PILOTS' ABBREVIATED FLIGHT CREW CHECKLIST

USAF SERIES

F-106A AND F-106B

Contracts AF41 (603)-11351, F41608-71-D-0973

F41608-78-D-A005


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

PUBLISHED UNDER AUTHORITY OF THE SECRETARY OF THE AIR FORCE

15 NOVEMBER 1974
CHANGE 2 – 30 OCTOBER 1978
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MINOT ALTERNATE QUICK REFERENCE

FUEL FIGURES FOR TANKED F-106 AT MISSED APPROACH
(1800# RESERVE OVER ALTERNATE) ADD 10% FOR 50 K
HEADWIND SUBTRACT 10% IF TANKS ARE DROPPED — OBTAIN
CRUISE DATA FROM OPTIMUM RETURN CHART
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STARTING ENGINE (SCRAMBLE)

1. Normal Start.
2. All personal equipment — Attach. (FP-RP)

ELECTRICAL POWER SUPPLY (SCRAMBLE)

1. External power — Disconnected.
2. Master electrical power switch — ON.
3. Emergency AC generator — Check.
4. ATG — Check.
5. Generator switch — ON.
6. MA-1 power switch — ON.

HYDRAULIC POWER SUPPLY (SCRAMBLE)

1. Hydraulic and flight control systems — Check.
2. Takeoff trim button — Depress.

BEFORE TAKEOFF (SCRAMBLE)

1. Ejection seat ground safety pin — Remove. (FP-RP)
2. Canopy — Close, lock, & light out.
3. Idle thrust control switch — OFF.
4. AIR-2A arm/safe/monitor power circuit breaker — Closed.
5. Cabin air selector switch — PRESS.
T.O. 1F-106A-1CL-1

F-106 TAKEOFF AND LANDING DATA CARD

CONDITIONS

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TAKEOFF

| ENGINE PRESSURE RATIO |         |
| ACCELERATION CHECK Kts. at Ft. |         |
| TAKEOFF DISTANCE | Ft. |
| TAKEOFF SPEED | Kts. |
| REFUSAL SPEED & DISTANCE Kts. at Ft. |         |
| MAX. ABORT SPEED | Kts. |
| INITIAL CLimb SPEED |         |

LANDING

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LIST OF EFFECTIVE PAGES

INSERT LATEST CHANGED PAGES. DESTROY SUPERSEDED PAGES.

Dates of issue for original and changed pages are:

Original . . . . 0 . . . . . . 15 Nov 74
Change . . . . 1 . . . . . . 1 Aug 77
Change . . . . 2 . . . . . . 30 Oct 78

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.

TOTAL NUMBER OF PAGES IN THIS PUBLICATION IS 130 CONSISTING OF THE FOLLOWING:

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Change 2  iii
INTRODUCTION: In accordance with AFR60-9, the flight crew is required to use this checklist when operating the airplane. It is not mandatory to refer directly to this checklist during the EXTERIOR INSPECTION; however, the pilot is responsible for the line items in the Flight Manual. In addition, the pilot is not required to refer to this checklist when its use is impracticable; in such cases, the pilot shall memorize all line items in sequence prior to accomplishment. The line items in this checklist correspond to the line items in the amplified procedures in the Flight Manual but are not intended to replace them. Refer to the Introduction in the Flight Manual for details on the checklist program.

AIRPLANE DESIGNATION CODE. Checklist line items not applicable to both airplane models are coded as follows:

F-106B – B   F-106A – A

COMMENTS AND QUESTIONS. Any comments, questions, and recommendations should be forwarded on AF Form 847 in accordance with AFR60-9 and T.O. 00-5-1 through your Command Headquarters to San Antonio ALC/MMSRE, Kelly AFB, Texas 78241.

PRINT CODING (Emergency Section)
1. Major Area — UN-11-B
   Example: GROUND OPERATIONS
2. Procedure Title & Bold Face — UN-10-B
   Example: ENGINE FIRE DURING START
   1. THROTTLE — OFF.
3. Challenge and Response — C-10-M
   Example: 3. Canopy — Fully open.
   4. ATG switch — OFF.
F-106A AND F-106B ABBREVIATED CHECKLIST

EMERGENCY PROCEDURES
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T.O. 1F-106A-1CL-1

GROUND OPERATIONS

TABLE OF CONTENTS

ENGINE FIRE DURING START .............. E-1
EXCESSIVE EGT OR FIRE IN TAILPIPE .... E-1
EMERGENCY GROUND EGRESS ............. E-1

vii/(viii Blank)
ENGINE FIRE DURING START

1. THROTTLE — OFF.
2. Fuel switches — Close.
3. Master electrical power — OFF.

EXCESSIVE EGT OR FIRE IN TAILPIPE

1. Throttle — Off.
2. Compressor air — Connected.
3. Fuel shutoff & boost pump switches — OFF.
4. Master electrical power — ON.
5. Ignition button — Depress & hold.
6. Throttle — START.
7. Ignition button — Release when fuel in starter flask is expended.
8. Throttle — OFF.
9. Master electrical power — OFF.

EMERGENCY GROUND EGRESS

1. OXYGEN SUPPLY LEVER — OFF.
2. SURVIVAL KIT EMERGENCY RELEASE HANDLE — PULL.
3. Deleted.
4. SAFETY BELT AND SHOULDERS HARNESS — RELEASE.
5. CANOPY — JETTISON (if necessary).
6. PARACHUTE FIRING LANYARD — DISCONNECT BY STANDING UP.
6. Depart airplane.

E-1
GROUND OPERATIONS
Change 1
T.O. 1F-106A-1CL-1

TAKEOFF

TABLE OF CONTENTS

ABORT ........................................... E-4
BARRIER ENGAGEMENT .......................... E-4
ENGINE FAILURE DURING TAKEOFF .......... E-4
ENGINE FIRE DURING TAKEOFF .............. E-5
AFTERBURNER FAILURE DURING TAKEOFF .. E-5
AFTERBURNER EXHAUST NOZZLE FAILURE .. E-5
GEAR WARNING LIGHT ILLUMINATED ...... E-6

E-3
TAKEOFF
ABORT

1. THROTTLE – IDLE.
2. DRAG CHUTE – EMERGENCY DEPLOY.
3. TAILHOOK – DOWN (if necessary).
4. EXTERNAL TANKS – JETTISON (if necessary).
5. Maintain aircraft control.
   a. Nose wheel steering – As necessary.
   b. Rudder and elevon – As necessary.
   c. Differential braking – As necessary.
6. Idle thrust control switch – ON.
7. Brakes – As necessary.
8. Shoulder harness – MANUAL LOCK. (FP-RP)

BARRIER ENGAGEMENT PROCEDURES

1. Call for barrier webbing to be lowered.
2. Tailhook – Down (at least 2000 feet from barrier).
3. Steer airplane toward barrier center & follow ABORT procedure.

ENGINE FAILURE DURING TAKEOFF

If decision is made to stop:

1. FOLLOW ABORT PROCEDURE.

If takeoff is continued:

1. EXTERNAL TANKS – JETTISON.
2. ZOOM (IF POSSIBLE) AND EJECT.
T.O. 1F-106A-1CL-1

ENGINE FIRE DURING TAKEOFF

If decision is made to stop:

1. FOLLOW ABORT PROCEDURE.

If takeoff is continued:

1. THROTTLE – MAX THRUST TO SAFE EJECT ALTITUDE.
2. EXTERNAL TANKS – JETTISON (if necessary).
3. IF ON FIRE – EJECT.

If fire cannot be confirmed:

4. Throttle – Min practical thrust.
5. Land as soon as possible.

AFTERBURNER FAILURE DURING TAKEOFF

If decision is made to stop:

1. FOLLOW ABORT PROCEDURE.

If takeoff is continued:

1. THROTTLE – INBOARD TO FULL MIL POWER.

AFTERBURNER EXHAUST NOZZLE FAILURE DURING TAKEOFF

If an EPR drop or loss thrust does not occur when afterburner is selected:
1. Throttle – Inboard, and abort takeoff.

E-5
LANDING GEAR WARNING AND POSITION LIGHTS REMAIN ILLUMINATED ON GEAR RETRACTION

1. Airspeed — Below max gear extension speed.
2. Leave gear handle — UP.
3. Obtain a visual inspection.
4. If visual inspection reveals gear and doors extended — Gear — Recycle.
5. If gear retract — Continue mission.
6. Gear remains down, doors open — Depress landing gear emergency-up button
7. If gear remains down:
   a. Gear handle — DOWN.
   b. Land as soon as practicable.
8. If visual inspection reveals gear down and doors closed or partially closed or if unable to obtain a visual inspection, use LANDING GEAR EMERGENCY EXTENSION procedures.

LANDING GEAR WARNING LIGHT REMAINS ILLUMINATED ON GEAR RETRACTION OR ILLUMINATES ABNORMALLY DURING FLIGHT

1. Airspeed — Below max gear extension speed.
2. Leave gear handle — UP.
3. Obtain a visual inspection.
4. If visual inspection reveals:
   b. One or more gear extended or partially retracted (in proper sequence with doors) — Extend gear and land.
   c. Gear down and doors open — Depress gear emergency-up button.
   d. Gear extended, doors closed — Use LANDING GEAR EMERGENCY EXTENSION PROCEDURES.
LANDING GEAR POSITION LIGHT REMAINS ILLUMINATED ON GEAR RETRACTION WITH NO ACCOMPANYING GEAR WARNING LIGHTS

1. Leave gear retracted — do not recycle.
2. Do not perform excessive maneuvering.
3. Feed out external tanks and maximum practical internal fuel prior to gear extension.
4. Extend gear using normal system.
5. An approach end engagement is recommended if practical.

Reflects T.O. 1F-106A-1S-188

E-6A
<table>
<thead>
<tr>
<th>SECTION</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>INFLIGHT</td>
<td></td>
</tr>
<tr>
<td>TABLE OF CONTENTS</td>
<td></td>
</tr>
<tr>
<td>BEFORE EJECTION</td>
<td>E-9</td>
</tr>
<tr>
<td>EJECTION</td>
<td>E-9</td>
</tr>
<tr>
<td>ENGINE MALFUNCTIONS</td>
<td></td>
</tr>
<tr>
<td>ENGINE MECHANICAL FAILURE</td>
<td>E-10</td>
</tr>
<tr>
<td>EGT OVERTEMP WARNING LIGHT</td>
<td>E-10</td>
</tr>
<tr>
<td>ENGINE FIRE</td>
<td>E-10</td>
</tr>
<tr>
<td>AIRSTART</td>
<td>E-11</td>
</tr>
<tr>
<td>AFTERBURNER FAILURE</td>
<td>E-11</td>
</tr>
<tr>
<td>OIL QUANTITY LOW</td>
<td>E-14</td>
</tr>
<tr>
<td>OIL PRESSURE LOW</td>
<td>E-14</td>
</tr>
<tr>
<td>ENGINE FUEL CONTROL FAILURE</td>
<td>E-14</td>
</tr>
<tr>
<td>VARIABLE RAMP FAILURE</td>
<td>E-14</td>
</tr>
<tr>
<td>ENGINE COMPARTMENT OVERPRESSURE</td>
<td>E-24</td>
</tr>
<tr>
<td>ENGINE ANTI-ICE</td>
<td>E-25</td>
</tr>
<tr>
<td>FUEL SYSTEM MALFUNCTIONS</td>
<td></td>
</tr>
<tr>
<td>MALFUNCTIONING VENT/ANTI-G VALVE</td>
<td>E-14A</td>
</tr>
<tr>
<td>FUEL BOOST PUMP FAILURE</td>
<td>E-15</td>
</tr>
<tr>
<td>FUEL BOOST PRESSURE LOW</td>
<td>E-15</td>
</tr>
<tr>
<td>WING TANK PRESSURIZATION FAILURE</td>
<td>E-15</td>
</tr>
<tr>
<td>FUEL IMBALANCE</td>
<td>E-16</td>
</tr>
<tr>
<td>FUSETAGE TANK PRESSURIZATION FAILURE</td>
<td>E-16</td>
</tr>
<tr>
<td>FUEL VALVE-CLOSED</td>
<td>E-17</td>
</tr>
<tr>
<td>FUEL QUANTITY-LOW</td>
<td>E-17</td>
</tr>
<tr>
<td>FLIGHT WITH LOW FUEL QUANTITY</td>
<td>E-17</td>
</tr>
<tr>
<td>ELECTRICAL SYSTEM MALFUNCTIONS</td>
<td></td>
</tr>
<tr>
<td>ELECTRICAL FIRE</td>
<td>E-11</td>
</tr>
<tr>
<td>COMPLETE ELECTRICAL FAILURE</td>
<td></td>
</tr>
<tr>
<td>EXCEPT BATTERY</td>
<td>E-18</td>
</tr>
<tr>
<td>COMPLETE ELECTRICAL FAILURE</td>
<td>E-19</td>
</tr>
<tr>
<td>AC POWER FAILURE</td>
<td>E-20</td>
</tr>
<tr>
<td>CADC FAILURE</td>
<td>E-20</td>
</tr>
<tr>
<td>DC POWER FAILURE</td>
<td>E-21</td>
</tr>
<tr>
<td>WINDSHIELD HEATING FAILURE</td>
<td>E-21</td>
</tr>
<tr>
<td>Table Title</td>
<td>Page</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>------</td>
</tr>
<tr>
<td><strong>INFLIGHT</strong></td>
<td></td>
</tr>
<tr>
<td><strong>TABLE OF CONTENTS (CONT.)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>HYDRAULIC SYSTEM MALFUNCTIONS</strong></td>
<td></td>
</tr>
<tr>
<td>HYDRAULIC PRESSURE LOW (FLASHING)</td>
<td>E-26</td>
</tr>
<tr>
<td>FLIGHT CONTROL OSCILLATIONS/OVERHEAT</td>
<td>E-27</td>
</tr>
<tr>
<td>HYDRAULIC PRESSURE LOW (STEADY)</td>
<td>E-28</td>
</tr>
<tr>
<td>ARTIFICIAL FEEL SYSTEM INOPERATIVE</td>
<td>E-28</td>
</tr>
<tr>
<td><strong>AUXILIARY EQUIPMENT MALFUNCTIONS</strong></td>
<td></td>
</tr>
<tr>
<td>SMOKE OR FUMES</td>
<td>E-12</td>
</tr>
<tr>
<td>FOG</td>
<td>E-12</td>
</tr>
<tr>
<td>PNEUMATIC PRESSURE LOW</td>
<td>E-23</td>
</tr>
<tr>
<td>LOSS OF CABIN PRESSURE</td>
<td>E-23</td>
</tr>
<tr>
<td>CABIN PRESSURE LOW</td>
<td>E-23</td>
</tr>
<tr>
<td>OXYGEN DEPLETED</td>
<td>E-21</td>
</tr>
<tr>
<td>HYPOXIA SYMPTOMS</td>
<td>E-23</td>
</tr>
<tr>
<td>OXYGEN LOW</td>
<td>E-24</td>
</tr>
<tr>
<td>SUSPECTED PERSONAL LEADS OR</td>
<td></td>
</tr>
<tr>
<td>SHIP-TO-KIT DISCONNECT SEPARATION</td>
<td>E-24</td>
</tr>
<tr>
<td>ELECTRONIC COOLING</td>
<td>E-25</td>
</tr>
<tr>
<td>REFRIGERATION UNIT FAILURE</td>
<td>E-25</td>
</tr>
<tr>
<td><strong>ARMAMENT SYSTEM MALFUNCTIONS</strong></td>
<td></td>
</tr>
<tr>
<td>ARMAMENT JETTISON</td>
<td>E-17</td>
</tr>
<tr>
<td>MISSILE DISPLACED (DOORS CLOSED)</td>
<td>E-28</td>
</tr>
<tr>
<td>MISSILE DISPLACED (LAUNCHERS EXTENDED)</td>
<td>E-29</td>
</tr>
<tr>
<td>MISFIRE</td>
<td>E-29</td>
</tr>
<tr>
<td><strong>MISCELLANEOUS</strong></td>
<td></td>
</tr>
<tr>
<td>CONTROL LOSS</td>
<td>E-13</td>
</tr>
<tr>
<td>NEGATIVE STALL/INVERTED SPIN RECOVERY</td>
<td>E-13</td>
</tr>
<tr>
<td>CRACKED WINDSHIELD</td>
<td>E-22</td>
</tr>
<tr>
<td>CANOPY UNLOCKED</td>
<td>E-22</td>
</tr>
<tr>
<td>LOSS OF CANOPY IN FLIGHT</td>
<td>E-22</td>
</tr>
<tr>
<td>THROTTLE HANGUP</td>
<td>E-26</td>
</tr>
</tbody>
</table>
BEFORE EJECTION
(IF TIME AND CONDITIONS PERMIT)

1. Inform other pilot of ejection necessity.
2. Aim airplane toward uninhabited area.
3. Give location to nearest radio facility & select IFF EMER, Mode 3/A.
4. Stow all loose equipment. (FP-RP)
5. Actuate bailout bottle (if applicable). (FP-RP)
6. Cabin air — RAM.
8. Airplane — Trim for level flight.
9. Throttle — OFF; reduce speed.
10. Sit erect, elbows tightly against body while grasping the ejection seat handgrips. Head firmly against headrest, chin tucked in.

