183	11/198	1.17/1.12	.87/.91
	520	10/181	10/187	10/194	11/201	11/209	12/227	13/249	15/278	17/318	1.23/1.18	.85/.89
	550	12/220	12/230	13/241	13/253	14/268	16/308	20/388	—	—	1.20/1.15	.84/.87

Figure 11-166. Low Altitude Acceleration - Maximum Thrust - 26,000 Pounds - F404-GE-400

LOW ALTITUDE ACCELERATION
F404-GE-400
MILITARY THRUST
GROSS WEIGHT = 26,000 POUNDS

REMARKS

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

	SPEED (KIAS)	TIME TO ACCELERATE (SEC) / FUEL TO ACCELERATE (LBS)									TEMP. EFFECT FACTORS	
		DRAG INDEX										
		0	25	50	75	100	150	200	250	300	+10°C	-10°C
SEA LEVEL (15°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	6/32	6/33	6/35	7/36	7/38	8/41	8/45	9/51	11/57	1.22/1.15	.86/.89
	480	12/69	13/73	14/77	15/81	15/86	18/98	21/115	25/140	33/187	1.23/1.16	.84/.87
	520	17/98	18/104	20/111	21/119	23/130	28/158	38/216	—	—	1.23/1.16	.84/.88
	550	22/122	23/132	26/144	28/160	32/180	—	—	—	—	1.19/1.16	.84/.88
2000 FEET (11°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	6/33	7/34	7/36	7/37	7/39	8/43	9/48	10/54	12/61	1.23/1.16	.85/.90
	480	13/71	14/75	15/79	16/84	17/90	19/103	23/123	29/154	43/235	1.24/1.16	.79/.82
	520	19/101	20/108	21/116	23/125	25/137	32/172	—	—	—	1.25/1.17	.84/.88
	550	23/126	25/137	28/152	31/171	36/199	—	—	—	—	1.25/1.17	.84/.88
4000 FEET (7°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	7/34	7/35	7/37	8/39	8/40	9/45	10/50	11/57	13/66	1.25/1.17	.84/.89
	480	14/74	15/78	16/82	17/88	18/94	21/110	26/134	34/179	—	1.26/1.18	.83/.87
	520	20/104	21/111	23/120	25/132	28/146	36/193	—	—	—	1.27/1.19	.83/.87
	550	25/130	27/144	30/162	36/193	—	—	—	—	—	1.28/1.20	.83/.87
6000 FEET (3°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	7/36	8/37	8/39	8/41	9/43	10/48	11/54	13/62	15/73	1.27/1.19	.83/.88
	480	15/76	16/81	17/86	18/92	20/100	24/118	30/149	43/218	-	1.28/1.19	.83/.88
	520	21/108	23/117	25/127	28/141	31/160	—	—	—	—	1.29/1.20	.82/.87
	550	27/137	30/156	36/188	—	—	—	—	—	—	1.31/1.22	.82/.86

Figure 11-167. Low Altitude Acceleration - Military Thrust - 26,000 Pounds - F404-GE-400

LOW ALTITUDE ACCELERATION

F404-GE-400

MAXIMUM THRUST
GROSS WEIGHT = 30,000 POUNDS

REMARKS

ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

		TIME TO ACCELERATE (SEC) / FUEL TO ACCELERATE (LBS)									TEMP. EFFECT FACTORS	
	SPEED (KIAS)	DRAG INDEX										
		0	25	50	75	100	150	200	250	300	+10°C	-10°C
SEA LEVEL (15°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	4/71	4/72	4/73	4/75	4/76	4/80	4/83	4/87	5/91	1.14/1.10	.89/.92
	480	7/146	7/150	7/153	8/157	8/161	8/169	9/179	9/190	10/202	1.16/1.11	.88/.92
	520	10/199	10/204	10/210	10/216	11/223	11/238	12/254	13/274	14/298	1.17/1.13	.91/.92
	550	11/241	12/249	12/257	13/266	13/276	14/298	15/325	17/358	19/403	1.19/1.14	.92/.93
2000 FEET (11°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	4/72	4/73	4/74	4/76	4/78	4/81	4/85	5/89	5/93	1.14/1.10	.89/.92
	480	7/148	8/152	8/155	8/159	8/164	9/173	9/183	10/195	11/209	1.16/1.11	.89/.92
	520	10/202	10/208	11/214	11/221	11/228	12/244	13/262	14/285	15/312	1.18/1.13	.89/.92
	550	12/245	12/254	13/263	13/273	14/283	15/308	17/340	19/381	21/442	1.22/1.18	.89/.91
4000 FEET (7°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	4/72	4/74	4/75	4/77	4/79	4/82	5/86	5/91	5/95	1.15/1.09	.89/.91
	480	8/151	8/154	8/159	9/163	9/167	9/177	10/189	11/202	11/217	1.17/1.11	.88/.91
	520	11/205	11/211	11/218	12/225	12/233	13/251	14/272	15/297	17/329	1.19/1.14	.87/.91
	550	13/249	13/258	14/269	15/280	15/293	16/324	18/366	22/431	—	1.21/1.16	.86/.89
6000 FEET (3°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	4/75	4/76	4/78	5/80	5/82	5/86	5/90	5/95	6/100	1.15/1.10	.88/.91
	480	8/154	9/158	9/162	9/167	9/172	10/183	11/196	12/210	12/227	1.17/1.12	.87/.91
	520	11/210	12/217	12/224	12/232	13/241	14/261	15/287	17/319	19/363	1.23/1.18	.85/.89
	550	13/254	14/256	15/278	15/292	16/309	19/353	23/436	—	—	1.20/1.15	.84/.87

Figure 11-168. Low Altitude Acceleration - Maximum Thrust - 30,000 Pounds - F404-GE-400

LOW ALTITUDE ACCELERATION
F404-GE-400
MILITARY THRUST
GROSS WEIGHT = 30,000 POUNDS

REMARKS

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

		TIME TO ACCELERATE (SEC) / FUEL TO ACCELERATE (LBS)									TEMP. EFFECT FACTORS	
	SPEED (KIAS)	DRAG INDEX										
		0	25	50	75	100	150	200	250	300	+10°C	-10°C
SEA LEVEL (15°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	7/37	7/39	7/40	8/42	8/44	9/48	10/53	11/59	12/66	1.22/1.15	.86/.89
	480	14/80	15/84	16/89	17/94	18/99	20/113	24/132	29/161	38/213	1.23/1.16	.84/.87
	520	20/113	21/120	23/128	25/138	27/149	32/182	44/247	—	—	1.23/1.16	.84/.88
	550	25/141	27/153	29/166	33/184	37/208	—	—	—	—	1.19/1.16	.84/.88
2000 FEET (11°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	7/38	8/40	8/41	8/43	9/45	9/50	10/55	12/62	13/71	1.23/1.16	.85/.90
	480	15/83	16/87	17/92	18/97	19/103	22/119	26/141	33/179	—	1.24/1.16	.79/.82
	520	21/117	23/124	25/134	27/145	29/158	36/198	—	—	—	1.25/1.17	.84/.88
	550	27/146	29/159	32/175	36/197	42/229	—	—	—	—	1.25/1.17	.84/.88
4000 FEET (7°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	8/39	8/41	8/43	9/45	9/47	10/52	11/58	13/66	15/76	1.25/1.17	.84/.89
	480	16/85	17/90	18/95	20/102	21/109	24/127	29/154	39/204	—	1.26/1.18	.83/.87
	520	23/120	24/129	26/139	29/152	32/168	42/221	—	—	—	1.27/1.19	.83/.87
	550	28/151	31/166	35/187	41/222	—	—	—	—	—	1.28/1.20	.83/.87
6000 FEET (3°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	8/41	9/43	9/45	10/47	10/50	11/55	13/62	15/72	17/84	1.27/1.19	.83/.88
	480	18/88	19/94	20/100	21/107	23/115	27/136	34/170	48/245	—	1.28/1.20	.83/.88
	520	25/125	27/135	29/147	32/163	36/184	—	—	—	—	1.29/1.20	.82/.87
	550	31/158	35/180	42/215	—	—	—	—	—	—	1.31/1.22	.82/.86

Figure 11-169. Low Altitude Acceleration - Military Thrust - 30,000 Pounds - F404-GE-400

LOW ALTITUDE ACCELERATION

F404-GE-400

MAXIMUM THRUST
GROSS WEIGHT = 34,000 POUNDS

REMARKS

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

	SPEED (KIAS)	TIME TO ACCELERATE (SEC) / FUEL TO ACCELERATE (LBS)									TEMP. EFFECT FACTORS	
		DRAG INDEX										
		0	25	50	75	100	150	200	250	300	+10°C	-10°C
SEA LEVEL (15°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	4/80	4/82	4/83	4/85	4/87	5/90	5/94	5/98	5/103	1.14/1.10	.89/.92
	480	8/166	8/170	8/174	9/178	9/183	9/192	10/203	10/215	11/229	1.16/1.11	.88/.92
	520	11/226	11/232	11/239	12/246	12/253	13/269	14/288	15/310	16/337	1.17/1.13	.91/.92
	550	13/274	13/283	14/292	14/302	15/313	16/337	17/367	19/405	21/454	1.19/1.14	.92/.93
2000 FEET (11°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	4/81	4/83	4/85	4/86	5/88	5/92	5/96	5/101	5/106	1.14/1.10	.89/.92
	480	9/168	9/172	9/177	9/181	9/186	10/196	10/208	11/221	12/236	1.16/1.11	.89/.92
	520	11/230	12/236	12/243	12/251	13/259	14/276	15/297	16/322	17/352	1.18/1.13	.89/.92
	550	14/278	14/288	15/298	15/309	16/321	17/349	19/384	21/430	24/496	1.22/1.18	.89/.91
4000 FEET (7°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	4/82	5/84	5/86	5/88	5/89	5/94	5/98	6/103	6/108	1.15/1.09	.89/.91
	480	9/171	9/175	9/180	10/185	10/190	11/201	11/214	12/229	13/246	1.17/1.11	.88/.91
	520	12/233	12/240	13/247	13/256	14/264	15/284	13/250	17/336	19/371	1.19/1.14	.87/.91
	550	14/283	15/293	16/305	16/317	17/332	19/366	21/412	24/482	—	1.21/1.16	.86/.89
6000 FEET (3°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	5/85	5/87	5/89	5/91	5/93	5/97	6/102	6/108	6/114	1.15/1.10	.88/.91
	480	10/175	10/179	10/184	10/190	11/195	11/208	12/222	13/238	14/257	1.17/1.12	.87/.91
	520	13/238	13/246	14/254	14/263	15/273	16/296	17/324	19/359	22/407	1.23/1.18	.85/.89
	550	15/289	16/301	17/315	17/331	18/349	21/397	25/483	—	—	1.20/1.15	.84/.87

