

Systems Activation and Checks

#	Task/Activity Description	Switch position/Action
1	No. 1 and No. 2 batteries	ON
2	DC to AC Inverter	Verify set to AUTO
3	Intercom System power switch	ON
4	VHF-2 radio (R-800L1)	ON
5	External DC Power (skip this step if external power is not available)	ON
6	External AC Power (skip this step if external power is not available)	ON
7	HYD/XMSN group and EKCRAN system power switch	ON
8	Master Caution/Warning Light Reset and EKCRAN self test	Press and release twice, EKCRAN self test should run
9	Lamp test	Press, button verify all warning, caution, and advisory lamps light and audio warning plays, then release button
10	Navigation lights (if required)	ON
11	Gauge illumination (if required - skip this step if using night vision goggles)	ON
12	ADI and HSI illumination (if required - skip this step if using night vision goggles)	ON
13	Blade tip lights (if required)	ON
14	Formation lights (if required)	ON
15	Anti-collision light (if required)	ON
16	Cockpit night illumination (if required - when using night vision goggles)	ON
17	Landing/Search light (if required)	ON
18	Rear control panel illumination (if required)	ON
19	Inertial Navigation Unit power	ON
20	K-041 Targeting/Navigation power switch	ON
21	ABRIS AMMS	ON
22	Standby Attitude Indicator power	ON
23	PVI-800 Master mode selector	OPER
24	Weapons control system switch	ON
25	UV-26 IRCM deployment system	ON
26	UV-26 programming	Program as required
27	L-140 Laser Warning Receiver	ON
28	EGT indicator "engines stopped" test	Press button, verify that both gauges increase past 800°C, release button
29	Fire extinguishing system test switch	TEST
30	Fire signalling switch	Verify set to "WARN"
31	Fire warning group 1 test switch	Group 1 - Verify proper light illumination*

#	Task/Activity Description	Switch position/Action
32	Reset fire warning lights	Move fire signalling switch from "WARN" to "OFF" then back to "WARN"
33	Fire warning group 2 test switch	Group 2 - Verify proper light illumination*
34	Reset fire warning lights	Move fire signalling switch from "WARN" to "OFF" then back to "WARN"
35	Fire warning group 3 test switch	Group 3 - Verify proper light illumination*
36	Reset fire warning lights	Move fire signalling switch from "WARN" to "OFF" then back to "WARN"
37	Set fire extinguishing system to normal operation.	OPER
38	Voice message unit test	Press and release button, audio message "EKRRAN is ready" should play
39	Fuel meter power	ON
40	Fuel meter test	Press test button and verify both needles increase to maximum and both low fuel warning lights illuminate.
41	Cockpit door	CLOSE (CTRL+C)

Items with a gray background can be skipped when performing an accelerated start up.

*Note: During testing of the fire extinguishing system, the following lights should illuminate (from left to right): During test of Group 1 and Ground 2: FIRE LH ENG, FIRE APU, FIRE HYDR, FIRE RH ENG, FIRE GRBX (all 5 lights) - During test of Group 3: FIRE LH ENG, FIRE HYDR, FIRE RH ENG, FIRE GRBX (4 lights only, FIRE APU should not illuminate)

