

# PREFLIGHT CHECKS

- If required, tell Chief to PLACE the WHEEL CHOCKS.
- Armament switches.....OFF
- Throttle.....OFF
- Speed brake switch.....NEUTRAL
- Landing gear handle.....DOWN
- Engine master, emergency ignition, battery switches.....OFF
- Tell Chief to turn GROUND POWER ON.
- Landing gear position indicators.....CHECK
- Oxygen regulator.....CHECK
- Anti-G suit regulator valve.....CHECK
- Left circuit breakers.....IN
- Ammunition compartment heat emergency shutoff handle.NORMAL
- Cockpit air temperature control switch.....AUTO
- Air outlet selector lever.....FLOOR
- Cockpit air temperature control rheostat.....AS DESIRED
- Cockpit pressure schedule switch.....2.75 PSI
- Cockpit pressure control switch.....PRESS
- Windshield anti-icing lever.....OFF
- Rudder trim switch.....OFF
- Lateral alternate trim switch.....NORMAL
- Longitudinal alternate trim switch.....NORMAL GRIP CONT
- Flight control switch.....NORMAL
- Drop tank selector switch.....ALL TANKS OFF
- Wing flap lever.....UP
- Emergency fuel switch.....OFF
- Emergency jettision handle.....IN

# PREFLIGHT CHECKS

- Landing and taxi light switch.....OFF
- Pitot heat switch.....ON ⇒ OFF
- Engine anti-ice and screen switch.....EXTEND
- Clock, accelerometer.....SET
- Altimeter.....SET QFE
- Fuel quantity.....CHECK
- Totalizer.....SET
- Directional indicator.....CHECK AGAINST STAND-BY COMPASS
- Attitude indicator.....CHECK
- Vertical velocity indicator.....SET
- Generator switch.....ON
- Canopy alternate emergency jettision handle.....IN
- Flight control emergency override handle.....IN
- Lighting controls.....AS REQUIRED
- Communication equipment switches.....AS REQUIRED
- Landing gear emergency release handle.....IN
- Canopy declutch handle.....IN
- Sight mechanical caging lever.....CAGE
- Instrument power switch.....ALTERNATE ⇒ NORMAL
- Warning lights and indicators test warning system.....CHECK
- Flight controls.....CHECK
- Normal trim switch.....CHECK
- Radio compass.....CHECK
- Canopy.....CLOSE

# ENGINE START

- Radio **ATC** and **REQUEST START-UP**.
- Engine master switch.....**ON**
- Battery starter switch.....**STARTER** ⇒ **BATTERY**
- At 3% RPM.....**THROTTLE OUTBOARD**
- At 6% RPM.....**THROTTLE IDLE**
- Engine.....**CHECK**
  - EGT.....**600 – 690°C**
  - Oil pressure.....**CHECK**
  - Fuel flow.....**500 – 800 lbs/h**
  - Engine RPM.....**30 – 38%**
  - Generator warning light.....**OUT**
- Drop tank selector switch.....**SET**
  - External tanks inboard.....**INBD ON & JETT**
  - External tanks outboard.....**OUTBD ON & JETT**
  - No external tanks.....**ALL TANKS OFF**
- Tell **Chief** to turn **GROUND POWER OFF**.

## WARNINGS

- **Abort start** by depressing **STOP-STARTER** button if
  - Voltage drops **below 15 V** during start
  - EGT fails to increase within 5 sec
  - Engine RPM does not reach **23%** within 1 minute
- Starter is limited to 3 starts during 30 minutes.
- **Overtemperature** conditions:
  - **950°C** for 2 sec during engine start.
  - **690 – 750°C** for 40 sec or more.
  - **750 – 800°C** for 10 sec or more.
  - **800 °C** for 2 sec or more.

# SYSTEM GROUND CHECKS

- Throttle.....IDLE
- Hydraulic pressure gage selector.....NORMAL
- Flight control switch.....RESET
- Alternate-on warning light.....OUT
- Flight control normal hydraulic system.....CHECK
  - Flight control switch.....NORMAL
  - Move control stick.....PROPER CONTROL SURFACE MOTION
  - Pressure after 5 sec.....2850 – 3200 PSI
- Flight control alternate hydraulic system.....CHECK
  - Flight control switch.....ALTERNATE ON
  - Alternate-on warning light.....ON
  - Move control stick.....PROPER CONTROL SURFACE MOTION
  - Pressure after 5 sec.....2550 – 3200 PSI
  - Flight control switch.....RESET
  - Alternate-on warning light.....OUT
- Flight control manual emergency override system.....CHECK
  - Hydraulic pressure gage selector switch.....ALTERNATE
  - Flight control switch.....HOLD AT RESET
  - Emergency override handle.....PULL TO FULL EXTENSION
  - Move control stick.....PROPER CONTROL SURFACE MOTION
  - Flight control switch.....NORMAL
  - Alternate-on warning light.....ON
  - Pressure.....3050 – 4000 PSI
  - Emergency override handle.....IN
  - Pressure.....2550 – 3200 PSI

## SYSTEM GROUND CHECKS

- Automatic return to normal flight control system.....**CHECK**
  - Control stick.....**MOVE RAPIDLY**
  - Alternate-on warning light.....**OUT**
  - Hydraulic pressure gage selector switch.....**NORMAL**
  - Pressure.....**2550 – 3200 PSI**
- Utility hydraulic system.....**CHECK**
  - Hydraulic pressure gage selector switch.....**UTILITY**
  - Speed brakes switch.....**OUT ⇒ IN ⇒ NEUTRAL**
  - Pressure.....**~3000 PSI**
  - Hydraulic pressure gage selector switch.....**NORMAL**
- Loadmeter and voltmeter.....**CHECK**
- Perform emergency fuel system check if required.
- If required, tell **Chief** to **REMOVE the WHEEL CHOCKS**.

