

21 Sep 2010

Flying Operations

FLIGHT CREW CHECKLIST

Mi-8MTV/Mi-17 AIRCRAFT CHECKLIST

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This checklist establishes procedures for the operation of Mi-8MTV/Mi-17 aircraft. This checklist is applicable to all subordinate AFSOC flying units, AFSOC-gained ANG flying units and AFRC units under AFSOC oversight that operate the Mi-8MTV/Mi-17 aircraft. This checklist compliments AFSOCI 219, Vol 3, *Additional Aircraft Operations Procedures*, and is printed on standard 8 1/2" x 11" bond paper then trimmed to a unique size 4 1/2" x 6 1/2" that will fit the standard plastic aircrew checklist binders. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located at <https://www.my.af.mil/gcss-af61a/afirms/afirms/rims.cfm>.

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NORMAL PROCEDURES

BEFORE EXTERIOR INSPECTION

1. Aircraft Forms – Checked
2. Chocks – In place
3. Grounding wire – Stowed
4. Blade tie-downs – Removed
5. Fire extinguisher – In place
6. Before Exterior Inspection Checklist – COMPLETED

EXTERIOR INSPECTION (BOTTOM)

1. Battery compartment – Checked and Closed
2. Windows and movable blisters – Checked
3. Pitot static tubes – Checked
4. Nose landing gear strut and tires – Checked
5. KO-50 heater and RH fuel tank – Checked

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6. RH main landing gear strut and tires – Properly charged:
 - a. 240 mm empty
 - b. 90 ± 20 mm at 11100kg
 - c. 68 ± 20 mm at 13000kg
 - d. Tire deflection < 68mm
7. Main rotor blades – Checked
8. Intermediate and tail rotor gearbox oil levels tail rotor hub and blades – Checked
9. Tail boom, pylon attachment, stabilizer and tail skid – Tape undamaged
10. Cargo doors – Secured for flight
11. LH main landing gear strut and tires – Properly charged (same as 6.)
12. LH fuel tank – Checked
13. Inert gas system bursting disk – Checked
14. Crew entrance door – Normal operation

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15. Hoist – Checked

16. Exterior Inspection (Bottom) Checklist – COMPLETED

INTERIOR INSPECTION

1. Portable fire ext – Checked

2. Load – Secured and in CG limits

3. Inert gas system – Checked (If installed)

4. Emergency escape hatches – Secure for flight

5. Tail-boom interior – Checked

6. Interior Inspection Checklist – COMPLETED

EXTERIOR INSPECTION (TOP)

1. Covers and plugs – Removed and Stowed

2. Starboard engine – Checked

a. Inspect dust protection device

b. Inlet section and compressor blades

c. Engine driven fuel pump

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- d. Engine temp sensing probe
 - e. RPM tach generator
 - f. Oil filler cap (Tight and safe-tied)
 - g. Oil tank capacity (Min. 8 ltrs/Max. 11 ltrs)
 - h. Fuel control unit (No leaks, control rods secured and no excessive play)
 - i. Engine general condition
3. Main gearbox area (Starboard) – Checked
- a. Oil cooler area
 - b. Main gearbox oil level
 - c. Air compressor (Properly attached/no leaks)
 - d. Auxiliary hydraulic pump (No leaks)
 - e. Main/Aux fire bottles (100-115 kgf/cm²)(40-50kgf/cm² if filled with Halon)
 - f. Rotor brake (General condition)
 - g. Hydraulic system reservoirs fluid level

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h. Hydraulic damper compensation tank (Between upper and lower mark)

i. T/R control cables (Free from obstructions)

4. APU – Checked

a. Air intake unobstructed

b. Oil level

c. No oil or fuel leaks

d. Exhaust not obstructed

5. Main rotor system – Checked

a. Top of the tail boom (Lights, antennas horizontal stabilizer) – Checked

b. Main rotor hub – Checked

c. All hinges (Flap, feather, drag) – Checked

d. Oil beakers (Undamaged and no water contamination) – Checked

e. Pitch links (Check wire locked and torque seal, no excessive play) – Checked

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- f. Drive link (No excess play/no damage) – Checked
- g. Main rotor blades – Checked
- h. Anti-icing electrical connections – Checked
- 6. Main gearbox area (Port) – Checked
 - a. AC Gen (#1 rear & #2 front, proper attachment)
 - b. Main hydraulic pump (No leaks)
 - c. Main rotor rpm tach generator
 - d. Oil cooler fan (Temperature sensor for EER indicating system)
- 7. Port engine
 - a. Inspect dust protection device
 - b. Inlet section and compressor blades
 - c. Engine driven fuel pump
 - d. Engine temp sensing probe
 - e. RPM tach generator

- f. Oil filler cap (Tight and safe-tied)
 - g. Oil tank capacity (Min. 8 ltrs / Max 11 ltrs)
 - h. Fuel control unit (No leaks, control rods secured and no excessive play)
 - i. Engine general condition
- 8. Main gearbox and engine access panels – Secured
 - 9. Overhead hatch – Closed
 - 10. Exterior Inspection Checklist (Top) – COMPLETED

COCKPIT AREA INSPECTION

- 1. Emergency crash axe – Available
- 2. Pilots and Flight Engineer seats – Checked
- 3. Instruments – Checked condition
- 4. Circuit breakers – SET
- 5. Stopcocks – CLOSED
- 6. All switches – OFF (from left to right)

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7. Hydraulic system – Both ON
8. Fuel crossfeed – ON
9. Fuel bypass – OFF
10. Batteries – CHECKED and Both ON (Check voltage)
 - a. DC selector switch – BATT BUS >24v
 - b. External power selector – OFF
 - c. DC selector switch – BATT 1
 - d. Batt #2 – OFF
 - e. Fuel booster pump – ON >24v
 - f. DC selector switch – BATT 2
 - g. Batt #2 – ON >24v
 - h. Batt #1 – OFF
 - i. Fuel booster pump – OFF
 - j. Batt #1 – ON
 - k. DC selector switch – BATT BUS

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11. AC Selector Switch – 115 VAC
12. Caution light test – Checked
13. Flashing caution light test – Checked
14. Fire protection system – CHECKED
 - a. Fire ext system circuit breaker – ON
 - b. Selector knob – OFF
 - c. Fire ext switch – DETECT
 - d. Squib switch – Check I and II (No lights)
 - e. Selector knob to – TEST (Fire detect test light “ON”)
 - f. Selector knob – Test all 6 channels
15. Fire Ext selector knob – OFF
16. Fuel quantity – Checked
17. Batteries – Both OFF
18. DC selector knob – OFF
19. Cockpit Area Inspection – COMPLETED

BEFORE STARTING ENGINES

(* items may be omitted during through flight)

1. Overhead hatch – “CLOSED” (FE)
2. Harnesses – “FASTENED & CHECKED” (P, CP, FE)
3. Engine Control levers – “CHECKED & DETENT” (P)
4. Collective – “FULL DOWN” (P)
5. Collective friction – “ADJUSTED” (P)
6. Throttle – “FULL LEFT” (P)
7. Throttle friction – “ADJUSTED” (P)
8. Cyclic – “NEUTRAL” (P)
9. Wheel brakes – “RESET” (31-34 kgf/cm²) (P, FE)
10. Tail rotor pedals – “ADJUSTED” (P, CP)
11. Battery switches – “BOTH ON” (FE)
12. DC selector knob – “BATT BUS” (FE)
13. 36v Inst transformer – “MAIN” (FE)

