PILOT'S
ABBREVIATED
FLIGHT CREW CHECKLIST
USAF/USN SERIES

T-6B

Commanders are responsible for bringing this checklist to the attention of all personnel cleared for operation of this aircraft.

This publication supersedes TO 1T-6B-1CL-1/NAVAIR A1-T-6BAA-FCL-100, dated 01 June 2009.

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INSERT LATEST CHANGED PAGES. DESTROY SUPERSEDED PAGES.

LIST OF EFFECTIVE PAGES

NOTE: The portion of the text affected by the changes is indicated by a vertical line in the outer margins of the page. Changes to illustrations are indicated by miniature pointing hands.

Dates of issue for original and changed pages are:

Original ..... 0 ..... 01 December 2017

TOTAL NUMBER OF PAGES IN THIS PUBLICATION IS 256, CONSISTING OF THE FOLLOWING:

Page No.	* Change No.
Title	0
A - C	0
i - iii	0
iv blank	0
E-1 - E-3	0
E-4 blank	0
EA-1 - EA-15	0
EA-16 blank	0
EB-1 - EB-23	0
EB-24 blank	0
EB-25 - EB-27	0
EB-28 blank	0
EB-29 - EB-43	0
EB-44 blank	0
EC-1 - EC-9	0
EC-10 blank	0
ED-1 - ED-11	0
ED-12 blank	0
ED-13 - ED-17	0
ED-18 blank	0
EE-1 - EE-3	0
EE-4 blank	0
EE-5 - EE-33	0
EE-34 blank	0
EF-1 - EF-7	0
EF-8 blank	0
EG-1 - EG-3	0
EG-4 blank	0
EG-5 - EG-31	0
EG-32 blank	0
EG-33 - EG-35	0
EG-36 blank	0
N-1 - N-19	0
N-20 blank	0
N-21 - N-33	0
N-34 blank	0
P-1	0
P-2 blank	0
P-3 - P-31	0
P-32 blank	0
blank	0
Preflight Briefing	0
Message, Cause, and Reference Table	0

* Zero in this column indicates an original page.

INTERIM SUPPLEMENT SUMMARY

The following Interim Supplements have been cancelled or previously incorporated in this Manual:

INTERIM SUPPLEMENT NUMBER(S)	REMARKS/PURPOSE
1T-6B-1S-1	24 December 2009
1T-6B-1S-2	23 April 2010
1T-6B-1S-3	30 April 2010
1T-6B-1S-4	21 May 2010
1T-6B-1S-5	17 August 2011
Interim Change 003	18 May 2012
Interim Change 004	08 November 2012
Interim Change 005	03 October 2013
Interim Change 006	29 April 2014
Interim Change 007	09 June 2014
Interim Change 008	19 March 2015
Interim Change 009	13 March 2015
Interim Change 010	18 June 2015
Interim Change 011	10 March 2016
Interim Change 012	30 March 2016
Interim Change 013	22 April 2016
Interim Change 014	28 November 2016
Interim Change 015	28 February 2016
Interim Change 016	22 March 2017
Interim Change 017	24 August 2017
Interim Change 018	22 November 2017

Interim Supplements Outstanding - To be maintained by the custodian of this Manual:

INTERIM SUPPLE-MENT NUMBER	ORIGINATOR/DATE (or DATE/TIME/ GROUP)	PAGES AFFECTED	REMARKS/ PURPOSE

YOUR RESPONSIBILITY

In accordance with OPNAV 3710.7 Series/AFI 11-215, the flight crew is required to use tis checklist when operating the subject aircraft.

TECHNICAL ORDER NUMBER

This checklist is identified by a TO number that is identical to that of the T-6B Flight Manual except for the addition of the letters “CL” (checklist) and a suffix number indicating the crew member to which it applies.

HOW TO BE ASSURED OF HAVING THE LATEST DATA

Refer to TO 0-1-1-5 and supplements thereto for listing of all current Trainer Aircraft Flight Manuals, Safety and Operational Supplements and Flight Crew Checklists to assure an accurate, up-to-date listing of these publications.

CONTENT

This checklist consists of three parts: Normal Procedures, Emergency Procedures and Performance Data. The numbered items (line items) correspond to identically numbered items in the amplified procedures in Sections II and III of the Flight Manual. Emergency procedures are identified by black diagonal striped borders. A Takeoff and Landing Data Card is included and appears immediately preceding Takeoff in the Normal Procedures section.

FLIGHT MANUAL

This checklist does not replace the amplified version of the procedures in the Flight Manual. To fly the aircraft safely and efficiently, you must read and thoroughly understand why each step is performed and why it occurs in a certain sequence.

CONCURRENCY

As changes are made to the amplified procedures in the Flight Manual, concurrent changes will be made to this checklist so that both will agree. However, a change to the Flight Manual may not affect the amplified procedures. Therefore, the Flight Manual date may not be the same as the checklist date. To determine the checklist applicable to a given Flight Manual issue, refer to the bottom of the Flight Manual “A” page (List of Effective Pages) under “Current Flight Crew Checklist.”

SAFETY AND OPERATIONAL SUPPLEMENTS

Whenever you receive a supplement affecting your checklist, write in the appropriate information. Printed replacement checklist pages will be made available to you as quickly as possible. A notation on the bottom inside corner of these pages will indicate that they reflect certain Safety and/or Operational Supplements. Note that there is no authority under the checklist program for discarding a Safety or Operational Supplement; such authority exists only under instructions in the Flight Manual (title page) or a subsequent Safety/Operational Supplement.

CHANGES AND REVISIONS

Whenever you receive a normal change or revision to your checklist, check to ascertain that it contains all outstanding Safety/Operational Supplements that affect the checklist. If it does not, add the required information.

COMMENTS AND QUESTIONS

Comments, questions or recommended changes regarding any phase of the checklist should be forwarded through command channels.

AIRCRAFT SERIAL NUMBER CODING

CODE NO.	SERIAL NO.	
<1>	OBOGS Low Pressure Switch and Drain Valve	166061 and After
<2>	Friction Collar, Nose Landing Gear	166160 and After
<3>	Prior to AYC-1641 Power Quadrant Assembly Modification	166010 thru 166194
<4>	After AYC-1641 Power Quadrant Assembly Modification	166010 thru 166194; 166195 and After
<5>	Prior to TD 1T-6A-825 ADS-B OUT	166010 thru 166261
<6>	After TD 1T-6A-825 ADS-B OUT	166010 thru 166261

AIRCRAFT SERIAL NUMBER CODING		
<7>	Prior to AYC-1737 Landing Gear Control Replacement	166010 thru 166243
<8>	After AYC-1737 Landing Gear Control Replacement	166010 thru 166243; 166244 and After

EMERGENCY INDEX

Conference Hotel: Time and conditions permitting, a Conference Hotel should be initiated for any safety of flight emergency conditions which may prevent landing the aircraft safely and are not covered by this manual. To initiate a Conference Hotel, have ground personnel (SDO, FDO, Base Ops, FSS, ATC) call the Tinker AFB Command Post at DSN 884 -7313 or commercial (405) 734 -7313 and state: "I am initiating a Conference Hotel for the T-6 aircraft.". Ground personnel should be made aware that they will be acting as a communications relay between the engineering support team and the aircraft.

HYDRAULICS

ELECTRICAL

FUEL

O_2/ECS

ENGINE

TAKEOFF

GENERAL

1-5/8" top tab

HYDRAULICS

1N Illumination of the EHYD PX LO caution or HYD FL LO caution may indicate a fluid leak in either hydraulic system. If the leak is on the emergency side and is of small enough flow rate that it does not activate the hydraulic fuse, all fluid could leak out of both systems and a gear-up landing would be required. Unless fuel range is a factor, lower the gear (and flaps if desired) prior to depletion of hydraulic fluid.

2N Loss of hydraulic pressure (out of limits, decreasing toward or reads zero psi) without illumination of either EHYD PX LO caution or HYD FL LO caution may indicate engine-driven hydraulic pump failure or partial failure.

3N If HYD FL LO caution illuminates and hydraulic pressure indicates 0 psi, check HYD SYS circuit breaker on the battery bus circuit breaker panel (left front console). If the circuit breaker is open it may be reset.

4N Low hydraulic pressure (below 1800 psi) will necessitate using the emergency gear extension procedure.

5N Flap extension may require use of the emergency landing gear and flap extension system if the normal hydraulic system pressure has dropped below usable levels. If the emergency gear handle has not been pulled previously to lower the landing gear, it will have to be pulled in order to emergency extend the flaps.

6N Landing gear and flap retraction is not possible once extended using emergency landing gear extension system.

HYDRAULIC SYSTEM MALFUNCTIONS

1. Hydraulic pressure - CHECK [1N] [2N] [3N]
2. Airspeed - 150 KIAS OR BELOW
3. Landing gear handle - DOWN [4N]
4. Flaps - EXTEND (AS REQUIRED) [5N] [6N]
5. Land as soon as practical

1N Execute this checklist anytime the landing gear does not indicate fully up with the gear handle up, or fully down with the gear handle down.

2N A visual inspection by another aircraft is the preferred method of determining abnormal landing gear and inboard gear door positions. Time and conditions permitting, do not delay coordination for an aircraft visual inspection.

3N If available, have another aircraft or RDO/tower flyby report gear position visually prior to configuration change.

4N If only the nose gear indicates unsafe with the main gear down and locked and the inboard gear doors are closed (no red lights), the nose gear down lock microswitch may be faulty. Pulling and resetting the LDGGR CONT circuit breaker (left front console) may allow the hydraulic selector valve to center causing the nose gear down lock microswitch to finish the sequence and provide a safe cockpit gear indication.

5N Confirm all landing gear position lights illuminate. All lights in respective cockpit will illuminate regardless of gear position unless position light is burned out.

6N The lamp test will not illuminate the gear position lights or the gear handle lights when the LDGGR CONT circuit breaker is tripped.

7C <8>Any electrical failure which causes the LDGGR CONT circuit breaker (left front console) to trip will cause the position indicator lights and the lights in the gear handle to be inoperative. Additionally, a tripped LDG GR CONT circuit breaker will cause the landing light, taxi light, and the AOA indexers to be inoperative. This will leave aircrew unable to ascertain "down and locked" gear through internal indications.

8N <7>Any electrical failure which causes the LDGGR CONT circuit breaker (left front console) to trip will cause the landing light, taxi light and AOA indexers to be inoperative. Any electrical failure which causes the INST circuit breaker (left front console) in either cockpit to trip will cause the position indicator lights and the light in the gear handle to be inoperative in the respective cockpit.

LANDING GEAR MALFUNCTION 1N 2N 3N

If any safe gear-down indications are obtained at any point, discontinue this checklist and land as soon as practical. Safe gear-down indications are:

- Gear indications in both cockpits combine to show three green position lights regardless of gear warning tone or any combination of red position lights
- Either AOA indexer is illuminated
- Landing and/or taxi lights are switched on and illuminated.
- If the main gear indicate down and locked and the inboard gear doors are fully closed (no red lights), the nose gear can be assumed to be down and locked 4N

1. Airspeed - REMAIN BELOW 150 KIAS
2. Gear handle - DOWN (PRESS DOWN FIRMLY. IF UNABLE TO LOWER THE GEAR HANDLE, EXECUTE THE LANDING GEAR EMERGENCY EXTENSION CHECKLIST) (BOTH)
3. LAMP test switch - CHECK 5N 6N
4. Hydraulic pressure - CHECK (IF HYDRAULIC PRESSURE IS BELOW 1800 PSI, EXECUTE THE LANDING GEAR EMERGENCY EXTENSION CHECKLIST. CONTINUE THIS CHECKLIST IF HYDRAULIC PRESSURE IS ABOVE 1800 PSI)
5. LDGGR CONT (left front console), INST (left front console), and INST LT (left front console), circuit breakers - CHECK IN/RESET (IF UNABLE TO RESET THE LDGGR CONT CIRCUIT BREAKER, EXECUTE THE EMERGENCY GEAR EXTENSION CHECKLIST) 7C 8N 9N 10N

9N A tripped LDGGR CONT circuit breaker (left front console) will cause the weight-on-wheels switches to revert to "in-air" functionality. This will result in loss of ground idle RPM and resultant longer landing rollouts, as well as a loss of nose wheel steering functionality.

10N In these procedures, the term “reset” is used to describe the action of resetting a circuit breaker that is already open. The pilot should assess the severity of the emergency and equipment lost prior to resetting or opening any circuit breaker.

11N Multiple gear handle cycles are permissible to achieve a safe landing configuration until a critical fuel state is reached, or the PIC concludes that continued attempts to cycle the landing gear risk more serious damage to the gear or loss of hydraulic pressure.

LANDING GEAR MALFUNCTION (CONTINUED)

6. Gear handle - CYCLE 11N

The following actions while cycling or attempting to cycle the gear handle may result in successful landing gear extension:

- Applying symmetric G forces from 0 to 2.5 Gs (airspeed between 140 and 150 KIAS required to generate 2.5 Gs)
- Applying side loads (slipping aircraft)
- Slowing airspeed (in no case should aircraft be slowed below 90 KIAS or stick shaker, whichever is higher)
- Actuating speed brake
- Selecting flaps LDG
- Making small, quick, side-to-side movements of the gear handle in the front cockpit

7. Gear and gear door positions - CHECK (IF UNABLE TO CHECK EXTERNALLY WITH ANOTHER AIRCRAFT OR RDO/TOWER FLYBY, EXECUTE THE LANDING WITH UNSAFE GEAR INDICATIONS CHECKLIST)

IF ANY OF THE FOLLOWING CONDITIONS REMAIN, EXECUTE STEP 8:

- Both inboard main gear doors are partially open
- Both inboard main gear doors are open with one or both main landing gear fully retracted
- Only one inboard main gear door is open
- Only the nose gear is down and locked
- A suspected landing gear jam caused by an external event (i.e. bird strike, deer strike, hard landing, etc)

8. Landing with Unsafe Gear Indications checklist - EXECUTE

IF NONE OF THE PRECEEDING CONDITIONS REMAIN:

9. Landing Gear Emergency Extension checklist - EXECUTE

"CONT" LDG GEAR MALF

1W A gear-up landing to a suitable landing area is preferred if any gear is confirmed unsafe. Fly a flat, power-on, straight-in approach while maintaining directional control with rudder.

2C Treat any landing gear not fully extended as retracted.

3W Allowing the nose to forcefully contact the ground may cause structural damage rendering the CFS system inoperative and/or making the canopy difficult or impossible to open.

4C Be prepared to use the anti-suffocation valve when the OBOGS shuts down with the engine. Do not drop the mask until it has been determined that the CFS will not be needed. Consider disconnecting oxygen mask hose from the CRU-60/P.

5C When engine is shutdown, expect a noticeable reduction in drag due to the propeller feathering. Be prepared for the aircraft to balloon in the flare.

6W Once on the ground and stopped, if any landing gear position light indicates unsafe, do not taxi or tow aircraft until landing gear safety pins have been properly installed.

LANDING WITH UNSAFE GEAR INDICATIONS

1W 2C

1. Gear handle - RAISE (IF ABLE)
2. Fuel - REDUCE (RECOMMEND NO LESS THAN 100 POUNDS)
3. Flaps - AS REQUIRED (RECOMMEND FLAPS LDG)
4. Harness - LOCKED (BOTH)
5. Landing technique for gear configuration - EXECUTE
   a. All gear up - Touch down on upwind side with minimum sink in normal landing attitude. Anticipate faster than normal deceleration.
   b. Nose gear only (down and locked) - Consider Controlled Ejection procedure.
   c. Main gear only - After touchdown, hold nose off runway as long as possible. Gently lower nose to runway prior to loss of elevator authority. Use differential braking to maintain control. Heavy braking might cause excessive stress on forward fuselage. 3W
   d. One main gear only (nose gear up or down) - Touch down smoothly on same side of runway as extended landing gear. While on rollout, hold opposite wing up as long as possible. Use rudder and brakes to maintain a straight path down runway.

When landing assured:

6. PCL - OFF 4C 5C
7. FIREWALL SHUTOFF handle - PULL

After aircraft comes to a stop: 6W

8. Emergency Ground Egress - AS REQUIRED

LDG W/ UNSAFE GEAR

1N Landing gear and flap retraction is not possible once the Emergency LDG GR handle has been pulled.

2C After an engine compartment fire, extension of the landing gear may result in nose gear failure upon touchdown.

3N If unable to place the landing gear handle DOWN, continue with Step 3. Regardless of gear handle position, actuation of the emergency landing gear extension handle will cause the landing gear to extend and lock down.

4C <8>Any electrical failure which causes the LDGGR CONT circuit breaker (left front console) to trip will cause the position indicator lights and the lights in the gear handle to be inoperative. Additionally, a tripped LDG GR CONT circuit breaker will cause the landing light, taxi light, and the AOA indexers to be inoperative. This will leave aircrew unable to ascertain "down and locked" gear through internal indications.

5N <7>Any electrical failure which causes the LDGGR CONT circuit breaker (left front console) to trip will cause the landing light, taxi light and AOA indexers to be inoperative. Any electrical failure which causes the INST circuit breaker (left front console) in either cockpit to trip will cause the position indicator lights and the light in the gear handle to be inoperative in the respective cockpit.

6N A tripped LDGGR CONT circuit breaker (left front console) will cause the weight-on-wheels switches to revert to "in-air" functionality. This will result in loss of ground idle RPM and resultant longer landing rollouts, as well as a loss of nose wheel steering functionality.

7N A pull extension of approximately .75 inches and actual pull force in excess of 80 lbs. has been proven necessary to actuate the emergency landing gear extension system

LANDING GEAR EMERGENCY EXTENSION 1N

Do not use the Landing Gear Emergency Extension checklist unless directed by the Landing Gear Malfunction, Hydraulic System Malfunctions, Battery Bus Inoperative, or the Battery and Generator Failure checklists.

1. Airspeed - REDUCE TO 150 KIAS OR BELOW
2. Gear handle - DOWN 2C 3N
3. EMER LDG GR handle - PULL 4C 5N 6N 7N

LDG GEAR EMER EXT

8N Normal safe indications, with electrical power, when the emergency extension system has been used to lower the landing gear, are two green main gear lights, two red main gear door lights, green nose gear light, and red light in gear handle.

9N During landing gear emergency extension, fluid from the emergency accumulator and emergency hydraulic lines opens the main gear inner doors and extends the nose and main landing gear. As pressure in the accumulator diminishes, operation of the gear and flaps may be slower than normal and EHYD PX LO caution may illuminate.

10W Once on the ground and stopped, if any landing gear position light indicates unsafe, do not taxi or tow aircraft until landing gear safety pins have been properly installed.

11C Do not land or taxi across raised arresting cables with main gear doors open.

LANDING GEAR EMERGENCY EXTENSION (CONTINUED)

4. Landing gear down indicator lights - CHECK 8N 9N
5. Flaps - AS REQUIRED 10W 11C

IF LANDING GEAR INDICATIONS ARE UNSAFE:

6. Landing with Unsafe Gear Indications checklist - EXECUTE

"CONT"
LDG
GEAR
EMER
EXT

1N In extreme cases (nose wheel deflecting greater than 45 degrees) and fuel permitting, consideration should be given to diverting to an airfield with a wider runway than the runway of intended landing (if available). RCR and crosswinds may also affect this decision.

2N Experience shows that a cocked nose wheel typically will straighten out once it contacts the runway. However, crews should always be ready to comply with the appropriate action if directional control becomes difficult.

LANDING WITH COCKED NOSE WHEEL

1. Airspeed - 150 KIAS OR BELOW
2. Gear - DO NOT RETRACT
3. Flaps - AS REQUIRED
4. Confirm position of nose wheel (number of degrees off center) with chase aircraft or RDO/tower
5. Land from straight-in approach and hold nose wheel off runway as long as possible. Use rudder/differential braking as necessary to keep nose tracking down runway
6. If directional control is not a problem, hydraulic pressure is normal and nose wheel steering works normally, clear runway and taxi to parking (if desired). Otherwise, stop straight ahead, shutdown, and have aircraft towed

2N	1N

LDG W/ COCKED NOSE WHEEL

ELECTRICAL

1N During all electronic display failures, the pilot should confirm indications in both cockpits (if occupied), reference alternate data sources or the backup instruments as applicable, and check applicable circuit breakers.

2N The term “reset” is used to describe the action of resetting a circuit breaker that is already open. The pilot should assess the severity of the emergency and equipment lost prior to resetting or opening any circuit breaker.

3C Do not select REPEAT in cockpit with working MFD’s. This may result in loss of all MFD information in both cockpits.

4N If synchronization errors or erratic indications are detected on ground, takeoff is not recommended.

5N If synchronization errors are detected without a loss of MFD information, do not select REPEAT on UFCP in either cockpit.

6N Front cockpit failures/erratic displays indicate IAC1 failure, rear cockpit failures/erratic displays indicate IAC2 failure.

INTEGRATED AVIONICS COMPUTER (IAC) FAILURE (SINGLE/DUAL) (LOSS OF MFD DISPLAYS/ERRATIC DISPLAYS/INTEGRATED AVIONICS SYSTEM SYNCHRONIZATION ERRORS) 1N 2N 3C 4N 5N

1. Backup flight instrument - REFERENCE AS REQUIRED
2. NORM/REPEAT switch - NORM (BOTH COCKPITS)
3. IAC1 and IAC2 circuit breakers (left and right front console) - CHECK, RESET IF OPEN

If IAC/MFD failures or erratic displays persists: 6N

4. Failed IAC circuit breaker(s) (left and right front console) - PULL, RESET AFTER 5 SECONDS

If IAC/MFD failures, erratic displays, or IAC synchronization errors persists:

5. Land as soon as practical

1N During all electronic display failures, the pilot should confirm indications in both cockpits (if occupied), reference alternate data sources or the backup instrument as applicable, and check applicable circuit breakers.

2N In the following procedures, the term “reset” is used to describe the action of resetting a circuit breaker that is already open. The pilot should assess the severity of the emergency and equipment lost prior to resetting or opening any circuit breaker.

IRS FAILURE (LOSS OF ATTITUDE OR HEADING DISPLAY ON HUD AND MFD) 1N 2N

1. Backup flight instrument - REFERENCE AS REQUIRED
2. IRS circuit breaker (left and right front console) - CHECK, RESET IF OPEN
3. Place aircraft in straight and level unaccelerated flight and monitor alignment status
4. Land as soon as practical

IRS FAIL

1N During all electronic display failures, the pilot should confirm indications in both cockpits (if occupied), reference alternate data sources or the backup instrument as applicable, and check applicable circuit breakers.

2N In the following procedures, the term “reset” is used to describe the action of resetting a circuit breaker that is already open. The pilot should assess the severity of the emergency and equipment lost prior to resetting or opening any circuit breaker.

3N Failure of a single MFD will result in PFD and EICAS display only and loss of ability to manipulate the display to the FMS MENU.

MFD FAILURE (LOSS OF MFD DISPLAY IN FRONT OR REAR COCKPIT) 1N 2N 3N

1. NORM/REPEAT switch in failed cockpit - REPEAT
2. MFD circuit breaker (left MFD right console, right and center MFD left console) - CHECK, RESET IF OPEN
3. Backup flight instrument - REFERENCE AS REQUIRED

MFD FAIL

1N During all electronic display failures, the pilot should confirm indications in both cockpits (if occupied), reference alternate data sources or the backup instrument as applicable, and check applicable circuit breakers.

2N In the following procedures, the term “reset” is used to describe the action of resetting a circuit breaker that is already open. The pilot should assess the severity of the emergency and equipment lost prior to resetting or opening any circuit breaker.

3N With the UFCP inoperative, the functions not available to the pilot in the cockpit with the failed UFCP are: FMS execute, system Mag/True heading toggle, system GS/CAS/TAS HUD speed toggle, and radio tuning with UFCP.

UFCP FAILURE (BLANK UFCP ENTRY WINDOWS, DATA ENTRY KNOB OR SYSTEM BUTTON NON-FUNCTIONING) 1N 2N 3N

1. UFCP circuit breaker (left front console or left rear console) - CHECK, RESET IF OPEN
2. Land as soon as practical

UFCP FAIL

UFCP FAILURE

1N During all electronic display failures, the pilot should confirm indications in both cockpits (if occupied), reference alternate data sources or the backup instrument as applicable, and check applicable circuit breakers.

2N In the following procedures, the term “reset” is used to describe the action of resetting a circuit breaker that is already open. The pilot should assess the severity of the emergency and equipment lost prior to resetting or opening any circuit breaker.

BACKUP FLIGHT INSTRUMENT DISPLAY FAILURE

1N 2N

1. Place aircraft in straight and level unaccelerated flight
2. STBY INST circuit breaker (left front/left rear console) - CHECK, RESET IF OPEN
3. AFT STBY circuit breaker (left front console) - CHECK, RESET IF OPEN

If display does not return:

4. Land as soon as practical

BCKP INST FAIL

1N During all electronic display failures, the pilot should confirm indications in both cockpits (if occupied), reference alternate data sources or the backup instruments as applicable, and check applicable circuit breakers.

2N The term “reset” is used to describe the action of resetting a circuit breaker that is already open. The pilot should assess the severity of the emergency and equipment lost prior to resetting or opening any circuit breaker.

3N If an EDM FAIL occurs prior to start and is accompanied by red X’s in the IOAT and ITT counters, refer to High IOAT at Start >80 °C.

4N If EDM FAIL warning remains displayed, the engine data manager has failed. The pilot will lose the ability to directly monitor the engine, fuel, electrical, and hydraulic systems, and cockpit pressurization. The following messages will be displayed; however, they are no longer monitoring their respective system: CKPT PX, CKPT ALT, HYD FL LO, FUEL BAL, L FUEL LO, R FUEL LO, and FUEL BAL. The PMU should remain online.

5N If an EDM A INOP or EDM B INOP advisory remains, suspect a data bus malfunction. Prior to flight, maintenance action is required.

ENGINE DATA MANAGER FAIL (EDM FAIL WARNING, OR EDM A INOP OR EDM B INOP ADVISORY RESULTING IN TOTAL OR PARTIAL LOSS OF ENGINE DATA MANAGER INFORMATION) 1N 2N 3N

1. EDM circuit breakers (left and right front console) - CHECK, RESET IF OPEN

If engine instrument displays on EICAS page do not return:

2. Land as soon as practical 4N 5N

EDM FAIL

1N During all electronic display failures, the pilot should confirm indications in both cockpits (if occupied), reference alternate data sources or the backup instruments as applicable, and check applicable circuit breakers.

2N The term “reset” is used to describe the action of resetting a circuit breaker that is already open. The pilot should assess the severity of the emergency and equipment lost prior to resetting or opening any circuit breaker.

3N If the ADC FAIL warning remains displayed, the air data computer has failed. Primary airspeed, altimeter, and VSI will be inoperative. Reference backup flight instrument and AOA as necessary. TAD, aural gear warning, and transponder mode C will also be inoperative. Expect PMU STATUS caution to illuminate after landing.

AIR DATA COMPUTER FAILURE (ADC FAIL WARNING OR ADC A INOP OR ADC B INOP ADVISORY RESULTING IN TOTAL OR PARTIAL LOSS OF AIR DATA COMPUTER INFORMATION) 1N 2N

1. Backup flight instrument - REFERENCE AS REQUIRED
2. ADC circuit breaker (right front console) - CHECK, RESET IF OPEN 3N

ADC CMPT FAIL

1N During all electronic display failures, the pilot should confirm indications in both cockpits (if occupied), reference alternate data sources or the backup instrument as applicable, and check applicable circuit breakers.

2N In the following procedures, the term “reset” is used to describe the action of resetting a circuit breaker that is already open. The pilot should assess the severity of the emergency and equipment lost prior to resetting or opening any circuit breaker.

3N When the EMR/NRM switch is placed in the EMR position, VHF audio will be unamplified and UHF audio will not be heard. Consideration of the loss of UHF audio should be taken prior to placing the EMR/NRM switch to EMR.

LOSS OF ICS/AUDIO 1N 2N

1. Switch COMM lead to auxiliary cord (affected cockpit) - INITIATE AS REQUIRED
2. AUDIO circuit breaker (right front/rear and left front console) - CHECK, RESET IF OPEN

If audio not re-established:

3. EMR/NRM switch - SELECT EMR (BOTH) 3N

LOSS OF ICS/ AUDIO

1N During all electronic display failures, the pilot should confirm indications in both cockpits (if occupied), reference alternate data sources or the backup instruments as applicable, and check applicable circuit breakers.

2N In the following procedures, the term “reset’ is used to describe the action of resetting a circuit breaker that is already open. The pilot should assess the severity of the emergency and equipment lost prior to resetting or opening any circuit breaker.