EJECTION

1. ORDER CREWMEMBER TO EJECT.
   a. Bailout warning switch — ON (if necessary).

2. EJECTION SEAT HANDGRIPS — RAISE.

   If canopy fails to jettison:
   1. Handgrips — Return to down position.
   2. Canopy jettison handle — Pull & raise.

   If canopy again fails to jettison:
   1. Canopy latch handle — Unlock.
   2. Canopy — Push open.
   3. Canopy switch — Open (if necessary).
   4. Ejection seat handgrips — Raise.
ENGINE MECHANICAL FAILURE DURING FLIGHT

1. Throttle — OFF.
2. Airspeed — 250 KCAS (gear up, speed brakes closed).
3. RAT — Extend (if necessary).
4. Fuel shutoff and boost pump switches — OFF.

EXHAUST GAS OVERTEMPERATURE WARNING LIGHT ILLUMINATED

1. Thrust — Reduce (when practical).
2. If the light extinguishes:
   a. Continue the mission and monitor EGT and other engine instruments.
3. If the light stays on:
   a. Monitor EGT and other engine instruments. If EGT remains above 635°C and/or the other engine instruments indicate a malfunction, land as soon as practicable.

ENGINE FIRE — STEADY OR FLASHING WARNING LIGHT

1. THROTTLE — MINIMUM PRACTICABLE THRUST.

If fire is confirmed:

2. THROTTLE — OFF.
3. FUEL SHUTOFF SWITCHES — CLOSE.
4. IF FIRE CONTINUES — EJECT.
5. RAT — Extend (if necessary).
T.O. 1F-106A-1CL-1

AIRSTART

1. THROTTLE — INBOARD FROM AFTERBURNER.
2. FUEL CONTROL SWITCH — EMERGENCY.
3. IGNITION BUTTON DEPRESSED & THROTTLE — AS REQUIRED.
4. RPM — 60-80%, then release ignition button.

Immediate relight not obtained:

5. Throttle — OFF.
6. Fuel control switch — EMERGENCY.
7. All fuel switches — Check.
8. Airspeed — 250 KCAS.
9. Ignition button — Depress & hold.
10. Throttle — START, OFF, then IDLE.
11. RPM — 60-80%, then release ignition button.
12. RAT — Extend (if necessary).

ELECTRICAL FIRE

1. MA-1 — EMER.
2. If fire continues, generator — OFF.
3. If fire persists, master electrical power — OFF.
4. If fire continues — Eject.
5. Land as soon as practicable if fire subsides.

AFTERBURNER FAILURE

1. Throttle — Inboard.
2. Wait five seconds.
3. Throttle — AFTERBURNER (if desired).
4. No A/B light in 5 sec, throttle — Inboard.

E-11 Change 1
SMOKE OR FUMES

1. Cabin air — RAM (below 25,000).
   Cabin air — OFF (above 25,000).
2. Start descent to 25,000 or below (if practicable).
3. MA-1 — EMER.
4. Cabin temperature control knob — MAN COLD.
5. When smoke or fumes are eliminated, cabin air — PRESS.
6. MA-1 — ON (if not cause of smoke or fumes).

FOG

1. Cabin air — RAM.
2. Cabin air — PRESS, when cockpit clears.
3. Cabin temperature — HOT.

Reflects T.O. 1F-106A-1S-191

Change 2 E-12
CONTROL LOSS
(POST STALL GYRATION AND SPIN RECOVERY)

At the first sign of a control loss, neutralize the ailerons and unload the airplane to approximately zero G. If the airplane does not recover:

1. CONTROL STICK – CENTER FORWARD OF NEUTRAL.
2. EMERGENCY DIRECT MANUAL BUTTON – DEPRESS.
3. THROTTLE – IDLE.

If a spin develops:

4. HOLD FULL AILERON IN THE DIRECTION OF SPIN ROTATION MAINTAINING FORWARD STICK UNTIL SPIN IS BROKEN OR EJECTION ALTITUDE IS REACHED.

When the spin is broken:

5. NEUTRALIZE AILERONS – MAINTAIN DIVE ATTITUDE UNTIL AIRSPEED REACHES 140 KCAS.

NEGATIVE STALL/INVERTED SPIN RECOVERY PROCEDURES

1. NEUTRALIZE CONTROLS.
2. ALLOW AIRSPEED TO BUILD TO 140 KCAS OR ABOVE.
3. IF REQUIRED, ROLL UPRIGHT USING RUDDER ONLY.
OIL QUANTITY LOW

1. Follow Oil-Pressure-Low Warning Light Illuminated Procedure.

OIL-PRESSURE-LOW WARNING LIGHT ILLUMINATED

1. Thrust — Minimum required for flight.
2. Airspeed — Below RAT max extend speed.
3. Tanks — Jettison, (if necessary).
4. G forces — Minimize.
5. If engine vibrations become excessive, shut down engine.
6. Land as soon as possible; use flameout landing pattern if practicable and minimum thrust.

ENGINE FUEL CONTROL FAILURE

1. Throttle — As required.
2. Fuel control switch — EMER.
3. Control engine speed as necessary.
4. Land as soon as possible.

VARIABLE RAMP FAILURE

1. Speed — Decrease to less than Mach 1.1 (or 500 KCAS), and IDLE RPM below 25,000 ft.
2. Variable ramps — EMER OPEN (retracted).
3. Check other systems for failure.
5. Land as soon as practicable, maintaining a minimum of 200 KCAS until starting flare.
MALFUNCTIONING VENT/ANTI-G VALVE

1. Fuselage tank emergency pressure switch — Check OFF.
2. Fuselage tank switch — OFF.
3. Land as soon as possible.
COMPLETE FUEL BOOST PUMP FAILURE

1. ATG switch — Check AUTO.
2. Operate in a nose-high attitude.
3. Avoid negative G maneuvers.
4. Avoid uncoordinated maneuvers.
5. Avoid rapid decelerations.
7. When asymmetrical fuel feeding occurs, close fuel shutoff valve on low side when fuel quantity on that side reaches approximately 200 pounds.
8. Land as soon as practicable.

FUEL BOOST PRESSURE-LOW WARNING LIGHT ILLUMINATED: “FUEL BOOST PRESS L OR R”

1. Fuel quantities — Monitor.
2. If fuel flow is symmetrical, assure an erroneous warning indication.
3. Asymmetrical fuel flow — Confirms boost pump failure on one side.
4. Land as soon as possible — Use fuel from side with operating pumps.
5. If sufficient fuel not available — All boost pumps OFF; use FUEL BOOST PUMP FAILURE procedures.

WING TANK PRESSURIZATION FAILURE

1. Land as soon as practicable.
2. On the side of the illuminated warning light, depend on No. 3 wing tank fuel only.
3. Monitor fuel quantity in each wing.
FUEL IMBALANCE

1. Fuel quantity - Check.
2. Boost pumps - OFF (on the side with lowest fuel).
3. Boost pumps - ON (on side with highest fuel).
   If high side is required for safe recovery:
   a. Boost pump switches - OFF (on side with highest fuel).
   b. Boost pump switches - ON (on side with lowest fuel).
   c. High side fuel shutoff switch - CLOSE.
   d. After five seconds, high side fuel shutoff switch - OPEN.
   e. All boost pumps - ON.
   f. Monitor fuel on high side.
   g. If high side fuel does not feed, depend on low side wing and fuselage tank fuel only. Land as soon as practicable.
   h. If high side feeds, balance fuel as necessary with boost pumps.

5. When fuel quantities are balanced or fuel quantity-low warning light on high side illuminates, all boost pumps - ON.

FUSELAGE TANK PRESSURIZATION FAILURE

1. Airplanes with F tank emergency pressure switch:
   a. F tank switch - Check OPEN.
   b. If F tank does not feed, T tank switch - CLOSE.
   c. F tank emer pressure switch - ON.
2. Airplanes with F tank emer boost pump switch:
   a. F tank switch — Check OPEN.
   b. If F tank does not feed, T tank switch — CLOSE.
   c. F tank shutoff switch — CLOSE.
   d. F tank emer boost pump switch — ON.
3. Apply positive and negative G’s to the airplane.
4. If F tank still does not feed:
   a. T tank switch — OPEN.
   b. F tank emer boost pump/press switch — OFF.
   c. F tank switch — OPEN.
   d. CG switch — TEST and hold.
5. If F tank fails to feed, remaining fuel available is:
   a. No. 3 tanks.
   b. Wing and T tanks.
1. Check fuel control panel: determine closed valve.
2. Check for asymmetrical fuel feeding.
3. Land as soon as possible.
4. If fuel on closed valve side is not feeding and required for safe recovery:
   a. Boost pumps (for side with valve indicating closed) - OFF.
   b. Fuel shutoff switch (for valve indicating closed) - CLOSE.
   c. After five seconds, fuel shutoff switch - OPEN.
   d. If light does not go out, depend on the other wing and fuselage tank fuel only.
   e. If the light goes out, turn on all boost pumps, monitor fuel to insure the affected wing is feeding and balance fuel as necessary with boost pumps.
FUEL QUANTITY-LOW WARNING LIGHT ILLUMINATED

1. Check for asymmetrical fuel.
2. Land as soon as possible.

FLIGHT WITH LOW FUEL QUANTITY

1. Avoid prolonged turns, decelerations or negative G maneuvers and maintain nose high attitude.
2. Land ASAP from straight-in approach.

ARMAMENT JETTISON

1. Armament selector switch — SALVO.
2. Arm-safe switch — ARM.
3. S.W. release lock switch — UNLOCK.
4. S.W. release lock indicator — “UNLOCK.”
5. Armament trigger — Press to second detent.
COMPLETE ELECTRICAL FAILURE EXCEPT BATTERY

The following are either independent of electrical power, or require battery power only and will continue to function with complete generator failure:

1. All airplanes:
   a. Armament salvo.
   b. Cabin pressure altitude gage.
   c. Canopy jettison.
   d. Drag chute.
   e. Emergency fuel transfer.
   f. Exhaust gas temperature gage.
   g. Landing gear and tailhook down warning lights.
   i. Speed brakes.
   j. Standby magnetic compass.
   k. Surface trim.
   l. Tachometer.
   m. Turn-and-slip indicator.
   n. Variable ramp emergency retraction.

2. Conventional instrument display only:
   a. Accelerometer.
   b. Airspeed indicator.
   c. Altimeter.
   d. Vertical velocity indicator.

3. Integrated flight instrument system only:
   a. Standby airspeed indicator.
   b. Standby altimeter.
COMPLETE ELECTRICAL POWER FAILURE

1. Important system losses:
   a. Emergency drag chute.
   b. Tailhook.
   c. Interphone and bailout warning.
   d. Exhaust gas temperature gage.
   e. Standby attitude indicator.
   f. Normal landing gear extension.

The following instruments will continue to function:

1. Conventional instrument display:
   a. Airspeed phase, airspeed-angle of attack ind.
   b. Cabin pressure altitude gage.
   c. Accelerometer.
   d. Tachometer.
   e. Vertical velocity indicator.
   f. Altimeter.
   g. Standby magnetic compass.

2. Integrated flight instrument system:
   a. Tachometer.
   b. Standby altimeter.
   c. Standby airspeed indicator.
   d. Standby magnetic compass.
   e. Cabin altitude marker.
AC POWER FAILURE WARNING LIGHT ILLUMINATED

1. Fuel boost — Check (lights not illuminated).
2. Throttle — 83% minimum.
3. Altitude — 35,000 feet or below.
4. Generator — OFF, then ON.
5. Cabin temperature — HOT.
6. Rain removal — ON (if subsonic).
7. If warning light remains on:
   a. Generator — OFF.
   b. Land as soon as practicable.
8. Important system losses:
   a. Automatic vari-ramp control.
   b. Windshield & canopy anti-icing.
   c. Pitch & yaw dampers.
   d. Fuel in ext tanks.
   e. If ATG is inoperative:
      (1) Fuel boost pumps.
      (2) Pitot heat. (Nose Boom).
      (3) TACAN and ILS.
   f. If emerg AC generator is inoperative:
      (1) Engine instruments except tach.
      (2) Attitude indicators and integrated instruments.
      (3) Fuel quantity indication.
      (4) Cockpit lighting.
      (5) UHF.
      (6) ADF.
      (7) IFF.
   *(8). Turn and slip indicator.
9. Land as soon as practicable.

CADC FAILURE WARNING LIGHT ILLUMINATED

1. Refer to standby altimeter and airspeed indicators.
2. Altimeter — STBY (conventional instrument display).

*After T.O. 1F-106A-1157.
T.O. 1F-106A-1CL-1

DC POWER FAILURE WARNING LIGHT ILLUMINATED

Reduce electrical load since the battery will be the only power source for the DC essential bus.

1. Important system losses:
   a. Automatic vari-ramp control.
   b. Automatic cg fuel transfer.
   c. F tank emer boost pump control.
   d. Taxi and landing lights.
   e. Anticollision lights.
   f. Pitch & yaw dampers.
   g. Automatic ice detector.
   h. Fuel in external tanks.
   i. MA-1 system.

WINDSHIELD HEATING FAILURE

1. If windshield is heated & ac failure is noted:
   a. Rain removal — ON (if subsonic).
2. If failure is not noted until condensation forms:
   a. Rain removal — ON (if subsonic).
   b. Cabin temperature — HOT.
CRACKED WINDSHIELD

Outer Layer Crack
1. Windshield anti-icing, antifog switch — OFF (side corresponding to cracked panel).
2. Ascertain that only the outer layer has cracked.
3. Land as soon as practicable.

Inner Layer Crack
1. HELMET VISOR(S) — DOWN. (FP-RP).
2. CABIN AIR — RAM.
3. Windshield anti-icing, antifog switch — OFF (side corresponding to cracked panel).
5. Descend, and land as soon as practicable.

CANOPY UNLOCKED WARNING LIGHT ILLUMINATED

1. Canopy latch handle — Push forward (if LOCKED & latches are engaged).
2. If warning light stays on, handle is not in apparent locked position, or canopy latches are not engaged:
   a. Airspeed — Reduce to 230 KCAS.
   b. Cabin air — OFF.
   c. Land as soon as practicable.

LOSS OF CANOPY IN FLIGHT

1. Airspeed — Reduce to 230 KCAS.
2. Check for physical damage and minimum control speed.
3. Land as soon as practicable.
T.O. 1F-106A-1CL-1

PNEUMATIC PRESSURE-LOW WARNING LIGHT ILLUMINATED

1. Do not recycle the armament system.
2. Use rudder control with caution.
4. There is a possibility of loss of one or both brakes.

LOSS OF CABIN PRESSURE

1. Refrigeration unit switch — ON.
2. Cabin air — PRESS.
3. If cabin altitude is higher than actual altitude:
   a. Cabin air — OFF.
   b. Airspeed — Reduce.
4. MA-1 — EMER and descend to 24,000 feet.
5. If cockpit becomes contaminated or depressurization occurs:
   a. Oxygen mask connections — Check. (FP-RP)
   b. Cabin air — RAM.

