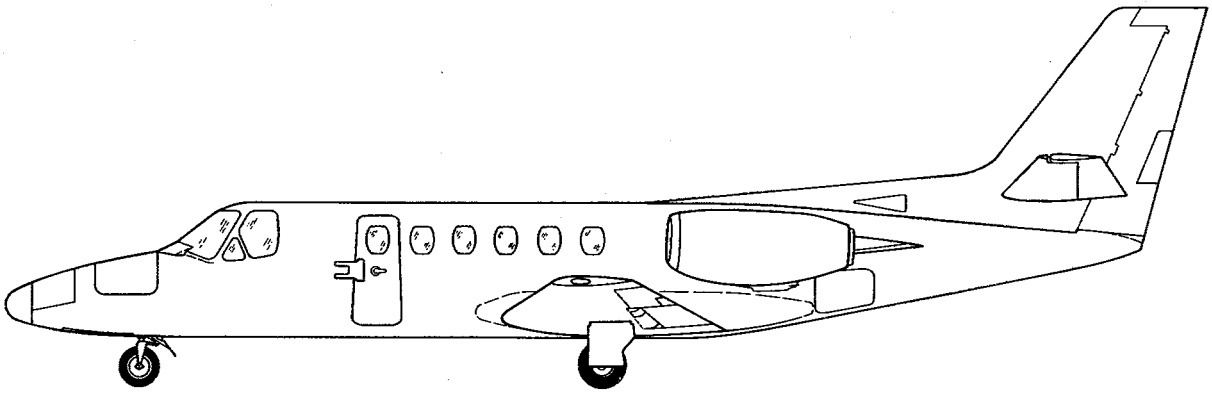
FAA APPROVED

AIRPLANE FLIGHT MANUAL

FOR

cessna CITATION II

MODEL 550



NOTE

This aircraft must be operated in compliance with the certificate limitations herein. This manual must be maintained in accordance with the log of effective pages of this manual. The certification basis is in the Transport Category based on FAR 25, effective February 1, 1965, as amended by 25-1 through 25-17. paragraph 25. 1401(d) of Amendment 25-27, paragraph 25.1385(c) of Amendment 25-38, Special Conditions 25-25-CE-4 and Far 36.

REVISION NOTICE

LATEST REVISED PAGES SUPERSEDE THE SAME PAGES OF PREVIOUS DATE
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UNIT NUMBER _____

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APPROVED BY Robert W Stephens

CHIEF WICHITA ENGINEERING AND
MANUFACTURING DISTRICT OFFICE. WICHITA. KANSAS
FAA CENTRAL REGION

DATE OF APPROVAL 3-24-78

Revision 42 Dated 19 JUNE 2000

CESSNA AIRCRAFT COMPANY. AIRCRAFT DIVISION, P.O. BOX 7704, WICHITA, KANSAS 67277

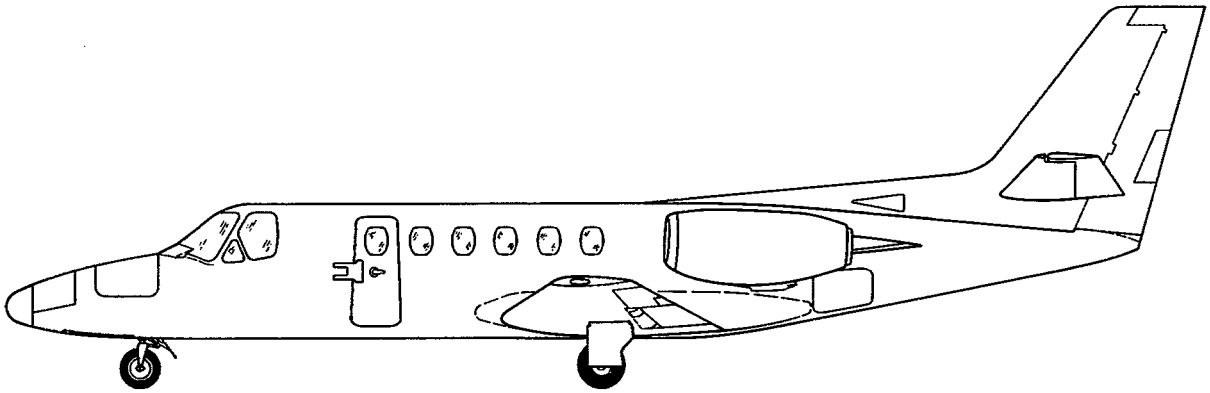
FAA APPROVED

AIRPLANE FLIGHT MANUAL

FOR

cessna CITATION II

MODEL 550



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CESSNA AIRCRAFT COMPANY. AIRCRAFT DIVISION, P.O. BOX 7704, WICHITA, KANSAS 672777

CANADA

LOG OF EFFECTIVE PAGES

Use this page to determine the currency and applicability of your FAA Approved Airplane Flight Manual. Pages affected by the current revision are indicated by an asterisk (*) preceding the pages listed under the Page column. Determine which pages are applicable to your airplane under the Airplane Affected column. As required by the FAA, only the pages applicable to your airplane should be retained in the FAA Approved Airplane Flight Manual.

In addition to the serialization shown in the Airplane Affected column, pages that apply to a certain airplane have the applicable unit number on the bottom of the pages. Pages not serialized apply to all airplanes.

Following is a description of the Log of Effective Pages columns:

Page - FAA Approved Airplane Flight Manual Page Numbers.
Page Status - Indicates if the page has been added, revised or deleted by the current revision.
Revision Number - Indicates the revision number.
Airplane Affected - Indicates page effectivity by unit number.

Revision Number	Date	Revision Number	Date
Original	24 March 1978		
Revision 1	9 May 1978	Revision 22	16 December 1981
Revision 2	31 May 1978	Revision 23	5 February 1982
Revision 3	6 July 1978	Revision 24	17 March 1982
Revision 4	28 July 1978	Revision 25	6 July 1982
Revision 5	6 October 1978	Revision 26	26 October 1982
Revision 6	9 January 1978	Revision 27	20 December 1982
Revision 7	29 May 1979	Revision 28	31 January 1983
Revision 8	6 July 1979	Revision 29	2 December 1983
Revision 9	16 August 1979	Revision 30	22 December 1983
Revision 10	13 November 1979	Revision 31	23 March 1984
Revision 11	22 January 1980	Revision 32	9 May 1984
Revision 12	25 February 1980	Revision 33	29 October 1984
Revision 13	15 April 1980	Revision 34	30 August 1985
Revision 14	13 June 1980	Revision 35	5 December 1985
Revision 15	28 July 1980	Revision 36	12 December 1986
Revision 16	22 September 1980	Revision 37	15 January 1987
Revision 17	20 January 1981	Revision 38	27 January 1989
Revision 18	17 March 1981	Revision 39	19 November 1990
Revision 19	11 May 1981	Revision 40	21 May 1993
Revision 20	21 May 1981	Revision 41	19 November 1999
Revision 21	11 June 1981	Revision 42	19 June 2000

Page	Page Status	Revision Number	Configuration Code
* Title	Revised	42	AD
* i	Revised	42	AA

(Continued Next Page)

LOG OF EFFECTIVE PAGES (Continued)

Page	Page Status	Revision Number	Configuration Code
* ii thru v/vi	Revised	42	AA
A	Revised	40	AE
Contents	Revised	40	AA
1-1/1-2	Revised	41	AA
1-3	Revised	41	AA
1-4	Revised	40	AA
1-5	Revised	41	AA
1-6	Added	40	AA
1-7/1-8	Added	40	AA
2-1/2-2	Revised	41	AJ
2-1.1/2-2.1	Revised	41	AK
2-1.2/2-2.2	Revised	41	AL
2-1.3/2-2.3	Revised	41	AM
2-1.4/2-2.4	Revised	41	AN
2-1.5/2-2.5	Revised	41	AO
2-1.6/2-2.6	Revised	41	AP
2-3	Revised	41	AA
2-4	Revised	40	AA
2-5	Revised	41	AA
2-6 thru 2-7	Revised	40	AA
2-8	Revised	41	AF
2-8.1	Revised	41	AG
2-9	Revised	41	AA
2-10	Revised	41	AB
2-10.1	Revised	41	AC
2-11	Revised	41	AH
2-11.1	Revised	41	AI
2-12	Revised	40	AA
2-13	Revised	40	AA
2-14	Revised	40	AI
2-14.1	Revised	40	AH
2-15	Added	40	AA
2-16	Added	40	AJ
2-16.1	Added	40	AK
2-16.2	Added	40	AL
2-16.3	Added	40	AM
2-16.4	Added	40	AN
2-16.5	Added	40	AP
2-16.6	Added	40	AO
3-1	Revised	41	AK
3-1.1	Revised	41	AQ
3-1.2	Revised	41	AF
3-2	Revised	41	AA
3-3	Revised	40	AD
3-3.1	Added	40	AE

(Continued Next Page)

LOG OF EFFECTIVE PAGES (Continued)

Page	Page Status	Revision Number	Configuration Code
3-4	Revised	40	AA
3-5	Revised	40	AI
3-5.1	Added	40	AH
3-6	Revised	40	AA
3-7	Revised	40	AA
* 3-8	Revised	42	AA
* 3-9	Revised	42	AF
* 3-9.1	Revised	42	AZ
3-9.2	Added	40	AH
3-10	Revised	41	AF
3-10.1	Revised	41	AS
3-10.2	Revised	41	AH
3-10.3	Revised	41	BA
3-10.4	Revised	41	AT
* 3-11	Revised	42	AF
* 3-11.1	Revised	42	BA
* 3-11.2	Revised	42	AR
* 3-11.3	Revised	42	AT
* 3-12	Revised	42	AT
* 3-12.1	Revised	42	AR
3-13	Revised	41	BA
3-13.1	Revised	41	AH
3-13.2	Revised	41	AT
3-14	Revised	40	AT
3-14.1	Revised	40	AR
3-15	Revised	40	AA
3-16	Revised	40	AQ
3-16.1	Revised	40	AK
3-16.2	Revised	40	AF
3-17	Revised	40	AK
3-17.1	Revised	40	AU
3-17A	Added	40	AA
3-18	Revised	40	AA
3-19	Revised	41	AI
3-19.1	Revised	41	AH
3-20	Revised	40	AA
3-21	Revised	40	AF
3-21.1	Revised	40	AG
3-22	Revised	40	AU
3-22.1	Revised	40	AK
3-23 thru 3-24	Revised	40	AA
3-23A	Added	40	AA
3-24	Revised	40	AA
3-25 thru 3-29	Revised	40	AA

(Continued Next Page)

LOG OF EFFECTIVE PAGES (Continued)

	Page	Page Status	Revision Number	Configuration Code
	3-30	Revised	41	AA
	3-31thru 3-32	Revised	40	AA
*	3-33	Revised	42	AY
*	3-33.1	Revised	42	AV
*	3-34	Revised	42	AV
*	3-34.1	Revised	42	AY
	3-35	Revised	40	AX
	3-35.1	Revised	40	AK
	3-35.2	Added	40	AW
	3-35.3	Added	40	AF
	3-36	Revised	40	AV
	3-36.1	Added	40	AY
	3-37	Revised	40	AA
	3-38	Revised	40	AV
	3-38.1	Added	40	AY
	3-39 thru 3-42	Revised	41	AA
	3-42A	Added	41	AA
	3-43	Revised	40	AA
	3-44	Revised	40	AA
	3-45	Revised	41	AD
	3-45.1	Revised	41	AE
	3-46	Revised	40	AA
	3-47	Revised	41	AU
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	3-50.1	Revised	41	AG
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	3-51.1	Added	40	AG
	3-52	Added	40	AA
	4-1/4-2	Revised	41	AA
	4-3/4-4	Revised	41	AA
	4-5	Revised	40	AA
	4-6	Revised	41	AA
	4-7 thru 4-9	Revised	40	AA
	4-10	Revised	41	AA
	4-11 thru 4-28	Revised	40	AA
*	4-28A/4-28B	Revised	42	AA
	4-29 thru 4-30	Revised	40	AA
	4-31	Revised	40	AD
	4-31.1	Revised	40	AE
*	4-32	Revised	42	AA

(Continued Next Page

LOG OF EFFECTIVE PAGES (Continued)

Page	Page Status	Revision Number	Configuration Code
4-33/4-34	Revised	40	AA
4-35/4-36	Revised	40	AA
4-37 thru 4-38	Revised	40	AA
4-39 /4-40	Revised	40	AA
4-41 thru 4-70	Revised	40	AA
4-71/4-72	Revised	40	AA
4-73 thru 4-92	Revised	40	AA
4-93/4-94	Revised	40	AA
4-95 thru 4-126	Revised	40	AA
4-127/ 4-128	Revised	40	AA
4-129 thru 4-148	Revised	40	AA
4-149 thru 4-158	Added	40	AA
4-159/4-160	Added	40	AA
4-161 thru 4-178	Added	40	AA
4-178A/4-178B	Added	40	AA
4-179 thru 4-234	Added	40	AA
4-235/4-236	Added	40	AA
5-1/5-2	Revised	40	AA
6-1/6-2	Revised	40	AA
* 7-1 thru 7-8	Revised	42	AA
* 7-9 thru 7-14	Added	42	AA

APPROVED BY M Baker

for Everett W. Pittman, Manager
Aircraft Certification Office
Federal Aviation Administration
Wichita, Kansas

DATE OF APPROVAL 6/19/00

For operation in Canada all sections of this Flight Manual are mandatory

TABLE OF CONTENTS

INTRODUCTION
TABLE OF CONTENTS

INTRODUCTION

COVERAGE

The Flight Manual in the airplane at the time of delivery from Cessna Aircraft Company contains information applicable only to that particular airplane. This manual is applicable to airplane unit 550-0002 thru -0505.

NOTICE

THE SUPPLEMENTS IN SECTION V OF THIS FLIGHT MANUAL CONTAIN AMENDED OPERATING LIMITATIONS, OPERATING PROCEDURES, PERFORMANCE DATA AND OTHER NECESSARY INFORMATION FOR AIRPLANES CONDUCTING SPECIAL OPERATIONS AND FOR AIRPLANES EQUIPPED WITH SPECIFIC OPTIONS. OPERATORS SHOULD REFER TO SECTION V TO ENSURE THAT ALL LIMITATIONS AND PROCEDURES APPROPRIATE FOR THEIR AIRPLANE ARE OBSERVED.

UNIT AND SERIAL NUMBER

On all Citation II Model airplanes, both the serial and unit number are stamped into the airplane identification nameplate. This manual uses unit numbers to describe airplane effectivities.

FLIGHT MANUAL PART NUMBER

Each page in the FAA Approved Airplane Flight Manual contains the part number of the manual and the page status of each page; Refer to the example below. The Canadian Flight Manual Cover and pages unique to Canada contain the letters "CAFM-XX". All other pages in the Canadian Flight Manual will be 550FM-XX.

Basic Flight Manual

55 FM 40

- 40 — Page Status (Revision)
- FM — Flight Manual
- 55 — Airplane Model (550 -0002 thru -0505)

Flight Manual Supplements

55 FM - S27 - 01

- 01 — Page Status (Revision 1)
- S27 — Supplement Number (Supplement 27)
- FM — Manual (Flight Manual)
- 55 — Airplane Model (550 -0002 thru -0505)

REVISIONS

As new information becomes available for your airplane, revisions will be issued to all registered owners. It is the pilot's responsibility to assure that this FAA Approved Airplane Flight Manual is complete and current at all times.

REVISED MATERIAL INDICATORS

Two types of revised material indicators will be used in this manual.

A bar will extend the full length of deleted, new or revised text added on new or presently existing pages. This bar will be located adjacent to the applicable text in the margin on the left side of the page.

A miniature pointing hand will be used in an existing illustration, pointing to the revised area. Should the illustration be new material, the miniature hand will point to the figure number; i.e., Figure x-x.

All revised pages will carry the revision number opposite the page number on the applicable page. A list of revisions is located at the beginning of the list of effective pages.

DEFINITIONS

Performance definitions are available in Section IV; the remaining definitions are listed as follows:

WARNING

OPERATING PROCEDURES, TECHNIQUES, ETC., WHICH WILL RESULT IN PERSONAL INJURY OR LOSS OF LIFE IF NOT CAREFULLY FOLLOWED.

CAUTION

OPERATING PROCEDURES, TECHNIQUES, ETC., WHICH WILL RESULT IN DAMAGE TO EQUIPMENT IF NOT CAREFULLY FOLLOWED.

NOTE

An operating procedure, technique, etc., which is considered essential to emphasize.

LAND AS SOON AS POSSIBLE

Land at the nearest suitable airport. Extreme situations could require off airport landing. The primary consideration is safety of occupants.

LAND AS SOON AS PRACTICAL

Land at a suitable airport. The primary consideration is the urgency of the emergency or abnormal situation. Continuing to the destination or to an alternate with appropriate service facilities may be an option.

EMERGENCY PROCEDURES

An emergency procedure is one requiring the use of special systems and/or regular systems in order to protect the occupants and the airplane from serious or critical harm. Usually, these procedures require immediate action.

ABNORMAL PROCEDURES

An abnormal procedure is one requiring the use of special systems and/or the alternate use of regular systems which, if followed, will maintain an acceptable level of airworthiness or reduce operational risk resulting from a failure condition.

NORMAL PROCEDURES

A normal procedure is one which may be thought of as routine in day-to-day flying.

ADVISORY INFORMATION

Section VII of this manual provides guidance information not approved by the FAA.

SERVICE BULLETIN CONFIGURATION LIST

The following is a list of Service Bulletins that are applicable to the operation of the airplane, and have been incorporated into this manual. This list contains only those Service Bulletins that are currently active.

Number	Title	Airplane Serial Effectivity	Revision Incorporated	Incorporated in Airplane
SB550-32-5	Caster Angle Change and Replacement Antiskid Valve and Control Box	-0002 thru -0177	Rev. 11	_____
SB550-32-14	Increased Maximum Gear Extend Speed	-0002 thru -0505	Rev. 39	_____
SB550-54-4	Starter/Generator Airscoop Installation	-0115 thru -0295	Rev. 22	_____
SB550-71-3	Power Plant - Installation and Removal of JT15D-4B Loaner Engine	-0002 and On	Rev. 35	_____
SB550-32-12	Landing Gear - BFGoodrich Brakes and Wheels Installation	-0002 thru -0505	Rev. 41	_____

AIRPLANE CONFIGURATION CODES

The following is a list of airplane configuration codes which appear at the bottom of the page of the basic FAA Approved Airplane Flight Manual, and indicates page effectivity by unit number. If no configuration code appears on page, the page is for all configurations. This list contains only the configurations which have been incorporated into this basic manual.

Configuration Code	Effectivity by Unit Number
AA	Airplanes -0002 thru -0505
AB	Airplanes Not Incorporating SB550-32-14
AC	Airplanes Incorporating SB550-32-14
AD	Except Canadian Registered Airplanes
AE	Canadian Registered Airplanes
AF	Airplanes -0482 and -0485 thru -0505
AG	Airplanes -0002 thru -0481, -0483 and -0484
AH	Airplanes -0115 thru -0295 Except Airplanes Incorporating SB550-54-4
AI	Airplanes -0002 thru -0114, -0296 thru -0505 and Airplanes -0115 thru -0295 Incorporating SB550-54-4
AJ	Airplanes -0162 thru -0175 Not Incorporating "H" Modification as Indicated on the Flight Director Computer
AK	Airplanes -0002 thru -0161
AL	Airplanes -0176 thru -0481, -0483 and -0484 Not Incorporating "H" Modification as Indicated on the Flight Director Computer
AM	Airplanes -0162 thru -0175 Incorporating "H" Modification as Indicated on the Flight Director Computer
AN	Airplanes -0176 thru -0481, -0483 and -0484 Incorporating "H" Modification as Indicated on the Flight Director Computer

(Continued Next Page)

AIRPLANE CONFIGURATION CODES (Continued)

Configuration Code	Effectivity by Unit Number
AO	Airplanes -0482 and -0485 thru -0505 Not Incorporating "H" Modification as Indicated on the Flight Director Computer
AP	Airplanes -0482 and -0485 thru -0505 Incorporating "H" Modification as Indicated on the Flight Director Computer
AQ	Airplanes -0162 thru -0481, -0483 and -0484
AR	Airplanes -0002 thru -0355
AS	Airplanes -0356 thru -0481, -0483 and -0484
AT	Airplanes -0356 thru -0505
AU	Airplanes -0162 thru -0505
AV	Airplanes -0002 thru -0436
AW	Airplanes -0437 thru -0481, -0483 and -0484
AX	Airplanes -0162 thru -0436
AY	Airplanes -0437 thru -0505
AZ	Airplanes -0002 thru -0114, -0296 thru -0481, -0483 and -0484 and Airplanes -0115 thru -0295 Incorporating SB550-54-4
BA	Airplanes -0002 thru -0114, -0296 thru -0355 and Airplanes -0115 thru -0295 Incorporating SB550-54-4

OPERATING LIMITATIONS TABLE OF CONTENTS

OPERATING LIMITATIONS TABLE OF CONTENTS

OPERATING LIMITATIONS TABLE OF CONTENTS

OPERATING LIMITATIONS TABLE OF CONTENTS

OPERATING LIMITATIONS TABLE OF CONTENTS

OPERATING LIMITATIONS
TABLE OF CONTENTS

OPERATING LIMITATIONS TABLE OF CONTENTS

OPERATING LIMITATIONS

NOTICE

CERTIFICATION AND OPERATIONAL LIMITATIONS ARE CONDITIONS OF THE TYPE AND AIRWORTHINESS CERTIFICATES AND MUST BE COMPLIED WITH AT ALL TIMES AS REQUIRED BY LAW.

CERTIFICATION STATUS

This airplane is certified in accordance with FAR 25.

WEIGHT LIMITATIONS

Maximum Design Ramp Weight	13,500 Pounds
Maximum Design Takeoff Weight	13,300 Pounds
Maximum Design Landing Weight	12,700 Pounds
Maximum Design Zero Fuel Weight	9,500 Pounds

Takeoff weight is limited by the most restrictive of the following requirements:

Maximum Certified Takeoff Weight	13,300 Pounds
Maximum Takeoff Weight Permitted by Climb Requirements	Refer to Procedures for Use of Takeoff Performance Tables in Section IV
Takeoff Field Lengths	Refer to Procedures for Use of Takeoff Performance Tables in Section IV

Landing weight is limited by the most restrictive of the following requirements:

Maximum Certified Landing Weight	12,700 Pounds
Maximum Landing Weight Permitted by Climb Requirements or Brake Energy Limit	Refer to Procedures for Use of Approach and Landing Performance Tables in Section IV
Landing Distance	Refer to Procedures for Use of Approach and Landing Performance Tables in Section IV

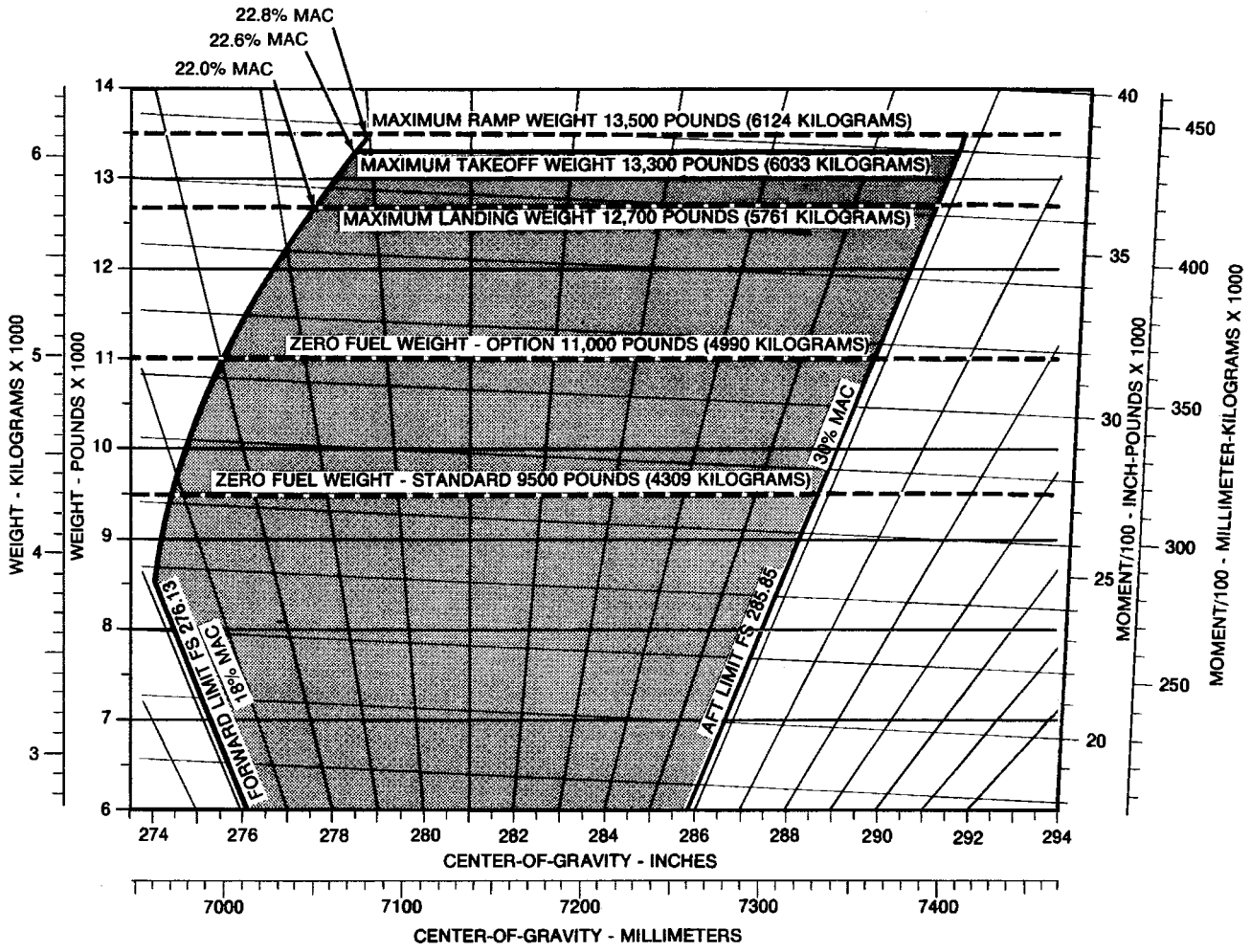
CENTER-OF-GRAVITY LIMITS

Center-of-Gravity Moment Envelope	Refer to Figure 2-1

WEIGHT AND BALANCE DATA

The airplane must be operated in accordance with the approved loading schedule. (Refer to Weight and Balance Data Sheet and Model 550 Citation II Weight and Balance Manual.)

CENTER-OF-GRAVITY MOMENT ENVELOPE



1562-3

Figure 2-1

POWERPLANT LIMITATIONS

Engine TypePratt and Whitney Canada Inc. JT15D-4 Turbofan

*Pratt and Whitney Canada Inc. JT15D-4B

Engine Operating Limits . . . . . Refer to Figure 2-2
Inter-Turbine Temperatures Limits . . . . . Refer to Figure 2-3
Engine Overspeed Limits . . . . . Refer to Figure 2-4
Takeoff/Go Around Thrust Setting . . . . . Refer to Figure 4-7
Maximum Continuous Thrust Setting . . . . . Refer to Figure 4-8
Normal Climb/Cruise Thrust Setting . . . . . Refer to Figure 4-9

*Airplanes Incorporating SB550-71-3 are restricted to 90-day operation only.

ENGINE OPERATING LIMITS

OPERATING CONDITIONS	OPERATING LIMITS					
THRUST SETTING	TIME LIMIT (MINUTES)	ITT TEMPERATURE °C	N_2 % TURBINE RPM	N_1 % FAN RPM	OIL PRESSURE PSIG (NOTE 2)	OIL TEMPERATURE °C
TAKEOFF	5	700	96	104 (NOTE 4)	70 TO 85 (NOTE 3)	10 TO 121
MAXIMUM CONTINUOUS	CONTINUOUS	680	96	104 (NOTE 4)	70 TO 85	0 TO 121
IDLE	CONTINUOUS	580	49 (NOTE 5)	---	35 (MIN)	–40 TO 121
STARTING	---	(NOTE 1)	---	---	---	–40 (MIN)
TRANSIENT	---	700	96	104	(NOTE 3)	0 TO 121

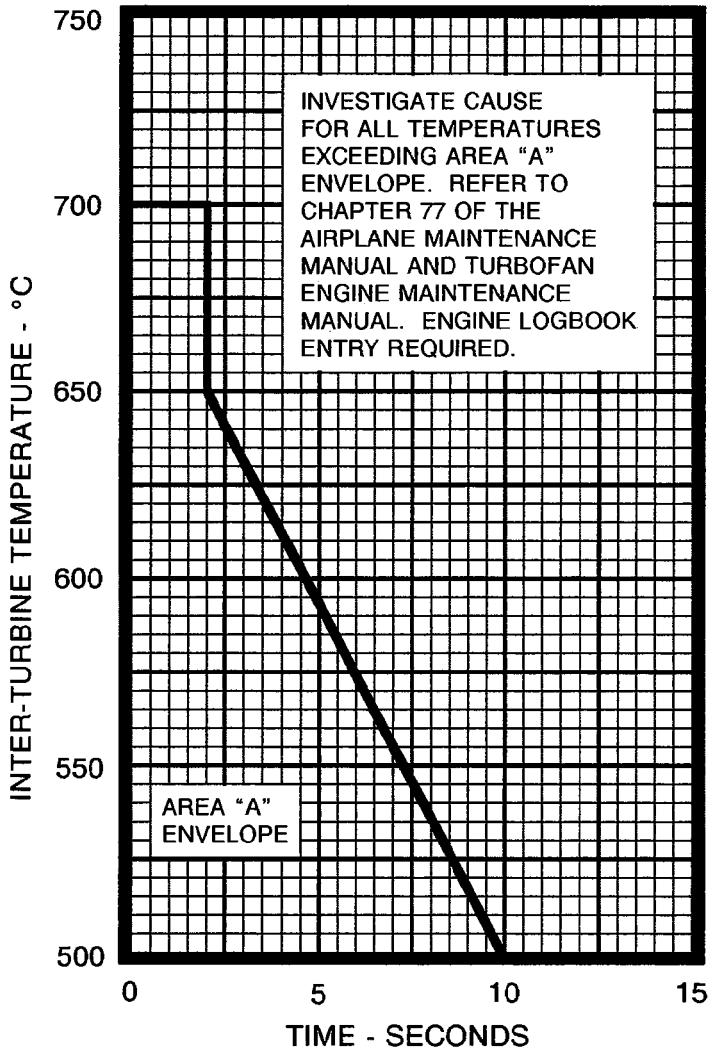
NOTES

1. Refer to Figure 2-3.
2. Normal oil pressures are 70 to 85 PSIG above 60% TURBINE RPM. Oil pressures below 70 PSIG are undesirable and should be tolerated only for the completion of the flight, preferably at reduced power setting. Oil pressures below 35 PSIG are unsafe and require that either the engine be shut down or a landing be made as soon as possible, using the minimum power required to sustain flight.
3. The maximum transient oil pressure can be 95 PSIG for 90 seconds.
4. Refer to the appropriate thrust setting charts in Section IV (Standard Charts) for % FAN RPM setting.
5. With ignition ON idle turbine RPM is 49% +0.5 or –0.5%. A minimum decrease of 0.5% will be noted with ignition OFF.