Figure 11-170. Low Altitude Acceleration - Maximum Thrust - 34,000 Pounds - F404-GE-400

LOW ALTITUDE ACCELERATION

F404-GE-400

MILITARY THRUST
GROSS WEIGHT = 34,000 POUNDS

REMARKS

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

	SPEED (KIAS)	TIME TO ACCELERATE (SEC) / FUEL TO ACCELERATE (LBS)									TEMP. EFFECT FACTORS	
		DRAG INDEX										
		0	25	50	75	100	150	200	250	300	+10°C	-10°C
SEA LEVEL (15°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	8/43	8/44	8/46	9/48	9/50	10/54	11/60	12/67	14/75	1.22/1.15	.86/.89
	480	16/91	17/96	18/101	19/107	20/113	23/129	27/150	33/182	43/242	1.23/1.16	.84/.87
	520	23/128	24/136	26/146	28/157	30/170	37/206	49/277	—	—	1.23/1.16	.84/.88
	550	29/161	31/174	33/189	37/209	42/235	—	—	—	—	1.19/1.16	.84/.88
2000 FEET (11°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	8/44	9/45	9/47	9/49	10/51	11/57	12/63	13/70	15/81	1.23/1.16	.85/.90
	480	18/94	18/99	19/104	21/111	22/118	25/135	30/160	37/202	—	1.24/1.16	.79/.82
	520	24/133	26/141	28/152	30/164	33/179	41/224	—	—	—	1.25/1.17	.84/.88
	550	30/166	33/180	36/199	41/223	47/258	—	—	—	—	1.25/1.17	.84/.88
4000 FEET (7°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	9/45	9/47	10/49	10/51	11/53	12/59	13/66	15/75	17/86	1.25/1.17	.84/.89
	480	19/97	20/102	21/109	22/115	24/123	28/144	34/175	44/230	—	1.26/1.18	.83/.87
	520	26/137	28/146	30/158	33/172	36/190	47/249	—	—	—	1.27/1.19	.83/.87
	550	32/172	36/189	40/212	47/250	—	—	—	—	—	1.28/1.20	.83/.87
6000 FEET (3°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	10/47	10/49	11/51	11/54	12/57	13/63	15/71	17/82	20/96	1.27/1.19	.83/.88
	480	20/101	21/107	23/114	24/121	26/131	31/155	38/193	54/273	—	1.28/1.20	.83/.88
	520	28/142	30/153	33/167	36/185	41/208	—	—	—	—	1.29/1.20	.82/.87
	550	35/180	39/204	47/243	—	—	—	—	—	—	1.31/1.22	.82/.86

Figure 11-171. Low Altitude Acceleration - Miliatry Thrust - 34,000 Pounds - F404-GE-400

LOW ALTITUDE ACCELERATION

F404-GE-400

MAXIMUM THRUST
GROSS WEIGHT = 38,000 POUNDS

REMARKS

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

	SPEED (KIAS)	TIME TO ACCELERATE (SEC) / FUEL TO ACCELERATE (LBS)									TEMP. EFFECT FACTORS	
		DRAG INDEX										
		0	**25**	**50**	**75**	**100**	**150**	**200**	**250**	**300**	**+10°C**	**-10°C**
SEA LEVEL (15°C)	**360**	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	4/90	5/92	5/94	5/95	5/97	5/101	5/106	6/110	6/116	1.14/1.10	.89/.92
	480	9/186	9/190	9/195	10/199	10/204	10/215	11/227	12/241	12/256	1.16/1.11	.88/.92
	520	12/253	12/260	13/267	13/275	14/283	14/301	15/322	17/347	18/376	1.17/1.13	.91/.92
	550	15/307	15/317	15/327	16/338	17/350	18/377	19/410	21/451	24/505	1.19/1.14	.92/.93
2000 FEET (11°C)	**360**	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	5/91	5/93	5/95	5/97	5/99	5/103	6/108	6/113	6/119	1.14/1.10	.89/.92
	480	10/188	10/193	10/198	10/203	11/208	11/220	12/233	12/247	13/264	1.16/1.11	.89/.92
	520	13/257	13/264	14/272	14/280	14/289	15/309	16/332	18/360	19/393	1.18/1.13	.89/.92
	550	15/312	16/322	17/334	17/346	18/359	19/390	21/428	23/478	27/549	1.22/1.18	.89/.91
4000 FEET (7°C)	**360**	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	5/92	5/94	5/96	5/98	5/100	6/105	6/110	6/115	7/122	1.15/1.09	.89/.91
	480	10/192	10/197	11/202	11/207	11/213	12/225	13/239	13/256	14/274	1.17/1.11	.88/.91
	520	13/261	14/269	14/277	15/286	15/296	16/317	18/343	19/374	21/413	1.19/1.14	.87/.91
	550	16/317	17/328	17/341	18/355	19/371	21/408	23/458	27/531	—	1.21/1.16	.86/.89
6000 FEET (3°C)	**360**	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	5/95	6/97	6/100	6/102	6/104	6/109	6/115	7/121	7/127	1.15/1.10	.88/.91
	480	11/196	11/201	11/207	12/213	12/219	13/232	14/248	15/266	16/287	1.17/1.12	.87/.91
	520	14/267	15/275	15/285	16/295	16/306	18/331	19/361	21/400	24/451	1.23/1.18	.85/.89
	550	17/323	18/337	19/352	19/369	21/389	23/441	28/529	—	—	1.20/1.15	.84/.87

Figure 11-172. Low Altitude Acceleration - Maximum Thrust - 38,000 Pounds - F404-GE-400

LOW ALTITUDE ACCELERATION

F404-GE-400

MILITARY THRUST
GROSS WEIGHT = 38,000 POUNDS

REMARKS

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

	SPEED (KIAS)	TIME TO ACCELERATE (SEC) / FUEL TO ACCELERATE (LBS)									TEMP. EFFECT FACTORS	
		DRAG INDEX										
		0	25	50	75	100	150	200	250	300	+10°C	-10°C
SEA LEVEL (15°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	9/48	9/50	9/52	10/54	10/56	11/61	12/67	14/75	16/85	1.22/1.15	.86/.89
	480	18/103	19/108	20/113	22/120	23/127	26/144	30/168	37/204	48/270	1.23/1.16	.84/.87
	520	26/144	27/153	29/163	31/176	34/190	41/230	54/308	—	—	1.23/1.16	.84/.88
	550	32/180	34/195	37/212	41/234	46/263	—	—	—	—	1.19/1.16	.84/.88
2000 FEET (11°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	9/49	10/51	10/53	11/55	11/58	12/64	13/71	15/80	17/91	1.23/1.16	.85/.90
	480	20/105	21/111	22/117	23/124	25/132	28/152	33/180	42/225	—	1.24/1.16	.79/.82
	520	27/149	29/159	31/170	34/184	37/201	46/250	—	—	—	1.25/1.17	.84/.88
	550	34/186	37/202	41/223	45/249	47/255	—	—	—	—	1.25/1.17	.84/.88
4000 FEET (7°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	10/50	10/53	11/55	11/57	12/60	13/66	15/74	17/84	19/98	1.25/1.17	.84/.89
	480	21/109	22/115	23/122	25/130	27/139	31/161	38/195	49/256	—	1.26/1.18	.83/.87
	520	29/153	31/164	34/177	37/193	40/213	52/277	—	—	—	1.27/1.19	.83/.87
	550	36/193	40/212	45/237	52/278	—	—	—	—	—	1.28/1.20	.83/.87
6000 FEET (3°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	11/53	11/55	12/58	12/61	13/64	15/71	16/80	19/92	22/109	1.27/1.19	.83/.88
	480	23/113	24/120	25/128	27/136	29/147	35/173	43/216	60/301	—	1.28/1.20	.83/88
	520	31/159	34/172	37/188	41/207	46/233	—	—	—	—	1.29/1.20	.82/.87
	550	39/203	44/288	52/270	—	—	—	—	—	—	1.31/1.22	.82/.86

Figure 11-173. Low Altitude Acceleration - Military Thrust - 38,000 Pounds - F404-GE-400

LOW ALTITUDE ACCELERATION
F404-GE-400
MAXIMUM THRUST
GROSS WEIGHT = 42,000 POUNDS

REMARKS

ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

	SPEED (KIAS)	TIME TO ACCELERATE (SEC) / FUEL TO ACCELERATE (LBS)									TEMP. EFFECT FACTORS	
		DRAG INDEX										
		0	25	50	75	100	150	200	250	300	+10°C	-10°C
SEA LEVEL (15°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	5/100	5/102	5/104	5/106	5/108	6/112	6/117	6/123	6/129	1.14/1.10	.89/.92
	480	10/206	10/211	10/216	11/221	11/227	12/238	12/252	13/267	14/284	1.16/1.11	.88/.92
	520	13/280	14/288	14/296	15/304	15/313	16/333	17/357	18/384	20/416	1.17/1.13	.91/.92
	550	16/340	17/351	17/362	18/374	18/387	20/417	21/453	23/498	26/556	1.19/1.14	.92/.93
2000 FEET (11°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	5/101	5/103	5/105	6/107	6/110	6/114	6/120	7/125	7/132	1.14/1.10	.89/.92
	480	11/209	11/214	11/219	11/225	12/231	12/243	13/258	14/274	15/292	1.16/1.11	.89/.92
	520	14/285	15/293	15/302	15/311	16/320	17/342	18/367	20/397	21/434	1.18/1.13	.89/.92
	550	17/346	18/357	18/369	19/383	20/397	21/431	23/473	26/527	29/602	1.22/1.18	.89/.91
4000 FEET (7°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	6/102	6/105	6/107	6/109	6/111	6/117	7/122	7/128	7/135	1.15/1.09	.89/.91
	480	11/213	11/218	12/224	12/230	12/236	13/250	14/265	15/283	16/304	1.17/1.11	.88/.91
	520	15/289	15/298	16/307	16/317	17/327	18/351	20/379	21/413	23/456	1.19/1.14	.87/.91
	550	18/351	19/364	19/377	20/393	21/410	23/450	25/504	29/581	—	1.21/1.16	.86/.89
6000 FEET (3°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	6/106	6/108	6/111	6/113	7/116	7/121	7/127	8/134	8/142	1.15/1.10	.88/.91
	480	12/217	12/223	13/229	13/236	13/242	14/257	15/275	16/294	17/318	1.17/1.12	.87/.91
	520	16/296	16/305	17/315	18/326	18/338	20/366	21/399	24/440	26/495	1.23/1.18	.85/.89
	550	19/358	20/373	21/390	22/408	23/430	25/485	30/574	—	—	1.20/1.15	.84/.87