3N A failure of the AOA computer will be most easily recognized by the loss of AOA indication in the HUD, and the loss of the AOA indexer with the landing gear down.

AOA COMPUTER FAILURE 1N 2N 3N

1. AOA circuit breaker (left front console) - CHECK, RESET IF OPEN
2. Land as soon as practical

AOA CMPT FAIL

1N The generator will remain offline if the starter is in the MANUAL position and the starter will drain battery in less than 10 minutes if left ON.

2N Opening the bus tie switch will reduce electrical load on the main battery by shedding the generator bus. This will permit main battery operation for at least 30 minutes.

3W OBOGS will be inoperative once the main battery is depleted or with battery failure.

4N If main battery fails, refer to Battery and Generator Failure procedure.

5N Cockpit will depressurize when power to the battery bus is lost.

GENERATOR INOPERATIVE

GEN INOP

1. STARTER switch - NORM (BOTH) 1N
2. GEN switch - ON (FRONT OR BACK)
3. GEN RESET switch - DEPRESS AND HOLD FOR A MINIMUM OF 1 SECOND

If generator remains inoperative (DC voltmeter below 25 volts and ammeter discharging):

4. Descent below 10,000 ft MSL - INITIATE (AS REQUIRED)
5. GEN switch - OFF (BOTH)
6. BUS TIE switch - OPEN (BUS TIE CAUTION AND GEN BUS WARNING ILLUMINATE) 2N
7. Land as soon as practical 3W 4N 5N

1N With an operating generator and the BUS TIE switch in NORM, the generator will continue to charge the battery and power the battery buses. Items on the generator bus will remain inoperative.

GENERATOR BUS INOPERATIVE

The GEN BUS warning will illuminate if there is an actual loss of the generator bus (and the associated avionics buses).

1. BUS TIE switch - NORM 1N
2. Land as soon as practical

GENERATOR BUS INOPERATIVE	BATTERY BUS OPERATIVE
Air Conditioner	Battery Buses w/Bus Tie Closed
Gen Switch	Ram Air Valve
Fuel Balance	OBOGS
Side/Nav/Taxi/Test Lights	Clocks
Probes Anti-Ice	Emergency Flaps
Cockpit Temperature	ELT
Nose Wheel Steering	Flight Data Recorder Maintenance
Fire Detector #2	Battery
Trim Indicator	Chip Detector
Seat Adjust	Aileron/Elevator/Rudder Trim
DVR/DTS	Utility/Collision/Instrument/ Landing/Flood Lights
EDMA	IAC1
HOTAS	Ignition
TAD	Avionics Master
Speed Brake	Prop Sys Solenoid
Evaporator Blower	Hydraulic System
ADC	Fuel Quantity Low
TCAS	Start
COM1	UFCP
	Landing Gear Control
	PMU FAIL and PMU STATUS Monitoring

GENERATOR BUS INOPERATIVE (CONTINUED)

GENERATOR BUS INOPERATIVE	BATTERY BUS OPERATIVE
IAC2	Oil TRX
IRS	Flap Control
Radio Relays	Angle of Attack
RAD ALTM	Boost Pump
LH MFD	EDM B
DME	Battery Switch
Transponder	Inflow Switch
VHF NAV	RH MFD
	Center MFD
	Backup Flight Instrument
	IRS
	COM 2
	Fire Detector #1

1N With a battery bus failure, the PFD will be the default display in flight and the EICAS and NAV displays can be accessed using the MFD menu page.

2N If the BAT BUS warning illuminates, the cockpit battery bus has failed or the annunciator sensing circuit has failed. The generator is still supplying the generator bus and charging the battery.

3W OBOGS will be inoperative once the main battery is depleted or with battery failure.

4N Cockpit will depressurize when power to the battery bus is lost.

5N Place the BUS TIE switch to OPEN to isolate the generator bus from any potential battery or battery bus faults.

6N Backup flight instrument and VHF tuning (standby VHF control head) will be powered for approximately 30 minutes by the auxiliary battery.

7W Plan to extend the landing gear using the emergency extension system. Emergency flaps will be powered by the main battery through the hot battery bus as long as the main battery has not failed. With normal flap extension and a loss of power to the battery bus, flaps will retract. Landing gear and flap position indicators will not be powered.

BATTERY BUS INOPERATIVE 1N

The BAT BUS warning will illuminate if there is an actual loss of the battery bus (and the associated avionics buses), or if the current limiter on the battery bus side has failed.

Indications of the current limiter and/or actual bus failure will be illumination of the BAT BUS warning, accompanied by multiple failures of items on the battery bus with associated CAS message illuminated (TRIM OFF, OIL PX, HYDR FL LO, PMU STATUS). The most noticeable failures will be the UFCP, the center and right MFD's. 2N

If BAT BUS warning is illuminated and is accompanied by other indications of a battery bus failure:

1. Descent below 10,000 ft MSL - INITIATE (AS REQUIRED) 3W 4N
2. BUS TIE switch - OPEN 5N
3. AUX BAT switch - ON 6N
4. Standby VHF - ON
5. LANDING GEAR EMERGENCY EXTENSION - EXECUTE PRIOR TO LANDING 7W

The following table contains a list of the cockpit items that will remain operative or are inoperative with the battery bus inoperative or bus tie inoperative with a depleted battery.

BAT BUS INOP

BATTERY BUS INOPERATIVE (CONTINUED)

BATTERY BUS INOPERATIVE	GENERATOR BUS OPERATIVE
Battery Buses w/Bus Tie Closed	Air Conditioner
Ram Air Valve	Gen Switch
OBOGS	Fuel Balance
Clocks	Side/Nav/Taxi/Test Lights
Emergency Flaps	Probes Anti-Ice
ELT	Cockpit Temperature
Flight Data Recorder Maintenance	Fire Detector #2
Battery	Seat Adjust
Chip Detector	DTS/DVR
Nose Wheel Steering	EDM A
Aileron/Elevator/Rudder Trim	HOTAS
Utility/Collision/Instrument/ Landing/Flood Lights	TAD
IAC1	Speed Brake
Ignition	Evaporator Blower
Prop Sys Solenoid	ADC
Avionics Master Fails in the ON Position	
Hydraulic System	

"CONT" BAT BUS INOP

BATTERY BUS INOPERATIVE (CONTINUED)

BATTERY BUS INOPERATIVE	GENERATOR BUS OPERATIVE
Fuel Quantity Low	TCAS
Start	COM1
UFCP	IAC2
Landing Gear Control	IRS
PMU FAIL and PMU STATUS Monitoring	Radio Relays
Oil TRX	RAD ALTM
Flap Control	LH MFD
Angle of Attack	DME
Boost Pump	Transponder
EDM B	VHF NAV
Battery Switch	With Aux Battery:
Inflow Switch	Radio Relays
RH MFD	Fire Detector #1
Center MFD	IRS
UFCP	Backup Flight Instrument
Ground Idle	COM2 if STBY VHF is ON
PMU below 40 to 50% N_P	

"CONT" BAT BUS INOP

1N Expect approximately 30 minutes of useful power from the main battery under these conditions. Items on the generator bus will remain powered as long as the generator is online. To conserve battery power, consider deactivating interior/exterior lighting as conditions permit. The avionics master switch can also be set to OFF, disabling all avionics and radios, with the exception of the standby VHF.

2N If main battery depletes, refer to Battery Bus Inoperative procedure. Items on generator bus will remain functional with an operative generator.

3N Cockpit will depressurize when power to the battery bus is lost.

BUS TIE INOPERATIVE

1. BUS TIE switch - NORM

If BUS TIE caution remains illuminated:

2. Land as soon as practical [1N] [2N] [3N]

BUS TIE INOP

1W OBOGS will be inoperative once the main battery is depleted or with battery failure.

2N Cockpit will depressurize when power to the battery bus is lost.

3N Backup flight instruments and VHF tuning (standby VHF control head) will be powered for approximately 30 minutes by the auxiliary battery. Plan to extend the landing gear using the emergency extension system. Emergency flaps will not be functional if the main battery has failed. With normal flap extension and a loss of power to the battery bus, flaps will retract. Landing gear and flap position indicators will not be powered. The taxi and landing lights will not be functional.

BATTERY AND GENERATOR FAILURE

1. Descent below 10,000 ft MSL - INITIATE (AS REQUIRED) 1W 2N

If the battery and generator fail, accomplish the following:

2. AUX BAT switch - ON 3N
3. Land as soon as possible

BAT AND GEN FAIL

1W Under varying conditions of fire and/or smoke where aircraft control is jeopardized, the pilot has the option of actuating CFS or ejecting.

2N If a faulty component can be identified as the source of smoke and fumes, turn defective unit off or pull respective circuit breaker. Circuit breakers for items on the hot battery bus are not accessible in flight.

3N Selecting RAM/DUMP does not shut off bleed air inflow.

4N Defog is turned off when RAM/DUMP is selected.

5W OBOGS will be inoperative once the main battery is depleted or with battery failure.

6W To prevent injury, ensure oxygen mask is on and visor is down prior to actuating the CFS system.

7N Recover aircraft without electrical power if possible. If IMC penetration is required, turn the auxiliary battery on. Backup flight instruments and lighting, fire detection (FIRE 1 only), and VHF radio (tuning through standby VHF control unit) will be powered for approximately 30 minutes. Landing gear must be extended by emergency means. The flap lever is powered through the hot battery bus and should function as long as the main battery has not depleted. With normal flap extension and a loss of power to the battery bus, flaps will retract. Gear and flap indicators, as well as exterior lighting, will not be powered. Unless the faulty component has been isolated, further restoration of electrical power is not recommended.

8N With the battery and generator off, the landing gear must be extended using the emergency landing gear extension system.

ELECTRICAL FIRE 1W 2N

*1. OBOGS - CHECK (BOTH):
   a. OBOGS supply lever - ON
   b. OBOGS concentration lever - MAX
   c. OBOGS pressure lever - EMERGENCY
2. Descent below 10,000 ft MSL - INITIATE (AS REQUIRED)
3. PRESSURIZATION switch - RAM/DUMP 3N 4N
4. BLEED AIR INFLOW switch - OFF

ELEC FIRE

If smoke/fire persists:

5. BAT and GEN switches - OFF 5W
6. AUX BAT switch - OFF (AS REQUIRED)
7. CFS - ROTATE 90° COUNTERCLOCKWISE AND PULL (IF NECESSARY) 6W
8. Restore electrical power - AS REQUIRED 7N
9. Land as soon as possible 8N

1N <6>An amber IAC XTALK message may result in loss of repeat switch functionality. RPT ERROR will be posted if MFD/UFP REPEAT/NORM switch is in REPEAT position. Baro Set function, heading, altitude and airspeed bug settings, minimums on/off selection, radio altitude set height, mag/true compass setting, bingo fuel setting, clock setting and G reset feature will operate independently in each cockpit.

2C <6>With IAC XTALK message present, Baro Set function on the UFCP will operate independently in each cockpit. Confirm PFD altimeter settings in each cockpit.

<6>IAC XTALK FAILURE

1. MFD/UFP REPEAT/NORM switch - NORM
2. Land as soon as practical 1N 2C

IAC XTALK FAIL

1N <6>Although direct effects the ADS-B failure are minor, the ADS-B information will be used by other ADS-B equipped aircraft and by ATC. Confirm with ATC that ADS-B information is not being transmitted or is transmitting in error. If ADS-B is transmitting in error, disable by turning the transponder to standby. With the transponder placed in standby, all transponder related functions will be lost (mode C, S, TCAS, ADS-B).

<6>ADS-B OUT FAILURE

ADS-B OUT FAIL

1. Confirm with Air Traffic Control (ATC) that ADS-B information is missing or in error. Comply with ATC direction and adjust mission as required. 1N

1N <6>Although direct effects of the Transponder failure are minor, the transmitted information will be used by other TCAS and ADS-B equipped aircraft and by ATC. Confirm with ATC that information is not being transmitted or is transmitting in error. If transmitting in error, disable by turning the transponder to standby. With the transponder placed in standby, all transponder related functions will be lost (mode C, S, TCAS, ADS-B).

<6>XPDR FAILURE

1. XPDR circuit breaker (right front console) - Check, reset if open

IF NORMAL OPERATION DOES NOT RESUME:

2. Confirm with Air Traffic Control (ATC) that transponder is not transmitting correctly. Comply with ATC direction and adjust mission as required. 1N

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FUEL C

FUEL

1N If the FUEL PX warning remains illuminated, the engine-driven high pressure fuel pump is suction feeding. Engine operation with high pressure pump suction feeding is limited to 10 hours.

2C Unless a greater emergency exists, do not reset BOOST PUMP circuit breaker (left front console) if open.

LOW FUEL PRESSURE

*1. PEL - EXECUTE 1N
*2. BOOST PUMP switch - on 2C

1N If FP FAIL caution illuminated, refer to the Fuel Probe Malfunction checklist.

2N If a fuel leak is suspected, refer to Leaking Fuel from Wing procedure.

3N The pilot should assess the severity of the emergency and equipment lost prior to resetting or opening any circuit breaker.

4C Do not attempt to manually balance fuel load if FP FAIL caution is illuminated. With a probe failure, a fuel imbalance indication may not be correct, and manual balancing attempts may cause or aggravate a fuel imbalance.

5N With a full lateral fuel imbalance (one tank full, the other tank empty), sufficient lateral authority exists to control the aircraft (no crosswind). Expect increased lateral stick forces.

6N If the fuel imbalance remains constant or increases, consider fuel in the wing that is not feeding to be trapped. Subtract trapped fuel to get total usable fuel.

FUEL IMBALANCE

1. Fuel gages - VERIFY IMBALANCE AND CHECK FOR FUEL LEAKS 1N 2N
2. FUEL BAL circuit breaker (right front console) - CHECK, RESET IF OPEN 3N
3. FUEL BAL switch - MAN/RESET (M FUEL BAL ADVISORY ILLUMINATES) 4C
4. MANUAL FUEL BAL switch - TO LOW TANK
5. fuel gages - MONITOR

If fuel imbalance is corrected (FUEL BAL caution extinguishes):

6. MANUAL FUEL BAL switch - OFF, WHEN IMBALANCE IS CORRECTED 5N
7. FUEL BAL switch - AUTO, IF DESIRED

If system is returned to autobalance, monitor for correct operation. 6N

1N With a full lateral fuel imbalance (one tank full, the other tank empty), sufficient lateral authority exists to control the aircraft (no crosswind). Expect increased lateral stick forces.

LEAKING FUEL FROM WING

1. Aircraft structure - VISUALLY INSPECT FOR SIGN OF LEAKAGE

IF LEAKING FUEL OVERBOARD:

2. FUEL BAL switch - MAN/RESET
3. MANUAL FUEL BAL switch - TO NON-LEAKING TANK 1N
4. MANUAL FUEL BAL switch - TO LEAKING TANK ONCE EMPTY
5. Land as soon as possible

LEAK FUEL FROM WING

1C Do not attempt to manually balance fuel load if FP FAIL caution is illuminated. With a probe failure, a fuel imbalance message may not be correct, and manual balancing attempts may cause or aggravate a fuel imbalance.

2N Depending on which probe malfunctions, the fuel quantity may read lower than actual. A rapid drop in fuel indication may occur.

3N The auto fuel balance system will be inoperative, but the manual fuel balance system remains operative.

4N The pilot should assess the severity of the emergency and equipment lost prior to resetting or opening any circuit breaker.

FUEL PROBE MALFUNCTION

1. Fuel gages and fuel flow - VERIFY INDICATIONS [1C] [2N] [3N]
2. EDM circuit breakers (left and right front console) - CHECK, RESET IF OPEN [4N]
3. Land as soon as practical if fuel state cannot be verified

FUEL PROBE MALF

OXYGEN D

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O_2/ECS

1W If physiological symptoms are recognized at any point, proceed immediately to the OBOGS FAILURE/PHYSIOLOGICAL SYMPTOMS Checklist.

2W If the battery is depleted or fails, OBOGS will be inoperative.

3N Advance PCL as required to extinguish OBOGS FAIL warning. At low bleed air pressure conditions (e.g., PCL idle at high altitudes), bleed air pressure may drop sufficiently to momentarily illuminate the OBOGS FAIL warning. This does not necessarily indicate an OBOGS failure. If OBOGS FAIL warning extinguishes, continue flight.

4W It is possible to experience hypoxia symptoms if OBOGS has malfunctioned.

5C When breathing oxygen under increased pressure, breathe at a rate and depth slightly less than normal to preclude hyperventilation.

6N The OBOGS FAIL warning will illuminate if both supply levers are set to OFF with the engine running.

OBOGS FAIL MESSAGE 1W 2W

*1. PCL - ADVANCE 3N
2. OBOGS - CHECK (BOTH)
   a. OBOGS supply lever - ON
   b. OBOGS concentration lever - MAX
   c. OBOGS pressure lever - EMERGENCY
   d. OBOGS flow indicator - CHECK (FLOW INDICATOR FOR NORMAL OPERATION)
3. Oxygen hose/CRU-60/P connection - CHECK (BOTH)
4. Oxygen mask - CHECK FOR LEAKS (BOTH) 4W 5C 6N

If OBOGS FAIL WARNING remains illuminated (AFTER 20 SECONDS):

5. OBOGS FAILURE/PHYSIOLOGICAL SYMPTOMS Checklist - EXECUTE

1W Emergency oxygen bottle provides approximately 10 minutes of oxygen. If aircraft pressure altitude is above 10,000 feet MSL, ensure the aircraft reaches an altitude of 10,000 feet MSL or lower prior to exhaustion of the emergency oxygen supply or the effects of hypoxia may incapacitate the crew.

2W The OBOGS concentrator may malfunction resulting in zeolite dust in the breathing system without an illumination of the OBOGS FAIL light. Indications of this malfunction include respiratory irritation, coughing, or the presence of white dust in the oxygen mask. Prolonged inhalation of zeolite dust should be avoided.

3C When breathing oxygen under increased pressure, breathe at a rate and depth slightly less than normal to preclude hyperventilation.

4N When the emergency oxygen system is actuated, high pressure air may make verbal communication with either the other crewmember or ATC more difficult.

5N Once activated, emergency oxygen cannot be shut off and will provide oxygen flow until the cylinder is depleted (10 minutes). Since the emergency oxygen system is not regulated, it is normal for pressure to gradually decrease to the point it feels like the oxygen is depleted before reaching 10 minutes of use.

6N Avoid inadvertently disconnecting COMM cable when disconnecting main oxygen hose.

7N As the emergency oxygen flow decreases, breathing through the CRU-60/P anti-suffocation valve will become increasingly noticeable and uncomfortable.

8N Selecting RAM/DUMP does not shut off bleed air inflow.

9N Defog is turned off when RAM/DUMP is selected.

10W Oxygen mask must be on and secure before actuation CFS or initiating ejection.

11W If physiological symptoms persist and the pilot(s) feel unsafe to land, maintain below 10,000 feet MSL as long as practical before considering ejection.

OBOGS FAILURE/PHYSIOLOGICAL SYMPTOMS

*1. **GREEN RING - PULL (AS REQUIRED) (BOTH)** [1W] [2W] [3C] [4N] [5N]

*2. **DESCENT BELOW 10,000 FEET MSL - INITIATE**

*3. **DISCONNECT MAIN OXYGEN SUPPLY HOSE FROM CRU-60/P** [6N]

4. Emergency Oxygen Hose - CHECK (BOTH)
5. Rate and depth of breathing - NORMALIZE (BOTH) [7N]
6. OBOGS - OFF (BOTH)

Below 10,000 Feet MSL

7. PRESSURIZATION switch - RAM/DUMP [8N] [9N]
8. BLEED AIR INFLOW switch - OFF
9. Oxygen mask - REMOVE (AS REQUIRED) (BOTH) [10W]
10. Land as soon as practical [11W]

Initial Aircraft Altitude (feet)	Descent Rate (feet/min) Maintained to Achieve 10,000 feet MSL Within 10 Minutes
31,000	2100
28,000	1800
25,000	1500
23,500 and lower	1350

1N Cabin pressurization will bleed out through the cabin pressurization outflow valves when the inflow switch is set to OFF. The canopy pressure seal and anti-G systems will not be operational.

ENVIRONMENTAL SYSTEMS DUCT OVERTEMP

1. Cockpit temperature controller - MANUAL
2. Cockpit temperature controller - COLD; HOLD FOR 30 SECONDS

If conditions persist:

3. DEFOG switch - OFF

If conditions persist:

4. Descent below 18,000 ft MSL - INITIATE (AS REQUIRED)
5. BLEED AIR INFLOW switch - OFF 1N

ENV SYS
DUCT
OVER
TEMP

1N Cabin pressurization will bleed out through the cabin pressurization outflow valves when the inflow switch is set to OFF. The canopy pressure seal and anti-G systems will not be operational.

COCKPIT OVERPRESSURIZATION

1. Descend - BELOW 18,000 FT MSL
2. PRESSURIZATION switch - DUMP, BELOW 18,000 FT MSL

If conditions persist:

3. BLEED AIR INFLOW switch - OFF 1N

CKPT
OVER
PRES

1W The effects of hypoxia are a concern above 10,000 feet cockpit pressure altitude. Hyperventilation is caused by an excessive breathing rate and may occur at any cockpit pressure altitude. Slowing the breathing rate should cause symptoms to go away. The procedures are the same for hypoxia and hyperventilation symptoms. In either case, maximum oxygen supply is needed. If oxygen supply is not as expected, an oxygen hose continuity check is needed.

2N With a sudden or rapid decompression at altitudes near 20,000 feet MSL, there may be a transient OBOGS FAIL indication (for up to 20 seconds) as the OBOGS system switches to high altitude mode to compensate for higher cockpit pressure altitudes.

3N A malfunctioning defog valve has the potential to trip the IN-FLOW SYS circuit breaker resulting in a loss of pressurization.

4N The term “reset” is used to describe the action of resetting a circuit breaker that is already open. The pilot should assess the severity of the emergency and equipment lost prior to resetting or opening any circuit breaker.

RAPID DECOMPRESSION/COCKPIT PRESSURE ALTITUDE EXCEEDS 19,000 FEET 1W

1. OBOGS - CHECK (BOTH):
   a. OBOGS supply lever - ON
   b. OBOGS concentration lever - MAX (AS REQUIRED) (IN THE EVENT OF A RAPID DECOMPRESSION, PLACE THE OBOGS CONCENTRATION LEVER TO MAX FOR THE REMAINDER OF THE SORTIE TO HELP PREVENT DECOMPRESSION SICKNESS)
   c. OBOGS pressure lever - EMERGENCY
   d. OBOGS flow indicator - CHECK (FLOW INDICATOR FOR NORMAL OPERATION)
2. Oxygen hose/CRU-60/P connection - CHECK (BOTH)
3. Oxygen mask - CHECK FOR LEAKS (BOTH) 2N
4. Descent to below 18,000 ft MSL - INITIATE
5. BLEED AIR INFLOW switch - HI
6. INFLOW SYS circuit breaker (left front console) - CHECK, RESET IF OPEN 3N 4N
7. Land as soon as practical

If cockpit altitude exceeded 18,000 feet MSL:

8. Land as soon as possble

RAPID DECOMP

DEFOG VALVE FAILS TO CLOSE IN FLIGHT

Verify that appropriate time has elapsed before initiating the following procedure.The electrically controlled defog valve may take up to 40 seconds to close.

1. AIR COND switch - ON
2. Cockpit temperature controller - MANUAL
3. Cockpit temperature controller - COLD; HOLD FOR 30 SECONDS
4. Verify defog not needed for visibility
5. Verify DEFOG switch - OFF
6. PRESSURIZATION switch - RAM/DUMP AT OR BELOW 18,000 FT MSL
7. BLEED AIR INFLOW switch - OFF
8. Land as soon as practical

DEFOG VALVE FAILS CLOSE

1N The term “reset” is used to describe the action of resetting a circuit breaker that is already open. The pilot should assess the severity of the emergency and equipment lost prior to resetting or opening any circuit breaker.

COCKPIT FAILS TO PRESSURIZE

1. BLEED AIR INFLO switch - OFF (for at least 5 seconds)
2. BLEED AIR INFLO switch - NORM

If cockpit pressurizes:

3. Continue mission

If cockpit remains unpressurized:

4. PRESSURIZATION switch - NORM
5. RAM AIR switch - OFF
6. BLEED AIR INFLOW switch - HI

If cockpit pressurizes:

7. Continue mission

If cockpit remains unpressurized:

8. INFLOW SYS circuit breaker (left front console) - CHECK, RESET IF OPEN 1N
9. Remain below 18,000 ft MSL

CKPT FAILS TO PRES

1W Under varying conditions of fire and/or smoke where aircraft control is jeopardized, the pilot has the option of actuating CFS or ejecting.

2N If a faulty component can be identified as the source of smoke and fumes, turn defective unit off or pull respective circuit breaker. Circuit breakers for items on the hot battery bus are not accessible in flight.

3N Selecting RAM/DUMP does not shut off bleed air inflow.

4N Defog is turned off when RAM/DUMP is selected.

5W OBOGS will be inoperative once the main battery is depleted or with battery failure.

6W To prevent injury, ensure oxygen mask is on and visor is down prior to actuating the CFS system.

7N Recover aircraft without electrical power if possible. If IMC penetration is required, turn the auxiliary battery on. Backup flight instruments and lighting, fire detection (FIRE 1 only), and VHF radio (tuning through standby VHF control unit) will be powered for approximately 30 minutes. Landing gear must be extended by emergency means. The flap lever is powered through the hot battery bus and should function as long as the main battery has not depleted. With normal flap extension and a loss of power to the battery bus, flaps will retract. Gear and flap indicators, as well as exterior lighting, will not be powered. Unless the faulty component has been isolated, further restoration of electrical power is not recommended.

8N With the battery and generator off, the landing gear must be extended using the emergency landing gear extension system.

SMOKE AND FUME ELIMINATION 1W 2N

*1. OBOGS - CHECK (BOTH):
   a. OBOGS supply lever - ON
   b. OBOGS concentration lever - MAX
   c. OBOGS pressure lever - EMERGENCY
2. Descent below 10,000 ft MSL - INITIATE (AS REQUIRED)
3. PRESSURIZATION switch - RAM/DUMP 3N 4N
4. BLEED AIR INFLOW switch - OFF

SMOKE FUME ELIM

If smoke/fire persists:

5. BAT and GEN switches - OFF 5W
6. AUX BAT switch - OFF (AS REQUIRED)
7. CFS - ROTATE 90° COUNTERCLOCKWISE AND PULL (IF NECESSARY) 6W
8. Restore electrical power - AS REQUIRED 7N
9. Land as soon as possible 8N

ENGINE

1N Note and report to maintenance the degree and duration of any overtemperature.

2N If start is initiated with PCL in the OFF position, abort by reselecting AUTO/RESET on the STARTER switch. If start is initiated with PCL out of the OFF position, but not past the IDLE gate, abort by placing the PCL to OFF or reselecting AUTO/RESET on the STARTER switch. If the PCL is past the IDLE gate, abort by placing the PCL to OFF.

3C If a start using external power is either aborted by the PMU, or manually aborted for a hot, hung, or no start, do not attempt subsequent starts.

4C Repeated PMU aborted start attempts are indicative of engine malfunction.

5N During ground starts, certain parameters (weak battery, high OAT, high pre-start ITT, high density altitude, tailwind) may cause the PMU to abort a battery start attempt. Though these parameters are not directly monitored by the PMU, they cause a rate of rise in N_1 and/or ITT that are indicative of an impending hung or hot start.

6N If a battery start was aborted (PMU or manual abort), connect external power (if available) and perform Motoring Run Procedure. Subsequent starts may be attempted if no engine malfunctions are evident and no limits have been exceeded.

7C STARTER switch is not spring-loaded from MANUAL to NORM.

8N Observe starter duty cycle cool-down period.

ABORT START PROCEDURE 1N

*1. PCL - OFF; OR STARTER SWITCH - AUTO/RESET 2N
2. Perform Motoring Run Procedure 3C 4C 5N 6N

MOTORING RUN PROCEDURE

1. PCL - OFF
2. IGNITION switch - NORM
3. Propeller area - CLEAR
4. STARTER switch - MANUAL FOR 20 SECONDS 7C 8N
5. STARTER switch - NORM

EMERGENCY ENGINE SHUTDOWN ON THE GROUND

*1. **PCL - OFF**
*2. **FIREWALL SHUTOFF HANDLE - PULL**
*3. Emergency Ground Egress - AS REQUIRED

1N Mid range is a physical PCL angle that approximates the midway position between IDLE and MAX.

2N A PCL position above IDLE will provide the best chance for the engine to recover.

3N A mid-range PCL position will minimize the potential of engine overtorque and/or overtemperature when the PMU is turned OFF.