Figure 2-2

INTER-TURBINE TEMPERATURE LIMITS

STARTING CONDITIONS ONLY



ALL CONDITIONS EXCEPT STARTING

If the Inter-Turbine Temperature (ITT) exceeds 700°C during takeoff, or if 680°C is exceeded at any time other than takeoff, refer to Chapter 77 of the Maintenance Manual and Engine Maintenance Manual.

Figure 2-3

ENGINE OVERSPEED LIMITS

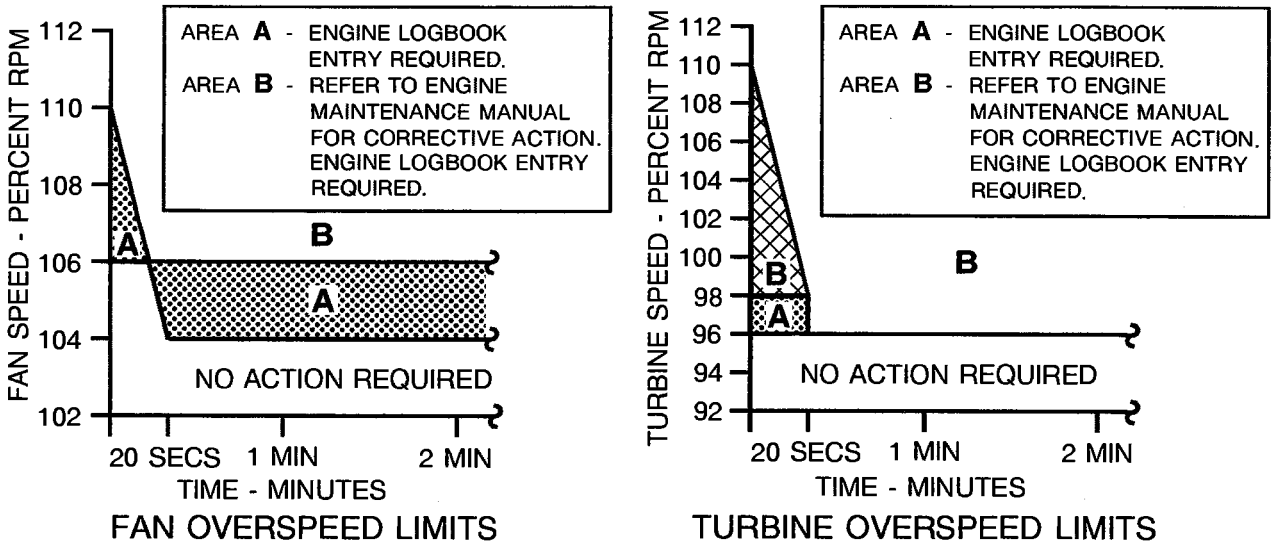


Figure 2-4

ENGINE FAN INSPECTION

To assure accurate fan speed thrust indication, inspect the fan for damage prior to each flight.

NOTE

Refer to the exterior inspection in the Normal Procedures Section of this manual for engine duct and fan inspection.

BATTERY AND STARTER CYCLE LIMITATIONS

Starter Limitation . . . . . Three engine starts per 30 minutes. Three cycles of operation with a 30-second rest period between cycles is permitted.

NOTE

This limitation is independent of starter power source: i.e. battery, generator assisted cross start, or external power unit.

(Continued Next Page)

BATTERY AND STARTER CYCLE LIMITATIONS (Continued)

Battery Limitation . . . . . Three engine starts per hour. Refer to notes (2) and (3).

NOTE

(1) If battery limitation is exceeded, a deep cycle including a capacity check must be accomplished to detect possible cell damage. Refer to Chapter 24 of the Maintenance Manual for procedure.
(2) Three generator assisted cross starts are equal to one battery start.
(3) If an external power unit is used for start, no battery cycle is counted.
(4) Use of an external power source with voltage in excess of 28 VDC or current in excess of 1000 amps may damage the starter.

PROLONGED GROUND OPERATION

Continuous engine ground static operation up to and including five minutes at takeoff thrust is limited to ambient temperatures not to exceed 36°C above ISA. (Refer to Figure 4-7).

Continuous ground operation of the starter-generator above 325 amperes is prohibited.

Limit ground operation of pitot/static heat to two minutes to preclude damage to the pitot static tubes and angle-of-attack probe.

Operation in the GND bleed mode at power settings greater than 70% turbine RPM (N_2) for the right engine is prohibited.

WINDSHIELD ICE PROTECTION FLUID

Use TT-I-735 isopropyl alcohol for windshield anti-ice.

HYDRAULIC FLUID

Use Skydrol 500A, B, B-4, C, or LD-4; or Hyjet, Hyjet W, III, IV or IVA or IVA Plus only.

APPROVED OILS

The following oils are approved for use:

MOBIL JET OIL II	EXXON TURBO OIL 2380	AERO SHELL TURBINE OIL 500
MOBIL JET OIL 254	CASTROL 5000	AERO SHELL TURBINE OIL 560
	ROYCO TURBINE OIL 560	ROYCO TURBINE OIL 500

CAUTION

WHEN CHANGING FROM AN EXISTING LUBRICANT FORMULATION TO A "THIRD GENERATION" LUBRICANT FORMULATION (AERO SHELL/ROYCO TURBINE OIL 560 OR MOBIL JET 254) THE ENGINE MANUFACTURER STRONGLY RECOMMENDS THAT SUCH A CHANGE SHOULD ONLY BE MADE WHEN AN ENGINE IS NEW OR FRESHLY OVERHAULED. FOR ADDITIONAL INFORMATION ON USE OF THIRD GENERATION OILS, REFER TO THE ENGINE MANUFACTURERS PERTINENT OIL SERVICE BULLETINS.

(Continued Next Page)

ENGINE OVERSPEED LIMITS

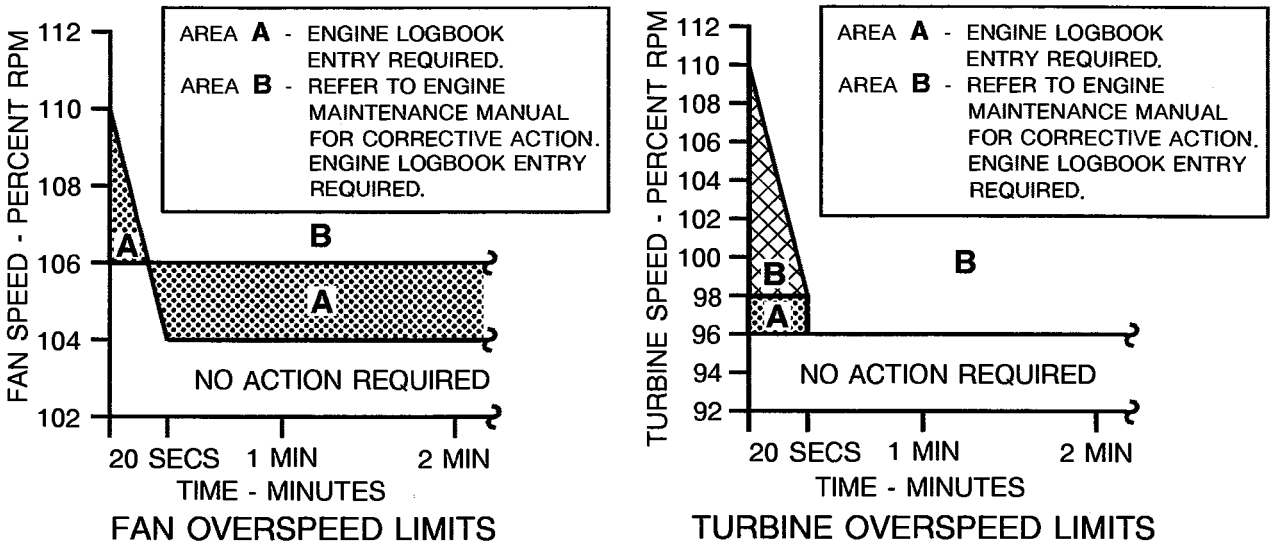


Figure 2-4

5685X6061

ENGINE FAN INSPECTION

To assure accurate fan speed thrust indication, inspect the fan for damage prior to each flight.

NOTE

Refer to the exterior inspection in the Normal Procedures Section of this manual for engine duct and fan inspection.

BATTERY AND STARTER CYCLE LIMITATIONS

Starter Limitation . . . . . Three engine starts per 30 minutes. Three cycles of operation with a 30-second rest period between cycles is permitted.

NOTE

This limitation is independent of starter power source: i.e. battery, generator assisted cross start, or external power unit.

(Continued Next Page)

BATTERY AND STARTER CYCLE LIMITATIONS (Continued)

Battery Limitation . . . . . Three engine starts per hour. Refer to notes (2) and (3).

NOTE

(1) If battery limitation is exceeded, a deep cycle including a capacity check must be accomplished to detect possible cell damage. Refer to Chapter 24 of the Maintenance Manual for procedure.
(2) Three generator assisted cross starts are equal to one battery start.
(3) If an external power unit is used for start, no battery cycle is counted.
(4) Use of an external power source with voltage in excess of 28 VDC or current in excess of 1000 amps may damage the starter.

PROLONGED GROUND OPERATION

Continuous engine ground static operation up to and including five minutes at takeoff thrust is limited to ambient temperatures not to exceed 36°C above ISA. (Refer to Figure 4-7).

Continuous ground operation of the starter-generator above 325 amperes is prohibited.

Limit ground operation of pitot/static heat to two minutes to preclude damage to the pitot static tubes and angle-of-attack probe.

WINDSHIELD ICE PROTECTION FLUID

Use TT-I-735 isopropyl alcohol for windshield anti-ice.

HYDRAULIC FLUID

Use Skydrol 500A, B, B-4, C, or LD-4; or Hyjet, Hyjet W, III, IV, IVA, or IVA Plus only.

APPROVED OILS

The following oils are approved for use:

MOBIL JET OIL II	EXXON TURBO OIL 2380	AERO SHELL TURBINE OIL 500
MOBIL JET OIL 254	CASTROL 5000	AERO SHELL TURBINE OIL 560
	ROYCO TURBINE OIL 560	ROYCO TURBINE OIL 500

CAUTION

WHEN CHANGING FROM AN EXISTING LUBRICANT FORMULATION TO A "THIRD GENERATION" LUBRICANT FORMULATION (AERO SHELL/ROYCO TURBINE OIL 560 OR MOBIL JET 254) THE ENGINE MANUFACTURER STRONGLY RECOMMENDS THAT SUCH A CHANGE SHOULD ONLY BE MADE WHEN AN ENGINE IS NEW OR FRESHLY OVERHAULED. FOR ADDITIONAL INFORMATION ON USE OF THIRD GENERATION OILS, REFER TO THE ENGINE MANUFACTURERS PERTINENT OIL SERVICE BULLETINS.

(Continued Next Page)

APPROVED OILS (Continued)

In addition, oils listed for the engine in the latest revision to Pratt and Whitney Canada Inc. Service Bulletin Number 7001 are approved.

Should it be necessary to replenish oil consumption losses when oil of the same brand (as tank contents) is unavailable, then the following requirements apply:

For contingency purposes, oil replenishment using any other approved oil brand listed is acceptable provided:

1. The total quantity of added oil does not exceed two U.S. quarts in any 400-hour period.
2. If it is required to add more than two U.S. quarts of dissimilar oil brands, drain and flush complete oil system and refill with an approved oil in accordance with Engine Maintenance Manual instructions.

Should oils of nonapproved brands or of different viscosities become intermixed, drain and flush complete oil system and refill with an approved oil in accordance with Engine Maintenance Manual instructions.

Minimum oil temperature for starting is –40°C.

FUEL LIMITATIONS

Anti-icing additive must be added to all approved fuels not presently containing the additive.

* Boost Pumps - ON; when low fuel lights illuminate or at 169 pounds or less indicated fuel.

The following fuels are approved for use in accordance with Figure 2-5.

COMMERCIAL KEROSENE JET A, JET A-1, JET B, JP-4, JP-5 and JP-8 per CPW 204 specification.

AVIATION GASOLINE, MIL-G-5572, all grades, permitted for a maximum of 50 hours or 3500 gallons between overhauls providing:

1. Pilot confirms fuel temperature within limits.
2. Maximum ambient air temperature (takeoff) +32°C.
*3. Boost pumps - ON.
4. Hours used entered in Engine Logbook. For record keeping purposes, assume one hour of engine operation equals 70 gallons of gasoline.

CAUTION

THESE FUELS, EXCEPT MILITARY JP-4, JP-5 and JP-8, REQUIRE THE ADDITION OF ANTI-ICE ADDITIVE (PER MIL-I-27686 OR MIL-I-85470); REFER TO SECTION III, NORMAL PROCEDURES, FUEL ANTI-ICE ADDITIVES, FOR PROCEDURES TO FOLLOW WHEN BLENDING AND CHECKING FUEL ANTI-ICE ADDITIVES.

* To crossfeed, turn boost pump OFF on side opposite selected tank.

FUEL LIMITATIONS AND ADJUSTMENTS

	JET A, A-1, JP-5 & JP-8	JET B & JP-4	AVIATION GASOLINE
MINIMUM FUEL TEMPERATURE (TAKEOFF)	-40°C	-54°C	-54°C
MINIMUM FUEL TEMPERATURE (STARTING)	-40°C	-54°C	-54°C
MAXIMUM FUEL TEMPERATURE	+50°C	+50°C	+32°C
MAXIMUM ALTITUDE	43,000 FEET	43,000 FEET	18,000 FEET
MAXIMUM ASYMMETRIC FUEL DIFFERENTIAL FOR NORMAL OPERATIONS	600 POUNDS	600 POUNDS	600 POUNDS
FUEL CONTROL DENSITY ADJUSTMENT FOR OPTIMUM ENGINE ACCELERATION	0.81	0.79	0.73

Figure 2-5

UNUSABLE FUEL

Fuel remaining in the fuel tanks when the fuel quantity indicator reads zero is not usable in flight.

SPEED LIMITATIONS

Maximum Operating Limit Speeds

M_{MO} (Above 28,000 Feet) . . . . . 0.705 Mach (Indicated)
V_{MO} (Between 14,000 Feet and and 28,000 Feet) . . . . . 277 KIAS
V_{MO} (Betwen Sea Level and 14,000 Feet) . . . . . 262 KIAS

The maximum operating limit speeds may not be deliberately exceeded in any regime of flight (climb, cruise or descent) unless a higher speed is authorized for flight test or pilot training.

Maximum Maneuvering Speeds - V_A . . . . . Refer to Figure 2-6

Full application of rudder and aileron controls as well as maneuvers that involve angles-of-attack near the stall should be confined to speeds below maximum maneuvering speed.

Maximum Flap Extended Speed - V_{FE}

Full Flaps - LAND Position (40°) . . . . . 176 KIAS
Partial Flaps - T.O. & APPR Position (15°) . . . . . 202 KIAS

Maximum Landing Gear Operating Speed - V_{LO} . . . . . 176 KIAS

This is the maximum speed at which the landing gear may be lowered or raised.

Maximum Speed Brake Operation Speed - V_{SB} . . . . . No Limit
Minimum Control Speeds (V_{MCA} and V_{MCG}) . Refer to Section IV, Performance General
Maximum Tire Ground Speed . . . . . 165 Knots
Autopilot Operation . . . . . 277 KIAS or 0.705 MACH
262 KIAS below 14,000 Feet

APPROVED OILS (Continued)

In addition, oils listed for the engine in the latest revision to Pratt and Whitney Canada Inc. Service Bulletin Number 7001 are approved.

Should it be necessary to replenish oil consumption losses when oil of the same brand (as tank contents) is unavailable, then the following requirements apply:

For contingency purposes, oil replenishment using any other approved oil brand listed is acceptable provided:

1. The total quantity of added oil does not exceed two U.S. quarts in any 400-hour period.
2. If it is required to add more than two U.S. quarts of dissimilar oil brands, drain and flush complete oil system and refill with an approved oil in accordance with Engine Maintenance Manual instructions.

Should oils of nonapproved brands or of different viscosities become intermixed, drain and flush complete oil system and refill with an approved oil in accordance with Engine Maintenance Manual instructions.

Minimum oil temperature for starting is –40°C.

FUEL LIMITATIONS

Anti-icing additive must be added to all approved fuels not presently containing the additive.

* Boost Pumps - ON; when low fuel lights illuminate or at 169 pounds or less indicated fuel.

The following fuels are approved for use in accordance with Figure 2-5.

COMMERCIAL KEROSENE JET A, JET A-1, JET B, JP-4, JP-5 and JP-8 per CPW 204 specification.

AVIATION GASOLINE, MIL-G-5572, all grades, permitted for a maximum of 50 hours or 3500 gallons between overhauls providing:

1. Pilot confirms fuel temperature within limits.
2. Maximum ambient air temperature (takeoff) + 32°C.
* 3. Boost pumps - ON.
4. Hours used entered in Engine Logbook. For record keeping purposes, assume one hour of engine operation equals 70 gallons of gasoline.

CAUTION

THESE FUELS, EXCEPT MILITARY JP-4, JP-5 and JP-8, REQUIRE THE ADDITION OF ANTI-ICE ADDITIVE (PER MIL-I-27686 OR MIL-I-85470); REFER TO SECTION III, NORMAL PROCEDURES, FUEL ANTI-ICE ADDITIVES, FOR PROCEDURES TO FOLLOW WHEN BLENDING AND CHECKING FUEL ANTI-ICE ADDITIVES.

* To crossfeed, turn boost pump OFF on side opposite selected tank.

FUEL LIMITATIONS AND ADJUSTMENTS

	JET A, A-1, JP-5 & JP-8	JET B & JP-4	AVIATION GASOLINE
MINIMUM FUEL TEMPERATURE (TAKEOFF)	–40°C	–54°C	–54°C
MINIMUM FUEL TEMPERATURE (STARTING)	–40°C	–54°C	–54°C
MAXIMUM FUEL TEMPERATURE	+50°C	+50°C	+32°C
MAXIMUM ALTITUDE	43,000 FEET	43,000 FEET	18,000 FEET
MAXIMUM ASYMMETRIC FUEL DIFFERENTIAL FOR NORMAL OPERATIONS	600 POUNDS	600 POUNDS	600 POUNDS
FUEL CONTROL DENSITY ADJUSTMENT FOR OPTIMUM ENGINE ACCELERATION	0.81	0.79	0.73

Figure 2-5

UNUSABLE FUEL

Fuel remaining in the fuel tanks when the fuel quantity indicator reads zero is not usable in flight.

SPEED LIMITATIONS

Maximum Operating Limit Speeds

M_{MO} (Above 28,000 Feet) ..... 0.705 Mach (Indicated)
V_{MO} (Between 14,000 Feet and 28,000 Feet) ..... 277 KIAS
V_{MO} (Below 14,000 Feet) ..... 262 KIAS

The maximum operating limit speeds may not be deliberately exceeded in any regime of flight (climb, cruise or descent) unless a higher speed is authorized for flight test or pilot training.

Maximum Maneuvering Speeds - V_A ..... Refer to Figure 2-6

Full application of rudder and aileron controls as well as maneuvers that involve angles-of-attack near the stall should be confined to speeds below maximum maneuvering speed.

Maximum Flap Extended Speed - V_{FE}

Full Flaps - LAND Position (40°) ..... 176 KIAS
Partial Flaps - T.O. & APPR Position (15°) ..... 202 KIAS

Landing Gear Operating Speed, Extend - (V_{LO} Extend) ..... 250 KIAS
Landing Gear Operating Speed, Retract - (V_{LO} Retract) ..... 200 KIAS
Landing Gear Extended Speed - (V_{LE}) ..... 277 KIAS
Maximum Speed Brake Operation Speed - V_{SB} ..... No Limit
Minimum Control Speeds (V_{MCA} and V_{MCG}) . Refer to Section IV, Performance General
Maximum Tire Ground Speed ..... 165 Knots
Autopilot Operation ..... 277 KIAS or 0.705 MACH
262 KIAS below 14,000 Feet

TAKEOFF AND LANDING OPERATIONAL LIMITS

Maximum Altitude Limit ..... 14,000 Feet
Maximum Tailwind Components ..... 10 Knots
Maximum Water/Slush on Runway ..... 0.4 Inches
Maximum Ambient Temperature ..... ISA +39°C (Refer to Figures 2-7 and 4-6)
Minimum Ambient Temperature ..... –54°C

The autopilot and yaw damper must be OFF for takeoff and landing.

Goodyear part number 184F08-1 or 184F13-5 and part number 031-613-8 (manufactured by BFGoodrich/Michelin) are the only nose tires approved. The nose tire must be inflated to 120 ± 5 PSI.

Maximum Tire Ground Speed ..... 165 Knots

Vertical navigation system must be OFF below 500 feet AGL.

If a takeoff is to be made following a landing or an aborted takeoff during which the brakes were applied above 50 KIAS, refer to Figure 4-11 for minimum turnaround time.

Takeoffs and landings are limited to paved runways unless equipped with optional Gravel Runway Modification, either factory installed or through appropriate Cessna Service Bulletin.

ENROUTE OPERATIONAL LIMITS

Maximum Operating Altitude ..... 43,000 Feet
Maximum Ambient Temperature ..... Refer to Figure 2-7
Minimum Ambient Temperature ..... Refer to Figure 2-7
Generator Load ..... 400 Amperes Up to 25,000 Feet
250 Amperes Above 25,000 Feet

OPERATIONS AUTHORIZED

This airplane is approved for day and night, VFR, IFR flight and flight into known icing conditions.

MINIMUM CREW

Minimum Flight Crew for All Operations ..... 1 Pilot and 1 Copilot

LOAD FACTOR

In Flight
Flaps UP Position (0°) ..... –1.52 to +3.8G at 13,300 Pounds
Flaps T.O. & APPR to LAND Position
(15° To 40°) ..... 0.0 to +2.0G at 13,300 Pounds

These accelerations limit the angle-of-bank in turns and limit the severity of pull-up maneuvers.

Landing
Flaps - T.O. & APPR to LAND Position
(15° to 40°) ..... +3.75G at 12,700 Pounds

MAXIMUM MANEUVERING

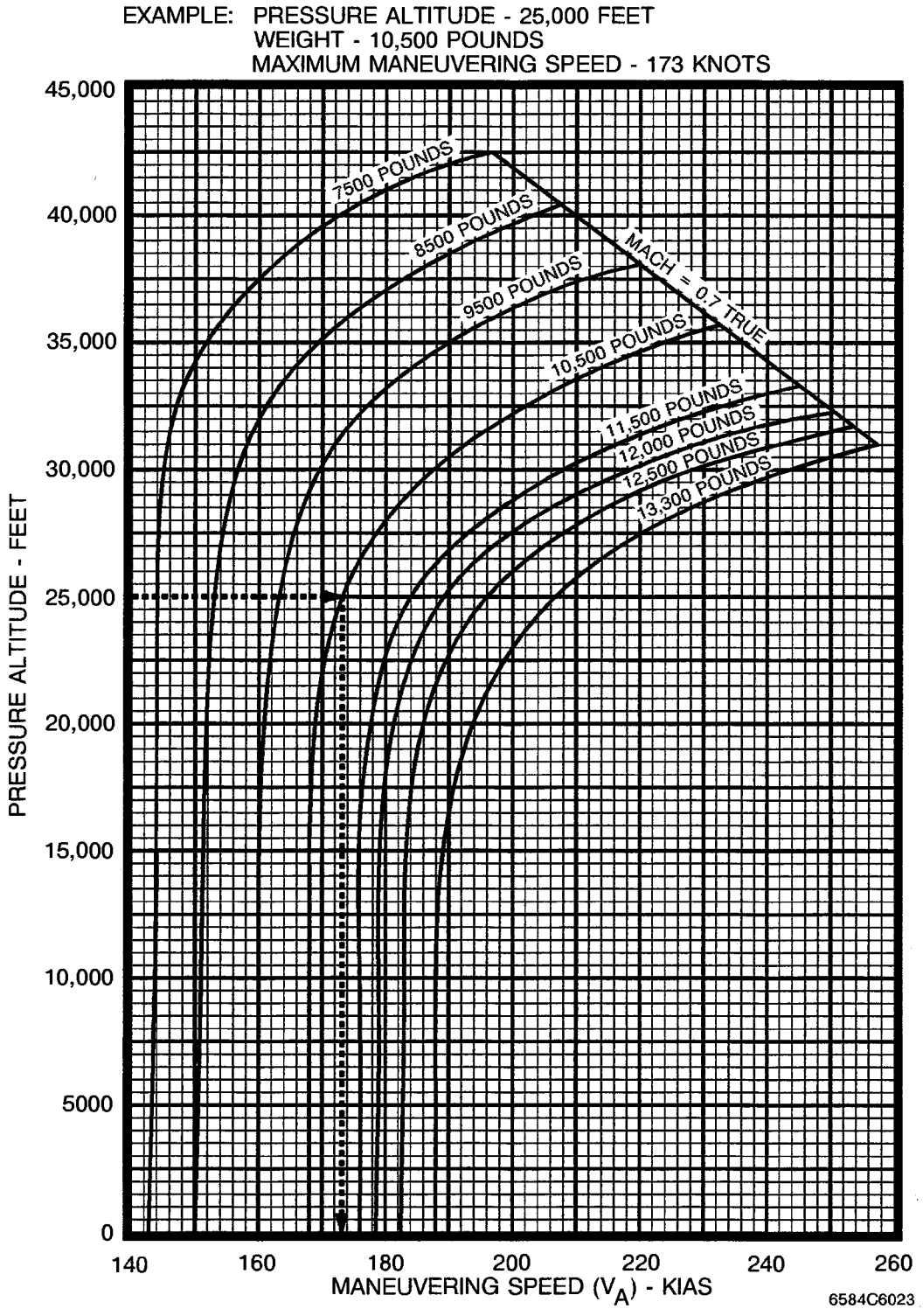


Figure 2-6

TAKEOFF AND LANDING OPERATIONAL LIMITS

Maximum Altitude Limit ..... 14,000 Feet
Maximum Tailwind. Components ..... 10 Knots
Maximum Water/Slush on Runway ..... 0.4 Inches
Maximum Ambient Temperature ..... ISA +39°C (Refer to Figures 2-7 and 4-6)
Minimum Ambient Temperature ..... –54°C

The autopilot and yaw damper must be OFF for takeoff and landing.

Goodyear part numbers 184F08-1 and 184F13-5, and BFGoodrich/Michelin part number 031-613-8, are the only nose tires approved. The nose tire must be inflated to 120 PSI +5 or –5 PSI.

Maximum Tire Ground Speed ..... 165 Knots

Vertical navigation system must be OFF below 500 feet AGL.

If a takeoff is to be made following a landing or an aborted takeoff during which the brakes were applied above 50 KIAS, refer to Figure 4-11 for minimum turnaround time.

Takeoffs and landings are limited to paved runways unless equipped with optional Gravel Runway Modification, either factory installed or through appropriate Cessna Service Bulletin.

ENROUTE OPERATIONAL LIMITS

Maximum Operating Altitude ..... 43,000 Feet
Maximum Ambient Temperature ..... Refer to Figure 2-7
Minimum Ambient Temperature ..... Refer to Figure 2-7
Generator Load ..... 400 Amperes Up to 35,000 Feet
325 Amperes Above 35,000 Feet

OPERATIONS AUTHORIZED

This airplane is approved for day and night, VFR, IFR flight and flight into known icing conditions.

MINIMUM CREW

Minimum Flight Crew for All Operations ..... 1 Pilot and 1 Copilot

LOAD FACTOR

In Flight
Flaps UP Position (0°) ..... –1.52 to +3.8G at 13,300 Pounds
Flaps T.O. & APPR to LAND Position
(15° To 40°) ..... 0.0 to +2.0G at 13,300 Pounds

These accelerations limit the angle-of-bank in turns and limit the severity of pull-up maneuvers.