## EMERGENCY FUEL SYSTEM CHECK

- Toe brakes.....**HOLD**
- Throttle.....**80% RPM**
- Emergency fuel switch.....**ON**
- Throttle - advance cautiously to .....**FULL OPEN**
- Emergency fuel switch.....**OFF**
- Emergency fuel switch.....**ON**
- Observe recovery time and stabilized RPM.
- Emergency fuel switch.....**OFF**

## TAXI

- Radio **ATC** and **REQUEST** permission to **TAXI TO RUNWAY**.
- Nose wheel steering button.....**DEPRESS**
- Throttle.....**70% RPM ⇒ 65% RPM**
- Turn and slip indicator.....**CHECK PROPER DEFLECTION**
- Radio compass.....**CHECK RELATIVE BEARING**

## BEFORE TAKE-OFF

- Hold at runway line.
- Armament switches off.....CHECK
- Trim for take-off.....CHECK
- Wing flap lever.....DOWN
- Canopy switch.....CLOSE
- Pitot heat.....ON
- Oxygen regulator diluter valve.....NORMAL OXYGEN
- Engine anti-ice and screen switch.....RET ⇒ EXTEND
- Radio ATC and REQUEST permission for TAKE-OFF.

## TAKE-OFF

- Roll to runway centerline.
- Toe brakes.....HOLD
- Nose wheel steering button.....DEPRESS
- Throttle.....FULL
- At 50 KIAS.....NWS RELEASE
- At 110 KIAS.....ROTATE
- At 125 KIAS.....TAKE-OFF

## AFTER TAKE-OFF

- Landing gear handle.....UP
- Initial climb: hold airspeed below 120-125 KIAS.
- Level off and accelerate to best climb speed.
- Horizontal tail trim.....AS REQUIRED
- Engine anti-ice switch.....RETRACT
- At 155 KIAS wing flap lever.....UP

# LANDING

- Armament switches.....OFF
- Gun sight caging lever.....CAGE
- Engine anti-ice switch.....EXTENT ⇒ ANTI-ICE IF REQUIRED
- Speed brake switch.....OUT
- Landing gear handle.....DOWN
- Flap lever.....DOWN
- Final approach speed.....135 KIAS
- Touchdown speed.....110 KIAS

## GUNS

- Gun-missile selector.....**SIGHT CAMERA & RADAR**
- Gun selector switch.....**ALL GUNS**
- Twist throttle grip for radar ranging.....**COUNTER CLOCKWISE**
- Sight mechanical caging lever.....**UNCAGE**
- Sight function selector lever.....**GUN**
- Target speed switch.....**LO or HI**
- Gun-missile selector.....**GUNS**
- Wing span adjustment knob.....**SET TARGET WING SPAN**
- Sight electrical caging button.....**DEPRESS and HOLD**
- Target indicator light comes ON at range of ~4800 ft (1500 m)
- Sight electrical caging button.....**RELEASE.**
- Pull trigger to second detend when ready to fire.

## ROCKETS

- Gun-missile selector.....**SIGHT CAMERA & RADAR**
- Rocket intervalometer.....**1 or 9 for droptanks**
- Twist throttle grip for radar ranging.....**COUNTER CLOCKWISE**
- Sight mechanical caging lever.....**UNCAGE**
- Sight function selector lever.....**ROCKET**
- Rocket depression angle lever
  - Dive angle  $<20^{\circ}$  and firing range 5000-6000 ft .. **35-40 mil**
  - Dive angle  $30-40^{\circ}$ .....**25-35 mil**
- Rocket release selector switch.....**AUTO or SINGLE**
- Rocket jettison switch.....**OFF**
- Rocket fuze delay switch.....**INSTANT or DELAY**
- Sight electrical caging button.....**DEPRESS and HOLD**
- Keep reticle on target and elec. caging button.....**RELEASE**
- Continue smooth target tracking for 3 sec then fire.



## BOMBS USING SIGHT

- Gun-missile selector.....**SIGHT CAMERA & RADAR**
- Sight mechanical caging lever.....**UNCAGE**
- Demolition bomb release selector switch.....**AUTO or MANUAL**
- Demolition bomb sequence selector switch.....**AS REQUIRED**
- Fragmentation bomb selector switch.....**OFF**
- Sight function selector lever.....**BOMB**
- Bomb arming switch.....**NOSE & TAIL or TAIL**
- Sight electrical caging button.....**DEPRESS and HOLD**
- Push over into dive. Keep reticle center dot on target.
- Sight electrical caging button.....**RELEASE**
- **AUTOMATIC** release:
  - Keep reticle on target during dive.
  - Depress and hold release button.
  - Fly a curved path by increasing pitch steadily.
  - Automatic release when reticle circle disappears.
- **MANUAL** release:
  - Keep reticle on target during dive.
  - Calculated release point when reticle dot disappears.
  - Depress bomb release button.

## AIR-TO-AIR MISSILES

- Weapon selector.....**MISSILE**
- Sight mechanical caging lever.....**UNCAGE**
- Missile launch mode button.....**RH or AS REQUIRED**
- Missile volume knob.....**AS REQUIRED**
- Sight electrical caging button.....**DEPRESS and HOLD**
- When in range - sight electrical caging button.....**RELEASE.**
- Listen to missile ready tone.
- Pull and hold trigger to second detend until missile away.