4C There is a potential for ITT limits to be exceeded if the PMU switch is turned OFF with ITT ≥820 °C.

5C Ground idle will not be available during landing rollout and taxi. Plan for increased landing distances due to higher IDLE N_1 (approximately 67%).

6N With constant airspeed and torque, RPM can be considered stable if below 40% and no upward change for a 3-second period.

7N If N_P indicator is displaying red X's, switching the PMU to NORM and back OFF will reset the PMU and may restore the N_P indication.

8N Propeller should come out of feather within 15-20 seconds.

9W If rate of descent (indicated on the VSI while stabilized at 125 KIAS with gear, flaps, and speed brake retracted and 4 to 6% torque) is greater than 1500 ft/min, increase torque as necessary (up to 131%) to achieve approximately 1350 to 1500 ft/min rate of descent. If engine power is insufficient to produce a rate of descent less than 1500 ft/min, set PCL to OFF.

10N The pilot should consider moving the PCL through the full range of motion to determine power available.

11C Consideration should be given to leaving the engine operating with PCL at mid range.

12W With the PROP SYS circuit breaker pulled and the PMU switch OFF, the feather dump solenoid will not be powered. The propeller will feather at a slower rate as oil pressure decreases and the feathering spring takes effect. Glide performance will be considerably reduced and it may not be possible to intercept or fly the emergency landing pattern.

UNCOMMANDED POWER CHANGES/LOSS OF POWER/UNCOMMANDED PROPELLER FEATHER

*1. **PCL - MID RANGE** 1N 2N 3N
*2. **PMU SWITCH - OFF** 4C 5C
*3. **PROP SYS CIRCUIT BREAKER (left front console) - PULL, IF N_P STABLE BELOW 40%** 6N 7N 8N
*4. PCL - AS REQUIRED 9W 10N

If power is sufficient for continued flight:

*5. PEL - EXECUTE

If power is insufficient to complete PEL: 11C

*6. PROP SYS circuit breaker - RESET; AS REQUIRED 12W
*7. PCL - OFF
*8. FIREWALL SHUTOFF handle - PULL
*9. Execute Forced Landing or Eject

UNC POWER CHG/ LOSS

1N Setting the DEFOG switch to ON automatically selects high bleed air inflow and will alleviate back pressure on the engine compressor.

2W When the engine is so underpowered that high rates of descent occur, any delay in shutting down the engine to feather the propeller may result in insufficient altitude to reach a suitable landing site.

COMPRESSOR STALLS

*1. PCL - SLOWLY RETARD BELOW STALL THRESHOLD
*2. DEFOG switch - ON 1N
*3. PCL - SLOWLY ADVANCED (AS REQUIRED)

If power is sufficient for continued flight:

*4. PEL - EXECUTE

If power is insufficient to complete PEL:

*5. PCL - OFF 2W
*6. FIREWALL SHUTOFF handle - PULL
*7. Execute forced landing or eject

COMP STALLS

1W Illumination of the fire warning light accompanied by one or more of the following indications is confirmation of an engine fire: smoke; flames; engine vibration; unusual sounds; high ITT; and fluctuating oil pressure, oil temperature, or hydraulic pressure.

2W A fire warning light with no accompanying indication is not a confirmed fire. Do not shut down an engine for an unconfirmed fire.

3W High engine compartment temperatures resulting from a bleed air leak may cause illumination of the fire warning light. Reducing the PCL setting towards IDLE will decrease the amount of bleed air and possibly extinguish the fire warning light; however, advancing the PCL may be required to intercept the ELP. Regardless of reducing or advancing the PCL, continue to investigate for indications confirming an engine fire.

4W If the fire cannot be confirmed, the fire warning system may be at a fault and should be tested as conditions permit. If only one fire loop annunciator is illuminated (top or bottom half only), a false fire indication may exist if the other loop tests good.

FIRE IN FLIGHT

If fire is confirmed: 1W

*1. **PCL - OFF**

*2. **FIREWALL SHUTOFF HANDLE - PULL**

If fire is extinguished:

*3. Forced landing - EXECUTE

If fire does not extinguish or forced landing is impractical:

*4. Eject (BOTH)

If fire is not confirmed:

*5. PEL - EXECUTE 2W 3W 4W

1C Before resetting PMU or switching PMU to OFF, set power at lowest practical setting in order to minimize power shift.

2N If PMU failure is accompanied by uncommanded power changes other than anticipated step changes, do not reset PMU. Refer to Uncommanded Power Changes/Loss of Power/Uncommanded Propeller Feather.

3N The pilot should consider moving the PCL through the full range of motion to determine power available.

4C If the above actions do not clear the annunciator(s), the pilot should be aware that automatic torque, ITT, and N_1 limiting will not be available.

5C Ground idle will not be available during landing rollout and taxi. Plan for increased landing distances due to higher IDLE N_1 (approximately 67%).

PMU FAILURE

If the PMU FAIL warning illuminates, accomplish the following:

1. PCL - MINIMUM PRACTICAL FOR FLIGHT
2. PMU switch - OFF [1C] [2N] [3N]

To reset PMU:

3. IGN, START, and PMU circuit breakers (left front console) - CHECK AND RESET IF NECESSARY
4. PMU switch - NORM (ATTEMPT SECOND RESET IF NECESSARY) [4C]

If PMU reset is unsuccessful:

5. PMU switch - OFF
6. Land as soon as practical [5C]

PMU FAIL

1N If PMU STATUS caution illuminates after landing, notify maintenance.

2C Ground idle will not be available during landing rollout and taxi. Plan for increased landing distances due to higher IDLE N_1 (approximately 67%).

3N Once the gear has been extended, the weight-on-wheels circuit malfunction could prevent the gear from retracting.

PMU FAULT

On ground: 1N

1. PMU switch - OFF, THEN NORM

   If PMU STATUS caution remains illuminated, confirm source of fault prior to flight.

Inflight:

The PMU has detected a discrepancy in the weight on wheels switch. A reset is not possible. 2C 3N

PMU FAULT

1C Higher power settings may aggravate the existing condition.

CHIP DETECTOR WARNING

*1. PCL - MINIMUM NECESSARY TO INTERCEPT ELP; AVOID UNNECESSARY PCL MOVEMENTS 1C

*2. PEL - EXECUTE

CHIP DETECT WARN

1N Use this procedure for any of the following: red OIL PX annunciator illuminated, amber OIL PX annunciator illuminated, oil pressure fluctuations, oil temperature out of limits, or visibly confirmed leaking oil from the aircraft.

2N If OIL PX warning illuminates and oil pressure indicates <5 psi, check OIL TRX circuit breaker on the battery bus circuit breaker panel (left front console). If the circuit breaker is open, it may be reset.

3N Due to the sensitivity of the signal conditioning unit, a single, momentary illumination of the amber OIL PX caution while maneuvering is possible but may not indicate a malfunction.

4N Illumination of both red and amber OIL PX message while the oil pressure gage indicates normal pressure indicates an SCU failure.

5C Higher power settings may aggravate the existing condition.

OIL SYSTEM MALFUNCTION OR LOW OIL PRESSURE 1N 2N 3N 4N

If only amber OIL PX caution illuminates:

*1. Terminate maneuver

*2. Check oil pressure; if pressure is normal, continue operations

OIL SYSTEM MALF

If red OIL PX warning illuminates and/or amber OIL PX caution remains illuminated for 5 seconds, oil pressure fluctions, or oil temperature out of limits:

*3. PCL - MINIMUM NECESSARY TO INTERCEPT ELP; AVOID UNNECESSARY PCL MOVEMENTS 5C

*4. PEL - EXECUTE

1W Airstart attempts outside of the airstart envelope may be unsuccessful or result in engine overtemperature. Consideration should be given to ensure airstarts are attempted within the airstart envelope (125-200 KIAS for sea level to 15,000 feet, or 135-200 KIAS for 15,001 to 20,000 feet).

2W Do not delay ejection while attempting airstart at low altitude if below 2000 feet AGL.

3W PCL must be in OFF to feather the propeller, and ensure proper starter, ignition, boost pump, and PMU operation during airstart.

4C Ensure PCL is in OFF; otherwise, fuel may be prematurely introduced during start.

5C If N_1 does not rise within 5 seconds, discontinue the airstart attempt and proceed to IF AIRSTART IS UNSUCCESSFUL due to suspected mechanical failure.

6W Movement of the PCL above IDLE before N_1 stabilizes at approximately 67% will cause an increase in fuel flow which may cause engine failure due to a severe ITT over-temperature.

7C If there is no rise in ITT within 10 seconds after fuel flow indications, place the PCL to OFF and abort the start.

9C Continuous operation with the BOOST PUMP switch in the ON position will cause damage to the engine-driven low pressure fuel pump. Upon landing, notify maintenance of the duration of flight with BOOST PUMP switch in the ON position.

10N If generator will not reset, verify the STARTER switch is in NORM. The starter will drain battery power in 10 minutes if left in MANUAL.

IMMEDIATE AIRSTART (PMU NORM) 1W

*1. **PCL - OFF** 2W 3W 4C
*2. **STARTER SWITCH - AUTO/RESET** 5C
*3. **PCL - IDLE, ABOVE 13% N_1** 6W 7C
*4. Engine instruments - MONITOR ITT, N_1, AND OIL PRESSURE

If airstart is unsuccessful:

*5. PCL - OFF
*6. FIREWALL SHUTOFF handle - PULL
*7. Execute Forced Landing or Eject

If airstart is successful:

*8. PCL - AS REQUIRED AFTER N_1 REACHES IDLE RPM (APPROXIMATELY 67% N_1)
*9. PEL - EXECUTE
10. Confirm the position of the following:
    a. BOOST PUMP switch - ON 8C
    b. IGNITION switch - ON
11. STARTER switch - NORM
12. BLEED AIR INFLOW switch - NORM
13. GEN switch - VERIFY ON, RESET IF NECESSARY 9N
14. OBOGS - AS REQUIRED

1W If the engine should fail while flying the PEL, refer to the Engine Failure During Flight checklist, and transition to the Forced Landing procedure.

2W If rate of descent (indicated on the VSI while stabilized at 125 KIAS with gear, flaps, and speed brake retracted and 4 to 6% torque) is greater than 1500 ft/min, increase torque as necessary (up to 131%) to achieve approximately 1350 to 1500 ft/min rate of descent. If engine power is insufficient to produce a rate of descent less than 1500 ft/min, set PCL to OFF.

3W Once on profile, if the engine is vibrating excessively, or if indications of failure are imminent, set PCL to OFF.

4W Engine failure or shutdown will completely disable the bleed air system. Depending on environmental conditions, this may cause significant canopy icing and/or fogging, severely hampering visibility, especially from the rear cockpit.

5C Inducing yaw (side slipping) with a known engine/oil malfunction could result in impaired windshield visibility due to oil leakage spraying onto the windshield.

6N Do not set the boost pump and ignition to ON for engine malfunctions, such as oil system, chip light, fire, or FOD. In these cases, turning the boost pump ON may provide an undesirable immediate relight.

7N With uncontrollable high power, the pilot must shut down the engine once landing is assured.

PRECAUTIONARY EMERGENCY LANDING (PEL)

1W 2W 3W 4W 5C

*1. Turn to nearest suitable field

*2. Climb or accelerate to intercept ELP

*3. Gear, flaps, speed brake - UP

4. Conduct a systematic check of the aircraft and instruments for additional signs of impending engine failure 6N

5. BOOST PUMP switch - AS REQUIRED

6. IGNITION switch - AS REQUIRED

7. Plan to intercept the emergency landing pattern at or below high key in the appropriate configuration and a minimum airspeed of 120 KIAS 7N

1N If experiencing uncommanded power changes/loss of power/uncommanded propeller feather or compressor stalls, refer to appropriate procedure.

2N Propeller will not feather unless the PCL is fully in OFF.

3W If a suitable landing surface is available, turn immediately to intercept the nearest suitable point on the ELP. Any delay could result in insufficient gliding distance to reach a landing surface.

4W Do not delay decision to eject below 2000 feet AGL.

5W Airstart procedure is not recommended below 2000 feet AGL, as primary attention should be to eject or safely recover the aircraft.

6W Crosscheck N_1 against other engine indications to assess condition of engine and determine if an airstart is warranted. At 125 KIAS, an engine which has flamed out will rotate below 8% N_1 and indicate 0% N_1. The engine oil pressure indicator may display oil pressures up to 4 psi with or without the engine seized.Airstart procedure is not recommended below 2000 feet AGL, as primary attention should be to eject or safely recover the aircraft.

ENGINE FAILURE DURING FLIGHT 1N

*1. **ZOOM/GLIDE - 125 KNOTS (MINIMUM)**
*2. **PCL - OFF** 2N
*3. **INTERCEPT ELP** 3W 4W
*4. Airstart - ATTEMPT IF WARRANTED 5W 6N

If conditions do not warrant an airstart:

*5. FIREWALL SHUTOFF handle - PULL
*6. Execute Forced Landing or Eject

1W Airstart attempts outside of the airstart envelope may be unsuccessful or result in engine overtemperature. Consideration should be given to ensure airstarts are attempted within the airstart envelope (125-200 KIAS for sea level to 15,000 feet, or 135-200 KIAS for 15,001 to 20,000 feet).

2W Do not delay ejection while attempting airstart at low altitude if below 2000 feet AGL.

3W PCL must be in OFF to feather the propeller, and ensure proper starter, ignition, boost pump, and PMU operation during airstart.

4C Ensure PCL is in OFF; otherwise, fuel may be prematurely introduced during start.

5C Continuous operation with the BOOST PUMP switch in the ON position will cause damage to the engine-driven low pressure fuel pump. Upon landing, notify maintenance of the duration of flight with BOOST PUMP switch in the ON position.

6C If N_1 does not rise within 5 seconds, discontinue the airstart attempt and proceed to if airstart is unsuccessful due to suspected mechanical failure.

7W Movement of the PCL above IDLE before N_1 stabilizes at approximately 67% will cause an increase in fuel flow which may cause engine failure due to a severe ITT over-temperature.

8C If there is no rise in ITT within 10 seconds after fuel flow indications, place the PCL to OFF and abort the start.

9N If generator will not reset, verify the STARTER switch is in NORM. The starter will drain battery power in 10 minutes if left in MANUAL.

PMU NORM AIRSTART 1W

1. PCL - OFF 2W 3W 4C
2. Confirm the position of the following:
   a. START, IGN, BOOST PUMP, and PMU circuit breakers (left front console) - IN
   b. FIREWALL SHUTOFF handle - DOWN
3. BLEED AIR INFLOW switch - OFF
4. BOOST PUMP switch - ON 5C
5. IGNITION switch - ON
6. STARTER switch - AUTO/RESET 6C
7. PCL - IDLE, ABOVE 13% N_1 7W 8C
8. Engine instruments - MONITOR ITT, N_1, AND OIL PRESSURE

If airstart is unsuccessful:

9. PCL - OFF
10. FIREWALL SHUTOFF handle - PULL
11. Execute Forced Landing or Eject

If airstart is successful:

12. PCL - AS REQUIRED AFTER N_1 REACHES IDLE RPM (APPROXIMATELY 67% N_1)
13. STARTER switch - NORM
14. GEN switch - VERIFY ON; RESET IF NECESSARY

    Expect high amperage readings (above 30 amps) after the start. 9N
15. BLEED AIR INFLOW switch - NORM
16. OBOGS - AS REQUIRED
17. PEL - EXECUTE

PMU NORM AIR-START

1W Airstart attempts outside of the airstart envelope may be unsuccessful or result in engine overtemperature. Consideration should be given to ensure airstarts are attempted within the airstart envelope (125-200 KIAS for sea level to 15,000 feet, or 135-200 KIAS for 15,001 to 20,000 feet).

2W Do not delay ejection while attempting airstart at low altitude if below 2000 feet AGL.

3W PCL must be in OFF to feather the propeller, and stop fuel flow; if start is attempted without the PCL in OFF, fuel is introduced without ignition and a hot start will likely result when ignition begins.

4C Ensure PCL is in OFF; otherwise, fuel may be prematurely introduced during start.

5C Continuous operation with the BOOST PUMP switch in the ON position will cause damage to the engine-driven low pressure fuel pump. Upon landing, notify maintenance of the duration of flight with BOOST PUMP switch in the ON position.

6C If N_1 does not rise within 5 seconds, discontinue the airstart attempt and proceed to IF AIRSTART IS UNSUCCESSFUL due to suspected mechanical failure.

7W Movement of the PCL above IDLE before N_1 stabilizes at approximately 67% will cause an increase in fuel flow which may cause engine failure due to a severe ITT over-temperature.

8C If there is no rise in ITT within 10 seconds after fuel flow indications, place the PCL to OFF and abort the start.

9C The most critical pilot action during the PMU OFF start is PCL movement while monitoring fuel flow, ITT, and N_1 acceleration.

10N If generator will not reset, verify the STARTER switch is in NORM. The starter will drain battery power in 10 minutes if left in MANUAL.

PMU OFF AIRSTART 1W

1. PCL - OFF 2W 3W 4C
2. PMU switch - OFF
3. Confirm the position of the following:
   a. START, IGN, and BOOST PUMP circuit breakers (left front console) - IN
   b. FIREWALL SHUTOFF handle - DOWN
4. BLEED AIR INFLOW switch - OFF
5. BOOST PUMP switch - ON 5C
6. IGNITION switch - ON
7. STARTER switch - MANUAL 6C
8. PCL - AT 13% N_1 MINIMUM, ADVANCE TO OBTAIN INITIAL FUEL FLOW, THEN SLOWLY TO IDLE 7W 8C
9. Engine instruments - MONITOR ITT, N_1, AND OIL PRESSURE 9C

If airstart is unsuccessful:

10. PCL - OFF
11. FIREWALL SHUTOFF handle - PULL
12. Execute Forced Landing or Eject

If airstart is successful:

13. PCL - AS REQUIRED AFTER N_1 REACHES IDLE RPM (APPROXIMATELY 67% N_1)
14. STARTER switch - NORM
15. GEN switch - VERIFY ON, RESET IF NECESSARY

    Expect high amperage readings (above 30 amps) after the start. 10N

16. BLEED AIR INFLOW switch - NORM
17. OBOGS - AS REQUIRED
18. PEL - EXECUTE

PMU OFF AIR-START

1C Starting the engine in the manual mode disables the PMU from controlling any engine functions, including auto abort.

2W Failure to close the canopy prior to engine start may result in injury or damage to the aircraft due to exhaust and propwash.

3C If there is no rise in ITT within 10 seconds after fuel flow indications, place the PCL in OFF and perform the Abort Start procedure.

4C With the PMU disabled, monitor ITT, N_1, and torque and adjust PCL to remain within limits. Failure to operate within limits may cause serious engine damage.

5C Placing the PCL into IDLE prior to 60% N_1 during a manual start may cause engine damage due to overtemperature.

PMU OFF GROUND START

This procedure is recommended only for ferry flights to a suitable location where maintenance can be performed when autostart is not possible. 1C

1. Canopy - CLOSED AND LOCKED 2W
2. Navigation and anti-collision lights - AS REQUIRED
3. PMU switch - OFF (VERIFY PMU FAIL WARNING AND PMU STATUS CAUTION MESSAGES ILLUMINATE)
4. BLEED AIR INFLOW switch - OFF
5. BOOST PUMP switch - ON
6. IGNITION switch - ON
7. Propeller area - CLEAR
8. STARTER switch - MANUAL
9. PCL - AT 13% N_1 MINIMUM, ADVANCE ONLY AS FAR AS NECESSARY TO OBTAIN FUEL FLOW INDICATIONS (EXPECT APPROXIMATELY 70 TO 80 PPH)
10. ITT and N_1 - MONITOR 3C 4C
11. Oil and hydraulic pressure - CHECK
12. PCL - ADVANCE SLOWLY TO REACH IDLE AT APPROXIMATELY 67% N_1 5C
13. STARTER switch - NORM
14. IGNITION switch - NORM
15. BOOST PUMP switch - ARM
16. External power - DISCONNECT (IF USED) AND DOOR SECURED
17. GEN switch - ON
18. BLEED AIR INFLOW switch - NORM
19. Before Taxi Check - PERFORM

PMU OFF GND START

1W Landing distance will increase with the propeller feathered.

2W Landing on an unprepared surface may cause structural damage making it impossible to open the canopy or fracture it using the CFS.

3W Engine failure or shutdown will completely disable the bleed air system. Depending on environmental conditions, this may cause significant canopy icing and/or fogging, and severely hamper visibility, especially from the rear cockpit.

4C Ejection is recommended if a suitable landing area is not available. If circumstances dictate an emergency landing and ejection is not possible or the ejection system malfunctions, the pilot may perform an ELP to an unprepared surface or ditch the aircraft. The aircraft structure can survive either type of forced landing; however, the risk of injury increases significantly due to crash loads and the complexity of ground or water egress.

5C Inducing yaw (side slipping) with a known engine/oil malfunction could result in impaired windshield visibility due to oil leakage spraying onto the windshield.

6C At higher temperature and pressure altitudes, power response will be delayed. Airspeeds below 110 KIAS on ELP final, in combination with transitioning to a high flare, may lead to a hard landing resulting in landing gear component failure.

7W If landing on an unprepared surface or ditching, do not extend the landing gear. Flaps will not be available without emergency gear extension.

8N Normal safe indications with electrical power, when the emergency extension system has been used to lower the gear, are two green main gear lights, two red main door lights, green nose gear light, and red light in handle.

9N Selecting either TO or LDG flaps will extend the flaps to the commanded position if the landing gear has been extended using the emergency extension system and if battery power is available.

10N Landing gear/flap retraction is not possible when the emergency extension system has been used.

11N Nose wheel steering is unavailable with an inoperative engine. Maintain directional control with rudder and differential braking.

12N Activating the ELT at a higher altitude will transmit emergency signal for a longer distance and could aid in rescue/recovery.

FORCED LANDING [1W] [2W] [3W] [4C] [5C] [6C]

*1. Airspeed - 125 KIAS PRIOR TO EXTENDING LANDING GEAR
*2. EMER LDG GR handle - PULL (AS REQUIRED) [7W] [8N]
*3. Airspeed - 120 KIAS MINIMUM UNTIL INTERCEPTING FINAL; 110 KIAS MINIMUM ON FINAL
*4. Flaps - AS REQUIRED [9N] [10N] [11N]

Accomplish the following as conditions permit:

5. Distress call - TRANSMIT
6. ELT switch - AS REQUIRED [12N]
7. Transponder - 7700 (AS REQUIRED)
8. Harness - LOCKED (BOTH)
9. Emergency Ground Egress procedure - EXECUTE (AS REQUIRED)

FORCED LDG

TAKEOFF

1W After a stop which required maximum effort braking and if overheated brakes are suspected, do not taxi into or park in a congested area until brakes have had sufficient time to cool. Do not set parking brake.

ABORT

*1. **PCL - IDLE**
*2. **BRAKES - AS REQUIRED** 1W

1C Land on side of runway corresponding to the good tire (put drag in the middle). Maintain directional control using rudder, brakes, and nose wheel steering as required.

TIRE FAILURE DURING TAKEOFF

If the decision is made to stop:

1. Abort

If takeoff is continued:

2. Gear and flaps position - DO NOT CHANGE
3. Straight-in approach - EXECUTE 1C

1W If insufficient runway remains to land straight ahead, consider immediate ejection.

2W Do not sacrifice aircraft control while troubleshooting or lowering gear with emergency system.

3N The pilot should select IDLE to use the increased drag of the not yet feathered propeller or select OFF to reduce the sink rate.

4N With a loss of hydraulic pressure, landing gear and flaps can-not be lowered by normal means.

ENGINE FAILURE IMMEDIATELY AFTER TAKEOFF (SUFFICIENT RUNWAY REMAINING STRAIGHT AHEAD) 1W 2W

*1. **AIRSPEED - 110 KNOTS (MINIMUM)**
*2. **PCL - AS REQUIRED** 3N
*3. **EMER LDG GR HANDLE - PULL (AS REQUIRED)** 4N
*4. Flaps - AS REQUIRED

ENG FAIL AFT T/O

GENERAL G

1-5/8” top tab

GENERAL

1W Improperly positioning the control stick/elevator aft of the neutral position may significantly delay or prevent the aircraft from recovering from an OCF/spin which could result in loss of aircraft and/or crew.

2N Cycling of control positions or applying anti-spin controls prematurely can aggravate aircraft motion and significantly delay recovery.

3W Recommended minimum altitude for ejection is 6000 feet AGL.

4C Power-on and inverted departures or spins will result in high loads on the engine and torque shaft. If an inverted or power-on departure is encountered, land as soon as conditions permit. The pilot should suspect possible engine damage and may experience unusual engine operation accompanied by low oil pressure or CHIP detector warning. In all cases of inverted or power-on departures, the engine shall be inspected by qualified maintenance personnel after flight.

INADVERTENT DEPARTURE FROM CONTROLLED FLIGHT

*1. **PCL - IDLE**
*2. **CONTROLS - NEUTRAL** 1W 2N
*3. **ALTITUDE - CHECK** 3W
*4. Recover from unusual attitude 4C

FLIGHT WITH SHATTERED/DAMAGED CANOPY

1. OBOGS - MAX (AS REQUIRED) (BOTH)
2. Airspeed - 150 KIAS MAXIMUM
3. Descend - BELOW 18,000 FT MSL
4. PRESSURIZATION switch - DUMP BELOW 18,000 FT MSL IF CANOPY DAMAGED BUT INTACT
5. Controllability Check - AS REQUIRED
6. Land as soon as possible

DMGD CANOPY

1W Do not attempt to lock the canopy in flight. Movement of the internal canopy lock handle may inadvertently allow the canopy to open and depart the aircraft.

2W If canopy frame is floating off the left side rail or the canopy is obviously unlocked, do not eject.

CANOPY UNLOCKED

1. Airspeed - 150 KIAS MAXIMUM; AVOID ABRUPT MANEUVERING 1W
2. Descend below 18,000 ft MSL
3. PRESSURIZATION switch - DUMP BELOW 18,000 FT MSL
4. Land as soon as possible 2W

CANOPY UNLOCK

CANOPY UNLOCKED

1N Except when trim is at full nose down, reducing airspeed to110 to 150 KIAS will reduce control forces. Adding power will cause a pitch up/left yaw, while reducing power will cause a pitch down/ right yaw. With full nose down trim, cruise and approach as fast as practical to reduce pitch forces.

2N At typical final approach speeds, aileron forces remain relatively light in the event of full aileron trim runaway. Leaving the AIL/EL TRIM circuit breaker in during aileron trim malfunctions will enable the pilot to use pitch trim when necessary.

RUNAWAY TRIM

1. Trim interrupt button (control stick) - DEPRESS AND HOLD
2. Airspeed - AS REQUIRED TO REDUCE CONTROL FORCES 1N
3. TRIM DISCONNECT switch (left console) - TRIM DISCONNECT
4. Trim interrupt button (control stick) - RELEASE
5. AIL/EL TRIM or RUD TRIM circuit breaker(s) (left front console) - PULL, AS REQUIRED 2N
6. TRIM DISCONNECT switch (left console) - NORM
7. Controllability Check - AS REQUIRED

1N If the elevator trim failed during high speed cruise or descent, the stick force will increase to approximately 10 pounds as the aircraft is slowed for approach and during landing. Approximate maximum forces for aileron trim or rudder trim are 5 pounds and 20 pounds respectively.

STUCK/FAILED TRIM

1. TRIM DISCONNECT switch (left console) - NORM
2. AIL/EL TRIM or RUD TRIM circuit breaker(s) (left front console) - CHECK, RESET IF OPEN 1N

STUCK/ FAILED TRIM

1N If TAD FAIL caution remains illuminated, notify maintenance personnel after landing and leave the BAT and AVIONICS MASTER switches ON until the TAD failure code lights, labeled L1 through L4, in the right aft avionics bay, are inspected. If the battery is turned OFF, the TAD failure code will be lost.

TRIM AID DEVICE FAILURE (TAD)

1. TAD circuit breaker (right front console) - CHECK IN OR PULL AND RESET
2. TRIM AID switch - ENGAGE AFTER TAD FAIL CAUTION EXTINGUISHES 1N

TRIM AID DEVICE FAILURE (TAD)

1N Do not attempt to extend speed brake when experiencing asymmetric flaps.

2W Once asymmetry is minimized or eliminated, do not reposition flap control handle.

3N If necessary, confirm flap position with tower flyby and/or visual inspection by another aircraft.