CABIN PRESSURE-LOW WARNING LIGHT ILLUMINATED

1. Descend to 24,000 ft. cabin altitude, if practicable.
2. Land as soon as practicable.

OXYGEN SYSTEM DEPLETED OR CONTAMINATED

1. Emer oxygen manual release — Pull.
2. Oxygen supply — OFF.
3. Descend to a cockpit altitude below 10,000 feet within 10 minutes.

HYPOXIA SYMPTOMS

1. Check hose connections.
2. Oxygen supply — Check ON.
OXYGEN-LOW WARNING LIGHT ILLUMINATED

1. Descend to altitude where oxygen is not required.
2. Actuate emergency bailout bottle, if necessary.

SUSPECTED PERSONAL LEADS OR SHIP-TO-KIT DISCONNECT SEPARATION

1. Oxygen supply lever — OFF.
2. If breathing is normal with the supply lever on, but impossible with it off: Oxygen supply lever — ON.
3. If normal pressure breathing continues or if breathing is difficult, but in either case is unaffected by the position of the oxygen supply lever:
   a. Oxygen supply lever — OFF.
   b. Descend below 10,000 ft. cabin altitude immediately.

ENGINE COMPARTMENT OVERPRESSURE WARNING LIGHT ILLUMINATED

1. Airspeed — Below Mach 1.0 as soon as practicable.
ENGINE ANTI-ICE WARNING LIGHT ILLUMINATED

1. Surface and engine anti-icing switch — MAN ON.

ELECTRONIC COOLING WARNING LIGHT ILLUMINATED

Ground Operation

1. Cabin air — OFF.
2. RPM — Increase.

Flight Operation

1. Throttle — Advance (if possible).
2. Flight conditions — Change (if possible).
3. Cabin temperature — Increase.
4. Cabin air — OFF or RAM.
5. If light does not go out within 10 minutes, follow procedures for REFRIGERATION UNIT FAILURE.

REFRIGERATION UNIT FAILURE

1. Refrigeration unit switch — OFF.
2. MA-1 — EMER.
3. Airspeed — 250 KCAS.
4. Land as soon as practicable.
5. MA-1 — OFF (after landing).
THROTTLE HANGUP

1. Retain tanks and burn off excess fuel.
2. Test fuel shutoff valve warning lights.
3. Slow to below max gear lowering speed.
4. Descend to pattern altitude, fly straight-in approach.
5. At 1 to 2 miles from runway, move boost switches to OFF and close fuel shutoff switch on one side. Check fuel warning light on.
6. When landing assured, close remaining fuel shutoff switch. Check fuel warning light on.
7. Execute touchdown and landing.

HYDRAULIC PRESSURE-LOW WARNING LIGHT ILLUMINATED (FLASHING)

1. Airspeed — Below RAT max extend speed.
2. Hydraulic pressure — Check.

Failure of Primary Hydraulic System

1. Avoid violent maneuvers, dives, and unnecessary use of speed brakes.
2. Land as soon as practicable.
   a. Gear — DOWN (normal extension).
   b. RAT — Extend.

Failure of Secondary Hydraulic System

1. Flight mode selector switch — YAW.
2. Avoid violent maneuvers, dives, and speed brake use.
3. Land as soon as practicable.
   a. Gear — Emergency extend.
   b. Gear handle — DOWN.
   c. Drag chute handle — Emergency deploy (on landing).
FLIGHT CONTROL SYSTEM OSCILLATIONS AND/OR HYDRAULIC FLUID OVERHEAT WARNING LIGHT ILLUMINATED

1. REDUCE AIRSPEED TO 230 KCAS.
2. EMERGENCY DIRECT MANUAL BUTTON – DEPRESS.
3. FLIGHT MODE SELECTOR SWITCH – DIR MAN.
4. If uncontrollable maneuvers are encountered:
   a. GENERATOR SWITCH – OFF.
   b. IF CONTROL IS NOT REGAINED, MASTER SWITCH – OFF, CONDITIONS PERMITTING.
   c. Maintain control by overcoming stick forces.
   d. If control cannot be regained – EJECT.
   e. If control is regained land as soon as practicable. See Complete Electrical Failure, this section.
5. If oscillations are encountered, use pitch or yaw modes as required.
6. If oscillations persist or increase:
   a. Generator switch – OFF.
   b. If oscillations continue, master switch – OFF.
   c. If oscillations continue, master switch – ON.
   d. Maintain safe altitude.
   e. When oscillations reduce to a safe minimum, land as soon as practicable.
   f. If airplane becomes uncontrollable – EJECT.
7. During low fuel state keep nose level attitude.
8. Maintain altitude to evaluate nature of overheat.
HYDRAULIC PRESSURE-LOW WARNING LIGHT ILLUMINATED: "HYD FAIL" (STEADY)

1. RAT — EXTEND.
2. IF FLIGHT CONTROL OPERATION IS NOT POSSIBLE — EJECT.
3. Check flight control operation by:
   a. Moving the control stick and checking control response.
   b. Checking primary hydraulic pressure gage (if ac power is available).
   c. Flashing hyd press-low warning light indicates RAT is pressurizing primary system.
4. If pressure is available for flight control operation:
   a. Avoid violent maneuvers and use of speed brakes.
   b. Extend landing gear by emergency system.
5. Land as soon as practicable.

ARTIFICIAL FEEL SYSTEM INOPERATIVE

1. Airspeed — Reduce to 230 KCAS.
2. Use minimum control stick movement.
3. Flight mode selector switch — DIR MAN.

MISSILE DISPLACED WARNING LIGHT ILLUMINATED WITH MISSILE BAY DOORS CLOSED

1. If the missile displaced warning light illuminates in flight and the doors are known to be closed, the aircraft should be landed without further armament operation.

Reflects T.O. 1F-106A-1S-196
MISSILE DISPLACED WARNING LIGHT ILLUMINATED WITH LAUNCHERS EXTENDED

1. If clean configuration is not mandatory:
   a. Fuel consumption — Monitor for range considerations.
   b. Land as soon as practicable with launchers extended.
2. If clean configuration is mandatory:
   a. Auto search button — Press to break lockon.
   b. 75 seconds — Wait.
   c. Arm-safe switch — SAFE.
   d. Armament selector switch — VIS IDENT.
   e. Missile bay doors close button — Press and hold until door open warning light extinguishes.

MISFIRE OR DOOR OPEN WARNING LIGHT ILLUMINATED

2. Auto search button — Press to break location.
3. Special weapon release lock switch — LOCK.
4. Special weapon release lock indicator — LOCK or striped.
5. Missile displaced warning light — Check not illuminated.
6. 75 seconds — Wait (if missiles are aboard).
7. Arm-safe switch — SAFE.
8. Armament selector switch — VIS IDENT.
9. Missile bay doors close button — Press and hold until misfire and door open warning lights extinguish.

E-29/(E-30 Blank)
LANDING

TABLE OF CONTENTS

RUNWAY APPROACH END ARRESTMENT .... E-32
DITCHING ........................................ E-32
FLAMEOUT LANDING .............................. E-33
LANDING GEAR EMERGENCY EXTENSION ... E-33
LANDING GEAR WARNING LIGHT ON
LANDING GEAR EXTENSION ................. E-33
PARTIAL GEAR LANDING ....................... E-34
BELLY LANDING ................................. E-34
LANDING WITH FUEL IMBALANCE .......... E-35

E-31
LANDING
RUNWAY APPROACH END ARRESTMENT
(BAK-9, BAK-12)


   NOTE: Based on engaging the barrier at recommended touchdown speed with armament in, maximum fuel onboard should be:

<table>
<thead>
<tr>
<th>CONFIGURATION</th>
<th>BAK-9</th>
<th>BAK-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIR-2A</td>
<td>11,000 lbs</td>
<td>9,000 lbs</td>
</tr>
<tr>
<td>M61A1</td>
<td>10,300 lbs</td>
<td>8,300 lbs</td>
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<tr>
<td></td>
<td>9,000 lbs</td>
<td>7,200 lbs</td>
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</tbody>
</table>

2. Use airborne procedures for respective conditions.
3. Tailhook down button — Depress.
4. Shoulder harness — MANUAL LOCK. (FP-RP)
5. Drag chute — Deploy.
7. Avoid brake use just prior to engagement.
8. Throttle — IDLE or OFF.
9. Fuel switches — CLOSE.
10. Master electrical power — OFF (if required).

APPROACH END ENGAGEMENT
OPTION CHART

<table>
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<tr>
<th>SITUATION</th>
<th>OPTION</th>
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</thead>
<tbody>
<tr>
<td>Both main down</td>
<td>Do not engage</td>
</tr>
<tr>
<td>Nose up</td>
<td></td>
</tr>
<tr>
<td>One main down</td>
<td>Engage</td>
</tr>
<tr>
<td>Nose down</td>
<td>Engage</td>
</tr>
<tr>
<td>One main down</td>
<td>Engage</td>
</tr>
<tr>
<td>Nose up</td>
<td>Do not engage</td>
</tr>
<tr>
<td>All up</td>
<td>Do not engage</td>
</tr>
<tr>
<td>Both main up</td>
<td>Do not engage</td>
</tr>
<tr>
<td>Nose down</td>
<td></td>
</tr>
</tbody>
</table>
DITCHING

1. Tanks — Jettison.
2. Normal approach with speed brakes out.
3. Shoulder harness — MANUAL LOCKED. (FP-RP)
4. Immediately before touchdown:
   a. Throttle — OFF.
   b. Fuel switches — CLOSE.
   c. Master electrical power — OFF.
   d. Canopy — Jettison.
   e. Drag chute — Emergency deploy.
5. Abandon the airplane when forward motion stops.
FLAMEOUT LANDING (ALL GROSS WEIGHTS)

1. RAT — Extend.
2. High key: Speed — 250 KCAS.
   Altitude — 12,000 ft, minimum.
   Gear — Emer extend.
3. Reduce speed — 230 KCAS minimum.
4. Shoulder harness — LOCK. (FP-RP)
5. Low key: SPEED — 230 KCAS minimum.
   Altitude — ½ high-key alt.
   Throttle — OFF.
   Fuel switches — OFF.
   Master switch — OFF.
7. Touchdown: Speed — 155-175 KCAS (175 KCAS with frozen engine).
   Drag chute — Emer deploy
   Brakes — Apply as required.

LANDING GEAR EMERGENCY EXTENSION

1. Speed — Below landing gear emergency extend speed.
2. Gear — Emergency extend.
3. Gear handle — DOWN.
4. Gear — Check down and locked.
5. Landing or taxi lights — ON.

LANDING GEAR WARNING LIGHT REMAINS ILLUMINATED ON LANDING GEAR EXTENSION

Recycle. If no safe indication, recycle in zero-G flight. If no safe indication, USE LANDING GEAR EMERGENCY EXTENSION procedure.
PARTIAL GEAR LANDING

1. Tanks — Jettison (if required).
2. Normal approach & landing with speed brakes out.
3. Shoulder harness — MANUAL LOCKED. (FP-RP)
4. Immediately before touchdown:
   a. Throttle — OFF.
   b. Fuel switches — CLOSE.
   c. Master electrical power — OFF.
   d. Canopy — Retain.
5. After touchdown:
   b. Hold faulty gear off the ground.
   c. Braking — As required.
6. Abandon the airplane when it stops.

BELLY LANDING

1. Tanks — Jettison (if required).
2. Normal approach.
3. Speed brakes — Open.
4. Shoulder harness — LOCKED. (FP-RP)
5. Immediately before touchdown:
   a. Throttle — OFF.
   b. Fuel switches — CLOSE.
   c. Canopy — Retain.
6. Touchdown attitude — Normal.
8. Master electrical power — OFF.
T.O. 1F-106A-1CL-1

LANDING WITH FUEL IMBALANCE

If a fuel imbalance is noted during flight, the following should be accomplished prior to landing to insure adequate aircraft control.

1. Fuel imbalance — Determine amount and heavy wing.
2. Crosswind component — Determine for landing runway.
3. Appropriate minimum control speed — Select from following table.
4. Using minimum control speed as minimum touchdown speed, add 20 knots for prior to flare speed and 30 knots for final approach speed.
5. Land from a straight-in approach if final approach speed must be increased.

<table>
<thead>
<tr>
<th>Fuel Imbalance* (Pounds)</th>
<th>Minimum Control Speed (KCAS)</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean</td>
<td>360 Gal. Ext Tanks</td>
<td>Crosswind 0 Kt</td>
<td>Crosswind (Kt)</td>
</tr>
<tr>
<td>2500</td>
<td>-</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>3000</td>
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<tr>
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<td>186</td>
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</tr>
<tr>
<td>- 5500</td>
<td>185</td>
<td>193</td>
<td>200</td>
</tr>
</tbody>
</table>

*For a fuel imbalance less than the amount shown, use the touchdown speeds recommended for the total fuel on board.
## F-106A AND F-106B ABBREVIATED CHECKLIST
(NORMAL PROCEDURES)

### TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>PREFLIGHT CHECKS</td>
<td>N-2</td>
</tr>
<tr>
<td>BEFORE EXTERIOR INSPECTION</td>
<td>N-2</td>
</tr>
<tr>
<td>AFT COCKPIT (SOLO FLIGHTS)</td>
<td>N-4</td>
</tr>
<tr>
<td>EXTERIOR INSPECTION</td>
<td>N-4</td>
</tr>
<tr>
<td>INTERIOR INSPECTION</td>
<td>N-9</td>
</tr>
<tr>
<td>BEFORE STARTING ENGINE</td>
<td>N-13</td>
</tr>
<tr>
<td>STARTING ENGINE</td>
<td>N-13</td>
</tr>
<tr>
<td>BEFORE TAXIING</td>
<td>N-15</td>
</tr>
<tr>
<td>TAXIING</td>
<td>N-19</td>
</tr>
<tr>
<td>BEFORE TAKEOFF</td>
<td>N-19</td>
</tr>
<tr>
<td>TAKEOFF</td>
<td>N-20</td>
</tr>
<tr>
<td>AFTER TAKEOFF — CLIMB</td>
<td>N-21</td>
</tr>
<tr>
<td>CLIMB</td>
<td>N-21</td>
</tr>
<tr>
<td>NAVIGATION</td>
<td>N-22</td>
</tr>
<tr>
<td>WEAPON DELIVERY</td>
<td>N-23</td>
</tr>
<tr>
<td>RECOVERY (RTB)</td>
<td>N-31</td>
</tr>
<tr>
<td>DESCENT</td>
<td>N-31</td>
</tr>
<tr>
<td>BEFORE LANDING</td>
<td>N-32</td>
</tr>
<tr>
<td>LANDING</td>
<td>N-32</td>
</tr>
<tr>
<td>GO-AROUND</td>
<td>N-32</td>
</tr>
<tr>
<td>AFTER LANDING — CLEAR OF RUNWAY</td>
<td>N-32</td>
</tr>
<tr>
<td>ENGINE SHUTDOWN</td>
<td>N-33</td>
</tr>
<tr>
<td>BEFORE LEAVING AIRPLANE</td>
<td>N-34</td>
</tr>
<tr>
<td>STRANGE FIELD PROCEDURES</td>
<td>N-34</td>
</tr>
</tbody>
</table>
PREFLIGHT CHECKS
BEFORE EXTERIOR INSPECTION

1. Form 781 — Check.
2. External power — OFF.
3. Canopy support(s) — In place.
5. Ejection seat ground safety pin — Installed.
   (FP-RP)
6. Handgrip down lock cable — Check ball secure.
7. Canopy jettison handle — Down. (FP-RP)
8. Seat arming lanyard — Secured. (FP-RP)
10. Ejection seat disconnects and hoses — Check.
    (FP-RP)
11. Canopy support — Check for security (if installed).
12. Canopy, survival kit & seat maintenance pins — Removed. (FP-RP)
13. Survival kit mode selector lever — AUTOMATIC.
14. Survival kit beacon switch — AUTOMATIC (red dot showing).
15. Canopy breaker tool — Check for security.
16. Inertial reel cable & survival kit lanyard — Secure.
17. Safety belt connectors — Secure.
18. Oxygen bail out bottle — 1800 psi min at 70°F. (FP-RP)
19. Parachute — Install in airplane. (FP-RP)
   a. Parachute — Place in seat.
   b. Parachute firing lanyard — Install
      (1) Plug — Remove.
      (2) Safety pin — Remove and stow.
      (3) Lanyard — Insert terminal in actuator assembly.
   c. Survival kit — Attach harness release assemblies to parachute.
19. MA-1 — OFF.
20. RAT handle — UP.
21. Throttle — OFF.
22. Armament selector switch — VIS IDENT
    (safetied and sealed if primary armament aboard).
23. Arm-safe switch — SAFE (safetied if armament aboard).
24. S.W. release lock switch — LOCK (safetied and
    sealed if primary armament aboard).
25. S.W. release lock indicator — Striped.
26. Master switch — ON; Battery — Check.
27. AIR-2A Arm/Safe/Monitor power circuit
    breaker — Open.
28. Master electrical power — OFF.
29. Deleted.
31. Emergency landing gear extension handle — In
    and secured.
32. All fuses — In. (FP-RP)
33. Slipway door — Closed (if installed).
AFT COCKPIT (SOLO FLIGHTS)

Inspect aft seat, consoles, and instrument panel before entering forward seat.

