

AD 1 AERODROMES/HELIPORTS - INTRODUCTION

AD 1.1 AERODROME/HELIPORT AVAILABILITY

1 General Conditions

1.1 NOTIFICATION

1.1.1 The Hong Kong International Airport is hereby notified for the purposes of Articles 71(1)(a) and 73 of the Air Navigation (Hong Kong) Order 1995 as available for the take-off and landing of aircraft engaged on flights for the purpose of public transport of passengers or for the purpose of instruction in flying subject to the conditions specified in this Aeronautical Information Publication.

1.2 Permission to land or take-off at Hong Kong International Airport will not be refused solely because of adverse weather conditions. Pilots of public transport aircraft should bear in mind however, that Articles 30 and 31 of the Air Navigation (Hong Kong) Order 1995, requires that they do not infringe the aerodrome operating minima specified by their company.

1.3 Engine-out-ferry flights to and from Hong Kong International Airport will not normally be permitted. If extenuating circumstances prevail, an operator may request permission to carry out an engine-out ferry flight; such requests should be made to the Director-General of Civil Aviation.

1.4 Unless a prior arrangement has been made with the AAHK, all landing and parking charges due and payable in respect of an aircraft in accordance with the provisions of the Airport Authority Ordinance shall be payable before the aircraft leaves the airport; and the AAHK may refuse to give clearance for that aircraft to depart or for any other aircraft that is operated by the operator of that aircraft to depart until such charges have been paid (see GEN 4.1 para. 1 to 4 for details).

2 Applicable ICAO Documents

2.1 ICAO Standards and Recommended Practices contained in Annex 14 - Aerodromes, are applied in so far as geographical limits permit. Differences to these Standards and Recommended Practices are listed in GEN 1.7.

3 Use of Military Aerodromes

3.1 Nil.

4 Aerodrome Operating Minima (AOM)

- 4.1 According to the *Manual of All Weather Operations* (ICAO DOC 9365-AN/910), where a State of the Aerodrome has established the aerodrome operating minima (AOM) policy and published the landing and take-off minima in the AIP, the minima authorised for the use by the State of the Operator shall not be lower than the minima established by the State of the aerodrome. The AOM for the Hong Kong International Airport and relevant requirements are published in AD 1.1 for compliance by all operators.
- 4.2 Under the Air Navigation (Hong Kong) Order 1995, operators of public transport aircraft registered outside Hong Kong shall not fly in or over Hong Kong unless the operator has furnished their AOMs required. For foreign operators to meet this requirement, they shall submit the AOM required under para 7.1 below to the Director-General of Civil Aviation in conjunction with other documents required under GEN 1.2.
- 4.3 Operators should note RWY 07L/25R and RWY 07R/25L instrument approaches have more than one missed approach climb gradient requirement. Acceptable minima for operations at Hong Kong International Airport are based on ICAO DOC 9365-AN/910, and are as follows :

(a) TAKE – OFF 200 m RVR

(b) LANDING

	DECISION HEIGHT	RVR
CAT I	200 ft	550 m
CAT II	100 ft	300 m
CAT IIIA	50 ft	175 m

5 Airport Qualifications

- 5.1 Prior to the commencement of operations at Hong Kong International Airport, flight deck crew are to be adequately briefed on operations into and out of the airport.
- 5.2 Various methods of aerodrome categorization are in operation throughout the world. It is the responsibility of each State Authority to stipulate the level of familiarization required by pilots operating aircraft on their respective register prior to operations into Hong Kong International Airport.
- 5.3 For Hong Kong registered operators, Hong Kong International Airport has been declared Category B, indicating the second level of pilot briefing intensity is required.

- 5.4 As stated, whilst regulatory authorities may impose additional requirements on operators registered with them, the minimum suggested requirement is a self briefing document to be issued to pilots highlighting the following:
- a) terrain at and within the environs of the airport;
 - b) departure, arrival, missed approach procedures, gradients and DME limits required;
 - c) familiarity with the Windshear and Turbulence Warning System (WTWS) operation and terminology;
 - d) Hong Kong and specific airport weather characteristics and seasonal variations;
 - e) location of nearby aerodromes Shenzhen, Macao and Zhuhai, and the delineation of the Hong Kong TMA boundary in relation to these aerodromes;
 - f) ground handling and breakaway thrust requirements.
- 5.5 A system should be in place to ensure flight crew remain current with the Hong Kong International Airport brief on an annual basis or at least prior to each operation to the airport, if such operations are less frequent.
- 5.6 It is recommended that all operators complete flight crew familiarisation in accordance with para 5.4 above.