ASYMMETRIC FLAPS (SPLIT-FLAP CONDITION) 1N

1. Airspeed - AS REQUIRED TO MAINTAIN CONTROL AND MINIMIZE CONTROL EFFORT
2. Flap control handle - ACTUATE TO MINIMIZE OR ELIMINATE FLAP ASYMMETRY 2W 3N
3. Controllability Check - AS REQUIRED
4. Land via straight-in approach

ASYM
FLAP

1W Failure to stow the gust lock completely may prevent the flight controls from operating properly. Any attempt to actuate the flight controls with the gust lock not properly stowed may result in damage to the flight control assemblies. Ensure the gust lock is not impeded by the leather boot at the base of the control stick.

2N If necessary, relax rudder pedal force and allow heading to drift, controlling heading with bank angle. If the aircraft turn and slip indicator is fully deflected, remain below 140 KIAS. Consideration may be given to reducing power to regain/maintain directional control.

3N A fully deflected cockpit rudder trim position indicator may be indicative of a significant rudder mis-trim and/or a runaway rudder trim condition.

4N With a rudder trim push rod failure, the cockpit trim position indications will respond to trim inputs but will have no effect upon rudder pedal forces, trim slip indicator or actual trim tab position.

5N Inability to center the ball may indicate rudder mis-trim, a rudder trim system malfunction or a rudder jammed in other than neutral position.

6W Use extreme caution when reversing control inputs during slip maneuvers. Reversing the control inputs (opposite rudder and aileron) without first neutralizing the controls may cause the aircraft to depart controlled flight.

7W If a mechanical rudder system malfunction is suspected, full rudder deflection is not recommended.

8C The stall speed is greatly increased during slips (uncoordinated flight condition).

9N Reference table below to determine maximum crosswind component for landing. Plan to land on a runway with a crosswind component equivalent to or less than the maximum observed rudder turn and slip indication (ball widths).

10N During level flight, approximately 60 lbs. of rudder pedal force yields an approximate turn and slip indication of 2 ball widths.

RUDDER SYSTEM MALFUNCTION

RUDD SYSTEM MALF

1. Gear, flaps, speed brake - UP
2. Gust lock - CHECK STOWED 1W
3. Climb to minimum 6500 ft AGL 2N
4. Airspeed - 120-140 KIAS
5. TAD switch - OFF
6. TRIM DISCONNECT switch - NORM (BOTH)
7. RUD TRIM circuit breaker (left front console) - CHECK; RESET IF OPEN
8. Rudder trim indicator/turn and slip indicator - VERIFY INDICATIONS (BOTH) 3N
9. Rudder trim - MOVE TO ACHIEVE TWO BALL WIDTHS DEFLECTION AS INDICATED ON THE TRIM SLIP INDICATOR (WINGS-LEVEL, LEFT AND THEN RIGHT) 4N
10. RE-TRIM AIRCRAFT AND VERIFY THE TURN AND SLIP INDICATOR (BALL) IS CENTERED, WINGS-LEVEL, WITHOUT APPLYING ANY RUDDER PEDAL INPUT/FORCE. 5N
11. Brakes - PRESS AND RELEASE BOTH LEFT AND RIGHT PEDALS SIMULTANEOUSLY 2-3 TIMES (BOTH)
12. Rudder Pedals - ADJUST FORWARD AND AFT USING ADJUSTMENT CRANK (BOTH)
13. Descend below 10,000 ft MSL
14. PRESSURIZATION switch - RAM/DUMP
15. Rudder Pedals - RUDDER PEDALS - SLOWLY CHECK RANGE OF MOTION IN BOTH DIRECTIONS VIA A STRAIGHT AHEAD SLIP (LEFT, PAUSE IN NEUTRAL AND THEN RIGHT) WHILE OBSERVING TURN AND SLIP INDICATION REQUIRED FOR LANDING 6W 7W 8C 9N 10N

Maximum Crosswind Component for Landing	Turn and Slip Indication
10 knots	1 ball width
15 knots	2 ball widths
20 knots	3 ball widths
25 knots	3.5 ball widths

11N If necessary to divert to a field with a safe crosswind component, consideration must be given to diversion range summary performance for unpressurized flight. If fuel state dictates, it is permissible to re-pressurize the aircraft in order to reach a suitable alternate. Execute the CONTROLABILITY CHECK at the alternate destination.

RUDDER SYSTEM MALFUNCTION (CONTINUED)

16. CONTROLLABILITY CHECK - EXECUTE (IF UNABLE TO ACHIEVE NORMAL RUDDER CONTROL) 11N
17. Land as soon as practical

**"CONT"
RUDD
SYSTEM
MALF**

1N If unable to manipulate any flight control surface, control may be available from the other cockpit.

2W Do not stall aircraft or slow to the point that full stick or rudder is required to maintain aircraft control. In no case should the aircraft be slowed below 90 KIAS or to activation of the stick shaker (approximately 15.5 AOA), whichever is higher.

3W Do not change configuration once controllability check is complete, as additional structural damage and/or an unsafe landing condition may occur.

4C If flap system damage is known or suspected, do not reposition flaps.

5N Ensure all power options (idle to max power) are attempted during the controllability check. With the PCL at IDLE, zero torque will simulate the flare and landing. This condition should demonstrate if the rudder is available for a normal landing.

6W Without full rudder authority and a crosswind component greater than 5 knots, directional control on final approach may be extremely difficult due to the inability to apply proper crosswind controls. Fly a no-flap, straight-in approach. If the need arises to discontinue the approach or go-around, a slow and steady application of the PCL may prevent torque effect from exacerbating aircraft control problems. On landing roll, differential braking may be required in order to prevent departure from the prepared surface.

7C Landings have been accomplished at touchdown speeds up to approximately 110 KIAS with landing flaps and 130 KIAS with flaps up. Anticipate increased directional sensitivity and longer landing distances at touchdown speeds above 100 KIAS. High touchdown airspeeds also increase the potential for a blown tire, brake fade, and/or overheated brakes.

8N Differential braking may aid in directional control upon touchdown.

CONTROLLABILITY CHECK (STRUCTURAL DAMAGE/FLIGHT CONTROL MALFUNCTION) 1N

CONT CHECK (STRC DAM)

If experiencing any rudder-related malfunctions, do not execute the Controllability Check (Structural Damage/Flight Control Malfunction) checklist until directed by the Rudder System Malfunction checklist.

1. Climb to minimum 6500 feet AGL, if practical
2. Check flight characteristics, gradually slowing aircraft to landing configuration and airspeed 2W 3W 4C 5N
3. Fly no slower than minimum controllable airspeed plus 20 KIAS until on final approach
4. Fly a power-on, straight-in approach requiring minimum flare and plan to touchdown at no less than previously determined minimum controllable airspeed
   6W 7C 8N

1N In a situation requiring immediate ground egress, the ejection system has the capability for 0/0 ejection.

2W Failure to ensure that the ISS mode selector is set to SOLO may result in the inadvertent ejection of one or both seats.

3W Failure to insert both ejection seat safety pins (if occupied) before ground egress may result in inadvertent activation of ejection sequence and subsequent injury or death when performing emergency ground egress.

4W If the canopy fracturing system malfunctions in conjunction with a canopy latch failure in the locked position, ejection may be the only option remaining to exit the aircraft. Aircrew shall remove the ejection seat safety pin and ensure shoulder straps, lap straps, and leg restraint garters are still attached prior to pulling the ejection handle.

5W To prevent injury, ensure oxygen mask is on and visor is down prior to actuating the CFS system.

6W Each internal CFS handle activates only the CFS charge for the respective transparency. Both internal CFS handles must be activated in order to fracture both transparencies (if required).

7N Oxygen hose, emergency oxygen hose, communication leads, and anti-G suit hose will pull free while vacating cockpit and leg restraint lines will pull through leg garter D rings if released with quick-release lever.

EMERGENCY GROUND EGRESS 1N

*1. ISS mode selector - SOLO 2W
*2. Seat safety pin - INSTALL (BOTH) 3W
*3. PARKING BRAKE - AS REQUIRED
*4. Canopy - OPEN

If canopy cannot be opened or situation requires right side egress:

*5. CFS handle - ROTATE 90° COUNTERCLOCKWISE AND PULL (BOTH) 4W 5W 6W
*6. Upper fittings, lower fittings, and leg restraint garters - RELEASE (BOTH) 7N
*7. BAT, GEN, and AUX BAT switches - OFF
*8. Evacuate aircraft

1W If the seat becomes unlocked from the catapult and slides partially up the rails or completely out of the cockpit, ejection and/or parachute deployment is still possible, but the ejection handle must be pulled followed by activation of the manual override (MOR) handle. Under these circumstances, low altitude ejection capabilities are compromised.

2W If increased pressure in the mask is not felt after a high altitude ejection prior to seat separation, the pilot should make attempts to firmly pull the green ring because it is possible that the ejection sequence may not fully activate the emergency oxygen cylinder. Several attempts may be required to fully activate the system using the green ring.

3W If the aircraft is not controllable, ejection must be accomplished regardless of speed, altitude, or attitude since immediate ejection offers the best opportunity for survival.

4W Recommended minimum altitudes for ejection are 2000 feet AGL for controlled ejection and 6000 feet AGL for uncontrolled ejection.

5W The possibility of safe ejection is greatly improved by making the decision to eject early, and with sufficient airspeed and altitude. Although the ejection seat is capable of ejection at zero altitude and zero airspeed, or with sink rates to 10,000 feet per minute, do not postpone the decision to eject. Variables such as pilot reaction time, aircraft attitude, airspeed, and sink rate can significantly affect minimum safe ejection altitude.

6W When ejecting over mountainous terrain exceeding 8000 feet MSL, the manual override (MOR) handle should be used to manually separate from the seat and deploy the parachute.

7W Failure to release emergency oxygen hose from elastic sidewall strap may result in loss of emergency oxygen system during ejection.

CONTROLLED EJECTION [1W] [2W]

Perform as time and conditions permit:

1. Notify crewmember of decision to eject (BOTH)
2. Altitude - 2000 FEET AGL MINIMUM (RECOMMENDED) [3W] [4W] [5W] [6W]
3. Airspeed - 125-180 KIAS (RECOMMENDED)
4. Distress call - TRANSMIT
5. Transponder - 7700
6. Loose equipment - STOW (BOTH)
7. Visor - DOWN (BOTH)
8. Oxygen mask and helmet - FASTENED AND TIGHT, CHIN STRAP FASTENED (BOTH) [7W]
9. Leg restraint garters - CHECK (BOTH)
10. Harness - LOCKED (BOTH)
11. ADU mode selector valve - AS REQUIRED (BOTH)
12. Turn aircraft toward uninhabited area
13. PCL - OFF
14. Assume proper position:
    a. Head back firmly against headpad
    b. Shoulders and back against seat back
    c. Elbows close to body
    d. Legs flat on seat pad
    e. Legs extended, but not rigid
15. Execute EJECT

1W To avoid injury, grasp handle and pull sharply towards abdomen, keeping elbows against the body.

2W The emergency escape system incorporates an explosive canopy fracturing system. The force of detonation blows numerous shards and small fragments outward from the canopy and into the cockpit. Some metallic fragments may be extremely hot and may cause burns upon contact with the skin. Aircrew should enure exposed skin is covered, the oxygen mask is on, and visor is down prior to ejection or actuating the CFS system to prevent injury from shards and hot fragments.

3W When ejecting over mountainous terrain exceeding 8000 feet MSL, the manual override (MOR) handle should be used to manally separate from the seat and deploy the parachute.

4N If ejecting at low speed, one or both sets of risers may remain velcroed together following seat separation. This may create a slight increase in descent rate and/or an uncommanded turn. Manually separate the risers if time permits. The steering lines (toggles) are located on the backside of each of the front risers. To counter any uncommanded turns, unstow the opposite steering line or use risers for controllability.

EJECT

*1. **EJECTION HANDLE - PULL (BOTH)**
1W | 2W | 3W | 4N

1W Pulling the SSK manual release handle will release the raft/SSK on a 12-foot lowering line below the crewmember and is not recommended over land. The raft/SSK may become entangled in trees or power lines.

2N The following options may be performed if time permits and in any order.

3W An increased risk of severe injury or death during parachute landing fall (PLF) exists with surface winds exceeding 25 knots. High surface winds contribute to parachute landing velocity. When time permits, select parachute steering and turn into the wind to reduce landing velocity. Also, locate parachute release fittings and prepare to release chute after PLF to prevent dragging injuries.

4N If decision is made to discard SSK (release both lap straps), waiting until near the ground reduces the risk of losing survival equipment.

POST EJECTION PROCEDURES

1. Inspect canopy - CAREFULLY INSPECT CANOPY AND SUSPENSION LINES FOR DAMAGE AND/OR MALFUNCTIONS
2. (I) Inflate LPU - LOCATE TOGGLES AND PULL DOWN TO WAIST
3. (R) Release raft by pulling the SSK manual release handle - AS REQUIRED [1W]
4. (O) Options - AS REQUIRED [2N]
   a. LeMoinge slots - Locate toggles on front risers. Pull down on toggles to turn chute into the wind prior to landing (left toggle, left turn; right toggle, right turn).
   b. Visor - If descending over water, raise visor for increased visibility. If descending over land, leave visor down for increased face and eye protection.
   c. Oxygen mask - If descending over water, remove oxygen mask from face and discard. If descending over land, loosen bayonet fittings and retain oxygen mask for increased face protection.
   d. Gloves - If descending over water, gloves may be removed for better dexterity; if removed, retain and stow. If descending over land, keep gloves on for increased hand protection.
   e. Seat survival kit (SSK) - If descending over water, do not discard SSK (release both lap straps). If descending over land, discard SSK only during daylight conditions and over open terrain; do not pull SSK manual release handle. [3W] [4N]

POST EJECT PROC

5N If decision is made to discard SSK (release both lap straps), waiting until near the ground reduces the risk of losing survival equipment.

6N Heels should never contact the ground while performing a PLF.

7W Release lap strap on right side only. Releasing lap strap on left side could result in loss of SSK and associated survival items.

POST EJECTION PROCEDURES (CONTINUED)

5. (K) Konnectors - LOCATE CANOPY RELEASE UPPER (KOCH) FITTINGS
6. Preparing to land procedures - PREPARE FOR LANDING AT A HIGH ENOUGH ALTITUDE (APPROXIMATELY 200 FEET) TO ACCOMPLISH THE FOLLOWING:
   a. If over land - DISCARD SSK (RELEASE BOTH LAP STRAPS) [5N]
   b. Locate clear landing area and steer into wind
   c. Grab rear risers at retainer loops with elbows pointed forward, (toggles) at eye level, with head erect, and eyes on the horizon
   d. Ensure feet and knees are together, knees are slightly bent, and balls of feet are lower than heels
7. Landing/post-landing procedures - OVER LAND
   a. Perform parachute landing fall (PLF) - FIVE POINTS OF CONTACT:
      (1) Balls of feet
      (2) Side of calf
      (3) Side of thigh
      (4) Side of buttocks
      (5) Shoulder blade [6N]
   b. Release upper KOCH fittings after completion of PLF
8. Landing/post-landing procedures - OVER WATER
   a. Release upper KOCH fittings as soon as feet touch the water and perform ADR (post-water entry):
      (1) (A) Avoid the chute
      (2) (D) Disentangle the chute
      (3) (R) Release SSK and retrieve survival items [7W]

"CONT" POST EJECT PROC

LIFE RAFT OPERATION

1. When clear of parachute canopy, retrieve the life raft by locating the drop line and pulling the raft to you.
2. Position the raft so boarding will be on the same side as the CO_2 bottle.
3. Grasp raft and forcibly push below waist.
4. Use boarding handles, pull into raft and turn towards seated position.
5. Locate sea anchor and deploy.
6. Retrieve rucksack.
7. Pull canopy over shoulders.
8. Use integral bailer to remove water from inside life raft as follows:
   a. Make sure funnel is not twisted.
   b. Put funnel end of integral bailer in water and lift funnel to allow water to run out through tube.
   c. Repeat step (b) until no water remains in life raft.
   d. Use bailing sponge to dry floor and squeeze water out into funnel.
   e. When there is no more water in life raft, twist integral bailer three complete turns.
   f. Tie integral bailer to floor loop patch with cord using bowline knot.
9. Feed antenna of emergency transmitter through sleeve in raft canopy.
10. Close raft canopy and attach edges with touch-and-close fastener strips and press studs.
11. Pull raft hood canopy over face and attach touch-and-close patches.

1W To allow discharge of static electricity and prevent electrical shock, avoid touching rescue device until it has made contact with water/ground.

2W To avoid severe injury, keep hands clear of hook and ring assemblies during hoisting.

3W Under no circumstances should survivors attempt to assist their entrance into helicopter or move from rescue device until helicopter aircrewman assists them to a seat in the aircraft.

RESCUE

If picked up by rescue helicopter with no rescue swimmer deployed, the following procedures should be followed:

1. Stow or discard loose gear and roll out on right side of raft (side with CO2 bottle).
2. Ensure helmet visor has been lowered and swim away from raft.
3. Disconnect lower KOCH fittings after rescue strop (horse collar) has been lowered. 1W 2W 3W

Use the following procedures for use of the rescue strop (horse collar):

1. Grasp free end of rescue strop.
2. Encircle body with rescue strop and roll into rescue strop.
3. Attach free end of rescue strop to large hook.
4. Make sure rescue strop is above waist and high on back.
5. Wrap arms around rescue strop.
6. Keep head down and to left; give thumbs up signal to helphoist operator.
7. Cross feet after clear of water.

NORMAL PROCEDURES

TABLE OF CONTENTS PAGE

PREFLIGHT CHECK

BEFORE EXTERIOR INSPECTION

1. Seat safety pin - INSTALLED (BOTH)
2. Ejection handle - CHECK CONDITION (BOTH)
3. CFS handle safety pin - REMOVE AND STOW (BOTH)
4. CFS pin storage box - CLOSED AND LATCHED
5. STARTER switch - NORM (BOTH)
6. IGNITION switch - NORM (BOTH)
7. AVIONICS MASTER switch - OFF
8. EVAP BLWR control - OFF (BOTH)
9. ISS mode selector - SOLO OR CMD FWD (AS REQUIRED) (VERIFY ISS MODE SELECTOR LEVER IS LOCKED IN SOLO OR CMD FWD)
10. DTS/DVR cartridge - INSERT (AS REQUIRED)
11. Circuit breakers - IN (BOTH)
12. PCL - CHECK, OFF (BOTH) (VERIFY TWO AUDIBLE CLICKS PER PCL AND THE PCL IN BOTH COCKPITS ARE INTERCONNECTED AND MOVE FREELY THROUGH THE FULL RANGE OF MOTION. VERIFY POSITIVE IDLE-STOP AND NO FORWARD PCL MOVEMENT IS REQUIRED TO MOVE AFT PAST IDLE-STOP TO OFF. <3> VERIFY PCL CUTOFF FINGER LIFT MOVES FREELY. RAISE PCL CUTOFF FINGER LIFT AND VERIFY PCL CAN BE MOVED FROM IDLE TO OFF. <4> VERIFY FINGER LIFT GUARD AND PCL CUTOFF FINGER LIFT MOVE FREELY. PUSH FINGER LIFT GUARD DOWN, RAISE PCL CUTOFF FINGER LIFT AND VERIFY PCL CAN BE MOVED FROM IDLE TO OFF. VERIFY FINGER LIFT GUARD RETURNS TO ITS SPRING LOADED POSITION.)
13. Gear handle - DOWN (BOTH)
14. MASTER ARM switch - SAFE
15. Brake reservoir - CHECK (NOTIFY MAINTENANCE IF FILLER PLUG GREEN BAND IS NOT VISIBLE OR LOWER RED BAND SHOWS)
16. FIREWALL SHUTOFF handle - DOWN, GUARD IN PLACE
17. AUX BAT switch - ON
18. Fire detection system switch - TEST (FIRE 1) (UPPER HALF OF ANNUNCIATOR SHOULD ILLUMINATE) (BOTH)

19. Standby VHF control head - CHECK, OFF
20. Backup flight instrument - CHECK (BOTH)
21. BAT switch - ON
22. AUX BAT switch - OFF
23. AUX BAT - TEST
24. Battery voltage - CHECK (23.5 VDC MINIMUM FOR A BATTERY START)
25. Fuel quantity - CHECK
26. Seat Height - ADJUST (BOTH)
27. BAT switch - OFF
28. CFS donor assemblies - INSPECT FOR PROTRUDING FIRING PLUNGERS (BOTH)
29. Ejection seat - INSPECT (BOTH):
    a. CFS attach bolt - CHECK
    b. Top latch mechanisms- CHECK
    c. Parachute risers inertial reel - CHECK CONDITION/ OPERATION
    d. Lap straps - CHECK CONDITION
    e. Leg restraint lines - CHECK SECURE TO FLOOR AND SEAT
    f. Ejection seat manual override (MOR) handle - VISUALLY CHECK FULL DOWN AND LOCKED
    g. Oxygen hoses (main and emergency) - CHECK CONDITION
    h. Seat survival kit (SSK) - SET AND CHECK (MAKE SURE ADU MODE SELECTOR SWITCH IS IN DESIRED POSITION AND VISUALLY INSPECT THAT ADU AND RADIO BEACON CABLES ARE PROPERLY CONNECTED TO THE EJECTION SEAT)
    i. Ejection seat oxygen supply - CHECK
30. Gust lock - STOWED
31. HUD combiner cover - REMOVE AND STOWED

EXTERIOR INSPECTION

Left wing - Area 1

1. Flaps - CHECK
2. Main gear - CHECK:
    a. No hydraulic leaks

b. No external damage
c. Tire condition
d. No wheel damage
e. Landing light - CONDITION

3. Aileron - CHECK
4. Static wicks (4) - CHECK
5. Position, navigation, and anti-collision strobe lights - CHECK CONDITION
6. Wing condition - CHECK
7. AOA vane - CHECK FOR SMOOTH ROTATION
8. Fuel vents (2) - CLEAR
9. Pitot tube - CHECK
10. TAT probe - CHECK
11. Fuel filler cap - SECURED
12. Main gear - CHECK:
    a. No hydraulic leaks
    b. No external damage
    c. Tire - CONDITION (NO RED CORD VISIBLE, DEEP CUTS, GOUGES, VISUAL TIRE PRESSURE (ROUND), OR ANYTHING ELSE UNUSUAL)
    d. Brake wear indicators (2) - CHECK (WEAR INDICATORS SHOULD PROTRUDE ABOVE HOUSING. IF AN INDICATOR READS LOW, RESET THE PARKING BRAKE AND RE-CHECK)
    e. No wheel damage
    f. Strut extension (minimum 2 inches)
    g. Hydraulic brake lines and electrical cables - CONDITION
    h. Gear doors secure
    i. Landing light - CONDITION
    j. Landing gear lock pin and flag - VERIFY REMOVED AND STOWED
13. Fuel drains (2) - CHECK FOR LEAKS

Left Nose - Area 2

1. Single point refueling door - CHECK:
    a. Refueling cap - VERIFY SECURE
    b. Pre-check valves - DOWN
    c. Fuel filter indicator - CHECK IN
    d. Maintenance fuel shutoff valve - CHECK

2. Nose gear - CHECK:
   a. No hydraulic leaks
   b. No external damage
   c. Tire condition
   d. No wheel damage
   e. Strut extension (minimum 2.5 inches)
   f. Nose gear spring strut - INSPECT
   g. <2>Nose gear friction collar - CHECK
   h. Gear doors secure
   i. Jack pad - SECURE (WARNING FLAG REMOVED)
   j. Landing gear lock pin and flag - VERIFY REMOVED AND STOWED
3. Engine compartment - CHECK:
   a. Oil filler cap - VERIFY SECURE
   b. Hot battery bus circuit breakers - VERIFY IN
   c. General condition - CHECK
4. Engine cowling - CLOSED AND LATCHED
5. Starter/generator air intake duct - CLEAR
6. Fuel drain - CHECK
7. Engine exhaust stack - CHECK
8. Propeller blades and spinner - CHECK:
   a. Blade condition
   b. Security of spinner
   c. Free propeller rotation
9. Engine air inlet - CLEAR
10. Oil cooler inlet and outlet - CLEAR
11. Inertial separator exit duct - CLEAR

Right Nose - Area 3

1. Maintenance access door - CLOSED AND LATCHED
2. Engine exhaust stack - CHECK
3. Engine cowling - CLOSED AND LATCHED
4. Heat exchanger/ECS intake - CHECK
5. Heat exchanger/ECS exhaust - CHECK
6. Inertial separator exit duct - CLEAR
7. Front cockpit canopy - CHECK

Right Wing - Area 4

1. Fuel drains (2) - CHECK FOR LEAKS
2. Main gear - CHECK:
   a. No hydraulic leaks
   b. No external damage
   c. Tire - CONDITION (NO RED CORD VISIBLE, DEEP CUTS, GOUGES, VISUAL TIRE PRESSURE (ROUND), OR ANYTHING ELSE UNUSUAL)
   d. Brake wear indicators (2) - CHECK (WEAR INDICATORS SHOULD PROTRUDE ABOVE HOUSING. IF AN INDICATOR READS LOW, RESET THE PARKING BRAKE AND RE-CHECK)
   e. No wheel damage
   f. Strut extension (minimum 2 inches)
   g. Hydraulic brake lines and electrical cables - CONDITION
   h. Gear doors secure
   i. Taxi light - CONDITION
   j. Landing gear lock pin and flag - VERIFY REMOVED AND STOWED
3. Fuel vents (2) - CLEAR
4. Fuel filler cap - SECURED
5. Pitot tube - CHECK
6. Wing condition - CHECK
7. Position, navigation, and anti-collision strobe lights - CHECK CONDITION
8. Static wicks (4) - CHECK
9. Aileron - CHECK
10. Main gear - CHECK:
    a. No hydraulic leaks
    b. No external damage
    c. Tire condition
    d. No wheel damage
    e. Taxi light - CONDITION
11. Flaps - CHECK

Right Fuselage - Area 5

1. Rear cockpit canopy - CHECK

2. External CFS handle access door - CLOSED AND LATCHED
3. Speed brake - CHECK
4. Antennas - CHECK
5. Ventral fin - CHECK
6. Hydraulic reservoir fluid level - CHECK
7. Hydraulic manual pressure release handle - VERIFY FULLY SEATED
8. Hydraulic system service bay access panel - CLOSED AND LATCHED
9. Avionics door - CLOSED AND LATCHED
10. Air conditioning service panel access door - SECURED
11. Static ports (2) - CLEAR
12. Air conditioner inlet/exhaust - CLEAR

Empennage - Area 6

1. Vertical and right horizontal stabilizer - CHECK
2. Elevator and elevator trim tab - CHECK
3. Static wicks (9) - CHECK
4. Rudder and rudder trim tab - CHECK
5. Left horizontal stabilizer - CHECK

Left Fuselage - Area 7

1. Static ports (2) - CLEAR
2. Air conditioner inlet/exhaust - CLEAR
3. Ground crew headset jack flip cover - SECURE
4. Baggage compartment - SECURE LOOSE ITEMS AND LATCH DOOR
5. Avionics door - CLOSED AND LATCHED
6. GPU plug access door - AS REQUIRED
7. External CFS handle access door - CLOSED AND LATCHED

INTERIOR INSPECTION

REAR COCKPIT (SOLO FLIGHT)

1. Ejection seat - INSPECT:
   a. Seat safety pin - INSTALLED AND WARNING STREAMER IS FREE AND CLEAR OF EJECTION SEAT HANDLE (BOTH)
2. CFS handle safety pin - INSTALLED
3. ISS mode selector - SOLO
4. Left console circuit breakers - CHECK IN
5. TRIM DISCONNECT switch - NORM
6. Interior lighting - OFF
7. UFCP lower panel switches - SET
   a. UFCP brightness knob - MINIMUM
   b. HUD brightness switch - DAY
   c. MFD/UFCP REPEAT/NORM switch - NORM
8. Audio panel - NORM; VOLUME AND VOX KNOBS - IN
9. BAT and GEN switches - OFF
10. STARTER switch - NORM
11. IGNITION switch - NORM
12. BOOST PUMP switch - ARM
13. EVAP BLWR control - AS REQUIRED
14. OBOGS - OFF:
    a. OBOGS supply lever - OFF
    b. OBOGS concentrator lever - NORMAL
    c. OBOGS pressure lever - NORMAL
15. Right console circuit breakers - CHECK IN
16. Rear cockpit tie down (solo flight) - COMPLETE AS FOLLOWS:
    a. Seat - LOWER SEAT AS REQUIRED TO ENSURE SEAT SAFETY PIN CLEARANCE WITH CONTROL STICK IN FULL AFT POSITION
    b. Upper fittings - LOWER AND ROTATE 180 DEGREES OUTBOARD
    c. Left and right leg restraint lines - EXTEND FULLY TO FACILITATE STEPS D AND E BELOW
    d. Right leg garter - ROUTE THROUGH RIGHT LAP STRAP AND RIGHT PARACHUTE RISER AND SECURE AROUND OXYGEN HOSES AND COMM CORD

e. Left leg garter - ROUTE THROUGH LEFT LAP STRAP AND LEFT PARACHUTE RISER AND SECURE AROUND OXYGEN HOSES AND COMM CORD
f. Shoulder harness control lever - LOCK
g. Leg garter restraint lines - PULL EXCESS THROUGH LEFT AND RIGHT RESTRAINT SNUBBER UNIT
h. Lap straps - TIGHTEN
i. CFS handle safety pin - TIE WARNING STREAMER TO LEFT LEG RESTRAINT GARTER LINE
j. Control stick - VERIFY BOOT COLLAR DOES NOT RESTRICT CONTROL STICK MOVEMENT
k. Upper fittings - ROTATE INBOARD AND SECURE INSIDE THE PARACHUTE RISER