14. External power – “Connected” (As required) (FE, Ground)
15. Electrical system – “Set” (As required) (FE)
16. BATT Power Start
 - a. Inverter – “MANUAL” (115 VAC)
17. AC EXT Power (Only is using external power)
 - a. AC selector knob – “EXT PWR”
 - b. Ext Power switch – “ON” (Voltage 204v)
 - c. Rectifiers 1, 2 & 3 – “ON” (Voltage 27 + 3v)
 - d. Inverters – “AUTO” (36 & 115 VAC)
18. DC EXT Power (Only if using external power)
 - a. DC selector knob – “EXT PWR”
 - b. Ext Power switch – “ON” (Voltage 27 + 3v)
 - c. Rectifiers – “All OFF”
 - d. Inverter – “MANUAL” (115 VAC)

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19. Intercom – “CHECKED” (P, CP, FE, Lt, Rt)
 20. *Vibration indicator – “CHECKED” (FE, P)
 21. *PTIT indicator – “COLD TEST” (FE, P)
 22. Flight data recorder – As required (FE)
 23. *Voice warning – As required (FE)
 24. *Voice recorder – As required
 25. Fire protection system – “FIRE EXT” (FE, P)
 26. Fuel pumps: Service/Left/Right – “THREE ON” (FE, CP)
- NOTE:** Turn off Left/Right Pumps for battery start.
27. Fuel fire shutoff valves – “BOTH OPEN” (FE, CP)
 28. Fuel quantity – “CHECKED” (FE)
 29. Pitot heat – As required (P, CP)
 30. Landing & search lights – “CHECKED OFF” (P, CP)
 31. Before starting engines checklist – “COMPLETED”

STARTING APU

1. Radio call – “COMPLETED” (P)
2. Reserve generator – “OFF” (FE)
3. APU start selector switch – “START” (FE, CP)

NOTE: For APU start w/battery – 115v Inverter “OFF”.

4. Stopwatch – “STARTED” (CP)
5. Start button – Depress (2-3 sec) (FE)
 - a Auto control light – On
 - b Rise of EGT within 9 sec (Max. 880C)
 - c. Oil pressure normal light – On
 - d. Battery/Ext power voltage <18v for 1 sec
 - e. Normal speed light – On (within 20 sec)
 - f. Auto control light – Off (within 30 sec)
6. APU – “STABALIZE 1 MINUTE” (FE)
7. 115v Inverter – “MANUAL” (Batt or DC Ext Pwr) (FE)

8. "AUTO" (for AC Ext Pwr) (FE)

NOTE: Abort if any of the following conditions occur:

- a. EGT does not rise within 9 seconds.
- b. Battery/Ext power voltage drops below 18V.
- c. EGT rises above 880C.
- d. Max speed light on.
- e. Auto control light continues to illuminate after 30 seconds.
- f. Fire warning light on.

NOTE: In case of aborted start the APU should be cold cranked before restart (Ref Additional Checklists).

NOTE: Observe these limits for successive APU Starts.

- a. 3 starts with 3 min cool down in between.
- b. After 3rd start, 15 minute cool down.
- c. Only 10 starts w/ Batt observing above limits.

9. APU idle check – “COMPLETE” (FE)

- a. Temp < 720 degrees C
- b. Oil pressure normal light
- c. Normal speed light
- d. Air pressure within limits

10. Starting APU checklist – “COMPLETED” (FE)

STARTING ENGINES

FIRST ENGINE

- 1. Anti-collision light – “ON” (FE)
- 2. APU EGT – “CHECKED” (FE)
- 3. APU AIR PRESSURE – “Within Limits” (FE)
- 4. Start selector switch – “LEFT” or “RIGHT” As required (FE)
* Leeward Engine 1st*

CAUTION: If PTIT rises above limits during start, initiate shutdown using the stopcock. DO NOT PRESS THE STOP BUTTON IMMEDIATELY!

5. Start/Crank switch – “START” (FE)
6. Rotor brake – “RELEASED” (FE)
7. Area – “CLEAR” (P, CP, Ground)
8. Stop watch – “START” (CP)
9. Start button – Depress (2-3 sec) (FE)
10. Stopcock – “OPEN” (FE)
 - a. NTK rise within 3 seconds
 - b. Rotor engaged: 20-25% NTK
 - c. Rise of PTIT Max 780 C
 - d. Battery/EXT PWR voltage (>18V)
 - e. Oil pressure rise in engine
 - f. Main gearbox oil pressure (Above 0.5 kgf/cm²)
 - g. Start line air pressure (Within Limits)

- h. Hydraulic system pressure
- i. Starter OFF (60-65% NTK) – APU bleed air cycle should not exceed 45 seconds
- j. Auto control light OFF (30 seconds)
- k. NTK attain idle speed (Before 60 sec)
- l. Rotor with 1 engine at idle: 40-55%

NOTE:

At 45% NTK, eng oil press should be >1 kgf/cm².

If eng start aborted, cold cranked the engine (ref Engine Abort/Cold Crank checklist).

“EER OFF” light may come on during start until 60% NTK (If EER switch on Governor panel is ON).

- 11. APU – “STABALIZE 1 MINUTE” (FE)

SECOND ENGINE

CAUTION: If PTIT rises above limits during start, initiate shutdown using the stopcock. DO NOT PRESS THE STOP BUTTON IMMEDIATELY!

12. APU EGT and AIR PRESSURE – “Within limits” (FE)
13. Start selector switch – “RIGHT” or “LEFT” As required (FE, CP)
14. Stop watch – “STARTED” (CP)
15. Start button – Depress (2-3 sec) (FE)
16. Stopcock – “OPEN” (FE)
 - a. NTK rise within 3 seconds
 - b. Rotor engaged: 20-25% NTK
 - c. Rise of PTIT Max 780 C
 - d. Battery/EXT PWR voltage (>18V)
 - e. Oil pressure rise in engine
 - f. Main gearbox oil pressure (Above 0.5 kgf/cm²)

- g. Starter OFF (60-65% NTK) – APU bleed air cycle should not exceed 45 seconds
- h. Auto control light OFF (30 seconds)
- i. NTK attain idle speed (Before 60 sec)
- j. Rotor with 1 engine at idle: 40-55%

NOTE:

At 45% NTK, eng oil press should be >1 kgf/cm².

If eng start aborted, cold cranked the eng (ref Engine Abort/Cold Crank checklist).

“EER OFF” light may come on during start until 60% NTK (If EER switch on Governor panel is ON).

- 17. APU – “STABALIZE 1 MINUTE” (FE)
- 18. Reserve (standby) generator – As required (FE)
- 19. Equipment Test Switch – As required (FE)
- 20. Fuel pumps – “THREE ON” (FE, CP)

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21. Idle speed parameters – “CHECKED” (FE)

- a. NTK – “Within Limits”
- b. PTIT – “Within Limits”
- c. Engine oil pressure – “>2 kgf/cm²”
- d. MGB Oil Pressure – “>0.5 kgf/cm²”
- e. Rotor – “45-65%”

NOTE: Abort start of either engine if any of the following conditions occur:

NTK fails to accelerate or hangs for more than 3 seconds.

PTIT fails to rise or rises above computed temp.

Non engagement of rotor within 20-25% NTK.

No oil pressure in engine or below 1 kgf/cm² below 45% NTK.