6 ILS Category I (CAT I) Operations

- 6.1 At Hong Kong International Airport, pilots are to expect an ILS CAT I approach unless otherwise informed. Therefore the type of approach to be expected will not normally be included in the ATIS Arrival broadcast. In the event of an ILS approach not being available and a LOC or VOR approach is required, this will be included in the ATIS Arrival broadcast.

7 Acceptance of ILS CAT II/III (CAT II/III) Operations

- 7.1 Before commencing public transport operations at the Hong Kong International Airport, foreign operators who wish to conduct ILS Category II (CAT II) or Category IIIA (CAT IIIA) operations at Hong Kong International Airport, must submit the following information to the Director-General of Civil Aviation.

- a) The completed proforma (softcopy in <http://www.cad.gov.hk/english/aom.html>) to show the operator's CAT II/III minima authorised by their State; and
- b) The CAT II/III authorisation issued by their State.

- 7.2 The operator shall comply with the more restrictive minima prescribed by their State or Hong Kong when operating at the Hong Kong International Airport at all times.

8 Low Visibility Operations (LVO)

8.1 GENERAL

8.1.1 General AOM requirements of the ICAO and Hong Kong are in paragraph 4.

8.1.2 Operators and pilots who wish to conduct ILS CAT II/IIIA operations at the Hong Kong International Airport shall conform with all requirements prescribed by their States and Hong Kong, China.

8.2 SPECIAL PROCEDURES AND SAFEGUARDS

8.2.1 Special procedures and safeguards will be applied during CAT II/III operations to protect aircraft operating in low visibility and to avoid interference to the ILS signals in accordance with ICAO Doc 9365 - Manual of All Weather Operations.

8.2.2 Pilots shall be informed when:

- a) meteorological reports preclude ILS CAT I operations;
- b) Low Visibility Procedures are in operation;
- c) there is any unserviceability in a promulgated facility so that they may amend their minima.

8.2.3 Hong Kong International Airport RWY 07L, RWY 07R and RWY 25L have ILS CAT II equipment and RWY 25R has ILS CAT IIIA equipment. Low Visibility Procedures are established for operations in a visibility of less than RVR 550 m or a cloud ceiling of less than 200 ft.

8.2.4 When Low Visibility Procedures are in force, pilots will be advised on the ATIS. Pilots may carry out ILS CAT II approaches. When the ATIS advises "Low Visibility Procedures in force, CAT III approach available on request", pilots wishing to carry out ILS CAT III approaches shall inform Approach Control on initial contact. (Pilots conducting practice ILS CAT II/III approaches do not have to inform ATC. See para 8.5.1)

8.3 ARRIVING AIRCRAFT

8.3.1 All runway exit taxiways are available.

8.3.2 All runway exits have taxiway centre-line lead off lights that are colour coded (green/yellow) to indicate that portion of the taxiway that is within the ILS sensitive area. Pilots are to delay the 'runway vacated' call until the aircraft has completely vacated the ILS sensitive area and passed the end of the colour coded taxiway centre-line lights.

8.3.3 During LVO, ATC may rely on the pilot report and/or information from the Advanced Surface Movement Guidance and Control System (A-SMGCS) to determine if an aircraft has vacated the runway and/or the ILS sensitive area.

8.4 DEPARTING AIRCRAFT

8.4.1 Aircraft shall normally enter the runway for departure via the following taxiways:

- RWY 07L - TWY A1 or A2;
- RWY 07R - TWY J1, J2 or K1;
- RWY 25L - TWY J10, J11 or K7;
- RWY 25R - TWY A11 or A12.

8.4.2 Aircraft may enter the runway for an intersection departure via the following taxiways:

- RWY 07L - TWY A3 (TORA 3306 m);
- RWY 07R - TWY J3 (TORA 3130 m) or K2 (TORA 2720 m);
- RWY 25L - TWY J9 (TORA 3200 m) or K6 (TORA 2880 m);
- RWY 25R - TWY A10 (TORA 3247 m).

8.4.3 The holding positions on TWY A1, A2, J1, J2, J10 and J11 are combined CAT I/II holding positions, separate CAT I and CAT II holding points are provided on taxiways K1, K7 and K.

8.4.4 The holding positions on taxiways A11 and A12 are combined CAT I/II/III holding points.

8.5 PRACTICE APPROACHES

8.5.1 Pilots may carry out a practice ILS CAT II/III approach at any time, but the full safeguarding procedures will not be applied and pilots should anticipate the possibility of ILS signal interference.

