

JG-1 FRITZ SCHMENKEL

DCS: MiG-21bis

Pilot's Checklist



JG1_Britchot

2/22/2018

NORMAL PROCEDURES

Power-up

1. Aircraft Armament _____ COFIGURE/VERIFY
2. PO-750 No.1 Current Converter _____ ON
3. PO-750 No.2 Current Converter _____ ON
4. Battery Heating _____ ON
5. DC Battery _____ ON
6. Voltage ($\geq 24.5V$) _____ VERIFY
7. DC Generator _____ ON
8. Fire Extinguisher _____ ON
9. Radio _____ ON/SET
10. SARPP-12 "Black Box" _____ ON
11. Navigation Lights _____ AS REQ

Engine Start

1. Fuel Pump 1st Tank Group _____ ON
2. Fuel Pump 3rd Tank Group _____ ON
3. Fuel Pump Drain Tank _____ ON
4. APU _____ ON
5. Throttle _____ UNLOCK/OPEN 1cm
6. Engine Start State _____ ENGINE START
7. Engine Start _____ PRESS (2-3s)
8. "Engine Start Up" Lamp Off _____ Verify
9. Throttle _____ IDLE
10. Low Pressure Compressor (~35%) _____ Verify
11. High Pressure Compressor (~50%) _____ Verify

Pre-Taxi

1. Gyros: NPP, SAU, Radar, and KPP _____ ON
2. Gyros: DA-200, NPP, SAU, and Radar _____ ON
3. AC Generator _____ ON
4. SPRD Jettison Switch _____ ON
5. SPRD Power Switch _____ ON
6. SPRD Jettison Cover _____ AS REQ
7. ARC _____ ON
8. Radio Alt and Marker _____ ON
9. RSBN _____ ON
10. KPP _____ ON
11. NPP _____ ON
12. SAU _____ ON

13. SAU/Pitch _____ ON
14. Trimmer _____ ON
15. Emergency Hydraulic Pumps _____ ON
16. Nosecone and Air Bleed Doors Auto _____ ON
17. SPO RWR _____ ON
18. SOD _____ ON
19. SOD Channel _____ SET
20. NPP Adjust _____ PRESS(5s)
21. Canopy _____ LOCK
22. Canopy Seal _____ SET
23. Airbrakes _____ CHECK/CLOSE
24. Flaps _____ TAKEOFF
25. Trim _____ CENTERED
26. Controls _____ FREE/CORRECT
27. Navigation Instruments _____ SET
28. Altimeter _____ SET
29. Primary and Secondary Pitot Heat _____ ON

Weapons Systems Initialization

1. RP-22 Radar Main Mode _____ Standby
2. Missile Controller Power _____ AS REQ
3. Pylon 1-2 Power _____ AS REQ
4. Pylon 3-4 Power _____ AS REQ
5. Gun Sight Power _____ ON
6. Gun Camera Power _____ AS REQ
7. SRZO-2 "IFF" _____ ON
8. SRZO-2 "IFF" _____ SET
9. ASP-PFD Pipper _____ AS REQ
10. ASP-PFD Fixed Net _____ AS REQ

Taxi

1. Taxi Light _____ AS REQ
2. Nose Gear Brake _____ OFF
3. Brake Pressure ($\geq 8kp/cm^2$) _____ VERIFY
4. Throttle _____ INCREASE
5. Brakes _____ CHECK

Takeoff

1. Landing Light _____ AS REQ

2. Nose Gear Brake _____ ON
3. Brakes _____ APPLY
4. Brake Pressure ($\geq 8\text{kp/cm}^2$) _____ VERIFY
5. Throttle _____ FULL MILITARY POWER
6. Engine Oil Pressure ($\geq 3\text{kp/cm}^2$) _____ VERIFY
7. Hydro-pressure ($\geq 170\text{kp/cm}^2$) _____ VERIFY
8. Warning Lights _____ CHECK
9. EGT ($\geq 600^\circ\text{C}$) _____ VERIFY
10. Afterburner _____ ENGAGE
11. "Nozzle Open" Lamp _____ VERIFY
12. "Emergency Afterburner Engaged" _____ AS REQ
13. Brakes _____ RELEASE
14. Rotate (250-300km/h) _____ $+4/5^\circ$ PITCH
15. Liftoff (360-380km/h) _____ $+10^\circ$ PITCH
16. Landing Gear ($\geq 10\text{m}$) _____ UP
17. Landing/Taxi Light ($\leq 700\text{km/h}$) _____ RETRACT
18. Flaps ($\geq 100\text{m}$) _____ UP
19. Climb _____ $+15^\circ$ PITCH
20. Afterburner ($\geq 600\text{m}$ and $\geq 600\text{km/h}$) _____ AS REQ
21. Landing Gear Indicator Up _____ VERIFY
22. Landing Gear _____ NEUTRAL

Intercept Regime (Full Reheat)

1. Climb (950km/h TAS) _____ PERFORM
2. Level off (10,000m) _____ PERFORM
3. Accelerate to 1,200km/h IAS _____ PERFORM
4. Climb (1,200km/h IAS to 1.9M) _____ PERFORM
5. Continue Climb (1.9M) _____ AS REQ
6. Zoom Climb (1.7-1.75M) _____ AS REQ
7. Attack _____ AS REQ
8. RTB (11,000m @ 510km/h IAS) _____ PERFORM

Intercept Regime (Combined)

9. Afterburner ($\geq 600\text{m}$ and $\geq 600\text{km/h}$) _____ OFF
10. Climb (850-870km/h TAS) _____ PERFORM
11. Level off (9,500- 10,000m) _____ PERFORM
12. Cruise to Target (530km/h IAS) _____ PERFORM
13. Climb IAW Full Reheat Regime _____ AS REQ
14. Attack _____ AS REQ
15. RTB (11,000m @ 510km/h IAS) _____ PERFORM