17. Map containers - CLOSED
18. Loose articles - REMOVED AND STOWED

COCKPIT (ALL FLIGHTS)

1. Strap in - COMPLETE (BOTH)
2. BAT switch - ON
3. Anti-suffocation valve - CHECK (BOTH)
4. External power - AS REQUIRED
5. Seat height - ADJUST
6. Rudder pedals - ADJUST
7. Flight controls - CHECK (BOTH)
8. Fire detection system - TEST (FIRE 1 AND FIRE 2) (BOTH)
9. LAMP test switch - CHECK (BOTH)
10. Flaps - UP
11. Exterior lights - OFF
12. TRIM DISCONNECT switch - NORM (BOTH)
13. Interior lights - AS REQUIRED
14. TRIM AID switch - OFF
15. Trim operation - CHECK (BOTH):
    a. Aileron, elevator, and rudder trim - CHECK
    b. Elevator and aileron trim - SET FOR T/O
    c. Rudder trim - SET OUTSIDE GREEN RANGE
16. EMER LDG GR handle - CHECK STOWED
17. Clock - SET
18. UFCP lower panel switches - SET

19. Audio panel - AS REQUIRED
20. DEFOG switch - OFF
21. ELT switch - ARM
22. PARKING BRAKE - RESET
23. Chocks - REMOVED
24. GEN switch - OFF (BOTH)
25. FUEL BAL switch - AUTO
26. MANUAL FUEL BAL switch - OFF
27. AVIONICS MASTER switch - OFF
28. BUS TIE switch - NORM
29. PROBES ANTI-ICE switch - CHECK, OFF
30. BOOST PUMP switch - CHECK, ARM
31. PMU switch - NORM (LEVER LOCKED)
32. EVAP BLWR control - AS REQUIRED
33. AIR COND switch - OFF
34. BLEED AIR INFLOW switch - OFF
35. PRESSURIZATION switch - NORM (GUARDED POSITION)
36. RAM AIR FLOW switch - AS REQUIRED
37. TEMP CONTROL switch - AUTO

ENGINE START

HIGH IOAT AT START >80 °C

1. PCL - VERIFY OFF
2. PMU - RESET IF NECESSARY
3. PMU switch - OFF
4. Propeller Area - CLEAR
5. STARTER switch - MANUAL FOR 20 SECONDS MAXIMUM
6. STARTER switch - NORM
7. Repeat Steps 4 thru 6 if IOAT is greater than 80 °C
8. PMU switch - NORM
9. Continue with Engine Start

ENGINE START (AUTO)

1. Canopy - CLOSED AND LATCHED (BOTH)
2. Navigation and anti-collision lights - AS REQUIRED

3. PMU FAIL/PMU STATUS message - EXTINGUISHED
4. PCL - ADVANCE TO START POSITION (ST READY ADVISORY)
5. Propeller area - CLEAR
6. STARTER switch - AUTO/RESET
7. Engine Start - MONITOR
8. PCL - ADVANCE PAST TWO CLICKS, THEN IDLE, AT OR ABOVE 60% N_1
9. External power - DISCONNECTED

BEFORE TAXI

1. GEN switch - ON (WARNING LIGHT SHOULD EXTINGUISH)
2. AUX BAT switch - ON
3. BLEED AIR INFLOW switch - NORM
4. EVAP BLWR control - AS REQUIRED
5. AIR COND switch - AS REQUIRED
6. AVIONICS MASTER switch - ON
7. OBOGS - CHECK (BOTH):
   a. OBOGS supply lever - ON
   b. OBOGS concentration lever - CHECK MAX (LIGHT ON) THEN BACK TO NORMAL
   c. OBOGS pressure lever - CHECK EMERGENCY (INCREASED PRESSURE) THEN BACK TO NORMAL
   d. Check flow indicator for normal operation (BOTH)
8. Anti-G test - CHECK (BOTH)
9. System test panel - CHECK:
   a. LAMP test switch - CHECK (BOTH)
   b. AOA system test switch - TEST:
      (1) LO - AMBER DONUT, 10.5 UNITS
      (2) HI - GREEN CHEVRON, STICK SHAKER, 18 UNITS
   c. ALT audio switch - TEST
   d. LDG GR audio switch - TEST
   e. OVR SPD audio switch - TEST
   f. OVR G audio switch - TEST
   g. BINGO FUEL audio switch - TEST
10. Speed brake - CHECK (GROUND CREW OBSERVER IF AVAILABLE) (BOTH)

11. Flaps - CHECK (GROUND CREW OBSERVER IF AVAILABLE) (BOTH):
    a. Set flaps LDG - VERIFY FLAPS MOVE TO LDG, INDICATORS READ LDG, AND SPEED BRAKE RETRACTS (MESSAGE EXTINGUISHES)
    b. Set flaps TO - VERIFY FLAPS MOVE TO TO AND INDICATOR READS TO
    c. Attempt to extend speed brake - VERIFY SPEED BRAKE DOES NOT EXTEND
12. TRIM AID switch - ON (VERIFY TAD OFF MESSAGE EXTINGUISHED AND (RUDDER) TRIM SET IN GREEN RANGE (T/O))
13. Nose wheel steering - ON
14. PARKING BRAKE - RELEASE
15. Brakes - CHECK
16. TCAS - ON/TEST
17. UFCP and MFD - CHECK AND SET:
    a. Database, location and alignment - CHECK
    b. UHF - AS REQUIRED
    c. VHF - AS REQUIRED
    d. VOR - AS REQUIRED
    e. Transponder - SET
    f. FMS - AS REQUIRED
    g. Altitude, G, speed, fuel flags - AS REQUIRED
18. Flight instruments - CHECK (BOTH) (VERIFY PITCH, ROLL, HEADING INDICATIONS, AND NO FLAGS)
19. Altimeters - SET AND CHECK (BOTH)
20. EICAS display - CHECK (BOTH)
21. Landing/taxi lights - AS REQUIRED

TAXI

1. Transponder - AS REQUIRED
2. Heading and turn and slip indicators - CHECK

OVERSPEED GOVERNOR CHECK

1. Brakes - HOLD AS REQUIRED
2. PCL - IDLE

3. PMU switch - OFF (VERIFY IDLE N_1 STABILIZES AT 60% OR ABOVE)
4. PCL - ADVANCE TO 100±2% N_P AND ALLOW ENGINE TO STABILIZE (VERIFY100±2% N_P IS REACHED AT 30±5% TORQUE)
5. PCL - ADVANCE SLIGHTLY AND VERIFY N_P REMAINS 100±2%
6. PCL- IDLE (VERIFY IDLE N_1 STABILIZES AT 60% OR ABOVE)
7. PMU switch - NORM (VERIFY PMU FAIL MESSAGE EXTINGUISHES, N_P RETURNS TO 46-50% N_P AND N_1 RETURNS TO 60-61%)

BEFORE TAKEOFF

1. Minimum power at 60 KIAS - COMPUTE
2. Speed brake - RETRACTED
3. Flaps - TO
4. Trim - SET FOR TAKEOFF
5. Fuel quantity and balance - CHECK
6. Engine instruments - CHECK
7. DVR control - AS REQUIRED
8. Amps - VERIFY +50 AMPS OR LESS
9. DEFOG switch - OFF
10. Oxygen mask - ON AND SECURE (BOTH)
11. Seat safety pin - REMOVED AND STOWED (BOTH)
12. ISS mode selector - AS REQUIRED (VERIFY ISS MODE SELECTOR LEVER IS LOCKED IN DESIRED DETENT)

LINEUP CHECK

1. Exterior lights - ON
2. Transponder - AS REQUIRED
3. PROBES ANTI-ICE switch - ON
4. Nose wheel steering - OFF
5. EICAS display - CHECK (BOTH)

AFTER TAKEOFF

1. Gear - AS REQUIRED (BOTH)
2. Flaps - UP (BOTH)

CLIMB (PASSING 10,000 FEET)

1. OBOGS - CHECK (BOTH) (CHECK FLOW INDICATOR FOR NORMAL OPERATION)
2. DEFOG switch - AS REQUIRED
3. Vent control lever - AS REQUIRED
4. Pressurization system - CHECK

OPERATIONS CHECK

1. Hydraulic pressure - CHECK
2. Electrical systems - CHECK
3. Fuel quantity/balance - CHECK
4. OBOGS - CHECK (BOTH) (CHECK FLOW INDICATOR FOR NORMAL OPERATION)
5. Engine instruments - CHECK
6. Pressurization - CHECK

PRE-STALLING, SPINNING, AND AEROBATIC CHECKS

1. Loose items - STOWED (BOTH)
2. Engine instruments - CHECK
3. Fuel balance - CHECK LESS THAN 50 POUNDS

DESCENT

1. PFD - CHECK (BOTH)
2. Altimeters - SET (BOTH)
3. MASTER ARM switch - AS REQUIRED
4. DEFOG switch - AS REQUIRED
5. Vent control lever - AS REQUIRED

BEFORE LANDING

1. DEFOG switch - OFF

2. Engine instruments - CHECK
3. Gear - DOWN (BOTH) (CHECK THREE GREEN ANNUNCIATORS ILLUMINATED)
4. Brakes - CHECK, AS REQUIRED (VERIFY POSITIVE PRESSURE BY ACTUATING TOE BRAKES)
5. Flaps - AS REQUIRED (BOTH)
6. Speed brake - RETRACTED

AFTER LANDING

1. ISS mode selector - SOLO OR CMD FWD (VERIFY ISS MODE SELECTOR LEVER IS LOCKED IN SOLO OR CMD FWD)
2. Seat safety pin - INSTALL (BOTH)
3. PROBES ANTI-ICE switch - OFF
4. Flaps - UP
5. Trim interrupt button - DEPRESS (VERIFY TRIM OFF AND TAD OFF MESSAGE ILLUMINATED AND TAD SWITCH MOVES TO OFF)
6. Trim - SET FOR TAKEOFF
7. Transponder - AS REQUIRED
8. TCAS - STBY
9. BLEED AIR INFLOW switch - OFF

FULL STOP/TAXI BACK CHECKLIST

1. PROBES ANTI-ICE switch - OFF
2. Flaps - TO
3. Trim - SET FOR TAKEOFF
4. Transponder - AS REQUIRED
5. Fuel quantity and balance - CHECK
6. Engine instruments - CHECK
7. DEFOG switch - OFF
8. Minimum power at 60 KIAS - COMPUTE

AFTER CLEARED ONTO THE RUNWAY:

9. Exterior lights - ON
10. Transponder - AS REQUIRED
11. PROBES ANTI-ICE - ON
12. Nose wheel steering - OFF
13. EICAS display - CHECK (BOTH)

ENGINE SHUTDOWN

1. PARKING BRAKE - SET
2. Landing and taxi lights - OFF
3. Transponder - AS REQUIRED
4. AVIONICS MASTER switch - OFF
5. RAM AIR FLOW switch - OFF
6. AIR COND switch - OFF
7. EVAP BLWR control - OFF (BOTH)
8. OBOGS - OFF (BOTH):
   a. OBOGS pressure lever - NORMAL
   b. OBOGS concentration lever - NORMAL
   c. OBOGS supply lever - OFF
9. PCL - IDLE >60 SECONDS, THEN OFF
10. Interior/exterior lights - OFF
11. PMU STATUS message - EXTINGUISHED (OR NOTIFY MAINTENANCE)
12. FDR light - EXTINGUISHED
13. GEN, BAT, and AUX BAT switches - OFF
14. Gust lock - ENGAGE (AS REQUIRED)

BEFORE LEAVING AIRCRAFT

1. PARKING BRAKE - AS REQUIRED
2. CFS handle safety pins - INSTALL (BOTH)
3. DTS/DVR cartridge - REMOVE (AS REQUIRED)
4. ISS mode selector - SOLO (VERIFY ISS MODE SELECTOR LEVER IS LOCKED IN SOLO)
5. Oxygen hose and communication cord - STOW WITH LOOP FORWARD
6. HUD combiner cover - INSTALL
7. Wheel chocks - INSTALL (AS REQUIRED)
8. Exterior walk-around inspection - VISUALLY CHECK:
   a. Ground for evidence of fuel or hydraulic leaks
   b. Flap condition
   c. Speed brake condition
   d. Gear, gear doors, and wheel well condition
   e. Tires for indication of wear, cuts, or blisters
   f. Access doors, panels, fairings, and ventral fin for damage or missing fasteners

g. Rudder - LOCKED (AS REQUIRED)

STRANGE FIELD PROCEDURES

POSTFLIGHT INSPECTION

1. PARKING BRAKE - SET
2. Interior - VISUALLY CHECK:
   a. Gust lock - ENGAGE
   b. Ejection control handle safety pins - CHECK (BOTH)
   c. CFS handle safety pins - INSTALL (BOTH)
3. Exterior walk around inspection - VISUALLY CHECK:
   a. Ground for evidence of fuel or hydraulic leaks
   b. Flap condition
   c. Speed brake condition
   d. Gear, gear doors, and wheel well condition
   e. Tires for indication of wear, cuts, or blisters
   f. Brake wear indicators (2) - CHECK (WEAR INDICATORS SHOULD PROTRUDE ABOVE HOUSING. IF AN INDICATOR READS LOW, RESET THE PARKING BRAKE AND RE-CHECK)
   g. Install chocks, engine inlet covers, exhaust covers/prop restraints (Propeller shall be in a X configuration), AOA probe cover, and pitot covers
   h. Install tie down, if required, and static ground wire
   i. Access doors, panels, fairings, and ventral fin for damage or missing fasteners
4. Engine oil level (dipstick) - CHECK
5. Refueling - AS REQUIRED
6. Aircraft - SECURED:
   a. Install sun shields - AS REQUIRED
   b. Canopy - LOCKED
   c. External CFS handle access doors - CLOSED AND LOCKED
   d. Baggage door - LATCHED AND LOCKED
   e. Avionics doors - LATCHED

PREFLIGHT INSPECTION

1. Aircraft - UNLOCK:
   a. Canopy - UNLOCKED

b. External CFS handle access doors - CLOSED AND LOCKED
c. Baggage door - UNLOCKED

2. Seat safety pin - VERIFY INSTALLED AND ENSURE WARNING STREAMER IS FREE AND CLEAR OF EJECTION SEAT HANDLE (BOTH)
3. CFS handle safety pins - VERIFY INSTALLED (BOTH)
4. Rear cockpit tie down (solo flight) - COMPLETE AS FOLLOWS:
   a. Seat - LOWER SEAT AS REQUIRED TO ENSURE SEAT SAFETY PIN CLEARANCE WITH CONTROL STICK IN FULL AFT POSITION
   b. Upper fittings - LOWER AND ROTATE 180 DEGREES OUTBOARD
   c. Left and right leg restraint lines - EXTEND FULLY TO FACILITATE STEPS D AND E BELOW
   d. Right leg garter - ROUTE THROUGH RIGHT LAP STRAP AND RIGHT PARACHUTE RISER AND SECURE AROUND OXYGEN HOSES AND COMM CORD
   e. Left leg garter - ROUTE THROUGH LEFT LAP STRAP AND LEFT PARACHUTE RISER AND SECURE AROUND OXYGEN HOSES AND COMM CORD
   f. Shoulder harness control lever - LOCK
   g. Leg garter restraint lines - PULL EXCESS THROUGH LEFT AND RIGHT RESTRAINT SNUBBER UNIT
   h. Lap straps - TIGHTEN
   i. CFS handle safety pin - TIE WARNING STREAMER TO LEFT LEG RESTRAINT GARTER LINE
   j. Control stick - VERIFY BOOT COLLAR DOES NOT RESTRICT CONTROL STICK MOVEMENT
   k. Upper fittings - ROTATE INBOARD AND SECURE INSIDE THE PARACHUTE RISER
5. PARKING BRAKE - SET
6. Tiedowns - REMOVE
7. Chocks, gear pins, engine inlet covers, exhaust cover/prop restraints, AOA probe cover, and pitot covers - REMOVE
8. Nose gear spring strut - INSPECT
9. Hydraulic system service bay access panel - OPEN
10. Hydraulic reservoir fluid level - CHECK

11. Hydraulic system service bay access panel - CLOSE AND LATCH
12. Fuel sumps - CHECK (AS REQUIRED)
13. Fuel filter bypass indicator (single point refuel bay) - VERIFY IN NORMAL POSITION (INDICATOR IN)
14. PCL - OFF (BOTH)
15. Gear handle - DOWN (BOTH)
16. STARTER switch - NORM (BOTH)
17. IGNITION switch - NORM (BOTH)
18. External power - AS REQUIRED
19. BAT switch - ON
20. Fuel quantity - CHECK
21. Battery voltage - CHECK SUFFICIENT FOR START (23.5 VOLTS)
22. Exterior lights - ON
23. PROBES ANTI-ICE switch - ON
24. Conduct exterior check for light operation, and pitot and AOA for heating
25. PROBES ANTI-ICE switch - OFF
26. Exterior lights - OFF
27. BAT switch - OFF
28. CFS handle safety pins - REMOVE AND STOW (BOTH)

REFERENCE DATA

TABLE OF CONTENTS PAGE

AIRSPEED AND MACH LIMITATIONS

MAXIMUM OPERATING AIRSPEED/MAXIMUM OPERATING MACH NUMBER (V_{MO}/M_{MO})

Maximum operating airspeed (V_{MO}) is not to be intentionally exceeded in any phase of flight (climb, cruise, descent, maneuvering). V_{MO} is 316 KIAS up to and including 19,020 feet MSL.

Maximum operating Mach number (M_{MO}) is not to be intentionally exceeded in any phase of flight (climb, cruise, descent, maneuvering). Above 19,020 feet MSL, M_{MO} is 0.67 indicated Mach number (IMN). The airspeed in KIAS which corresponds to M_{MO} varies with altitude.

WING FLAPS LIMITATIONS

Maximum airspeed with the flaps extended (V_{FE}) or during flap operation is 150 KIAS.

LANDING GEAR LIMITATIONS

Maximum airspeed with the landing gear extended (V_{LE}) or during landing gear operation is 150 KIAS.

TURBULENT AIR PENETRATION SPEED LIMITATIONS (V_G)

Maximum airspeed for flying through turbulence is 207 KIAS. Recommended airspeed in turbulent air is 180 KIAS.

MANEUVERING SPEED LIMITATIONS (V_O)

Operating maneuvering speed (V_O) is the speed above which full or abrupt control movements in one axis can result in structural damage to the aircraft.V_O is 227 KIAS. Full rudder deflection above 150 KIAS will exceed the limits for the rudder control system.

STARTING

STARTER LIMITATIONS

Starter duty cycle (start attempts and/or engine motoring) is limited to four 20-second cycles as follows.

First - Motor 20 seconds then 30-second cooling period.

Second - Motor 20 seconds then 2-minute cooling period.

Third - Motor 20 seconds then 5-minute cooling period.

Fourth - Motor 20 seconds then 30-minute cooling period.

EXTERNAL POWER LIMITATIONS

Do not connect external power if battery voltage is below 22.0 volts.

TEMPERATURE LIMITATIONS

Maximum IOAT for start is 80 °C.

WEIGHT LIMITATIONS

Maximum ramp weight - 6950 pounds

Maximum takeoff weight - 6900 pounds

Maximum landing weight - 6900 pounds

Maximum zero fuel weight - 5850 pounds

Maximum weight in baggage compartment - 80 pounds

PROHIBITED MANEUVERS

Inverted stalls

Inverted spins

Aggravated spins past two turns

Spins with PCL above IDLE

Spins with landing gear, flaps, or speed brake extended

Spins with PMU off

Spins below 10,000 feet pressure altitude

Spins above 22,000 feet pressure altitude

Abrupt cross-controlled (snap) maneuvers

Aerobatic maneuvers, spins, or stalls with a fuel imbalance greater than 50 pounds between wings

Tail slides

ENGINE LIMITS

ENGINE OIL QUANTITY LIMITATIONS

Oil level must be serviced within 30 minutes of engine shutdown. For most accurate results, check oil level 15 to 20 minutes after shutdown. Normal oil level is between ADD and MAX HOT. If oil level is at or below ADD, service the oil level to MAX HOT. If en-

gine oil level is not serviced properly, engine damage is possible.

The sight glass is not to be used for checking oil level; only the dipstick is to be used for correct indication of oil level in the tank.

Operating Condition	Operating Limits					
Power Setting	**TORQUE %**	**ITT °C**	**N_1% (1)**	**N_P% (4)**	**Oil Pressure psi**	**Oil Temp °C**
Takeoff/Max	100 Max	820 MAX	104 Max	100 Max (2)	90 to 120 (6)	10 to 105
Idle	1 to 10% (9) (ground)	750 MAX	60 to 61 (ground) 67 Min (flight)	46 to 50 (ground)	90 Min	-40 to 105 (Ground) 10 to 105 (Flight) 106 to 110 (7)
Start	---	871-1000 (5 sec)	---	---	200 Max	-40 Min
Transient	132 Max (20 sec) (8)	821-870 (20 sec)	104 Max	110 (3) (20 sec)	40 to 130 (5)	106 to 110 (10 minutes)

NOTES

1. N_1 values presented for PMU ON. With PMU OFF, N_1 may vary from these values.

2. With PMU OFF, permissible maximum N_P is 100±2%.

3.Permissible at any power setting for completion of in-flight emergency.

4. Avoid stabilized ground operation from 62 to 80% N_P.

5. Operation in this range permitted only during aerobatics or spins, 15 to 40 psi for 5 seconds with PCL at IDLE.

6. Normal oil pressure during steady state conditions is 90 to 120 psi. Operation at oil pressure less than 90 psi at flight idle or above is indicative of oil system malfunction.

7. Acceptable for ground operation at and below 20% torque.

8. Torque at 132% is a materials limit above which damage to the engine may occur. Torque above 102% is indicative of a system malfunction.

9. Allowable torque range with N_P stabilized and PCL at IDLE.

MISCELLANEOUS LIMITATIONS

TEMPERATURE LIMITATIONS

Ground operation is limited to ambient temperatures of -23 °C to +43 °C.

NOTE

Ground operation during ambient temperatures exceeding +43 °C is permitted for up to 15 minutes for the purpose of taxiing the aircraft to park.

EQUIPMENT COOLING LIMITATIONS (COCKPIT SUN SHIELDS)

Due to equipment cooling requirements, the limitations presented below apply when the aircraft is parked in direct sunlight in ambient temperatures of 35 °C and above.

STORAGE TIME	CANOPY/ SUN SHIELDS	REQUIREMENT FOR FLIGHT
> 15 Minutes	Closed/ Not installed	Open canopy fully for 1 hour prior to engine start
> 15 Minutes	Closed/Installed	Open canopy fully for 15 minutes prior to engine start
No limit	On prop strut/ Not installed	Open canopy fully for 15 minutes prior to engine start
No limit	On prop strut/ Installed	No limit
No limit	Fully open/ Not installed	No limit

COCKPIT PRESSURIZATION SYSTEM LIMITATIONS

Cockpit pressurization schedule limit is 3.6±0.2 psi.

CKPT PX annunciator illuminates at 3.9 to 4.0 psi.

Cockpit ΔP display changes to red and overpressurization safety valve opens at 4.0 psi.

RUNWAY SURFACE LIMITATIONS

The aircraft is cleared to operate on hard surfaced runways (concrete, tarmac, or similar) only.

CANOPY WIND LIMITATIONS

The canopy shall not be opened on the ground when the surface winds exceed 40 knots.

ESCAPE SYSTEM LIMITATIONS

Ejection seat pilot weight limits are a minimum pilot weight with equipment and flight gear of 131.8 pounds, and a maximum pilot weight with equipment and flight gear of 265.4 pounds.

Ejection seats must never be operated with the canopy open.

CAPACITIES

Total usable fuel - 1100 pounds (single point refueling)

Oil tank capacity - 10 quarts

Oil system capacity - 18.5 quarts

SERVICING SPECIFICATIONS

MATERIAL	SPECIFICATION	NATO CODE
FUEL	MIL-DTL-5624T	JP-4 / JP-5
	MIL-DTL-83133E	JP-8/ JP-8+100 (USAF ONLY)
	COMMERCIAL	Jet A / Jet A+100 (USAF ONLY) Jet A-1 / Jet B
	NATO	F-24/ F-34 / F-35 / F-40 / F-44 / F-27 / (USAF ONLY)
Commercial Jet A, Jet A-1, or Jet B may be used, providing it contains anti-ice/fungicide (PFAMB, MIL-DTL-85470 or equivalent).		
OIL	MIL-PRF-23699F	NONE
DO NOT USE MIL-PRF-23699F HTS		
HYDRAULIC FLUID	MIL-H-5606	H-515
DEICING/ANTI-ICING FLUID, AIRCRAFT	Propylene Glycol (AMS 1424,Type I)	
GROUND POWER REQUIREMENTS External ground power must provide the following: 28 to 28.5 VDC, 1000 amps for 5 seconds, 500 amps for 2 minutes, 300 amps continuous For off-station engine starts, 24.0 to 29.5 VDC are acceptable external power voltage limits.		

TIRES	
TIRE SIZE AND RATING	TIRE PRESSURE
Nose Wheel 16” x 4.4” (8 ply)	120±5 psi
Main Wheel 20” x 4.4” (14 ply)	225±5 psi or 185±5 psi

CAUTION

Heating is the only method allowed for deicing the canopy and, if used, the maximum temperatures of the transparency is 150 °F.

CAUTION

Using a heated hangar or cover is the first choice in preventing icing. Deicing can be accomplished by one or a combination of the following: blowing, wiping, or spraying. Propylene glycol (AMS 1424, Type 1) diluted by water is the only deicing agent authorized for spraying on the T-6B and should be used as a last resort.

CAUTION

Do not rub surfaces coated with aircraft deicing agent or runway deicing/anti-icing agent. Plastic surfaces (paint and canopy) soften on exposure to fluid at temperatures above freezing.

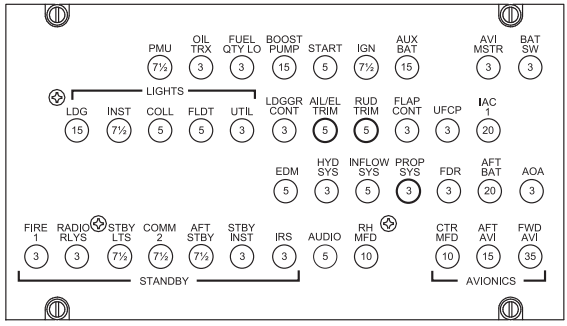
NOTE

Annotate in the aircraft maintenance forms if aircraft is exposed to aircraft deicing agent or runway deicing/anti-icing agent.

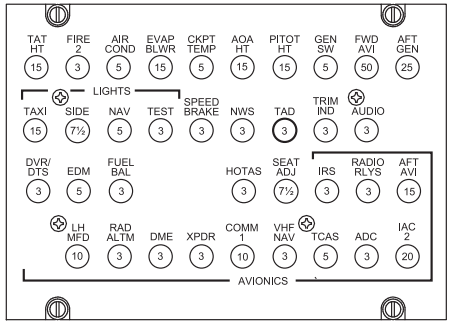
SAMPLE TAKEOFF AND LANDING DATA (TOLD) CARD

The following page contains a sample takeoff and landing data (TOLD) card. The sample provides possible entries but is not meant to be limiting in terms of showing more or less information.