Figure 11-174. Low Altitude Acceleration - Maximum Thrust - 42,000 Pounds - F404-GE-400

LOW ALTITUDE ACCELERATION

F404-GE-400

MILITARY THRUST
GROSS WEIGHT = 42,000 POUNDS

REMARKS

DATE: 16 NOVEMBER 1989
DATA BASIS: **ESTIMATED (BASED ON FLIGHT TEST)**

ENGINE(S): (2)F404-GE-400
U.S. STANDARD DAY, 1962

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

	SPEED (KIAS)	TIME TO ACCELERATE (SEC) / FUEL TO ACCELERATE (LBS)									TEMP. EFFECT FACTORS	
		DRAG INDEX										
		0	25	50	75	100	150	200	250	300	+10°C	-10°C
SEA LEVEL (15°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	10/53	10/55	11/57	11/60	11/62	13/68	14/75	15/84	17/95	1.22/1.15	.86/.89
	480	21/114	22/120	23/126	24/133	25/141	29/160	34/187	41/226	53/298	1.23/1.16	.84/.87
	520	29/160	30/170	32/182	35/195	37/211	45/255	60/339	—	—	1.23/1.16	.84/.88
	550	36/200	38/216	42/235	46/259	51/291	—	—	—	—	1.19/1.16	.84/.88
2000 FEET (11°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	10/55	11/57	11/59	12/62	12/65	14/71	15/79	17/89	19/102	1.23/1.16	.85/.90
	480	22/117	23/123	24/130	26/138	27/147	31/169	37/200	46/249	—	1.24/1.16	.79/.82
	520	30/165	32/176	35/189	38/204	41/223	51/277	—	—	—	1.25/1.17	.84/.88
	550	38/207	41/225	45/247	50/276	58/320	—	—	—	—	1.25/1.17	.84/.88
4000 FEET (7°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	11/56	12/59	12/61	13/64	13/67	15/74	16/83	19/95	22/110	1.25/1.17	.84/.89
	480	23/121	25/128	26/136	28/144	30/154	35/180	42/217	54/282	—	1.26/1.18	.83/.87
	520	32/170	35/183	37/197	41/214	45/236	58/305	—	—	—	1.27/1.19	.83/.87
	550	40/214	44/235	49/263	57/306	—	—	—	—	—	1.28/1.20	.83/.87
6000 FEET (3°C)	360	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	420	12/59	13/62	13/65	14/68	15/71	16/79	18/90	21/103	25/122	1.27/1.19	.83/.88
	480	25/126	27/133	28/142	30/152	33/163	38/193	48/239	65/330	—	1.28/1.20	.83/.88
	520	35/177	38/191	41/208	45/230	50/257	—	—	—	—	1.29/1.20	.82/.87
	550	44/225	49/253	58/301	—	—	—	—	—	—	1.31/1.22	.82/.86

Figure 11-175. Low Altitude Acceleration - Military Thrust - 42,000 Pounds - F404-GE-400

MAXIMUM THRUST ACCELERATION

F404-GE-400

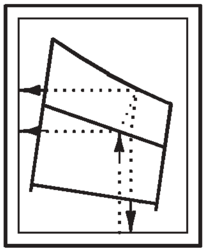
10,000 FEET

REMARKS
ENGINE(S): (2) F404-GE-400
U.S. STANDARD DAY, 1962

AIRCRAFT CONFIGURATION
(2) AIM-9 + (2) AIM-7

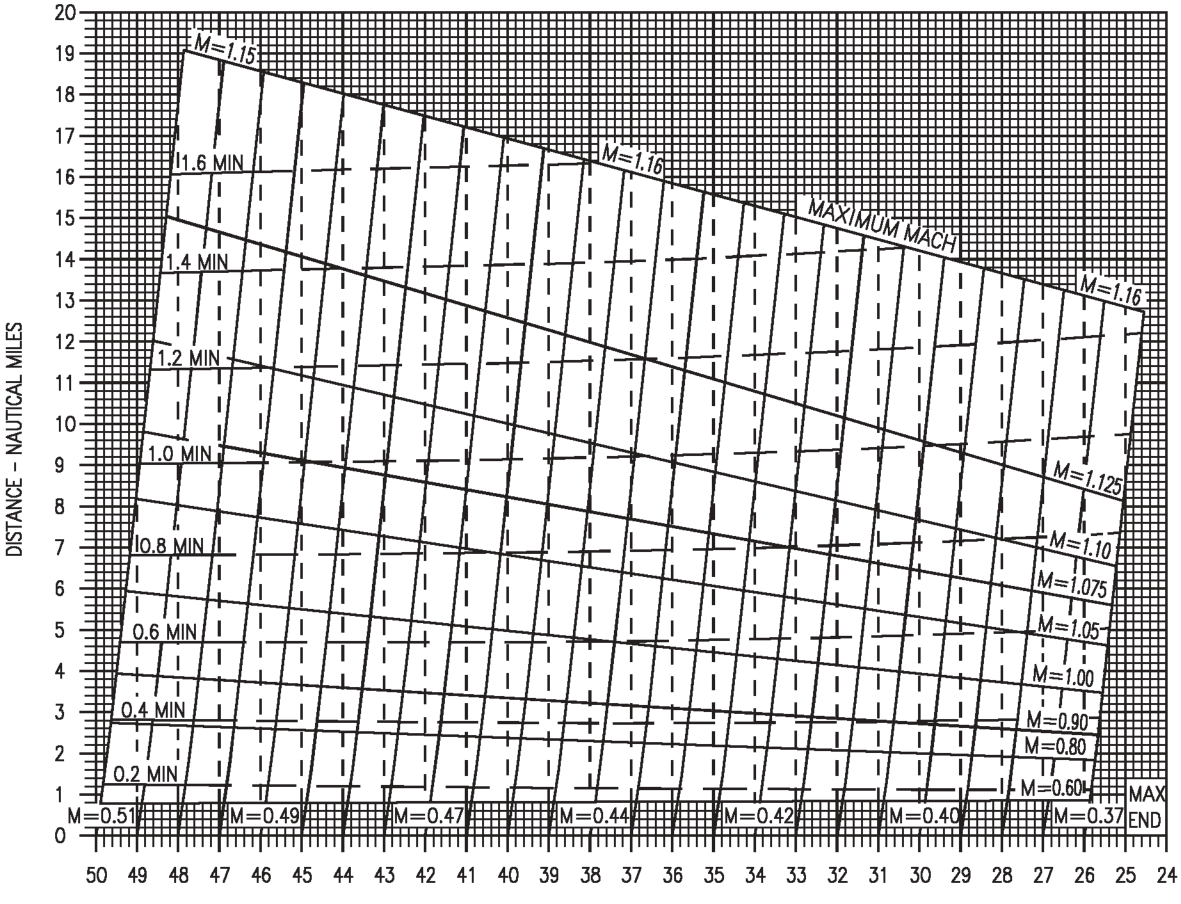
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	-5	12
15,000	-15	6
20,000	-25	-12
25,000	-35	-30
30,000	-44	-48
35,000	-54	-66
40,000	-57	-70
70,000	-57	-70

