

COPY NO. 28

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PILOT'S

ABBREVIATED CHECKLIST

MODIFIED AIRCRAFT

7 September 1965

Changed 10 June 1966

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A

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3. Crossfeed & boost pumps - Press on
4. Pump release - Actuate
5. Tanks 1, 2, & 6 - Check on
6. Crossfeed - Press off
7. Fuel quantity - Check
8. Gear warning lights - Test
9. Ind. test - Press
10. Headset and mask - Connect (if suit not used).
11. Oxygen systems - ON (if suit not used).
12. Tape and flight recorders - ON

### STARTING ENGINES

- Check with INS crew
  2. Fuel low pressure lights - Off
  3. Engine instruments - Check
  4. Starter - Call ready for start
  5. Throttle - IDLE at rpm rise
  6. Fuel flow - Check
  7. Verify ignition within 15 seconds by continuous rpm and EGT increase
  8. EGT - Check for 540<sup>o</sup> C max
  9. Starter - Call off at 3300 rpm
  10. Idle rpm - Check 3550-3650 rpm
  11. Engine and hydraulic instruments - Normal
  12. UHF - BOTH
  13. Other engine - Use same procedure
  14. TEB counter - Check
- INS mission only

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N-5

## CLEARING ENGINE

1. Throttle - OFF
2. Starter - Crank 15 sec, then call OFF

## BEFORE TAXING

1. UHF and IFF/SIF - Check
2. IFF - As required
3. Generators - RESET at idle rpm  
(Check with INS crew before resetting)
4. Battery - BAT (within 3 sec)
5. Generator Out lights - Check off
6. INS DEST/FIX - VARIABLE DEST
7. INS Mode - NAV (Check with INS crew prior to actuating switch.) Press STORE button and check BDHI No. 2 needle for  $10^{\circ}$  Rt. DTG 122 N Mi.
8. INS - Report data when slew complete
9. INS DEST/FIX - VARIABLE FIX and STORE-FIX REJECT light on
10. INS DEST/FIX - VARIABLE DEST and STORE-FIX REJECT light off
11. INS umbilical cord - Disconnected  
(Confirmed by INS crew.)
12. External power - Disconnect
13. Forward bypass - Confirm both open
14. HF radio - ON
15. SAS channel switches - ON
16. SAS recycle lights - Press off
17. SAS light test switch - Press
18. Autopilot pitch and roll - Engage
19. Autopilot control stick disengage - Press

20. SAS channel switches - OFF
21. Surface trim - Check & set to zero
22. Control system - Check
23. Packages - As required
24. Canopy & seat pins - Remove & stow
25. Canopy - Close and lock
26. Canopy seal pressure - ON
27. Rear view mirror - Check
28. Taxi clearance - Obtain
29. Chocks and gear pins - Removed
30. Steering - Engage and check

### TAXIING

1. Brakes - Check
2. Flight instruments - Check
3. Nav eq'pt - Check TACAN, ADF, INS

### BEFORE TAKEOFF

1. Engine trim - As required
2. SAS channels - Engage
3. SAS lights - Check off
4. Surface trim - Check zero
5. Tanks 1, 2, & 6 - ON
6. INS - Check and fix as required
7. Compasses - Check and sync FRS
8. Pitot heat - On
9. Warning lights - Off (except MANUAL INLET).
10. Shoulder harness - Lock
11. BCN lights - As required

12. Flight controls - Cycle & check hydro pressure
13. Suit vent boost - NORM
14. B-W - ON

### TAKEOFF

1. Brakes - Hold
2. Elapsed time clock - Start
3. Steering - Check engaged
4. Throttles - Advance
5. Brakes - Release at 6000 rpm
6. Engine instr. - Check at MILITARY
7. Throttles - Afterburner mid-range
8. Throttles - MAX THRUST
9. Engine instr. - Check at MAX THRUST
10. Acceleration - Check
11. Rotation - Begin at computed KIAS

### AFTER TAKEOFF

1. Gear - UP
2. Throttles - Climb power
3. Engine instr. - Check
4. Surface limiter - In
5. Fuel derich - ARM

### NORMAL CLIMB

1. Airspeed - Establish climb schedule
2. Altimeter - Set 29.92 at FL 180

4. Canopy - Open
5. Igniter purge - DUMP
6. Recorders - OFF
7. Appropriate electrical switches - Off
8. Inverters - OFF
9. Battery - OFF
10. Generators - TRIP
11. Throttles - OFF
12. Seat and canopy pins - Installed

TAKEOFF AND LANDING DATA CARD

(Refer to front flap of checklist)

- . - (MOD.)