Landing
Flaps - T.O. & APPR to LAND Position
(15° to 40°) ..... +3.75G at 12,700 Pounds

MAXIMUM MANEUVERING SPEEDS

EXAMPLE: PRESSURE ALTITUDE - 25,000 FEET
WEIGHT - 10,500 POUNDS
MAXIMUM MANEUVERING SPEED - 173 KNOTS

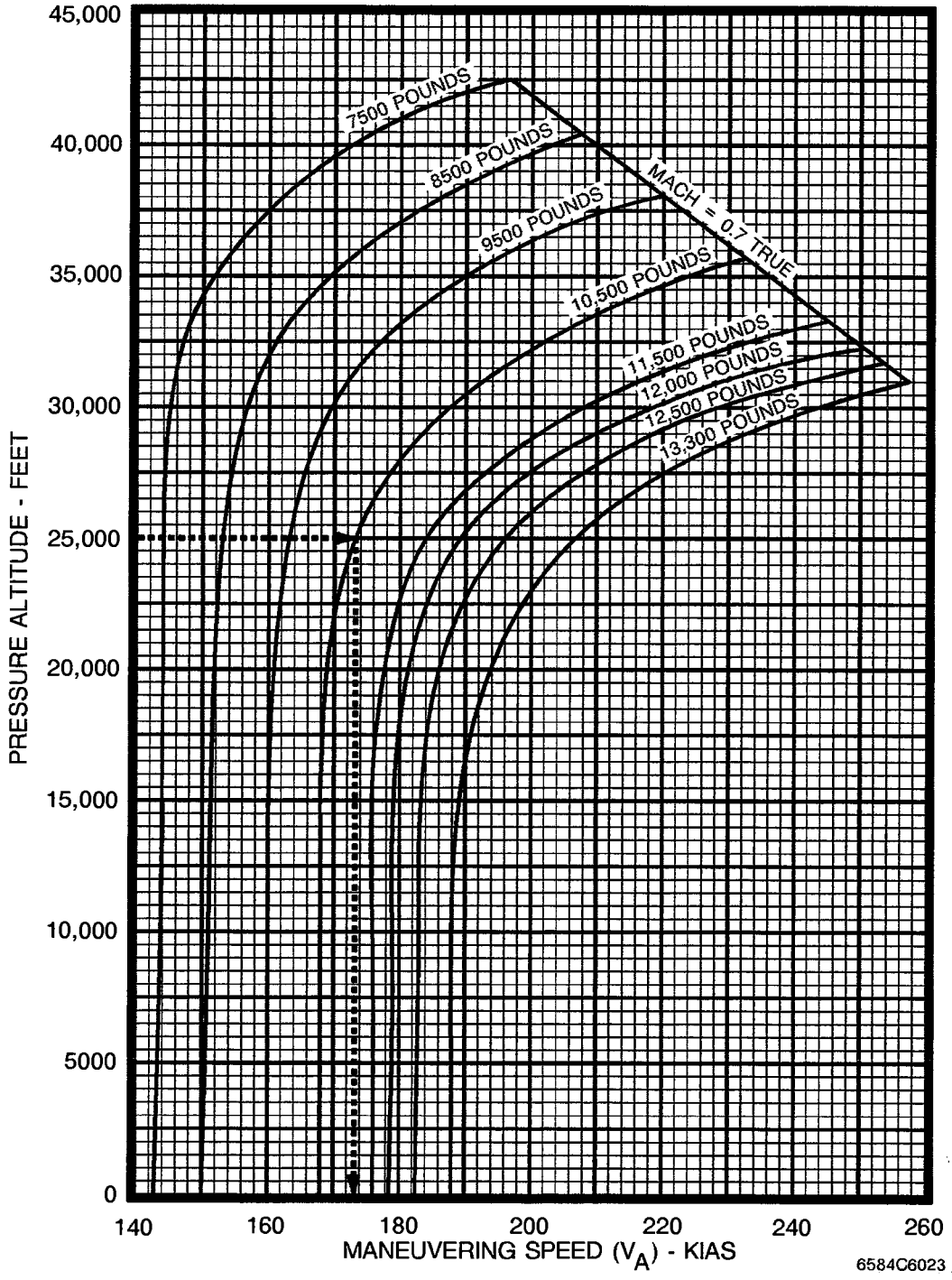
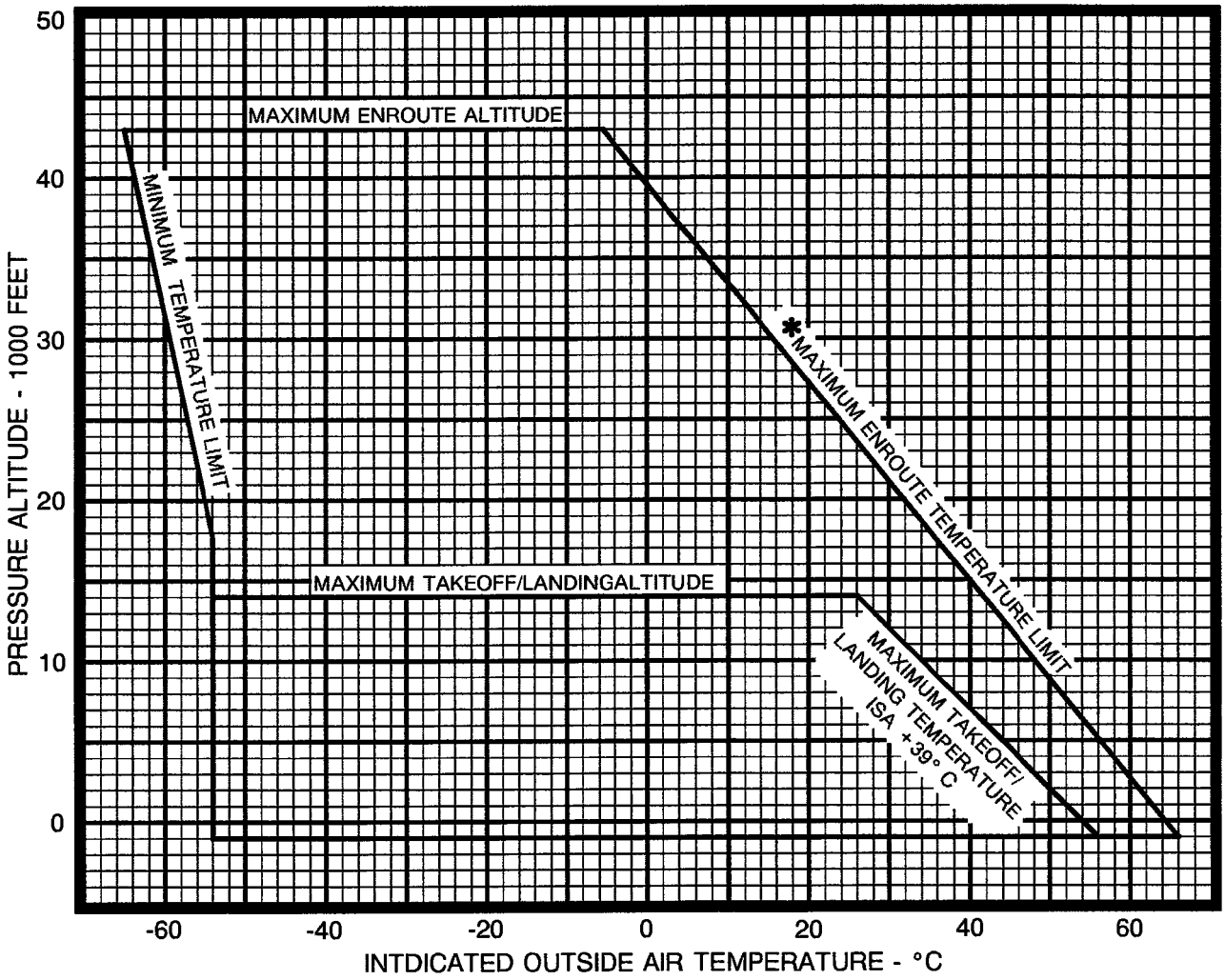


Figure 2-6

TAKEOFF/LANDING/ENROUTE TEMPERATURE LIMITATIONS



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* Maximum Enroute Operating Temperature Limit is ISA +39°C ambient temperature adjusted for Ram Rise (refer to Figures 4-2 and 4-6) or the Indicated Outside Air Temperature from Figure 2-7, whichever is less.

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Figure 2-7

CABIN PRESSURIZATION LIMITATIONS

Normal Cabin Pressurization Limitations . . 0.0 to 8.8 PSI, +0.1 or –0.1 PSI Differential

MANEUVER

No acrobatic maneuvers, including spins, are approved. No intentional stalls permitted above 25,000 feet or at engine speeds between 61.0 and 65.0% N_1.

PASSENGER SEAT POSITION

For all takeoffs and landings, seats must be fully upright and outboard, and the seat just aft of the emergency exit, must be to the most aft position (toward rear of airplane).

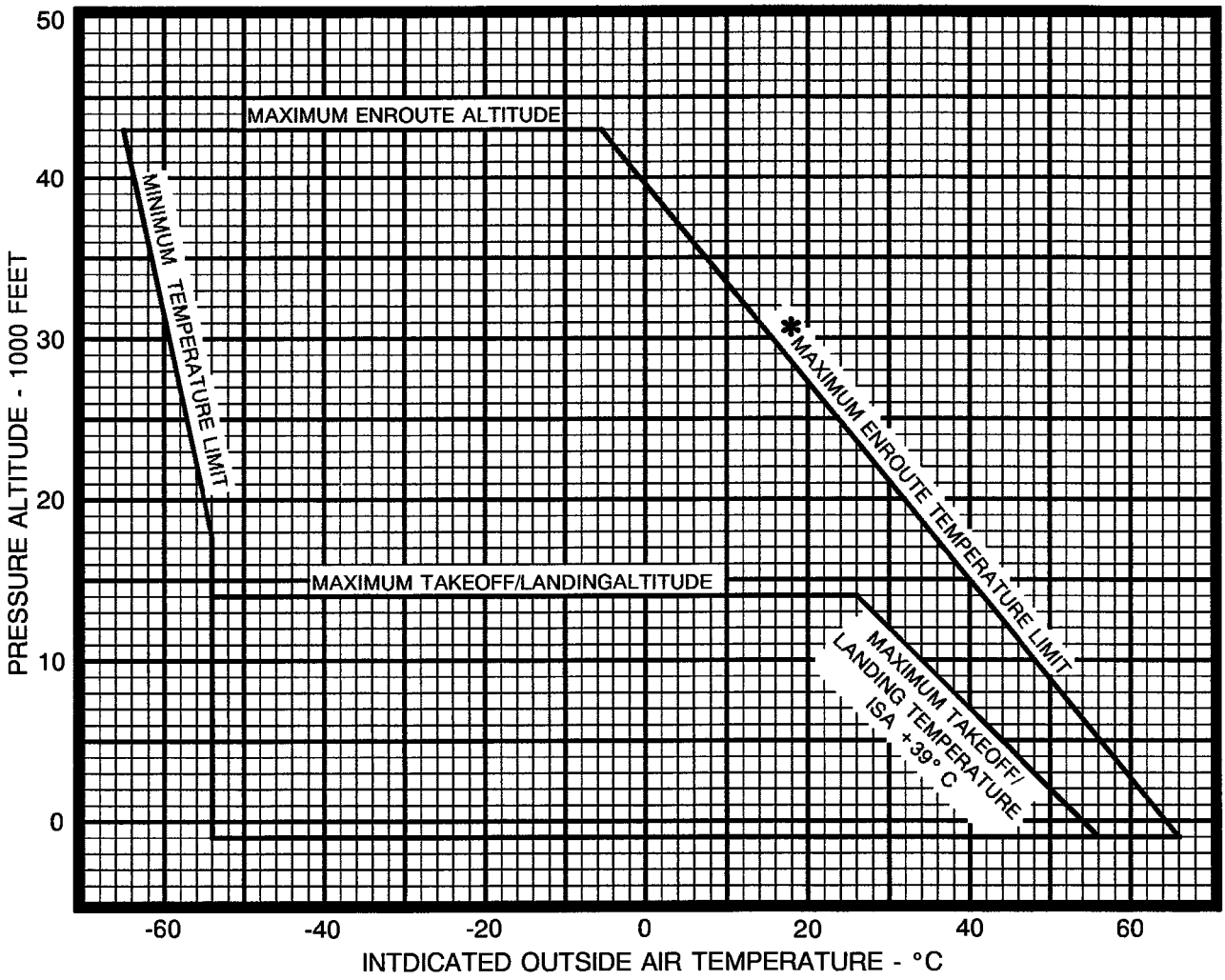
AIRPLANE BATTERY

If the BATT O'TEMP light illuminates during ground operation, do not take off until after the proper maintenance procedures have been accomplished.

INSTRUMENT MARKINGS

Left and Right Oil Pressure Indicators	Red Line - 35 PSI Yellow Band - 35 to 70 PSI Green Band - 70 to 85 PSI
Left and Right Turbine RPM Indicators	Red Light and Flashing Readout - 96% RPM Normal Operating - 46 to 96% RPM
Left and Right Oil Temperature Indicators	Red Line - 121°C Green Band - 0 to 121°C
Airspeed Indicator	Red Line - 262 KIAS - 277 KIAS - 0.705 Mach
Left and Right Inter-Turbine Temperature Indicators	Red Line - 700°C Yellow Band 680 to 700°C Green Band - 150 to 680°C
Left and Right Fan RPM Indicators (Refer to Section IV for thrust setting limits)	Red Line - 104.0% Green Band - 25 to 104.0%
Left and Right Ammeter Indicators	Red Line - 400 Amps Yellow Arc - 325 to 400 Amperes
Cabin Differential Pressure Indicator	Red Line - 8.8 PSI Green Arc - 0.0 to 8.8 PSI

TAKEOFF/LANDING/ENROUTE TEMPERATURE LIMITATIONS



6584C6016

* Maximum Enroute Operating Temperature Limit is ISA +39°C ambient temperature adjusted for Ram Rise (refer to Figures 4-2 and 4-6) or the Indicated Outside Air Temperature from Figure 2-7, whichever is less.

Figure 2-7

CABIN PRESSURIZATION LIMITATIONS

Normal Cabin Pressurization Limitations . . 0.0 to 8.8 PSI, +0.1 or –0.1 PSI Differential

MANEUVER

No acrobatic maneuvers, including spins, are approved. No intentional stalls permitted above 25,000 feet or at engine speeds between 61.0 and 65.0% N_1.

PASSENGER SEAT POSITION

For all takeoffs and landings, seats must be fully upright and outboard, and the seat just aft of the emergency exit, must be to the most aft position (toward rear of airplane).

AIRPLANE BATTERY

If the BATT O'TEMP light illuminates during ground operation, do not take off until after the proper maintenance procedures have been accomplished.

INSTRUMENT MARKINGS

Left and Right Oil Pressure Indicators . . . . . Red Line - 35 PSI
Yellow Band - 35 to 70 PSI
Green Band - 70 to 85 PSI

Left and Right Turbine RPM Indicators . . . . . Red Light and Flashing Readout - 96% RPM
Normal Operating - 46 to 96% RPM

Left and Right Oil Temperature Indicators . . . . . Red Line - 121°C
Green Band - 0 to 121°C

Airspeed Indicator . . . . . Red Line - 262 KIAS
- 277 KIAS
- 0.705 Mach

Left and Right Inter-Turbine Temperature Indicators . . . . . Red Line - 700°C
Yellow Band 680 to 700°C
Green Band - 150 to 680°C

Left and Right Fan RPM Indicators . . . . . Red Line - 104.0%
(Refer to Section IV for thrust setting limits) Green Band - 25 to 104.0%

Left and Right Ammeter Indicators . . . . . Red Line - 400 Amps
Yellow Arc - 250 to 400 Amperes

Cabin Differential Pressure Indicator . . . . . Red Line - 8.8 PSI
Green Arc - 0.0 to 8.8 PSI

INSTRUMENT MARKINGS (Continued)

Oxygen Pressure Indicator	Red Line - 2000 PSI Yellow Arc - 0.0 to 400 PSI Green Arc - 1600 to 1800 PSI
Gyro Pressure Indicator	Red Lines - 2.00 PSI 3.00 PSI Green Arc - 2.00 to 3.00 PSI
Brake and Gear Pneumatic Pressure Indicator (In Nose Compartment)	Wide Red Arc - Above 2050 PSI Narrow Red Arc - 0.0 to 1600 PSI Yellow Arc - 1600 to 1800 PSI Wide Green Arc - 1800 to 2050 PSI
Brake Hydraulic Accumulator Pressure Indicator	Light Green Arc - Static Pressure Dark Green Arc - Pressurized Pressure

CABIN (OVHD) FAN

The cabin (OVHD) fan must be operated in either the HI or LOW position when the aft baggage compartment dividers are closed. If the cabin fan is OFF or inoperable, the following placard must be displayed on the fixed portion of the aft divider.

"PRIVACY CURTAIN & DOOR MUST BE OPEN UNLESS TOILET IS OCCUPIED"

AUTOPILOT

One pilot must remain in his seat with the seat belt fastened during all autopilot operations.

The autopilot torque monitor must be functionally tested per the Normal Procedures in Section III prior to inflight use of the autopilot.

(Continued Next Page)

AUTOPILOT (Continued)

Autopilot operation is prohibited above 14,500 feet if the torque monitor (AP TORQUE annunciator light) does not test per the Normal Procedures in Section III.

AUTOPILOT/FLIGHT DIRECTOR

Flight director back course approaches (coupled or uncoupled) are prohibited without an operating radio altimeter.

DUAL FLIGHT DIRECTOR INSTALLATION

The copilot's second attitude indicating system must be installed, operational, and remain operating throughout the flight for those airplanes equipped with the Dual Flight Director Installation.

HIGH FREQUENCY (HF) AUTOMATIC DIRECTION FINDER (ADF) SYSTEMS

The ADF bearing information may be erratic when keying the HF transmitter. Should this occur, disregard the ADF bearing during periods of transmission.

PRESSURIZATION SOURCE SELECTOR

Operation in BOTH HI mode is not approved for takeoff, landing or high power settings.

OXYGEN MASK

The standard diluter demand oxygen mask must be positioned around the neck to qualify as a quick-donning oxygen mask.

The optional pressure demand sweep-on oxygen mask must be properly stowed to qualify as a quick-donning oxygen mask.

NOTE

Headsets, eyeglasses or hats worn by the crew may interfere with the quick-donning capabilities of the oxygen masks.

SUPPLEMENTAL OXYGEN SYSTEM

Continuous use of the supplemental oxygen system with cabin altitude above 25,000 feet with passengers, or with cabin altitude above 34,000 feet, crew only, is prohibited.

INSTRUMENT MARKINGS (Continued)

Oxygen Pressure Indicator ..... Red Line - 2000 PSI
Yellow Arc - 0.0 to 400 PSI
Green Arc - 1600 to 1800 PSI

Gyro Pressure Indicator ..... Red Lines - 2.00 PSI
3.00 PSI
Green Arc - 2.00 to 3.00 PSI

Brake and Gear Pneumatic Pressure Indicator
(In Nose Compartment) ..... Wide Red Arc - Above 2050 PSI
Narrow Red Arc - 0.0 to 1600 PSI
Yellow Arc - 1600 to 1800 PSI
Wide Green Arc - 1800 to 2050 PSI

Brake Hydraulic Accumulator Pressure
Indicator ..... Light Green Arc - Static Pressure
Dark Green Arc - Pressurized Pressure

CABIN (OVHD) FAN

The cabin (OVHD) fan must be operated in either the HI or LOW position when the aft baggage compartment dividers are closed. If the cabin fan is OFF or inoperable, the following placard must be displayed on the fixed portion of the aft divider.

"PRIVACY CURTAIN & DOOR MUST BE OPEN UNLESS TOILET IS OCCUPIED"

AUTOPILOT

One pilot must remain in his seat with the seat belt fastened during all autopilot operations.

The autopilot torque monitor must be functionally tested per the Normal Procedures in Section III prior to inflight use of the autopilot.

(Continued Next Page)

DUAL FLIGHT DIRECTOR INSTALLATION

The copilot's second attitude indicating system must be installed, operational, and remain operating throughout the flight for those airplanes equipped with the Dual Flight Director Installation.

HIGH FREQUENCY (HF) AUTOMATIC DIRECTION FINDER (ADF) SYSTEMS

The ADF bearing information may be erratic when keying the HF transmitter. Should this occur, disregard the ADF bearing during periods of transmission.

PRESSURIZATION SOURCE SELECTOR

Operation in BOTH HI mode is not approved for takeoff, landing or high power settings.

OXYGEN MASK

The standard diluter demand oxygen mask must be positioned around the neck to qualify as a quick-donning oxygen mask.

The optional pressure demand sweep-on oxygen mask must be properly stowed to qualify as a quick-donning oxygen mask.

NOTE

Headsets, eyeglasses or hats worn by the crew may interfere with the quick-donning capabilities of the oxygen masks.

SUPPLEMENTAL OXYGEN SYSTEM

Continuous use of the supplemental oxygen system with cabin altitude above 25,000 feet with passengers, or with cabin altitude above 34,000 feet, crew only, is prohibited.

INSTRUMENT MARKINGS (Continued)

Oxygen Pressure Indicator	Red Line - 2000 PSI Yellow Arc - 0.0 to 400 PSI Green Arc - 1600 to 1800 PSI
Gyro Pressure Indicator	Red Lines - 2.00 PSI 3.00 PSI Green Arc - 2.00 to 3.00 PSI
Brake and Gear Pneumatic Pressure Indicator (In Nose Compartment)	Wide Red Arc - Above 2050 PSI Narrow Red Arc - 0.0 to 1600 PSI Yellow Arc - 1600 to 1800 PSI Wide Green Arc - 1800 to 2050 PSI
Brake Hydraulic Accumulator Pressure Indicator	Light Green Arc - Static Pressure Dark Green Arc - Pressurized Pressure

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The cabin (OVHD) fan must be operated in either the HI or LOW position when the aft baggage compartment dividers are closed. If the cabin fan is OFF or inoperable, the following placard must be displayed on the fixed portion of the aft divider.

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The autopilot torque monitor must be functionally tested per the Normal Procedures in Section III prior to inflight use of the autopilot.

(Continued Next Page)

AUTOPILOT (Continued)

Autopilot operation is prohibited above 14,500 feet if the torque monitor (AP TORQUE annunciator light) does not test per the Normal Procedures in Section III.

AUTOPILOT/FLIGHT DIRECTOR

Flight director back course approaches (coupled or uncoupled) are prohibited without an operating radio altimeter.

HIGH FREQUENCY (HF) AUTOMATIC DIRECTION FINDER (ADF) SYSTEMS

The ADF bearing information may be erratic when keying the HF transmitter. Should this occur, disregard the ADF bearing during periods of transmission.

PRESSURIZATION SOURCE SELECTOR

Operation in BOTH HI mode is not approved for takeoff, landing or high power settings.

OXYGEN MASK

The standard diluter demand oxygen mask must be positioned around the neck to qualify as a quick-donning oxygen mask.

The optional pressure demand sweep-on oxygen mask must be properly stowed to qualify as a quick-donning oxygen mask.

NOTE

Headsets, eyeglasses or hats worn by the crew may interfere with the quick-donning capabilities of the oxygen masks.

SUPPLEMENTAL OXYGEN SYSTEM

Continuous use of the supplemental oxygen system with cabin altitude above 25,000 feet with passengers, or with cabin altitude above 34,000 feet, crew only, is prohibited.

INSTRUMENT MARKINGS (Continued)

Oxygen Pressure Indicator ..... Red Line - 2000 PSI
Yellow Arc - 0.0 to 400 PSI
Green Arc - 1600 to 1800 PSI

Gyro Pressure Indicator ..... Red Lines - 2.00 PSI
3.00 PSI
Green Arc - 2.00 to 3.00 PSI

Brake and Gear Pneumatic Pressure Indicator
(In Nose Compartment) ..... Wide Red Arc - Above 2050 PSI
Narrow Red Arc - 0.0 to 1600 PSI
Yellow Arc - 1600 to 1800 PSI
Wide Green Arc - 1800 to 2050 PSI

Brake Hydraulic Accumulator Pressure
Indicator ..... Light Green Arc - Static Pressure
Dark Green Arc - Pressurized Pressure

CABIN (OVHD) FAN

The cabin (OVHD) fan must be operated in either the HI or LOW position when the aft baggage compartment dividers are closed. If the cabin fan is OFF or inoperable, the following placard must be displayed on the fixed portion of the aft divider.

"PRIVACY CURTAIN & DOOR MUST BE OPEN UNLESS TOILET IS OCCUPIED"

AUTOPILOT

One pilot must remain in his seat with the seat belt fastened during all autopilot operations.

The autopilot torque monitor must be functionally tested per the Normal Procedures in Section III prior to inflight use of the autopilot.

(Continued Next Page)

AUTOPILOT (Continued)

Autopilot operation is prohibited above 14,500 feet if the torque monitor (AP TORQUE annunciator light) does not test per the Normal Procedures in Section III.

DUAL FLIGHT DIRECTOR INSTALLATION

The copilot's second attitude indicating system must be installed, operational, and remain operating throughout the flight for those airplanes equipped with dual flight director installation.

HIGH FREQUENCY (HF) AUTOMATIC DIRECTION FINDER (ADF) SYSTEMS

The ADF bearing information may be erratic when keying the HF transmitter. Should this occur, disregard the ADF bearing during periods of transmission.

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NOTE

Headsets, eyeglasses or hats worn by the crew may interfere with the quick-donning capabilities of the oxygen masks.

SUPPLEMENTAL OXYGEN SYSTEM

Continuous use of the supplemental oxygen system with cabin altitude above 25,000 feet with passengers, or with cabin altitude above 34,000 feet, crew only, is prohibited.

INSTRUMENT MARKINGS (Continued)

Oxygen Pressure Indicator ..... Red Line - 2000 PSI
Yellow Arc - 0.0 to 400 PSI
Green Arc - 1600 to 1800 PSI

Gyro Pressure Indicator ..... Red Lines - 2.00 PSI
3.00 PSI
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Indicator ..... Light Green Arc - Static Pressure
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AUTOPILOT

One pilot must remain in his seat with the seat belt fastened during all autopilot operations.

The autopilot torque monitor must be functionally tested per the Normal Procedures in Section III prior to inflight use of the autopilot.

(Continued Next Page)

AUTOPILOT (Continued)

Autopilot operation is prohibited above 14,500 feet if the torque monitor (AP TORQUE annunciator light) does not test per the Normal Procedures in Section III.

HIGH FREQUENCY (HF) AUTOMATIC DIRECTION FINDER (ADF) SYSTEMS

The ADF bearing information may be erratic when keying the HF transmitter. Should this occur, disregard the ADF bearing during periods of transmission.

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The standard diluter demand oxygen mask must be positioned around the neck to qualify as a quick-donning oxygen mask.

The optional pressure demand sweep-on oxygen mask must be properly stowed to qualify as a quick-donning oxygen mask.

NOTE

Headsets, eyeglasses or hats worn by the crew may interfere with the quick-donning capabilities of the oxygen masks.

SUPPLEMENTAL OXYGEN SYSTEM

Continuous use of the supplemental oxygen system with cabin altitude above 25,000 feet with passengers, or with cabin altitude above 34,000 feet, crew only, is prohibited.

INSTRUMENT MARKINGS (Continued)

Oxygen Pressure Indicator ..... Red Line - 2000 PSI
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3.00 PSI
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Narrow Red Arc - 0.0 to 1600 PSI
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Indicator ..... Light Green Arc - Static Pressure
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The cabin (OVHD) fan must be operated in either the HI or LOW position when the aft baggage compartment dividers are closed. If the cabin fan is OFF or inoperable, the following placard must be displayed on the fixed portion of the aft divider.

"PRIVACY CURTAIN & DOOR MUST BE OPEN UNLESS TOILET IS OCCUPIED"

AUTOPILOT

One pilot must remain in his seat with the seat belt fastened during all autopilot operations.

The autopilot torque monitor must be functionally tested per the Normal Procedures in Section III prior to inflight use of the autopilot.

(Continued Next Page)

AUTOPILOT (Continued)

Autopilot operation is prohibited above 14,500 feet if the torque monitor (AP TORQUE annunciator light) does not test per the Normal Procedures in Section III.

AUTOPILOT/FLIGHT DIRECTOR

Flight Director back course approaches (coupled or uncoupled) are prohibited without an operating radio altimeter.

HIGH FREQUENCY (HF) AUTOMATIC DIRECTION FINDER (ADF) SYSTEMS

The ADF bearing information may be erratic when keying the HF transmitter. Should this occur, disregard the ADF bearing during periods of transmission.

OXYGEN MASK

The standard diluter demand oxygen mask must be positioned around the neck to qualify as a quick-donning oxygen mask.

The optional pressure demand sweep-on oxygen mask must be properly stowed to qualify as a quick-donning oxygen mask.

NOTE

Headsets, eyeglasses or hats worn by the crew may interfere with the quick-donning capabilities of the oxygen masks.

SUPPLEMENTAL OXYGEN SYSTEM

Continuous use of the supplemental oxygen system with cabin altitude above 25,000 feet with passengers, or with cabin altitude above 34,000 feet, crew only, is prohibited.

INSTRUMENT MARKINGS (Continued)

Oxygen Pressure Indicator ..... Red Line - 2000 PSI
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(Continued Next Page)

AUTOPILOT (Continued)

Autopilot operation is prohibited above 14,500 feet if the torque monitor (AP TORQUE annunciator light) does not test per the Normal Procedures in Section III.

HIGH FREQUENCY (HF) AUTOMATIC DIRECTION FINDER (ADF) SYSTEMS

The ADF bearing information may be erratic when keying the HF transmitter. Should this occur, disregard the ADF bearing during periods of transmission.

OXYGEN MASK

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Headsets, eyeglasses or hats worn by the crew may interfere with the quick-donning capabilities of the oxygen masks.

SUPPLEMENTAL OXYGEN SYSTEM

Continuous use of the supplemental oxygen system with cabin altitude above 25,000 feet with passengers, or with cabin altitude above 34,000 feet, crew only, is prohibited.

OPERATING PROCEDURES TABLE OF CONTENTS

(Continued Next Page)

OPERATING PROCEDURES TABLE OF CONTENTS

(Continued Next Page)

OPERATING PROCEDURES TABLE OF CONTENTS

(Continued Next Page)

ABNORMAL PROCEDURES (Continued)

(Continued Next Page)

NORMAL PROCEDURES (Continued)

NORMAL PROCEDURES (Continued)

OPERATING PROCEDURES - GENERAL

The operating procedures contained in this manual have been developed and recommended by Cessna Aircraft Company and are approved by the FAA for use in the operation of this airplane.

This section contains the emergency, abnormal and normal procedures for your airplane. For your convenience, definitions of these terms are listed in Section I.

Some emergency situations require immediate corrective action. These numbered steps are printed in boxes in the emergency procedures and should be done without the aid of the checklist.

EMERGENCY PROCEDURES

ENGINE FAILURE OR FIRE DURING TAKEOFF

SPEED BELOW V_1 TAKEOFF SHOULD BE ABORTED

1. Brakes - AS REQUIRED.
2. Throttles - IDLE.
3. Speedbrakes - EXTEND.

IF ENGINE FIRE

4. Accomplish ENGINE FIRE procedures.

IF ENGINE FAILURE

4. Accomplish ENGINE FAILURE/PRECAUTIONARY SHUTDOWN procedure.

NOTE

- To obtain maximum braking performance from the antiskid system, the pilot must apply continuous maximum effort (no modulation) to the brake pedals.
- The Takeoff Field Lengths assume that the pilot has maximum effort applied to the brakes at the scheduled V_1 speed during the aborted takeoff.

SPEED ABOVE V_1 - TAKEOFF SHOULD NORMALLY BE CONTINUED

1. After establishing a positive rate-of-climb, retract landing gear.
2. At 400 feet, retract flaps at V_2 + 10 and accelerate to V_{ENR}.

IF ENGINE FIRE

3. Accomplish ENGINE FIRE procedures.

IF ENGINE FAILURE

3. Accomplish ENGINE FAILURE/PRECAUTIONARY SHUTDOWN procedure.

ENGINE FAILURE/PRECAUTIONARY SHUTDOWN

1. Throttle (Affected Engine) - OFF.
2. Ignition (Affected Engine) - OFF.
3. Engine Synchronizer - OFF.
4. Generator (Affected Engine) - OFF.
5. Electrical Load - REDUCE as required; 400 amperes maximum to 35,000 feet, 325 amperes maximum above 35,000 feet.
6. Fuel Crossfeed - AS REQUIRED.