No oil pressure in MGB.

Collective spontaneously moves up and no hydraulic pressure.

Voltage drop below 18V for more than 1 second.

Starter fails to disengage at 60-65% NTK (starter on light).

Engine fails to gain idle rpm within 60 seconds.

Engine oil pressure less than 2 kgf/cm² at idle.

MGB oil pressure less than 0.5 kgf/cm² at idle.

A necessity arises to shut down the APU.

Signal to shutdown from ground crew.

21. Starting engines checklist – “COMPLETED” (FE).

AFTER START

(*May be omitted during through flight)

1. Engine & MGB – “CHECKED” (FE)
2. Flight controls – “CHECKED” (P)
3. *Hydraulic system – “CHECKED” (P)
 - a. Main system switch – OFF Then ON
 - b. Check aux system takes over

- c. Pressure within limits (45+/-3 to 65 +8/-2)
- d. Red aux warning light – ON
- e. Audio warning
- f. Check controls for smooth operation
- g. Aux system – OFF
- h. Check main system takes over
- i. Check controls for smooth operation

NOTE: If AC external power is used turn off rectifiers prior to throttles full right.

4. Throttle – “FULL RIGHT” (within 3 seconds)

5. *ENGINE PARTIAL ACCELERATION
CHECK – “Checked” (P, FE)

- a. Throttle – FULL RIGHT, note NTK
- b. Throttle – FULL LEFT
- c. Throttle – FULL RIGHT (in 1-2 secs)

- d. Acceleration time to 1-1.5% below noted NTK should not exceed 3-6 secs
- e. PTIT – Not to exceed limits on fig 3.4 in manual

**6. ENGINE ELECTRONIC REGULATOR
CHECK – “CHECKED” (P, FE)**

For TB3-117MT Engines with PIIP-3AM Gov

CAUTION: If the main rotor overspeeds above $118 \pm 2\%$ the engines power limit governor shuts down the engine and the amber overspeed light illuminates. After replacement of engine and during 100-hour maintenance check: In order to functionally check the PIIP-3AM actuator it is allowed to shut down the engine by resetting the FT Test Switch from FT1 to FT2 (or vice versa) without switching off engine power limit governor.

- a. Engine Throttle – FULL LEFT
 - b. T.O. Power Circuit Breaker – ON
 - c. Left & Right engine gov switch – ON
 - d. Test switch – FT1
 - e. Throttle – FULL RIGHT
- (1) Overspeed Lts illum(left & right) at $91.5 \pm 2.5\%$

- f. Test switch – OPERATE
 - (1) Overspeed lts illum
- g. Throttle – FULL LEFT
- h. Left & Right engine gov switch – OFF
 - (1) Overspeed lts off
- i. Left & Right engine gov switch – ON
- j. Test switch – FT2
- k. Throttle – FULL RIGHT
 - (1) Overspeed lts illum (left & right) at 91.5+2.5%
- l. Test switch – OPERATE
 - (1) Overspeed lts illum
- m. Throttle – FULL LEFT
- n. Left & Right engine gov switch – OFF
 - (1) Overspeed lts off
- o. Left & Right engine gov switch – ON

For TB3-117BM Engines with ЭРД-3BM Gov

- a. Engine Throttle – FULL LEFT
- b. Left and Right engine gov switch – ON
- c. Test switches (Left & Right Engines) – FT1
- d. Throttle (at min main rotor pitch) – FULL RIGHT
- e. ECLs – Manipulate separately (Left engine then Right engine to increase MR)
 - (1) Overspeed lts illum (left then right) at 96+2%
- f. ECLs – Retard 5-7% / no lower than 88%
 - (1) L or R Overspeed lts illum
- g. Test Switches – OPERATE
 - (1) Overspeed lts off
- h. Repeat test with Test Switches in FT2

i. On Completion, Test Switch – OPERATE

CAUTION: If during the test Overspeed Lights fail to illuminate or flicker, do not continue operation of engine with the governor.

7. AC generators – “BOTH ON” (FE)
8. Rectifiers 1, 2 & 3 – “ON” (FE)
9. Equipment test switch – “OFF” (FE)
10. Reserve generator – “OFF” (FE)
11. External power switch (AC/DC) – “OFF” (FE)
12. External Power – “DISCONNECT” (FE, Ground)
13. Inverters (36 & 115 Vac) – “AUTO” (FE)
14. APU – “OFF” (FE)
15. Chocks – “REMOVE” (FE, Ground)
16. After start checklist – “COMPLETED” (FE)

BEFORE TAXI

(* May be omitted during through flight)

1. *PTIT indicator – “HOT TEST” (80-130c) (FE)

2. Flight data recorder – “AUTO” (P, FE)
 3. *Voice warning – As required (FE)
 4. *Voice recorder – As required (FE)
 5. Captain’s Gyro horizon – “CAGED” (P)
 6. Erecting cutout switch – “ON” (P)
 7. Tail rotor pitch limiter – “ON” (P)
 8. Anti-icing – As required (P, FE)
 9. Fire protection system – “FIRE EXTING” (FE, P)
 10. Fuel pumps: Service/Left/Right – “THREE ON” (FE, CP)
 11. ADF radio – As required (FE, CP)
 12. Co-Pilot’s gyro horizon – “CAGED” (CP)
 13. Compass system – “ON” (CP)
- NOTE:** < 0 C OAT Comp Sys Heat – ON, if installed.
14. Tail rotor pitch limiter – “ON” (P, FE)

15. *Tail rotor pitch limiter – “CHECKED” (FE)

- a. Tail Rotor Pitch Limiter Switch
- b. Pitch Limiter Off Light – OFF
- c. Off Light button – Depress & hold
- d. P – t Switch – “P”, then release switch & button
- e. Null indicator – Moves left, then back to center
 - (1) Repeat for Switch to “t” (moves right)
- f. Off Light button – Depress and hold
- g. Test knob – Turn until indicator full right
- h. Pitch Limiter Switch – OFF
- i. Null indicator – Resets to full left
- j. Pitch Limiter Switch – ON
- k. Off Light button – Depress and hold
- l. Test knob – Adjust indicator to center

16. Comm radio – “ON” (P, CP, FE)

17. Doppler – As required (CP)
18. 5.5Vac switch – As required (CP)
19. Aircraft lighting – “ON” (FE)
20. Instrument heating – As required (FE)
21. Autopilot – “CHECKED & OFF” (FE)

CAUTION: Move the pedals and control stick smoothly and not more than + 50mm from the neutral position.