9. Parallel Runway Operations

9.1 When both runways are available the operating mode is normally segregated operations, ie one runway for arrival and one runway for departure. The north runway, RWY 07L/25R, is the normal arrival runway and the south runway, RWY 07R/25L, is the normal departure runway. During peak arrival periods, to minimize overall airborne delay and maximize runway utilization ATC may nominate specific arrivals (cargo and/or passenger) to land on the south runway.

10. Runway Utilisation**10.1 DEPARTURES**

- a) When instructed to enter the runway pilots should commence the manoeuvre without delay.
- b) Pilots should commence take-off roll as soon as take-off clearance is issued by ATC.
- c) To enable efficient handling of departures, all runways have a pair of lead-on taxiways at the beginning of the runway. For application of wake turbulence longitudinal separation, ATC considers aircraft using these two taxiways as departing from a similar position, and not intermediate (intersection) departures.

Runway	Pair of Taxiways	Distance between Taxiway Lead-on Guidelines at the Runway Centreline
07L	A1 and A2	99 m
25R	A11 and A12	99 m
07R	J1 and J2	80 m
25L	J10 and J11	99 m

- d) To provide an expeditious departure sequence, ATC may request a flight to depart from an intersection taxiway with a reduced runway length. In this case and when applicable, the intermediate (intersection) departure wake turbulence longitudinal separation shall be applied. The take-off run available (TORA) for an intermediate (intersection) departure is listed below:

RWY	Intersection Taxiway	Take-off Run Available
07L	A3	3306 m
25R	A10	3247 m
07R	J3	3130 m
	K2	2720 m
25L	J9	3200 m
	K6	2880 m

- e) If the pilot is unable to comply with the conditions mentioned in the subparagraphs above, he/she must inform ATC prior to entering the runway.

10.2 ARRIVALS

- a) Pilots should vacate the runway as quickly as practicable to enable ATC to apply minimum spacing on final approach thereby maximising runway utilisation and minimising the occurrence of missed approaches.
- b) To facilitate minimum runway occupancy time, each runway has multiple Rapid Exit Taxiways (RETs) that comply with ICAO design specifications. Pilots should vacate via the first available RET commensurate with operational conditions, or as instructed by ATC.
- c) A number of RETs (TWYs A4, A6, K3 and K5) have Rapid Exit Taxiway Indicator Lights (RETILs) to assist pilots at night or in low visibility to assess the distance to the exit taxiway. (The RETILs indicate 300 metres, 200 metres and 100 metres to go to the exit taxiway.)
- d) The landing distance to each RET is listed below:

RWY	Rapid Exit Taxiway	Landing Distance
07L	A7	1962 m
	A8	2432 m
	A9	2902 m
25R	A6*	1962 m
	A5	2432 m
	A4*	2902 m
07R	J7	2197 m
	K5*	2428 m
	J8	2536 m
	K6	2897 m
25L	J5	2197 m
	K3*	2428 m
	J4	2597 m
	K2	2897 m

* With RETILs

- e) Aircraft vacating the runway should not stop on the exit taxiway until the entire aircraft has passed the runway holding point.
- f) When vacating the runway pilots shall remain on the appropriate Tower frequency until instructed to contact the relevant Ground Control frequency.

10.3 REDUCED RUNWAY SEPARATION MINIMA (RRSM)

10.3.1 RRSM may be applied between a departing aircraft and a succeeding landing aircraft or between two successive landing aircraft on the same runway provided the following conditions exist:

- a) visibility at least 5 km;
- b) cloud ceiling in the departure/missed approach area at 3 000 feet or more;
- c) during daylight hours from 30 minutes after local sunrise to 30 minutes before local sunset;
- d) the second aircraft able to see the first aircraft clearly and continuously until the first is clear of the runway;
- e) no unfavourable surface wind conditions (including significant tailwind/turbulence or windshear, etc);braking action not adversely affected by water or other contaminants (ie RRSM will be suspended whenever the runway is wet or there is pilot report of poor braking action).

10.3.2 When RRSM is applied, the successive landing aircraft may be given clearance to land before the first aircraft has cleared the runway-in-use after landing or crossed the runway end on departure provided there is reasonable assurance that the following separation distances will exist when the landing aircraft crosses the runway threshold:

	Landing following departure	Landing following landing
RWY 07R/25L	The departing aircraft is/will be airborne and has passed a point at least 2 900 m from the threshold of the runway (abeam TWY K6 for RWY 07R or TWY K2 for RWY 25L)	The preceding aircraft has landed and has passed a point at least 2 900 m from the threshold of the runway (abeam TWY K6 for RWY 07R or TWY K2 for RWY 25L), is in motion and will vacate the runway without backtracking.
RWY 07L/25R	The departing aircraft is/will be airborne and has passed a point at least 2 400 m from the threshold of the runway (abeam TWY A8 for RWY 07L or TWY A5 for RWY 25R)	The preceding aircraft has landed and has passed a point at least 2 400 m from the threshold of the runway (abeam TWY A8 for RWY 07L or TWY A5 for RWY 25R), is in motion and will vacate the runway without backtracking.