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(317-2)12-CATI

Figure 11-176. Maximum Thrust Acceleration - 10,000 Feet - F404-GE-400

MAXIMUM THRUST ACCELERATION

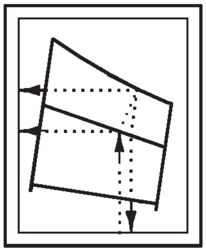
F404-GE-400
30,000 FEET

REMARKS
ENGINE(S): (2) F404-GE-400
U.S. STANDARD DAY, 1962

AIRCRAFT CONFIGURATION
(2) AIM-9 + (2) AIM-7

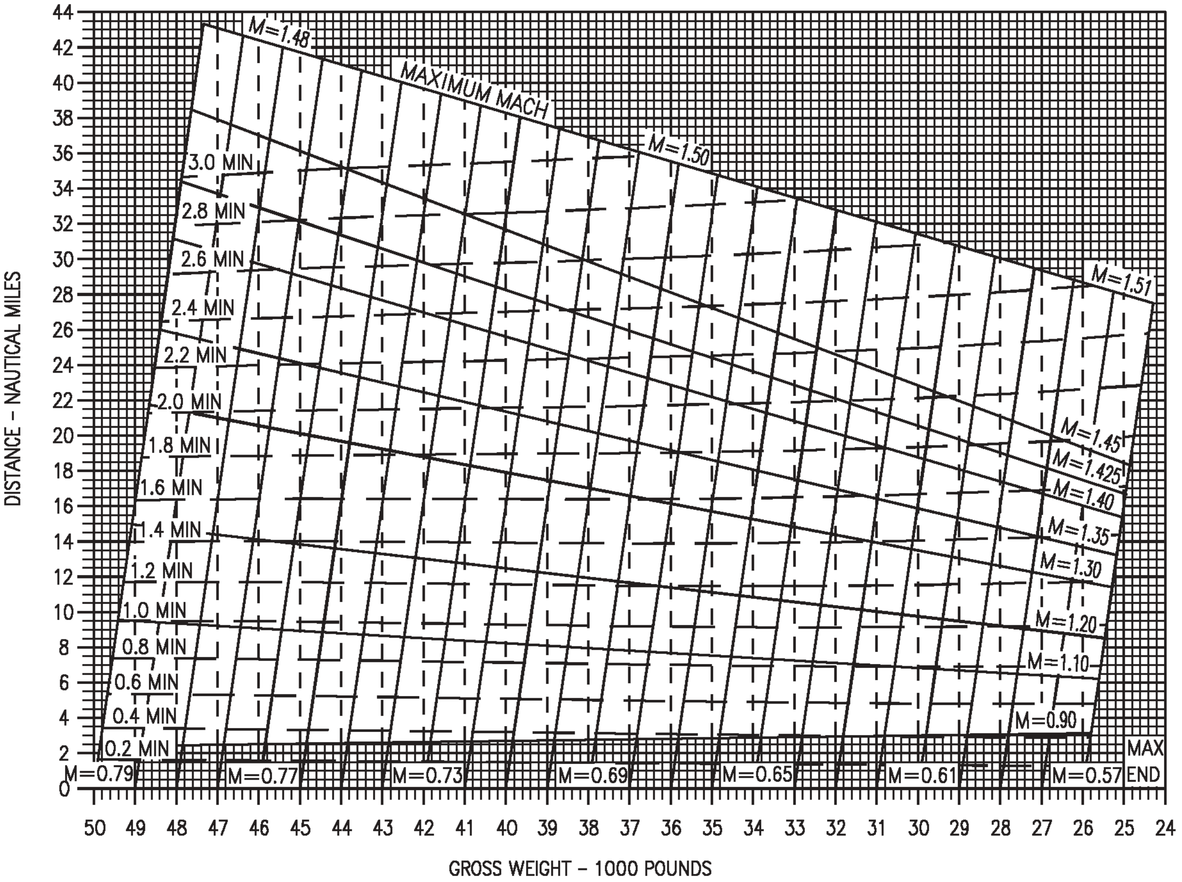
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	-5	12
15,000	-15	6
20,000	-25	-12
25,000	-35	-30
30,000	-44	-48
35,000	-54	-66
40,000	-57	-70
70,000	-57	-70

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(317-3)12-CATI

Figure 11-177. Maximum Thrust Acceleration - 30,000 Feet - F404-GE-400
(Sheet 1 of 4)

MAXIMUM THRUST ACCELERATION

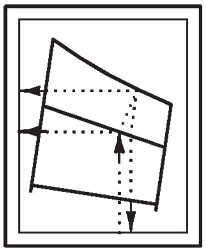
F404–GE–400
30,000 FEET

REMARKS
ENGINE(S): (2) F404–GE–400
U.S. STANDARD DAY, 1962

AIRCRAFT CONFIGURATION
(2) AIM–9 + (2) AIM–7
+ ℄ TANK

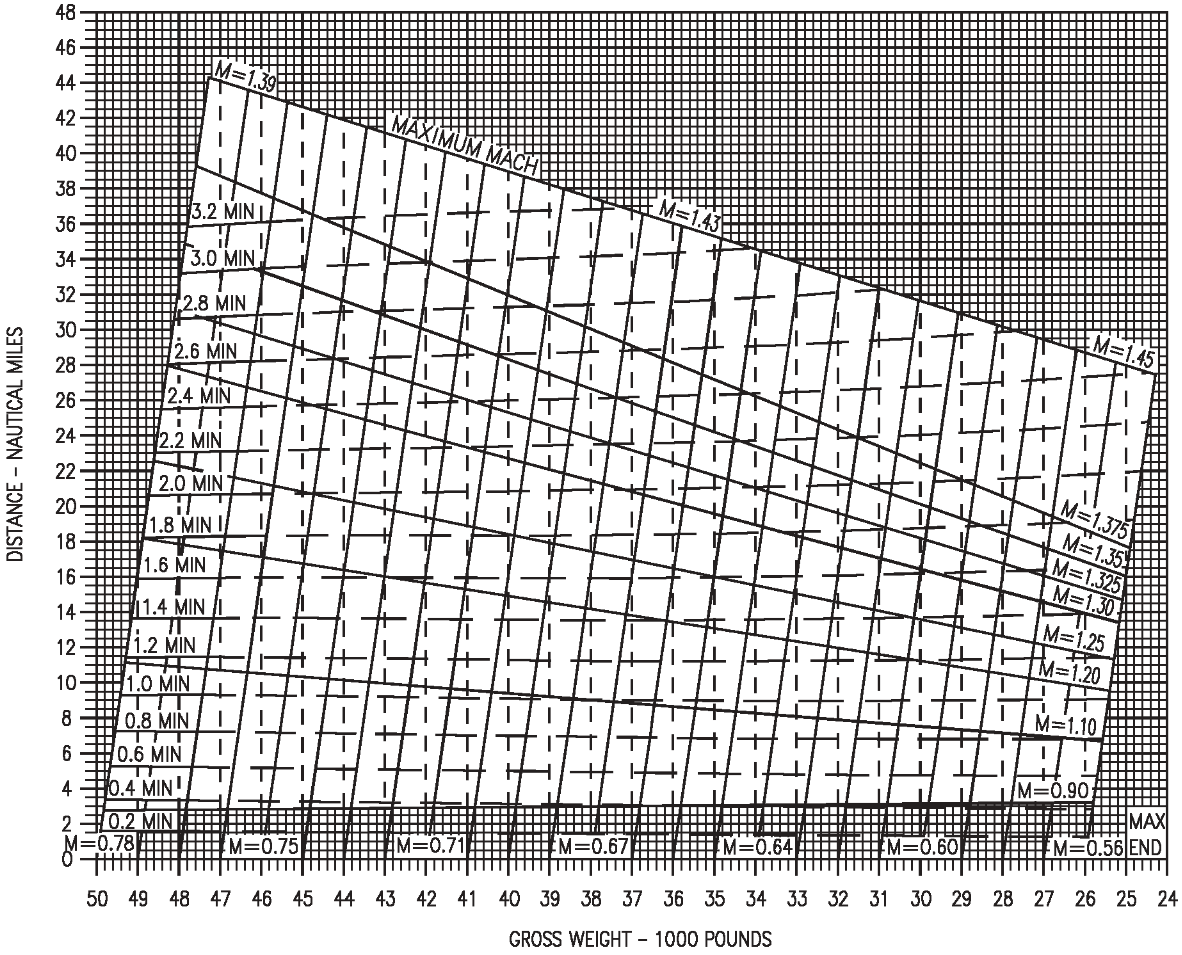
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70

GUIDE



FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC–NFM–20–(317–7)12–CATI

Figure 11-177. Maximum Thrust Acceleration - 30,000 Feet - F404-GE-400
(Sheet 2 of 4)

MAXIMUM THRUST ACCELERATION

F404–GE–400

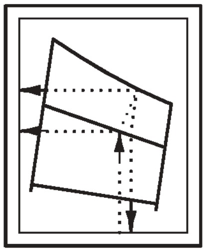
30,000 FEET

AIRCRAFT CONFIGURATION
(4) AIM–9 + (2) AIM–7
+ FLIR

REMARKS
ENGINE(S): (2) F404–GE–400
U.S. STANDARD DAY, 1962

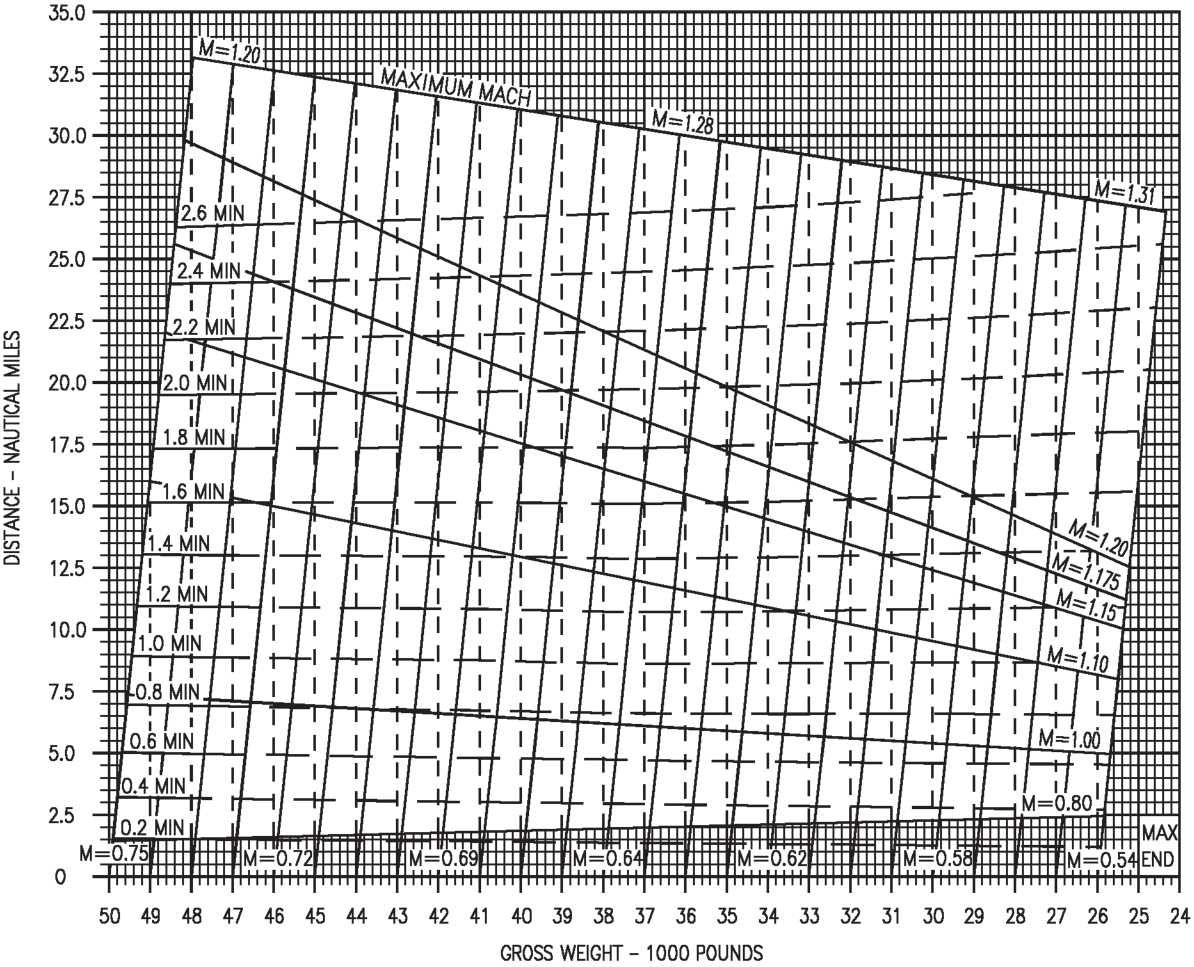
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	–5	12
15,000	–15	6
20,000	–25	–12
25,000	–35	–30
30,000	–44	–48
35,000	–54	–66
40,000	–57	–70
70,000	–57	–70