- a. AP CB, Comp System, Copilot Gyro Horizon – ON
- b. AP Channels (green “armed” lights) – All OFF
- c. Yaw Channel Input – Check
 - (1) ‘3K’ switch on compass panel - left then right
 - (2) Y scale indicator (SI) rotates opposite sw mov’t
- d. Roll Channel Input – Check
 - (1) Cyclic – Deflect left then right
 - (2) Roll SI rotates opposite cyclic mov’t

e. Pitch Channel Input – Check

(1) Cyclic – Deflect forward then backward

(2) Roll SI rotates opposite cyclic mov't

f. ALL AP shutoff buttons – Check

(1) Y, P/R & Alt Channels – ON (3 green lts)

(2) Pilot AP shutoff button (cyclic) – Press

(3) Y and P/R channels – OFF

(4) Repeat for Copilot

(5) Collective friction release button – Press

(6) ALT channel – OFF

(7) Repeat for Copilot

g. Y, P/R & Alt Channels – ON (3 green)

h. Y, P, R & A Null Indicators (NI) – w/in ± 1 bar width

i. P/R Servo – Check

(1) Cyclic – Deflect fwd & right

(2) NI (Roll/Pitch) Banks right/Deflects down

(3) Cyclic – Deflect rearward & left

(4) NI (Roll/Pitch) – Banks left/Deflects up

j. Yaw Servo – Check

(1) Yaw adjustment knob – Push & turn to left

(2) SI (Yaw) – Rotates left

(3) NI (Yaw) – Deflects left

(4) Left Pedal – Displaces fwd

(5) Yaw pedal micro switches – depress w/feet

(6) Pedals – Centered

(7) NI (Yaw) – Centered

(8) Yaw channel light – Remains ON

- (9) Repeat for right axis

CAUTION: Ensure collective firmly held during altitude channel test.

k. Altitude (collective) Servo – Check

- (1) Alt test switch – Push UP
- (2) NI (Alt) – Deflects UP
- (3) Helicopter – ‘Jumps’ UP
- (4) Collective – Add 1 degree pitch
- (5) Alt test switch – Push DOWN
- (6) NI (Alt) – Deflects DOWN
- (7) Helicopter – Drops DOWN

23. *Before taxi checklist – “COMPLETED” (FE)

TAXI CHECK

- 1. Engines & gearbox – “CHECKED” (FE)

2. Radar altimeter – “ON” (P, CP)
3. Autopilot – “OFF” (Pitch/Roll and Yaw channels) (FE)
4. Doors & windows – “SECURE” (P, CP, Rt, Lt)
5. Chocks – “REMOVED & STOWED” (Rt)
6. Cargo Compartment – “READY FOR TAXI” (Rt, Lt)
7. Brakes – “CHECKED” (P)
8. Taxi checklist – “COMPLETED” (FE)

BEFORE TAKEOFF

(*Completed for multiple approaches in terminal area)

1. *Crew and Passengers – “BRIEFED” (P, CP)
2. Fuel selector – “SERVICE” (FE)
3. *Fuel pumps – “THREE ON” (FE, CP)
4. Transponder – “ON” (FE, CP)
5. *Engine and gearboxes – “CHECKED” (FE)
6. *Autopilot – “ON” (FE)

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7. *Cargo Compartment – “SECURE” (FE, Rt, Lt)
8. *Brakes – As required (state “On” or “Off” and line pressure reading) (FE)
9. Before takeoff checklist – “COMPLETED” (FE)

AFTER TAKEOFF

1. Rotor – “95” + 2% (FE)
2. Dust protectors – As required (state “On” or “Off”) (FE)
3. Visual inspection – “COMPLETE” (Cockpit & Cabin) (FE, Rt, Lt)
4. Fuel consumption – “MONITORED” (FE)
5. After takeoff checklist – “COMPLETED” (FE)

BEFORE LANDING

1. Engines & gearboxes – “CHECKED” (FE)
2. Rotor – “95” + 2% (FE)
3. Brakes – As required (state “On” or “Off” and line pressure reading) (FE)

4. Dust protectors – As required (state “On” or “Off”) (FE)
5. Cargo compartment – “SECURE” (FE)
6. Crew – “BRIEFED” (P, CP)
7. Before landing checklist – “COMPLETED” (FE)

AFTER LANDING

1. Auto-pilot – “OFF” (P, CP)
2. Pitch limiter – “OFF” (FE)
3. Transponder – “OFF” (FE, CP)
4. Searchlight – “OFF” (P, CP)
5. Dust protectors – “OFF” (FE)
6. Doppler – “OFF” (CP)
7. Radar Altimeter – “OFF” (P, CP)
8. After landing checklist – “COMPLETED” (FE)

ENGINE SHUTDOWN

1. Brakes – “SET” (P, FE)

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2. Inverters – 115v MAN / 36v “OFF” (FE)
3. All non-essential switches – “OFF” (FE)
4. Rectifiers – “All OFF” (FE)
5. Generators – “OFF” (FE)
6. Throttle – “IDLE” (Full left) (P)
7. Engine Cool Down – 1-2 minutes As required (CP, FE)
8. Stopcocks – “CLOSED” (FE)
9. Engine NTK Coast Down – “Checked” (50 sec) (FE)

NOTE: “EER OFF” light may come on during engine coast down below 60% NTK.

10. Rotor brake – “ON” Below 20% MR RPM (FE)
11. Fuel fire shutoff valves – As required (Zero NTK) (FE)
12. Fuel pumps – “OFF” (FE)
13. Fire ext system – “DETECT” (FE)
14. 115v inverter – “OFF” (FE)

15. Batteries – “OFF” (FE)
16. DC selector switch – “OFF” (FE)
17. 36V Inst transformer – “OFF” (FE)
18. Circuit breakers – As required (FE)
19. Chocks – “INSTALLED” (FE)
20. Brake – “RELEASED” (P)
21. Other switches – “OFF” (FE)
22. Engine shutdown checklist – “COMPLETED” (FE)

EMERGENCY PROCEDURES

SINGLE ENGINE FAILURE

- 1. NR – MAINTAIN WITH COLLECTIVE** (92% minimum)
 - a. ECLs – Full Up (MT Engines Only)
- 2. AIRSPEED – 120KPH minimum**
- 3. STOPCOCK – CLOSED** (Affected Engine)
- 4. FUEL FIRE SHUTTOFF VALVE – CLOSED** (Affected Engine)
- 5. Land – As soon as practical**

CAUTION: Never restart the failed engine in flight

WARNING: (BM Engines) Engine Electronic Regulator must be ON and Emergency Duty Power must be ON in order for single engine “maximum power” to be available. If the EER/Emer Duty switches are off or the systems fail, the engine will only be able to produce normal Take-Off power.

WARNING: (MT Engines) Maximum Single Engine power will not be available unless the pilot pulls the appropriate ECL to the full UP position. This activates a microswitch which disables the power limiter. The second step in the bold face for MT models should be ECLs – Full UP.

DUAL ENGINE FAILURE

- 1. “AUTOROTATE”**
- 2. STOPCOCKS – “CLOSED”**
- 3. FUEL FIRE SHUTOFF VALVES – “CLOSED”**
4. Fuel Pumps – OFF (Time permitting)

ENGINE FIRE INFLIGHT

- 1. FIRE PROTECTION SYSTEM ACTIVATION
”CONFIRM”**
- 2. STOPCOCK – “CLOSED” (Affected Engine)**
- 3. FUEL FIRE SHUTOFF VALVE – “CLOSED”(Affected
Engine)**
- 4. NR – “MAINTAIN WITH COLLECTIVE”**
 - a. ECLs – Full UP (MT Engines Only)

- 5. AIRSPEED – “120KPH MINIMUM”**

NOTE: Depress Fire Warn Off button to reset FIRE light (8-10 secs).

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6. Fire system reset
7. Alt Discharge – As required

WARNING: (BM Engines).

The Engine Electronic Regulator and Emergency Duty Power must be ON in order for single engine "maximum power" to be available. If the EER is off or fails, engine will only be able to produce normal Take-Off power. Pulling ECLs will not provide additional power.

Maximum Single Engine power will not be available unless the pilot pulls the appropriate ECL to the full UP position. This activates a micro switch which disables the power limiter. The fifth step in the bold face for MT models should be ECLs–Full UP.