1. Ejection seat ground safety pin — Installed.
2. Seat handgrip down lock cable — Check ball secure.
4. Ejection seat disconnects & hoses — Check.
5. Canopy & seat maintenance pins — Removed.
6. Survival kit — Remove or secure.
7. Personal leads & all loose items — Stow.
9. Fuel shutoff — NORMAL.
10. Variable ramp — AUTO.
11. Fuel control — NORM.
12. Throttle — OFF.
13. Oxygen — OFF.
14. Master electrical power — ON.
15. Gear handle — DOWN.
16. Gear emergency extension handle — In & secure.
17. Flight mode selector — DIR MAN.
18. Drag chute handle — In.
19. TSD light intensity rheostat — OFF.
20. TSD mode selector — MAN.
22. Fuse panel — Check.
23. UHF — OFF.

EXTERIOR INSPECTION

A. FORWARD LEFT SIDE.

1. Canopy access door — Secured.
2. Aircraft placarding — Check armament status.
T.O. 1F-106A-1CL-1

4. Oxygen access door — Secured.
5. Nose wheel well door hinges — Check.
6. Forward electronics bay door — Secured.
7. Transducer vane — Condition, guard removed, free, & full up.

B. NOSE

1. Radome — Condition & secure.

C. FORWARD RIGHT SIDE

1. Forward electronics bay door — Secured.
2. Static ports — Clear.
3. Direction finder antenna — Secured.

D. NOSE WHEEL WELL

1. Taxi light — Condition & security.
2. Nose gear door seal — Condition.
3. Control outflow valve — FLIGHT (safetied).
4. Wheel brake reservoirs — Checked (some airplanes).
5. Deleted.
6. Battery and battery charger — Secured.
7. IR circuit breakers — IN.
8. Fuses and circuit breaker — Check.
10. Nose wheel steering unit ground pin — Removed.
12. Strut extension — 4-5 inches.
13. Tires — Check.
E. RIGHT SIDE
1. Temperature probe — Condition & clear.
2. Lower aft electronics bay door — Secured.
3. Lower mid-electronics bay door — Secured.
4. Missile bay door — Secured.
5. Upper aft electronics bay door — Secured.
6. Air-conditioning compartment access door — Secured.
9. Intake duct — Condition & loose articles.
10. Fuel filler cap & access door — Secured.

F. HYDRAULIC COMPARTMENT
1. RAT door — Check pressure relieved.
2. RAT — Condition & turns freely.
3. Primary & secondary hyd accumulator — 750 psi.
4. Hydraulic fluid levels — Not lower than ¾ inch below temperature mark.
5. Reservoir pressure — Check approx 55 psi.
6. Reservoir shutoff — Open & pin installed.
7. Lower anticollision light — Condition.

G. RIGHT MAIN WHEEL WELL
2. Refuel selector valve — Horizontal.
3. Armament control panel — Check.
4. Armament lock valve — FLIGHT.
5. Hydraulic & fuel lines — Check.
6. Fuses — Check.
7. Starter ignition disarm — ON.
8. Deleted.
9. Ignition disconnect — ARM.
10. Brake & hydraulic lines — Check.
11. Strut extension — 5-6 inches.
12. Landing gear fairing, door, & light — Condition & security.
13. Tire & chocks — Check.

**H. RIGHT ENGINE ACCESS COMPARTMENT**

1. Magnetron hydraulic system accumulator — 1200 to 1500 psi.
2. Magnetron hydraulic system quantity gage — Full for specified level.
3. Fuel shutoff valve — FULLY OPEN.

**I. RIGHT WING**


1A. AIS POD — Check for security (if installed).

3. Wing condition, & position lights — Check.
4. Elevon actuator fairing — No hydraulic leaks.
5. Trailing edge & elevon — Condition.

**J. TAIL SECTION**

1. Ram air “q” intake covers — Removed.
2. Rudder & position light — Condition.
3. Speed brakes & drag chute — Check.
4. Tailpipe & exhaust nozzle — Check.
5. Tailhook — Check & remove pin.
6. Data link antenna — Check.

**K. LEFT WING**

1. Trailing edge & elevon — Condition.
2. Elevon actuator fairing — No hydraulic leaks.
3. Wing condition, & position lights — Check.
T.O. IF-106A-1CL-1

4. Oil cap access door — Secured.

II. LEFT ENGINE ACCESS COMPARTMENT

1. Hyd lines, fuel lines, & throttle linkage — Check.
3. Fuel shutoff valve — FULLY OPEN.

III. LEFT MAIN WHEEL WELL

2. External air — Connected.
4. Fuses — Check.
5. Hydraulic & fuel lines — Check.
7. Pneumatic pressure gage — 2000 to 3000 psi.
8. Missile bay doors — Manually opened (slow).
9. Missile bay — Check for armament.
10. General condition of rocket or gun — Check.
11. General condition of missiles — Check.
12. Missile bay doors — Closed.
13. Pneumatic system pressure — 3000 psi.
15. Brake & hydraulic lines — Check.
16. Strut extension — 5-6 inches.
17. Landing gear fairing, door, & light — Condition.
18. Tire & chocks — Check.
19. RAT door & test hook — Close & pull to check.

IV. LEFT SIDE

1. Missile bay door — Condition & secured.
2. Emergency canopy jettison access door — Secured.
5. Intake duct — Condition & loose articles.
6. Air-conditioning compartment access door — Secured.
7. Upper aft electronics bay door — Secured.

INTERIOR INSPECTION

NOTE: Items marked with the symbol ▲ preceding the step cannot be performed if making the interior inspection with battery power prior to battery start. These items (▲) should be checked after battery start. (Refer to INTERIOR INSPECTION AFTER BATTERY START, this section.)

GENERAL

1. Personal equip., belt, harness — Attach & adjust. (FP-RP)
1A. Canopy support — Remove
1B. Ladder — Remove (not cocking).
▲ 2. External power — Connected (if available).

LEFT-HAND CONSOLE

1. Cabin air handle — Adjust for vertical outlet. (FP-RP)
2. MA-1 test panel cover — Closed.
▲ 3. Intercom volume — As desired. (FP-RP)
▲ 4. Emergency slipway door open switch (if installed) — NORM (guard closed).
▲ 5. Refuel select switch (if installed) — ALL TANKS (guard closed).
T.O. 1F-106A-1CL-1

6. Air refuel switch (if installed) — OFF (guard closed).
7. Armament reset button — Depress, for 5 seconds.
8. Variable ramps — AUTO (guard closed). (FP-RP)
9. Fuses (LH panel) — Check.
9A. Fuel shutoff switches—OPEN. (T tank switch — CLOSED)
10. Fuel shutoff switches — OPEN.
11. Fuel shutoff switch — NORM. (RP)
12. Boost pump switches — Check, then ON.
13. F tank emer press or boost pump — OFF.
13A. External tank emergency switch — OFF
14. MA-1 — Recheck OFF.
16. SIF code — Set.
17. IFF control panel — Set (as required).
18. RAT handle — UP.
19. Fuel control — NORMAL. (FP-RP)
20. Throttle — OFF. (FP-RP)
22. UHF functional selector switch — BOTH.
23. UHF — Set. (FP-RP)
25. Armament selector switch — VIS IDENT (safetied and sealed if primary armament aboard).
26. Arm safe switch — SAFE (safetied and sealed if armament aboard).
27. S.W. release lock switch — LOCK (safetied and sealed if primary armament aboard).
28. S.W. release lock indicator — “LOCK” (if primary armament, ATR, or MSR is aboard).
29. Armament selection indicator — “NO.”
30. AIR-2A Arm/Safe/Monitor power circuit breaker — Open.
31. ILS channel — Set, minimum volume.
32. Cockpit no-fog & vent suit switch — As desired.
33. Landing & taxi lights — Check.
34. Reset/MBL switch (if installed) — NORM.
35. Bailout light switch — Check. (FP-RP)
36. CG control — AUTO.

N-10 Change 1 Reflects T.O. 1F-106A-1S-197
37. CG transfer test fail light — ON (full internal fuel); press-to-test (reduced internal fuel).
38. Idle thrust switch — OFF (if installed).
39. Master electrical power — Recheck OFF (if starting with external power).
40. Oxygen system — Check. (FP-RP)
41. Radar/IR control panel — Set.
42. Gear handle — DOWN. (FP-RP)
43. Landing gear emergency extension handle — In. (FP-RP)
44. Altitude Band Selector Switch — OFF.

INSTRUMENT PANEL

1. Flight mode selector switch — DIR MAN. (FP-RP)
2. Heading hold switch — OFF. (FP-RP)
3. Altitude hold switch — OFF. (FP-RP)
4. DISP/AUTO mode switch — ILS.
5. Clock — Set. (FP-RP)
6. TACAN range light — Push-to-test (if installed).
7. Drag chute handle — In. (FP-RP)
8. Gear position lights — On. (FP-RP)
9. Gear warning light — Out. (FP-RP)
10. External tank empty lights (if installed) — Check.
11. Computer mode indicator — Striped. (FP-RP)
12. Radar scope controls — Set.
13. Engine fire warning loops — Test.
16. Warning lights — On (canopy unlocked, master warning, hydraulic pressure-low). (FP-RP)
17. Engine instruments — Check. (FP-RP)
18. EGT power flag — Not displayed.
20. RDR/IR selector panel — Set.
21. Oil quantity gage — Indicating normally.
22. Bearing selector switch — NORM (if installed).
   (FP-RP)
23. Heading selector switch — NORMAL (if installed).
   (FP-RP)
24. TSD controls — As desired. (FP-RP).

RIGHT-HAND CONSOLE
1. Hydraulic pressure — Check.
2. Oil pressure — Check.
3. Refrigeration unit — ON.
4. Cabin air — OFF.
5. Deleted.
6. Deleted.
7. Generator switch — OFF.
8. TACAN function selector knob (if installed) — As desired.
9. TACAN mode selector switch (if installed) — As desired.
10. TACAN range selector switch (if installed) — As desired.
11. TACAN channel — Select.
12. TACAN volume — Minimum.
13. TACAN ECM indicator light — Out.
14. Homing point selector — NOT “A,” “T” or “U.”
15. Data link antenna — NORM.
16. Master warning lights — Check. (FP-RP)
17. ATG switch — OFF.
18. Canopy latch handle — Unlock (fully aft).
19. Map light — Check (if required).
*19A. Altitude warning selector — Set.
20. Windshield anti-icing, antifog switches — ON.
21. TACAN-cmd alt switch — As desired (if installed).
21A. TACAN bearing/ADF select switch - As desired (if installed).
22. Emer ac gen — NORMAL.
23. TACAN power switch — NORMAL (if installed).
24. Data link panel — Set.

N-12 Change 1  *After T.O. 1F-106-1158
Reflects T.O. 1F-106A-1S-198
37. CG transfer test fail light — ON (full internal fuel); press-to-test (reduced internal fuel).
38. Idle thrust switch — OFF (if installed).
39. Master electrical power — Recheck OFF (if starting with external power).
40. Oxygen system — Check. (FP-RP)
41. Radar/IR control panel — Set.
42. Gear handle — DOWN. (FP-RP)
43. Landing gear emergency extension handle — In. (FP-RP)
44. Altitude Band Selector Switch — OFF.

INSTRUMENT PANEL

1. Flight mode selector switch — DIR MAN. (FP-RP)
2. Heading hold switch — OFF. (FP-RP)
3. Altitude hold switch — OFF. (FP-RP)
4. DISP/AUTO mode switch — ILS.
5. Clock — Set. (FP-RP)
6. TACAN range light — Push-to-test (if installed).
7. Drag chute handle — In. (FP-RP)
8. Gear position lights — On. (FP-RP)
9. Gear warning light — Out. (FP-RP)
10. External tank empty lights (if installed) — Check.
11. Computer mode indicator — Striped. (FP-RP)
12. Radar scope controls — Set.
13. Engine fire warning loops — Test.
16. Warning lights — On (canopy unlocked, master warning, hydraulic pressure-low). (FP-RP)
17. Engine instruments — Check. (FP-RP)
18. EGT power flag — Not displayed.
20. RDR/IR selector panel — Set.
21. Oil quantity gage — Indicating normally.
22. Bearing selector switch — NORM (if installed).
   (FP-RP)
23. Heading selector switch — NORMAL (if installed).
   (FP-RP)
24. TSD controls — As desired. (FP-RP).

RIGHT-HAND CONSOLE

1. Hydraulic pressure — Check.
2. Oil pressure — Check.
3. Refrigeration unit — ON.
4. Cabin air — OFF.
5. Deleted.
6. Deleted.
7. Generator switch — OFF.
8. TACAN function selector knob (if installed) — As desired.
9. TACAN mode selector switch (if installed) — As desired.
10. TACAN range selector switch (if installed) — As desired.
11. TACAN channel — Select.
12. TACAN volume — Minimum.
13. TACAN ECM indicator light — Out.
14. Homing point selector — NOT "A," "T" or "U."
15. Data link antenna — NORM.
16. Master warning lights — Check. (FP-RP)
17. ATG switch — OFF.
18. Canopy latch handle — Unlock (fully aft).
19. Map light — Check (if required).
*19A. Altitude warning selector — Set.
20. Windshield anti-icing, antifog switches — ON.
21. TACAN-cmd alt switch — As desired (if installed).
22. Emer ac gen — NORMAL.
23. TACAN power switch — NORMAL (if installed).
24. Data link panel — Set.

*After T.O. 1F-106-1158

N-12 Change 1
25. Rain removal — OFF.
26. Thunderstorm lights — Check, then as desired.
27. Warning lights dimmer — As desired.
28. All external internal light switches — Check & set. (FP-RP)
29. Formation navigation lights switch — NAV ON.
30. Pitot heat — Check, then OFF. (ON, for cocking.)
32. Surface & eng anti-icing — AUTO ON.
33. Cabin temperature control — AUTOMATIC.
34. Compass control panel — Set.
35. Air refuel switch (if installed) — OFF (guard closed).
36. Refuel select switch (if installed) — ALL TANKS (guard closed).
37. Emergency slipway door open switch (if installed) — NORM (guard closed).
38. Fuses — Check. (FP-RP)
39. UHF circuit breaker (if installed) — On (up position).

BEFORE STARTING ENGINE

PNEUMATIC START

1. Starter ignition disarm switch — OFF.
2. Use normal start procedure; throttle IDLE at 10% RPM.

STARTING ENGINE

NOTE

Items marked with the symbol ▲ preceding the step cannot be performed if starting with the battery.

1. Clear to start — Check. (FP-RP)
2. Formation/navigation lights switch — NAV ON.
3. Ignition button — Depress & hold.
4. Throttle — START, OFF (until 10% RPM), then IDLE.
5. Fuel flow — Check indication.
6. EGT rise — Check.
8. Ignition button — Release at approx 30% RPM.
9. Idle — 59-61% RPM.
11. EGT — Stabilized.
12. External power — Disconnected.

UNSUCCESSFUL, HUNG, OR SLOW START

1. Throttle — OFF.
2. Check for fire.

CLEARING ENGINE

Refer to EXCESSIVE EGT OR FIRE IN TAILPIPE DURING GROUND OPERATIONS in the Emergency Section.