(Continued Next Page)

EMERGENCY PROCEDURES

ENGINE FAILURE OR FIRE DURING TAKEOFF

SPEED BELOW V_1 TAKEOFF SHOULD BE ABORTED

1. Brakes - AS REQUIRED.
2. Throttles - IDLE.
3. Speedbrakes - EXTEND.

IF ENGINE FIRE

4. Accomplish ENGINE FIRE procedures.

IF ENGINE FAILURE

4. Accomplish ENGINE FAILURE/PRECAUTIONARY SHUTDOWN procedure.

NOTE

- To obtain maximum braking performance from the antiskid system, the pilot must apply continuous maximum effort (no modulation) to the brake pedals.
- The Takeoff Field Lengths assume that the pilot has maximum effort applied to the brakes at the scheduled V_1 speed during the aborted takeoff.

SPEED ABOVE V_1 - TAKEOFF SHOULD NORMALLY BE CONTINUED

1. After establishing a positive rate-of-climb, retract landing gear.
2. At 400 feet, retract flaps at V_2 + 10 and accelerate to V_{ENR}.

IF ENGINE FIRE

3. Accomplish ENGINE FIRE procedures.

IF ENGINE FAILURE

3. Accomplish ENGINE FAILURE/PRECAUTIONARY SHUTDOWN procedure.

ENGINE FAILURE/PRECAUTIONARY SHUTDOWN

1. Throttle (Affected Engine) - OFF.
2. Ignition (Affected Engine) - OFF.
3. Engine Synchronizer - OFF.
4. Generator (Affected Engine) - OFF.
5. Electrical Load - REDUCE as required; 400 amperes maximum to 25,000 feet, 250 amperes maximum above 25,000 feet.
6. Fuel Crossfeed - AS REQUIRED.

(Continued Next Page)

ENGINE FAILURE/PRECAUTIONARY SHUTDOWN (Continued)

7. If no fire, firewall shutoff - OPEN and fuel boost pump - ON.

NOTE

If no fire hazard exists, leave firewall shutoff OPEN and turn boost pump ON to prevent damage to engine fuel pump. If engine windmills with firewall shutoff CLOSED or with no indication of oil pressure, after landing refer to Engine Maintenance Manual.

8. Refer to Emergency Restart - One Engine or Single-Engine Approach and Landing procedures.

ENGINE FAILURE DURING COUPLED APPROACH

1. Power (Operating Engine) - INCREASE as required.
2. Autopilot and Yaw Damper - OFF.
3. Airspeed - V_{REF} +10 KIAS.
4. Rudder Trim - TRIM toward operating engine.
5. Flaps - T.O. & APPR.
6. Throttle (Affected Engine) - OFF.
7. If Engine Fire, accomplish ENGINE FIRE procedure.
8. Passenger Advisory Lights - PASS SAFETY.
9. Passenger Seats - CHECK FULL UPRIGHT, OUTBOARD and POSITIONED AFT or FORWARD to clear exit doors.
10. Seats, Seat Belts and Shoulder Harnesses - SECURE.
11. Fuel Crossfeed - CHECK.
12. Ignition (Operating Engine) - ON.
13. Landing Gear - DOWN and LOCKED.
14. Antiskid - CHECK ON.
15. Annunciator Panel - CHECK.
16. Flaps - LAND (when landing assured).
17. Airspeed - V_{REF}.
18. Pressurization - CHECK ZERO DIFFERENTIAL.
19. Speed Brakes - RETRACTED PRIOR TO 50 FEET.

NOTE

Do not allow turbine speed RPM to be less than 49%.

EMERGENCY RESTART - ONE ENGINE (Refer to Figure 3-1 for Airstart Envelope)

FOLLOWING SHUTDOWN - WITH STARTER ASSIST

1. Throttle - OFF.
2. Generator - GEN.
3. Firewall Shutoff - CHECK OPEN.
4. Ignition - ON.
5. Start Button - PRESS momentarily.

(Continued Next Page)

EMERGENCY RESTART - ONE ENGINE (Refer to Figure 3-1 for Airstart Envelope) (Continued)

6. Throttle - IDLE at 8 to 10 percent turbine RPM.
7. Engine Instruments - MONITOR.
8. Ignition - NORM.
9. If start does not occur - PRESS STARTER DISENGAGE SWITCH.

FOLLOWING SHUTDOWN - WINDMILLING WITH AIRSPEED ABOVE 200 KIAS

1. Throttle - OFF.
2. Firewall Shutoff - CHECK OPEN.
3. Ignition - ON.
4. Boost Pump - ON.
5. Throttle - IDLE.
6. Engine Instruments - MONITOR.
7. After Engine Stabilizes - Boost Pump and Ignition - NORM.
8. Generator - GEN.

EMERGENCY RESTART - TWO ENGINES (Refer to Figure 3-1 for Airstart Envelope)

1. Ignition - BOTH ON.
2. Boost Pumps - BOTH ON.
3. Throttles - IDLE.
4. If Altitude Allows - INCREASE AIRSPEED TO 200 KIAS.

5. Firewall Shutoff - CHECK OPEN.
6. All Anti-Ice Switches - OFF.
7. If no start in ten seconds: Either Start Button - PRESS momentarily.

AIRSTART ENVELOPE

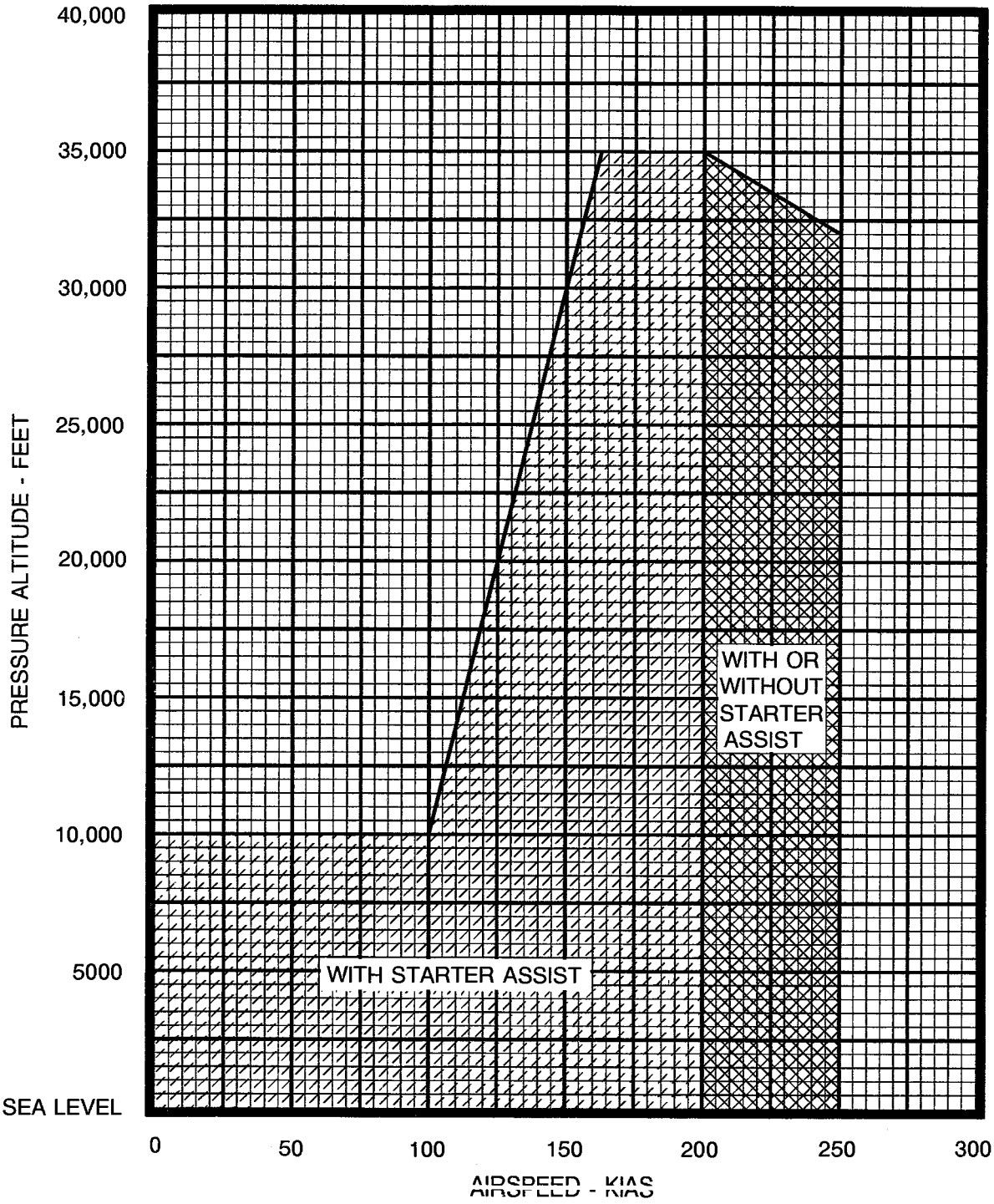

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Figure 3-1

ENGINE FIRE (ENGINE FIRE SWITCH ILLUMINATED)

1. Throttle (Affected Engine) - IDLE.

IF LIGHT REMAINS ON

2. Engine Fire Switch - LIFT COVER and PUSH.
3. Either Illuminated Bottle Armed Light - PUSH.

4. Ignition - NORM.
5. Throttle (Affected Engine) - OFF.
6. Reduce Electrical Load - AS REQUIRED; 400 amperes maximum to 35,000 feet, 325 amperes maximum above 35,000 feet.
7. Boost Pump - OFF.
8. Land as soon as practical. Refer to Abnormal Procedures, SINGLE-ENGINE APPROACH AND LANDING.

If Fire Warning Light On After 30 Seconds

9. Remaining Illuminated Bottle Armed Light - PUSH.
10. Land as soon as possible.

IF LIGHT GOES OUT AND SECONDARY INDICATIONS ARE NOT PRESENT

2. Land as soon as practical. Refer to Abnormal Procedures, SINGLE-ENGINE APPROACH AND LANDING.

ELECTRICAL FIRE OR SMOKE

1. Oxygen Masks - DON and 100% OXYGEN.
2. Oxygen Microphone Switches - AS REQUIRED.

KNOWN SOURCE

3. Isolate faulty circuit - PULL Circuit Breaker(s).

UNKNOWN SOURCE

3. Flood lights - FULL BRIGHT.
4. Battery Switch - EMER.

(Continued Next Page)

ENGINE FIRE (ENGINE FIRE SWITCH ILLUMINATED)

1. Throttle (Affected Engine) - IDLE.

IF LIGHT REMAINS ON

2. Engine Fire Switch - LIFT COVER and PUSH.
3. Either Illuminated Bottle Armed Light - PUSH.
4. Ignition - NORM.
5. Throttle (Affected Engine) - OFF.
6. Reduce Electrical Load - AS REQUIRED; 400 amperes maximum to 35,000 feet, 325 amperes maximum above 35,000 feet.
7. Boost Pump - OFF.
8. Land as soon as practical. Refer to Abnormal Procedures, SINGLE-ENGINE APPROACH AND LANDING.

IF FIRE WARNING LIGHT ON AFTER 30 SECONDS

9. Remaining Illuminated Bottle Armed Light - PUSH.
10. Land as soon as possible.

IF LIGHT GOES OUT AND SECONDARY INDICATIONS ARE NOT PRESENT

2. Land as soon as practical. Refer to Abnormal Procedures, SINGLE-ENGINE APPROACH AND LANDING.

ELECTRICAL FIRE OR SMOKE

1. Oxygen Masks - DON and 100% OXYGEN.
2. Oxygen Microphone Switches - AS REQUIRED.
3. Pressurization Source Selector - BOTH HI.

KNOWN SOURCE

4. Isolate faulty circuit - PULL Circuit Breaker(s).

UNKNOWN SOURCE

4. Flood lights - FULL BRIGHT.
5. Battery Switch - EMER.

(Continued Next Page)

ENGINE FIRE (ENGINE FIRE SWITCH ILLUMINATED)

1. Throttle (Affected Engine) - IDLE.

IF LIGHT REMAINS ON

2. Engine Fire Switch - LIFT COVER and PUSH.
3. Either Illuminated Bottle Armed Light - PUSH.
4. Ignition - NORM.
5. Throttle (Affected Engine) - OFF.
6. Reduce Electrical Load - AS REQUIRED; 400 amperes maximum to 25,000 feet, 250 amperes maximum above 25,000 feet.
7. Boost Pump - OFF.
8. Land as soon as practical.

If Fire Warning Light On After 30 Seconds

9. Remaining Illuminated Bottle Armed Light - PUSH.
10. Land as soon as possible.

IF LIGHT GOES OUT AND SECONDARY INDICATIONS ARE NOT PRESENT

2. Land as soon as practical.

ELECTRICAL FIRE OR SMOKE

1. Oxygen Masks - DON and 100% OXYGEN.
2. Oxygen Microphone Switches - AS REQUIRED.
3. Pressurization Source Selector - BOTH HI.

KNOWN SOURCE

4. Isolate faulty circuit - PULL Circuit Breaker(s).

UNKNOWN SOURCE

4. Flood lights - FULL BRIGHT.
5. Battery Switch - EMER.

(Continued Next Page)

ELECTRICAL FIRE OR SMOKE (Continued)

5. Generators - OFF. With the battery switch in the emergency position and the generators off, power is supplied for approximately 30 minutes to the following equipment:

COMM 1	Overhead Floodlights
NAV 2	Copilot's HSI and Voltmeter

CAUTION

WHEN LANDING WITH EMERGENCY POWER (BATTERY SWITCH-EMER AND BOTH GENERATORS OFF), THE FOLLOWING ARE NOT AVAILABLE:

THE LANDING GEAR NORMAL OPERATION IS NOT AVAILABLE: THE LANDING GEAR MUST BE LOWERED USING THE BLOWDOWN SYSTEM AND THE LANDING GEAR WARNING LIGHTS WILL NOT ILLUMINATE.

THE FLAPS WILL NOT OPERATE. IF NOT PREVIOUSLY IN THE LANDING POSITION, A FLAP INOPERATIVE LANDING MUST BE MADE.

THE ANTISKID/POWER BRAKE SYSTEM IS INOPERATIVE; ONLY THE EMERGENCY BRAKE SYSTEM IS AVAILABLE.

THE ENGINE ANTI-ICE VALVES WILL BE OPEN. REFER TO ANTI-ICE ON THRUST CHARTS.

THE OUTSIDE AIR TEMPERATURE GAGE IS NOT RELIABLE, SO USE CAUTION WHEN APPLYING POWER (EXCEPT FOR GO-AROUND WHERE GROUND TEMPERATURES CAN BE USED).

ALL ENGINE INSTRUMENTS EXCEPT THE VERTICAL TAPE N_1 WILL BE INOPERATIVE. THE VERTICAL TAPE N_1 WILL INDICATE ERRATICALLY BELOW APPROXIMATELY 50% N_1 BUT WILL GIVE RELIABLE INDICATIONS ABOVE 50% N_1.

6. Microphone Selector - EMER COMM (headphones required to receive audio).
7. Receiver Select - COM 1 to HDPH (required only if AUTO SELECT is OFF).
8. Windshield Bleed Air Manual Valves - OFF or MINIMUM for clear vision through windshield.
9. DC Power RH Bus No. 1, 2 and 3 Circuit Breakers (Located on RH Panel) - PULL.
10. RH CB PANEL Circuit Breaker (Located on LH Panel) - PULL.
11. AC INVERTER No. 1 Circuit Breaker (Located on LH Panel)- PULL.
12. Land as soon as practical (Within 30 Minutes).

IF SEVERITY OF SMOKE WARRANTS

13. Initiate Smoke Removal and/or Emergency Descent Procedures. Land as soon as possible.

WHEN LANDING ASSURED

14. LH Generator - ON.
15. Landing Gear - DOWN.

(Continued Next Page)

ELECTRICAL FIRE OR SMOKE (Continued)

6. Generators - OFF. With the battery switch in the emergency position and the generators off, power is supplied for approximately 30 minutes to the following equipment:

COMM 1	Overhead Floodlights
NAV 2	Copilot's HSI and Voltmeter

CAUTION

WHEN LANDING WITH EMERGENCY POWER (BATTERY SWITCH-EMER AND BOTH GENERATORS OFF), THE FOLLOWING ARE NOT AVAILABLE:

THE LANDING GEAR NORMAL OPERATION IS NOT AVAILABLE: THE LANDING GEAR MUST BE LOWERED USING THE BLOWDOWN SYSTEM AND THE LANDING GEAR WARNING LIGHTS WILL NOT ILLUMINATE.

THE FLAPS WILL NOT OPERATE. IF NOT PREVIOUSLY IN THE LANDING POSITION, A FLAP INOPERATIVE LANDING MUST BE MADE.

THE ANTISKID/POWER BRAKE SYSTEM IS INOPERATIVE; ONLY THE EMERGENCY BRAKE SYSTEM IS AVAILABLE.

THE ENGINE ANTI-ICE VALVES WILL BE OPEN. REFER TO ANTI-ICE ON THRUST CHARTS.

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7. Microphone Selector - EMER COMM (headphones required to receive audio).
8. Receiver Select - COM 1 to HDPH (required only if AUTO SELECT is OFF).
9. Windshield Bleed Air Manual Valves - OFF or MINIMUM for clear vision through windshield.
10. DC Power RH Bus No. 1, 2 and 3 Circuit Breakers (Located on RH Panel) - PULL.
11. RH CB PANEL Circuit Breaker (Located on LH Panel) - PULL.
12. AC INVERTER No. 1 Circuit Breaker (Located on LH Panel) - PULL.
13. Land as soon as practical (Within 30 Minutes).

IF SEVERITY OF SMOKE WARRANTS

14. Initiate Smoke Removal and/or Emergency Descent Procedures. Land as soon as possible.

WHEN LANDING ASSURED

15. LH Generator - ON.
16. Landing Gear - DOWN.

(Continued Next Page)

ELECTRICAL FIRE OR SMOKE (Continued)

6. Generators - OFF. With the battery switch in the emergency position and the generators off, power is supplied for approximately 30 minutes to the following equipment:

COMM 1	Overhead Floodlights
NAV 2	Copilot's HSI and Voltmeter

CAUTION

WHEN LANDING WITH EMERGENCY POWER (BATTERY SWITCH-EMER AND BOTH GENERATORS OFF), THE FOLLOWING ARE NOT AVAILABLE:

THE LANDING GEAR NORMAL OPERATION IS NOT AVAILABLE: THE LANDING GEAR MUST BE LOWERED USING THE BLOWDOWN SYSTEM AND THE LANDING GEAR WARNING LIGHTS WILL NOT ILLUMINATE.

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THE ANTISKID/POWER BRAKE SYSTEM IS INOPERATIVE; ONLY THE EMERGENCY BRAKE SYSTEM IS AVAILABLE.

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12. Land as soon as practical (Within 30 Minutes).

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WHEN LANDING ASSURED

14. LH Generator - ON.
15. Landing Gear - DOWN.

(Continued Next Page)

ELECTRICAL FIRE OR SMOKE (Continued)

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THE ANTISKID/POWER BRAKE SYSTEM IS INOPERATIVE; ONLY THE EMERGENCY BRAKE SYSTEM IS AVAILABLE.

THE ENGINE ANTI-ICE VALVES WILL BE OPEN. REFER TO ANTI-ICE ON THRUST CHARTS.

THE OUTSIDE AIR TEMPERATURE GAGE IS NOT RELIABLE, SO USE CAUTION WHEN APPLYING POWER (EXCEPT FOR GO-AROUND WHERE GROUND TEMPERATURES CAN BE USED).

ALL ENGINE INSTRUMENTS EXCEPT THE VERTICAL TAPE N_1 WILL BE INOPERATIVE. THE VERTICAL TAPE N_1 WILL INDICATE ERRATICALLY BELOW APPROXIMATELY 50% N_1 BUT WILL GIVE RELIABLE INDICATIONS ABOVE 50% N_1.

7. Microphone Selector - EMER COMM (headphones required to receive audio).
8. Windshield Bleed Air Manual Valves - OFF or MINIMUM for clear vision through windshield.
9. DC Power RH Bus No. 1, 2 and 3 Circuit Breakers (Located on RH Panel) - PULL.
10. RH CB PANEL Circuit Breaker (Located on LH Panel) - PULL.
11. AC INVERTER No. 1 Circuit Breaker (Located on LH Panel)- PULL.
12. Land as soon as practical (Within 30 Minutes).

IF SEVERITY OF SMOKE WARRANTS

13. Initiate Smoke Removal and/or Emergency Descent Procedures. Land as soon as possible.

WHEN LANDING ASSURED

14. LH Generator - ON.
15. Landing Gear - DOWN.

(Continued Next Page)

ELECTRICAL FIRE OR SMOKE (Continued)

6. Generators - OFF. With the battery switch in the emergency position and the generators off, power is supplied for approximately 30 minutes to the following equipement:

COMM 1	Overhead Floodlights
NAV 2	Copilot's HSI and Voltmeter

CAUTION

WHEN LANDING WITH EMERGENCY POWER (BATTERY SWITCH-EMER AND BOTH GENERATORS OFF), THE FOLLOWING ARE NOT AVAILABLE:

THE LANDING GEAR NORMAL OPERATION IS NOT AVAILABLE: THE LANDING GEAR MUST BE LOWERED USING THE BLOWDOWN SYSTEM AND THE LANDING GEAR WARNING LIGHTS WILL NOT ILLUMINATE.

THE FLAPS WILL NOT OPERATE. IF NOT PREVIOUSLY IN THE LANDING POSITION, A FLAP INOPERATIVE LANDING MUST BE MADE.

THE ANTISKID/POWER BRAKE SYSTEM IS INOPERATIVE; ONLY THE EMERGENCY BRAKE SYSTEM IS AVAILABLE.

THE ENGINE ANTI-ICE VALVES WILL BE OPEN. REFER TO ANTI-ICE ON THRUST CHARTS.

THE OUTSIDE AIR TEMPERATURE GAGE IS NOT RELIABLE, SO USE CAUTION WHEN APPLYING POWER (EXCEPT FOR GO-AROUND WHERE GROUND TEMPERATURES CAN BE USED).

ALL ENGINE INSTRUMENTS EXCEPT THE VERTICAL TAPE N_1 WILL BE INOPERATIVE. THE VERTICAL TAPE N_1 WILL INDICATE ERRATICALLY BELOW APPROXIMATELY 50% N_1 BUT WILL GIVE RELIABLE INDICATIONS ABOVE 50% N_1.

7. Microphone Selector - EMER COMM (headphones required to receive audio).
8. Receiver Select - COMM 1 to HDPH (required only if AUTO SELECT is OFF).
9. Windshield Bleed Air Manual Valves - OFF or MINIMUM for clear vision through windshield.
10. DC Power RH Bus No. 1, 2 and 3 Circuit Breakers (Located on RH Panel) - PULL.
11. RH CB PANEL Circuit Breaker (Located on LH Panel) - PULL.
12. AC INVERTER No. 1 Circuit Breaker (Located on LH Panel)- PULL.
13. Land as soon as practical (Within 30 Minutes).

IF SEVERITY OF SMOKE WARRANTS

14. Initiate Smoke Removal and/or Emergency Descent Procedures. Land as soon as possible.

WHEN LANDING ASSURED

15. LH Generator - ON.
16. Landing Gear - DOWN.

(Continued Next Page)

ELECTRICAL FIRE OR SMOKE (Continued)

16. Flaps - LAND.
17. Airspeed - V_{REF}.

IF SMOKE OR FIRE RESTARTS

18. LH Generator - OFF.

ADVISORY - Antiskid systems will be inoperative. Power brakes will be available until accumulator discharges. Multiply landing distance by 1.6. Be prepared to use the emergency brake system.

BATTERY OVERHEAT (BATT O'HEAT LIGHT ON)

1. Amperage - NOTE.
2. Battery Switch - EMER.
3. Amperage - NOTE DECREASE.

4. If battery voltage is 1 volt less than generator voltage in 30 seconds to 2 minutes, monitor battery overheat annunciator for possible change.

IF BATTERY O'HEAT LIGHT GOES OUT

5. Battery Switch - BATT.

IF NO AMP DECREASE OR BATTERY O'HEAT LIGHT FLASHES

5. Flood Lights - FULL BRIGHT.
6. Generators - OFF. The BATT O'HEAT light will extinguish immediately when the generators are turned off if the battery relay is not stuck. With the battery switch in emergency position and the generators off, power is supplied for approximately 30 minutes to the following equipment:

COMM 1	Overhead Floodlights
NAV 2	Copilot's HSI and Voltmeter

CAUTION

WHEN LANDING WITH EMERGENCY POWER (BATTERY SWITCH-EMER AND BOTH GENERATORS OFF), THE FOLLOWING ARE NOT AVAILABLE:

THE LANDING GEAR NORMAL OPERATION IS NOT AVAILABLE: THE LANDING GEAR MUST BE LOWERED USING THE BLOWDOWN SYSTEM AND THE LANDING GEAR WARNING LIGHTS WILL NOT ILLUMINATE.

THE FLAPS WILL NOT OPERATE. IF NOT PREVIOUSLY IN THE LANDING POSITION, A FLAP INOPERATIVE LANDING MUST BE MADE.

THE ANTISKID/POWER BRAKE SYSTEM IS INOPERATIVE; ONLY THE EMERGENCY BRAKE SYSTEM IS AVAILABLE.

(Continued Next Page)

ELECTRICAL FIRE OR SMOKE (Continued)

16. Flaps - LAND.
17. Airspeed - V_{REF}.

IF SMOKE OR FIRE RESTARTS

18. LH Generator - OFF.

ADVISORY - Antiskid systems will be inoperative. Power brakes will be available until accumulator discharges. Multiply landing distance by 1.6. Be prepared to use the emergency brake system.

BATTERY OVERHEAT (BATT O'HEAT LIGHT ON)

1. Amperage - NOTE.
2. Battery Switch - EMER.
3. Amperage - NOTE DECREASE.

4. If battery voltage is 1 volt less than generator voltage in 30 seconds to 2 minutes, monitor battery overheat annunciator for possible change.

IF BATTERY O'HEAT LIGHT GOES OUT

5. Battery Switch - BATT.

IF NO AMP DECREASE OR BATTERY O' HEAT LIGHT FLASHES

5. Flood Lights - FULL BRIGHT.
6. Generators - OFF. The BATT O'HEAT light will extinguish immediately when the generators are turned off if the battery relay is not stuck. With the battery switch in emergency position and the generators off, power is supplied for approximately 30 minutes to the following equipment:

COMM 1	Overhead Floodlights
NAV 2	Copilot's HSI and Voltmeter

CAUTION

WHEN LANDING WITH EMERGENCY POWER (BATTERY SWITCH-EMER AND BOTH GENERATORS OFF), THE FOLLOWING ARE NOT AVAILABLE:

THE LANDING GEAR NORMAL OPERATION IS NOT AVAILABLE: THE LANDING GEAR MUST BE LOWERED USING THE BLOWDOWN SYSTEM AND THE LANDING GEAR WARNING LIGHTS WILL NOT ILLUMINATE.

THE FLAPS WILL NOT OPERATE. IF NOT PREVIOUSLY IN THE LANDING POSITION, A FLAP INOPERATIVE LANDING MUST BE MADE.

THE ANTISKID/POWER BRAKE SYSTEM IS INOPERATIVE; ONLY THE EMERGENCY BRAKE SYSTEM IS AVAILABLE.

(Continued Next Page)

ELECTRICAL FIRE OR SMOKE (Continued)

16. Flaps - LAND.
17. Airspeed - V_{REF}.

IF SMOKE OR FIRE RESTARTS

18. LH Generator - OFF.

ADVISORY - Antiskid systems will be inoperative. Power brakes will be available until accumulator discharges. Multiply landing distance by 1.6. Be prepared to use the emergency brake system.

BATTERY OVERHEAT (BATT O'HEAT LIGHT ON)

1. Amperage - NOTE.
2. Battery Switch - EMER.
3. Amperage - NOTE DECREASE.

4. If battery voltage is 1 volt less than generator voltage in 30 seconds to 2 minutes, monitor battery overheat annunciator for possible change.

IF BATTERY O'HEAT LIGHT GOES OUT

5. Battery Switch - BATT.

IF NO AMP DECREASE OR BATTERY O'HEAT LIGHT FLASHES

5. Flood Lights - FULL BRIGHT.
6. Generators - OFF. The BATT O'HEAT light will extinguish immediately when the generators are turned off if the battery relay is not stuck. With the battery switch in emergency position and the generators off, power is supplied for approximately 30 minutes to the following equipment:

COMM 1	Overhead Floodlights
NAV 2	Copilot's HSI and Voltmeter

CAUTION

WHEN LANDING WITH EMERGENCY POWER (BATTERY SWITCH-EMER AND BOTH GENERATORS OFF), THE FOLLOWING ARE NOT AVAILABLE:

THE LANDING GEAR NORMAL OPERATION IS NOT AVAILABLE: THE LANDING GEAR MUST BE LOWERED USING THE BLOWDOWN SYSTEM AND THE LANDING GEAR WARNING LIGHTS WILL NOT ILLUMINATE.

THE FLAPS WILL NOT OPERATE. IF NOT PREVIOUSLY IN THE LANDING POSITION, A FLAP INOPERATIVE LANDING MUST BE MADE.

THE ANTISKID/POWER BRAKE SYSTEM IS INOPERATIVE; ONLY THE EMERGENCY BRAKE SYSTEM IS AVAILABLE.

(Continued Next Page)

ELECTRICAL FIRE OR SMOKE (Continued)

17. Flaps - LAND.
18. Airspeed - V_{REF}.

IF SMOKE OR FIRE RESTARTS

19. LH Generator - OFF.

ADVISORY - Antiskid systems will be inoperative. Power brakes will be available until accumulator discharges. Multiply landing distance by 1.6. Be prepared to use the emergency brake system.

BATTERY OVERHEAT (BATT O'HEAT LIGHT ON)

1. Amperage - NOTE.
2. Battery Switch - EMER.
3. Amperage - NOTE DECREASE.

4. If battery voltage is 1 volt less than generator voltage in 30 seconds to 2 minutes, monitor battery overheat annunciator for possible change.

IF BATTERY O'HEAT LIGHT GOES OUT

5. Battery Switch - BATT.

IF NO AMP DECREASE OR BATTERY O'HEAT LIGHT FLASHES

5. Flood Lights - FULL BRIGHT.
6. Generators - OFF. The BATT O'HEAT light will extinguish immediately when the generators are turned off if the battery relay is not stuck. With the battery switch in emergency position and the generators off, power is supplied for approximately 30 minutes to the following equipment:

COMM 1	Overhead Floodlights
NAV 2	Copilot's HSI and Voltmeter

CAUTION

WHEN LANDING WITH EMERGENCY POWER (BATTERY SWITCH-EMER AND BOTH GENERATORS OFF), THE FOLLOWING ARE NOT AVAILABLE:

THE LANDING GEAR NORMAL OPERATION IS NOT AVAILABLE: THE LANDING GEAR MUST BE LOWERED USING THE BLOWDOWN SYSTEM AND THE LANDING GEAR WARNING LIGHTS WILL NOT ILLUMINATE.