CAUTION: Never restart the failed engine in flight.

APU/MGB/SVC TANK & KO-50 FIRE

1. Fire Protection System Activation – “CONFIRM”
2. APU / KO-50 (affected system) – OFF
 - a. Hold OFF Button 2-3 secs

3. Fire Protection System – “RESET”

NOTE: Depress Fire Warn Off button to reset FIRE light.

4. Alt Discharge – As required

ENGINE SHUTDOWN INFLIGHT

1. Airspeed and collective – “ADJUST”

a. ECL – “FULL UP” (Good Engine - MT Engines Only)

2. Stopcock – “CLOSED” (Affected engine)

3. Fuel fire shutoff valve – “CLOSED” (Affected engine)

4. PTIT – “MONITOR”

5. Refer to SINGLE ENGINE FAILURE checklist

ABNORMAL VIBRATIONS OF THE ENGINES

Low Vibration (>45mm sec):

1. Monitor engine

2. Continue with mission

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High Vibration (>60mm sec):

1. Reduce power

“Light goes out”

1. Establish 130 – 140 kmh
2. Land as soon as practical (running landing)

“Light stays on”

1. Shut down affected engine
2. Refer to SINGLE ENGINE FAILURE checklist

LOW ENGINE OIL PRESSURE

Below 3 kgf/cm²/High Temp:

1. ECL – Reduce (Affected engine)
2. Engine Oil Pressure and Temperature – Monitor
 - a. Press below 2 kgf/cm², Temp above 150 C or rough eng
3. Refer to SINGLE ENGINE FAILURE checklist

Above 2 kgf/cm² & Temp below 150 C:

1. Land as soon as practical (running landing)

ENGINE AUTOMATIC CONTROL SYSTEM MALFUNCTIONS

Type 1: Ng oscillations of 1% or more, power rating of one engine fails to change during collective movement, Nr stable at $95 \pm 2\%$.

1. Land as Soon as Practical

Type 2: Ng split of 2% and/or spontaneous increase of Nr.

If on Takeoff or final approach:

1. Smoothly turn throttle to left and pull up collective to maintain $95 \pm 2\%$ Nr – and land

For all other phases of flight:

1. Pull up collective to maintain 92-93% Nr
2. Determine malfunction by moving collective down (Nr<98%) then up. Indications determine procedures:

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Condition 1: Ng varies in both engines, Nr maintains $95 \pm 2\%$

1. Maintain 100-150 kmh
2. Land as Soon as Practical

Condition 2: Ng varies in one engine, other engine at max power & Ng does not vary, Nr maintains $95 \pm 2\%$

1. Reduce ECL of engine at max power by 3%
2. Maintain 100-150 kmh
3. Land as Soon as Practical

Condition 3: Ng varies in one engine, other engine at max power, Nr does not maintain $95 \pm 2\%$ (Nr increases as collective is lowered and droops as collective is raised)

1. Throttle – Adjust when moving collective (Maintain $95 \pm 2\%$ Nr)
2. Maintain 100-150 kmh
3. Land as Soon as Practical

UNSTABLE OPERATION OF THE ENGINE
(Compressor Stall)

1. Reduce power (If possible)
 - a. Reduce Collective
 - ~ and/or ~
 - b. Reduce ECL of unstable engine
2. If stall continues:
3. Shutdown engine if necessary
4. Refer to SINGLE ENGINE FAILURE checklist

PTIT LIMITER FAILURE
(PTIT 950 C or more)

1. Reduce engine power setting with ECL or collective
2. Avoid Ng setting above 97.5%

3. Monitor PTIT – Land as soon as practical

NOTE: The limiter can experience a failure of sending a constant false high signal to the fuel control even though the engine is not exceeding 950 C. This failure will cause the engine to decrease power until reaching $85 \pm 1\%$ NTK. At that point, the PTIT limiter actuator is automatically disengaged as a fail-safe measure. The engine will run normally but not have PTIT limiting.

PTIT LIMITER FAILURE

(PTIT 950 C or more)

1. Reduce engine power setting with ECL or collective
2. Avoid Ng setting above 97.5%
3. Monitor PTIT – Land as soon as practical

NOTE: The limiter can experience a failure of sending a constant false high signal to the fuel control even though the engine is not exceeding 950 C. This failure will cause the engine to decrease power until reaching $85 \pm 1\%$ NTK. At that point, the PTIT limiter actuator is automatically disengaged as a fail-safe measure. The engine will run normally but not have PTIT limiting.

TAIL ROTOR FAILURE

- 1. “AUTOROTATE”**
- 2. STOPCOCKS – “CLOSED”**
- 3. FUEL FIRE SHUTOFF VALVES – “OFF”**
4. Fuel Pumps – OFF

TAIL ROTOR CONTROL LINKAGE FAILURE

Helicopter fails to respond to pedal inputs:

1. Establish airspeed 120-130 kmh
2. Land as Soon as Possible (running landing)

NOTE: As collective is raised, depending on airspeed, nose will move left.

MAIN/INTERMEDIATE/TAIL ROTOR GEARBOX MALFUNCTION

Main, IGB or T/R GB Oil Temp high or Press low, or unusual noises or vibration:

1. Reduce power setting

2. Establish airspeed 120-140 kmh
3. Land as Soon as Possible (vertical or running landing)

FAILURE OF ONE GENERATOR

1. Failed generator – “OFF”
2. Main & Tail rotor anti-icing system – “OFF”
3. Land as soon as practical

NOTE: With one generator failed the second operating generator is capable of powering all electrical loads except the main and tail rotor anti-icing system.

FAILURE OF BOTH GENERATORS

1. Generator switches – “OFF”
2. APU – “START”
3. Standby generator – “ON”
4. DC voltage selector switch – “STBY GEN”
5. Check voltage – “27-29 vdc”

6. Check generator load – “<100a” (state load)
7. Land as soon as practical

BATTERY BUS WITH/OUT APU CHART

NOTE: The following systems will be powered by the battery bus for 6-7 minutes w/o APU generator:

APU 115vAC//36vAC

Inverters Eng/XMSN oil gages MR pitch indicator

PTIT Indicator PTIT Limiter

Vibration detection EPR

Main & Aux hydraulics Left pitot tube heater

Fire protection system Cockpit dome lights

Pilot/Co dash lights Cabin standby lights

Navigation lights Anti-collision light

VHF radio Transponder

Intercomm system Left gyro horizon

Radar altimeter Voice recorder

Flight data recorder External load shackle

Ext store emer release Pilot's windshield wiper

Fuel tank pumps NTK overspeed protection

Fuel bypass Fuel fire shutoff valves

Inert gas system Eng inlet anti-ice

Ice detector Signal flares

T/R pitch limiter Info reporter

Wheel brakes Collective pitch lock

Landing/search light (right) Power limiter (MT version)

NOTE: Autopilot receives inputs from the right gyro. If right Gyro fails with Autopilot engaged, a slight jerk will be felt in pitch and roll axes (Left Gyro operating only).

FAILURE OF RECTIFIERS

Failed rectifier ammeter points to 0, Yellow “Off” light on Right

Overhead Panel comes on:

One Rectifier Failed:

1. Switch off failed rectifier

NOTE: With one rectifier failed, the two remaining are capable of powering all loads essential for flight.