BATTERY STARTING

1. Generators — OFF.
2. Boost pumps — ON.
3. Master electrical power — ON.
4. Fire warning system — TEST.
5. Throttle — Move through normal starting sequence.
6. After throttle in IDLE, emergency AC generator — START.
7. After engine starts, perform ELECTRICAL POWER SUPPLY SYSTEM CHECK AND INTERIOR INSPECTION AFTER BATTERY START.
BEFORE TAXIIING

ELECTRICAL POWER SUPPLY SYSTEM CHECK

1. Master electrical power switch — ON.
2. Emergency ac generator — Check.
3. ATG — Check.
4. Generator switch — ON.
5. MA-1 power switch — ON.
7. Radar scope switch — ON.
9. Altitude warning selector — SET, CHECK.

INTERIOR INSPECTION AFTER BATTERY START

1. Armament recycle button — Depress, for 5 seconds.
2. Boost pumps — Check, then ON.
6. Oxygen quantity — Check.
8. Fuel quantity — Check.
9. All light switches — CHECK/TEST, then Climatic.
10. Pitot heat — Check, then OFF.
11. Seat & Rudder pedals — Adjust (FP-RP)

* After T.O. 1F-106-1158.
HYDRAULIC AND FLIGHT CONTROL SYSTEM CHECK

1. Throttle — IDLE.
2. Speed brakes switch — IN, then center (off).
3. Hydraulic pressure — Check 3000 (±100) psi.
   After T.O. 1F-106A-558 - 2800 to 3100 psi
   with fluctuations ± 150 psi for secondary
   system only.
4. Flight mode selector switch — PITCH.
5. System check:
   a. Control surface movement.
   b. Hydraulic system recovery
8. Trim — Check & Set.
AIR REFUELING SYSTEM CHECK (AIR REFUELING PLANNED)

1. Air refuel switch — ON.
   a. Slipway door — Fully open.
   b. Boom latches — Retracted.
   c. Slipway lights — On.
   d. Ready light — On.

2. Reset/MBL switch — MBL.
   a. Boom latches — Extended.

   a. Boom latches — Retracted.
   b. Disconnect light — On.

   a. Boom latches — Extended.
   b. Disconnect light — Off.

5. Reset/MBL switch — NORM.
   a. Boom latches — Extended.
   b. Contact light — On.

   a. Boom latches — Retracted.
   b. Ready light — Off.
   c. Contact light — Off.
   d. Disconnect light — On.

7. Reset/MBL switch — RESET.
   a. Boom latches — Retracted.
   b. Ready light — Off.
   c. Disconnect light — On.

8. Air refuel switch — Off.
   a. Slipway door — Closed.
GENERAL
1. Oxygen — ON. (FP-RP)
2. Engine anti-ice warning test button — Depress & hold for 3 seconds.
3. Rain removal — ON, then OFF.
4. Canopy — Close (as required).
5. Flight Instruments — Check and set. (FP-RP)
6. Barometer — Set. (FP-RP)
7. EPR — Set. (FP-RP)
8. Ejection seat ground safety pin — Remove and display to crew chief. (FP-RP)
9. Power annunciator — "OK."

RADAR/IR GROUND CHECKOUT PROCEDURE
1. IR Seekerhead — Check extension.
2. Photographic recorder — check.
   On 0 gunsight airplanes, set f stop.
3. Search and attack displays — Check centering.
4. DISP/AUTO Mode Switch — MAN NAV or AUTO NAV.
5. Artificial horizon — Adjust 5 degrees high.
6. Firing range bar — note presence from SPL WPN time-in.
7. LC/PUR switch — Depress momentarily.
8. DISP/AUTO Mode Switch — ILS then MAN NAV or AUTO NAV.
9. LC/PUR switch — Depress momentarily.
10. Firing range bar — 3.3 miles (if SPL WPN selected).
11. Nose/tail switch — TAIL.
12. Firing range bar — 1.8 miles (if SPL WPN selected).
13. Armament selector switch — RAD.
14. LC/PUR switch — Depress momentarily.
15. Firing range bar — 0.4 miles.
16. Nose/tail switch — NOSE.
17. Fire range bar — 2.1 miles.
18. Range switch — 16 miles.
19. LC/PUR switch — Depress momentarily.
20. Boresight switch — BORS.
22. Auto search button — Depress momentarily.
23. RDR/IR select button — Depress and release.
24. Elevation scaling — Check.
25. IR tone and video — Adjust.
26. IR lockon — Accomplish.
27. RDR/IR select button — Depress and release.
28. Auto search button — Depress momentarily.
30. Radar lockon — Accomplish.
31. IR seekerhead — Stow.
31A. Gunsight display — Check.
32. Armament selector switch — VI.
33. DL test pattern — Check.
34. Antenna stabilization and range gate drift — Check.

RADAR GROUND CHECK — MSR OR WSEM's ABOARD

1. With VI selected, armament recycle button depress and hold for 5 seconds.
2. Armament selection indicator — OK (for SPLWPN, RAD, and ALL).
3. Taxi and takeoff — VIS IDENT selected.

TAXIING

1. Brakes & steering — Check.
2. Idle thrust control switch — As desired.
3. Flight instruments — Recheck & set (if necessary). (FP-RP)
4. Navigation equipment — Check. (FP-RP)

BEFORE TAKEOFF

AIRPLANE CHECK

1. Canopy — Close and lock, check light out.
2. AIR-2A arm/safe/monitor power circuit breaker — Push in.
3. Cabin air — PRESS.

4. Pressure suit handle — Cracked (if wearing suit).
5. Ejection seat ground safety pin — Check removed. (FP-RP)
6. Idle thrust control switch — OFF.
7. Flight mode selector switch — DIR MAN.
8. Warning lights — Out.
9. Formation-navigation lights — As required.
10. Pitot heat switch — ON.
11. Line up with nose wheel steering engaged.
12. Gyro erect button — Press to erect (if required).
*12A. Heading push to sync knob - Press & hold (if required).
13. IFF control panel — As required.

ENGINE CHECK

1. Throttle — IDLE.
2. Fuel control emergency system — Check.
3. Throttle — Full Military.
4. EGT and rpm — Note.
5. EGT spread button — Depress and check.
6. Oil quantity — Check needle in the green range.
7. Engine instruments — Check. (FP-RP)

TAKEOFF
NORMAL TAKEOFF

1. Throttle — FULL MIL POWER.
3. Nose wheel steering — Check.
4. Throttle — AFTERBURNER.
5. 120 to 135 KCAS — Smoothly raise nose to takeoff attitude, & allow airplane to fly off ground.
6. Attitude indicator — 10° nose-up indication.

*After T.O. 1F-106-1181.
T.O. 1F-106A-1CL-1

AFTER TAKEOFF – CLIMB

2. IFF – Checked.
3. Flight mode – PITCH (above 5000 ft.).
4A. Altitude Warning Selector – Set.
5. Standby flight instruments – Check normal operation.

CLIMB

ARMAMENT SAFETY (TRIGGER) CHECK

**WARNING** — If doors open, release trigger, select VIS IDENT, wait 75 sec. minimum, then close doors and return to base.

No Primary Armament Aboard

1. Arm-safe switch - SAFE (safetied if armament aboard).
2. S.W. release lock switch - LOCK.
3. S.W. monitor CB - IN.
4. Armament selector - SPL WPN.
5. S.W. armed light - Check not illuminated.
6. LC/PUR switch - Depress.
7. Radar scope - Check for firing bar.
8. Armament trigger - Press to second detent.
9. Armament selector switch - VIS IDENT.

Primary Armament Aboard

1. Arm-safe switch - SAFE and safety wired.
2. S.W. release lock switch - LOCK (safety wired and sealed).
3. Armament selector switch - MISSILES RAD.
4. LC/PUR switch - Depress.
5. Radar scope - Check for firing bar.

Reflects T.O. 1F-106A-1S-191

Change 2 N-21
6. Wait 12 seconds minimum then check for no MMST No. 5 light.
7. Armament trigger - Press to second detent.
8. Armament selector switch - VIS IDENT.

**FUEL QUANTITY CHECKS**

1. Monitor for fuel usage and F tank feeding.

**NAVIGATION**

**RADAR AIRBORNE CHECK**

1. Antenna elevation — Check for level sweep.
2. Antenna — Depress.
3. Radar horizon — Drift or tilt.
4. Range gate drift — Recheck.
5. Antenna tracking — Check.
6. Computer operation — Check throughout flight.

**IR AIRBORNE CHECK (IIP)**

1. IR stow switch — RDR SLVD or RDR SCAN.
2. Auto search button — Press and release.
3. Armament selector switch — Not VIS IDENT.
4. Radar/IR select button — Press and release.
5. IR threshold video control knob — Adjust.
6. IR lock-on — Accomplish.
7. Auto search button — Press and release.
8. Radar/IR select button — As desired.

**VISUAL IDENTIFICATION PROCEDURES**

1. Arm-safe switch — SAFE.
2. Armament selector switch — VIS IDENT.
3. Display/automatic mode switch — Any position other than ILS or ILS APCH.
4. Radar range lock-on — Accomplish.
5. Flight mode selector switch — As desired.
7. Steering dot — Moves to perimeter of V1 command azimuth circle at 6000 ft. or less.
8. VI range circle — Moves down as range decreases.
9. VI command azimuth circle (greater than 6000 feet) — Circle fixed size and designates scope center.
10. VI command azimuth circle (less than 6000 feet) — Circle centered, size increases as range decreases.
11. Closing rate — Adjust to 50 knots or less.
12. VI warn, master warning and flight mode fail lights — Monitor.
13. Flight mode selector switch — Monitor for stepdown to ASSIST.

WEAPON DELIVERY

AIR-2A ATTACK PROCEDURES

AIR-2A Armament Selection

1. Arm-safe switch — SAFE.
2. AIR-2A Arm/safe/monitor power circuit breaker — Check closed.
3. Armament selector switch — SPL WPN.
4. Armament selection indicator — "OK."
5. Arm-safe switch — ARM.
6. MMST confirm light No. 5 — Check illuminated.
7. Special weapon-armed light — Illuminated, "SPL WPN ARMED."
8. Special weapon release lock switch — UNLOCK.
9. Special weapon release lock indicator — "UNLOCK."
10. Photographic recorder — Check operation.
11. Altitude bank selector switch — As desired.
AIR-2A Post-Attack Procedures

1. Arm-safe switch — SAFE.
2. Armament selector switch — VIS IDENT.
3. Special weapon release lock switch — LOCK.
4. Special weapon release lock indicator — Striped.
5. Auto search button — Press and release.

Rocket Lead Collision Attack

1. AIR-2A armament selection — Accomplish.
2. Radar range lock-on — Accomplish.
4. Armament trigger — Press to second detent and hold at 20-seconds before firing time.
5. Radar scope — Monitor for “8” pullout signal.
8. AIR-2A post-attack procedures — Accomplish.

Rocket Radar Pursuit Attack

1. AIR-2A armament selection — Accomplish.
2. LC/PUR switch — Press and release.
3. RDR switch — NORM.
4. Radar range lock-on — Accomplish.
5. Attack steering — Accomplish.
6. Armament trigger — Press to second detent and hold at firing bar cycling.
10. LC/PUR switch — Press and release.
11. AIR-2A post-attack procedures — Accomplish.
Rocket Radar Pursuit/Lead Collision Attack

1. Steps 1 through 5 of ROCKET RADAR PURSUIT ATTACK — Accomplish.
2. LC/PUR switch — Press and release.
3. Steps 3 through 8 of ROCKET LEAD COLLISION ATTACK — Accomplish.

Rocket Radar Pursuit Attack, HOM Mode

1. AIR-2A armament selection — Accomplish.
2. RDR switch — HOM.
3. ATOT — Accomplish.
5. Target at firing range bar — Observe on 4 mile radar scope.
6. Armament trigger — Press to second detent and hold.
10. AIR-2A post-attack procedures — Accomplish.

Rocket Radar Pursuit/Lead Collision Attack, HOM Mode

1. Steps 1 through 4 of ROCKET RADAR PURSUIT ATTACK, HOM MODE — Accomplish.
2. Radar scope — Monitor for target burn-through.
3. Steps 3 through 8 of ROCKET LEAD COLLISION ATTACK — Accomplish.

Rocket IR Pursuit Attack

1. AIR-2A armament selection — Accomplish.
2. RDR switch — NORM.
3. IR stow switch — RDR SCAN or RDR SLVD.
4. IR lock-on — Accomplish.
5. Attack steering — Accomplish.
6. Armament trigger — Press to second detent and hold when the target is at the proper range.
10. AIR-2A post-attack procedures — Accomplish.

Rocket IR Pursuit/Radar Lead Collision Attack

1. Steps 1 through 5 of ROCKET IR PURSUIT ATTACK — Accomplish.
2. Radar scope — Monitor for radar contact.
4. Steps 3 through 8 of ROCKET LEAD COLLISION ATTACK — Accomplish.

Rocket Pursuit Attack Without MA-1 Range

1. Altitude band selector switch — As required.
2. AIR-2A armament selection — Accomplish.
3. LC/PUR switch — Press and release.
4. Pursuit course to firing position — Accomplish.
5. Armament trigger — Press to second detent and hold.
8. LC/PUR switch — Press and release.
9. Altitude band selector switch — OFF.
10. AIR-2A post-attack procedures — Accomplish.
T.O. 1F-106A-1CL-1

ROCKET ESCAPE MANEUVER PROCEDURES

Low Altitude Escape Maneuver

1. AIR-2A rocket launch — First establish a 60-degree bank angle, then pull maximum load factor as rapidly as possible.
2. Escape maneuver completion — Continue maximum-g climbing turn for at least 135 degrees of turn.

Level Turn Escape Maneuver

1. Bank angle and load factor — Establish as rapidly as possible.
2. Bank angle and load factor — Maintain until minimum 90° heading change from firing heading is accomplished.

Modified Split-S Escape Maneuver

1. Bank angle — Establish 135 to 180 degrees as rapidly as possible.
2. Maximum load factor — Establish as rapidly as possible.
3. Dive attitude and recovery — Accomplish.

AIM MISSILES ATTACK PROCEDURES

Missile Armament Selection

1. Arm-safe switch — SAFE.
2. Armament selector switch — MISSILES RAD, ALL, or IR.
3. Armament selection indicator — “OK.”
4. Arm-safe switch — ARM.
Missile Post-Attack Procedures

1. Auto Search button — Press and release.
2. WSEM’s loaded — wait 25 seconds.
3. Arm-safe switch — SAFE
4. Armament selector switch — VIS IDENT.

Missile Lead Collision Attack

1. Missile selection — Accomplish.
2. Radar range lock-on — Accomplish.
4. Armament trigger — Press to second detent and hold.
5. Radar scope — Monitor for “X” fire signal.

Missile Radar Pursuit Attack

1. Missile selection — Accomplish.
2. LC/PUR switch — Press and release.
3. RDR switch — NORM.
4. Radar range lock-on — Accomplish.
5. Attack steering — Accomplish.
6. Armament trigger — Press to second detent and hold.
10. LC/PUR switch — Press and release.

Missile Radar Pursuit Attack, HOM Mode

1. RDR switch — HOM.
T.O. 1F-106A-1CL-1

5. Target at firing range bar — Observe on radar scope.
6. Armament trigger — Press to second detent and hold.
7. Radar scope — Monitor for appearance of "X" fire signal.

**Missile IR Pursuit Attack**

1. RDR switch — As desired.
2. IR stow switch — RDR SCAN or RDR SLVD.
4. IR lock-on — Accomplish.
5. Attack steering — Accomplish.
6. Armament trigger — Press to second detent and hold.

**Missile IR/Radar Pursuit Attack**

1. Steps 1 through 5 of MISSILE IR PURSUIT ATTACK — Accomplish.
2. Radar lock-on — Accomplish.
3. Steps 6 through 10 of MISSILE IR PURSUIT ATTACK — Accomplish.
Missile Pursuit Attack Without MA-1 Range

1. Missile selection — Accomplish.
2. LC/PUR switch — Press and release.
3. Attack steering — Fly manually to position interceptor.
4. Armament trigger — Press to second detent and hold.
5. Radar scope — Monitor for fire signal.
8. LC/PUR switch — Press and release.