THE FLAPS WILL NOT OPERATE. IF NOT PREVIOUSLY IN THE LANDING POSITION, A FLAP INOPERATIVE LANDING MUST BE MADE.

THE ANTISKID/POWER BRAKE SYSTEM IS INOPERATIVE; ONLY THE EMERGENCY BRAKE SYSTEM IS AVAILABLE.

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BATTERY OVERHEAT (BATT O'HEAT LIGHT ON) (Continued)

CAUTION (Continued)

THE ENGINE ANTI-ICE VALVES WILL BE OPEN. REFER TO ANTI-ICE ON THRUST CHARTS.

THE OUTSIDE AIR TEMPERATURE GAGE IS NOT RELIABLE, SO USE CAUTION WHEN APPLYING POWER (EXCEPT FOR GO-AROUND WHERE GROUND TEMPERATURES CAN BE USED).

ALL ENGINE INSTRUMENTS EXCEPT THE VERTICAL TAPE N_1 WILL BE INOPERATIVE. THE VERTICAL TAPE N_1 WILL INDICATE ERRATICALLY BELOW APPROXIMATELY 50% N_1 BUT WILL GIVE RELIABLE INDICATIONS ABOVE 50% N_1.

IF NORMAL DC POWER IS LOST (Battery Relay Not Stuck)

7. Generators - GEN (BATT O'HEAT light will come back on until battery cools).
8. Battery Switch - OFF.

CAUTION

- WITH THE BATTERY SWITCH OFF, ALL POWER FROM THE EMERGENCY BUS WILL BE REMOVED
- AFTER LANDING, REFER TO AIRPLANE MAINTENANCE MANUAL FOR PROPER MAINTENANCE PROCEDURES, AS DAMAGE TO THE BATTERY MAY HAVE OCCURRED.

9. Land as soon as practical.

IF NO DC POWER LOST (Battery Relay Stuck)

7. Microphone Selector - EMER COMM (headphones required to receive audio).
8. Receiver Select - COMM 1 to HDPH (required only if AUTO SELECT is OFF).
9. Windshield Bleed Air Manual Valves - OFF.
10. DC Power LH and RH BUS NO. 1, 2 and 3 Circuit Breakers - PULL.
11. Land as soon as practical.

When Landing Assured

12. DC Power LH and RH Bus Circuit Breakers - RESET.
13. Landing Gear - DOWN.
14. Flaps - LAND.
15. Airspeed - V_{REF}.

CAUTION

AFTER LANDING, REFER TO AIRPLANE MAINTENANCE MANUAL FOR PROPER MAINTENANCE PROCEDURES, AS DAMAGE TO THE BATTERY MAY HAVE OCCURRED.

BATTERY OVERHEAT (BATT O'HEAT LIGHT ON) (Continued)

CAUTION (Continued)

THE ENGINE ANTI-ICE VALVES WILL BE OPEN. REFER TO ANTI-ICE ON THRUST CHARTS.

THE OUTSIDE AIR TEMPERATURE GAGE IS NOT RELIABLE, SO USE CAUTION WHEN APPLYING POWER (EXCEPT FOR GO-AROUND WHERE GROUND TEMPERATURES CAN BE USED).

ALL ENGINE INSTRUMENTS EXCEPT THE VERTICAL TAPE N_1 WILL BE INOPERATIVE. THE VERTICAL TAPE N_1 WILL INDICATE ERRATICALLY BELOW APPROXIMATELY 50% N_1 BUT WILL GIVE RELIABLE INDICATIONS ABOVE 50% N_1.

IF NORMAL DC POWER IS LOST (Battery Relay Not Stuck)

7. Generators - GEN (BATT O'HEAT light will come back on until battery cools).
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CAUTION

- WITH THE BATTERY SWITCH OFF, ALL POWER FROM THE EMERGENCY BUS WILL BE REMOVED
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When Landing Assured

11. DC Power LH and RH Bus Circuit Breakers - RESET.
12. Landing Gear - DOWN.
13. Flaps - LAND.
14. Airspeed - V_{REF}.

CAUTION

AFTER LANDING, REFER TO AIRPLANE MAINTENANCE MANUAL FOR PROPER MAINTENANCE PROCEDURES, AS DAMAGE TO THE BATTERY MAY HAVE OCCURRED.

LOSS OF BOTH GENERATORS

1. Generators - RESET THEN GEN.

IF ONLY ONE GENERATOR COMES ON

2. Electrical Load - REDUCE as required; 400 amperes maximum to 35,000 feet, 325 amperes maximum above 35,000 feet.

IF NEITHER GENERATOR COMES ON

2. Floodlights - FULL BRIGHT.
3. Battery Switch - EMER. With the battery switch in emergency position and the generators off, power is supplied for approximately 30 minutes to the following equipment:

COMM 1	Overhead Floodlights
NAV 2	Copilot's HSI and Voltmeter

CAUTION

WHEN LANDING WITH EMERGENCY POWER (BATTERY SWITCH-EMER AND BOTH GENERATORS OFF), THE FOLLOWING ARE NOT AVAILABLE:

THE LANDING GEAR NORMAL OPERATION IS NOT AVAILABLE: THE LANDING GEAR MUST BE LOWERED USING THE BLOWDOWN SYSTEM AND THE LANDING GEAR WARNING LIGHTS WILL NOT ILLUMINATE.

THE FLAPS WILL NOT OPERATE. IF NOT PREVIOUSLY IN THE LANDING POSITION, A FLAP INOPERATIVE LANDING MUST BE MADE.

THE ANTISKID/POWER BRAKE SYSTEM IS INOPERATIVE; ONLY THE EMERGENCY BRAKE SYSTEM IS AVAILABLE.

THE ENGINE ANTI-ICE VALVES WILL BE OPEN. REFER TO ANTI-ICE ON THRUST CHARTS.

THE OUTSIDE AIR TEMPERATURE GAGE IS NOT RELIABLE, SO USE CAUTION WHEN APPLYING POWER (EXCEPT FOR GO-AROUND WHERE GROUND TEMPERATURES CAN BE USED).

ALL ENGINE INSTRUMENTS EXCEPT THE VERTICAL TAPE N_1 WILL BE INOPERATIVE. THE VERTICAL TAPE N_1 WILL INDICATE ERRATICALLY BELOW APPROXIMATELY 50% N_1 BUT WILL GIVE RELIABLE INDICATIONS ABOVE 50% N_1.

4. Microphone Selector - EMER COMM (headphones required to receive audio).
5. Windshield Bleed Air Manual Valves - OFF or MINIMUM for clear vision through windshield.

(Continued Next Page)

LOSS OF BOTH GENERATORS

1. Generators - RESET THEN GEN.

IF ONLY ONE GENERATOR COMES ON

2. Electrical Load - REDUCE as required; 400 amperes maximum to 25,000 feet, 250 amperes maximum above 25,000 feet.

IF NEITHER GENERATOR COMES ON

2. Floodlights - FULL BRIGHT.
3. Battery Switch - EMER. With the battery switch in emergency position and the generators off, power is supplied for approximately 30 minutes to the following equipment:

COMM 1	Overhead Floodlights
NAV 2	Copilot's HSI and Voltmeter

CAUTION

WHEN LANDING WITH EMERGENCY POWER (BATTERY SWITCH-EMER AND BOTH GENERATORS OFF), THE FOLLOWING ARE NOT AVAILABLE:

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4. Microphone Selector - EMER COMM (headphones required to receive audio).
5. Windshield Bleed Air Manual Valves - OFF or MINIMUM for clear vision through windshield.

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LOSS OF BOTH GENERATORS

1. Generators - RESET THEN GEN.

IF ONLY ONE GENERATOR COMES ON

2. Electrical Load - REDUCE as required; 400 amperes maximum to 35,000 feet, 325 amperes maximum above 35,000 feet.

IF NEITHER GENERATOR COMES ON

2. Floodlights - FULL BRIGHT.
3. Battery Switch - EMER. With the battery switch in emergency position and the generators off, power is supplied for approximately 30 minutes to the following equipment:

COMM 1	Overhead Floodlights
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THE ANTISKID/POWER BRAKE SYSTEM IS INOPERATIVE; ONLY THE EMERGENCY BRAKE SYSTEM IS AVAILABLE.

THE ENGINE ANTI-ICE VALVES WILL BE OPEN. REFER TO ANTI-ICE ON THRUST CHARTS.

THE OUTSIDE AIR TEMPERATURE GAGE IS NOT RELIABLE, SO USE CAUTION WHEN APPLYING POWER (EXCEPT FOR GO-AROUND WHERE GROUND TEMPERATURES CAN BE USED).

ALL ENGINE INSTRUMENTS EXCEPT THE VERTICAL TAPE N_1 WILL BE INOPERATIVE. THE VERTICAL TAPE N_1 WILL INDICATE ERRATICALLY BELOW APPROXIMATELY 50% N_1 BUT WILL GIVE RELIABLE INDICATIONS ABOVE 50% N_1.

4. Microphone Selector - EMER COMM (headphones required to receive audio).
5. Receiver Select - COMM 1 to HDPH (required only if AUTO SELECT is OFF.
6. Windshield Bleed Air Manual Valves - OFF or MINIMUM for clear vision through windshield.

(Continued Next Page)

LOSS OF BOTH GENERATORS (Continued)

7. Land as soon as practical.

When Landing Assured

8. Battery Switch - BATT.
9. Landing Gear - DOWN.
10. Flaps - LAND.
11. Airspeed - V_{REF}.

AC POWER FAILURE (AC FAIL LIGHT ON)

1. Inverter 1 and Inverter 2 Circuit Breakers - RESET.
2. Battery Switch - EMER.

If the inverters will not come back on the line after the circuit breakers have been reset, complete the flight by using the copilot's air driven attitude indicator or the standby gyro horizon.(if installed) Placing the battery switch to EMER will provide AC power from the copilot's C-14D static inverter to power the copilot's compass system and NAV 2.

OVERPRESSURIZATION

1. Cabin Altitude Selector - SET to higher cabin altitude.
2. Rate Control - INC.

IF STILL OVERPRESSURIZED

3. Pressurization Source Selector - LH or RH; control cabin pressure with throttle.

IF UNABLE TO CONTROL

4. Oxygen Masks - DON and 100% OXYGEN.
5. PassengerOxygen Masks - MANUAL DROP.
6. Crew Oxygen Priority Valve - CHECK normal.
7. Passenger Oxygen - ENSURE passengers are receiving oxygen.
8. Oxygen Microphone Switches - MIC OXY MASK.
9. Passenger Advisory Light - PASS SAFETY.
10. Pressurization Source Selector - OFF.
11. Descend.

IF STILL OVERPRESSURIZED

12. Emergency Dump Switch - DUMP.
13. Refer to Use of Supplemental Oxygen Procedures in the Abnormal Procedures.

LOSS OF BOTH GENERATORS (Continued)

6. Land as soon as practical.

When Landing Assured

7. Battery Switch - BATT.
8. Landing Gear - DOWN.
9. Flaps - LAND.
10. Airspeed - V_{REF}.

AC POWER FAILURE (AC FAIL LIGHT ON)

1. Inverter 1 and Inverter 2 Circuit Breakers - RESET.
2. Battery Switch - EMER.

If the inverters will not come back on the line after the circuit breakers have been reset, complete the flight by using the copilot's air driven attitude indicator or the standby gyro horizon.(if installed) Placing the battery switch to EMER will provide AC power from the copilot's C-14D static inverter to power the copilot's compass system and NAV 2.

OVERPRESSURIZATION

1. Cabin Altitude Selector - SET to higher cabin altitude.
2. Rate Control - INC.

IF STILL OVERPRESSURIZED

3. Pressurization Source Selector - LH or RH; control cabin pressure with throttle.

IF UNABLE TO CONTROL

4. Oxygen Masks - DON and 100% OXYGEN.
5. Passenger Oxygen Masks - MANUAL DROP.
6. Crew Oxygen Priority Valve - CHECK normal.
7. Passenger Oxygen - ENSURE passengers are receiving oxygen.
8. Oxygen Microphone Switches - MIC OXY MASK.
9. Passenger Advisory Light - PASS SAFETY.
10. Pressurization Source Selector - OFF.
11. Descend.

IF STILL OVERPRESSURIZED

12. Emergency Dump Switch - DUMP.
13. Refer to Use of Supplemental Oxygen Procedures in the Abnormal Procedures.

RAPID DECOMPRESSION (INDICATED BY CAB ALT 10,000 FEET LIGHT ON)

1. Oxygen Masks - DON and 100% OXYGEN.
2. Emergency Descent - AS REQUIRED.
3. Passenger Oxygen - ENSURE passengers are receiving oxygen.
4. Oxygen Microphone Switches - MIC OXY MASK.
5. Transponder - EMERGENCY.
6. Refer to Use of Supplemental Oxygen Procedures in the Abnormal Procedures.

EMERGENCY DESCENT

1. Throttles - IDLE.
2. Speed Brakes - EXTEND.
3. Initiate Moderate Bank.
4. Airplane Pitch Attitude - 15 DEGREES NOSE DOWN.
5. Passenger Advisory Lights - PASS SAFETY.
6. Maximum Airspeed - V_{MO}/M_{MO} (Use reduced speed if structural damage has occurred).
7. Transponder - EMERGENCY.

ENVIRONMENTAL SYSTEM SMOKE OR ODOR

1. Oxygen Masks - DON and 100% OXYGEN.
2. Oxygen Microphone Switches - AS REQUIRED.
3. Cabin (OVHD) Fan - OFF.
4. Defog Fan - OFF.
5. Pressurization Source Selector - Isolate Source by Selecting: LH.

NOTE

Pressurization source selector must remain in each position long enough to allow adequate system purging to determine the source of smoke.

IF SMOKE CONTINUES

6. Pressurization Source Selector - RH (Allow time for smoke to dissipate).

IF SMOKE STILL CONTINUES (Air cycle machine seal may be leaking)

7. Pressurization Source Selector - EMER (Control cabin pressure with LH throttle).

SMOKE REMOVAL

NOTE

No action is normally required; however, if smoke is intense:

1. Oxygen Masks - DON and 100% OXYGEN.
2. Passenger Oxygen Masks - MANUAL DROP.
3. Crew Oxygen Priority Valve - CHECK normal.
4. Passenger Oxygen - ENSURE passengers are receiving oxygen.
5. Oxygen Microphone Switches - MIC OXY MASK.
6. Passenger Advisory Light - PASS SAFETY.
7. Cabin Altitude Selector - SET to higher cabin altitude.
8. Emergency Dump Switch - DUMP.
9. Pressurization Source Selector - BOTH HI.
10. Refer to Use of Supplemental Oxygen Procedures in the Abnormal Procedures.

IF SMOKE PERSISTS OR IT CANNOT BE VERIFIED THAT THERE IS NO FIRE

11. Land as soon as possible.

AUTOPILOT HARDOVER

1. Autopilot/Trim Disengage Switch - PRESS.

NOTE

Maximum altitude losses during autopilot malfunction:

Cruise	550 Feet at 43,000 Feet.
Climb	300 Feet at 17,000 Feet.
ILS Approach	34 Feet. (Autopilot must be off at 90 feet.) Refer to Figure 3-2 for Glideslope Deviation Profile.

MAXIMUM GLIDE - EMERGENCY LANDING

1. Airspeed - 120 KIAS at 9500 pounds. Increase speed approximately 3 KIAS per 500-pound increase in weight.
2. Flaps - UP.
3. Speedbrakes - RETRACT.
4. Landing Gear - UP.
5. Transponder - EMERGENCY.
6. ATC - ADVISE.
7. Passenger Advisory Switch - PASS SAFETY.
8. Shoulder Harness - SECURE.
9. Landing Gear, Speedbrakes and Flaps - AS REQUIRED

SMOKE REMOVAL

NOTE

No action is normally required; however, if smoke is intense:

1. Oxygen Masks - DON and 100% OXYGEN.
2. Passenger Oxygen Masks - MANUAL DROP.
3. Crew Oxygen Priority Valve - CHECK normal.
4. Passenger Oxygen - ENSURE passengers are receiving oxygen.
5. Oxygen Microphone Switches - MIC OXY MASK.
6. Passenger Advisory Light - PASS SAFETY.
7. Cabin Altitude Selector - SET to higher cabin altitude.
8. Emergency Dump Switch - DUMP.
9. Pressurization Source Selector - BOTH HI.
10. Refer to Use of Supplemental Oxygen Procedures in the Abnormal Procedures.

IF SMOKE PERSISTS OR IT CANNOT BE VERIFIED THAT THERE IS NO FIRE

11. Land as soon as possible.

AUTOPILOT HARDOVER

1. Autopilot/Trim Disengage Switch - PRESS.

NOTE

Maximum altitude losses during autopilot malfunction:

Cruise	450 Feet at 43,000 Feet.
Climb	50 Feet at 10,000 Feet.
Maneuvering	110 at 43,000 Feet.
ILS Approach	37 Feet. (Autopilot must be off at 100 feet.) Refer to Figure 3-2 for Glideslope Deviation Profile.

MAXIMUM GLIDE - EMERGENCY LANDING

1. Airspeed - 120 KIAS at 9500 pounds. Increase speed approximately 3 KIAS per 500-pound increase in weight.
2. Flaps - UP.
3. Speedbrakes - RETRACT.
4. Landing Gear - UP.
5. Transponder - EMERGENCY.
6. ATC - ADVISE.
7. Passenger Advisory Switch - PASS SAFETY.
8. Shoulder Harness - SECURE.
9. Landing Gear, Speedbrakes and Flaps - AS REQUIRED

SMOKE REMOVAL

NOTE

No action is normally required; however, if smoke is intense:

1. Oxygen Masks - DON and 100% OXYGEN.
2. Passenger Oxygen Masks - MANUAL DROP.
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4. Passenger Oxygen - ENSURE passengers are receiving oxygen.
5. Oxygen Microphone Switches - MIC OXY MASK.
6. Passenger Advisory Light - PASS SAFETY.
7. Cabin Altitude Selector - SET to higher cabin altitude.
8. Emergency Dump Switch - DUMP.
9. Refer to Use of Supplemental Oxygen Procedures in the Abnormal Procedures.

IF SMOKE PERSISTS OR IT CANNOT BE VERIFIED THAT THERE IS NO FIRE

10. Land as soon as possible.

AUTOPILOT HARDOVER

1. Autopilot/Trim Disengage Switch - PRESS.

NOTE

Maximum altitude losses during autopilot malfunction:

Cruise	550 Feet at 43,000 Feet.
Climb	300 Feet at 17,000 Feet.
ILS Approach	34 Feet. (Autopilot must be off at 90 feet.) Refer to Figure 3-2 for Glideslope Deviation Profile.

MAXIMUM GLIDE - EMERGENCY LANDING

1. Airspeed - 120 KIAS at 9500 pounds. Increase speed approximately 3 KIAS per 500-pound increase in weight.
2. Flaps - UP.
3. Speedbrakes - RETRACT.
4. Landing Gear - UP.
5. Transponder - EMERGENCY.
6. ATC - ADVISE.
7. Passenger Advisory Switch - PASS SAFETY.
8. Shoulder Harness - SECURE.
9. Landing Gear, Speedbrakes and Flaps - AS REQUIRED.

AUTOPILOT GLIDESLOPE DEVIATION PROFILE

CONDITIONS:

Airspeed - V_{REF}
Flaps - Land
Gear - Down
Delay - One second from fault recognition.
Pilot's hands on control wheel and power levers during the approach.

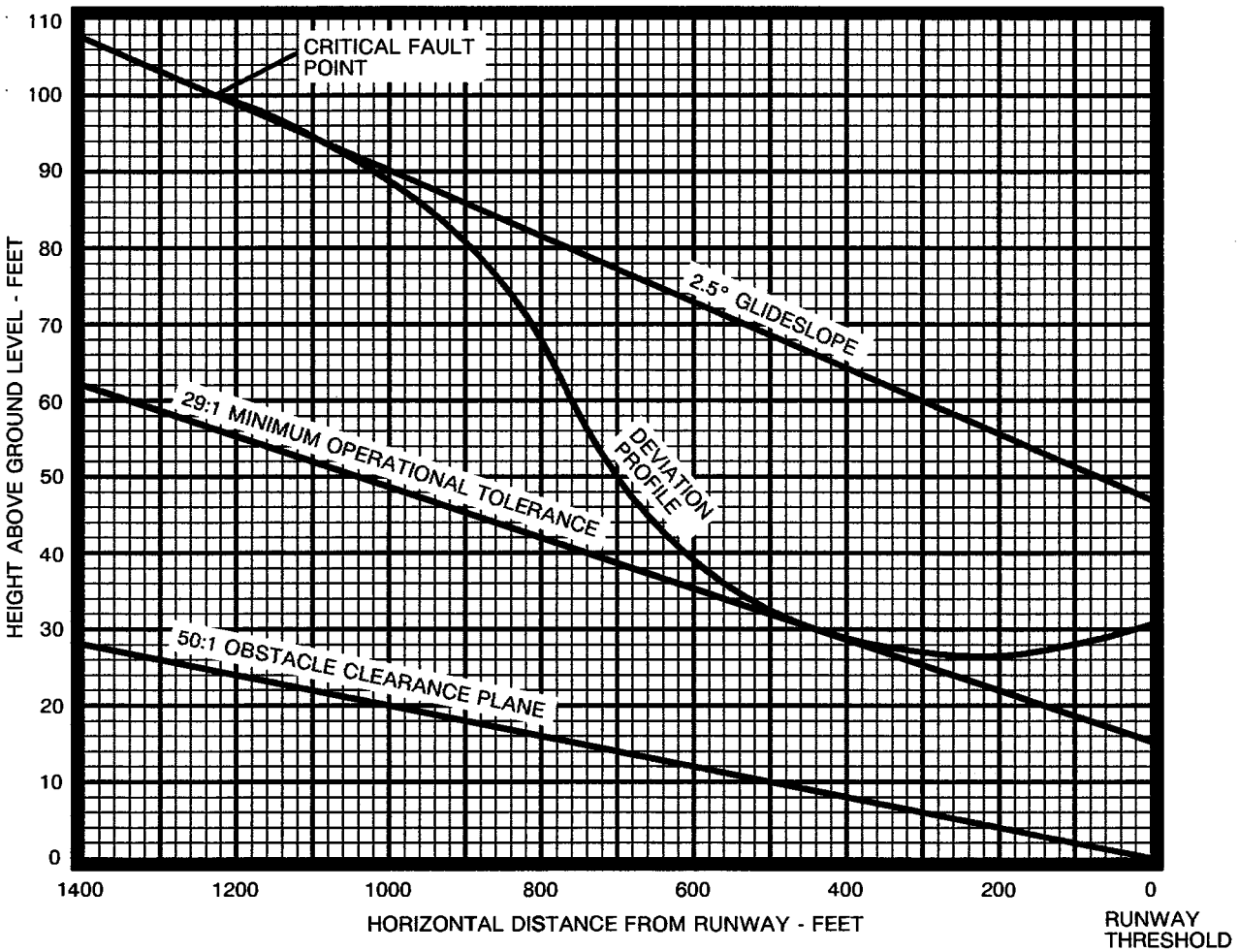

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Figure 3-2

AUTOPILOT GLIDESLOPE DEVIATION PROFILE

CONDITIONS:

Airspeed - V_{REF}
Flaps - Land
Gear - Down
Delay - One second from fault recognition.
Pilot's hands on control wheel and power levers during the approach.

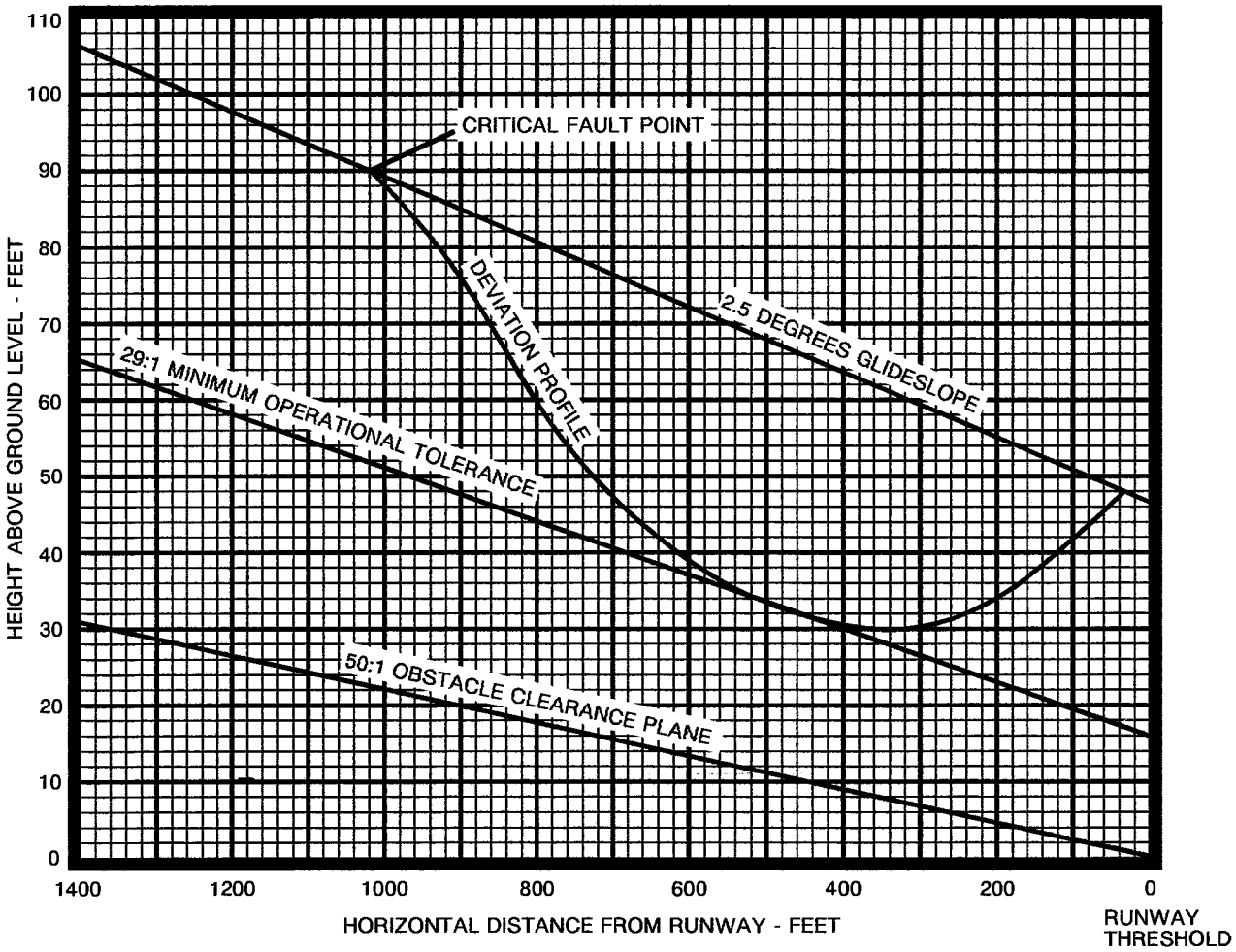

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Figure 3-2

EMERGENCY EVACUATION

1. Throttle - BOTH OFF.
2. LH/RH Engine Fire Switches - BOTH PRESS.
3. LH/RH Fire Bottle Armed Switches - BOTH PRESS (if fire suspected).
4. Battery Switch - OFF.
5. Airplane Outside - CHECK FOR BEST ESCAPE ROUTE.

IF THRU CABIN DOOR

6. Cabin Door - OPEN.
7. Move away from airplane.

IF THRU ESCAPE HATCH

6. Escape Hatch - REMOVE AND THROW HATCH OUT OF AIRPLANE.
7. Move away from Airplane.

ABNORMAL PROCEDURES

FALSE ENGINE START (ENGINE DOES NOT LIGHT)

1. Throttle - OFF.
2. Starter Disengage - PRESS 15 seconds after throttle OFF.

ENGINE STARTER WILL NOT DISENGAGE

1. Starter Disengage Button - PRESS.

IF STARTER DOES NOT DISENGAGE AND START BUTTON LIGHT REMAINS ILLUMINATED (Start Relay Stuck)

2. Battery Switch - OFF.
3. Battery Quick Disconnect Connector - DISCONNECT (Located in tailcone).
4. Throttle(s) - OFF.

ENGINE FIRE DURING GROUND SHUTDOWN (HIGH OR SUSTAINED ITT)

1. Throttle - CHECK OFF.
2. Start Button - PRESS momentarily.
3. Starter Disengage - PRESS after 15 seconds.

LOW OIL PRESSURE (OIL PRESS WARN LIGHT ON)

ABOVE 70 PSI

1. Land as soon as practical.

BETWEEN 35 AND 70 PSI

1. Throttle (Affected Engine) - REDUCE POWER.
2. Land as soon as practical.

BELOW 35 PSI

1. Throttle (Affected Engine) - OFF.
2. Accomplish ENGINE FAILURE/PRECAUTIONARY SHUTDOWN Checklist.

LOW OIL PRESSURE (OIL PRESS WARN LIGHT OFF)

BETWEEN 35 AND 70 PSI

1. Throttle (Affected Engine) - REDUCE POWER.

BELOW 35 PSI

1. Land as soon as practical.

LOW FUEL PRESSURE (FUEL LOW PRESS LIGHT ON)

1. Fuel Boost - ON (Check boost pump circuit breakers in).
2. Fuel Quantity - CHECK.
3. Fuel Crossfeed - IF REQUIRED.

LOW FUEL QUANTITY (FUEL LOW LEVEL LIGHT ON)

ADVISORY - The illumination of this light serves notice to the pilot that 169 pounds or less of fuel remains in the respective tank.

1. Fuel Boost - ON (Check boost pump circuit breakers in).
2. Land as soon as practical.

FUEL BOOST PUMP ON (FUEL BOOST ON LIGHT ON)

ADVISORY - Indicates that the respective fuel boost pump was either automatically or manually turned on.

1. Fuel Boost Switch (Affected Pump) - ON; then NORM.

IF FUEL BOOST PUMP ON LIGHT REMAINS ILLUMINATED

ADVISORY - If affected FUEL LOW PRESS light does not extinguish, leave the fuel boost switch in NORM with pump running.

FUEL FILTER BYPASS (FUEL FLTR BYPASS LIGHT ON)

ADVISORY - Consider possibility of partial or total loss of both engines. Inspect filters after landing.

SINGLE GENERATOR FAILURE (GEN OFF LIGHT ON)

1. Electrical Load - DECREASE if required; 400 amperes maximum up to 35,000 feet, 325 amperes maximum over 35,000 feet.
2. Failed Generator - CHECK SWITCHES and CIRCUIT BREAKERS; RESET AS REQUIRED.