Two Rectifiers Failed:

1. Switch off failed rectifiers
2. Switch off one of the generators
3. Switch off all loads non-essential for flight
4. Remaining rectifier should not exceed 200A
5. Refer to single AC generator failure

MAIN HYDRAULIC SYSTEM FAILURE

NOTE: Upon loss of Main hydraulics' the autopilot and collective friction will also be lost.

1. Main hydraulic switch – “OFF”
2. Collective friction – “ADJUST”
3. Autopilot – “OFF”
4. Land as soon as possible

DUAL HYDRAULIC SYSTEM FAILURE

1. Maintain collective position - do not release collective pitch control lever lock button
2. Reduce airspeed
3. Adjust power with throttle
4. Land immediately

FAILURE OF THE SERVICE TANK PUMP

Service Tank Pump On light goes out, momentary drop of Ng by 2-5% and Nr by 1-3%:

1. Land as Soon as Practical

FAILURE OF ONE TRANSFER PUMP

Right ON or Left ON transfer pump light goes off:

NOTE: On some Mi-17 models, pump lights come ON when a pump fails (i.e., for normal ops, the lights are off).

1. Crossfeed – ON
2. Land as Soon as Practical

FAILURE OF BOTH TRANSFER PUMPS

Right ON and Left ON transfer pump lights go out. Only 350 liters fuel remains in service tank (approx 23 minutes:)

1. Land as Soon as Practical

LOW FREQUENCY OSCILLATION IN FLIGHT

1. Disengage Autopilot

If vibration continues after 3-6 seconds:

2. Reduce collective pitch 2-3 degrees
3. Re-engage Autopilot

If vibration returns:

4. Disengage Autopilot
5. Land as Soon as Practical

FAILURE OF AUTOPILOT IN FLIGHT

CAUTION:

Never re-engage failed channel in flight.

Small jerks felt in controls with displacement of one of the Autopilot axes null indicator to the extreme position.

1. Determine failed channel by observing Autopilot axes null indicators
2. Disengage failed channel

3. Determine whether to continue or abort mission

Oscillation about one of the axes with oscillation of Autopilot null indicators:

1. Disengage autopilot using the button on the cyclic stick
2. Engage autopilot channels in succession monitoring to find failed channel
3. Determine whether to continue or abort mission

Slow, uncommanded change in established flight regime:

1. Determine failed channel by observing Autopilot axes null indicators
2. Disengage failed channel
3. Determine whether to continue or abort mission

If change occurs in yaw channel:

1. Place feet on rudder pedals, disengage yaw channel
2. Determine whether to continue or abort mission

FAILURE OF GYRO HORIZON

Gyro Horizon flag appears. If right Gyro fails with Autopilot engaged, a slight jerk will be felt in pitch and roll axes (Right Gyro Failure Only):

1. Confirm failure with opposite gyro, turn indicator, altimeter and VVI
2. Land as Soon as Practical

FAILURE OF COMPASS SYSTEM

Gyro Tilt Light on compass system illuminated, change in compass card heading and with Autopilot engaged, minor jerk of helicopter in yaw axis:

1. Terminate mission
2. When referring to mag compass, ensure bank/pitch angles are < 10 deg

ADDITIONAL CHECKLISTS

APU COLD CRANK (STARTING APU)

1. APU start selector switch – CRANK
2. Start button – Depress (2-3 sec)
 - a. Auto control light – ON
 - b. Oil pressure normal light – ON
 - c. Battery/Ext power voltage <18v for 1 sec
 - d. Normal speed light – ON (within 20s)
 - e. Auto control light – OFF (within 30s)

ENGINE ABORT/COLD CRANK (STARTING ENGINES)

CAUTION:

Fuel Fire Shutoff Valves must be ON (open) during Cold Crank in order to lubricate Fuel Control.

1. Stopcock – CLOSED
2. Start Discontinue – Push

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3. NTK – 0%
4. Start/Crank switch – CRANK
5. Start Button – Depress (2-3 sec)
 - a. 51-59 second cycle
 - b. Ng = 20-26%
 - c. Oil ≥ 0.5

STARTING HEATER

CAUTION:

If “Combustion Heater” light does not come on and/or the “Ignition” light fails to go off in 2 minutes, turn the heater off.

Heater must be shut off and cooled for 15 minutes prior to switch mode from Auto to Man or vice versa.

Never start heater in recirc mode if cabin temp >15 deg C.

After landing, drain excess fuel from heater drain tank.

1. Air Intake – OPEN (ground)/CLOSED (in-flight)
2. Heater and Pump Circuit Breaker – ON

Auto Mode

- a. Combustion Heater Circuit Breaker – ON
- b. Selector Switch – AUTO
- c. Temp Selector – As required
- d. Heater Start button – DEPRESS
 - (1) Fuel Heat Light – ON
 - (2) Ignition Light – ON
 - (3) Fuel Heat Light – OFF
 - (4) Comb Htr Light – ON
 - (5) At 40 seconds: Ignition Light – OFF

Manual Mode

- a. Combustion Heater Circuit Breaker – OFF
- b. Selector Switch – MANUAL

- c. Selector Switch – FULL or MED Rate
- d. Heater Start button – DEPRESS

ANTI-ICING SYSTEM TEST

CAUTION:

Only check rotor A/I with engines running.

Rotor A/I may be checked at +15 C or less.

NOTE:

Check A/I system before flight at OAT < 5 deg C and/or before flight in adverse weather conditions.

Place AC voltmeter selector switch to 115 prior to checking A/I system.

Before Starting Engines

1. All Anti-Ice Panel switches – OFF or AUTO
2. Anti-Icing C/Bs (5 total) – ON
 - a. A/I Control / Eng Dust Prot L / Eng Dust Prot R/
 - b. Ice Det (CO-121)/Heating W/S

3. General A/I switch – MAN
 - a. Anti-Ice On / R Eng Anti-Ice lights illum
4. General A/I switch – AUTO
5. A/I Off button – DEPRESS
 - a. Anti-Ice On / R Eng Anti-Ice lights – OFF
6. L Eng A/I switch – ON
 - a. L Eng Anti-Ice light illum
7. R Eng A/I switch – MAN
 - a. R Eng Anti-Ice light illum
8. L/R Eng A/I switches – OFF/AUTO
 - a. L/R Eng Anti-Ice lights off
9. Ice Det Test button – Depress
 - a. Ice Det light illum

After Starting Engines

1. Engines and both Generators – Operating
2. Anti-Icing C/Bs (5 total) – ON
 - a. A/I Control / Eng Dust Prot L / Eng Dust Prot R /Ice Det (CO-121)/Heating W/S
3. General A/I switch – MAN
 - a. Anti-Ice On / R Eng Anti-Ice / R Dust Prot Fwd / R Dust Prot Rear lights illum
4. L Eng A/I switch – ON
 - a. L Eng Anti-Ice / L Dust Prot Fwd / L Dust Prot Rear lights illum
5. Section lights 1 thru 4 – Illuminate consecutively
 - a. Load Current Selector – Rotate selector thru each blade (1-5) while Section Lights illuminate
 - b. Each section illuminates for approx. 38 seconds

- c. Ammeter for each section/blade: 60-80 A

CAUTION: It is allowed to energize main and tail rotor anti-icing systems for one cycle. If check not completed during this cycle, do not re-energize anti-icing until 5 minute cool down is accomplished.