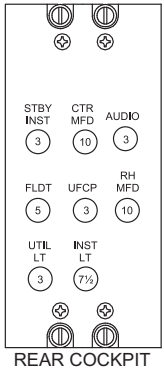
T-6B TAKEOFF AND LANDING DATA (TOLD) CARD				
CONDITIONS				
	TAKEOFF		LANDING	
GROSS WEIGHT		LBS		LBS
OAT		°C		°C
FIELD PRESSURE ALTITUDE		FT		FT
WIND COMPONENT		KNOTS		
RUNWAY CONDITION READING		RCR		RCR
RUNWAY LENGTH		FT		FT
TAKEOFF				
TAKEOFF DISTANCE		FT		
ROTATION SPEED (VR/ VOBS)		KIAS		
LANDING				
	IMMEDIATELY AFTER TAKEOFF		DESTINATION	
APPROACH SPEED FLAPS LDG		KIAS		KIAS
LANDING DISTANCE		FT		FT
APPROACH SPEED FLAPS TO		KIAS		KIAS
LANDING DISTANCE		FT		FT
APPROACH SPEED FLAPS UP		KIAS		KIAS
LANDING DISTANCE		FT		FT



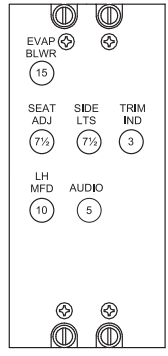
FRONT COCKPIT LEFT CONSOLE
BATTERY BUS



FRONT COCKPIT RIGHT CONSOLE
GENERATOR BUS



REAR COCKPIT
LEFT CONSOLE
BATTERY BUS



REAR COCKPIT
RIGHT CONSOLE
GENERATOR BUS

NOTE: CIRCUIT BREAKERS WITH BOLD CIRCLES HAVE BLACK COLLAR EXTENSIONS INSTALLED.

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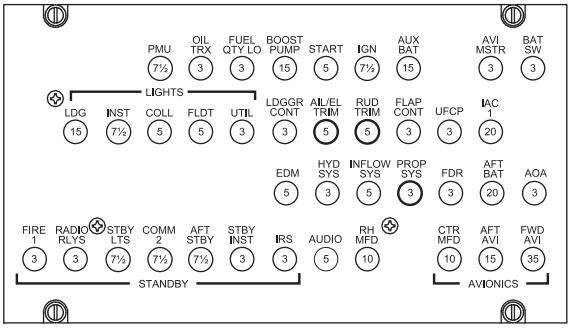
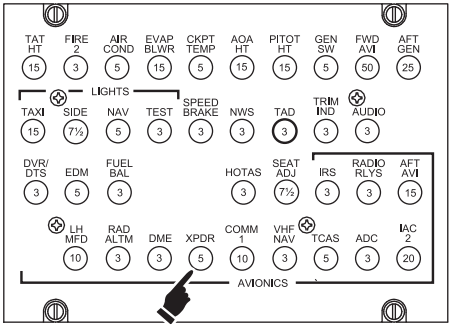
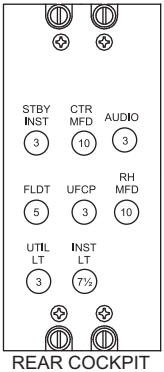
<5> Circuit Breaker Panels (Sheet 1 of 2)



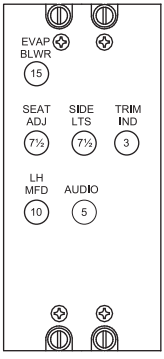
FRONT COCKPIT LEFT CONSOLE
BATTERY BUS



FRONT COCKPIT RIGHT CONSOLE
GENERATOR BUS



REAR COCKPIT
LEFT CONSOLE
BATTERY BUS



REAR COCKPIT
RIGHT CONSOLE
GENERATOR BUS

NOTE: CIRCUIT BREAKERS WITH BOLD CIRCLES HAVE BLACK COLLAR EXTENSIONS INSTALLED.

PN01D
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<6> Circuit Breaker Panels (Sheet 2 of 2)

CANOPY OPERATING PROCEDURES

TO OPEN THE CANOPY FROM THE OUTSIDE

1. Press and hold unlock button in while slowly rotating external canopy handle clockwise to placarded OPEN position.
2. Lift canopy open.

TO CLOSE THE CANOPY FROM THE OUTSIDE

1. Pull canopy lock release handle in either cockpit and hold.
2. Pull canopy over center and release canopy lock release handle.
3. Make sure external canopy handle is rotated to full OPEN (clockwise) position and slowly lower canopy rail to canopy sill.
4. Slowly rotate external canopy handle counterclockwise with a slow steady motion until resistance is felt in lock mechanism. Reverse direction just until pressure is relieved, then continue to rotate external canopy handle counterclockwise to CLOSE position.

TO CLOSE THE CANOPY FROM THE INSIDE

1. Pull canopy lock release handle in either cockpit and hold.
2. Pull canopy over center and release canopy lock release handle.
3. Make sure internal canopy handle is rotated full OPEN (aft) position and slowly lower canopy rail to canopy sill.
4. Rotate internal canopy handle forward with a slow steady motion until resistance is felt in lock mechanism. Reverse direction just until pressure is relieved, then continue to rotate internal canopy handle forward to LATCHED position.
5. Check proper engagement of canopy hooks by lifting lock release lever. Make sure canopy light and master warning illuminate and internal canopy handle does not rotate aft.
6. Release lock release lever and extinguish master warning. Make sure canopy light extinguishes.
7. Check canopy lock by gently attempting to rotate internal canopy handle aft. When properly locked, internal canopy handle cannot be rotated aft without raising lock release lever.
8. Verify mechanical green indicators visible.

TO OPEN THE CANOPY FROM THE INSIDE

1. Raise lock release lever located aft of internal canopy handle.
2. Hold lock release lever in UNLOCK position while slowly rotating internal canopy handle aft to placarded OPEN position.
3. Lift canopy open.

PERFORMANCE DATA

1-5/8” top tab

PERFORMANCE DATA

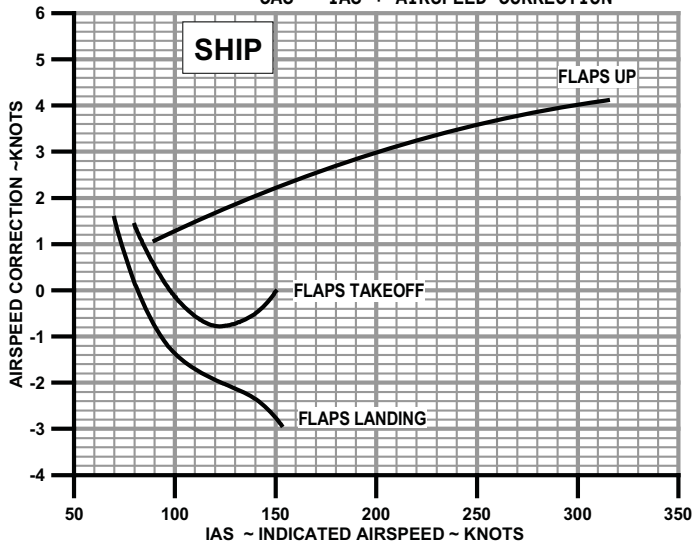
TABLE OF CONTENTS PAGE

POSITION CORRECTION

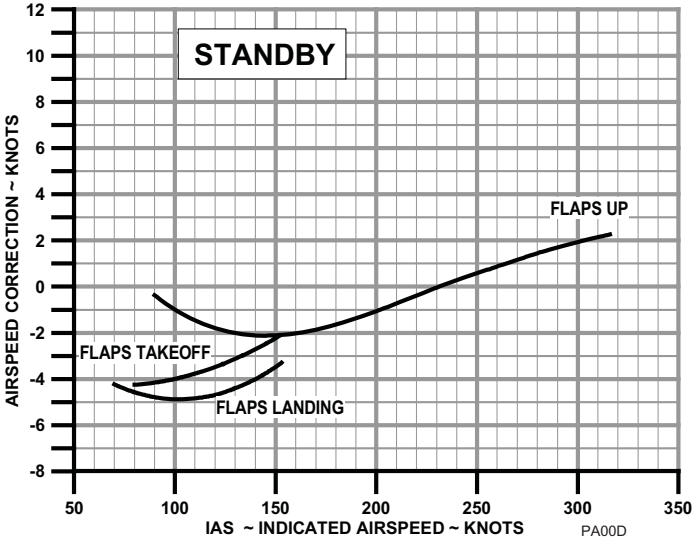
ASSOCIATED CONDITIONS:
LANDING GEAR HAS NO EFFECT
ALL WEIGHTS
NO GROUND EFFECT
LEVEL FLIGHT

AIRPLANE : T-6B
ENGINE : PT6A-68
DATE : MAR 2008
DATA BASIS : FLIGHT TEST

CAS = IAS + AIRSPEED CORRECTION



CAS = IAS + AIRSPEED CORRECTION



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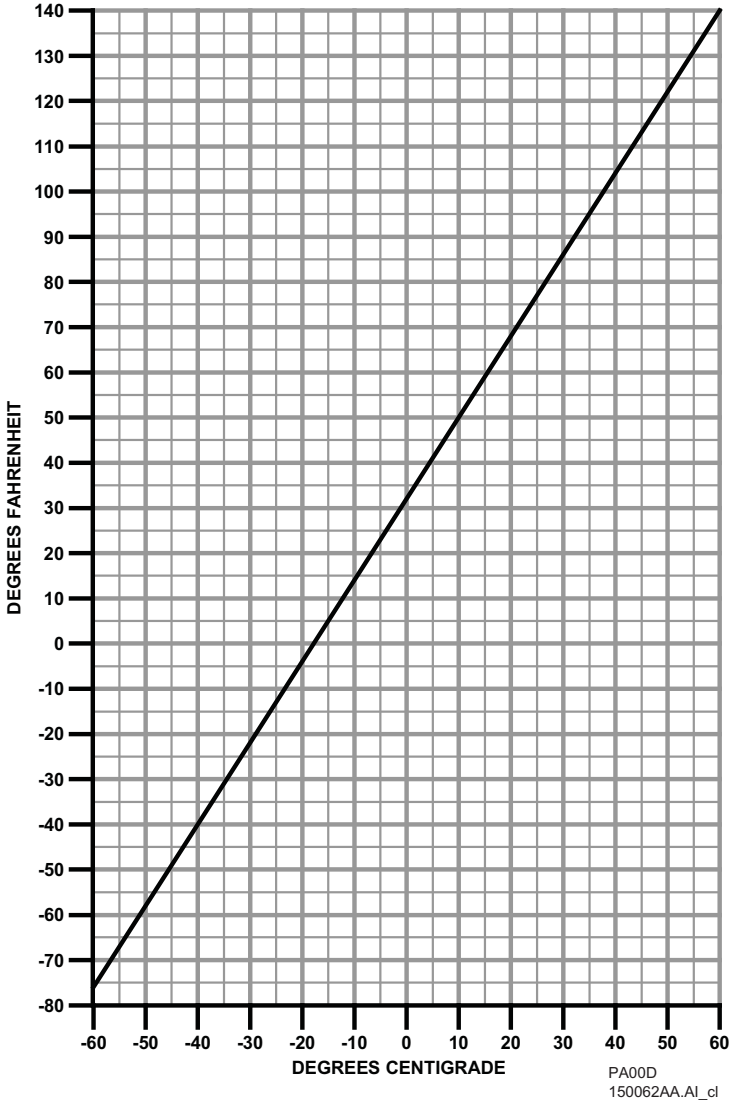
TEMPERATURE CONVERSION

NOTE:
°F = (9/5°C) + 32
°C = 5/9(°F - 32)



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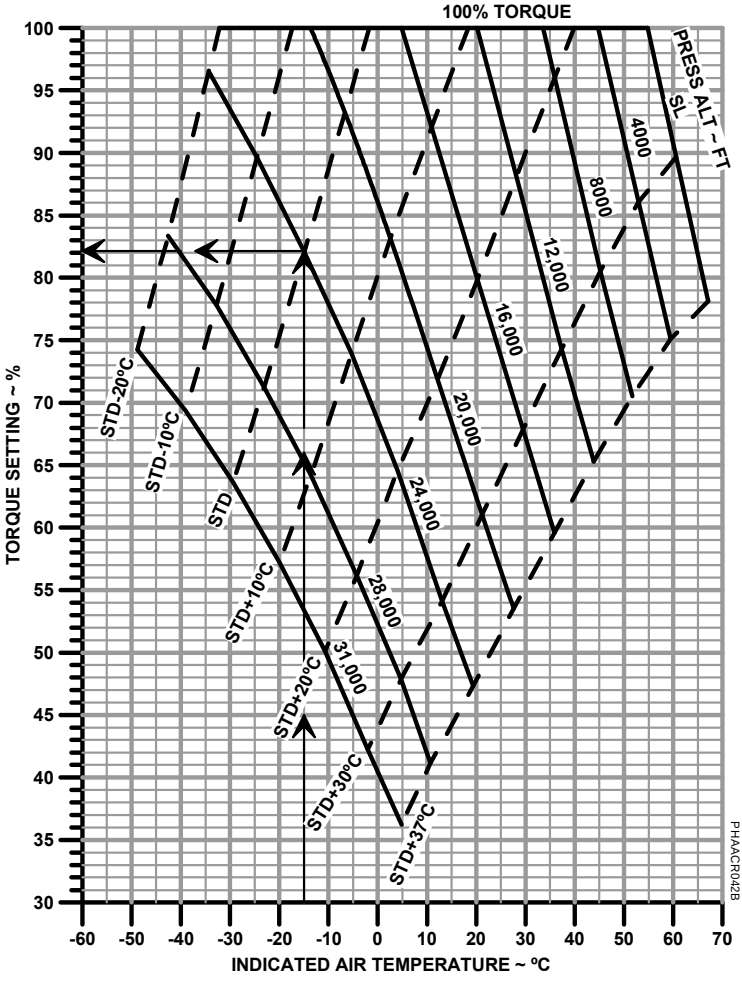
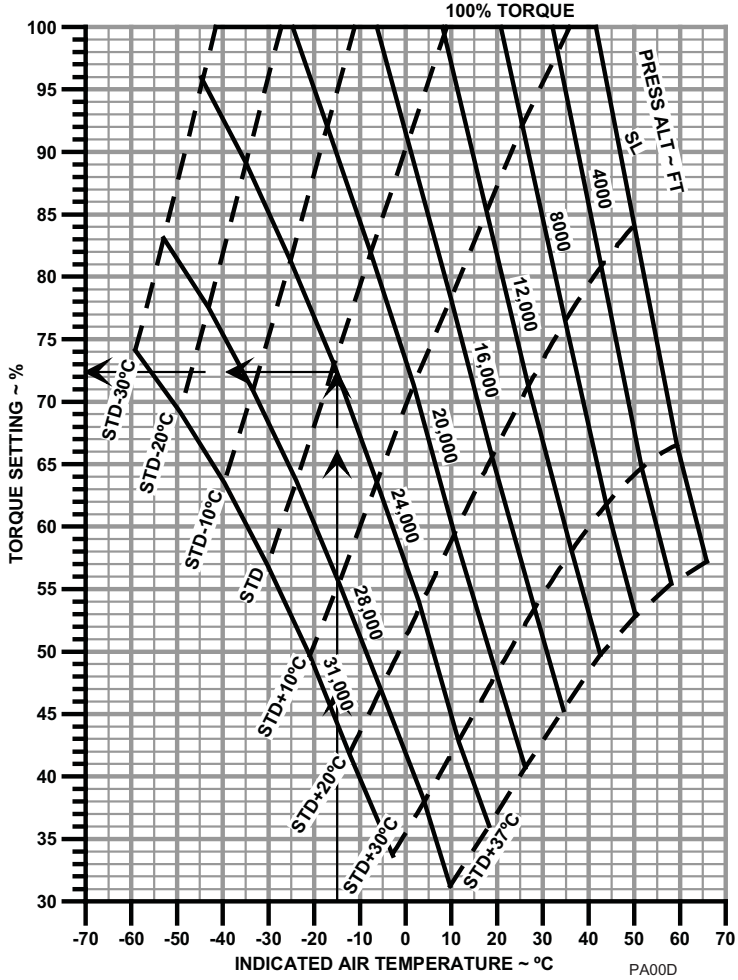
POWER AVAILABLE INFLIGHT
MAXIMUM CONTINUOUS POWER

AIRPLANE : T-6B
ENGINE : PT6A-68
DATE : APRIL 2010
DATA BASIS : FLIGHT TEST



POWER AVAILABLE INFLIGHT
MAXIMUM CRUISE POWER

AIRPLANE : T-6B
ENGINE : PT6A-68
DATE : APRIL 2010
DATA BASIS : FLIGHT TEST



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MINIMUM POWER AT 60 KIAS

ASSOCIATED CONDITIONS
TAKEOFF POWER
NP AT 100% (2000 RPM)
ACCURATE AT 60 KIAS

AIRPLANE : T-6B
ENGINE : PT6A-68
DATE : MAY 2008
DATA BASIS : FLIGHT TEST

IOAT ºC	ENGINE TORQUE - PERCENT								
	-2000 FT PA	SEA LVL PA	500 FT PA	1000 FT PA	1500 FT PA	2000 FT PA	4000 FT PA	6000 FT PA	8000 FT PA
17	100	100	100	100	100	100	100	100	100
18	100	100	100	100	100	100	100	100	98
19	100	100	100	100	100	100	100	100	97
20	100	100	100	100	100	100	100	100	96
21	100	100	100	100	100	100	100	100	94
22	100	100	100	100	100	100	100	100	93
23	100	100	100	100	100	100	100	100	92
24	100	100	100	100	100	100	100	99	90
25	100	100	100	100	100	100	100	99	89
26	100	100	100	100	100	100	100	97	88
27	100	100	100	100	100	100	100	96	86
28	100	100	100	100	100	100	100	94	85
29	100	100	100	100	100	100	100	93	83
30	100	100	100	100	100	100	100	91	82
31	100	100	100	100	100	100	99	90	81
32	100	100	100	100	100	100	98	88	79
33	100	100	100	100	100	100	96	87	78
34	100	100	100	100	100	100	94	85	76
35	100	100	100	100	100	100	93	84	75
36	100	100	100	100	100	100	91	82	74
37	100	100	100	100	100	99	90	81	72
38	100	100	100	100	100	97	88	79	71
39	100	100	100	100	98	96	87	78	69
40	100	100	100	99	96	94	85	76	68
41	100	100	99	97	94	92	83	75	67
42	100	100	97	95	93	91	82	73	65
43	100	98	96	93	91	89	80	72	64
44	100	96	94	92	89	87	79	70	62
45	100	94	92	90	88	86	77	69	61
46	100	93	90	88	86	84	76	67	60
47	100	91	89	86	84	82	74	66	58
48	99	89	87	85	83	81	73	64	57
49	97	87	85	83	81	79	71	63	55
50	95	86	83	81	79	77	70	62	54
51	93	84	82	80	78	76	68	60	53
52	91	82	80	78	76	74	67	59	51
53	89	80	79	77	75	73	65	57	50
54	87	79	77	75	73	71	64	56	48
55	86	77	75	73	72	70	62	54	47
56	84	76	74	72	70	68	61	53	46
57	82	74	72	70	69	67	59	51	44

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OAT TEMPERATURE CORRECTION

TRUE OAT = IOAT - Temperature Correction

NOTE: At an indicated airspeed of 0 KIAS, the temperature correction is 7 °C when the engine has been running at least 1 minute.

	Temperature Correction ~ °C				
	Altitude ~ Feet				
KIAS	SL	10K	20K	25K	31K
80	11	11	11	11	11
100	11	11	11	11	12
120	11	11	12	12	13
140	11	12	13	13	14
160	12	13	14	14	15
180	12	13	15	16	17
200	13	14	16	17	19
220	14	15	17	19	21
240	15	16	19	21	23
260	16	18	21	23	-
280	17	19	22	25	-
300	18	20	24	-	-

PHAAMS020A

TAKEOFF AND LANDING CROSSWIND

WIND DIRECTION RELATIVE TO RUNWAY (x)	WIND SPEED - KNOTS HW = Headwind Component CW = Crosswind Component									
	10		20		30		40		50	
	HW	CW	HW	CW	HW	CW	HW	CW	HW	CW
0	10	0	20	0	30	0	40	0	50	0
10	10	2	20	3	30	5	39	7	49	9
20	9	3	19	7	28	10	38	14	47	17
30	9	5	17	10	26	15	35	20	43	25
40	8	6	15	13	23	19	31	26	38	32
50	6	8	13	15	19	23	26	31	32	38
60	5	9	10	17	15	26	20	35	25	43
70	3	9	7	19	10	28	14	38	17	47
80	2	10	3	20	5	30	7	39	9	49
90	0	10	0	20	0	30	0	40	0	50

Crosswind Limit RCR 23 (dry) - 25 KTS
Crosswind Limit RCR 12 (wet) - 10 KTS
Crosswind Limit RCR 5 (icy) - 5 KTS

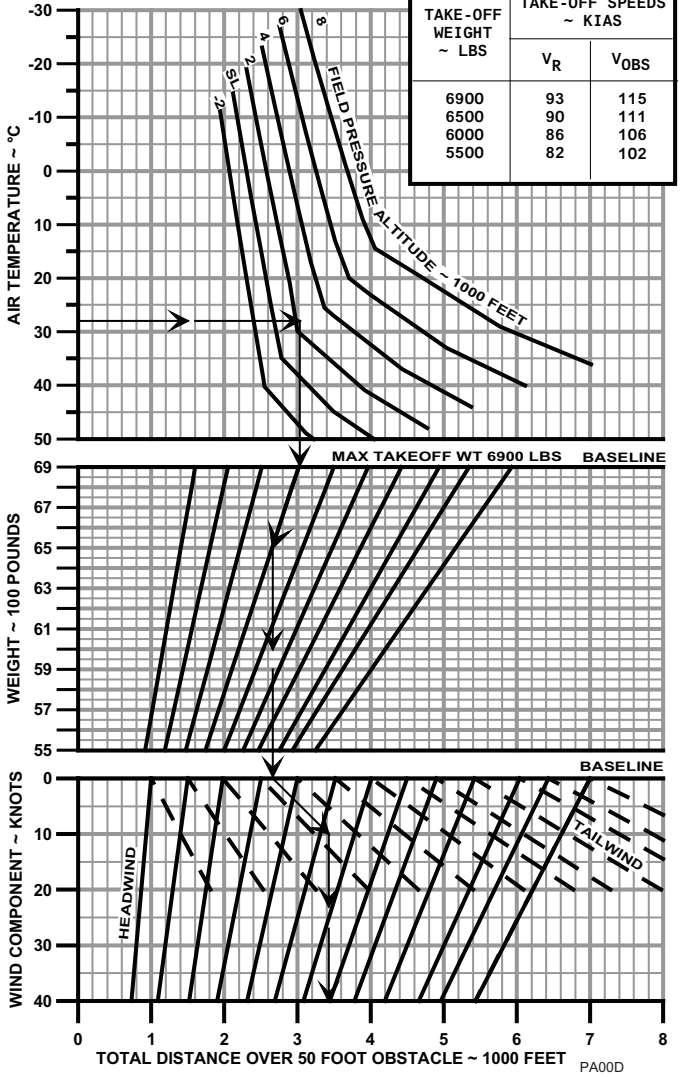
PHAAMS021A

TAKEOFF DISTANCE - FLAPS TAKEOFF

ASSOCIATED CONDITIONS:
TAKE-OFF POWER
LANDING GEAR
RETRACT AFTER LIFT-OFF
DRY, LEVEL, HARD SURFACE RUNWAY

AIRPLANE : T-6B
ENGINE : PT6A-68
DATE : MAR 2008
DATA BASIS : FLIGHT TEST

TAKE-OFF WEIGHT ~ LBS	TAKE-OFF SPEEDS ~ KIAS	
	V_R	V_{OBS}
6900	93	115
6500	90	111
6000	86	106
5500	82	102



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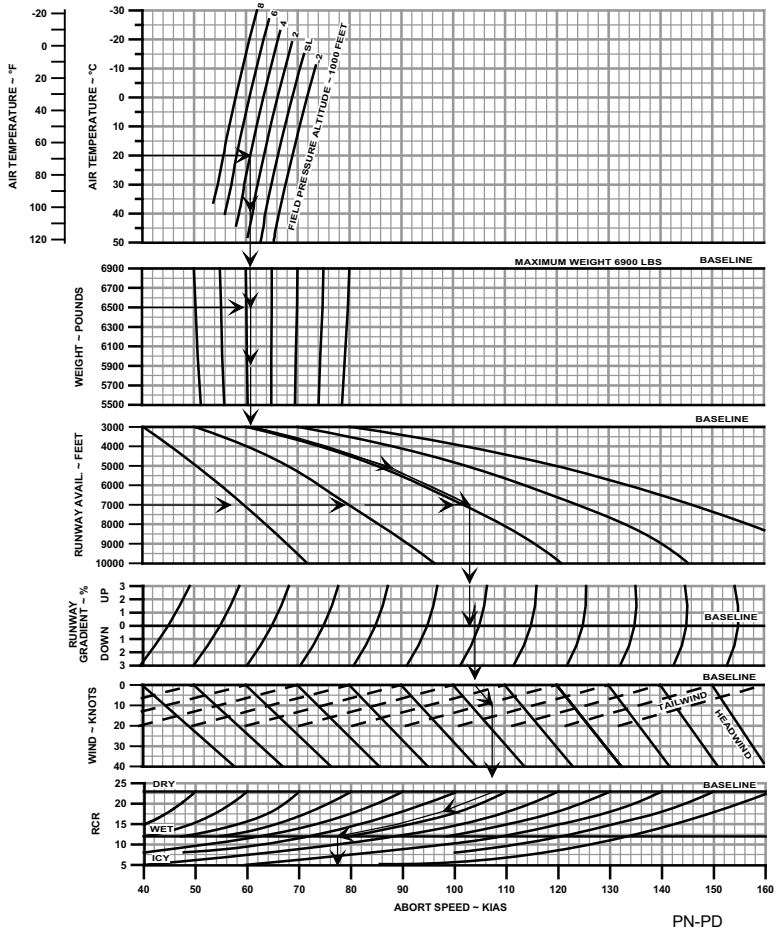
PHAATO010A

MAXIMUM ABORT SPEED - FLAPS TAKEOFF

ASSOCIATED CONDITIONS:
SET 30% TORQUE
RELEASE BRAKES AND SET TAKEOFF POWER
ABORT TAKEOFF AT OR BELOW ABORT SPEED
MAXIMUM BRAKING WITHOUT SKIDDING TIRES
HARD SURFACE RUNWAY

AIRPLANE : T-6B
ENGINE : PT6A-68
DATE : MAR 2008
DATA BASIS : FLIGHT TEST & ESTIMATE



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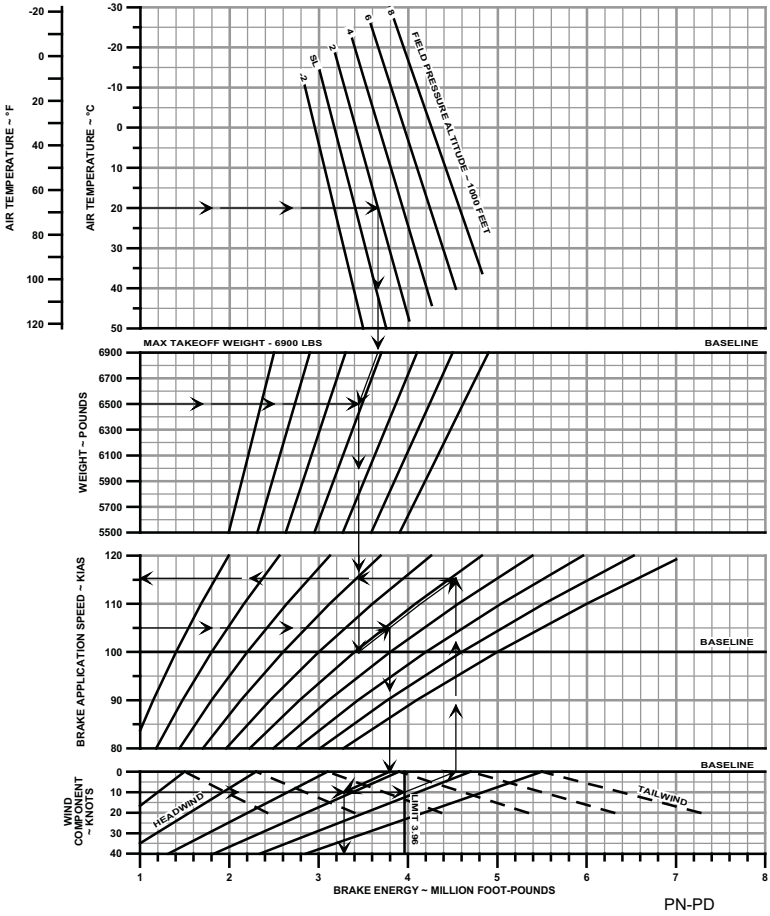
PHAATO003A

BRAKE ENERGY LIMITS/ MAXIMUM BRAKING SPEED

ASSOCIATED CONDITIONS:
ALL FLAP SETTINGS
POWER IDLE

AIRPLANE : T-6B
ENGINE : PT6A-68
DATE : MAR 2008
DATA BASIS : FLIGHT TEST

NOTE:
BRAKE ENERGIES EXCEEDING 3.96 MILLION FT-LB MAY RESULT IN LOSS OF BRAKING



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PHAATO001A

TIME, FUEL AND DISTANCE TO CLIMB

GEAR AND FLAPS RETRACTED
NO WIND
INDICATED CLIMB SPEED - 140 KNOTS
START CLIMB WEIGHT - 6900 LB
MAX CLIMB POWER
FOR OPERATION WITH DEFOG ON, FACTOR FUEL BY 1.6, TIME BY 1.85, AND DISTANCE BY 1.88

DRAG INDEX = 0

ALTITUDE (FT)	TIME - MIN OAT - °C				FUEL - LBS OAT - °C				DIST - NM OAT - °C			
	STD -20	STD	STD +10	STD +20	STD -20	STD	STD +10	STD +20	STD -20	STD	STD +10	STD +20
31,000	15	19	24		133	152	179		44	60	81	
30,000	14	17	21		127	142	164		41	54	70	
29,000	13	16	20		122	136	155		38	50	64	
28,000	12	15	18		116	129	146		36	46	59	
27,000	12	14	17		111	122	137		33	42	53	
26,000	11	13	15		106	116	128		31	38	47	
25,000	10	12	14	18	101	109	119	150	28	34	41	57
24,000	10	11	13	17	97	104	113	135	27	32	38	52
23,000	9	10	12	15	93	99	107	126	25	30	36	47
22,000	9	10	11	14	89	94	101	118	24	28	33	43
21,000	8	9	10	13	84	89	95	110	22	25	30	38
20,000	8	8	9	12	80	84	89	102	20	23	27	34
19,000	7	8	9	11	76	79	84	96	19	22	25	31
18,000	7	7	8	10	72	75	79	90	18	20	23	29
17,000	7	7	8	9	69	71	75	84	17	18	21	26
16,000	6	6	7	8	65	66	70	78	16	17	19	23
15,000	6	6	6	7	61	62	65	71	14	15	17	21
14,000	5	5	6	7	57	58	60	66	13	14	15	19
13,000	5	5	5	6	53	54	56	61	12	13	14	17
12,000	5	5	5	6	49	50	51	56	11	12	13	15
11,000	4	4	4	5	45	46	47	51	10	11	11	13
10,000	4	4	4	4	41	42	42	46	9	10	10	12
9,000	3	3	3	4	37	38	38	41	8	9	9	10
8,000	3	3	3	3	33	34	34	36	7	8	8	9
7,000	3	3	3	3	29	29	30	32	6	7	7	8
6,000	2	2	2	3	25	25	26	27	5	6	6	6
5,000	2	2	2	2	21	21	21	22	4	5	5	5
4000	1	1	1	2	17	17	17	18	3	4	4	4
3000	1	1	1	1	13	13	13	13	3	3	3	3
2000	1	1	1	1	8	8	9	9	2	2	2	2

NOTES:
1. For Drag Index = 20 (Gear Down, Flaps UP), factor time by 2.14, fuel by 2 and distance by 2.23; Climb to altitudes above 15,000 feet may not be possible.
2. For Drag Index = 80 (Gear Down, Flaps LDG), factor time by 2.66, fuel by 1.95 and distance by 2.17; Climb to altitudes above 15,000 feet may not be possible.
3. Defog On operation not recommended for configurations other then Drag Index = 0.