APU and Engines Start

#	Task/Activity Description	Switch position/Action
1	Request engine startup permission from control tower using VHF-2 radio	Continue after receiving engine startup permission
2	APU fuel shutoff valve	ON – Verify “APU VLV OPEN” light illuminates
3	Forward fuel tank boost pump	ON – Verify “FWD TANK PUMP ON” light illuminates
4	Aft fuel tank boost pump	ON – Verify “AFT TANK PUMP ON” light illuminates
5	Engine start mode – START/CRANK/FALSE	Verify in START position
6	Turbo Gear/APU/Left Engine/Right Engine selector	Verify in APU position
7	Start APU	Press and release START button
8	Monitor APU EGT during start	Verify EGT does not exceed 850°C
9	Check APU start sequence completed	Verify “APU ON” light illuminates within 24 seconds
10	Check proper APU operation	Verify “APU ON” and “APU OIL PRESS NORM” lights remain illuminated, and monitor APU EGT not to exceed 720°C
11	Rotor brake	OFF (down)
12	Collective	Verify full down
13	Left engine fuel shutoff valve	ON – Verify “LEFT VLV CLOSED” light extinguishes
14	Right engine fuel shutoff valve	ON – Verify “RIGHT VLV CLOSED” light extinguishes
15	Left and Right Engine Electronic Governor switches	ON
16	Turbo Gear/APU/Left Engine/Right Engine selector	LH ENG or RH ENG
17*	Start engine	Press and release START button
18	Engine cutoff lever of selected engine	OPEN when engine RPM indicator begins moving
19	Monitor N1 RPM gauge	Verify RPM increases smoothly
20	Check for engine ignition	Verify EGT increasing by 20% N1 RPM
21	Check for rotors turning	Verify rotor blades begin turning by 25% N1 RPM
22	Check for proper completion of start sequence	Verify “START VLV” light extinguishes between 60% and 65% N1 RPM
23	Repeat steps 16 through 22 for second engine	
24	Monitor smooth increase of rotor RPM	Verify rotor RPM greater than 55% after 2 nd engine start with throttles at “IDLE”
25	Shutdown APU	Press and release APU SHUTOFF button
26	APU fuel shutoff valve	OFF

#	Task/Activity Description	Switch position/Action
27	Verify APU shutdown	Verify APU EGT decreasing and all lights on APU panel extinguished
28	Check engine and gearbox operating temperatures	Verify both engine oil temperatures are above 30°C and main gearbox oil temperature is above -15°C
29	Set Parking Brake	(LSHIFT+W) Verify positive pressure on wheel brake pressure gauge
30	Increase throttle to flight idle	Throttle levers to "AUTO" position (PGUP twice)
31	Check rotor RPM	Verify rotor RPM smoothly increases to between 86%-87%
32	EGT indicator "engines running" test	Press button, verify that both gauges decrease below 150°C, release button

Items with a gray background can be skipped when performing an accelerated start up.

*Note: Ensure at least 1 minute for APU warm-up between APU start and first engine start. Also allow at least one minute between first and second engine starts to avoid APU overheating.

Pre-flight Checks

#	Task/Activity Description	Switch position/Action
1	Left and Right AC Generators	ON
2	Remove DC external power	OFF
3	Remove AC external power	OFF
4	Rotor de-ice system (only when outside air temperature is below 5°C)	ON
5	Engine anti-ice system (only when outside air temperature is below 5°C)	ON
6	Hydraulic systems check	Move cyclic and pedals (no more than 1/3 of their full travel) and verify that hydraulic system pressure remains between 65-80 kgf/cm ²
7	Radar altimeter	Set warning altitude
8	Ejection system	Set all three switches ON
10	Standby Attitude Indicator	Uncage and set rotary
11	HUD Brightness	Adjust as required

Items with a gray background can be skipped when performing an accelerated start up.

Taxi Checks

#	Task/Activity Description	Switch position/Action
1	Caution/Warning lamps and EKRAN checks	Verify no cautions or warnings
2	Check gauges and instruments	Verify all indications within normal operating parameters
3	Visually observe area around helicopter	Verify clear of obstacles
4	Request taxi permission from control tower using VHF-2 radio	Continue after receiving taxi permission
5*	Left and Right Engine dust protectors	ON – Verify “LH ENG DUST PROT” and “RH ENG DUST PROT” lights illuminate
6	Release parking brake	(RSHIFT-W)
7	Collective	Increase to 3° of blade pitch
8	Use cyclic and pedals to taxi to runway and line up on runway heading	
9	Autopilot	Press “BANK”, “PITCH”, and “HEADING” hold buttons
10	Collective	Lower to full down position
11	Set parking brake	(RSHIFT-W)

*Note: If engine anti-ice is operating, it is not necessary to perform this step, since the dust protectors operate in conjunction with the engine anti-ice system.