IF UNABLE TO RESET

3. Failed Generator - OFF.

AC POWER FAILURE (AC POWER FAIL LIGHT ON)

1. Avionic Power - Select INV 1 or INV 2 as appropriate.

LOW FUEL PRESSURE (FUEL LOW PRESS LIGHT ON)

1. Fuel Boost - ON (Check boost pump circuit breakers in).
2. Fuel Quantity - CHECK.
3. Fuel Crossfeed - IF REQUIRED.

LOW FUEL QUANTITY (FUEL LOW LEVEL LIGHT ON)

ADVISORY - The illumination of this light serves notice to the pilot that 169 pounds or less of fuel remains in the respective tank.

1. Fuel Boost - ON (Check boost pump circuit breakers in).
2. Land as soon as practical.

FUEL BOOST PUMP ON (FUEL BOOST ON LIGHT ON)

ADVISORY - Indicates that the respective fuel boost pump was either automatically or manually turned on.

1. Fuel Boost Switch (Affected Pump) - ON; then NORM.

IF FUEL BOOST PUMP ON LIGHT REMAINS ILLUMINATED

ADVISORY - If affected FUEL LOW PRESS light does not extinguish, leave the fuel boost switch in NORM with pump running.

FUEL FILTER BYPASS (FUEL FLTR BYPASS LIGHT ON)

ADVISORY - Consider possibility of partial or total loss of both engines. Inspect filters after landing.

SINGLE GENERATOR FAILURE (GEN OFF LIGHT ON)

1. Electrical Load - DECREASE if required; 400 amperes maximum up to 25,000 feet, 250 amperes maximum over 25,000 feet.
2. Failed Generator - CHECK SWITCHES and CIRCUIT BREAKERS; RESET AS REQUIRED.

IF UNABLE TO RESET

3. Failed Generator - OFF.

AC POWER FAILURE (AC POWER FAIL LIGHT ON)

1. Avionic Power - Select INV 1 or INV 2 as appropriate.

BLEED AIR GROUND (BLD AIR GND/HI or BLD AIR GND (as applicable)LIGHT ON)

ADVISORY - Light must be out before takeoff.

In Flight:

1. Pressurization Source Selector Switch - NORM.

ENVIRONMENTAL SYSTEM AIR DUCT OVERHEAT (AIR DUCT O'HEAT LIGHT ON)

1. TEMP Circuit Breaker - RESET.
2. Temperature Select - MANUAL.
3. Manual Hot/Manual Cold Switch - MANUAL COLD; maintain in this position until overheat light goes out.

AFTER LIGHT GOES OUT

4. Auto Temperature Select - AUTO.

NOTE

If the AIR DUCT O'HEAT light illuminates again, select MANUAL on temperature selector switch and control temperature with the manual temperature control.

IF LIGHT DOES NOT GO OUT

4. Pressurization Source Selector - LH or RH; reduce power on selected engine, if necessary.

EMERGENCY PRESSURIZATION ON (AUTOMATIC ACTUATION) (EMERG PRESS LIGHT ON)

ADVISORY - Indicates air cycle machine shutdown or failure.

1. NORM Pressurization Circuit Breaker - CHECK IN.
2. Temperature Control - ADJUST TO WARMER SETTING (May require manual mode).

NOTE

A time delay relay will lock the system into emergency pressurization if air cycle machine temperature remains too high for 12 seconds or more. If machine cools sufficiently in less than 12 seconds, the system will automatically return to the previously selected mode.

(Continued Next Page)

EMERGENCY PRESSURIZATION ON (AUTOMATIC ACTUATION) (EMERG PRESS LIGHT ON) (Continued)

3. Pressurization Source Selector - EMER.

NOTE

Wait at least one minute after pressurization source selector has been positioned to EMER before making next selection.

4. Pressurization Source Selector - RH, LH, or NORM.

IF EMERGENCY PRESSURIZATION REMAINS ON

5. Pressurization Source Selector - EMER.
6. Control cabin temperature with LH throttle.

CABIN ALTITUDE ABOVE SELECTED ALTITUDE

1. Cabin Altitude Selector - SET to lower cabin altitude.
2. Rate Control - FULL INC.
3. Pressurization Source Selector - EMER.

IF NOT ARRESTED BY 14,000 FEET CABIN ALTITUDE

4. Initiate Emergency Descent Procedure.
5. Passenger Oxygen Masks - MANUAL DROP.
6. Passenger Oxygen - ENSURE passengers are receiving oxygen.
7. Refer to Use of Supplemental Oxygen Procedures in the Abnormal Procedures.

AIR CYCLE MACHINE (ACM) OVERPRESSURE (ACM O'PRESS LIGHT ON)

On the Ground:

1. Do not fly the airplane until the malfunction has been repaired.

In Flight:

1. Pressurization Source Selector - RH, reduce power on right engine to 80% turbine speed.
2. EMER PRESS Circuit Breaker - PULL.
3. NORM PRESS Circuit Breaker - PULL and RESET.
4. EMER PRESS Circuit Breaker - RESET.

NOTE

If ACM O'PRESS light remains on, operate the right engine below 80% N_2. Operate left engine normally.

EMERGENCY PRESSURIZATION ON (AUTOMATIC ACTUATION) (EMERG PRESS LIGHT ON) (Continued)

3. Pressurization Source Selector - EMER.

NOTE

Wait at least one minute after pressurization source selector has been positioned to EMER before making next selection.

4. Pressurization Source Selector - RH, LH, NORM or BOTH HI.

IF EMERGENCY PRESSURIZATION REMAINS ON

5. Pressurization Source Selector - EMER.
6. Control cabin temperature with LH throttle.

CABIN ALTITUDE ABOVE SELECTED ALTITUDE

1. Cabin Altitude Selector - SET to lower cabin altitude.
2. Rate Control - FULL INC.
3. Pressurization Source Selector - EMER.

IF NOT ARRESTED BY 14,000 FEET CABIN ALTITUDE

4. Initiate Emergency Descent Procedure.
5. Passenger Oxygen Masks - MANUAL DROP.
6. Passenger Oxygen - ENSURE passengers are receiving oxygen.
7. Refer to Use of Supplemental Oxygen Procedures in the Abnormal Procedures.

PRECOOLER FAILURE (LEFT or RIGHT PRECOOLER FAIL LIGHT ON)

1. Affected Engine - REDUCE POWER (if situation permits).

IF LIGHT DOES NOT GO OUT OR SITUATION DOES NOT PERMIT POWER REDUCTION

2. Pressurization Source Selector - LH or RH (opposite of affected engine).

VACUUM SYSTEM FAILURE

NOTE

EMER DUMP valve will be inoperative. Cabin will go to maximum differential pressure.

1. Pressurization Source Selector - LH or RH (Reduce power below 70% N_1 RPM on selected side).
2. Pressurization Source Selector - OFF before landing.

ELECTRIC ELEVATOR RUNAWAY TRIM

1. Autopilot/Trim Disengage Switch - PRESS and hold until PITCH TRIM circuit breaker is pulled.
2. Manual Elevator Trim - AS REQUIRED.

ELECTRIC TRIM INOPERATIVE

1. Electric Trim Circuit Breaker (PITCH TRIM) - CHECK CIRCUIT BREAKER.

IF STILL INOPERATIVE

2. Manual Elevator Trim - AS REQUIRED.

NOTE

Do not attempt to use the autopilot if the electric trim is inoperative. The autopilot will not be able to trim out servo torque, and disengaging the autopilot could result in a significant pitch upset.

JAMMED ELEVATOR TRIM TAB

CRUISE

1. Maintain trim speed as long as practical. Do not extend flaps for approach or landing. Use FLAPS INOPERATIVE APPROACH AND LANDING procedure.

NOTE

Do not attempt to use the autopilot if the electric trim is inoperative. The autopilot will not be able to trim out servo torque, and disengaging the autopilot could result in a significant pitch upset.

TAKEOFF or GO AROUND

1. Reduce power as necessary to maintain 120 KIAS or less. Do not change flap position. Minimum speed is V_{REF} for flaps in LAND or V_{APP} for flaps in T.O. & APPR. Do not retract landing gear. Land as soon as practical.

AUTOPILOT TORQUE FAILS TO HIGH TORQUE (AP TORQUE LIGHT ON)

1. Autopilot/Trim Disengage Switch - PRESS.

NOTE

The autopilot must remain off during all flights conducted above 14,500 feet.

VACUUM SYSTEM FAILURE

NOTE

EMER DUMP valve will be inoperative. Cabin will go to maximum differential pressure.

1. Pressurization Source Selector - LH or RH (Reduce power below 70% N_1 RPM on selected side).
2. Pressurization Source Selector - OFF before landing.

ELECTRIC ELEVATOR RUNAWAY TRIM

1. Autopilot/Trim Disengage Switch - PRESS and hold until PITCH TRIM circuit breaker is pulled.
2. Manual Elevator Trim - AS REQUIRED.

ELECTRIC TRIM INOPERATIVE

1. Electric Trim Circuit Breaker (PITCH TRIM) - CHECK CIRCUIT BREAKER.

IF STILL INOPERATIVE

2. Manual Elevator Trim - AS REQUIRED.

NOTE

Do not attempt to use the autopilot if the electric trim is inoperative. The autopilot will not be able to trim out servo torque, and disengaging the autopilot could result in a significant pitch upset.

JAMMED ELEVATOR TRIM TAB

CRUISE

1. Maintain trim speed as long as practical. Do not extend flaps for approach or landing. Use FLAPS INOPERATIVE APPROACH AND LANDING procedure.

NOTE

Do not attempt to use the autopilot if the electric trim is inoperative. The autopilot will not be able to trim out servo torque, and disengaging the autopilot could result in a significant pitch upset.

TAKEOFF or GO AROUND

1. Reduce power as necessary to maintain 120 KIAS or less. Do not change flap position. Minimum speed is V_{REF} for flaps in LAND or V_{APP} for flaps in T.O. & APPR. Do not retract landing gear. Land as soon as practical.

ENGINE ANTI-ICE FAILURE (ENG ANTI-ICE LIGHT ON)

CONTINUOUS ILLUMINATION

1. Throttle - INCREASE POWER.
2. Engine Anti-Ice Controls - CHECK SWITCHES AND CIRCUIT BREAKERS.
3. Leave icing environment.

MOMENTARY ILLUMINATION (CYCLES ON AND OFF)

ADVISORY - Indicates failure of normal temperature controller or a wing heating element.

WINDSHIELD BLEED AIR FAILURE

LOSS OF HOT AIR SUPPLY (VALVE WILL NOT OPEN OR POSSIBLE LINE FAILURE)

1. Windshield Bleed Air Switch and Valves - OFF.
2. Windshield Alcohol Anti-Ice - AS REQUIRED.
3. Leave icing environment.

NOTE

Ten minutes alcohol available to pilot's windshield only.

WINDSHIELD AIR OVERHEAT (W/S AIR O'HEAT LIGHT ON)

WINDSHIELD BLEED SWITCH LOW OR HI (Air Flow Cycles Off and On)

1. If Windshield Bleed Air Switch is HI - SELECT LOW.

NOTE

If the controller has detected an overtemp and shut off the windshield bleed air, the system will cycle back on when the air temperature cools. Increased airspeed and selecting warmer cabin may improve controller efficiency and eliminate the overtemp condition. Satisfactory anti-ice will be provided under most icing conditions while the system cycles.

If Satisfactory Anti-ice Is Not Maintained

2. Windshield Bleed Air Circuit Breaker - Pull.

(Continued Next Page)

WINDSHIELD AIR OVERHEAT (W/S AIR O'HEAT LIGHT ON) (Continued)

3. Windshield Bleed Manual Valves - OFF or REDUCE to minimum flow which will maintain adequate visibility.

CAUTION

IF CONTINUING AIRFLOW, AIR WILL STILL BE TOO HOT BUT FLOW WILL BE REDUCED. MONITOR WINDSHIELD FOR EVIDENCE OF HEAT DAMAGE AND CLOSE WINDSHIELD MANUAL VALVES IF EVIDENCE OCCURS.

4. Windshield Alcohol Anti-Ice - AS REQUIRED.
5. Leave icing environment as soon as possible.

NOTE

Ten minutes alcohol available to the pilot's windshield only.

CONTINUED ILLUMINATION (Not Cycling, Probable Controller Failure)

1. Windshield Bleed Manual Valves - OFF or REDUCE to minimum flow which will maintain adequate visibility.

CAUTION

IF CONTINUING AIRFLOW, AIR WILL STILL BE TOO HOT BUT FLOW WILL BE REDUCED. MONITOR WINDSHIELD FOR EVIDENCE OF HEAT DAMAGE AND CLOSE WINDSHIELD MANUAL VALVES IF EVIDENCE OCCURS.

2. Windshield Alcohol Anti-Ice - AS REQUIRED.
3. Leave icing environment as soon as possible.

NOTE

Ten minutes alcohol available to the pilot's windshield only.

WINDSHIELD BLEED SWITCH OFF

Indicates probable solenoid valve failure or leak. Windshield air temperature is not regulated. Windshield heat damage is possible. Maintenance is required.

1. Windshield Bleed Air Manual Valves - OFF.

PITOT-STATIC HEATER FAILURE (P/S HTR OFF, LH or RH LIGHT MAY BE ON)

1. Anti-Ice Switches and Circuit Breakers - CHECK.
2. Determine Inoperative System.

NOTE

The autopilot references the pilot's pitot-static system; therefore, the altitude hold function will be inoperative if the pilot's pitot-static system fails.

LANDING GEAR WILL NOT EXTEND

1. Landing Gear Handle - CHECK DOWN (airspeed below 176 KIAS).
2. Gear Control Circuit Breaker - CHECK IN.
3. Auxiliary Gear Control - PULL T-HANDLE AND ROTATE TO LOCK.
4. Rudder - YAW AIRPLANE if necessary to achieve downlock light.

CAUTION

IF DOWNLOCK LIGHTS DO NOT ILLUMINATE, ASSURE VISUALLY IF POSSIBLE THAT ALL LANDING GEARS HAVE BEEN RELEASED FROM THE UPLOCKS PRIOR TO USING THE BLOWDOWN SYSTEM. THE BLOWDOWN WILL NOT REMOVE THE GEARS FROM THE UPLOCKS.

5. Auxiliary Gear Control - PULL KNOB TO BLOW DOWN (for positive lock).

NOTE

Pneumatic pressure should be used to assure positive locking of all three gear actuators.

LOW HYDRAULIC PRESSURE (HYD PRESS LO LIGHT ON)

ADVISORY - Indicates inoperative pump.

LOW HYDRAULIC FLUID LEVEL (HYD LOW LEVEL LIGHT ON)

1. Land as Soon as Practical - The speedbrakes may not operate and the gear may not operate using normal procedures.

SURFACE DEICE TIMER FAILURE

1. Surface Deice Circuit Breaker - CHECK IN.
2. Surface Deice Switch - RESET.
3. Surface Deice Switch - SURFACE DEICE.

IF SURFACE DEICE BOOTS FAIL TO INFLATE

4. Leave Icing Environment.

IF SURFACE DEICE BOOTS CONTINUE TO CYCLE WITH SURFACE DEICE SWITCH IN OFF POSITION

4. Surface Deice Circuit Breaker - PULL.
5. Leave Icing Environment.

ANTISKID SYSTEM FAILURE (ANTISKID INOP LIGHT ON, POWER BRAKE LOW PRESS LIGHT OUT)

1. Antiskid Switch - ON.
2. Skid Control Circuit Breaker - RESET.

IF LIGHT REMAINS ON.

3. Antiskid Switch - OFF.
4. Multiply landing distance of Figure 4-29 by 1.6.

CAUTION

DIFFERENTIAL POWER BRAKING IS AVAILABLE. HOWEVER, SINCE THE ANTISKID IS INOPERATIVE, EXCESSIVE PRESSURE ON THE BRAKE PEDALS MAY CAUSE WHEEL BRAKES TO LOCK, RESULTING IN TIRE BLOWOUT.

5. Be prepared to use the emergency brake system.

NOTE

If the antiskid pump fails after the accumulator pressure exceeds 750 psi, the POWER BRAKE LOW PRESS light may not illuminate until normal brakes are used.

HYDRAULIC SYSTEM REMAINS PRESSURIZED (HYD PRESS ON LIGHT REMAINS ON AFTER SYSTEM CYCLE IS COMPLETED)

1. Speedbrake Control Circuit Breaker - PULL.
2. Landing Gear Control Circuit Breaker - PULL.

IF SYSTEM DEPRESSURIZED

3. Circuit Breakers - RESET (one at a time). Leave pulled circuit breaker which caused system to depressurize.
4. Land as soon as practical. Reset Landing Gear or Speedbrake Control Circuit Breaker, if pulled, prior to landing.

IF SYSTEM REMAINS PRESSURIZED (indicates bypass valve failed)

3. Speedbrake Control and Gear Control Circuit Breakers - RESET (one at a time).
4. Land as soon as possible. If system bypass valve has failed, the hydraulic system may overheat.

DOOR NOT LOCKED (DOOR NOT LOCKED LIGHT ON)

ADVISORY - Indicates unlatched nose or tailcone doors, failure or improper position of one or more door switches, and/or possible disengagement of the lower forward cabin door pin.

On the Ground:

1. Correct condition prior to flight.

In Flight:

1. Cabin Altitude - SELECT to 9500 feet.
2. Airspeed - REDUCE.
3. Passenger Advisory Light - PASS SAFETY.
4. Cabin Door - KEEP CLEAR.
5. Descend to a lower altitude.
6. Land as soon as practical.

POWER BRAKE SYSTEM FAILURE (POWER BRAKE LOW PRESS AND ANTISKID INOP LIGHTS ON)

1. Skid Control Circuit Breaker - RESET.

IF LIGHTS REMAIN ON

2. Plan to use the emergency brake system for landing.
3. Brake Pedals - REMOVE FEET FROM BRAKE PEDALS.
4. Emergency Brake Handle - PULL AS REQUIRED.

CAUTION

ANTISKID SYSTEM DOES NOT FUNCTION DURING EMERGENCY BRAKING. EXCESSIVE PRESSURE ON EMERGENCY BRAKE HANDLE CAN CAUSE BOTH WHEEL BRAKES TO LOCK, RESULTING IN BLOWOUT OF BOTH TIRES.

5. Multiply the landing distance of Figure 4-29 by 1.6.

WHEEL BRAKE FAILURE

1. Brake Pedals - REMOVE FEET FROM BRAKE PEDALS.
2. Emergency Brake Handle - PULL AS REQUIRED.

CAUTION

ANTISKID SYSTEM DOES NOT FUNCTION DURING EMERGENCY BRAKING. EXCESSIVE PRESSURE ON EMERGENCY BRAKE HANDLE CAN CAUSE BOTH WHEEL BRAKES TO LOCK, RESULTING IN BLOWOUT OF BOTH TIRES.

3. Multiply the landing distance of Figure 4-29 by 1.6.

MASTER WARNING LIGHT ON STEADY

1. Warning Light Circuit Breaker - CHECK.
2. Instruments (Hydraulic, Electrical and Engine) - MONITOR.

SINGLE-ENGINE APPROACH AND LANDING

1. Seats, Seat Belts and Shoulder Harnesses - SECURE.
2. Avionics and Flight Instruments - CHECK and SET.
3. Radar Altimeter (if installed) - SET.
4. V_{REF} and Fan Speed Settings - CONFIRM.
5. Passenger Advisory Lights - PASS SAFETY.
6. Passenger Seats - CHECK FULL UPRIGHT, OUTBOARD and POSITIONED AFT or FORWARD to clear exit doors.
7. Flaps - T.O. & APPR.
8. Engine Synchronizer - OFF.
9. Fuel Crossfeed - CHECK.
10. Ignition (Operating Engine) - ON.
11. Landing Gear - DOWN and LOCKED.
12. Antiskid - CHECK ON.
13. Landing Lights - ON.
14. Airspeed - V_{REF} + 10 KIAS Minimum.
15. Autopilot and Yaw Damper - OFF.
16. Pressurization - CHECK ZERO DIFFERENTIAL.
17. Speedbrakes - RETRACTED.
18. Flaps - LAND (when landing assured).
19. Airspeed - V_{REF}.

NOTE

Do not allow N_2 (turbine) RPM to be less than 49%.

SINGLE-ENGINE GO-AROUND

1. Throttle (Operating Engine) - T.O. POWER.
2. Airplane Pitch Attitude - 7.5 Degrees (Go-around mode on flight director for reference).
3. Flaps - T.O. & APPR.

NOTE

The landing gear warning horn cannot be silenced if the landing gear is retracted prior to the flaps reaching the T.O. & APPR position.

4. Climb Speed - V_{REF} + 10 KIAS minimum.
5. Landing Gear - UP (When positive rate-of-climb is established).
6. Flaps (When Clear of Obstacle) - Retract at 400 feet.
7. Climb Speed - V_{ENR}.
8. Thrust - Maximum continuous power.

FLAPS INOPERATIVE APPROACH AND LANDING (NOT IN LANDING POSITION)

1. Seats, Seat Belts and Shoulder Harnesses - SECURE.
2. V_{REF} and Fan Speed Settings - CONFIRM.
3. Airspeed - Flaps 15°, V_{APP}.
   Flaps 0° or Unknown, V_{REF} + 15 KIAS.
4. Flap Control Circuit Breaker - CHECK IN.
5. Multiply the landing distance of Figure 4-29 by 1.8.
6. Avionics and Flight Instruments - CHECK and set.
7. Radar Altimeter - SET.
8. Passenger Advisory Lights - PASS SAFETY.
9. Passenger Seats - CHECK FULL UPRIGHT, OUTBOARD and POSITIONED AFT or FORWARD to clear exit doors.
10. Engine Synchronizer - OFF.
11. Fuel Crossfeed - OFF.
12. Ignition - ON.
13. Landing Gear - DOWN and LOCKED.
14. Antiskid - CHECK ON.
15. Landing Lights - ON.
16. Autopilot and Yaw Damper - OFF.
17. Annunciator Panel - CLEAR.
18. Pressurization - CHECK ZERO DIFFERENTIAL.
19. Speedbrakes - RETRACTED PRIOR TO 50 FEET.

NOTE

Do not allow turbine RPM to be less than 49%.

FIREWALL SHUTOFF VALVE CLOSED (F/W SHUTOFF LIGHT ON)

ADVISORY - Operated by engine fire push switches. All electrical, fuel and hydraulic systems are closed at applicable firewall.

USE OF SUPPLEMENTAL OXYGEN (UNPRESSURIZED)

1. Oxygen Masks - NORMAL below 25,000 feet cabin altitude.
   - 100% at or above 25,000 feet.
   - Ensure crew and passengers are receiving oxygen.
2. Cabin Altitude - MAXIMUM 25,000 feet with passengers.
   - MAXIMUM 34,000 feet crew only.
   - Adjust flight altitude as required.
3. Oxygen - CHECK ENDURANCE (Refer to Figure 3-3)
4. Range - COMPUTE, based on oxygen endurance and revised fuel flow and ground speed).

NORMAL PROCEDURES

PRELIMINARY COCKPIT INSPECTION

1. Control Lock - UNLOCKED.
2. Gear Handle - DOWN.
3. Elevator Trim - POSITION trim tab indicator within takeoff trim range.
4. Flap Handle - AGREES WITH FLAP POSITION.
5. Left and Right Circuit Breakers - IN.
6. Generators - GEN (OFF, if external power is to be used for start).
7. All other switches - OFF or NORM.
8. Throttles - OFF.
9. Battery Switch - BATT (24 volts minimum).
10. Landing Lights - ON - Check illumination on ground - OFF.
11. Other External Lights and Passenger Advisory Lights - ON. Check Illumination - OFF.
12. Pitot/Static Heat - ON - 30 seconds - OFF.

CAUTION

LIMIT GROUND OPERATION OF PITOT/STATIC HEAT TO TWO MINUTES TO PRECLUDE DAMAGE TO THE PITOT/STATIC TUBES AND THE ANGLE-OF-ATTACK PROBE.

13. Battery Switch - OFF.

NOTE

Omit checking the landing and other external lights if night flight is not anticipated. Expedite check if external power unit is not used.

EXTERIOR INSPECTION

During inspection, make a general check for security, condition and cleanliness of the airplane and components. Check particularly for damage; fuel, oil and hydraulic fluid leakage; security of access panels; and removal of keys from locks.

1. Left Nose - CHECK.
   a. Static Ports - CLEAR and WARM.
   b. Baggage Door - SECURE and LOCKED.
   c. Nose Gear, Doors, Wheel and Tire - CONDITION and SECURE.
   d. Pitot Tube - CLEAR and HOT.
2. Right Nose - CHECK.
   a. Pitot Tube - CLEAR and HOT.
   b. Windshield Alcohol Reservoir Sight Gage - FLUID VISIBLE.
   c. Brake and Gear Pneumatic Pressure Gage - GREEN ARC.
   d. Power Brake Accumulator Charge - LIGHT GREEN ARC (precharged pressure) or DARK GREEN ARC (operating pressure).
   e. Brake Fluid Reservoir Sight Gages - FLUID VISIBLE.
   f. Baggage Door - SECURE and LOCKED.
   g. Oxygen Blowout Disc - GREEN (Airplanes with nose mounted oxygen cylinder)
   h. Overboard Vent Lines - CLEAR.
   i. Static Ports - CLEAR and WARM.
   j. Angle-of-Attack Sensor - CLEAR, HOT and ROTATES. (if installed)

(Continued Next Page)

EXTERIOR INSPECTION (Continued)

3. Right Wing - CHECK.
   a. Dorsal Fin Air Inlet - CLEAR.
   b. Engine Fan Duct and Fan - CHECK for bent blades, nicks and blockage of fan stators.

NOTE

If fan is windmilling, place hand on bullet nose or install exhaust cover to stop. If any damage is observed, refer to Chapter 72 of the Engine Maintenance Manual.

   c. Generator Cooling Air Inlet - CLEAR.
   d. Heated Leading Edge - CONDITION.
   e. Fuel Quick Drains - DRAIN and CHECK FOR CONTAMINATION.
   f. Fuel Filter Drain - DRAIN.
   g. Main Gear Door, Wheel, Tire and Landing Light - CONDITION and SECURE.
   h. Deice Boot - CONDITION and SECURE.
   i. Fuel Filler Cap - SECURE.
   j. Fuel Tank Vent - CLEAR.
   k. Navigation, Strobe and Recognition Lights - CONDITION.
   l. Static Wicks - CHECK (three required).
   m. Aileron, Flap and Speedbrakes - CONDITION and SECURE.
4. Right Nacelle - CHECK.
   a. Oil Level - CHECK; Filler Cap and Access Door - SECURE.
   b. Precooler Overboard Exhaust - CLEAR (on airplanes so equipped)..
   c. Generator Cooling Air Exhaust - CLEAR.
   d. Engine Exhaust and Bypass Ducts - CONDITION and CLEAR.
   e. Engine Fluid Drain Mast - CLEAR.
   f. T-2 Sensor - CONDITION.
5. Right Empennage - CHECK.
   a. Deice Boot Overboard Vents - CLEAR.
   b. Airconditioning Overboard Exhaust - CLEAR.
   c. Hydraulic Service Door - SECURE, drain mast clear.
   d. Right Horizontal and Vertical Stabilizers Deice Boots - CONDITION and SECURE.
   e. Right Elevator and Trim Tab - MOVEMENT and CONDITION. Assure trim tab position matches elevator trim tab position indicator.
   f. Tail Mounted Rotating Beacon Light (if installed) - CONDITION.
   g. Tail Skid - CONDITION and SECURE.
   h. Rudder and Trim Tab - SECURE and CORRECT SERVO TAB ACTION.
   i. Static Wicks (Rudder, Vertical Stabilizer and Elevators) - CHECK (8 required).
   j. Left Horizontal Stabilizer Deice Boot - CONDITION and SECURE.
   k Oxygen Blowout Disc - GREEN (airplanes with tailcone mounted oxygen cylinder)
6. Aft Compartment - CHECK.
   a. Hydraulic Fluid Quantity - CHECK.
   b. Fire Bottle Pressure Gages - CHECK temperature pressure relationship.
   c. Junction Box Circuit Breakers - IN.
   d. Aft Compartment Baggage - SECURE.
   e. Aft Compartment Light - OFF.
   f. Access Door - SECURE and LOCKED.

(Continued Next Page)

EXTERIOR INSPECTION (Continued)

7. Left Empennage - CHECK.
   a. External Power Service Door - SECURE.
   b. Battery Cooling Intake and Vent Lines - CLEAR.
   c. Windshield Heat Exchanger Overboard Exhaust - CLEAR.
8. Left Nacelle - CHECK.
   a. T-2 Sensor - CONDITION.
   b. Engine Fluid Drain Mast - CLEAR.
   c. Engine Exhaust and Bypass Ducts - CONDITION and CLEAR.
   d. Generator Cooling Air Exhaust - CLEAR.
   e. Precooler Overboard Exhaust - CLEAR (airplanes so equipped).
   e. Oil Level - CHECK; Filler Cap and Access Door - SECURE.
9. Left Wing - CHECK.
   a. Flap, Speedbrakes, Aileron and Trim Tab - CONDITION and SECURE.
   b. Static Wicks - CHECK (three required).
   c. Navigation, Strobe and Recognition Lights - CONDITION.
   d. Fuel Tank Vent - CLEAR.
   e. Fuel Filler Cap - SECURE.
   f. Deice Boot - CONDITION and SECURE.
   g. Main Gear Door, Wheel, Tire and Landing Light - CONDITION and SECURE.
   h. Fuel Filter Drain - DRAIN.
   i. Fuel Quick Drains - DRAIN and CHECK FOR CONTAMINATION.
   j. Heated Leading Edge - CONDITION.
   k. Wing Inspection Light - CONDITION.
   l. Generator Cooling Air Inlet - CLEAR.
   m. Engine Fan Duct and Fan - CHECK for bent blades, nicks and blockage of fan stators.

NOTE

If fan is windmilling, place hand on bullet nose or install nozzle cover to stop. If any damage is observed, refer to Chapter 72 of the Engine Maintenance Manual.

   n. Dorsal Fin Air Inlet - CLEAR.
   o. Cabin Door Seal - CHECK for RIPS and TEARS.

CABIN INSPECTION

1. Emergency Exit - SECURE; Handle Lock Pin - REMOVE.
2. Passenger Seats - UPRIGHT, OUTBOARD and POSITIONED AFT or FORWARD as required to clear exit doors.
3. Door Entry Lights - OFF.
4. Luminescent Exit Placard - SECURE.
5. Portable Fire Extinguishers - SERVICED and SECURE.
6. Documents - CHECK ABOARD.
   a. To be displayed in airplane at all times:
      (1) Airworthiness and Registration Certificates.
      (2) Transmitter License(s).
   b. To be carried in the airplane at all times:
      (1) FAA Approved Airplane Flight Manual.