6. Load Current Selector switch – Tail Rotor

- a. Ammeter for Tail Rotor: 110-150 A

7. Load Current Selector switch – Heating W/S

- a. Ammeter for W/S: 40-90 A
- b. May have to place W/S switch to MAN

NOTE: W/S heaters only energize when OAT $< +20$ C.

8. General A/I switch – AUTO

9. A/I Off button – Depress

10. L Engine A/I switch – OFF

11. All A/I lights – OFF

Separate check of Eng Anti-Ice w/o Main & TR

1. L Eng A/I switch – ON
 - a. L Eng Anti-Ice / L Dust Prot Fwd
 - b. L Dust Prot Rear lights illum
2. R Eng A/I switch – MAN
 - a. R Eng Anti-Ice / R Dust Prot Fwd / R Dust Prot Rear lights illum
3. Load Current Selector sw – DP RIGHT & LEFT
 - a. Ammeter for Dust Protectors: 55-150 A
4. L/R Eng A/I switches – OFF/AUTO
5. All A/I lights – OFF

NOTE:

Turbine inlet temperature rises by 25 - 50 deg C and Ng may increase by 1 - 2 % with Engine Anti-Icing on; indicating system is operating.

With the Ice Det circuit breaker closed, Icing light may illuminate and go out in 15 - 30 sec.

**(Internal Hoist)Winch SLG-300
HOIST PREFLIGHT CHECK**

1. Forms – Checked
2. All electrical power – OFF
3. Hoist condition and installation – Checked
 - a. Electrical connections – Checked
 - b. General condition and Security – Checked
 - c. Boom Cantilever and Pin – Checked
4. Boom Cantilever – Working position
5. Electrical power – ON

NOTE: DC and AC power sources need to be “ON” for the internal hoist to operate on the ground.

- a. Battery switches – BOTH ON
- b. DC selector knob – BATT BUS
- c. 36v Inst transformer – MAIN
- d. AC External Power – CONNECTED

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6. AC External Power

- a. AC selector knob – EXT PWR
- b. AC Ext Power Switch – ON (Voltage 204v)
- c. Rectifiers 1,2,&3 – ON (Voltage $27 \pm 3v$)
- d. Inverters – AUTO (36 & 115 VAC)

7. External Load/Hoist Boom switch – HOIST BOOM

ВНЕШНЯЯ ПОДВЕСКА ЗАМОК/БОРТСТРЕЛА

(Located on left side cockpit electrical control panel)

8. SLG-300 Power Supply switches – ON

ПИТАНИЕ СЛГ-300

(Located in the cockpit one on the right and one on the left)

9. Boom Rotation switch – ON

ПОВОРОТ СТРЕЛЫ

(Located on Boom Control Panel)

10. Boom Extension/Retraction switch – EXTENSION

СТРЕЛА

ВЫП

(Located on Hoist Control Pendant)

11. Boom Rotation switch – OFF
ПОВОРОТ СТРЕЛЫ

12. 3 Control Winch SLG-300 switches – ON
УПРАВЛЕНИЕ ЛЕБЕДКА СЛГ-300
(Located on Boom Control Panel)

13. Hoist Control Pendant – Checked Up and Down
УБОРКА/ВЫПУСК

NOTE: Keep tension on the cable to prevent entanglement on the drum.

14. Cable – Inspect

NOTE: When the cable is fully extended there are 2 to 3 wraps on the drum. If one strand of the cable is broken, 10 separate yarns within 1 m (approx. 3 ft.) are broken, the cable is completely broken or its diameter is reduced up to 4.6 mm (necking down) or birdcaged because of wear or corrosion – replace the cable with a new one.

15. 3 Control Winch SLG-300 switches – OFF
УПРАВЛЕНИЕ ЛЕБЕДКА СЛГ-300

16. Boom Rotation switch – ON
ПОВОРОТ СТРЕЛЫ

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17. Boom Extension/Retraction switch – RETRACTION
СТРЕЛА УБР
18. Boom Rotation switch – OFF
ПОВОРОТ СТРЕЛЫ
19. SLG-300 Power Supply switches – OFF
ПИТАНИЕ СЛГ-300
20. External Load/Hoist Boom switch – OFF
ВНЕШНЯЯ ПОДВЕСКА ЗАМОК/БОРТСТРЕЛА
21. Electrical power – OFF
 - a. Inverters – OFF (36 & 115VAC)
 - b. Rectifiers 1, 2, & 3 – OFF
 - c. AC Ext Power switch – OFF
 - d. AC selector knob – OFF
 - e. AC External Power – DISCONNECTED
 - f. Battery switches – OFF
 - g. DC selector switch – OFF
 - h. 36V Inst transformer – OFF

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22. Boom Cantilever – Stowed position

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**(INTERNAL HOIST)
HOIST OPERATOR'S BEFORE PICKUP CHECKLIST**

1. Gunner's Belt – On & adjusted
2. ICS – Set
3. Gloves – ON
4. Boom Cantilever – Working position
5. External Load/Hoist Boom switch – HOIST BOOM
ВНЕШНЯЯ ПОДВЕСКА ЗАМОК/БОРТСТРЕЛА
6. SLG-300 Power Supply switches – ON
ПИТАНИЕ СЛГ-300
7. Boom Rotation switch – ON
ПОВОРОТ СТРЕЛЫ
8. 3 Control Winch SLG-300 switches – ON
УПРАВЛЕНИЕ ЛЕБЕДКА СЛГ-300
9. Rescue Device – Attach

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10. Boom Extension/Retraction switch – EXTENSION
СТРЕЛА ВЫП
(Set Boom to desired position)

NOTE: The Boom fully extended could be out of the reach of the Internal Hoist Operator).

11. “HOIST OPERATOR’S BEFORE PICKUP CHECKLIST
COMPLETE AND READY FOR
PICKUP” – ACKNOWLEDGE

**(INTERNAL HOIST)
HOIST OPERATOR’S AFTER PICKUP CHECKLIST**

1. Survivor in and secure – “Ready for Takeoff”
2. Boom Extension/Retraction switch – RETRACTION
СТРЕЛА УБР
3. 3 Control Winch SLG-300 switches – OFF
УПРАВЛЕНИЕ ЛЕБЕДКА СЛГ-300
4. Boom Rotation switch – OFF
ПОВОРОТ СТРЕЛЫ
5. SLG Power Supply switches – OFF
ПИТАНИЕ СЛГ-300

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6. External Load/Hoist Boom switch – OFF
ВНЕШНЯЯ ПОДВЕСКА ЗАМОК/БОРТСТРЕЛА
7. Boom Cantilever – Stowed position
8. “HOIST OPERATOR’S AFTER PICKUP CHECKLIST COMPLETED”

EXTERNAL HOIST PREFLIGHT CHECK

1. Forms – Checked
2. All electrical power – OFF
3. Hoist condition and installation – Checked
4. Electrical power – ON
5. Hoist switches – Set
6. Hoist control pendant – Checked up and down
7. Cable – Inspect
8. Limit switches – Checked
9. Rescue device – Inspect
10. Cable cutters – Available

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(EXTERNAL HOIST)
HOIST OPERATOR'S BEFORE PICKUP CHECKLIST

1. Gunner's Belt – ON & adjusted
2. ICS – Set
3. Gloves – ON
4. Hoist Power Switch – ON
5. Rescue Device – Attach
6. "Hoist Operator's before pickup checklist complete and ready for pickup." – Acknowledge