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP–5
FUEL DENSITY: 6.8 LB/GAL



18AC–NFM–20–(317–10)12–CATI

Figure 11-177. Maximum Thrust Acceleration - 30,000 Feet - F404-GE-400
(Sheet 3 of 4)

MAXIMUM THRUST ACCELERATION

F404-GE-400

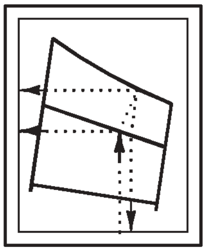
30,000 FEET

AIRCRAFT CONFIGURATION
(4) AIM-9 + (2) AIM-7
+ ℄ TANK + FLIR

REMARKS
ENGINE(S): (2) F404-GE-400
U.S. STANDARD DAY, 1962

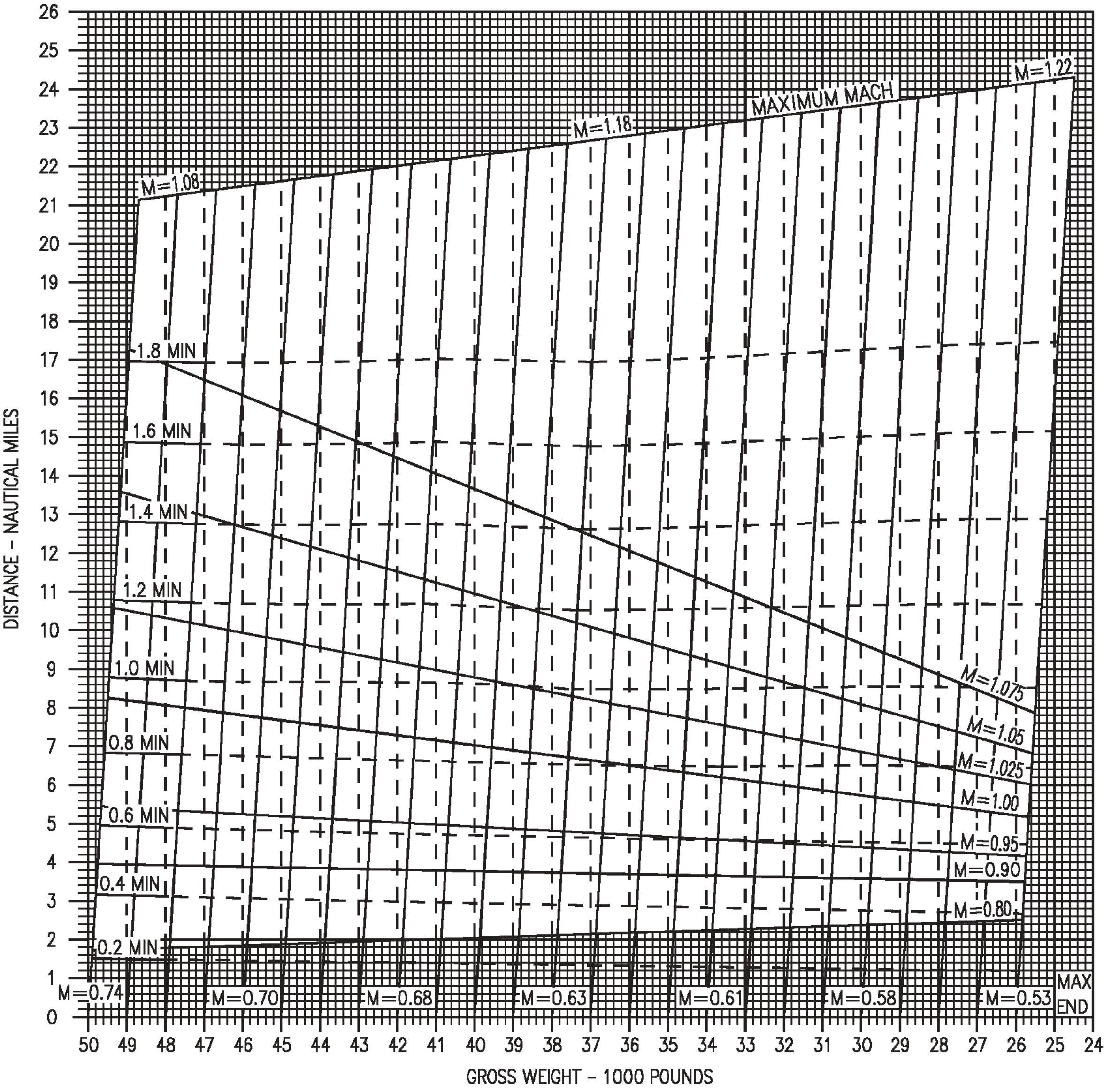
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	-5	12
15,000	-15	6
20,000	-25	-12
25,000	-35	-30
30,000	-44	-48
35,000	-54	-66
40,000	-57	-70
70,000	-57	-70

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



1BAC-NFM-20-(317-13)12-CATI

Figure 11-177. Maximum Thrust Acceleration - 30,000 Feet - F404-GE-400
(Sheet 4 of 4)

MAXIMUM THRUST ACCELERATION

F404-GE-400

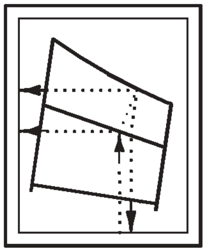
35,000 FEET

AIRCRAFT CONFIGURATION
(2) AIM-9 + (2) AIM-7

REMARKS
ENGINE(S): (2) F404-GE-400
U.S. STANDARD DAY, 1962

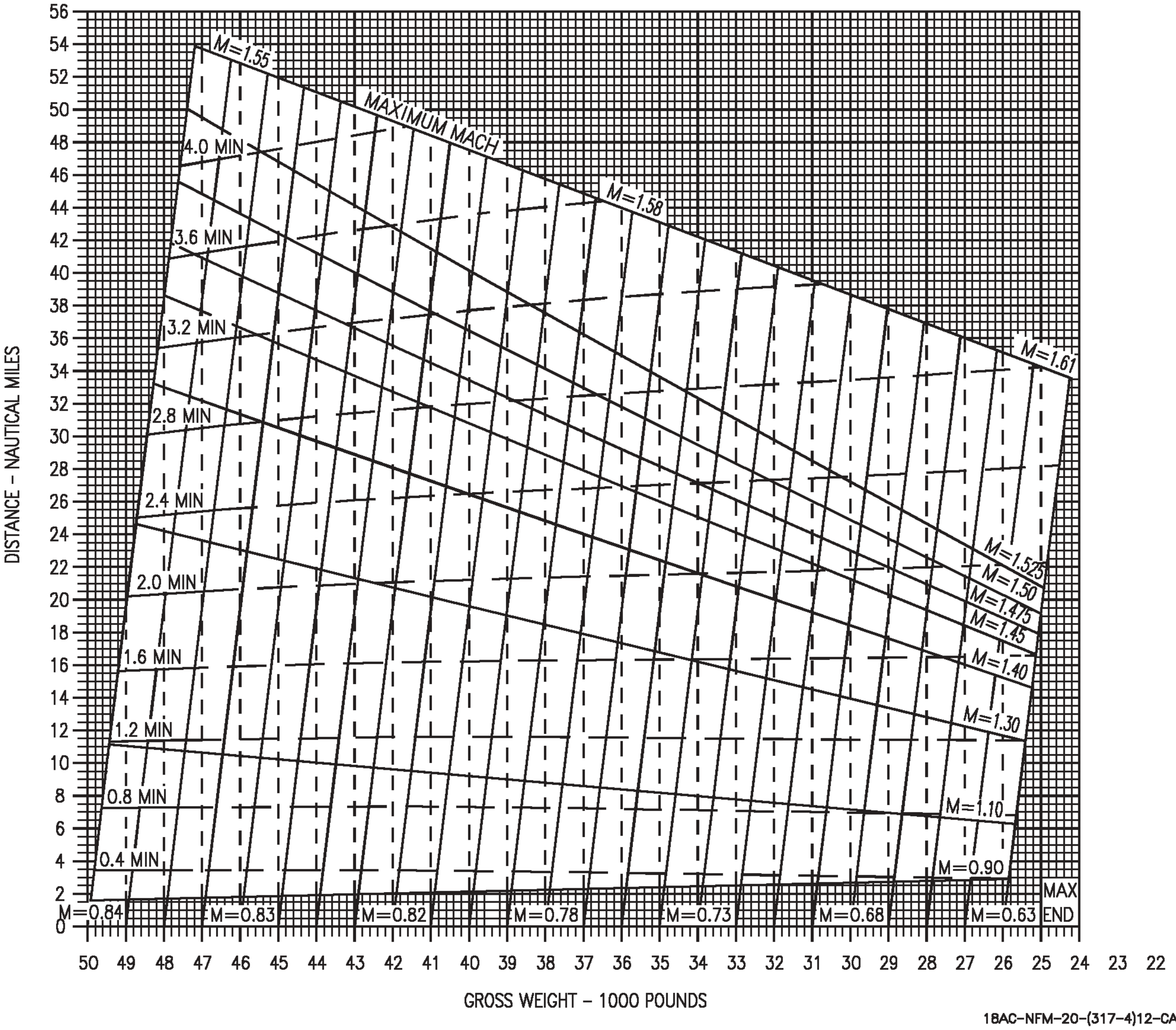
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	-5	12
15,000	-15	6
20,000	-25	-12
25,000	-35	-30
30,000	-44	-48
35,000	-54	-66
40,000	-57	-70
70,000	-57	-70