COCKPIT INSPECTION

1. Microphones and Headsets - Aboard.
2. Oxygen Masks - ABOARD.
3. OXYGEN PRIORITY and PASS OXY MASK Valves - CHECK IN NORMAL.
4. Flashlight - ABOARD.
5. Portable Fire Extinguisher - SERVICED and SECURE.

BEFORE STARTING ENGINES

1. Preflight Inspection - COMPLETE.
2. Cabin Door - CLOSE and LOCK. Check green indicators for proper door pin position, handle vertical and in detent.
3. Passenger Briefing - COMPLETE.
4. Crew Oxygen Mask and Pressure - CHECK (check mask at 100% and in EMER).
5. Seats, Seat Belts, Shoulder Harnesses and Rudder Pedals - ADJUST and SECURE.
6. Control Lock - OFF. (Ensure that the handle is fully in and controls and throttles are free.)
7. Circuit Breakers - CHECK.
8. Generators - GEN (OFF if external power is to be used for start).
9. Boost Pumps - NORM.
10. Fuel Crossfeed - OFF.
11. LH and RH Gyro Slave - AUTO.
12. Engine Synchronizer - OFF.
13. Windshield Bleed Air Valves - OFF.
14. Throttles - CHECK OFF.
15. Antiskid - ON.
16. All Other Switches - OFF or NORM.
17. Pilot and Copilot Foot Warmers - OPEN.
18. Battery Switch - EMER (Check power to emergency bus items).
19. Battery Switch - BATT.
20. Battery Voltage - CHECK (24 volts minimum).
21. External Power - CONNECTED (if applicable).
22. Landing Gear Control - DOWN.
23. Parking Brake - SET.
24. Rotary Test Switch - WARNING SYSTEMS CHECKED.
25. Engine Instrument Warning Indicators - NO FLAGS.
26. Fuel Quantity - CHECKED.
27. Anticollision Lights or Optional Rotating Beacon Light - ON.

STARTING ENGINES (EITHER ENGINE FIRST)

1. Flood and Center Panel Lights - FULL BRIGHT (for night operation).
2. Start Button - PRESS momentarily; button - LIGHTS.
3. Throttles - IDLE at 8% to 10% turbine RPM.

(Continued Next Page)

COCKPIT INSPECTION

1. Microphones and Headsets - Aboard.
2. Oxygen Masks - ABOARD.
3. OXYGEN PRIORITY and PASS OXY MASK Valves - CHECK IN NORMAL.
4. Flashlight - ABOARD.
5. Portable Fire Extinguisher - SERVICED and SECURE.

BEFORE STARTING ENGINES

1. Preflight Inspection - COMPLETE.
2. Cabin Door - CLOSE and LOCK. Check green indicators for proper door pin position, handle vertical and in detent.
3. Passenger Briefing - COMPLETE.
4. Crew Oxygen Mask.and Pressure - CHECK (check mask at 100% and in EMER).
5. Seats, Seat Belts, Shoulder Harnesses and Rudder Pedals - ADJUST and SECURE.
6. Control Lock - OFF. (Ensure that the handle is fully in and controls and throttles are free.)
7. Circuit Breakers - CHECK.
8. Generators - GEN (OFF if external power is to be used for start).
9. Boost Pumps - NORM.
10. Fuel Crossfeed - OFF.
11. LH and RH Gyro Slave - AUTO.
12. Engine Synchronizer - OFF.
13. Windshield Bleed Air Valves - OFF.
14. Throttles - CHECK OFF.
15. All Other Switches - OFF or NORM.
16. Pilot and Copilot Foot Warmers - OPEN.
17. Battery Switch - EMER (Check power to emergency bus items).
18. Battery Switch - BATT.
19. Battery Voltage - CHECK (24 volts minimum).
20. External Power - CONNECTED (if applicable).
21. Landing Gear Control - DOWN.
22. Parking Brake - SET.
23. Rotary Test Switch - WARNING SYSTEMS CHECKED.
24. Engine Instrument Warning Indicators - NO FLAGS.
25. Fuel Quantity - CHECKED.
26. Anticollision Lights or Optional Rotating Beacon Light - ON.

STARTING ENGINES (EITHER ENGINE FIRST)

1. Flood and Center Panel Lights - FULL BRIGHT (for night operation).
2. Start Button - PRESS momentarily; button - LIGHTS.
3. Throttles - IDLE at 8% to 10% turbine RPM.

(Continued Next Page)

STARTING ENGINES (EITHER ENGINE FIRST) (Continued)

4. ITT - CHECK for rise. Abort start if ITT approaches 700°C or shows no rise within 10 seconds.

NOTE

The temperature during ground start should not exceed 500°C. Temperatures exceeding this value should be investigated in accordance with the Engine Maintenance Manual.

5. Fan Speed - CHECK for indication of fan RPM with turbine RPM at 20% to 25%. Abort start if no fan RPM is shown by 25% turbine RPM.
6. Engine Instruments - CHECK NORMAL.
7. Fuel, Generator and Hydraulic Annunciators - EXTINGUISHED.
8. Operating Engine - SET 49 to 50 percent turbine RPM.

CAUTION

TURBINE SPEED GREATER THAN 50 PERCENT ON THE OPERATING ENGINE WILL PRODUCE A GENERATOR OUTPUT WHICH MAY DAMAGE THE GENERATOR DRIVE DURING THE SECOND ENGINE START.

9. Other Engine - START; repeat steps 2 through 7.
10. External Power - CHECK CLEAR (if applicable).
11. Generators - GEN (if external power was used for start).
12. Pressurization Source Selector - GND or NORM (Check gyro pressure in green arc).

BEFORE TAXIING

1. Lights - AS REQUIRED.
2. Avionic Power Switches - INV 1 and ON.
3. DC Amperes and Volts - CHECK for normal reading.
4. Passenger Advisory Lights - PASS SAFETY.
5. Antiskid - OFF.
6. Passenger Seats - CHECK FULL UPRIGHT, OUTBOARD and POSITIONED AFT or FORWARD to clear exit doors.

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STARTING ENGINES (EITHER ENGINE FIRST) (Continued)

4. ITT - CHECK for rise. Abort start if ITT approaches 700°C or shows no rise within 10 seconds.

NOTE

The temperature during ground start should not exceed 500°C. Temperatures exceeding this value should be investigated in accordance with the Engine Maintenance Manual.

5. Fan Speed - CHECK for indication of fan RPM with turbine RPM at 20% to 25%. Abort start if no fan RPM is shown by 25% turbine RPM.
6. Engine Instruments - CHECK NORMAL.
7. Fuel, Generator and Hydraulic Annunciators - EXTINGUISHED.
8. Operating Engine - SET 49 to 50 percent turbine RPM.

CAUTION

TURBINE SPEED GREATER THAN 50 PERCENT ON THE OPERATING ENGINE WILL PRODUCE A GENERATOR OUTPUT WHICH MAY DAMAGE THE GENERATOR DRIVE DURING THE SECOND ENGINE START.

9. Other Engine - START; repeat steps 2 through 7.
10. External Power - CHECK CLEAR (if applicable).
11. Generators - GEN (if external power was used for start).
12. Pressurization Source Selector - GND or NORM (Check gyro pressure in green arc).

BEFORE TAXIING

1. Lights - AS REQUIRED.
2. Avionic Power Switches - INV 1 and ON.
3. DC Amperes and Volts - CHECK for normal reading.
4. Passenger Advisory Lights - PASS SAFETY.
5. Antiskid - CHECK ON.

NOTE

If the antiskid is turned off prior to or during taxiing, it must be turned on prior to takeoff. The antiskid must be turned on and the self-testing sequence completed (antiskid annunciator light out) while the airplane is stationary. If the airplane is taxiing when the antiskid system is actuated, the antiskid test sequence will not be completed successfully and the antiskid will not be operational during takeoff.

6. Passenger Seats - CHECK FULL UPRIGHT, OUTBOARD and POSITIONED AFT or FORWARD to clear exit doors.

(Continued Next Page)

BEFORE TAXIING (Continued)

7. Seats, Seat Belts and Shoulder Harnesses - CHECK SECURE.
8. ATIS, Clearance and Flight Management System (if installed) - CHECK.
9. Avionics - AS REQUIRED.
10. Gyro Pressure - CHECK.
11. Temperature Select - AUTO.
12. Auto Temp Select - AS DESIRED.
13. Cabin Fan - HI or LOW if aft baggage compartment dividers are closed.
14. Pressurization - SET ALTITUDE and RATE.
15. Brakes - CHECK (during taxi).

TAXIING

1. Engine Instruments - CHECK.
2. Fuel Quantity - CHECK.
3. AC Test - COMPLETE.
4. Flight Instruments - CHECK.
5. Avionics - CHECK AND SET.
6. Autopilot - CHECK; engage autopilot; check pitch and roll command, heading mode and altitude mode. Push autopilot test button and HOLD. The AP TORQUE annunciator will illuminate, the AUTOPILOT OFF annunciator will illuminate and the autopilot disconnect horn will sound. If all annunciators do not illuminate, autopilot may not be functional.
7. Electric Elevator Trim - CHECK; operate electric elevator trim nose up and push AP/TRIM DISC switch. Verify elevator trim wheel stops rotating. Repeat check for nose down trim.
8. Flaps - CHECK and SET.
9. Flight Controls - FREE and CORRECT.
10. Speedbrakes - CYCLE.
11. Trim - SET.
12. Pressurization Source Selector - NORM.
13. Deice Systems - CHECK (when icing conditions are anticipated).

CAUTION

DO NOT OPERATE DEICE BOOTS WHEN AMBIENT (INDICATED OUTSIDE AIR) TEMPERATURE IS BELOW -40°C (-40°F).

(Continued Next Page)

BEFORE TAXIING (Continued)

7. Seats, Seat Belts and Shoulder Harnesses - CHECK SECURE.
8. ATIS, Clearance and Flight Management System (if installed) - CHECK.
9. Avionics - AS REQUIRED.
10. Gyro Pressure - CHECK.
11. Temperature Select - AUTO.
12. Auto Temp Select - AS DESIRED.
13. Cabin Fan - HI or LOW if aft baggage compartment dividers are closed.
14. Pressurization - SET ALTITUDE and RATE.
15. Brakes - CHECK (during taxi).

TAXIING

1. Engine Instruments - CHECK.
2. Fuel Quantity - CHECK.
3. AC Test - COMPLETE.
4. Flight Instruments - CHECK.
5. Avionics - CHECK AND SET.
6. Autopilot - CHECK; engage autopilot; check pitch and roll command, heading mode and altitude mode. Push to test must disengage autopilot. the AUTOPILOT OFF annunciator will illuminate and the autopilot disconnect horn will sound.
7. Electric Elevator Trim - CHECK; operate electric elevator trim nose up and push AP/TRIM DISC switch. Verify elevator trim wheel stops rotating. Repeat check for nose down trim.
8. Flaps - CHECK and SET.
9. Flight Controls - FREE and CORRECT.
10. Speedbrakes - CYCLE.
11. Trim - SET.
12. Pressurization Source Selector - NORM.
13. Deice Systems - CHECK (when icing conditions are anticipated).

CAUTION

DO NOT OPERATE DEICE BOOTS WHEN AMBIENT (INDICATED OUTSIDE AIR) TEMPERATURE IS BELOW -40°C (-40°F).

(Continued Next Page)

BEFORE TAXIING (Continued)

7. Seats, Seat Belts and Shoulder Harnesses - CHECK SECURE.
8. ATIS, Clearance and Flight Management System (if installed) - CHECK.
9. Avionics - AS REQUIRED.
10. Gyro Pressure - CHECK.
11. Temperature Select - AUTO.
12. Auto Temp Select - AS DESIRED.
13. Cabin Fan - HI or LOW if aft baggage compartment dividers are closed.
14. Pressurization - SET ALTITUDE and RATE.
15. Brakes - CHECK (during taxi).

CAUTION

IF, DURING TAXIING, A HARD BRAKE PEDAL - NO BRAKING CONDITION IS ENCOUNTERED, OPERATE THE EMERGENCY BRAKE SYSTEM. MAINTENANCE IS REQUIRED BEFORE FLIGHT.

TAXIING

1. Engine Instruments - CHECK.
2. Fuel Quantity - CHECK.
3. AC Test - COMPLETE.
4. Flight Instruments - CHECK.
5. Avionics - CHECK AND SET.
6. Autopilot - CHECK; engage autopilot; check pitch and roll command, heading mode and altitude mode. Push autopilot test button and HOLD. The AP TORQUE annunciator will illuminate, the AUTOPILOT OFF annunciator will illuminate and the autopilot disconnect horn will sound. If all annunciators do not illuminate, autopilot may not be functional.
7. Electric Elevator Trim - CHECK; operate electric elevator trim nose up and push AP/TRIM DISC switch. Verify elevator trim wheel stops rotating. Repeat check for nose down trim.
8. Flaps - CHECK and SET.
9. Flight Controls - FREE and CORRECT.
10. Speedbrakes - CYCLE.
11. Trim - SET.
12. Pressurization Source Selector - NORM.
13. Deice Systems - CHECK (when icing conditions are anticipated).

CAUTION

DO NOT OPERATE DEICE BOOTS WHEN AMBIENT (INDICATED OUTSIDE AIR) TEMPERATURE IS BELOW -40°C (-40°F).

(Continued Next Page)

BEFORE TAXIING (Continued)

7. Seats, Seat Belts and Shoulder Harnesses - CHECK SECURE.
8. ATIS, Clearance and Flight Management System (if installed) - CHECK.
9. Avionics - AS REQUIRED.
10. Gyro Pressure - CHECK.
11. Automatic Temperature Control Select - AUTOMATIC; AS DESIRED.
12. Cabin Fan - HI or LOW if aft baggage compartment dividers are closed.
13. Pressurization - SET ALTITUDE and RATE.
14. Brakes - CHECK (during taxi).

CAUTION

IF, DURING TAXIING, A HARD BRAKE PEDAL - NO BRAKING CONDITION IS ENCOUNTERED, OPERATE THE EMERGENCY BRAKE SYSTEM. MAINTENANCE IS REQUIRED BEFORE FLIGHT.

TAXIING

1. Engine Instruments - CHECK.
2. Fuel Quantity - CHECK.
3. AC Test - COMPLETE.
4. Flight Instruments - CHECK.
5. Avionics - CHECK AND SET.
6. Autopilot - CHECK; engage autopilot; check pitch and roll command, heading mode and altitude mode. Push autopilot test button and HOLD. The AP TORQUE annunciator will illuminate, the AUTOPILOT OFF annunciator will illuminate and the autopilot disconnect horn will sound. If all annunciators do not illuminate, autopilot may not be functional.
7. Electric Elevator Trim - CHECK; operate electric elevator trim nose up and push AP/TRIM DISC switch. Verify elevator trim wheel stops rotating. Repeat check for nose down trim.
8. Flaps - CHECK and SET.
9. Flight Controls - FREE and CORRECT.
10. Speedbrakes - CYCLE.
11. Trim - SET.
12. Pressurization Source Selector - NORM.
13. Deice Systems - CHECK (when icing conditions are anticipated).

CAUTION

DO NOT OPERATE DEICE BOOTS WHEN AMBIENT (INDICATED OUTSIDE AIR) TEMPERATURE IS BELOW -40°C (-40°F).

(Continued Next Page)

TAXIING (Continued)

14. Anti-Ice Systems - CHECK.

CAUTION

LIMIT GROUND OPERATION OF PITOT/STATIC HEAT TO TWO MINUTES TO PRECLUDE DAMAGE TO THE PITOT/STATIC HEATER.

15. V_1, V_R, V_2, Fan Speed Settings - CONFIRM for appropriate takeoff flap setting.
16. Crew Briefing - COMPLETE.

BEFORE TAKEOFF

1. Anti-Collision Lights and Recognition Lights (if installed) - ON.

NOTE

Do not operate the anti-collision lights in conditions of fog, clouds or haze as the reflection of the light beam can cause disorientation or vertigo.

2. Pitot/Static Heat - ON.
3. Anti-Ice/Deice Systems - ON if required.
4. Ignition - ON.
5. Antiskid - ON.
6. Transponder - ON.
7. Annunciator Panel - CLEAR.

TAKEOFF

1. Throttles - SET for takeoff.
2. Engine Instruments - CHECK.
3. Brakes - RELEASE.

AFTER TAKEOFF - CLIMB

1. Landing Gear - UP.
2. Landing Lights - OFF.
3. Flaps - UP.
4. Ignition - NORM.
5. Climb Power - SET.
6. Engine Synchronizer - SET.
7. Yaw Damper - AS REQUIRED.
8. Passenger Advisory Lights - AS REQUIRED.
9. Anti-Ice/Deice Systems - AS REQUIRED.
10. Recognition Lights (if installed) - OFF.
11. Altimeters - SET to 29.92 at transition altitude and CROSSCHECK.
12. Crew Oxygen Masks - SET 100% above Flight Level 250.

TAXIING (Continued)

14. Anti-Ice Systems - CHECK.

CAUTION

LIMIT GROUND OPERATION OF PITOT/STATIC HEAT TO TWO MINUTES TO PRECLUDE DAMAGE TO THE PITOT/STATIC HEATER.

15. V_1, V_R, V_2, Fan Speed Settings - CONFIRM for appropriate takeoff flap setting.
16. Crew Briefing - COMPLETE.

BEFORE TAKEOFF

1. Anti-Collision Lights and Recognition Lights (if installed) - ON.

NOTE

Do not operate the anti-collision lights in conditions of fog, clouds or haze as the reflection of the light beam can cause disorientation or vertigo.

2. Pitot/Static Heat - ON.
3. Anti-Ice/Deice Systems - ON if required.
4. Ignition - ON.
5. Transponder - ON.
6. Annunciator Panel - CLEAR.

TAKEOFF

1. Throttles - SET for takeoff.
2. Engine Instruments - CHECK.
3. Brakes - RELEASE.

AFTER TAKEOFF - CLIMB

1. Landing Gear - UP.
2. Landing Lights - OFF.
3. Flaps - UP.
4. Ignition - NORM.
5. Climb Power - SET.
6. Engine Synchronizer - SET.
7. Yaw Damper - AS REQUIRED.
8. Passenger Advisory Lights - AS REQUIRED.
9. Anti-Ice/Deice Systems - AS REQUIRED.
10. Recognition Lights (if installed) - OFF.
11. Altimeters - SET to 29.92 at transition altitude and CROSSCHECK.
12. Crew Oxygen Masks - SET 100% above Flight Level 250.

CRUISE

1. Cruise Power - SET.
2. Cabin Pressure Control - SET.
3. Anti-Ice/Deice Systems - AS REQUIRED.

CAUTION

DO NOT OPERATE DEICE BOOTS WHEN INDICATED OAT IS BELOW -40°C (-40°F).

NOTE

Check deice system for proper operation prior to entering areas in which icing might be encountered.

DESCENT

1. Defog Fan - HI (minimum of 15 minutes prior to descent).
2. Pilot and Copilot Foot Warmers - CLOSE.
3. Air Flow Distribution - COCKPIT.
4. Windshield Bleed Air Valves - MAX.
5. Windshield Bleed Air Switch - LOW.
6. Cabin Pressure Control - SET.
7. Anti-Ice/Deice Systems - AS REQUIRED.
8. Throttles - AS REQUIRED; maintain sufficient power for anti-icing (Engine anti-ice lights remain OFF).
9. Altimeters - SET at transition altitude and CROSSCHECK.
10. Recognition Lights - ON (if installed).
11. Speedbrakes - AS REQUIRED.

BEFORE LANDING

1. Seats, Seat Belts and Shoulder Harnesses - SECURE.
2. Avionics and Flight Instruments - CHECK.
3. V_{REF} and Fan Speed Settings - CONFIRM.
4. Radar Altimeter - SET.
5. Passenger Advisory Lights - PASS SAFETY.
6. Passenger Seats - CHECK FULL UPRIGHT, OUTBOARD and POSITIONED AFT or FORWARD to clear exit doors.
7. Flaps - T.O. and APPROACH.
8. Engine Synchronizer - OFF.
9. Fuel Crossfeed - OFF.
10. Ignition - ON.
11. Landing Gear - DOWN and LOCKED.
12. Antiskid - CHECK ON.
13. Landing Lights - ON.
14. Flaps - LAND.
15. Airspeed - V_{REF}.

(Continued Next Page)

BEFORE LANDING (Continued)

16. Autopilot and Yaw Damper - OFF.
17. Annunciator Panel - CLEAR.
18. Pressurization - CHECK ZERO DIFFERENTIAL.
19. Speedbrakes - RETRACTED PRIOR TO 50 FEET.

NOTE

Do not allow turbine speed RPM to be less than 49%.

LANDING

1. Throttles - IDLE.
2. Brakes - APPLY (after touchdown)

CAUTION

IF, DURING LANDING, A HARD BRAKE PEDAL - NO BRAKING CONDITION IS ENCOUNTERED, OPERATE THE EMERGENCY BRAKE SYSTEM. MAINTENANCE IS REQUIRED BEFORE NEXT FLIGHT.

NOTE

To obtain maximum braking performance from the antiskid system, the pilot must apply continuous maximum effort (no modulation) to the brake pedals.

3. Speedbrakes - EXTEND (after touchdown).

ALL ENGINES GO-AROUND

1. Thrust - SET TAKEOFF THRUST.
2. Airplane Pitch Attitude - POSITIVE.
3. Rotation - To +7.5 DEGREES (use flight director go-around mode).
4. Flaps - T.O. & APPR.
5. Climb Speed - V_{APP}.
6. Landing Gear - UP (when positive rate of climb is established).
7. Flaps - UP.
8. Thrust - SET FOR CLIMB.

AFTER LANDING

1. Flaps - UP.
2. Ignition - NORMAL.
3. Pitot/Static Heat - OFF.
4. Speedbrakes - RETRACT.
5. Anti-Collision and Recognition Lights - OFF (if installed).
6. Antiskid - OFF.
7. Anti-Ice/Deice Systems - OFF.
8. Transponder - OFF or STANDBY.

BEFORE LANDING (Continued)

16. Autopilot and Yaw Damper - OFF.
17. Annunciator Panel - CLEAR.
18. Pressurization - CHECK ZERO DIFFERENTIAL.
19. Speedbrakes - RETRACTED PRIOR TO 50 FEET.

NOTE

Do not allow turbine speed RPM to be less than 49%.

LANDING

1. Throttles - IDLE.
2. Brakes - APPLY (after touchdown)

CAUTION

IF, DURING LANDING, A HARD BRAKE PEDAL - NO BRAKING CONDITION IS ENCOUNTERED, OPERATE THE EMERGENCY BRAKE SYSTEM. MAINTENANCE IS REQUIRED BEFORE NEXT FLIGHT.

NOTE

To obtain maximum braking performance from the antiskid system, the pilot must apply continuous maximum effort (no modulation) to the brake pedals.

3. Speedbrakes - EXTEND (after touchdown).

ALL ENGINES GO-AROUND

1. Thrust - SET TAKEOFF THRUST.
2. Airplane Pitch Attitude - POSITIVE.
3. Rotation - To +7.5 DEGREES (use flight director go-around mode).
4. Flaps - T.O. & APPR.
5. Climb Speed - V_{APP}.
6. Landing Gear - UP (when positive rate of climb is established).
7. Flaps - UP.
8. Thrust - SET FOR CLIMB.

AFTER LANDING

1. Flaps - UP.
2. Ignition - NORMAL.
3. Pitot/Static Heat - OFF.
4. Speedbrakes - RETRACT.
5. Anti-Collision and Recognition Lights - OFF (if installed).
6. Anti-Ice/Deice Systems - OFF.
7. Transponder - OFF or STANDBY.

SHUTDOWN

1. Avionics Power Switches - OFF.
2. Defog Fan - OFF.
3. Flaps - T.O. & APPR.
4. Throttles - OFF after allowing ITT to stabilize at minimum value for one minute.
5. Passenger Advisory Lights - OFF.
6. Anticollision Lights or Optional Rotating Beacon - OFF.
7. Exterior Lights - OFF.
8. Control Lock - ENGAGE.
9. Parking Brake - SET or Wheels - CHOCK.

NOTE

- If brakes are very hot, do not set parking brake.
- Do not set parking brake if the anticipated cold soak temperature is -15°C (5°F) or below.

10. Battery Switch - OFF.
11. Engine Covers - INSTALL (after engines have cooled).

ANTI-ICE ADDITIVES

It is recommended that fuel anti-icing additive be used to control bacteria and fungi. The anti-ice additives EGME/DIEGME have shown, through service experience, that they provide acceptable protection from microorganisms such as bacteria and fungi that can rapidly multiply and cause serious corrosion in tanks and may block filters, screens and fuel metering equipment.

PROCEDURE FOR ADDING FUEL ADDITIVE

When the airplane is being refueled through the over wing ports, use the following procedure to blend anti-icing additive to nontreated fuel:

1. Attach additive to refuel nozzle, making sure blender tube discharges in the refueling stream.
2. Start refueling while simultaneously fully depressing and slipping ring over trigger of blender.

WARNING

ANTI-ICING ADDITIVES CONTAINING ETHYLENE GLYCOL MONOMETHYL ETHER (EGME) ARE HARMFUL IF INHALED, SWALLOWED OR ABSORBED THROUGH THE SKIN, AND WILL CAUSE EYE IRRITATION. IT IS ALSO COMBUSTIBLE. BEFORE USING THIS MATERIAL, REFER TO ALL SAFETY INFORMATION ON THE CONTAINER.

(Continued Next Page)

ANTI-ICE ADDITIVES (Continued)

CAUTION

- DIETHYLENE GLYCOL MONOMETHYL ETHER (DIEGME) IS SLIGHTLY TOXIC IF SWALLOWED AND MAY CAUSE EYE REDNESS, SWELLING AND IRRITATION. IT IS ALSO COMBUSTIBLE. BEFORE USING THIS MATERIAL, REFER TO ALL SAFETY INFORMATION ON THE CONTAINER.

- ASSURE THE ADDITIVE IS DIRECTED INTO THE FLOWING FUEL STREAM WITH THE ADDITIVE FLOW STARTED AFTER THE FUEL FLOW STARTS AND STOPPED BEFORE FUEL FLOW STOPS. DO NOT ALLOW CONCENTRATED ADDITIVE TO CONTACT COATED INTERIOR OF FUEL TANK OR AIRPLANE PAINTED SURFACE.

- USE NOT LESS THAN 20 FLUID OUNCES OF ADDITIVE PER 156 GALLONS OF FUEL OR MORE THAN 20 FLUID OUNCES OF ADDITIVE PER 104 GALLONS OF FUEL.

PROCEDURE FOR CHECKING FUEL ADDITIVE

1. Prolonged storage of the airplane will result in a water buildup in the fuel which "leaches out" the additive. An indication of this is when an excessive amount of water accumulates in the fuel tank sumps. The concentration of additive can be checked using an anti-icing additive concentration test kit available from Cessna Aircraft Company, Citation Marketing Division, Wichita, KS 67277. It is imperative that the instructions for the test kit be followed explicitly when checking the additive concentration. The additive concentrations by volume for EGME/DIEGME shall be 0.10 percent minimum and 0.15 percent maximum, either individually or mixed in a common tank. Fuel, when added to the tank, should have a minimum concentration of 0.10 percent by volume.

TURBULENT AIR PENETRATION

Flight through severe turbulence should be avoided if possible. The following procedures are recommended for flight in severe turbulence.

1. Ignition - ON.
2. Airspeed approximately 180 KIAS. Do not chase airspeed.
3. Maintain a constant attitude without chasing the altitude. Avoid sudden large control movements.
4. Operation of autopilot is recommended using the soft ride mode with altitude hold, IAS hold and/or vertical speed hold disconnected as applicable.

OXYGEN SYSTEM

Oxygen for flight crew and passengers is supplied from an oxygen cylinder and may be either 22-cubic foot capacity utilizing the standard oxygen mask or a 64-cubic foot capacity utilizing the optional sweep-on mask. The oxygen cylinder pressure gage is located on the instrument panel. Refer to the appropriate oxygen utilization chart for duration of oxygen supply (Figure 3-3).

(Continued Next Page)

OXYGEN SYSTEM (Continued)

There are two oxygen control switches on the pilot's left console. The oxygen priority valve should be in the NORMAL position and the passenger oxygen masks selector should be in the NORMAL position. If the cabin altitude exceeds approximately 14,000 feet, the passenger masks will automatically drop. Oxygen will flow to these masks when the lanyard is pulled as the mask is donned. Therapeutic oxygen may be supplied to the passengers at any cabin altitude by placing the passenger oxygen mask selector in the MANUAL DROP position. This will cause all masks in the cabin to deploy. Oxygen flow may be shut off from passenger masks by positioning the oxygen priority valve to the CREW ONLY position.

WARNING

- **NO SMOKING WHEN OXYGEN IS BEING USED OR FOLLOWING USE OF PASSENGER OXYGEN UNTIL LANYARDS HAVE BEEN REINSTALLED.**
- **DUE TO HUMAN PHYSIOLOGICAL LIMITATIONS, THE PASSENGER OXYGEN SYSTEM IS NOT SATISFACTORY FOR CONTINUOUS OPERATION ABOVE 25,000 FEET CABIN ALTITUDE AND THE CREW OXYGEN SYSTEM IS NOT SATISFACTORY FOR CONTINUOUS OPERATION ABOVE 34,000 FEET CABIN ALTITUDE. INDIVIDUAL PHYSIOLOGICAL LIMITATIONS MAY VARY. IF CREW OR PASSENGERS EXPERIENCE HYPOXIC SYMPTOMS, DESCEND TO A LOWER CABIN ALTITUDE.**

OXYGEN MASKS

The standard oxygen mask is a diluter demand mask with an integral mounted microphone and oxygen regulator. Each oxygen regulator has a lever allowing manual selection of diluter demand (normal) or demand (100% oxygen) flows. The crewmember is assured that oxygen is being received when no restriction to breathing is present with the mask donned and in the 100% position. The standard mask qualifies as a quick-donning mask when it is positioned around the neck. To ensure adequate supplemental oxygen, the regulator should be set to 100% for cabin altitudes above 20,000 feet.

The optional oxygen mask is a quick donning sweep-on mask with a microphone and regulator attachment. The mask is a diluter demand with pressure breathing available by selecting the EMER position. The crewmember is assured that oxygen is being received when no restriction to breathing is present with the mask donned and in the 100% position. Selection of the EMER position will provide a steady flow of pressurized oxygen in the face cone. To qualify as a quick donning mask, the mask must be properly stowed in it's retainer located just below each crew member's side window. (Refer to placard adjacent to retainer for proper stowage position.) To conserve oxygen when using the mask, the regulator may be set to normal if the cabin altitude is at/or below 20,000 feet.