MISSILE PULLOUT MANEUVER PROCEDURES

1. Level turn — Initiate a smooth turn at missile launch.
2. Modified split-S — Accomplish.

SORTED ATTACK PROCEDURES

2. Auto-search button — Press.
3. Arm-safe switch — SAFE.
4. S.W. release lock switch — LOCK.
5. S.W. release lock indicator — "LOCK."
6. Armament selector switch — VIS IDENT.

PRACTICE AIR-2A INTERCEPTS WITH SECONDARY ARMAMENT

1. Arm-safe switch — SAFE (guard safetied & sealed).
2. Special weapon release lock switch — LOCK (guard safetied & sealed).
3. Armament selector switch — SPL WPN.
5. At fire signal perform escape maneuver.
6. Armament selector switch — VIS IDENT.

RECOVERY (RTB)
1. Heading indicator — Check.
2. Stable platform check — Accomplish.
*2A. AHMG check - Accomplish.
3. Fuel quantity & balance — Check.
4. Aircraft position — Verify.

DESCENT
1. Fuel quantity and balance — Check.
2. Cabin temp control — AUTOMATIC HEAT or HOT.
3. Altimeter — Reset at designated altitude.
4. AAU-19A Altimeter (if installed) — Check servoed mode accuracy.
5. Standby flight instruments — Check normal operation.
6. IFF — Checked.
7. Boost pumps — ON.
8. Arm-safe switch — SAFE.
9. Armament selector — VIS IDENT.
10. S.W. release switch — LOCK.
11. S.W. release indicator — “LOCK.”
14. Canopy defog switch — As required.
15. Pressure suit handle — Cracked (if wearing suit).
16. Idle thrust control switch — OFF.
17. Shoulder harness — AUTOMATIC. (FP-RP)
18. Warning lights dimmer switch — As necessary.

*After T.O. 1F-106-1181.
BEFORE LANDING

1. Gear handle — DOWN & check. (FP-RP)
2. Landing & taxi light switch — LANDING LIGHTS.
3. Flight mode selector switch — DIR MAN.
4. Speed brakes — OUT.

LANDING

NORMAL LANDING

1. Throttle — IDLE during flareout.
2. Touchdown speed — As required.
3. Drag chute handle — Pull.
4. Lower nosewheel to runway.
5. Idle thrust control switch — ON.
6. Braking — As necessary.

GO-AROUND

1. Throttle — Full military or maximum.
2. Drag chute handle — In.
3. Speed brakes — Closed.
4. Idle thrust — OFF.
5. Landing gear — UP (when definitely airborne).

AFTER LANDING — CLEAR OF RUNWAY

1. Drag chute — Jettison.
2. Ejection seat ground safety pin — Install. (FP-RP)
3. Parachute — Disconnect and safety.
4. Mode 4 selector knob — Hold if required.
5. IFF master control knob — OFF.
6. Takeoff trim button — Depress.
7. RAT — Extend.
8. RAT handle — Up.
9. Arm-safe switch — SAFE.
10. AIR-2A arm/safe/monitor power circuit breaker — Open.
11. Armament selector switch — VIS IDENT.
12. Special weapon release lock switch — LOCK.
13. Cockpit no-fog & vent suit switch — OFF.
15. Oxygen — OFF. (FP-RP)
17. Cabin air — OFF.
18. Canopy — As desired.
19. Formation-navigation lights — NAV ON.
20. Anti-icing, antifog, rain removal and pitot heat — OFF.

ENGINE SHUTDOWN

1. Wheel chocks — Installed.
2. Compressed air — Connected or selected.
3. Canopy — Fully open.
4. ATG switch — OFF.
5. MA-1 — OFF.
6. Boost pumps — OFF.
7. T tank switch — CLOSE.
8. Idle thrust control — OFF.
10. Generator switch — OFF.
11. Emer ac generator switch — START.
12. Throttle — OFF.
   a. Observe "OFF" flag on attitude indicator.
   b. Monitor fuel quantity.
12A. UHF function selector switch — OFF.
13. Master electrical power — OFF.
T.O. 1F-106A-1CL-1

BEFORE LEAVING AIRPLANE

1. Ejection seat ground safety pin — Installed. (FP-RP)
2. Parachute firing lanyard — Check released and safetied. (FP-RP)
3. All electrical switches — As required.
4. Canopy support(s) — Installed.
5. Form 781 — Complete.

STRANGE FIELD PROCEDURES

IMMEDIATELY AFTER ENGINE SHUTDOWN

1. Engine oil level — Approx. 2 inches below filler neck (MIL-L-7808 or MIL-L-23699 according to season).
2. CSD oil level — Check service level on sight gages.
3. Hydraulic system reservoirs.
   a. Relieve system pressure by operating flight controls.
   c. Fluid level — Not more than ¼ inch below full mark corresponding to temperature on reservoir temperature gage.
   e. Open reservoir pressure shutoff valve; reservoir pressure gage should indicate 55 psi. Check "bleed" indicator, and if bleed is indicated, open bleed fitting on the reservoir servicing panel. When clear fluid flows, tighten bleed fitting.
4. Engine hot-section recorder — Check and reset.
   a. Check recorder for temperature data; enter in Form 781.
   b. Energize ac or dc essential bus — Check EGT gage power failure flag not on display.
   c. Remove recorder reset button caps — Reset recorder overtemperature flags and clocks.
   d. Reinstall button caps; turn off electrical power.

REFUELING

1. Fuel — JP-4. [Refer to T.O. 1F-106A-1, Section V, for listing of alternate and emergency fuels.]
2. Refueling truck pressure — 30-60 psi.
3. Refuel until truck gage indicates flow has stopped.
4. Disconnect fuel hose.

TIRE SERVICING

1. Nose tires — 140 psi (41,000 lbs. gross wt. and below)
   150 psi (41,001 to 42,720 lbs. gross wt.)
2. Main tires — 225 psi (33,000 lbs. gross wt. and below)
   240 psi (33,001 to 35,000 lbs. gross wt.)
   260 psi (35,001 to 37,500 lbs. gross wt.)
   275 psi (37,501 to 39,750 lbs. gross wt.)
   285 psi (39,751 to 41,000 lbs. gross wt.)
   295 psi (41,001 to 42,720 lbs. gross wt.)

LIQUID OXYGEN

1. Service with liquid oxygen, MIL-O-27210A, Grade A, Type II.
HIGH-PRESSURE PNEUMATIC SYSTEM

1. Use Besler 56150-17 quick-disconnect assembly and MC-11 or equivalent compressor. If quick-disconnect assembly is not available disconnect tubing aft of quick-disconnect fitting in airplane and connect compressor to tubing. Some airplanes have a tee fitting in the service line for alternate servicing.
2. Charge pneumatic system to 3000 psi.

DRAG CHUTE INSTALLATION

1. Check drag chute handle — pushed in.
2. Insert D-ring between mechanism jaws and release locking pawl. Insure proper locking.
3. Insert pin in jettison switch (pin should fit snugly).
4. Insert drag chute into canister with riser lying flat under the deployment bag and pilot chute flaps positioned at a 45 degree angle from the vertical.
5. Check that the riser keeper is on the top riser and under the pilot chute section of the deployment bag (not extending out beyond the deployment bag).
6. Check that the riser is positioned in the guide bracket with slack removed and riser taut in guide.
7. Position canister restraining straps over pilot chute cone with the upper strap placed on last and insert ripcord pin.
8. Safety wire drag chute ripcord pin to the pilot chute cone, using 0.020 inch diameter copper (breakaway) safety wire as follows:
   a. Loop one end of the wire around the cable just between top end of ripcord pin and swedged ball on cable.
   b. Using double twist method, twist wire down to the pilot chute cone.
   c. Loop one strand of wire around the cone between the ripcord pin and the restraining straps.
   d. Twist wire ends together and trim excess.
9. Remove pilot chute spring pin and streamer.
MISSILE BAY DOOR OPERATION

TO OPEN MISSILE BAY DOORS

1. Check the high-pressure pneumatic system pressure gage in the left wheel well, to determine that system pressure is between 2000 and 3000 psi. Charge the pneumatic system if necessary.
2. Clear the missile-bay area and post personnel to warn others that doors are to be operated.

   **CAUTION** — Do not operate the missile bay doors with the aft electronic compartment door open. Damage to the electronic door may result.

3. Place the manual door-control valve handle (left main wheel well bulkhead) in the OPEN position.
4. Lock the manual door-control valve handle in the OPEN position with the red streamered ground safety pin.
5. Install door safety locks on all door acutating cylinders, if available.

   **WARNING** — If door safety locks are not available, extreme caution should be exercised when checking equipment in the exposed missile bay area. Avoid movement of any of the door control valve indicator pins, as damage to the missile bay doors will result.

TO CLOSE MISSILE BAY DOORS

1. Check that the manual door-control valve handle is safetied in the OPEN position.
2. Remove door safety locks, if installed.
3. Clear the missile-bay area of personnel.
4. Remove and stow the manual door-control valve handle safety pin.
5. Place the manual door-control valve handle in the CLOSE position.
6. Check that pneumatic system pressure is between 2000 and 3000 psi. Charge the pneumatic system, if necessary.

RETRACTING AND LATCHING TAILHOOK

The tailhook is manually retracted and latched. The latching procedure generally requires two men and a special tailhook retracting tool (8-96515). However, the special tool may not be available, and the following alternate method may be used:

1. Disconnect battery.
2. Position a man on each side of extended tailhook.
3. Raise and hold the tailhook in the retracted position.

**WARNING** — To prevent serious injury to personnel, do not allow any part of the body to extend into the tailhook extension area.

4. Engage the latch shaft with a 5/8-inch open end wrench, and rotate latch shaft approximately 60° aft (clockwise, looking up). Listen for a definite, audible click which occurs as the latch lever seats in the trigger. (If click is not heard, lock may not be fully engaged. Check mechanism for binding, defective solenoid, etc.)
5. Remove wrench from latch shaft, and check that shaft remains in latched position.
6. Slowly ease off pressure applied to tailhook, until it can be determined that tailhook is firmly latched, then release tailhook.
7. Install the tailhook safety pin.
8. Check that tailhook shoe is held against upper stop with safety wire.

ELECTRICAL POWER REQUIREMENTS

1. MD-3 and MD-4 will provide sufficient power for starting and operation of the MA-1 system.
2. MD-3 with adapter cable 8-96052-801 (6115-00-690-4050) will provide power for starting only.

CAUTION — Ensure that the MD-3 or MD-4 have 3-phase ac power only. If single phase power is applied, the airplane electrical system can be seriously damaged.
# F-106A AND F-106B CHECKLIST PERFORMANCE

Refer to T.O. 1F-106A-1, Appendix Part 9, page A9-1, for explanation and limitations of checklist performance data.

## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Item</th>
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<tbody>
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P-1
TABLE OF CONTENTS (CONT.)

A  Takeoff, Military Thrust .................................. P-28
B  Takeoff, Military Thrust .................................. P-29
A  Takeoff - Maximum Thrust - Gun ........................ P-30
A  Takeoff - Military Thrust - Gun ......................... P-31
A  Maximum Refusal Speed, Distance - Maximum Thrust . P-32
A  Maximum Refusal Speed, Distance - Military Thrust . P-33
A  Maximum Abort Speed - Maximum Thrust ............... P-34
A  Maximum Abort Speed - Military Thrust ............... P-35
A  Takeoff and Landing Crosswind Chart .................. P-36
<table>
<thead>
<tr>
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XXX BEST RANGE VALUES DESCEND AT 275 KNOTS CAS ACE/FEED IN KNOTS CAS FOR 85% RPM START TO CLIMB 1700 Lb TIME IN MINUTES DISTANCE IN NAUTICAL MILES

CLIMB, CRUISE DESCENT AND SAUTNER

CLEAN
# A

**CLIMB, CRUISE, DESCENT AND SAUNTER**

**WITH 360-GALLON EXTERNAL TANKS**

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**With 360-Gallon External Tanks**

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**XXX BEST RANGE VALUES**

**Airspeed in Knots**

**Start to Climb 1070 LB Used**

**Descend at 275 Knots CAS and 85% RPM**

**Time in Minutes**

**Distance in Nautical Miles**
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<td><strong>TOTAL SAUNTER</strong></td>
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## CLIMB, CRUISE, DESCENT AND SAUNTER

### WITH M81A1GUN AND TWO 360-GALLON EXTERNAL TANKS

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<th>TIME</th>
<th>DIST</th>
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### T.O. IF-1004-1CL-1

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### Supersonic Acceleration Data

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- **Airspeed in Knots**: The airspeed in knots at various altitudes and Mach numbers.
- **Time in Minutes**: The time in minutes required for the acceleration.
- **Distance in Nautical Miles**: The distance in nautical miles covered during the acceleration.
- **Fuel**: The fuel consumption per 1000 lbs.
- **Cruise Data**: Various cruise conditions and Mach numbers.
- **Deceleration Data**: Deceleration rates and Mach numbers at different altitudes.
### SUPersonic Acceleration, Cruise and Deceleration

**Configuration without External Tanks**

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<td>1.7</td>
</tr>
</tbody>
</table>

**Airspeed in knots**

**Time in minutes**

**Distance in nautical miles**
## SUPersonic Acceleration, Cruise and Deceleration

### Acceleration Data

| ALT (FT) | TIME (STD) | CAS | DIRK | ZOA | 1.000 PKG | 2000 PKG | 3000 PKG | 1,000 FT | 1000 FT | 2000 FT | 3000 FT | 5000 FT | 10,000 FT | 20,000 FT | 30,000 FT | 50,000 FT | 100,000 FT |
|----------|------------|-----|------|-----|-----------|----------|----------|----------|---------|---------|---------|---------|-----------|------------|------------|------------|-----------|-------------|
| 0        | 0          | 0   | 0    | 0   | 0         | 0        | 0        | 0        | 0        | 0        | 0        | 0         | 0          | 0          | 0          | 0         | 0           |
| 5        | 0.1        | 0.1 | 0.1  | 0.1 | 0.1       | 0.1      | 0.1      | 0.1      | 0.1      | 0.1      | 0.1      | 0.1      | 0.1        | 0.1         | 0.1         | 0.1        | 0.1         |
| 10       | 0.2        | 0.2 | 0.2  | 0.2 | 0.2       | 0.2      | 0.2      | 0.2      | 0.2      | 0.2      | 0.2      | 0.2      | 0.2        | 0.2         | 0.2         | 0.2        | 0.2         |
| 15       | 0.3        | 0.3 | 0.3  | 0.3 | 0.3       | 0.3      | 0.3      | 0.3      | 0.3      | 0.3      | 0.3      | 0.3      | 0.3        | 0.3         | 0.3         | 0.3        | 0.3         |

### Cruise Data

| ALT (MACH) | TIME (STD) | CAS | DIRK | ZOA | 1.000 PKG | 2000 PKG | 3000 PKG | 1,000 FT | 1000 FT | 2000 FT | 3000 FT | 5000 FT | 10,000 FT | 20,000 FT | 30,000 FT | 50,000 FT | 100,000 FT |
|------------|------------|-----|------|-----|-----------|----------|----------|----------|---------|---------|---------|---------|-----------|------------|------------|------------|-----------|-------------|
| 0          | 0          | 0   | 0    | 0   | 0         | 0        | 0        | 0        | 0        | 0        | 0        | 0         | 0          | 0          | 0          | 0         | 0           |
| 5          | 0.1        | 0.1 | 0.1  | 0.1 | 0.1       | 0.1      | 0.1      | 0.1      | 0.1      | 0.1      | 0.1      | 0.1      | 0.1        | 0.1         | 0.1         | 0.1        | 0.1         |
| 10         | 0.2        | 0.2 | 0.2  | 0.2 | 0.2       | 0.2      | 0.2      | 0.2      | 0.2      | 0.2      | 0.2      | 0.2      | 0.2        | 0.2         | 0.2         | 0.2        | 0.2         |
| 15         | 0.3        | 0.3 | 0.3  | 0.3 | 0.3       | 0.3      | 0.3      | 0.3      | 0.3      | 0.3      | 0.3      | 0.3      | 0.3        | 0.3         | 0.3         | 0.3        | 0.3         |