10.3.3 ATC will provide warning to the second aircraft when issuing the landing clearance in line with ICAO standard phraseology, eg:

- “(Callsign...), preceding B737 landing about to vacate the runway, surface wind 090 degrees 11kt, cleared to land.”
- “(callsign...), departing A320 ahead about to rotate, surface wind 230 degrees 6kt, cleared to land.”

10.4 Pilots must notify ATC in advance if they anticipate not being able to comply with any of the above requirements.

11. Runway Maintenance Periods

- 11.1 To facilitate the regular maintenance of the runways at Hong Kong International Airport, one runway is normally closed overnight for scheduled maintenance period. During the closure period all arrivals and departures will use the other runway.
- 11.2 The scheduled maintenance periods are published in AIP Supplements and any amendments are promulgated by NOTAM.
- 11.3 In the event that during a maintenance period the operational runway is not available, or is likely to become unavailable, the maintenance work can be terminated and the closed runway returned to service within approximately one hour. However the timing is dependent on the nature of the maintenance work being carried out.

12. Ground Handling Arrangements

- 12.1 All operators, including overseas and local operators of private aircraft, operating international flights to or from Hong Kong International Airport shall employ the services of a recognised ground handling agent.
- 12.2 Operators should contact the Airport Authority Hong Kong for further information on ground handling arrangements.

13. Ground Manoeuvring of Aircraft

13.1 LEGISLATION

- 13.1.1 The rules concerning ground manoeuvring of aircraft and vehicles are contained in Rule 33 of Schedule 14 to the Air Navigation (Hong Kong) Order 1995.

13.2 DEFINITION OF TAXIING AIRCRAFT

- 13.2.1 Aircraft taxiing are those manoeuvring under the following conditions:

- a) Aircraft moving under their own power within the airport boundaries, or any part of the airport subject to communal use, excluding take-off and landing.
- b) Aircraft being moved with the assistance of ancillary power, i.e. tractor, jeep, or by other mechanical means.
- c) Aircraft being manoeuvred by hand.

Note: Aircraft classified under a), b) and c) above are not subject to these regulations unless they are moved along, or across runways, taxiways or taxilanes, in which case they are considered to be taxiing.

13.3 LOCAL TAXIING /AIR-TAXIING REGULATIONS

- 13.3.1 Overtaking of moving aircraft at Hong Kong International Airport is prohibited.
- 13.3.2 When taxiing/air-taxiing on an apron, aircraft shall follow the nose-wheel guide lines at all times. Marshalling service will only be provided at parking stands not equipped with full Safegate Aircraft Docking System.

Note: Pilots should exercise extreme caution when manoeuvring on the aprons due to the proximity of other aircraft, ground staff and equipment. Engine power should be restricted to the minimum required, to reduce the adverse effect of jet blast. A case in point is the use of greater than normal breakaway thrust when commencing taxi.

13.4 AIRCRAFT EQUIPPED WITH RADIO

13.4.1 Before the commencement of any manoeuvre, all aircraft equipped with radio, except those specified in the 'Note' to para 13.2 above, are to contact "Hong Kong Ground" on frequency 121.6 MHz or 122.55 MHz as appropriate.

13.4.2 A person qualified (see para 13.6 below) shall be in charge of all movements. If voice communication cannot be established, the aircraft is to remain in position and comply with regulations applicable to aircraft not fitted with radio.

13.5 AIRCRAFT UNABLE TO ESTABLISH RADIO CONTACT WITH ATC

13.5.1 Parked aircraft that are unable to establish radio contact with ATC must arrange with Airport Authority Apron Control Centre for a 'Follow Me' escort service to guide the aircraft.

13.5.2 Landing aircraft that are unable to establish radio contact with ATC shall vacate the RWY onto the parallel taxiway and await a 'Follow Me' vehicle to guide them to the parking stand.

13.6 PERSONS QUALIFIED TO TAXI/AIR-TAXI AIRCRAFT

13.6.1 No person may taxi/air-taxi an aircraft at Hong Kong International Airport unless they are qualified under one of the following categories:

- a) a licensed pilot in possession of a valid licence to operate that type of aircraft;
- b) a qualified ground engineer (see note below);
- c) a pupil under instruction who has been authorised by a Flying Instructor in possession of a valid instructor's licence for that type of aircraft.