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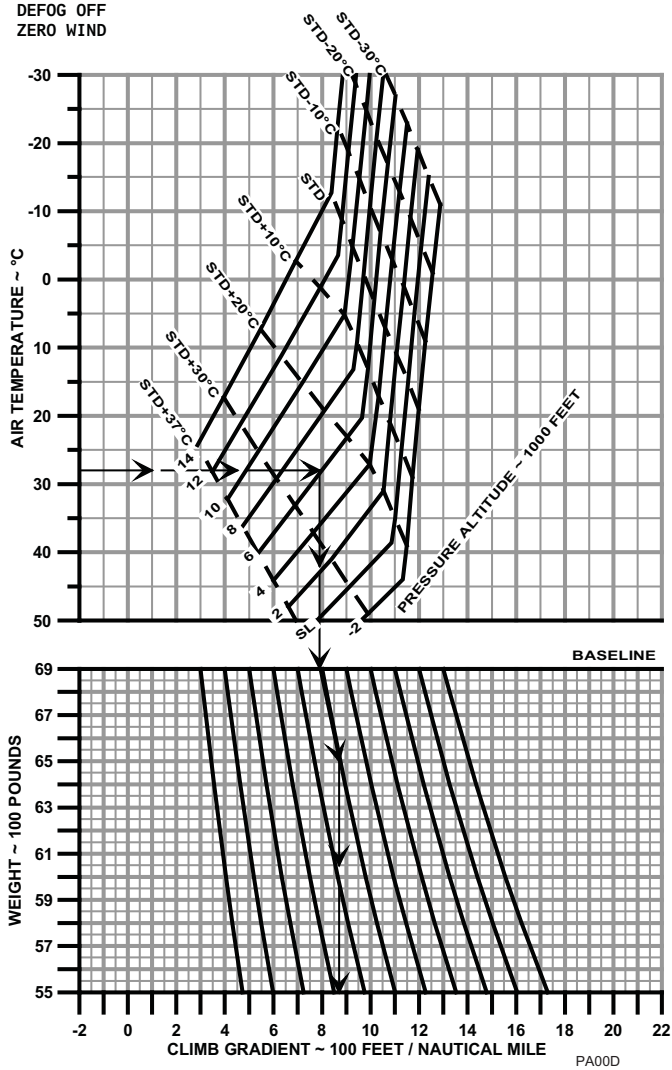
CLIMB GRADIENT FOR OBSTACLE CLEARANCE

ASSOCIATED CONDITIONS:
TAKEOFF POWER
FLAPS RETRACTED
LANDING GEAR RETRACTED
140 KIAS
DEFOG OFF
ZERO WIND

AIRPLANE : T-6B
ENGINE : PT6A-68
DATE : MAR 2008
DATA BASIS : FLIGHT TEST



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LONG RANGE CRUISE

DRAG INDEX = 0

GEAR AND FLAPS RETRACTED

ZERO WIND
AVERAGE WEIGHT - 6500 LB

Altitude FEET	OAT °C	IAS KNOTS	TAS KNOTS	FUEL FLOW PPH
SL	35 (STD+20)	239	251	644
	25 (STD+10)	245	252	652
	15 (STD)	246	250	650
	5 (STD-10)	249	248	643
	-5 (STD-20)	246	241	621
5000	25	228	257	571
	15	231	256	572
	5	223	243	534
	-5	227	243	535
	-15	231	242	532
10000	15	204	249	471
	5	202	242	458
	-5	208	244	462
	-15	208	239	448
	-25	206	233	435

ZERO WIND
AVERAGE WEIGHT - 6500 LB

Altitude FEET	OAT °C	IAS KNOTS	TAS KNOTS	FUEL FLOW PPH
15000	5	191	252	414
	-5	188	244	398
	-15	189	240	388
	-25	191	238	384
	-35	189	231	371
20000	-5	187	267	391
	-15	188	263	382
	-25	188	258	374
	-35	187	252	363
	-45	190	250	362
25000	-15	170	264	340
	-25	178	272	351
	-35	179	267	345
	-45	176	257	332
	-55	175	251	323
29000	-22	152	251	302
	-32	170	274	327
	-42	171	270	324
	-52	173	266	319
	-62	172	259	311
31000	-26	140	240	281
	-36	160	267	306
	-46	171	279	322
	-56	165	263	302
	-66	170	265	306

WEIGHT EFFECTS:
1. DATA ARE GIVEN FOR 6500 LBS. TO REPRESENT AN AVERAGE CRUISE WEIGHT.
2. MAINTAIN THE IAS FOR ANY OPERATING WEIGHT UNLESS LIMITED BY MAXIMUM CRUISE POWER.
3. VARIATION IN FUEL FLOW DUE TO WEIGHT WILL BE WITHIN ± 5 LB/HR.

4. THE SPECIFIC RANGE WILL DECREASE UP TO 1.5% ABOVE 6500 LBS.; AND INCREASE UP TO 1.5% BELOW 6500 LBS.

DEFOG ON EFFECTS:
FOR OPERATIONS WITH DEFOG ON, SPECIFIC RANGE WILL DECREASE BY 2% AND FUEL FLOW WILL INCREASE UP TO 20 LB/HR.

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LONG RANGE CRUISE (CONTINUED)

DRAG INDEX = 20
GEAR DOWN / FLAPS UP
ZERO WIND
AVERAGE WEIGHT - 6500 LB

Altitude FEET	OAT ºC	IAS KNOTS	TAS KNOTS	FUEL FLOW PPH
	35 (STD+20)	148	155	533
	25 (STD+10)	148	153	524
SL	15 (STD)	148	150	516
	5 (STD-10)	148	147	503
	-5 (STD-20)	148	145	493
	25	148	167	480
	15	148	164	472
5,000	5	148	161	463
	-5	148	158	455
	-15	148	156	440
	15	148	180	437
	5	148	177	428
10,000	-5	148	174	419
	-15	148	171	408
	-25	148	167	397
	5	148	195	416
	-5	148	192	407
15,000	-15	148	188	394
	-25	148	185	385
	-35	148	181	376

DRAG INDEX = 80
GEAR DOWN / FLAPS LANDING
ZERO WIND
AVERAGE WEIGHT - 6500 LB

Altitude FEET	OAT ºC	IAS KNOTS	TAS KNOTS	FUEL FLOW PPH
	35 (STD+20)	150	152	658
	25 (STD+10)	150	150	655
SL	15 (STD)	149	147	638
	5 (STD-10)	150	145	620
	-5 (STD-20)	150	142	604
	25	143	157	595
	15	144	155	595
5,000	5	137	145	543
	-5	139	144	536
	-15	142	145	536
	15	133	157	527
	5	132	154	518
10,000	-5	127	145	480
	-15	129	145	475
	-25	133	146	477
	5	124	159	479
	-5	128	161	486
15,000	-15	124	154	459
	-25	122	148	438
	-35	124	147	430

WEIGHT EFFECTS:

1. DATA ARE GIVEN FOR 6500 LBS. TO REPRESENT AN AVERAGE CRUISE WEIGHT.
2. MAINTAIN THE IAS FOR ANY OPERATING WEIGHT UNLESS LIMITED BY MAXIMUM POWER.
3. VARIATION IN FUEL FLOW DUE TO WEIGHT WILL BE WITHIN ± 32 LB/HR.
4. THE SPECIFIC RANGE WILL DECREASE UP TO 7% ABOVE 6500 LBS.; AND INCREASE UP TO 7% BELOW 6500 LBS.

DEFOG ON EFFECTS:

FOR OPERATIONS WITH DEFOG ON, SPECIFIC RANGE WILL DECREASE BY 4% AND FUEL FLOW WILL INCREASE UP TO 30 LB/HR.

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MAXIMUM ENDURANCE CRUISE

NO WIND
AVEREAGE WEIGHT: 6200 LB

		DRAG INDEX = 0 FLAPS UP GEAR UP		DRAG INDEX = 20 FLAPS UP GEAR DOWN		DRAG INDEX = 80 FLAPS LDG GEAR DOWN	
		125 KIAS		125 KIAS		125 KIAS	
ALTITUDE (FT)	AIR TEMP °C	TAS KNOTS	FUEL FLOW (PPH)	TAS KNOTS	FUEL FLOW (PPH)	TAS KNOTS	FUEL FLOW (PPH)
SL	-5 (STD-20)	122	414	122	450	122	532
	5 (STD-10)	125	413	125	453	125	542
	15 (STD)	127	412	127	458	127	553
	25 (STD+10)	129	413	129	466	129	564
	35 (STD+20)	131	423	131	478	131	575
5,000	-15	131	363	131	398	131	478
	-5	134	369	134	407	134	491
	5 (STD)	136	370	136	416	136	504
	15	139	374	139	425	139	516
	25	141	382	141	434	141	529
10,000	-25	142	322	142	355	142	454
	-15	144	325	144	363	144	465
	-5 (STD)	147	333	147	375	147	480
	5	150	339	150	383		
	15	153	347	153	390		
15,000	-35	153	284	153	325		
	-25	156	286	156	331		
	-15 (STD)	159	292	159	338		
	-5	162	306	162	345		
	5	165	313	165	351		
20,000	-45	166	263	Altitudes above 15,000 feet may not be possible in configurations other than clean.			
	-35	169	268				
	-25 (STD)	173	274				
	-15	176	280				
	-5	179	290				
25,000	-55	180	248				
	-45	184	253				
	-35 (STD)	188	259				
	-25	192	265				
	-15	195	271				
31,000	-66	200	237				
	-56	204	243				
	-46 (STD)	209	249				
	-36	214	255				
	-26	218	261				

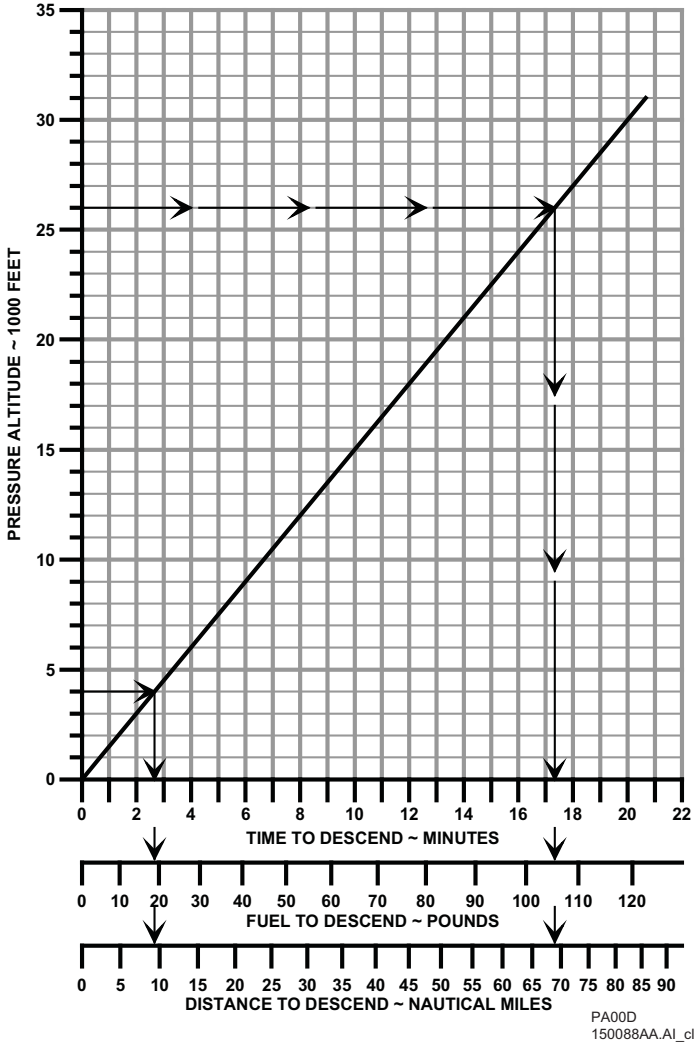
NOTES:
1. FUEL FLOW IS GIVEN FOR AN AVERAGE WEIGHT OF 6200 LB. INCREASE FUEL FLOW BY 1.8% FOR EACH 200 LB. OF WEIGHT ABOVE 6200 LB. DECREASE FUEL FLOW BY 1.8% FOR EACH 200 LB WEIGHT BELOW 6200 LB.
2. TAS IS VALID FOR ALL WEIGHTS.
3. FOR OPERATION WITH DEFOG ON, FACTOR FUEL FLOW BY 1.2.

PHAACR033A

MAXIMUM RANGE DESCENT TIME, FUEL AND DISTANCE

ASSOCIATED CONDITIONS:
POWER AS REQUIRED TO MAINTAIN
1500 FT/MIN DESCENT
180 KIAS DESCENT SPEED
LANDING GEAR UP
FLAPS UP
SPEEDBRAKE IN

AIRPLANE : T-6B
ENGINE : PT6A-68
DATE : MAR 2008
DATA BASIS : FLIGHT TEST



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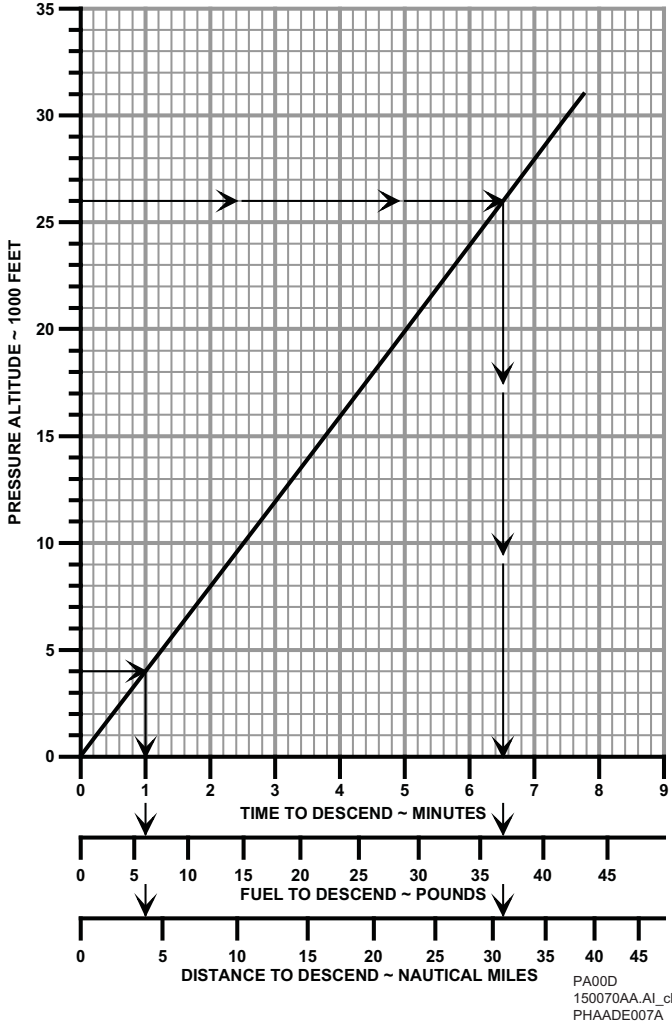
ENROUTE DESCENT
TIME, FUEL AND DISTANCE

ASSOCIATED CONDITIONS:
POWER AS REQUIRED TO MAINTAIN
4000 FPM DESCENT
220 KIAS DESCENT SPEED
LANDING GEAR UP
FLAPS UP
SPEEDBRAKE IN

AIRPLANE : T-6B
ENGINE : PT6A-68
DATE : MAR 2008
DATA BASIS : FLIGHT TEST



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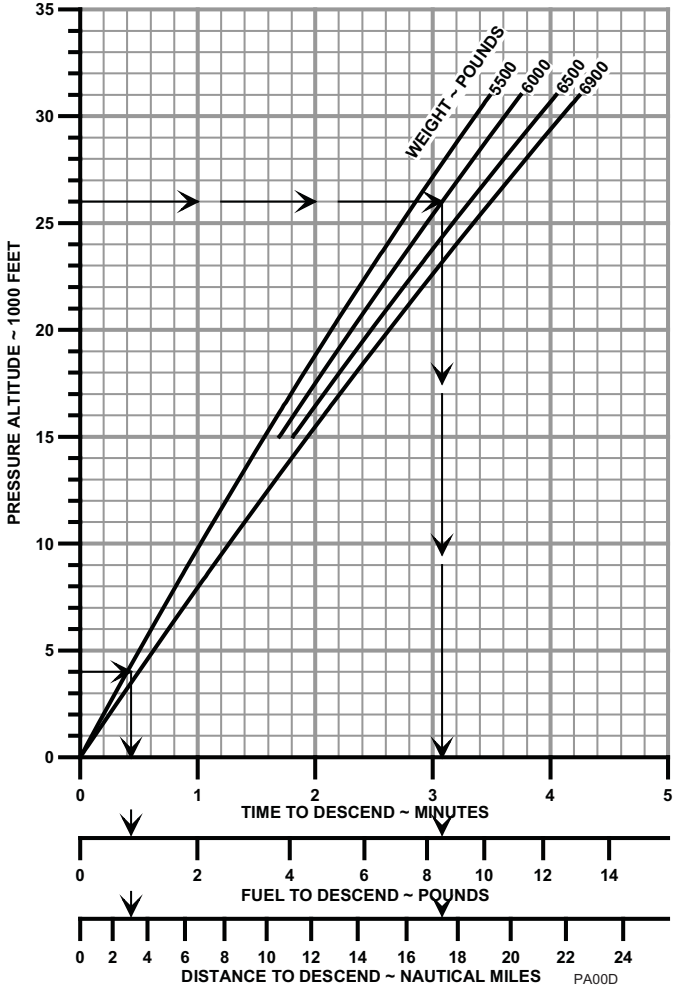
PHAADE007A

PENETRATION DESCENT
TIME, FUEL AND DISTANCE

ASSOCIATED CONDITIONS:
IDLE POWER
250 KIAS DESCENT SPEED
LANDING GEAR UP
FLAPS UP
SPEEDBRAKE OUT

AIRPLANE : T-6B
ENGINE : PT6A-68
DATE : APR 2009
DATA BASIS : FLIGHT TEST



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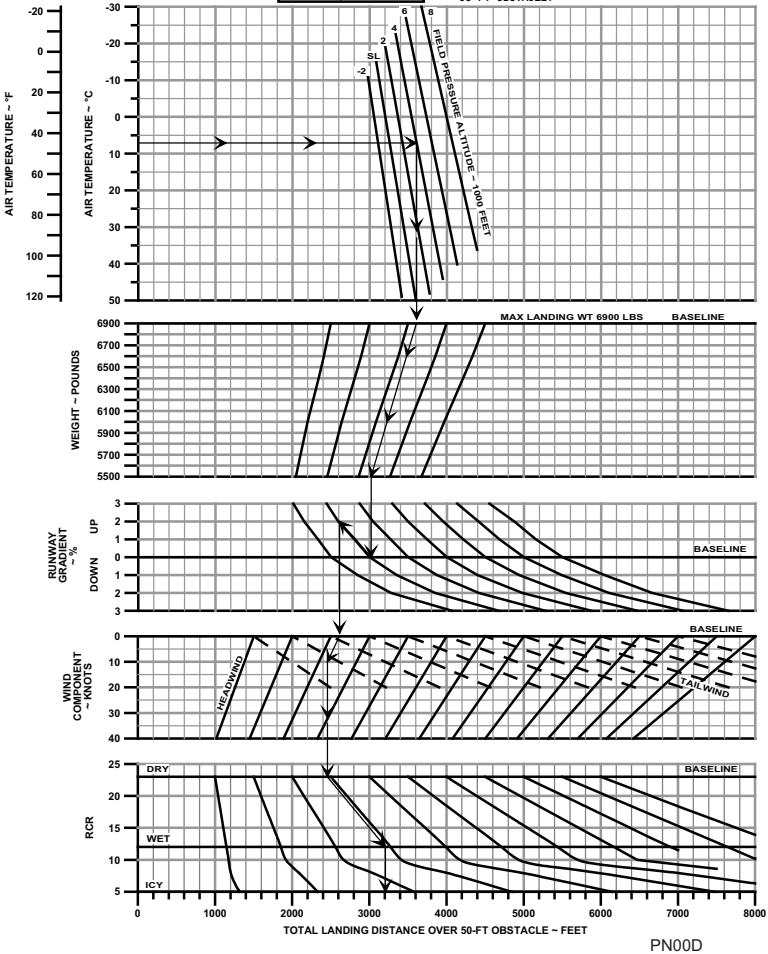
LANDING DISTANCE - FLAPS LANDING

ASSOCIATED CONDITIONS:
FINAL APPROACH SPEED AS TABULATED
3° GLIDE SLOPE DESCENT TO 50 FT
IDLE POWER AT 50 FT
MINIMUM FLARE AT TOUCHDOWN
MAXIMUM BRAKING WITHOUT
SKIDDING TIRES
HARD SURFACE RUNWAY

LANDING WEIGHT ~ LBS	FINAL APPROACH SPEED ~ KIAS
6900	106
6500	103
6000	99
5500	95

AIRPLANE : T-6B
ENGINE : PT6A-68
DATE : APRIL 2009
DATA BASIS : FLIGHT TEST

NOTES:
1. TAILWIND CORRECTIONS NOT RELIABLE FOR ICY RUNWAYS.
2. GROUND ROLL IS APPROX. 91% OF TOTAL DISTANCE OVER 50-FT OBSTACLE.



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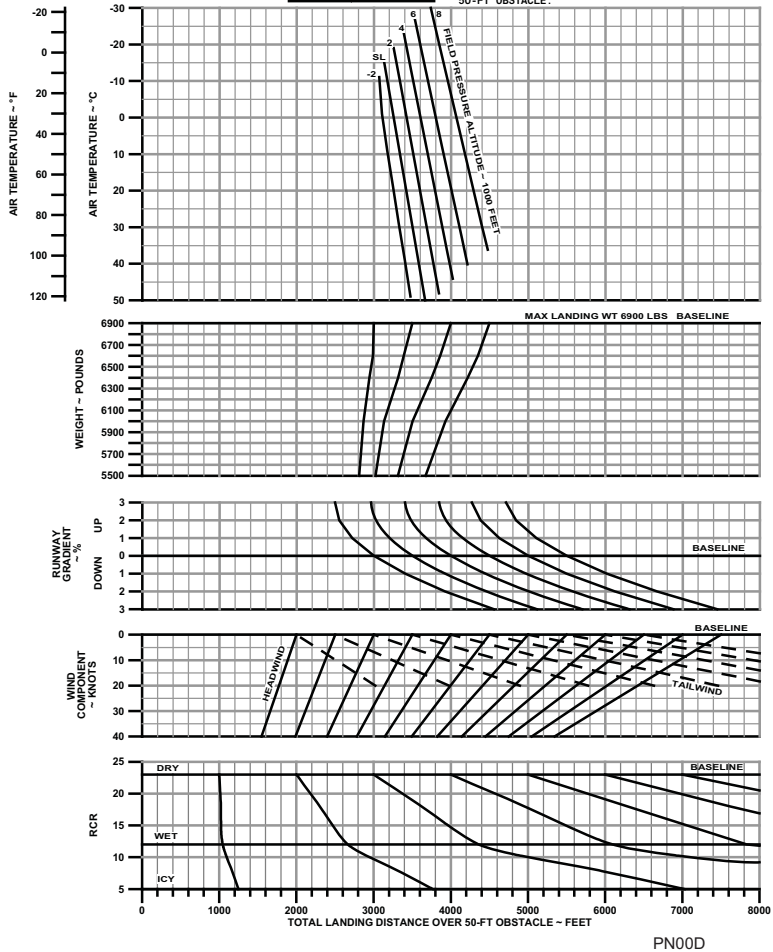
LANDING DISTANCE - FLAPS TAKEOFF

ASSOCIATED CONDITIONS:
FINAL APPROACH SPEED AS TABULATED
3° GLIDE SLOPE DESCENT TO 50 FEET
IDLE POWER AT 50 FEET
MINIMUM FLARE AT TOUCHDOWN
MAXIMUM BRAKING WITHOUT
SKIDDING TIRES
HARD SURFACE RUNWAY

LANDING WEIGHT ~ LBS	FINAL APPROACH SPEED ~ KIAS
6900	112
6500	108
6000	103
5500	99

AIRPLANE : T-6B
ENGINE : PT6A-68
DATE : APRIL 2009
DATA BASIS : FLIGHT TEST

NOTES:
1. TAILWIND CORRECTIONS NOT RELIABLE FOR ICY RUNWAYS.
2. GROUND ROLL IS APPROX. 89% OF TOTAL DISTANCE OVER 50-FT OBSTACLE.