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(317-4)12-CATI

Figure 11-178. Maximum Thrust Acceleration - 35,000 Feet - F404-GE-400
(Sheet 1 of 4)

MAXIMUM THRUST ACCELERATION

F404-GE-400

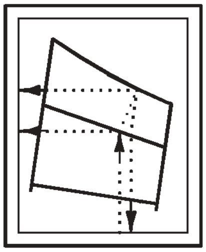
35,000 FEET

AIRCRAFT CONFIGURATION
(2) AIM-9 + (2) AIM-7
+ ℄ TANK

REMARKS
ENGINE(S): (2) F404-GE-400
U.S. STANDARD DAY, 1962

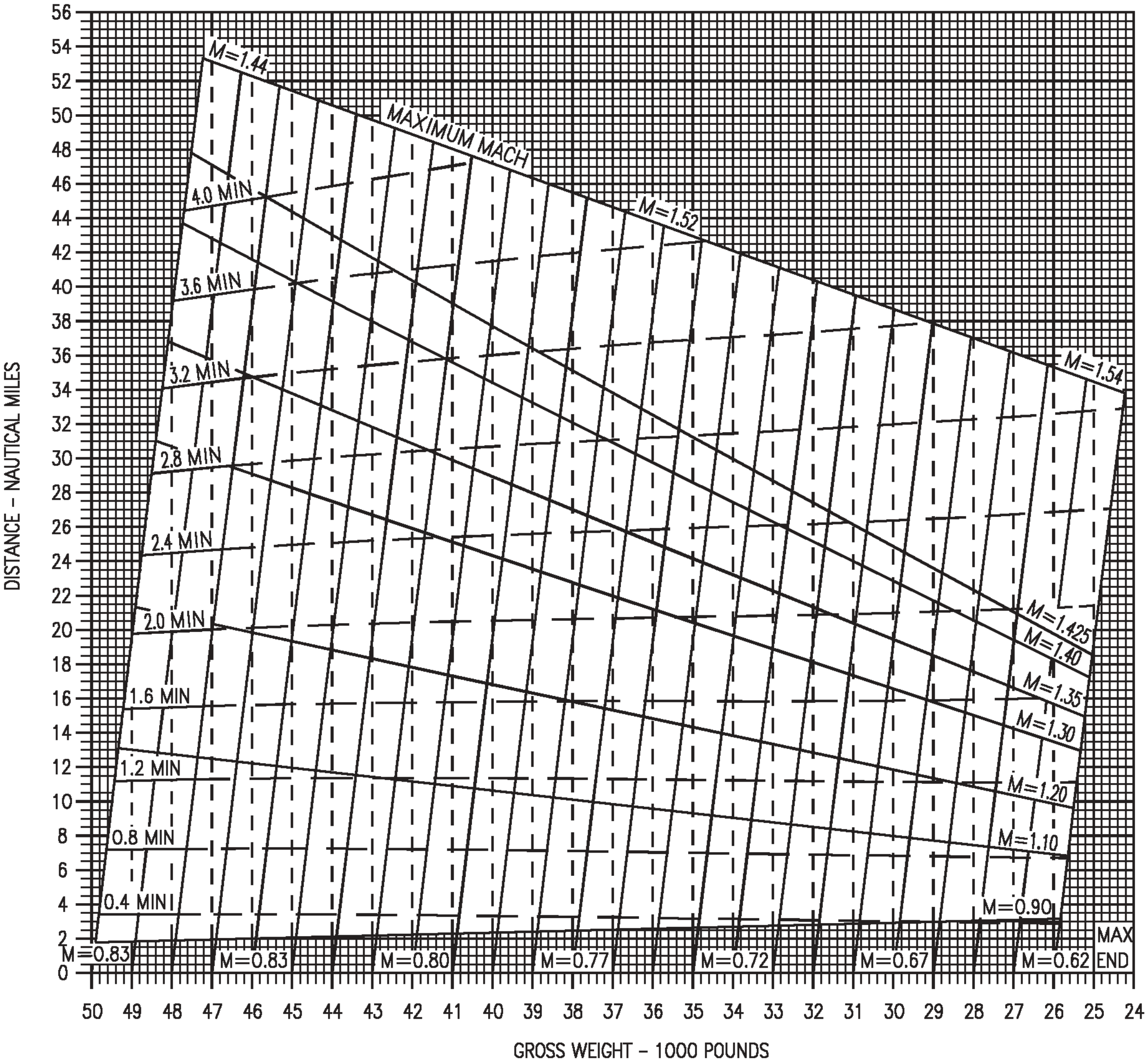
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	-5	12
15,000	-15	5
20,000	-25	-12
25,000	-35	-30
30,000	-44	-48
35,000	-54	-66
40,000	-57	-70
70,000	-57	-70

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(317-8)12-CATI

Figure 11-178. Maximum Thrust Acceleration - 35,000 Feet - F404-GE-400
(Sheet 2 of 4)

MAXIMUM THRUST ACCELERATION

F404-GE-400

35,000 FEET

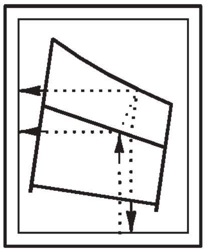
AIRCRAFT CONFIGURATION
(4) AIM-9 + (2) AIM-7
+ FLIR

REMARKS
ENGINE(S): (2) F404-GE-400
U.S. STANDARD DAY, 1962

STANDARD TEMPERATURE

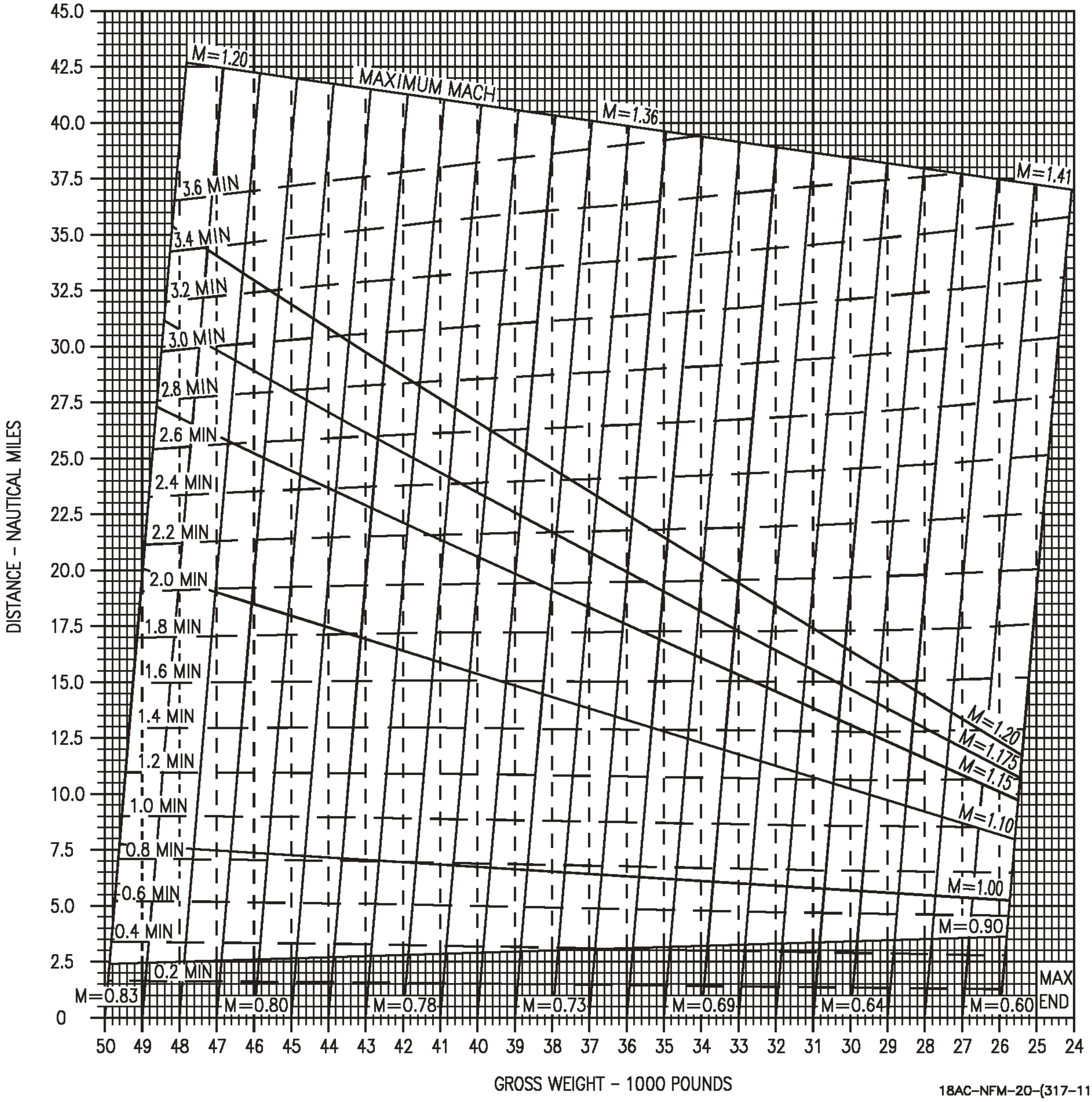
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	-5	12
15,000	-15	6
20,000	-25	-12
25,000	-35	-30
30,000	-44	-48
35,000	-54	-66
40,000	-57	-70
70,000	-57	-70

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(317-11)12-CATI

Figure 11-178. Maximum Thrust Acceleration - 35,000 Feet - F404-GE-400
(Sheet 3 of 4)