Note: In the case of para (b) above, such ground engineers are to be in possession of a certificate, signed by a pilot holding for that type of aircraft a valid licence, stating that the ground engineer is qualified to taxi/air-taxi that type of aircraft.

13.7 PERSONS QUALIFIED TO TOW AIRCRAFT

13.7.1 A tractor driver in possession of,

- (a) a valid Airport Standard Permit, with a driving endorsement, for the areas in which the aircraft is to be towed;
- (b) a valid Heavy Goods Vehicle Licence and Airport Ground Service Vehicle Licence issued by the Transport Department as appropriate for driving the type of tug which is to be used for towing the aircraft, and covered by a valid Third Party insurance policy for such towing;
- (c) written approval from the company owning the tug that he may tow aircraft;
- (d) written approval from the owner or operator of the aircraft to be towed, that he may tow the aircraft.

Note: In the case of para (d) the approval may be in the form of a contract between the company owning the tug and the aircraft owner/operator, providing the other conditions in para (a) to para (c) inclusive are satisfied.

13.7.2 In addition to the conditions set out above, the tug driver or his employer must also ensure that the tug is appropriate for towing that type of aircraft, has been licensed in accordance with Transport Department requirements, has been issued with a valid Airport Restricted Area Vehicle Permit for those areas within which it is intended to be operated, and is covered by the appropriate level of insurance required for operation on the aircraft movement area.

14. Regulations for Vehicles and Persons on Aerodromes

14.1 The general regulations for vehicles and persons within Hong Kong International Airport are contained in Airport Authority Ordinance.

14.2 The regulations for vehicles and persons within the Hong Kong International Airport Restricted Areas are contained in Airport Authority Ordinance.

15. Engine Tests and Ground Runs

15.1 GENERAL

15.1.1 An engine ground run is defined as any engine start up not associated with a planned aircraft departure.

15.1.2 Engine ground runs at ground idle power of not more than two engines at a time and for a duration not exceeding ten minutes may be carried out on the Passenger Apron or Cargo Apron.

15.1.3 Engine runs above ground idle power shall be carried out in the engine run-up facility and engine ground runs at idle power for a duration in excess of ten minutes shall only be carried out in approved locations.

15.1.4 All engine ground runs must be fully supervised by ground staff.

15.1.5 Maintenance or test running of jet engines not mounted on an aircraft is prohibited unless performed in a test cell of adequate design.

15.2 ENGINE GROUND RUN PROCEDURES

15.2.1 Initial requests for a ground engine run should be made to the Airport Authority Apron Control Centre (tel. no. 2910 1112). The airline, aircraft maintenance agent engineer or mechanic in charge of the engine test is responsible for ensuring that all safety precautions against injury to persons or damage to properties, aircraft, vehicles and equipment in the vicinity, are adopted.

15.2.2 When ready to conduct the engine run, the pilot or authorised engineer shall obtain start-up clearance from Apron Control on frequency 121.775MHz, and a listening watch shall be maintained on the frequency throughout the engine run. The aircraft anti-collision beacons must be activated for the entire duration of the ground engine run and Apron Control shall be advised on completion of the engine run.

15.2.3 The ground crew in charge must maintain communication with cockpit personnel and be able to stop the engine run immediately if directed.

16 Runway Friction Measuring Device and Runway Friction Level

- 16.1 Runway surface friction at Hong Kong is measured by means of a Griptester in accordance with recognised procedures. Runs are carried out at a speed of 65 km/hour regularly on a dry runway surface using a self-watering device giving a controlled depth of 1 mm of water to monitor the effectiveness of the rubber deposit removal programme and surface wear and tear. Should the friction value fall to 0.43 or less the runway will be notified as liable to be slippery when wet.
- 16.2 If and when such notification is given, there may be a significant deterioration both in aircraft stopping performance and directional control when the runway is wet. Take-off or landing should then be considered only if the distances available equal to or exceed those required for slippery conditions as determined in the Aeroplane Flight Manual.
- 16.3 If a pilot experiences a significant degradation of the braking action, it should immediately be reported to ATC for relay to subsequent landing aircraft and for follow-up action by the airport authority.

17 Ground Handling of Code F Aircraft

- 17.1 Both runways at Hong Kong International Airport can handle Code F aircraft, but not all the taxiways are suitable for A380. Refer to AD2-80F for taxiways/taxilanes available to A380.

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