(EXTERNAL HOIST)
HOIST OPERATOR'S AFTER PICKUP CHECKLIST

1. Hoist – Secured
2. Hoist Power Switch – OFF
3. "Hoist Operator's after pickup checklist completed"

PASSENGER BRIEFING GUIDE

1. Introduction of crew

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2. Designate compartment commander
3. Destination
4. Flight Altitude
5. Departure time and estimated time enroute
6. Enroute weather
7. Seats and safety belts/restraining devices (demonstrate use and operation)
8. Movement in the aircraft
9. Personal weapons will be safe-tied and muzzle down
10. Emergency exits (location and operation)
11. Emergency landings and autorotations
12. Crash position
13. Emergency/survival equipment
14. Use of portable electronic devices
15. Aircraft characteristics

OVER WATER BRIEFING GUIDE

1. Use of survival equipment
2. Emergency landing (signals, positions, exits, location of first aid kits and emergency radio)
3. WATER EGRESS PROCEDURES

MISCELLANEOUS DATA

Mi-8MTV AIRCRAFT DATA

Length (No rotors) 18.424 m
(Rotors on) 25.352 m
Height (No tail rotor) 4.756 m
(Tail rotor on) 5.521 m
Rotor diameter 21.294 m
Wheel base (Length) 4.281 m
(Width) 0.445 m

[Cargo compartment]

Length 5.34 m
Width 2.06 m
Height 1.8 m

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[Center of gravity limits]

< 12,500 #'s

Forward +300 mm

Aft -95 mm

= 13,000 #'s

Forward +257 mm

Aft +20 mm

Maximum overwater G/W 12,500kg

Basic Weight @7,150 kg

Normal Gross Weight 11,100 kg

Maximum Gross Weight 13,000 kg

Maximum internal cargo 4,000 kg

Maximum sling load 3,000 kg

Maximum hoist load 150 kg or 300kg depending on hoist type

Seats 24 Combat Troops

MEDEVAC 12 stretchers

TV3-117 mt/bm Engines 2225 shp

[Fuel System]

Fuel burn rate @800 liters/hr

Service tank 445L

Main tanks 2170L

Total 2615L

[Airspeeds]

11,000 kg: 13,000 kg:
Maximum
250 kmh 230 kmh

[Cruise]

220-230 kmh 205-215 kmh
Economical
120 kmh 120 kmh
Minimum
60 kmh 60 kmh

[Max Altitudes]

6000 m 4800 m
Hover ceiling OGE: 3980 m

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**WARNING LIGHTS SUMMARY TABLES
PILOT'S LEFT CONSOLE**

Light	Fault Condition	Corrective Action
L/R Eng Chip (Amber Light).	Chips in engine oil.	Refer to Low Eng Oil Press procedures.
Fire (Red Light).	Fire in Eng, GB or Heater Compartment.	Check Fire Protection System overhead console.
L/R Eng FF Clog (Amber Light) Flickering or steady.	Engine Fuel Filter is clogged.	Monitor engine and Land as Soon as Practical.
L/R Eng Mod Vibe (Amber Light).	Engine vibrations abnormal.	Monitor engines, continue mission.
L/R Eng High Vibe (Red Light).	Engine vibrations too high.	1. Reduce Power Light goes out: 2. Establish 130-140 kmh. 3. Land as soon as practical (execute running landing) Light remains illuminated: 1. Shut down engine. 2. Refer to SE procedures.

WARNING LIGHTS SUMMARY TABLES
PILOT'S LEFT CONSOLE (Continued)

Light	Fault Condition	Corrective Action
N2 Overspeed Left or Right (Red Light).	N2 of affected eng exceeded $118 \pm 2\%$ Fuel gov'n'r should shut down engine - or - False indication by one N2 detector.	Engine Continues to operate. 1. Gov-OFF (affected eng). 2. Ensure amber light off. 3. Gov-ON (affected eng) Amber light still on: Land as Soon as Practical Amber light off: Monitor eng, continue flight.
L/R Eng ED (Red Light).	Engine is operating in Emergency Duty.	Monitor engine gages and ensure PTIT, NTK and time limits are not exceeded.

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WARNING LIGHTS SUMMARY TABLES
PILOT'S LEFT CONSOLE (Continued)

Light	Fault Condition	Corrective Action
Low Oil Pr L/R Eng (Red Light).	Engine Oil Pressure is Low.	Confirm oil pressure gage. Pressure Normal Continue mission and monitor gages. Pressure below 3 kgf/cm ² . Refer to Low Eng Oil Press Procedures.
Gov Fail (Red Light).	Engine Governor Failure.	1. Gov-OFF (affected eng). 2. Monitor engine gages N2 not to exceed 102.5. 3. Land as Soon as Practical.
Battery Bus Pwr'd by Batteries Only (Red Light - to the right of ITT gages).	Batteries are not being recharged through relay from rectifier bus bar.	1. Check voltages: a. Batt Bus - 24 VDC. b. Rect Bus - 27 VDC. 2. Rectifier Switch-ON (on FE Console) 3. Check voltages: a. Batt Bus - 27 VDC b. Rect Bus - 27 VDC

**WARNING LIGHTS SUMMARY TABLES
FLIGHT ENGINEER'S CONSOLE**

Light	Fault Condition	Corrective Action
Chips in Main Gear Box (Red Light).	Metal Chips in Main, T/R or Int GB.	Oil temp/press normal: Land as Soon as Practical and monitor oil temp/press. Oil temp high/press low or unusual noises/vibration: Land as Soon as Possible ref Main, Int or T/R GB Oil Temp high or Press low.
Pitch Limiter Off Lt (Red Light) with Limiter sw turned on - and/or - Null index does not change position or deflects to right with alt or OAT increasing Null Index Position Left: Full pedal motion Right: limited pedal.	Failure of Pitch Limiter System.	1. Pitch Limiter off Null index deflects to left: 3. Land as Soon as Practical (normal landing avoiding pedal inputs) Null index deflected right or does not deflect to full left: 2. Land as Soon as Practical (running landing).

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**WARNING LIGHTS SUMMARY TABLES
NAVIGATOR'S (COPILOT'S) CONSOLE**

Light	Fault Condition	Corrective Action
300 l Fuel Rsv (Amber Light).	300 liters of fuel remain in service tank (approx. 20 min).	1. Check amount of total fuel Fuel in auxiliary tanks: 2. Control transfer of fuel to service tank using Bypass switch. (total in Svc Tank not to exceed 400-420 liters) Aux tanks are empty: 2. Land as Soon as Pract (at nearest Aerodrome or open field).

WARNING LIGHTS SUMMARY TABLES
PILOT'S CONSOLE LOWER LEFT/LOWER RIGHT

Pilot's Console Caution Lights (Lower Left)			
		Fuel Filter Clog L Eng.	Fuel Filter Clog R Eng.
Chips in L Eng Oil.	Chips in R Eng Oil.	L Eng High Vibration.	R Eng High Vibration.
FIRE		L Eng Off	R Eng Off

Pilot's Console Caution Lights (Lower Right)			
L Eng N2 Overspeed.	R Eng N2 Overspeed.	L Eng Low Oil Press.	R Eng Low Oil Press.
L Eng Emerg Duty.	R Eng Emerg Duty.	L Eng Auto Gov Off.	R Eng Auto Gov Off.

NOTE: Mi-17 manufactures are not standardized, therefore this chart may not agree with what's labeled on various Mi17 caution panels, however the fault they indicate will be the same - or panels may be in Cyrillic.