DOUBLE ENGINE FAILURE  
IMMEDIATELY AFTER TAKEOFF

1. IF GEAR IS DOWN AND CONDITIONS PERMIT - LAND STRAIGHT AHEAD.
2. IF GEAR RETRACTION HAS BEEN INITIATED OR CONDITIONS DICTATE - EJECT

AFTERBURNER NOZZLE FAILURE

Nozzle Failed Open Immediately After Takeoff

1. Throttle - AB range
2. Monitor rpm and EGT
3. Land as soon as possible

Nozzle Failed During Cruise

1. Throttle - MILITARY or below
2. Monitor rpm and EGT
3. Land as soon as possible

AFTERBURNER FLAMEOUT

1. Throttle - MILITARY
2. Throttle - AB midrange (note TEB)
3. Nozzle position - Check

If start not successful:

4. Throttle - MILITARY

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- . - (MOD.)

## INLET DUCT UNSTART

1. SIMULTANEOUSLY REDUCE ANGLE OF ATTACK, BOTH RESTARTS ON
2. BOTH THROTTLES - MILITARY
3. MAINTAIN ATTITUDE CONTROL - OPTIMIZE PITCH AND ROLL
4. AIRSPEED - ADJUST TOWARD 350 KEAS & DO NOT EXCEED MACH 3.1

If roughness not clear in 10 seconds:

5. AFT BYPASS - OPEN

When roughness clears:

6. Aft bypass - Normal schedule
7. Fwd bypass - Both Open
8. Restart - Both OFF

After inlet starts:

9. Fuel derich - Recycle below  $790^{\circ}\text{C}$  EGT if actuated.
10. Throttles - As required
11. Fwd bypass - Both AUTO

If unstarts repeat or inlet doesn't clear:

12. Engine, inlet instr, hyd press - Check
13. Repeat procedure

If unstarts persist:

14. Attempt restart and operation using manual inlet operating schedule

- . - (MOD.)

## MANUAL INLET OPERATING SCHEDULE

### Manual Spike Schedule

Accelerating - Lag Mach by 0.1

Cruising - Match Mach number

Decelerating - Lead Mach by 0.1

### Manual Bypass Schedule

Mandatory with manual spike.

Optional with auto spike and other inlet operating normally.

<u>Condition</u>	<u>Mach</u>	<u>Fwd Bypass</u>	<u>Aft Bypass</u>
Accel. & cruise	Above 1.7	Pos. 7	Pos. B
Accel. & cruise	Above 2.8	Pos. 8	CLOSED
Decel	ALL	OPEN	CLOSED

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- . - (MOD.)

AIR INLET CONTROL FAILURE

SPIKE NOT FWD light not on with SPIKE  
FWD selected

1. Check L or R hydro press normal & MANUAL INLET light on

If hydraulic failure has occurred and flight and mission conditions dictate:

2. Emergency spike switch - FWD.

Spike not scheduling or inlet spike unstable

1. Spike position ind. - Check
2. Spike - Cycle FWD then return to AUTO

If condition continues:

3. Forward bypass - Manual schedule
4. Spike - Manual schedule

As higher Mach number is reached:

5. Spike and forward bypass - AUTO.

If condition recurs or continues:

6. Operate per spike and bypass manual schedule

- . - (MOD.)

ELECTRICAL POWER SYSTEM FAILURE

SINGLE AC GENERATOR FAILURE

1. Generator - RESET

If light remains on:

2. Generator - TRIP.
3. Land as soon as possible

If flight continued:

4. Affected generator - TRIP

If EWS is operating:

5. TACAN - OFF

DOUBLE AC GENERATOR FAILURE

1. Battery - BAT
2. Generators - RESET
3. If only one generator resets - Land
4. If neither generator resets - Conserve batteries and land as soon as possible

INVERTER FAILURE

1. Failed inverter - EMER
2. Illuminated SAS lights - Press

HYDRAULIC POWER SYSTEM FAILURE

L-HYDRAULIC SYSTEM FAILURE

- a. Be prepared to use L EMER SPIKE FWD SWITCH
- b. Emergency gear extension required
- c. Use alternate brakes & NWS

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R-HYDRAULIC SYSTEM FAILURE

- a. Be prepared to use R EMER SPIKE  
FWD SWITCH

FLIGHT CONTROL SYSTEM FAILURE

FLIGHT CONTROL SYSTEM EMERGENCY  
OPERATION

If control difficulties are encountered:

1. Check A and B hydraulic pressures

If neither A or B hydraulic system has failed:

2. Disengage autopilot, check control
3. Check SAS warning lights. If SAS  
failure has occurred, see SAS Emer-  
gency Operation

A OR B HYDRAULIC SYSTEM FAILURE

1. Reduce KEAS to less than 350
2. Affected SAS yaw and pitch channels -  
OFF
3. SAS roll channels - Both Off
4. Operative roll channel - ON
5. Hyd. Res. oil - Operative system A or  
B.