Before Takeoff Checks

#	Task/Activity Description	Switch position/Action
1	Caution/Warning lamps and EKRAN checks	Verify no cautions or warnings
2	Check gauges and instruments	Verify all indications within normal operating parameters
3	Visually observe area around helicopter	Verify clear of obstacles
4	Request hover permission from control tower using VHF-2 radio	Continue after receiving hover permission
5	Release parking brake	(RSHIFT-W)
6	Collective	Increase and maintain stable hover between 7m and 10m altitude
7	Power check	Verify ability to maintain stable hover with engines operating within normal ranges
8	Flight controls	Verify flight controls operate properly
8	Center of Gravity	Verify aircraft is not out of balance
9	Request takeoff permission from control tower using VHF-2 radio	Continue after receiving takeoff permission
10	Takeoff	Perform helicopter-style (from hover) or running-style (from ground) takeoff

After Takeoff Checks

#	Task/Activity Description	Switch position/Action
1	Landing gear	Raise – Verify three red lights on landing gear control panel
2*	Left and Right Engine dust protectors	OFF – Verify “LH ENG DUST PROT” and “RH ENG DUST PROT” lights extinguish
3	PVI-800 waypoint mode	Press “WPT” button
4	PVI-800 waypoint selection	Select desired waypoint (1...6)
5	ABRIS mode selection	Select NAV, ARC, or HSI as desired

*Note: If engine anti-ice is operating, it is not necessary to perform this step, since the dust protectors operate in conjunction with the engine anti-ice system.

Before Landing Checks

#	Task/Activity Description	Switch position/Action
1	Within 10km of landing field	Contact control tower using VHF-2 radio and notify that you are are “Inbound”
2	Within 5km of landing field	Contact control tower using VHF-2 radio and request landing permission
3	Landing gear	Lower – Verify three green lights on landing gear control panel
4*	Left and Right Engine dust protectors	ON – Verify “LH ENG DUST PROT” and “RH ENG DUST PROT” lights illuminate

*Note: If engine anti-ice is operating, it is not necessary to perform this step, since the dust protectors operate in conjunction with the engine anti-ice system.

After Landing Procedures

#	Task/Activity Description	Switch position/Action
1	Taxi to parking	
2	Collective	Lower to full down position
3	Set parking brake	(RSHIFT+W) Verify positive pressure on wheel brake pressure gauge
4*	Left and Right Engine dust protectors	OFF – Verify “LH ENG DUST PROT” and “RH ENG DUST PROT” lights extinguish
5	Refuel/Rearm/Reconfigure if required	Set intercom source selector switch to “GRND CREW” and communicate request to ground crew

*Note: If engine anti-ice is operating, it is not necessary to perform this step, since the dust protectors operate in conjunction with the engine anti-ice system.

Shutdown Procedures

#	Task/Activity Description	Switch position/Action
1	Standby Attitude Indicator	Cage
2	Ejection system	Set all three switches OFF
3	Engine anti-ice system	OFF (set switch to center position)
4	Rotor de-ice system	OFF
5	Left and Right AC Generators	OFF
6	Throttle	Decrease to IDLE (PGDN twice) and wait 2 minutes for engine cooldown.
7	Left and Right Engine cutoff levers	CLOSE
8	Left and Right Engine Electronic Governor switches	OFF
9	Rotor brake	Wait until rotor RPM drops below 20%, then set rotor brake ON (up)
10	Left and Right engine fuel shutoff valves	Wait until both engine N1 gauges drop to zero, then OFF – Verify “LEFT VLV CLOSED” and “RIGHT VLV CLOSED” lights illuminate
11	Forward and Aft fuel tank boost pumps	OFF – Verify “FWD TANK PUMP ON” and “AFT TANK PUMP ON” lights extinguish
12	Cockpit door	OPEN (RCTRL+C)
13	Fuel meter power	OFF
14	VHF-2 radio (R-800L1)	OFF
15	Fire extinguishing system	OFF
16	UV-26 IRCM system	OFF
17	L-140 LWR system	OFF
18	Weapons control system switch	OFF
19	PVI-800 Master mode selector	OFF

#	Task/Activity Description	Switch position/Action
20	Standby Attitude Indicator power	OFF
21	ABRIS AMMS	OFF
22	K-041 Targeting/Navigation power switch	OFF
23	Inertial Navigation Unit power	OFF
24	HYD/XMSN group and EKTRAN system power switch	OFF
25	Intercom system power switch	OFF
26	No. 1 and No. 2 batteries	OFF