When using an oxygen mask for smoke protection, 100% position should be selected. The emergency position may be used with the optional oxygen mask.

OXYGEN MASK MIC AND HEADSET MIC

A two-position toggle switch is provided on the pilot's and copilot's side consoles. The switch is marked MIC OXY MASK and MIC HEAD SET. Depressing microphone button on the appropriate control wheel allows a crew member to transmit through the headset microphone or oxygen mask microphone, whichever is selected.

OXYGEN SUPPLY CHART

STANDARD OXYGEN MASK AND 22-CUBIC FOOT CYLINDER

AVAILABLE TIME IN HOURS:MINUTES								
CABIN ALTITUDE	1 COCKPIT	2 COCKPIT	2 COCKPIT 2 CABIN	2 COCKPIT 4 CABIN	2 COCKPIT 6 CABIN	2 COCKPIT 8 CABIN	2 COCKPIT 10 CABIN	2 COCKPIT 11 CABIN
8000	2:11	1:06	0:32	0:21	0:16	0:13	0:11	0:10
10,000	2:23	1:12	0:34	0:22	0:16	0:13	0:11	0:10
15,000	3:10	1:35	0:38	0:24	0:17	0:14	0:11	0:11
20,000	4:29	2:15	0:44	0:26	0:19	0:15	0:12	0:11
25,000	3:01	1:30	0:39	0:25	0:18	0:14	0:12	0:10
30,000	4:00	2:00						
34,000	5:15	2:38						

OPTIONAL OXYGEN MASK AND 64-CUBIC FOOT CYLINDER

AVAILABLE TIME IN HOURS:MINUTES								
CABIN ALTITUDE	1 COCKPIT	2 COCKPIT	2 COCKPIT 2 CABIN	2 COCKPIT 4 CABIN	2 COCKPIT 6 CABIN	2 COCKPIT 8 CABIN	2 COCKPIT 10 CABIN	2 COCKPIT 11 CABIN
8000	14:02	7:01	2:08	1:15	0:53	0:41	0:34	0:30
10,000	14:49	7:25	2:11	1:17	0:54	0:42	0:34	0:31
15,000	16:40	8:20	2:17	1:20	0:56	0:43	0:35	0:32
20,000	17:47	8:53	2:22	1:22	0:57	0:44	0:36	0:32
25,000	8:45	4:22	1:53	1:12	0:53	0:42	0:34	0:31
30,000	11:36	5:48						
34,000	15:14	7:37						

NOTE

Cockpit masks are assumed to be at the normal setting at 20,000 feet cabin altitude with a respiratory rate of 10 liters per minute - body temperature pressure saturated and at 100% setting at and above 25,000 feet.

Figure 3-3

FLIGHT INTO ICING

Flight into known icing is the intentional flight into icing conditions that are known to exist by either visual observation or pilot weather report information. Icing conditions exist any time the indicated RAT is +10°C and below, and visible moisture in any form is present. This airplane, with properly operating anti-ice and deice equipment, is approved to operate in maximum intermittent and maximum continuous icing conditions as defined by FAR 25, Appendix C. The equipment has not been designed to provide protection against freezing rain or severe conditions of mixed or clear ice. During all operations, the pilot is expected to exercise good judgement and be prepared to alter the flight plan, i.e. exit icing, if conditions exceed the capability of the aircraft and equipment.

(Continued Next Page)

FLIGHT INTO ICING (Continued)

Ice accumulations significantly alter the shape of airfoils and increase the weight of the aircraft. Flight with ice accumulated on the aircraft will increase stall speeds and alter the speeds for optimum performance. Flight at high angle-of-attack (low airspeed) can result in ice building on the underside of the wings and the horizontal tail aft of areas protected by boots or leading edge anti-ice systems. Minimum airspeed for sustained flight in icing conditions (except approach and landing) is 160 KIAS. Prolonged flight with the flaps and/or landing gear down is not recommended. Trace or light amounts of icing on the horizontal tail can significantly alter airfoil characteristics which will affect stability and control of the aircraft.

Freezing rain and clear ice will be deposited in layers over the entire surface of the airplane and can "run back" over control surfaces before freezing. Rime ice is an opaque, granular and rough deposit of ice that usually forms on the leading edges of wings, tail surfaces, pylons, engine inlets, antennas, etc.

ANTI-ICE AND DEICE SYSTEMS

The anti-ice system consists of bleed air heated engine inlets, bullet nose, stators, windshields (left and right), electrically heated pitot tubes, static ports and angle-of-attack probe (if installed) and wing leading edge segments ahead of each engine. The wing outboard of the electric elements, the horizontal stabilizer and the vertical stabilizer are deiced by pneumatic boots. Windshield alcohol anti-ice is also provided as a backup system for the left windshield.

All anti-ice systems should be turned on when operating in visible moisture and the indicated RAT is +10°C or below.

NOTE

- Icing conditions exist when the indicated RAT on the ground and for takeoff is +10°C or below; the indicated RAT inflight is +10°C or below; and visible moisture in any form is present (such as clouds, fog with visibility of one mile or less, rain, snow, sleet or ice crystals.)

- Icing conditions also exist when the indicated RAT on the ground and for takeoff is +10°C or below when operating on ramps, taxiways or runways where snow, ice, standing water, or slush may be ingested by the engines or freeze on engine nacelles or engine sensor probes.

(Continued Next Page)

ANTI-ICE AND DEICE SYSTEMS (Continued)

ENGINE ANTI-ICE SYSTEM

Bleed air flows continuously through the bullet nose whether the anti-ice system is activated or not. When the engine anti-ice switches (one for each engine) are positioned to LH and/or RH, bleed air flows through the applicable engine inlet and engine stators if the throttle position is above 45% fan speed. If sufficient bleed air flow is not available to maintain the proper engine inlet temperature or the stator bleed air valve does not open,the engine ice fail light on the annunciator panel will illuminate. The light may be extinguished by increasing engine RPM. Operation of the system may be checked by first turning on the igniters and observing engine ITT and fan speed when the engine anti-ice is turned on. The ITT should increase and the fan speed should decrease. If the check is made on the ground, it will require approximately two minutes to extinguish the engine ice fail light with turbine speed set at approximately 70%. Maximum engine power setting values are reduced when using anti-ice, as shown in Section IV. Loss of electrical power to the valve supplying flow to the inlets results in the valve opening; thus, assuring anti-ice capability.

The electrically heated wing section ahead of each engine consists of multiple elements and is turned on with the same switch which turns on the bleed air to the engine inlet and is not dependent upon engine power. Normal operation of the heated sections will result in approximately 150 amperes each, as shown on the ammeters, until the wing temperature reaches the maximum allowable, at which time the sections cycle off; thus, maintaining a given temperature range. The electrically heated wing section is controlled automatically by a controller. If the controller fails, the system will still cycle due to an overheat sensor installed in the system. If the system is cycling with a failed controller, the L or R ENG ICE FAIL light will illuminate each time the system cycles off. In the event any element fails in the heated section, or a minimum acceptable temperature is not maintained on the wing elements, the L or R ENG ICE FAIL light will illuminate. The affected heated wing section may then be observed for indication of ice buildup.

SURFACE DEICE

The pneumatic boots are activated by a surface deice switch, which is spring-loaded to OFF and provides one complete cycle following momentary actuation. The empennage boots inflate, then deflate; followed immediately by both wing boots inflating, then deflating. Proper operation of the surface deice system is indicated by a surface deice light illumination on the annunciator panel, which comes on when the pressure reaches the proper value and should blink off momentarily between the first and last portions of each cycle. A wing deice inspection light is provided on the pilot's side for observing ice buildup on the wing. Surface deice should be actuated when the ice thickness is estimated to be 1/4 to 1/2 inch. Actuating the system too soon will result in ice bridging on the wing. Waiting until ice accumulates to greater than 1/2 inch prior to system activation may result in such excessive ice buildup on the empennage surfaces that ice shedding is not adequate. A reset position is provided on the surface deice switch which terminates boot inflation and stops the cycle.

ANTI-ICE AND DEICE SYSTEMS (Continued)

WINDSHIELD ANTI-ICE

The windshield bleed air system provides windshield anti-ice under all normal operating conditions. This system also provides external windshield defog and rain removal. The system supplies engine bleed air through an electrically actuated pressure regulating shutoff valve in the tailcone of the airplane and manually positioned valves which regulate air to each windshield. The manual valves are located at each bleed air nozzle and are left in the OFF position for all normal operation. A check should be made to ensure that the rain removal knob is pushed IN for windshield anti-icing. When windshield anti-icing is required, the W/S bleed valves are turned ON and the W/S bleed switch is turned to LOW if the indicated OAT is above -18°C or to HI if the indicated OAT is -18°C or below. Normal system operation is indicated by an increase in air noise as the bleed air discharges from the nozzles. A temperature sensor is located near the discharge nozzles and automatically controls the windshield bleed air temperature by modulating cross flow air through a heat exchanger in the tailcone. An additional temperature sensor is located in the bleed air line, which automatically actuates the electrical shutoff valve and illuminates the windshield air overheat annunciator light should the bleed air temperature exceed the normal control value. This condition should not occur unless a sustained high power, low airspeed condition is maintained or a system malfunction occurs. If the windshield air overheat light illuminates, the manual bleed air valves should be modulated to reduce the flow. If the light remains on for over 60 seconds, position the manual valves to OFF. The windshield air overheat light will also illuminate if the electrical shutoff valve in the tailcone opens with the windshield bleed air switch in the OFF position.

Self-test of the temperature monitor system is normally accomplished during the preflight warning systems check by turning the windshield bleed air switch to either the HI or LOW position and selecting the W/S temperature position on the rotary test switch. Proper system function is verified by illumination of the W/S AIR O'HEAT annunciator light. Self-tests may also be accomplished in flight, if desired.

If the windshield bleed air anti-ice system fails, a backup alcohol anti-ice system is provided for the left windshield only. Sufficient alcohol is provided for ten minutes of operation; therefore, plans should be made to leave the icing environment without delay.

PITOT-STATIC ANTI-ICE

Electric heating elements are provided in the pilot's and copilot's pitot tubes, and pilot's and copilot's static ports and the angle-of-attack probe (if installed). The pitot static anti-ice switch actuates all of these elements. Operation may be checked on preflight by turning the switch ON for approximately 30 seconds, then OFF; then feeling each element during the external inspection. Ground operation of the pitot-static heat should be limited to less than two minutes to avoid damage. Failures of pitot and static heating elements are annunciated by the PSHTR OFF light on the annunciator panel. Failure of the optional AOA probe heating element is annunciated by the AOA HTR FAIL light.

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RAIN REMOVAL

The windshield bleed air system provides rain removal during flight and ground operations. This system also serves as the windshield anti-ice system when used as described in the windshield anti-ice paragraph of this section.

When rain removal is desired, the rain removal push-pull knob should be pulled out and the W/S BLEED switch should be positioned to LOW. A check should be made to ensure the WINDSHIELD BLEED AIR rotary controls are in the MAX position.

The engine ignition should be turned ON when flying in heavy rain.

WATER/SLUSH OPERATION

The airplane should not be operated when standing water/slush depths exceed 0.4 inch. If the 0.4 inch depth is inadvertently exceeded, compressor surges (bangs) may result.

HYDRAULIC SYSTEM

Hydraulic system pressure is supplied by one pump on each engine. The system is pressurized to 1500 PSI only during actuation of the landing gear, flaps or speedbrakes. Only Skydrol 500A, B, B-4, C, LD-4, or Hyjet, Hyjet W, III, IV, IVA or IVA PLUS are to be used as fluid. Normal operation is indicated by the HYD PRESS ON light on the annunciator panel. When a cycle of the gear, flaps or speedbrakes is complete, the light should go out. Should the system remain pressurized for an extended time, the speedbrake, flap or landing gear circuit breaker should be pulled as necessary to relieve system pressure.

ELECTRICAL SYSTEM

DC power is supplied by a 400-ampere starter-generator unit on each engine and a 39 ampere-hour nickel cadmium battery. Engine ground starts may be accomplished by use of either external power or the airplane battery for the first engine start. The second engine normally uses the generator from the operating engine to supply electrical power for the start. External power or the airplane battery may be used for starting the second engine, if desired, by turning the generators to the off position. Generator assist start capability is disabled in flight; therefore, all starter assist airstarts are from the battery. One generator is capable of supplying all standard electrical requirements in flight in the event of a generator failure. A protected DC power path is included which provides bus extension to the opposite circuit breaker panel. This is identified on each circuit breaker panel as RH and LH CB PANEL. The bus extensions feed DC power from one side to the bus extension on the opposite circuit breaker panel in order to allow logical grouping of corresponding LH and RH system circuit breakers.

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ELECTRICAL SYSTEM

DC power is supplied by a 400-ampere starter-generator unit on each engine and a 44 ampere-hour nickel cadmium battery. Engine ground starts may be accomplished by use of either external power or the airplane battery for the first engine start. The second engine normally uses the generator from the operating engine to supply electrical power for the start. External power or the airplane battery may be used for starting the second engine, if desired, by turning the generators to the off position. Generator assist start capability is disabled in flight; therefore, all starter assist airstarts are from the battery. One generator is capable of supplying all standard electrical requirements in flight in the event of a generator failure. A protected DC power path is included which provides bus extension to the opposite circuit breaker panel. This is identified on each circuit breaker panel as RH and LH CB PANEL. The bus extensions feed DC power from one side to the bus extension on the opposite circuit breaker panel in order to allow logical grouping of corresponding LH and RH system circuit breakers.

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ELECTRICAL SYSTEM (Continued)

DC power for all avionics is supplied through one avionics power switch. AC power is supplied by two 300 VA (or optional 600 VA) solid-state inverters. Either inverter will sulpply power to the flight director AC power bus which powers the pilot's ADI and HSI, the pilot's and copilot's RMI needles, altimeter and altitude alert/vertical nav system, the flight director and autopilot and the radar.

An emergency battery position is provided that supplies DC power to operate Comm 1, Nav 2, the copilot's HSI, the overhead floodlights. and the voltmeter. The N_1 strip gages are the only engine instruments available and these will not read accurately unless a throttle setting equivalent to about 50% N_1 or greater is selected. Communications can be continued using a headset and selecting EMER COMM on either audio amplifier.

A battery overheat warning system is provided to warn the pilot in the event of abnormally high battery temperatures. During self-testing of the circuit by the rotary test switch, the red BATT O'TEMP and the MASTER WARNING light will flash. An internal battery temperature of 63°C (145°F) will cause the red BATT O'TEMP annunciator light to illuminate steadily and trigger the MASTER WARNING light. Battery temperatures exceeding 71°C (160°F) will cause the annunciator and the MASTER WARNING light to flash.

HONEYWELL SPZ-500 FLIGHT GUIDANCE SYSTEM

The Honeywell SPZ-500 flight director and torque adaptive autopilot systems provide complete flight guidance using the flight director separately, the autopilot separately, or both systems concurrently. The torque adaptive autopilot provides two levels of torque authority automatically for both the pitch and roll axes. The torque switching is accomplished through a barometric switch (set to 14,500 feet), which is installed in the copilot's static system. The horizontal and vertical modes of operation of either system are controlled through a common mode control panel.

In addition to providing basic attitude control with the autopilot, including a soft ride mode and a bank limit mode, the system provides a heading mode, VOR nav mode, VOR/localizer approach mode, back course localizer mode and glideslope mode. Altitude hold, IAS hold, vertical speed hold and VNAV (vertical nav) mode along with touch control steering are provided. The autopilot may be used in all phases of flight except for takeoff and landing, and approach below landing approach minimum.

The flight director is normally armed unless the FD OFF mode has been selected. In the armed condition, the command bars can be brought into view by selecting a mode on the mode control panel. If FD OFF has been selected, the command bars are brought into view by canceling FD OFF and selecting another mode on the mode control panel.

All three axes of the autopilot are turned on by selecting AP ENGAGE on the autopilot control panel. Selecting YD ENGAGE on the autopilot control panel provides separate yaw damping capability and does not affect flight director operation. The yaw damper may be used for all phases of flight except takeoff and landing.

The flight director is turned off by turning off all modes, by selecting FD OFF on the mode control panel or by selecting GO-AROUND mode followed by activation of the TCS button.

The autopilot and/or yaw damper is turned off by any of the following:

1. Autopilot/Trim Disengage Switch - PRESS.
2. Electric Trim Button - PRESS (disconnects pitch and roll axis).
3. Go-Around Switch - PRESS.

The autopilot is also automatically turned off if power is removed to the system or part of the system. Any time the autopilot is turned off, a warning horn will sound for one second. Also, when the autopilot is intentionally turned off, a light on the pilot's panel illuminates for one second. An inadvertent autopilot disconnect causes the light on the pilot's panel to illuminate until the disconnect switch on either control wheel is pushed or the electric trim button is pushed.

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HONEYWELL SPZ-500 FLIGHT GUIDANCE SYSTEM

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In addition to providing basic attitude control with the autopilot, including a soft ride mode, the system provides a heading mode, VOR nav mode, VOR/localizer approach mode, back course localizer mode and glideslope mode. Altitude hold, IAS hold, vertical speed hold and VNAV (vertical nav) mode along with touch control steering are provided. The autopilot may be used in all phases of flight except for takeoff and landing, and approach below landing approach minimum.

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HONEYWELL SPZ-500 FLIGHT GUIDANCE SYSTEM (Continued)

Navigation control of the flight guidance system can be obtained from either the Nav 1 receiver or the Nav 2 receiver. Navigation information from the Nav 1 receiver is displayed on the pilot's HSI (left panel) and an omni bearing indicator repeater on the copilot's panel. Navigation information from the Nav 2 receiver is displayed on the copilot's panel. If Nav 1 is selected, the heading, course and navigation information supplied to the flight director and autopilot are controlled with the pilot's HSI and the Nav 1 receiver. If Nav 2 is selected, the heading, course and navigation information supplied to the flight director and autopilot are controlled with the copilot's HSI and the Nav 2 receiver.

Vertical navigation is provided to the flight director using the altitude alert/vertical nav control head. The vertical navigation system works only in conjunction with the NAV 1 system and performs its computations using DME information. To use the vertical navigation system, the DME must be in the NAV 1 position. The vertical navigation path to the selected waypoint will be displayed on the VNAV computer/controller when the required information is set into the computer/controller. After mode engagement, the vertical angle will be displayed on the vertical deviation indicator on the pilot's HSI. A one-dot deviation represents approximately a 750-foot deviation from the desired angle. Vertical navigation angles in excess of five degrees are displayed in a flashing mode. The system will not engage if the displayed angle of climb or descent is in excess of six degrees. Angles greater than three degrees should only be used for altitude changes greater than 3000 feet.

Any horizontal mode may be selected at any time; however, if a nav mode is selected outside the capture limits, the nav mode will arm and the heading mode will automatically be selected until the nav captures.

If the optional copilot's flight director is installed, operation is identical to the pilot's system. In the dual flight director installation, the autopilot can be driven from either flight director by selecting FD1 or FD2 on the autopilot selector switch located below the autopilot control wheel. The vertical navigation system will not couple to the copilot's flight director.

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HONEYWELL SPZ-500 FLIGHT GUIDANCE SYSTEM (Continued)

The torque adaptive autopilot must be tested prior to each flight to ensure that: 1) the current monitor, and 2) the torque limiter are both operational. Prior to takeoff, engage the autopilot, and then push and hold the TEST EACH FLT button on the autopilot control panel. The AP TORQUE annunciator must illuminate immediately and the autopilot must disengage within approximately two seconds from the time the TEST EACH FLT button was pushed. The AUTOPILOT OFF annunciator will illuminate and a warning horn will sound as the autopilot disengages. Engage the autopilot with the elevators and ailerons in the neutral position. Rotation of the pitch wheel must result in movement of the elevators in the direction of pitch wheel movement. Rotation of the turn knob must result in movement of the ailerons in the direction of the turn knob movement. Engage the heading mode with the heading cursor under the lubber line. Move the heading cursor to the left of the lubber line and the control wheel should roll left. Engage the altitude hold mode; then set the pilot's altimeter to a lower altitude and the control wheel should move aft. Disengage the altitude hold mode. Pull aft on the control wheel. After a short delay, the elevator trim wheel must start trimming nose down. Disengage the autopilot with the AP/TRIM DISC switch on the control wheel. The autopilot must disengage and the AUTOPILOT OFF light must illuminate for one second.

VOR/LOC FAIL ANNUNCIATOR LIGHTS

On airplanes equipped with VOR/LOC FAIL annunciator lights the standard pilot's NAV 2 repeater, and on dual flight director equipped airplanes the copilot's NAV 1 repeater, is replaced with VOR/LOC fail annunciator lights mounted on the respective pilot's panel. The annunciator lights are self tested by placing the warning switch to the annunciator position with the avionic switches on, and then observing on the pilot's panel the annunciator VOR/LOC 2 FAIL, or on the copilot's panel (if a dual flight director equipped airplane) the annunciator VOR/LOC 1 FAIL being illuminated.

VHF NAVIGATION SYSTEM

Momentary interference between the No. 2 Comm and the VHF navigation system may occur when the NAV's are tuned toward the high end of the frequency band (114.0 to 118.0 MHz) and the No. 2 Comm is tuned to frequencies from 118.0 MHz to 120.0 MHz. Should this occur, a Comm frequency above 120.0 MHz should be requested.

A NAV TEST button on the navigation control panel is designed to give the pilot a simple and accurate method of checking the VHF navigation receiver integrity.

NOTE

The NAV TEST should not be performed while the autopilot is coupled to the flight guidance system.

HONEYWELL SPZ-500 FLIGHT GUIDANCE SYSTEM (Continued)

A "Test Each Flt" button is provided on the autopilot control panel. This button activates a test of the current monitor of the autopilot and must be operationally checked prior to each flight. Prior to takeoff, engage the autopilot then push and hold the "Test Each Flt" button. The autopilot must disengage within approximately two seconds from the time the TEST EACH FLT button was pushed. The AUTOPILOT OFF annunciator will also illuminate and the warning horn will sound as a check of the disconnect warning system. Engage the autopilot with the elevators and ailerons in the neutral position. Rotation of the pitch wheel must result in movement of the elevators in the direction of pitch wheel movement. Rotation of the turn knob must result in movement of the ailerons in the direction of the turn knob movement. Engage the heading mode with the heading cursor under the lubber line. Move the heading cursor to the left of the lubber line and the control wheel should roll left. Engage the altitude hold mode; then set the pilot's altimeter to a lower altitude and the control wheel should move aft. Disengage the altitude hold mode. Pull aft on the control wheel. After a short delay, the elevator trim wheel must start trimming nose down. Disengage the autopilot with the AP/TRIM DISC switch on the control wheel. The autopilot must disengage and the AUTOPILOT OFF light must illuminate for one second.

VOR/LOC FAIL ANNUNCIATOR LIGHTS

On airplanes equipped with VOR/LOC FAIL annunciator lights the standard pilot's NAV 2 repeater, and on dual flight director equipped airplanes the copilot's NAV 1 repeater, is replaced with VOR/LOC fail annunciator lights mounted on the respective pilot's panel. The annunciator lights are self tested by placing the warning switch to the annunciator position with the avionic switches on, and then observing on the pilot's panel the annunciator VOR/LOC 2 FAIL, or on the copilot's panel (if a dual flight director equipped airplane) the annunciator VOR/LOC 1 FAIL being illuminated.

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FUEL SYSTEM

The fuel system consists of a single fuel tank feeding the right engine and a single tank feeding the left engine. No fuel management is required in normal operation of the airplane. If necessary to balance the fuel load due to asymmetric fueling, both engines may be operated from one tank or, for single-engine operation, the operating engine may be fed from either tank. When selecting crossfeed, allow sufficient time for the INTRANSIT light to illuminate, prior to reselecting OFF, or the opposite tank. If the airplane is parked on a slope, care should be taken to assure fuel is not being lost through the fuel vents.

FUEL CONTROL STEP MODULATOR

An increased fuel schedule is provided by the step modulator to compensate for the bleed air loss due to operation of the engine anti-ice. The step modulator provides the increased fuel schedule when the igniters are on. Proper operation of the step modulator can be checked by observing the engine ITT and fan speed when the igniters are turned ON. An increase in both fan speed and ITT indicates proper step modulator operation. The engine anti-ice must be off for this check to isolate the affect of the bleed air loss from the increased fuel schedule.

LOW FUEL LEVEL WARNING SYSTEM

The low fuel level warning system provides a visual warning to the pilot when 169 pounds or less of usable fuel remains in the respective fuel tank. The system consists of an electromagnetic float switch in each fuel tank and left and right FUEL LOW LEVEL lights. These lights are tested by the annunciator panel, test switch and dimmed by the same control as the annunciator panel. A usable fuel quantity between 169 and 219 pounds will cause an amber LOW FUEL LEVEL light to illuminate, indicating left or right tank low fuel level.

PRESSURIZATION/ENVIRONMENTAL SYSTEM

Normal system pressure is supplied by compressor bleed air from each engine at the rate of 6 pounds/minute passing through a series of control valves or precoolers and into the air cycle machine air conditioning and pressurization systems.

The control valves are combination flow control, shutoff and check valves. Valve position is controlled by a pressurization source selector switch providing OFF, GND, LH, NORM, RH and EMER positions. Normal inflight operation would be in the NORMAL mode. An electrical system malfunction will usually not affect normal pressurization. The control valves require electrical power to move from the normal mode position. If a different mode has been selected at the time electrical power to the valves is interrupted, the valves will return to the normal mode position. An overheat failure of the air cycle machine will result in automatic transfer from NORMAL mode to EMER mode. EMER mode should be used any time normal pressurization bleed air is not available. Its operation is indicated by an annunciator panel light. An increase in cabin noise level and temperature will also result since emergency bleed air comes directly from the left engine into the cabin.

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The precooler is a bypass-bleed-air/compressor-bleed-air heat exchanger. Fan bypass bleed air is routed from the low pressure engine bleed port through a control valve to the precooler and then overboard. Compressor bleed air passes through the high pressure

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PRESSURIZATION/ENVIRONMENTAL SYSTEM (Continued)

The GND mode is provided to supply bleed air from the right engine only for heating and cooling during ground operations. Operation in the GND mode is indicated by an annunciator panel light. The ground valve is a motorized shutoff valve and an automatic ground mode shutoff system is provided to prevent air cycle machine overpressurization. A primary pressure switch will actuate to close the ground valve at right engine turbine speeds (N_2) of approximately 70% to 80%. When the ground valve is completely closed, the GND bleed annunciator will extinguish. Reducing power setting somewhat below 70% N_2 will cause the ground valve to open again, illuminating the GND bleed annunciator. In the event the primary switch fails to close the valve, a secondary pressure switch will close the valve at right engine turbine speeds (N_2) of approximately 2% higher than the primary pressure switch. Additionally, the ACM OVERPRESS annunciator light will illuminate, indicating the need for maintenance on the system. The ACM OVERPRESS light will remain ON and GND mode cannot be re-selected until electrical power is removed and re-applied.

Normal bleed air supply to the cabin passes through the air cycle machine which provides cooling or heating of the cabin as desired by the pilot. Bleed air enters the ACM and passes over two heat exchangers for initial cooling. The air is then compressed by a turbine-driven compressor and passed over a third heat exchanger. Finally, the air drives the turbine, which extracts energy to drive the compressor and cools the air further. During ground operations, both heat exchangers are supplied with cooling air by a high pressure bleed ejector. The ejector pulls air through the dorsal scoop duct, passes it over the heat exchangers and dumps it overboard. In flight, the ejector is deactivated and ram air from the dorsal scoop passes over the heat exchangers. To avoid ejector bleed extraction during takeoff, the ejector is also deactivated on the ground anytime the brakes are released and engine speed exceeds 85% N_2. Ejector operation is indicated by an annunciator panel light.

Normal control of cabin temperature is maintained by the AUTOMATIC temperature control. The temperature range of this control is 18°C to 29°C. In the event that automatic control is lost, a manual control is provided. MANUAL control is selected by rotating the automatic temperature selector to the full counterclockwise position. The MANUAL toggle switch then sets the position of the bleed air mixing valve. The mixing valve will stay in the position selected until the control setting is changed. Approximately 10 seconds are required to drive the mixing valve from one extreme setting to the other. Additional heating of the cockpit area may be obtained by turning the DEFOG fan ON and opening the pilot's and copilot's footwarmer vents. These vents must be closed, however, for windshield defog.

Cabin pressure is maintained at any value selected by the pilot during flight up to a maximum value of 8.8 PSI. Rate of change of cabin altitude may also be controlled by the pilot.

A guarded emergency dump switch provides a rapid dump capability for the pilot. which equalizes cabin pressure; i.e., cabin altitude becomes equal to airplane altitude regardless of airplane altitude. Pressurization source selector must be OFF to obtain complete depressurization at altitudes above 28,000 feet.

To obtain adequate cabin ventilation either on the ground or in flight with the pressurization source selector OFF, the overhead fan must be ON and the cabin should be depressurized using the emergency dump switch.

PRESSURIZATION/ENVIRONMENTAL SYSTEM (Continued)

engine bleed ports to the precooler and on into the air cycle machine. The fan bypass control valve modulates the flow of bypass bleed air to maintain precooler outlet temperatures at an acceptable level. If outlet temperature exceeds the maximum allowable, a left or right precooler fail light will illuminate on the annunciator panel.

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WINDSHIELD DEFOG

Windshield defog is accomplished by diverting conditioned cockpit air to the windshield and crew side windows. The overhead and defog fans must be turned to HI and the pilot's footwarmers CLOSED to obtain defogging. The defog fan should be turned on 15 minutes or more prior to descent from altitude to provide adequate clearing for descent into high humidity conditions. If the descent is begun prior to turning on the defog, the windshield anti-ice should be turned on to assure defogging.

If the outside of the windshield fogs over after landing, the windshield bleed air should be turned to LOW to clear the windshield.

ANTISKID SYSTEM

The antiskid system provides power assisted braking with skid protection. It is designed to provide maximum braking efficiency on all runway surfaces. The system consists of two wheel speed generators, power brake relay/antiskid valve, control box, oversize reservoir, accumulator and an electrically-driven hydraulic pump.

System operation is conventional with power braking available at all speeds while antiskid protection is available at speeds above approximately 12 knots. The antiskid protection feature is designed to operate with maximum pilot applied brake pressure. Do not modulate brake pressure when maximum braking is desired.

To ensure proper braking on water, snow and ice-covered, hard-surfaced runways and all unimproved surfaces, it is necessary for the pilot to apply maximum effort to the brake pedals throughout the braking run. When the system anticipates a skid and releases the applied brake pressure, any attempt by the pilot to modulate braking can result in an interruption of the applied brake signal and may increase stopping distance significantly.