MAXIMUM THRUST ACCELERATION

F404-GE-400

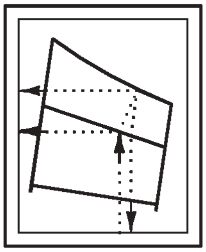
35,000 FEET

REMARKS
ENGINE(S): (2) F404-GE-400
U.S. STANDARD DAY, 1962

AIRCRAFT CONFIGURATION
(4) AIM-9 + (2) AIM-7
+ ℄ TANK + FLIR

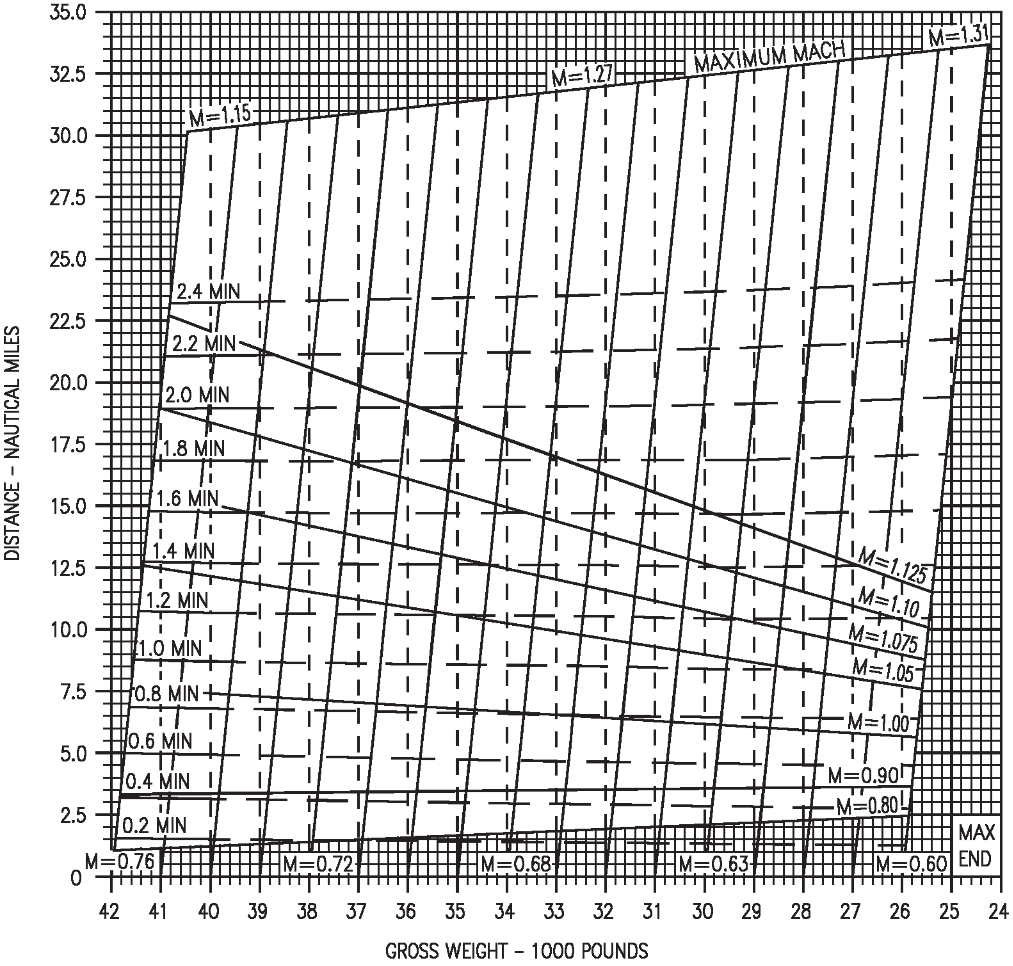
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	-5	12
15,000	-15	6
20,000	-25	-12
25,000	-35	-30
30,000	-44	-48
35,000	-54	-66
40,000	-57	-70
70,000	-57	-70

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(317-14)12-CATI

Figure 11-178. Maximum Thrust Acceleration - 35,000 Feet - F404-GE-400
(Sheet 4 of 4)

MAXIMUM THRUST ACCELERATION

F404-GE-400

40,000 FEET

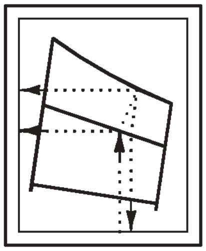
AIRCRAFT CONFIGURATION
(2) AIM-9 + (2) AIM-7

REMARKS
ENGINE(S): (2) F404-GE-400
U.S. STANDARD DAY, 1962

STANDARD TEMPERATURE

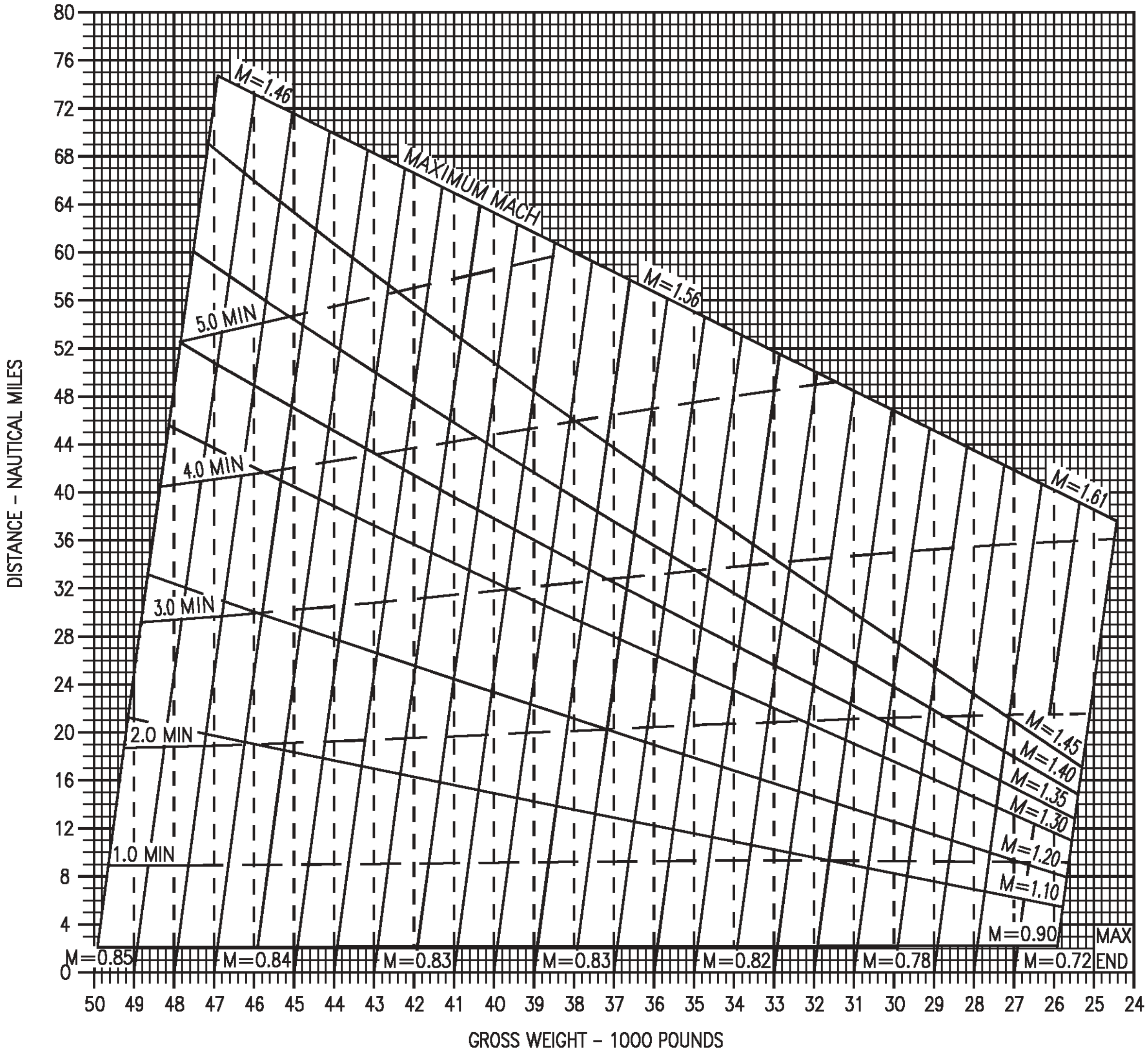
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	−5	12
15,000	−15	6
20,000	−25	−12
25,000	−35	−30
30,000	−44	−48
35,000	−54	−66
40,000	−57	−70
70,000	−57	−70

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(317-5)12-CATI

Figure 11-179. Maximum Thrust Acceleration - 40,000 Feet - F404-GE-400
(Sheet 1 of 3)