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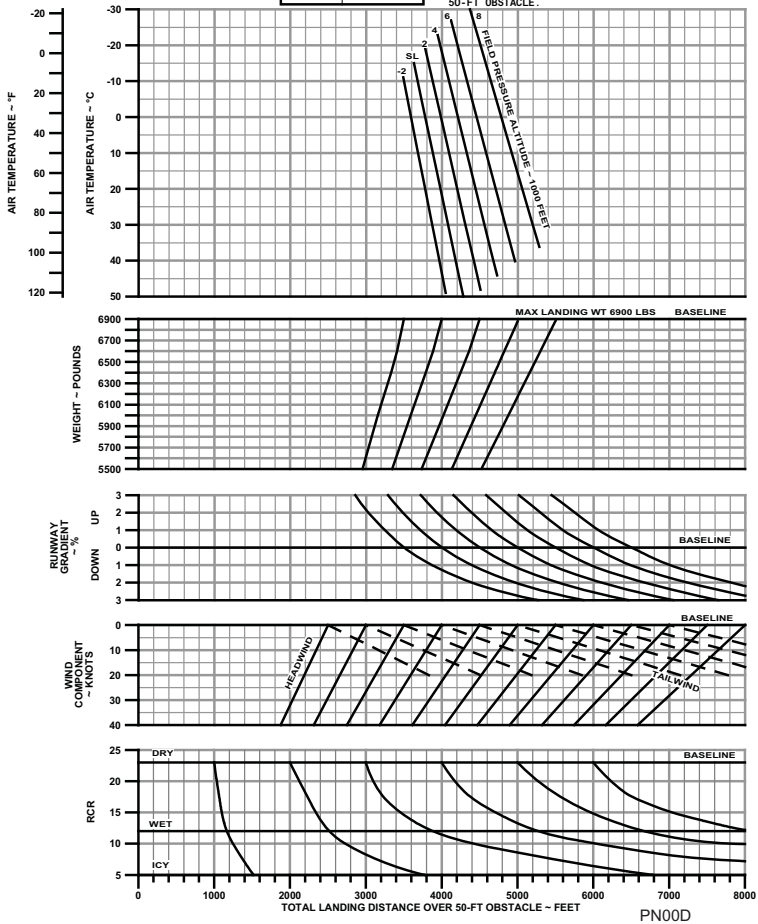
LANDING DISTANCE - FLAPS UP

ASSOCIATED CONDITIONS:
FINAL APPROACH SPEED AS TABULATED
3°GLIDESLOPE DESCENT TO 50 FEET
IDLE POWER AT 50 FT
MINIMUM FLARE AT TOUCHDOWN
MAXIMUM BRAKING WITHOUT SKIDDING TIRES
HARD SURFACE RUNWAY

LANDING WEIGHT ~ LBS	FINAL APPROACH SPEED ~ KIAS
6900	115
6500	112
6000	108
5500	103

AIRPLANE : T-6B
ENGINE : PT6A-68
DATE : APRIL 2009
DATA BASIS : FLIGHT TEST

NOTES:
1. TAILWIND CORRECTIONS NOT RELIABLE FOR ICY RUNWAYS.
2. GROUND ROLL IS APPROX. 90% OF TOTAL DISTANCE OVER 50-FT OBSTACLE.



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DIVERSION RANGE SUMMARY

FLAPS RETRACTED AND LANDING GEAR RETRACTED

STANDARD DAY
ZERO WIND (3)
DEFOG OFF (4)

DRAG INDEX = 0

AIRPLANE : T-6B
ENGINE : PT-6A-68
DATE : MAR, 2008
DATA BASIS : FLIGHT TEST

FUEL REMAINING, RANGE AND TIME WITH 105 LB FUEL RESERVE AT SEA LEVEL (1)

FUEL	1000 FT	SL	5	10	15	20	25	31	PROCEDURE / INITIAL ALTITUDE
200 LB	NM	36	42	46	50	52	54	57	CRUISE AT INITIAL ALTITUDE TO BASE, PENETRATION DESCENT OVER BASE. (2)
	MIN	9	10	11	12	11	11	12	
	1000 FT	**5**	**5**	**10**	**15**	**20**	**25**	**31**	**OPTIMUM ALTITUDE**
	NM	37							CLIMB TO OPTIMUM ALTITUDE, CRUISE TO PENETRATION DESCENT OVER BASE
	MIN	10							
400 LB	NM	113	132	151	173	189	208	228	CRUISE AT INITIAL ALTITUDE TO BASE, PENETRATION DESCENT OVER BASE. (2)
	MIN	27	33	37	43	43	46	55	
	1000 FT	**31**	**31**	**31**	**31**	**31**	**31**	**31**	**OPTIMUM ALTITUDE**
	NM	160	173	186	197	208	218		CLIMB TO OPTIMUM ALTITUDE, CRUISE TO PENETRATION DESCENT OVER BASE
	MIN	41	44	46	48	51	52		
600 LB	NM	190	223	257	297	327	363	403	CRUISE AT INITIAL ALTITUDE TO BASE, PENETRATION DESCENT OVER BASE. (2)
	MIN	46	55	63	74	75	81	97	
	1000 FT	**31**	**31**	**31**	**31**	**31**	**31**	**31**	**OPTIMUM ALTITUDE**
	NM	333	347	360	371	382	392		CLIMB TO OPTIMUM ALTITUDE, CRUISE TO PENETRATION DESCENT OVER BASE
	MIN	84	86	89	91	93	95		

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DIVERSION RANGE SUMMARY (CONTINUED)

FLAPS RETRACTED AND LANDING GEAR RETRACTED

STANDARD DAY
ZERO WIND (3)
DEFOG OFF (4)

DRAG INDEX = 0

AIRPLANE : T-6B
ENGINE : PT-6A-68
DATE : MAR, 2008
DATA BASIS : FLIGHT TEST

FUEL REMAINING, RANGE AND TIME WITH 105 LB FUEL RESERVE AT SEA LEVEL (1)

FUEL	1000 FT	SL	5	10	15	20	25	31	PROCEDURE
800 LB	NM	267	315	363	422	466	520	581	CRUISE AT INITIAL ALTITUDE TO BASE, PENETRATION DESCENT OVER BASE. (2)
	MIN	64	78	89	105	108	116	140	
	1000 FT	31	31	31	31	31	31	31	OPTIMUM ALTITUDE
	NM	510	524	537	548	559	570		CLIMB TO OPTIMUM ALTITUDE, CRUISE TO PENETRATION DESCENT OVER BASE
	MIN	126	129	131	133	136	137		
1000 LB	NM	344	406	469	548	606	677	761	CRUISE AT INITIAL ALTITUDE TO BASE, PENETRATION DESCENT OVER BASE. (2)
	MIN	83	100	115	137	140	151	182	
	1000 FT	31	31	31	31	31	31	31	OPTIMUM ALTITUDE
	NM	689	703	716	728	739	749		CLIMB TO OPTIMUM ALTITUDE, CRUISE TO PENETRATION DESCENT OVER BASE
	MIN	169	171	174	176	178	180		
CRUISE (5)	KIAS	246	223	208	189	188	179	148	
	KTAS	250	243	244	239	258	267	246	
	FF-(PPH)	650	535	462	386	375	346	284	

NOTES:

1. FUEL AND TIME INCLUDED FOR CLIMB AT 140 KIAS TO OPTIMUM ALTITUDE AND PENETRATION DESCENT.
2. PENETRATION DESCENT - CLEAN CONFIGURATION, SPEEDBRAKE EXTENDED, IDLE POWER, IMN 0.67/250 KIAS.
3. DECREASE RANGE BY 5% FOR EACH 10 KTS OF HEADWIND.
4. FOR OPERATION WITH DEFOG ON, DECREASE RANGE BY 4% AND TIME BY 6%.
5. FOR OPERATION WITH DEFOG ON, INCREASE FUEL FLOW BY 8%.

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DIVERSION RANGE SUMMARY
FLAPS RETRACTED, LANDING GEAR EXTENDED

STANDARD DAY
ZERO WIND (3)
DEFOG OFF (4)

DRAG INDEX = 20

AIRPLANE : T-6B
ENGINE : PT-6A-68
DATE : MAR, 2008
DATA BASIS : FLIGHT TEST

FUEL REMAINING, RANGE AND TIME WITH 105 LB FUEL RESERVE AT SEA LEVEL (1) PROCEDURE

FUEL	1000 FT	SL	5	10	15	INITIAL ALTITUDE
200 LB	NM	27	36	44	51	CRUISE AT INITIAL ALTITUDE TO BASE, PENETRATION DESCENT OVER BASE. (2)
	MIN	11	13	16	17	
	1000 FT	10	15	15	15	OPTIMUM ALTITUDE
	NM	33	40	46		CLIMB TO OPTIMUM ALTITUDE, CRUISE TO PENETRATION DESCENT OVER BASE
	MIN	13	14	16		
400 LB	NM	85	105	126	146	CRUISE AT INITIAL ALTITUDE TO BASE, PENETRATION DESCENT OVER BASE. (2)
	MIN	34	39	44	47	
	1000 FT	15	15	15	15	OPTIMUM ALTITUDE
	NM	127	134	140		CLIMB TO OPTIMUM ALTITUDE, CRUISE TO PENETRATION DESCENT OVER BASE
	MIN	43	44	46		
600 LB	NM	144	175	209	241	CRUISE AT INITIAL ALTITUDE TO BASE, PENETRATION DESCENT OVER BASE. (2)
	MIN	57	65	72	78	
	1000 FT	15	15	15	15	OPTIMUM ALTITUDE
	NM	222	229	236		CLIMB TO OPTIMUM ALTITUDE, CRUISE TO PENETRATION DESCENT OVER BASE
	MIN	73	75	76		
800 LB	NM	202	245	293	338	CRUISE AT INITIAL ALTITUDE TO BASE, PENETRATION DESCENT OVER BASE. (2)
	MIN	81	91	101	108	
	1000 FT	15	15	15	15	OPTIMUM ALTITUDE
	NM	318	325	332		CLIMB TO OPTIMUM ALTITUDE, CRUISE TO PENETRATION DESCENT OVER BASE
	MIN	103	105	107		

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DIVERSION RANGE SUMMARY (CONTINUED)
FLAPS RETRACTED, LANDING GEAR EXTENDED

STANDARD DAY
ZERO WIND (3)
DEFOG OFF (4)

DRAG INDEX = 20

AIRPLANE : T-6B
ENGINE : PT-6A-68
DATE : MAR, 2008
DATA BASIS : FLIGHT TEST

FUEL REMAINING, RANGE AND TIME WITH 105 LB FUEL RESERVE AT SEA LEVEL (1)						PROCEDURE
FUEL	1000 FT	SL	5	10	15	INITIAL ALTITUDE
1000 LB	NM	260	315	377	434	CRUISE AT INITIAL ALTITUDE TO BASE, PENETRATION DESCENT OVER BASE. (2)
	MIN	104	117	130	139	
	1000 FT	15	15	15	15	OPTIMUM ALTITUDE
	NM	414	422	429		CLIMB TO OPTIMUM ALTITUDE, CRUISE TO PENETRATION DESCENT OVER BASE.
	MIN	134	136	138		
CRUISE (5)	KIAS	148	148	148	148	
	KTAS	150	162	174	188	
	FF-(PPH)	517	464	420	395	

NOTES:

1. FUEL AND TIME INCLUDED FOR CLIMB AT 140 KIAS TO OPTIMUM ALTITUDE AND PENETRATION DESCENT.
2. PENETRATION DESCENT - FLAPS RETRACTED, LANDING GEAR EXTENDED, IDLE POWER, 148 KIAS.
3. DECREASE RANGE BY 7% FOR EACH 10 KTS OF HEADWIND.
4. FOR OPERATION WITH DEFOG ON, DECREASE RANGE AND TIME BY 4% .
5. FOR OPERATION WITH DEFOG ON, INCREASE FUEL FLOW BY 3% .

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DIVERSION RANGE SUMMARY

FLAPS LANDING, LANDING GEAR EXTENDED

STANDARD DAY
ZERO WIND (3)
DEFOG OFF (4)

DRAG INDEX = 80

AIRPLANE : T-6B
ENGINE : PT-6A-68
DATE : MAR, 2008
DATA BASIS : FLIGHT TEST

FUEL REMAINING, RANGE AND TIME WITH 105 LB FUEL RESERVE AT SEA LEVEL (1)

FUEL	1000 FT	SL	5	10	15	PROCEDURE
200 LB	NM	21	27	31	36	INITIAL ALTITUDE CRUISE AT INITIAL ALTITUDE TO BASE, PENETRATION DESCENT OVER BASE. (2)
	MIN	10	12	13	14	
	1000 FT	5	10	15	15	OPTIMUM ALTITUDE
	NM	23	27	31		CLIMB TO OPTIMUM ALTITUDE, CRUISE TO PENETRATION DESCENT OVER BASE.
	MIN	10	11	12		
400 LB	NM	66	80	91	102	CRUISE AT INITIAL ALTITUDE TO BASE, PENETRATION DESCENT OVER BASE. (2)
	MIN	32	36	38	40	
	1000 FT	15	15	15	15	OPTIMUM ALTITUDE
	NM	84	91	97		CLIMB TO OPTIMUM ALTITUDE, CRUISE TO PENETRATION DESCENT OVER BASE.
	MIN	34	36	38		
600 LB	NM	111	133	152	170	CRUISE AT INITIAL ALTITUDE TO BASE, PENETRATION DESCENT OVER BASE. (2)
	MIN	54	60	64	66	
	1000 FT	15	15	15	15	OPTIMUM ALTITUDE
	NM	152	159	165		CLIMB TO OPTIMUM ALTITUDE, CRUISE TO PENETRATION DESCENT OVER BASE.
	MIN	60	63	64		
800 LB	NM	156	187	213	238	CRUISE AT INITIAL ALTITUDE TO BASE, PENETRATION DESCENT OVER BASE. (2)
	MIN	76	85	90	93	
	1000 FT	15	15	15	15	OPTIMUM ALTITUDE
	NM	220	227	233		CLIMB TO OPTIMUM ALTITUDE, CRUISE TO PENETRATION DESCENT OVER BASE.
	MIN	87	89	91		
1000 LB	NM	201	241	275	307	CRUISE AT INITIAL ALTITUDE TO BASE, PENETRATION DESCENT OVER BASE. (2)
	MIN	98	109	116	119	
	1000 FT	15	15	15	15	OPTIMUM ALTITUDE
	NM	288	296	302		CLIMB TO OPTIMUM ALTITUDE, CRUISE TO PENETRATION DESCENT OVER BASE.
	MIN	113	116	118		

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DIVERSION RANGE SUMMARY (CONTINUED)

FLAPS LANDING, LANDING GEAR EXTENDED

STANDARD DAY
ZERO WIND (3)
DEFOG OFF (4)

DRAG INDEX = 80

AIRPLANE : T-6B
ENGINE : PT-6A-68
DATE : APRIL, 2008
DATA BASIS : FLIGHT TEST

FUEL REMAINING, RANGE AND TIME WITH 105 LB FUEL RESERVE AT SEA LEVEL (1)

PROCEDURE

FUEL	1000 FT	SL	5	10	15	INITIAL ALTITUDE
CRUISE (5)	KIAS	125	125	125	125	
	KTAS	123	132	143	154	
	FF-(PPH)	548	495	470	457	

NOTES:

1. FUEL AND TIME INCLUDED FOR CLIMB AT 125 KIAS TO OPTIMUM ALTITUDE AND PENETRATION DESCENT.
2. PENETRATION DESCENT - FLAPS LANDING, LANDING GEAR EXTENDED, IDLE POWER, 148 KIAS
3. DECREASE RANGE BY 8% FOR EACH 10 KTS OF HEADWIND.
4. FOR OPERATION WITH DEFOG ON, DECREASE RANGE AND TIME BY 4%.
5. FOR OPERATION WITH DEFOG ON, INCREASE FUEL FLOW BY 3%.

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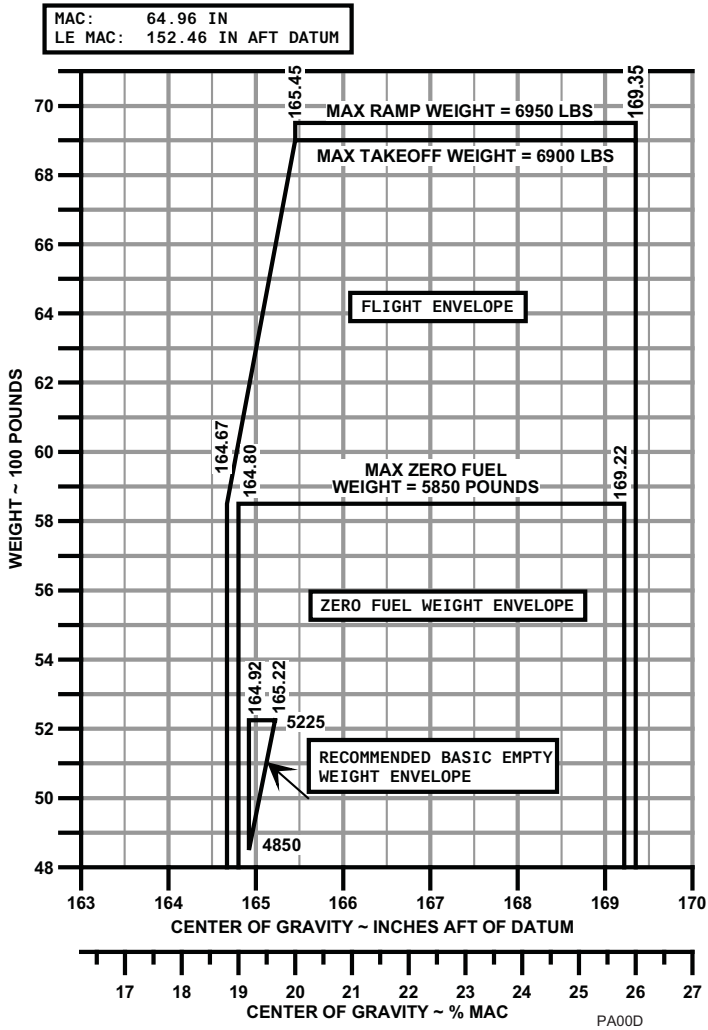
WEIGHT AND CG DIAGRAM
LANDING GEAR DOWN

1. ZERO FUEL LOADING CONDITIONS MUST BE WITHIN THE ZERO FUEL WEIGHT/CENTER OF GRAVITY ENVELOPE.
2. THE FLIGHT ENVELOPE WEIGHT/CENTER OF GRAVITY LIMITS WILL NOT BE EXCEEDED WITH SINGLE POING REFUELING.
3. WHEN FUELED OVER WING, VERIFY THAT MAXIMUM WEIGHT IS NOT EXCEEDED.
4. THE APPROVED FLIGHT ENVELOPE INCLUDES THE EFFECTS OF RETRACTING THE LANDING GEAR.



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WEIGHTS AND MOMENTS

Aircraft Weight and Balance

	Weight (Pound)	Station (Inch)	Moment (Pound-Inch)
Basic Empty Weight			
Front Pilot			
Rear Pilot			
Baggage			
Zero Fuel Weight			

Aircraft Station = Sum of Moments / Sum of Weights

Crew Weight and Moment

+ Gear Weight (Pound)	Front Pilot F.S. 162.60 Moment (Pound-Inch)	Rear Pilot F.S. 218.90 Moment (Pound-Inch)
131.8	214	288
134.8	219	295
138.9	226	304
142	231	311
145	236	318
149.1	242	326
152.2	247	247
155.3	252	340
158.3	257	347
161.4	262	353
164.5	267	360
167.5	272	367
170.6	277	373
173.7	282	380
176.8	287	387
179.8	292	394
182.9	297	400
186	302	407
190.1	309	416
193.1	314	423
196.2	319	429
199.3	324	436
202.3	329	443
205.4	334	450
208.5	339	456
211.6	344	463
214.6	349	470
217.7	354	477
220.8	359	483
223.8	364	490
226.9	369	497
231	376	506
234.1	381	512
237.1	386	519
241.2	392	528
244.3	397	535
247.3	402	541
250.4	407	548
253.5	412	555
256.6	417	562
259.6	422	568
262.7	427	575
265.4	432	581

Baggage Weight and Moment

Weight (Pound)	Moment (Pound-Inch)
2	5
4	11
6	16
8	22
10	27
12	33
14	38
16	43
18	49
20	54
22	60
24	65
26	70
28	76
30	81
32	87
34	92
36	98
38	103
40	108
42	114
44	119
46	125
48	130
50	136
52	141
54	146
56	152
58	157
60	163
62	168
64	173
66	179
68	184
70	190
72	195
74	201
76	206
78	211
80	217

Usable Fuel Weight and Moment

Weight (Pound)	Moment (Pound-Inch)	Weight (Pound)	Moment (Pound-Inch)
50	84	650	1,099
100	168	660	1,116
110	185	670	1,133
120	202	680	1,150
130	219	690	1,167
140	236	700	1,185
150	253	710	1,202
160	269	720	1,219
170	286	730	1,236
180	303	740	1,253
190	320	750	1,270
200	337	760	1,287
210	354	770	1,304
220	371	780	1,321
230	388	790	1,338
240	404	800	1,355
250	421	810	1,372
260	438	820	1,389
270	455	830	1,406
280	472	840	1,423
290	489	850	1,440
300	506	860	1,457
310	523	870	1,474
320	540	880	1,491
330	557	890	1,508
340	574	900	1,525
350	590	910	1,542
360	607	920	1,559
370	624	930	1,576
380	641	940	1,593
390	658	950	1,610
400	675	960	1,628
410	692	970	1,645
420	709	980	1,662
430	726	990	1,679
440	743	1000	1,696
450	760	1010	1,713
460	777	1020	1,730
470	794	1030	1,747
480	811	1040	1,764
490	828	1050	1,781
500	845	1060	1,798
510	862	1070	1,815
520	879	1080	1,832
530	896	1090	1,849
540	913	1100	1,866
550	930	1110	1,884
560	947	1120	1,901
570	963	1130	1,918
580	980	1140	1,935
590	997	1150	1,952
600	1,014	1160	1,969
610	1,031	1170	1,986
620	1,048	1180	2,003
630	1,065	1190	2,020
640	1,082	1200	2,037

PREFLIGHT BRIEFING

Communications and Crew Coordination

a. Frequencies
b. Radio procedures and discipline
c. Change of control of aircraft
d. Navigational aides
e. Identification
f. Clearing procedures

Weather

a. Local area
b. Local area and destination forecast
c. Weather alternate

Navigation and Flight Planning

a. Climbout
b. Mission planning, including fuel management
c. Penetration
d. Approach/missed approach
e. Recovery

Emergencies

a. Aborts
b. Divert fields
c. Minimum and emergency fuel
d. Loss of power
e. Radio failure/ICS failure
f. Loss of sight/lost wingman
g. Downed pilot and aircraft
h. Birdstrike
i. Other aircraft emergencies
j. Ejection

Message	Cause	Page
SPDBRK OUT	Speed Brake is extended or extending	No Procedure
WHITE (ADVISORY) MESSAGES		
RPT AFT	Front cockpit multi-function displays (MFD) are repeating IAC2 or rear cockpit MFD information	No Procedure
RPT FWD	Rear cockpit multi-function displays (MFD) are repeating IAC1 or front cockpit MFD information	No Procedure
RPT ERR	Both cockpits selected to repeat mode at the same time	No Procedure
STATUS/BIT	Status/built in test (BIT) page in flight management system (FMS) information has updated or changed	No Procedure
ADC A INOP	Internal failure of channel A of the ADC	EB-15
ADC B INOP	Internal failure of channel B of the ADC	EB-15
EDM A INOP	Internal failure of channel A of the EDM	EB-13
EDM B INOP	Internal failure of channel B of the EDM	EB-13
LAMP TEST	Condition indication for the lamp test switch in test position	No Procedure
IRS DEGD	IRS/GPS hybrid operational mode is degraded	No Procedure
<6>MX-G	Illuminates when one (or more) Over G event is captured in Over G log, 1 minute after transition to ground, 1 minute after IAC is powered and aircraft is on ground. No message during flight.	No Procedure

Message, Cause, and Reference Table (Continued)

Message	Cause	Page
L PHT INOP	Left pitot heater is not energized	No Procedure
R PHT INOP	Right pitot heater is not energized	No Procedure
UFCP 1 FAIL	UFCP in front cockpit failed	EB-9
UFCP 2 FAIL	UFCP in rear cockpit failed	EB-9
IAC1 CONFIG	Integrated avionics computers 1 and 2 have mismatched configuration	No Procedure
IAC2 CONFIG	Integrated avionics computers 1 and 2 have mismatched configuration	No Procedure
CHK ENG	Engine parameters are outside normal operating ranges Hyd pressure is less than or equal to 1790 PSI Hyd pressure is greater than 3510 PSI Oil temperature is between 106 and 111 °C DC voltage is between 29.6 vdc and 32.3 vdc and the engine is not in start mode while the GEN BUS and the BATT BUS warning conditions have not been met DC voltage is less than 21.9 vdc and the engine is not in start mode while the GEN BUS and the BATT BUS warning conditions have not been met	No Procedure
GREEN (ADVISORY) MESSAGES		
IGN SEL	Ignition on	No Procedure
M FUEL BAL	FUEL BAL switch in MANUAL position or EXT FUEL XFER switch in ON position	No Procedure
ST READY	PCL positioned for auto start	No Procedure
BOOST PUMP	BOOST PUMP selected by switch, starter relay, or low pressure switch	EC-3
ANTI ICE	PROBES ANTI-ICE switch on	No Procedure
TAD OFF	Rudder trim aid device selected off	No Procedure
TRIM OFF	TRIM DISCONNECT switch activated	No Procedure
NWS ON	Nose wheel steering is engaged/on	No Procedure

Message, Cause, and Reference Table (Continued)

Message	Cause	Page
AMBER (CAUTION) MESSAGES		
CKPT ALT	Cockpit pressure altitude above 19,000 ft	ED-11
DUCT TEMP	Environmental duct or defog duct above 300 ^{o}F	ED-7
HYD FL LO	Hydraulic reservoir fluid level below 55 cubic inches (1 qt)	EA-3
BUS TIE	BUS TIE switch open or bus tie inoperative	EB-33
FUEL BAL	Fuel imbalance exceeds 30 pounds for 2 minutes, or fuel probe or EDM fail	EC-5
EHYD PX LO	Emergency hydraulic pressure at or below 2400±150 psi	EA-3
OBOGS TEMP	OBOGS temperature above 200 ^{o}F	ED-5
TAD FAIL	Rudder trim aid device failure	EG-13
L FUEL LO	Left wing tank below approximately 110 pounds usable fuel	No Procedure
R FUEL LO	Right wing tank below approximately 110 pounds usable fuel	No Procedure
PMU STATUS	PMU has detected and accomplished a fault in-flight or WOW switch failure	EE-15
OIL PX	Oil pressure 15 to 40 at idle Oil pressure 40 and 90 psi for 10 seconds above idle	EE-19
<6>IAC XTALK FAIL	Loss of communication between the Integrated Avionics Computers	EB-39
<5>XPDR FAIL	Transponder failed	No Procedure
<6>XPDR FAIL	Transponder failed	EB-43
<6>ADS-B FAIL	Transponder indicates an ADS-B Out function failure	EB-41
FP FAIL	Fuel probe failure	EC-9
IAC1 FAIL	Integrated avionics computer 1 has failed	EB-3
IAC2 FAIL	Integrated avionics computer 2 has failed	EB-3
IAC1 OVHT	Integrated avionics computer 1 over heat	No Procedure
IAC2 OVHT	Integrated avionics computer 2 over heat	No Procedure
IRS FAIL	Inertial reference system failed	EB-5

Message, Cause, and Reference Table (Continued)

Message	Cause	Page
RED (WARNING) MESSAGES		
BATT BUS	Battery bus inoperative	EB-27
GEN BUS	Generator bus inoperative	EB-23
PMU FAIL	PMU fail	EE-13
GEN	Generator inoperative	EB-21
CKPT PX	Cockpit overpressurization, pressure exceeds 3.9 to 4.0 psi	ED-9
CANOPY	Canopy unlocked/unsafe	EG-7
FUEL PX	Fuel pressure below 10 psi in motive flow/return flow supply line	EC-3
OIL PX	Oil pressure at or below 15 psi, or oil pressure 15 to 40 psi for 5 seconds at idle	EE-19
OBOGS FAIL	OBOGS Fail Message	ED-3
CHIP	Engine chip detector indicates oil contamination	EE-17
ADC FAIL	Air data computer has failed	EB-15
EDM FAIL	Engine data manager has failed	EB-13
CHK ENG	Engine parameters have exceeded operating limitations Engine is not in start mode, and ITT is greater than or equal to 821 °C for more than 20 seconds Engine is not in start mode, and ITT is greater than or equal to 870 °C Oil pressure is greater than 201 PSI Oil temperature is greater than 111 °C Oil temperature is less than -41 °C N_1 is greater than 105% Torque is greater than 101% for more than 20 seconds Torque is greater than 131% DC voltage is greater than 32.3 vdc and the engine is not in start mode while the GEN BUS and the BATT BUS warning conditions have not been met RPM is greater than 102% for more than 20 seconds (while WOW switch is set to Airborne) RPM is greater than 106%	No Procedure

Message, Cause, and Reference Table