A AND B HYDRAULIC SYSTEMS BOTH  
FAILED

1. EJECT

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## SAS EMERGENCY OPERATION

1. Check A and B hydraulic pressures - Normal
2. Check INVERTER OUT warning lights not illuminated
3. Proceed to appropriate Roll Axis or Pitch or Yaw Axis Failure procedure

## ROLL AXIS FAILURE

1. A or B channels - OFF then ON

If light extinguished a transient probably existed and both roll channels are engaged:

2. After light extinguishes establish momentary roll transients

If light does not extinguish or reilluminates:

3. A and B channels - OFF
4. A channel engage - ON

If no improvement is noted:

5. A channel engage - OFF
6. B channel engage - ON

## PITCH OR YAW AXIS FIRST FAILURE

1. Refer to SAS Failure Warning Lights chart
2. Recycle indicator light - Press and release

If light extinguishes:

3. Duplicate maneuver which caused light to illuminate

- . - (MOD.)

If light remains on or reilluminates:

4. Faulty channel switch - OFF
5. Decelerate to pitch or yaw axis second failure limit speed if conditions permit.
6. Evaluate damping on remaining channel

#### PITCH AXIS SECOND FAILURE

1. Airspeed - 350 KEAS maximum
2. Remain supersonic and use logic override procedures if appropriate

If conditions permit:

3. Descend
4. Forward fuel transfer - ON  
Maintain 4000 pounds in tank 1
5. Airspeed - Maintain Mach 1.3 min.  
until fuel forward transfer is complete
6. Airspeed - Slow to best subsonic cruise speed and altitude
7. Refer to BUPD emergency procedure

If BUPD cannot be used:

8. Use caution to avoid abrupt maneuvers during landing approach

#### YAW AXIS SECOND FAILURE

1. Max. airspeeds - Mach 2.5
2. Remain supersonic and use logic override procedure if appropriate

Or if conditions permit:

3. Descend
4. Airspeed - Slow to best subsonic speed and altitude for duration of flight

LANDING GEAR SYSTEM EMERGENCY  
OPERATION

RETRACTION

1. Ground retract button - Press and hold
2. Gear lever - UP

EXTENSION

1. Gear lever - DOWN
2. Emergency gear handle - PULL
3. Verify gear down and locked

If landing gear remains retracted:

4. Gear CONT c/b - PULL
5. Repeat steps 2 and 3

WHEEL BRAKE SYSTEM FAILURE

BRAKE SYSTEM EMERGENCY OPERATION

1. Brake switch - ALT STEER & BRAKES

AIR DATA COMPUTER FAILURE

1. Check TDI, airspeed and altimeter

If cross check shows TDI to be inaccurate:

2. Revert to pitot-static instruments
3. Pull MACH TRIM c/b
4. Autopilot - OFF

PITOT-STATIC SYSTEM FAILURE

1. Attempt operation on alternate source

- . - (MOD.)

2. Maintain control by use of attitude and power indicating instruments
3. Request escort aircraft

AIR CONDITIONING & PRESSURIZATION  
FAILURE

LEFT ENGINE INOPERATIVE

1. Cockpit system - CROSSOVER

COCKPIT AND SUIT OVERTEMPERATURE

1. Defog - OFF
2. Cockpit temp ind. - Check

If temp ind is too high:

3. Cockpit auto temp - Rotate to COLD

If cockpit temp remains high:

4. Cockpit temp switch - Hold in COLD

If no temperature decrease:

5. Cockpit system - CROSSOVER
6. Q-Bay system - Check ON

If suit temperature cannot be controlled:

7. Suit flow valves - OFF
8. Reduce altitude and speed

Q-BAY OVERTEMPERATURE

1. Q-Bay auto temp - Rotate to COLD

If not effective:

2. Q-bay temp control - Hold in COLD

COCKPIT DEPRESSURIZATION

If suit inflates:

1. Cockpit altitude - Check.