### Deceleration Data

| ALT (FT) | TIME (STD) | CAS | DIRK | ZOA | 1.000 PKG | 2000 PKG | 3000 PKG | 1,000 FT | 1000 FT | 2000 FT | 3000 FT | 5000 FT | 10,000 FT | 20,000 FT | 30,000 FT | 50,000 FT | 100,000 FT |
|----------|------------|-----|------|-----|-----------|----------|----------|----------|---------|---------|---------|---------|-----------|------------|------------|------------|-----------|-------------|
| 0        | 0          | 0   | 0    | 0   | 0         | 0        | 0        | 0        | 0        | 0        | 0        | 0         | 0          | 0          | 0          | 0         | 0           |
| 5        | 0.1        | 0.1 | 0.1  | 0.1 | 0.1       | 0.1      | 0.1      | 0.1      | 0.1      | 0.1      | 0.1      | 0.1      | 0.1        | 0.1         | 0.1         | 0.1        | 0.1         |
| 10       | 0.2        | 0.2 | 0.2  | 0.2 | 0.2       | 0.2      | 0.2      | 0.2      | 0.2      | 0.2      | 0.2      | 0.2      | 0.2        | 0.2         | 0.2         | 0.2        | 0.2         |
| 15       | 0.3        | 0.3 | 0.3  | 0.3 | 0.3       | 0.3      | 0.3      | 0.3      | 0.3      | 0.3      | 0.3      | 0.3      | 0.3        | 0.3         | 0.3         | 0.3        | 0.3         |
### OPTIMUM RETURN

**DATA BASIS: FLIGHT TEST**

**CONDITIONS: STANDARD DAY - NO WIND**

<table>
<thead>
<tr>
<th>INITIAL ALTITUDE 1000 FT</th>
<th>60 NM</th>
<th>100 NM</th>
<th>150 NM</th>
<th>200 NM</th>
<th>250 NM</th>
<th>300 NM</th>
<th>350 NM</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>FUEL W/O CLimb</td>
<td></td>
<td>FUEL W/O CLimb</td>
<td></td>
<td>FUEL W/O CLimb</td>
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<td>FUEL W/O CLimb</td>
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<tr>
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<td>770</td>
<td>12.0</td>
<td>1370</td>
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</tbody>
</table>

### INSTRUCTIONS AND NOTES
- FUEL REQUIRED W/O CLimb INCLUDES MILITARY THRUST CLimb TO CRUISE ALTITUDE.
- CLimb AT 400 KCAS UNTIL REACHING 0.92 M, THEN CLimb CONSTANT MACH TO ALTITUDE.
- CRUISE AT RECOMMENDED MACH NO.
- AT DISTANCES LESS THAN 60 NM MINIMUM ALTITUDE 12,000 FEET.
- ZERO FUEL OVER LANDING BASE.

### CRUISE: CLEAN CONFIGURATION

<table>
<thead>
<tr>
<th>TRUE ALTITUDE 1000 FT</th>
<th>TRUE MACH NO.</th>
<th>CAS KNOTS</th>
<th>TAS KNOTS</th>
<th>FUEL FLOW LB/HR</th>
<th>ENGINE PRESSURE RATIO</th>
</tr>
</thead>
<tbody>
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</table>
### Optimum Return

**Clean**

#### Conditions: Standard Day — No Wind

<table>
<thead>
<tr>
<th>Initial Altitude 1000 FT</th>
<th>60 NM</th>
<th>100 NM</th>
<th>150 NM</th>
<th>200 NM</th>
<th>250 NM</th>
<th>300 NM</th>
<th>350 NM</th>
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</thead>
<tbody>
<tr>
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<td><strong>Fuel W/O Climb</strong></td>
<td><strong>Fuel W/O Climb</strong></td>
<td><strong>Fuel W/O Climb</strong></td>
<td><strong>Fuel W/O Climb</strong></td>
<td><strong>Fuel W/O Climb</strong></td>
<td><strong>Fuel W/O Climb</strong></td>
<td><strong>Fuel W/O Climb</strong></td>
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<td><strong>Sea Level</strong></td>
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</table>

### Instructions and Notes

- **Fuel Required with Climb** includes military thrust climb to cruise altitude.
- **Climb at 400 KCAS until reaching 0.92 M, then climb constant Mach to altitude.**
- **Cruise at recommended Mach no.**
- **At distances less than 60 NM minimum altitude 12,000 feet.**
- **Zero fuel over landing base.**

<table>
<thead>
<tr>
<th><strong>True Altitude 1000 FT</strong></th>
<th><strong>True Mach No.</strong></th>
<th><strong>CAS Knots</strong></th>
<th><strong>TAS Knots</strong></th>
<th><strong>Fuel Flow LB/HR</strong></th>
<th><strong>Engine Pressure Ratio</strong></th>
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</thead>
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<td>289</td>
<td>3710</td>
<td>1.28</td>
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</tbody>
</table>
### CRUISE MOLDAUGIN OR TWO 300-GAL EXTERNAL TANKS

#### INSTRUCTIONS AND NOTES
- CLimb at 400 KIAS until reaching 5000 feet, then climb constant Mach to altitude.
- At distances less than 50 miles to altitude, maintain altitude.
- Zero fuel over landing base.

#### CRUISE FLIGHT TEST

| INITIAL FLIGHT TEST CONDITIONS | CAS.
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>T.O. 1F-106A-1CL-1</td>
<td>270</td>
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</tbody>
</table>

#### CRUISE FLIGHT TEST CONDITIONS

| INITIAL FLIGHT TEST CONDITIONS | CAS.
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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>1500 NM</td>
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<td>2500 NM</td>
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<tr>
<td>3000 NM</td>
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</table>

#### CRUISE FLIGHT TEST CONDITIONS

| INITIAL FLIGHT TEST CONDITIONS | CAS.
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1500 NM</td>
<td>270</td>
</tr>
<tr>
<td>2500 NM</td>
<td>270</td>
</tr>
<tr>
<td>3000 NM</td>
<td>270</td>
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</tbody>
</table>

#### CRUISE FLIGHT TEST CONDITIONS

| INITIAL FLIGHT TEST CONDITIONS | CAS.
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1500 NM</td>
<td>270</td>
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<tr>
<td>2500 NM</td>
<td>270</td>
</tr>
<tr>
<td>3000 NM</td>
<td>270</td>
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</table>

#### CRUISE FLIGHT TEST CONDITIONS

| INITIAL FLIGHT TEST CONDITIONS | CAS.
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>1500 NM</td>
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<td>2500 NM</td>
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</tr>
<tr>
<td>3000 NM</td>
<td>270</td>
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#### CRUISE FLIGHT TEST CONDITIONS

| INITIAL FLIGHT TEST CONDITIONS | CAS.
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<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>1500 NM</td>
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<td>2500 NM</td>
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<td>3000 NM</td>
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</table>
### Table: Optimum Return Chart for 300-Gallon External Tanks

<table>
<thead>
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<th>Distance (NM)</th>
<th>250</th>
<th>300</th>
<th>350</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Altitude (KFT)</td>
<td>100</td>
<td>150</td>
<td>200</td>
</tr>
<tr>
<td>Fuel Flow (GL)</td>
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<td>30</td>
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<td>1.3</td>
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<td>True Altitude (KFT)</td>
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</table>

**Instructions and Notes**
- Fuel required includes military thrust levels.
- Cruise Mach 0.8 at 400 KIAS until reaching 15,000 feet, then constant Mach to altitude.
- Cruise altitude 35,000 feet, then climb to minimum altitude.
- Zero fuel at 12,000 feet and beyond.

**Diagram:**
- Two 300-Gallon External Tanks
- Engine Pressure Ratio
- Fuel Flow (LB/Hr)
- True Mach
- True Altitude (KFT)
- Cruise Mach
- Initial Altitude (KFT)
- Distance (NM)

**Model:**
- T.O. 1F-106A-1CL-1
### Optimum Return

**Model:** F-106A

**Data Basis:** Estimated

**Conditions:** Standard Day - No Wind

<table>
<thead>
<tr>
<th>Initial Altitude</th>
<th>60 NM</th>
<th>100 NM</th>
<th>150 NM</th>
<th>200 NM</th>
<th>250 NM</th>
<th>300 NM</th>
<th>350 NM</th>
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</thead>
<tbody>
<tr>
<td>40</td>
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<td>600</td>
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<td>1200</td>
<td>1500</td>
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<tr>
<td>35</td>
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<td>850</td>
<td>1150</td>
<td>1450</td>
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<td>700</td>
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<td>1300</td>
<td>1600</td>
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<td>2550</td>
<td>2800</td>
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</table>

### Instructions and Notes
- Fuel required with Climb includes military thrust Climb to cruise altitude.
- Climb at 400 KCAS until reaching 0.93N; then Climb constant Mach to Altitude.
- At distances less than 60 NM minimum Altitude 12,000 Feet.
- Zero Fuel over Landing Base.

---

**Cruise: M21A Gun and Two 360-Gal External Tanks**

<table>
<thead>
<tr>
<th>True Altitude 1000 FT</th>
<th>True Mach No.</th>
<th>Cas Knots</th>
<th>TAS Knots</th>
<th>Fuel Flow LB/HR</th>
<th>Engine Pressure Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>0.93</td>
<td>274</td>
<td>514</td>
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LANDING DISTANCE
CONFIGURATION: SPEED BRAKES OPEN (DRAG CHUTE NOT DEPLOYED)
HARD SURFACE RUNWAY
ARMAMENT IN

ENGINE: J75-17
FUEL GRADE: JP-4
FUEL DENSITY: 6.3 LB/GAL

MODEL: F-106A
DATE: 21 FEBRUARY 1967
DATA BASIS: FLIGHT TEST

NOTES:
IF ARMAMENT LOAD IS EXPENDED, APPROACH PRIOR TO FLARE AND TOUCHDOWN SPEEDS CAN BE REDUCED 4 KNOTS, CORRESPONDING GROUND ROLL DISTANCES CAN BE REDUCED 9%.

FUEL REMAINING CURVES BASED ON A ZERO FUEL WEIGHT OF 27,336 POUNDS (INCLUDING 316 POUNDS FOR EXTERNAL TANKS).

<table>
<thead>
<tr>
<th>FUEL</th>
<th>APPROACH SPEED KNOTS</th>
<th>PRIOR TO FLARE SPEED KNOTS</th>
<th>TOUCHDOWN SPEED KNOTS</th>
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</thead>
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</tr>
</tbody>
</table>

FUEL WITH TWO 300-GALLON EXTERNAL TANKS

P-20
**LANDING DISTANCE**

**CONFIGURATION:** Speed brakes open (Drag chute not deployed)

**HARD SURFACE RUNWAY**

**ARMAMENT IN**

**ENGINE:** J75-17

**FUEL GRADE:** JP-4

**FUEL DENSITY:** 6.3 lb/gal

---

**NOTES**

If armament load is expended, approach prior to flare and touchdown speeds can be reduced 6 knots. Corresponding ground roll distances can be reduced 9%.

Fuel remaining curves based on a zero fuel weight of 26,641 pounds (including 514 pounds for external tanks).

---

### Table: Approach Speed, Prior to Flare Speed, Touchdown Speed

<table>
<thead>
<tr>
<th>Fuel (lbs)</th>
<th>Approach Speed (knots)</th>
<th>Prior to Flare Speed (knots)</th>
<th>Touchdown Speed (knots)</th>
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</thead>
<tbody>
<tr>
<td>1000</td>
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</tr>
<tr>
<td>7000</td>
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<td>183</td>
<td>163</td>
</tr>
</tbody>
</table>

---

*Full fuel with two 360-gallon external tanks*
LANDING DISTANCE CONFIGURATION: SPEED BRAKES OPEN (DRAG CHUTE DEPLOYED) HARD SURFACE RUNWAY ARMAMENT IN

ENGINE: J75-17 FUEL GRADE: JP-4 FUEL DENSITY: 6.5 LB./GAL

NOTES
IF ARMAMENT LOAD IS EXPENDED, APPROACH PRIOR TO FLARE AND TOUCHDOWN SPEEDS CAN BE REDUCED 6 KNOTS. CORRESPONDING GROUND ROLL DISTANCES CAN BE REDUCED 9%.

FUEL REMAINING CURVES BASED ON A ZERO FUEL WEIGHT OF 37,334 POUNDS (INCLUDING 314 POUNDS FOR EXTERNAL TANKS).

<table>
<thead>
<tr>
<th>FUEL</th>
<th>APPROACH SPEED</th>
<th>PRIOR TO FLARE SPEED</th>
<th>TOUCHDOWN SPEED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CAS</td>
<td>KNOTS</td>
<td>CAS</td>
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<tr>
<td>8000</td>
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<table>
<thead>
<tr>
<th>FUEL</th>
<th>APPROACH SPEED</th>
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<th>TOUCHDOWN SPEED</th>
</tr>
</thead>
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<td>KNOTS</td>
<td>CAS</td>
</tr>
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<tr>
<td>14,493</td>
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<td>193</td>
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</tr>
</tbody>
</table>

* FULL FUEL WITH TWO 360-GALLON EXTERNAL TANKS
LANDING DISTANCE
CONFIGURATION: SPEED BRAKES OPEN
(DRAG CHUTE DEPLOYED)
HARD SURFACE RUNWAY
ARMAMENT IN

ENGINE: J75-17
FUEL GRADE: JP-4
FUEL DENSITY: 6.3 LB/GAL

NOTES
If ARMAMENT LOAD IS
EXPENDED, APPROACH
PRIOR TO FLARE AND
TOUCHDOWN SPEEDS CAN
BE REDUCED 9 KNOTS.
CORRESPONDING GROUND
ROLL DISTANCES CAN BE
REDUCED 9%.

FUEL REMAINING CURVES
BASED ON A ZERO FUEL
WEIGHT OF 28,441 POUNDS
FOR EXTERNAL TANKS.

<table>
<thead>
<tr>
<th>FUEL</th>
<th>APPROACH SPEED KNOTS</th>
<th>PRIOR TO FLARE SPEED KNOTS</th>
<th>TOUCHDOWN SPEED KNOTS</th>
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</tr>
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</table>

* Full Fuel with Two 365-Gallon External Tanks
LANDING DISTANCE

MODEL: F-106A
DATE: 2 OCTOBER 1972
DATA BASIS: ESTIMATED

ENGINE: J75-17
FUEL GRADE: JP-4
FUEL DENSITY: 6.3 LB/GAL

CONFIGURATION: M631 GUN, SPEED BRAKES OPEN
(DRAG CHUTE NOT DEPLOYED)

HARD SURFACE RUNWAY ARMAMENT IN

IF ARMAMENT LOAD IS EXPENDED, APPROACH PRIOR TO FLARE AND TOUCHDOWN SPEEDS CAN BE REDUCED 3 KNOTS. CORRESPONDING GROUND ROLL DISTANCES CAN BE REDUCED 9%.

FUEL REMAINING CURVES BASED ON A ZERO FUEL WEIGHT OF 27,825 POUNDS INCLUDING 514 POUNDS FOR EXTERNAL TANKS.

DISTANCE OVER 50 FOOT OBSTACLE - 1000 FEET

<table>
<thead>
<tr>
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<th>TOUCHDOWN SPEED</th>
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<td>KNOTS CAS</td>
<td>KNOTS CAS</td>
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<td>KNOTS CAS</td>
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<tr>
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</table>

*FULL FUEL WITH TWO 340 GALLON EXTERNAL TANKS
LANDING DISTANCE

CONFIDENTIAL: 461A-GUN, SPEED BRAKES OPEN
(DRAG CHUTE DEPLOYED)

ENGINE: J75-L7
FUEL GRADE: JP-4
FUEL DENSITY: 6.5 LBS/ GAL

MODEL: F-106A
DATE: 2 OCTOBER 1972
DATA BASIS: ESTIMATED

HARD SURFACE RUNWAY ARMAMENT IN

NOTES

IF ARMAMENT LOAD IS EXPENDED, APPROACH PRIOR TO FLARE AND TOUCHDOWN SPEEDS CAN BE REDUCED 3 KNOTS, CORRESPONDING GROUND ROLL DISTANCES CAN BE REDUCED 5.
FUEL REMAINING CURVES BASED ON A ZERO FUEL WEIGHT OF 27,893 POUNDS (INCLUDING 514 POUNDS FOR EXTERNAL TANKS).