MAXIMUM THRUST ACCELERATION

F404-GE-400

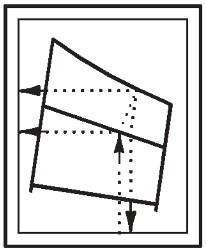
40,000 FEET

REMARKS
ENGINE(S): (2) F404-GE-400
U.S. STANDARD DAY, 1962

AIRCRAFT CONFIGURATION
(2) AIM-9 + (2) AIM-7
+ ℄ TANK

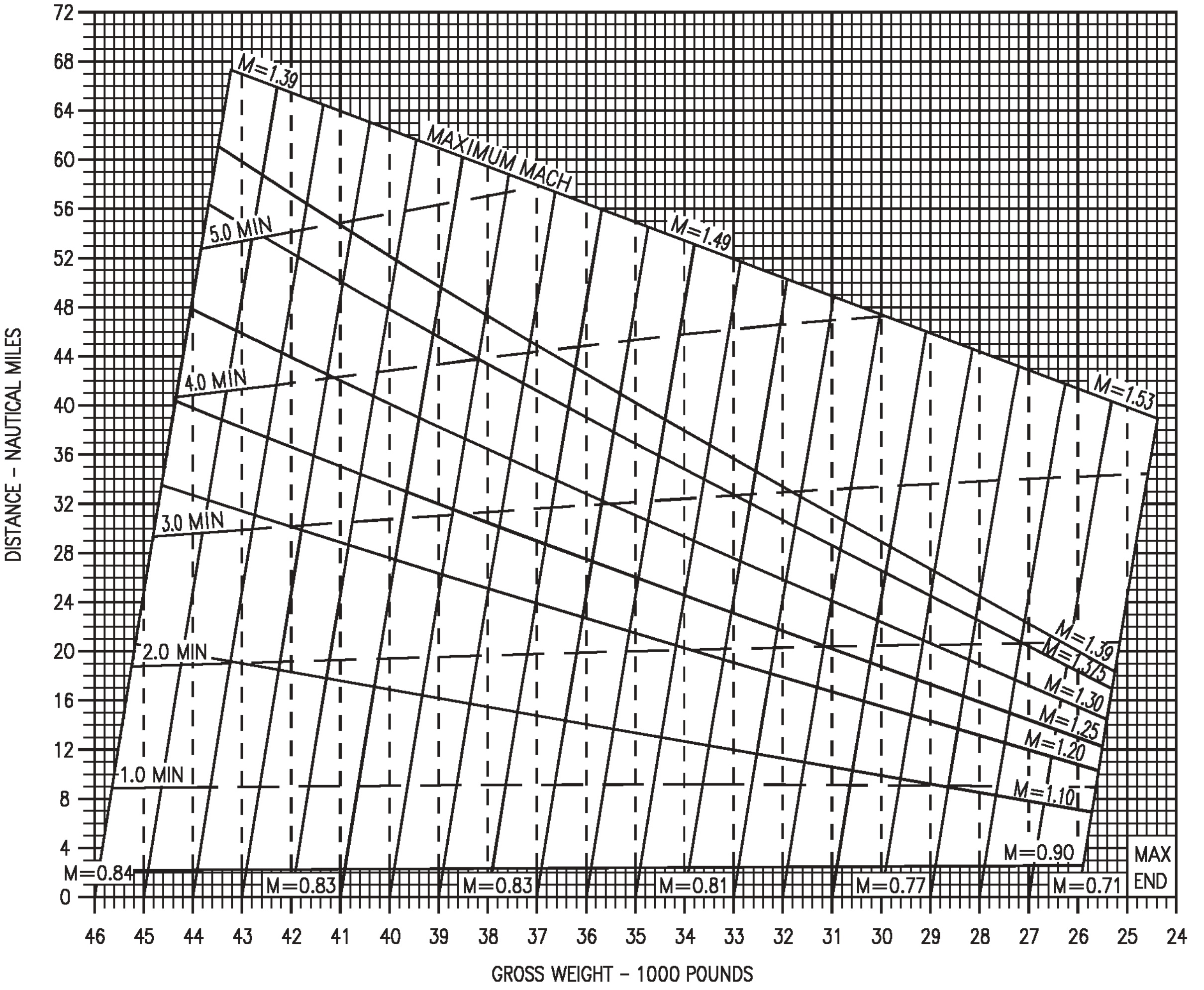
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	−5	12
15,000	−15	6
20,000	−25	−12
25,000	−35	−30
30,000	−44	−48
35,000	−54	−66
40,000	−57	−70
70,000	−57	−70

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(317-9)12-CATI

Figure 11-179. Maximum Thrust Acceleration - 40,000 Feet - F404-GE-400
(Sheet 2 of 3)

MAXIMUM THRUST ACCELERATION

F404-GE-400

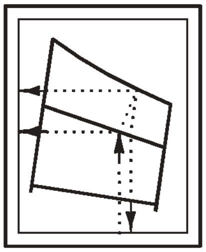
40,000 FEET

REMARKS
ENGINE(S): (2) F404-GE-400
U.S. STANDARD DAY, 1962

AIRCRAFT CONFIGURATION
(4) AIM-9 + (2) AIM-7
+ FLIR

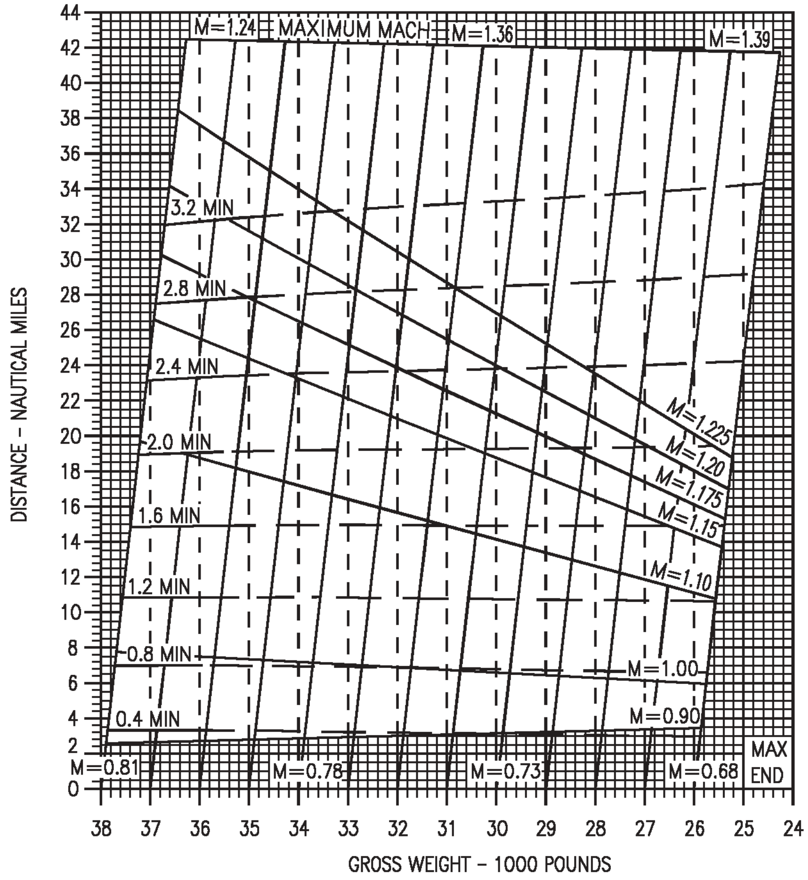
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	-5	12
15,000	-15	6
20,000	-25	-12
25,000	-35	-30
30,000	-44	-48
35,000	-54	-66
40,000	-57	-70
70,000	-57	-70

GUIDE



FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL

DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)



18AC-NFM-20-(317-12)12-CATI

Figure 11-179. Maximum Thrust Acceleration - 40,000 Feet - F404-GE-400
(Sheet 3 of 3)

MAXIMUM THRUST ACCELERATION

F404-GE-400

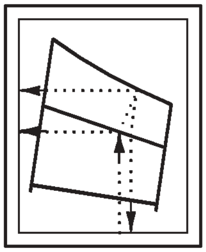
45,000 FEET

AIRCRAFT CONFIGURATION
(2) AIM-9 + (2) AIM-7

REMARKS
ENGINE(S): (2) F404-GE-400
U.S. STANDARD DAY, 1962

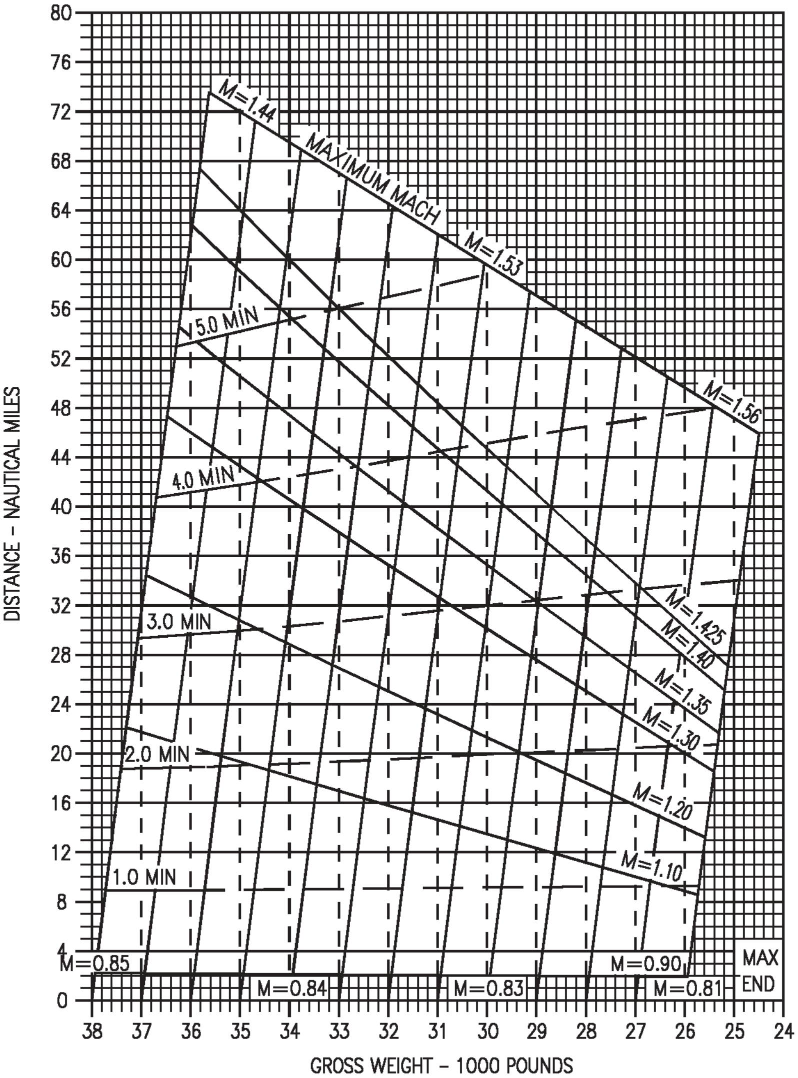
STANDARD TEMPERATURE		
ALT	°C	°F
SL	15	59
5,000	5	41
10,000	-5	12
15,000	-15	6
20,000	-25	-12
25,000	-35	-30
30,000	-44	-48
35,000	-54	-66
40,000	-57	-70
70,000	-57	-70

GUIDE



DATE: 15 JULY 1986
DATA BASIS: ESTIMATED (BASED ON FLIGHT TEST)

FUEL GRADE: JP-5
FUEL DENSITY: 6.8 LB/GAL



18AC-NFM-20-(317-6)12-CATI

Figure 11-180. Maximum Thrust Acceleration - 45,000 Feet - F404-GE-400

PART 10 - EMERGENCY OPERATION F404-GE-400

To be supplied

ALPHABETICAL INDEX

NOTE

- All text & illustrations numbers in this alphabetical index refer to page numbers, illustration page numbers are shown in parentheses.