

Flight line launch procedures for SH-60 Helicopters

Supplemental information to the Plane Captain's manual A1-H60CA-GAI-010

By: Dennis Santarinala

A. The Brief:

Prior to departure to the assigned aircraft, the Plane Captain shall be briefed by the 310 Shift Supervisor about the aircraft assignment and overall condition of the flight line and flight schedule.

Plane Captain and Fireguard personnel shall arrive equipped with proper PPE at the assigned aircraft 30 minutes prior to aircraft start/ departure. He/ she shall conduct a quick inspection of the aircraft and surroundings for Foreign Object Damage (FOD) and shall report to the Flightline Coordinator of the aircraft's current condition.

A qualified Fire Guard will be assigned to a Purple K Dry Chemical / CO2 fire extinguisher throughout the duration of the launch. In some occasions, a wheeled Halon 1211 fire extinguisher will be available in the absence of the previous. He/ she shall obtain all instructions from the Plane Captain who is in charge of the launch evolution.

The Plane Captain will be positioned facing the helicopter, at least 20 feet in front of, and 10 feet to the right of the aircraft's Pilot side. The Fire Guard will be in either 3 or 9 o'clock position of the aircraft outside of the helicopter rotor arc. These are the ONLY positions other flight line personnel may enter or exit the rotor arc with authorization from the Plane Captain.

B. Personal Protective Equipment (PPE) and Tool Control:

All qualified flight line personnel (Plane captain, Flightline Coordinator, Troubleshooters and Fireguard) on or near the flight line during flight operations shall wear authorized protective clothing and equipment at all times. The following are the PPE required:

- Cranial and ballistic proof goggles
- Flightline approved gloves
- Flightline approved long sleeve shirt
- Steel toe boots
- Long pants (FOD free pockets)
- Signal wands (night time launch and recovery)
- Two way radio

Tool control is mandatory prior to departure to assigned aircraft and all PPE will be properly logged in the Flightline Division tool control logbook.

C. Turning the APU:

As soon as the Aircrew and Pilots are ready, the Pilot will signal the Plane Captain to start the Auxiliary Power Unit (APU) evolution. Prior to turning the APU, the Plane Captain shall make sure of the following:

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- Aircraft properly chocked
- Qualified Fireguard personnel ready with fire extinguisher
- All flight personnel within 50 feet of aircraft are equipped with PPE
- No maintenance personnel working on top of the aircraft
- No open aircraft panels and cowlings

Hand signal to turn the APU will be a stationary left hand at 8 o'clock position with thumb and index finger touching, signaling number 3. The right hand will also have the same number 3 signal, waving in pendulum motion from shoulder towards waist level. This signal will continue until the Pilot gives the Plane Captain a thumbs up for a completion of this step.

D. Turning the Main Engines and Rotor:

Engaging the main engines and main rotor involves greater risk of mishap because it involves moving components that can damage surrounding equipment and accident to nearby personnel. Under gusty wind conditions, the main rotor blades can droop within 4 feet of the ground thus the Plane Captain must ensure all personnel are outside the main rotor arc at all times.

The pilot will signal the Plane Captain to start the number 1 engine. Prior to turning the number 1 and 2 engine, the Plane Captain shall make sure of the following:

- Aircraft properly chocked
- Fireguard ready with fire extinguisher
- All flight personnel within 50 feet of aircraft are equipped with PPE
- No maintenance personnel working on top of the aircraft
- No open aircraft panels and cowlings
- No personnel will be under the rotor arc
- All crewmembers remains inside the aircraft
- No other aircraft within 50 feet taxiing or turning rotors
- External power cable properly secured and stowed after use

Hand signal to turn main engines will be a stationary left hand up at 10 o'clock position with index finger open, signaling number 1 and right hand with the same number 1 signal, waving in pendulum motion from shoulder towards waist level. This signal will continue until the Pilot gives the Plane Captain a thumbs up for a completion of this step. Proceed with the same steps for number 2 engine but with index and middle finger open to signal number 2. At this time the main rotor should be engaged. Pilot then gives the Plane Captain a rotating hand with extended fingers pointing up signaling he is ready for main rotor engagement.

The Plane Captain proceeds with his final checks on the engaged main rotors by visually checking for the droop stops to unlock then gives the Pilot the droop stops unlock signal with arms up, fists closed, thumbs extended outwards, and swinging arms outwards.

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E. Helicopter Taxi for Launch

When ready, the Pilot will give the Plane Captain the thumbs up signal pointing at the direction the aircraft will be taxied out. At this point, an aircrew member will remove chocks, gives thumbs up to the Plane Captain and will return safely inside the aircraft. The Plane Captain will check the following prior to taxiing the aircraft for launch:

- No other chocks under the aircraft wheels
- No other aircrafts in the way of taxi route
- Surrounding aircraft within 50 feet taxiing or turning rotors
- No personnel under the rotor arc
- All aircrew members secured inside the aircraft
- No other personnel will be in front of the aircraft towards taxi route

Hand signal for "chocks out" is arms down, fists closed, thumbs extended outwards, swing arms outwards. A thumbs up signal from the pilot after the chocks out signal acknowledges that he is ready to taxi out for launch. Ensure at least a 20 feet safe distance from the aircraft is maintained throughout the duration of taxiing the aircraft.

The Plane Captain will proceed with giving the Pilot the following hand signals in consecutive order:

1. **Brakes off** (Arms above head, open palms and fingers raised with palms toward aircraft, then fists closed)
2. **Tail Wheel Unlock** (Hands overhead, palms together, then hands opened from the wrists to form a V, wrists remaining together)
3. **Move forward** (Arms extended from body and held horizontal to shoulders with hands up-raised and above eye level, palms facing backwards. Execute arm motion angled 45 degrees backward. Rapidity indicates speed desired)
4. **Stop/ Set brakes** (Arms crossed above the head, palms closed facing forward)
5. **Brakes off** (Arms above head, open palms and fingers raised with palms toward aircraft, then fists closed)
6. **Move forward** (Arms extended from body and held horizontal to shoulders with hands up-raised and above eye level, palms facing backwards. Execute arm motion angled backward. Rapidity indicates speed desired)
7. **Turn left and right to check proper tail wheel functions** (Point right arm down and left arm brought from overhead, vertical position to horizontal position repeating left arm movement. Repeat but vice versa)
8. **Thumbs up for proper tail wheel operation** (Raise right hand with thumbs up)
9. **Turn aircraft following taxi route** (Point right arm down and left arm brought from overhead, vertical position to horizontal position repeating left arm movement)
10. **Release aircraft** (Point towards taxi route using both hands palms open with extended fingers pointing at taxi route and render a salute)