<table>
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<th>FUEL (LB)</th>
<th>APPROACH SPEED (KNOTS)</th>
<th>PRIOR TO FLARE SPEED (KNOTS)</th>
<th>TOUCHDOWN SPEED (KNOTS)</th>
<th>GROUND ROLL - 1000 FEET</th>
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</thead>
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<td>168</td>
<td>149</td>
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<th>TOUCHDOWN SPEED (KNOTS)</th>
<th>GROUND ROLL - 1000 FEET</th>
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<tr>
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*FULL FUEL WITH TWO 340 GALLON EXTERNAL TANKS

P-25
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<tbody>
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<td>150</td>
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<td>685</td>
<td>661</td>
<td>685</td>
<td>685</td>
<td>661</td>
</tr>
</tbody>
</table>

**WIND CORRECTIONS FOR TAKEOFF ROLL DISTANCE**

- Zero Wind
- 10 Knots
- 25 Knots
- 40 Knots
- 55 Knots
- 70 Knots

**For Tail Wind**

- 25 Knots
- 40 Knots
- 55 Knots
- 70 Knots
- 85 Knots
- 100 Knots

**For Head Wind**

- 25 Knots
- 40 Knots
- 55 Knots
- 70 Knots
- 85 Knots
- 100 Knots

P-27
### Military Thrust Takeoff

**Roll Distance, 2000 Feet Check Speed and Refusal Speed Based on an 8000 Foot Runway**

<table>
<thead>
<tr>
<th></th>
<th>Full Internal Fuel</th>
<th>Clean</th>
<th>Full Fuel with 360-Gallon External Tanks</th>
</tr>
</thead>
<tbody>
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<td><strong>SL</strong></td>
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</tr>
<tr>
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<td>50</td>
<td>142</td>
<td>108</td>
</tr>
<tr>
<td>20</td>
<td>68</td>
<td>137</td>
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</tr>
<tr>
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<td>86</td>
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<tr>
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<td>126</td>
</tr>
<tr>
<td>50</td>
<td>122</td>
<td>126</td>
<td>122</td>
</tr>
</tbody>
</table>

### Wind Corrections for Takeoff Roll Distance

- Subtract for headwind
- Add values in parentheses ( ) for tailwind

<table>
<thead>
<tr>
<th><strong>Zero Wind T/O Roll</strong></th>
<th><strong>5 Knots</strong></th>
<th><strong>10 Knots</strong></th>
<th><strong>15 Knots</strong></th>
<th><strong>20 Knots</strong></th>
<th><strong>25 Knots</strong></th>
<th><strong>30 Knots</strong></th>
<th><strong>Zero Wind T/O Roll</strong></th>
<th><strong>5 Knots</strong></th>
<th><strong>10 Knots</strong></th>
<th><strong>15 Knots</strong></th>
<th><strong>20 Knots</strong></th>
<th><strong>25 Knots</strong></th>
<th><strong>30 Knots</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>6000</strong></td>
<td>390</td>
<td>(420)</td>
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**P-28**
# MILITARY THRUST TAKEOFF

## Roll Distance, 2000 Feet Check Speed and Refusal Speed Based on an 8000 Foot Runway

### Full Internal Fuel Clean

<table>
<thead>
<tr>
<th>Air Temp (°C)</th>
<th>SL</th>
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<th>3000</th>
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## Takeoff Speed – 182 KCAS Clean, 190 KCAS with 360-Gallon External Tanks

### Full Fuel with 360-Gallon External Tanks

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## Wind Corrections for Takeoff Roll Distance

- Subtract for Headwind
- Add Values in Parentheses ( ) for Tailwind

### Zero Wind T/O Roll

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<th>10 KNOTS</th>
<th>15 KNOTS</th>
<th>20 KNOTS</th>
<th>25 KNOTS</th>
<th>30 KNOTS</th>
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<td>770 (850)</td>
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<td>1760 (2240)</td>
<td>2040 (2720)</td>
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<td>450 (480)</td>
<td>880 (970)</td>
<td>1300 (1490)</td>
<td>1670 (2030)</td>
<td>2020 (2560)</td>
<td>2350 (3120)</td>
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<td>990 (1100)</td>
<td>1450 (1680)</td>
<td>1880 (2280)</td>
<td>2280 (2890)</td>
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### Zero Wind T/O Roll (KNOTS)

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<th>15 KNOTS</th>
<th>20 KNOTS</th>
<th>25 KNOTS</th>
<th>30 KNOTS</th>
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<td>-1110 (1230)</td>
<td>1620 (1870)</td>
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<td>2940 (3910)</td>
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### Maximum Thrust Takeoff

**Roll Distance, 2000 feet Check Speed and Refusal Speed Based on 2000 ft. Runway**

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<th>FULL FUEL WITH 50-GALLON EXTERNAL TANKS - NIALI GUN CONFIGURATION</th>
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### Wind Corrections for Takeoff Roll Distance

- **Subject for Heading, Add Values in Parentheses ( ) for Tailwind**

### Zero Wind 7/0 Roll

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*G48.668*
NOTE

- ENTER CHART WITH MAXIMUM GUST VELOCITY.
T.O. 1-1C-1-17CL-1

02 MAY 1979

PILOTS'

FLIGHT CREW CHECKLIST

F-106 A/B

AIR REFUELING PROCEDURES
WITH
KC-135

F34601-76-D-1782

CHANGE
LATEST CHANGED PAGES SUPERSIDE
THE SAME PAGES OF PREVIOUS DATE

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attention of all affected Air Force personnel.

PUBLISHED UNDER AUTHORITY OF THE SECRETARY
OF THE AIR FORCE

Basic and all changes have been merged to make
this a complete publication

1 APRIL 1967

CHANGE 9 1 MAY 1978
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**INSERT LATEST CHANGED PAGES. DESTROY SUPERSEDED PAGES.**

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**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. Changes to wiring diagrams are indicated by shaded areas.

Dates of issue for original and changed pages are:

- **Original** 0.1 Apr 67 Change .5. 1 Jul 72
- **Change** 1. 1 May 69 Change .6. 1 Jun 73
- **Change** 2. 1 Dec 69 Change .7. 15 Apr 74
- **Change** 3. 30 Oct 70 Change .8. 1 May 77
- **Change** 4. 1 Jul 71 Change .9. 1 May 78

**TOTAL NUMBER OF PAGES IN THIS PUBLICATION IS 14**
CONSISTING OF THE FOLLOWING:

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**ADDITIONAL COPIES OF THIS PUBLICATION MAY BE OBTAINED AS FOLLOWS:**

USAF ACTIVITIES. - In accordance with T.O. 00-5-2.

A Change 9
YOUR RESPONSIBILITY. In accordance with AFR 60-9, the flight crew is required to use this checklist when operating the subject airplane.

HOW TO BE ASSURED OF HAVING LATEST DATA. Refer to index T.O. 0-1-1-1 for a current listing of all Air Refueling Flight Manuals, Safety Supplements, and Checklists.

TECHNICAL ORDER NUMBER. This checklist is identified by a T.O. number that is identical to that of the applicable Flight Manual except for the addition of the letters "CL" (checklist) and a suffix number indicating the crewmember to which it applies.

CONTENT. This checklist consists of air refueling procedures. The numbered items (line items) correspond to identically numbered items in the amplified procedures in Sections IV and V of the Flight Manual.

FLIGHT MANUAL. This checklist does not replace the amplified version of the procedures in the Flight Manual. To operate the airplane 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 checklists 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 under
CURRENT FLIGHT CREW AIR REFUELING CHECKLIST.
For purposes of determining the concurrency between the Flight Manual and this checklist, the latest date of a Safety Supplement or Operational Supplement affecting this checklist will be considered to represent the latest change date of the Flight Manual.

SAFETY SUPPLEMENTS AND OPERATIONAL SUPPLEMENTS. When you receive an Interim (TWX) supplement affecting your checklist, write in the appropriate information. Printed, replacement checklist pages will be made available to you as soon as possible. When you receive a Formal Supplement affecting your checklist, it will contain a corrected cut-out checklist page. A notation on the bottom inside corner of these pages will indicate that they reflect certain Safety Supplements or Operational Supplements. Note that there is not action in the checklist program that constitutes authority for discarding a Safety Supplement or Operational Supplement. Such Action is authorized only through the title page of the Flight Manual, another Safety Supplement or Operation Supplement, or T. O. 0-1-1-1.

CHANGES AND REVISIONS. When you receive a normal change or revision to your checklist, check to ascertain that it contains all outstanding Safety Supplements and Operational Supplements that affect the checklist. If it does not, add in the outstanding Interim Supplement information by hand (on Formal Supplements, you will be able to accomplish this end simply by retaining the appropriate cut-out page attached to the outstanding supplement).
BINDERS. Binders containing plastic envelopes, to hold and protect the checklist pages, are available through normal AF supply channels. The binders are available with either 15, 25, or 40 envelopes. The Air Force Stock List numbers for these binders are: 7510-766-4268, 7510-766-4269, and 7510-766-4270 respectively. Be sure to order enough binders — if you have a large checklist, you may want to carry it in two small binders instead of a single large one.

COMMENTS AND QUESTIONS. Any comments, corrections and questions should be forwarded on AF Form 847 through your Command Headquarters, and coordinating agencies indicated in the Introduction of the Flight Manual, to Commander, Oklahoma City ALC/MMSRE, Tinker Air Force Base, Oklahoma 73145.
AIR REFUELING PROCEDURES

TABLE OF CONTENTS

HOT ARMAMENT SAFETY CHECK (INFLIGHT) ........................................ AR-1
PRECONTACT ............................................................... AR-2
CONTACT ................................................................. AR-3
DISCONNECT ............................................................. AR-3
POST AIR REFUELING .................................................. AR-3
VISUAL SIGNALS ......................................................... AR-4
AIR REFUELING EMERGENCY PROCEDURES ......................... AR-5
REFUELING RECEPTACLE MALFUNCTIONS .......................... AR-5
SECONDARY HYDRAULIC SYSTEM FAILURE .......................... AR-7

HOT ARMAMENT SAFETY CHECK (INFLIGHT)

1. Armament Selector Switch – VIS IDENT
2. Armament Safety Switch – SAFE
4. Special Weapon Release Lock Indicator – LOCK
5. Armament Selection Indicator – BLANK
PRECONTACT

1. Fuel Quantity – CHECK

2. MA-1 Power Switch – RADAR STBY

3. Flight Mode Selector Switch – PITCH

4. Armament Selector Switch – VIS IDENT

5. Arm-Safe Switch – SAFE

5.A. TACAN-SET, A/A

6. IFF Mode Selector Switch – AS REQUIRED.

7. Formation-Navigation Lights Switch – FORM ON

8. Formation Lights Dimmer Switch – DIM

9. Emer Slipway Door Open Switch – NORM (guard closed)

10. Refuel Select Switch – AS REQUIRED

11. Air Refuel Switch – ON

12. Warning Lights Dimmer Switch – BRT (day), Dim (night)

13. Master Warning Light – DEPRESS (to extinguish)

14. Ready Light – ON
CONTACT

1. Contact Light – ON
2. Ready Light – OFF

DISCONNECT

1. Manual Disconnect Switch – DEPRESS
2. Disconnect Light – ON
3. Contact Light – OFF

POST AIR REFUELING

1. Air Refuel Switch – OFF
2. Warning and Indicator Lights – NORMAL
3. Fuel Quantity – CHECKED
4. MA-1 Power Switch – AS REQUIRED
5. TACAN – AS REQUIRED
6. IFF Mode Selector Switch – AS REQUIRED
7. Flight Mode Selector Switch – AS REQUIRED
8. Formation-Nav Lights Switch – AS REQUIRED
<table>
<thead>
<tr>
<th>SIGNAL</th>
<th>INDICATION</th>
</tr>
</thead>
</table>
| 1. Boom in Trail  
(a) extended 10 feet  
(b) fully extended  
(c) fully retracted | *Ready for Contact  
2. Acknowledge Receiver's Signal that EBL has been selected.  
Offload Complete |
| 2. Boom Stowed  
(a) fully retracted  
(b) extended 5 feet | Tanker Air Refueling System Inoperative  
System Malfunction, Tanker and Receiver Check Air Refueling Systems |
| 3. Tanker Lower Rotating Beacon ON/Flashing Receiver Director Lights | BREAKAWAY |
| 4. Receiver Director Lights Goin OUT During Contact | Tanker Request for Disconnect, Receiver return to Pre-contact position. |
| 5. Receiver stabilizes in pre-contact position with receptacle open, then closes and re-opens receptacle | 1. Receiver has selected EBL on refueling switch.  
| 6. **Steady Light from Receiver or rock wings | Emergency Fuel Shortage Exists |

*Receiver(s) in the observation position will move to the precontact position in their briefed sequence only after insuring that the boom is in the ready for contact position and the preceding receiver has cleared the tanker. The receiver will stabilize in the precontact position, then move to the contact position. The boom operator will not give the ready for contact signal until the preceding receiver has cleared the tanker.

**If fuel shortage occurs at times other than scheduled air refueling, the receiver should be positioned so the signal may be seen from the tanker cockpit.

AR-4 Change 6
AIR REFUELING EMERGENCY PROCEDURES

REFUELING RECEPTACLE MALFUNCTIONS

MANUAL BOOM LATCHING (CONTACT)
1. Reset/MBL Switch – MBL
3. Contact Light – ON
5. Ready Light – OFF
6. Proceed with normal refueling.

MANUAL BOOM LATCHING (DISCONNECT)
1. Manual Disconnect Switch – DEPRESS/RELEASE
2. Disconnect Light – ON
3. Air Refuel Switch – OFF
4. Warning And Indicator Lights – NORMAL
5. Accomplish Normal Post Air Refueling Checks.
READY LIGHT NOT ILLUMINATED WHEN AIR REFUEL SWITCH IS ON

1. Ready Light – PRESS-TO-TEST
2. Warning And Indicator Lights – CHECK
3. Slipway Door – CHECK POSITION (If door is closed, use secondary HYD SYSTEM FAILURE procedure)

READY AND CONTACT LIGHTS ON AFTER BOOM NOZZLE INSERTED

1. Boom Latches – LATCHED (If not latched, use MANUAL BOOM LATCHING procedure)

CONTACT LIGHT DOES NOT ILLUMINATE WHEN BOOM NOZZLE IS INSERTED

1. Have Boom Operator Verify If Nozzle Is Latched
2. If Nozzle Latched, Proceed Normal A/R.
3. If Nozzle not Latched, Rest/MBL Switch – RESET.
4. Attempt Normal Contact And Refueling.
5. If Normal Contact Not Possible, Use MANUAL BOOM LATCHING Procedure.
SECONDARY HYDRAULIC SYSTEM FAILURE

1. Flight Mode Selector Switch – YAW
2. Avoid Use Of Speed Brakes.
3. Refuel Select Switch – AS REQUIRED
4. Air Refuel Switch – ON
5. Emer Slipway Door Open Switch – EMER
6. Ready Light – ON
7. Contact Light – ON
8. Fuel Transfer – INITIATE
9. Fuel Transfer – TERMINATE
10. Air Refuel Switch – OFF
11. Accomplish Normal Post Air Refueling Checks.
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Change 2
### T.O. 1F-106A-1CL-1

#### LANDING DATA

**RECOMMENDED MINIMUM SPEEDS – KCAS**

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**NOTE:**
- Add 8 knots for missiles, gun and ammo.
- Add 6 knots for missiles and AIM-2A.
- Add 5 knots for gun with no missiles or ammo.

#### MINIMUM TOUCHDOWN OR NOSEWHEEL LIFTOFF SPEED

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- With a crosswind component below 15 knots, use minimum recommended touchdown speeds (corrected for gusts).
- With a crosswind component of 15 knots or above, compare the minimum recommended touchdown speed (corrected for gusts) with the touchdown speed for the crosswind component, and use the higher speed.
- Landing with a crosswind component of 15 knots or above is not recommended when wearing a full pressure suit.
- Normal operations with a crosswind component from 21 to 26 knots is not recommended.

*Change 2*