Landing

1. Landing Light ($\leq 700\text{km/h}$) _____ AS REQ
2. Landing Gear ($\leq 500\text{km/h}$) _____ DOWN
3. Flaps ($\leq 500\text{km/h}$) _____ TAKEOFF
4. Flaps ($\leq 380\text{km/h}$) _____ LAND
5. Approach (360-340km/h) _____ PERFORM
6. Flare ($< 340\text{km/h}$) _____ PERFORM
7. Drag Chute ($< 320\text{km/h}$) _____ DEPLOY
8. Brakes _____ AS REQ
9. Drag Chute ($< 30\text{km/h}$) _____ JETTISON
10. Nose Gear Brake _____ OFF
11. Flaps _____ RETRACT

Shutdown

1. Landing/Taxi Light _____ RETRACT
2. Throttle _____ ENGINE STOP
3. DC Battery _____ OFF
4. Switches _____ OFF

Fence In

1. Navigation Lights _____ OFF
2. RP-22 Radar Main Mode _____ AS REQ
3. RP-22 Radar Low Alt/Sidebeam _____ AS REQ
4. IR/SARH Master Arm _____ ON
5. Gsh-23 Gun Power _____ ON
6. Gsh-23 Gun Load _____ AS REQ

Fence Out

1. Navigation Lights _____ AS REQ
2. IR/SARH Master Arm _____ OFF
3. Gsh-23 Gun Power _____ OFF

Air-to-Air Guns

1. ASP Master Mode _____ AIR (UP)
2. Gun Ready Light Illuminated _____ VERIFY
3. Gsh-23 Gun Load/Reload _____ AS REQ
4. ASP-PFD Guns/Rockets _____ GUNS (UP)
5. ASP-PFD Firing/Bombing _____ FIRING (UP)
6. ASP-PFD Auto/Manual _____ AUTO (UP)
7. ASP-PFD Target Size _____ SELECT

Air-to-Air Missiles

1. ASP Master Mode _____ AIR (UP)
2. AA Missile Type _____ AS REQ
3. Pylon and Weapon Type _____ SELECT
4. ASP-PFD Guns/Rockets ____ ROCKETS (DOWN)
5. ASP-PFD Firing/Bombing _____ FIRING (UP)
6. ASP-PFD Auto/Manual _____ AUTO (UP)
7. ASP-PFD Target Size _____ SELECT

Air-to-Ground Rockets

1. ASP Master Mode _____ GROUND (DOWN)
2. Pylon and Weapon Type _____ SELECT
3. ASP-PFD Guns/Rockets ____ ROCKETS (DOWN)
4. ASP-PFD Firing/Bombing _____ FIRING (UP)
5. ASP-PFD Auto/Manual _____ AUTO (UP)
6. ASP-PFD Target Size _____ SELECT

Air-to-Ground Bombs

1. ASP Master Mode _____ GROUND (DOWN)
2. ASP-PFD Guns/Rockets ____ ROCKETS (DOWN)
3. ASP-PFD Firing/Bombing _ BOMBING (DOWN)
4. ASP-PFD Auto/Manual _____ AUTO (UP)
5. ASP-PFD Target Size _____ SELECT

Engine start up (RED)	Dispenser fuel tank (RED) (means no fuel pressure or about 80 liters remaining)
Afterburner engaged (GREEN)	Emergency afterburner engaged (GREEN)
DC generator not operational (RED)	AC generator not operational (RED)
Engine compartment in fire (RED)	Nozzle open (GREEN)
Monitor buster hydro system pressure (AMBER)	Monitor main hydro system pressure (AMBER)

Ventral fuel tank empty (GREEN)
1 st fuel tanks group empty (GREEN)
450l remaining (RED)
3 rd fuel tanks group empty (GREEN)

Marker (RED)

(on when over the one of landing NDBs). Will blink and beep marker Morse code for about three seconds.

Cone out (GREEN)

Indicates cone is operational. As a general rule, cone should be in only when landing gear is extracted.

Tail for landing (GREEN)

Indicates ARU system is set-up for low speed tail movements (max movement). If this signal is ON and you have IAS >450KM/h, your ARU system is broken.

Trimmer neutral (GREEN)

Indicates trimmer is in neutral position.

Rockets on pylon 3 in zero position (empty) (GREEN)	Wing drop tanks empty (GREEN)	Ventral fuel tank connected (GREEN)
Rockets on pylon 1 in zero position (empty) (GREEN)	Pylon 1 inner (GREEN)	Pylon 2 inner (GREEN)
Rockets on pylon 2 in zero position (empty) (GREEN)	Pylon 3 outer (GREEN)	Pylon 4 outer (GREEN)
Rockets on pylon 4 in zero position (empty) (GREEN)	JATO rocket left (GREEN)	JATO rocket right (GREEN)

Engine Relight

NOTE: Engine relight is ensured: at altitudes of 8000 to 10.000 m, from airspeed of 550 km/h up to Mach numbers of 0.9 M; at altitudes below 8000 m, from airspeed of 450 km/h up to Mach numbers of 0.9 M.

1. Throttle Lever _____ SHUT-OFF
2. Air Relight Circuit Breaker _____ ON
When LP Rotor Speed $\geq 30\%$
3. Throttle Lever _____ ON AND ADVANCE
4. Air Relight Circuit Breaker _____ OFF
5. Repeat _____ AS REQ

Compressor Surge

1. Anti-Surge Shutters _____ MANUAL (DOWN)
2. Afterburner _____ OFF
3. Airspeed _____ REDUCE
When surge ceases:
4. Anti-Surge Shutters _____ AUTO (UP)
5. Throttle Lever _____ AS REQ