



GOVERNMENT OF INDIA
CIVIL AVIATION DEPARTMENT
O/O DIRECTOR GENERAL OF CIVIL AVIATION

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OPERATIONS CIRCULAR

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SUBJECT : HELICOPTER SPECIAL OPERATIONS

1. Introduction

- 1.1 Helicopters are versatile machines which can perform a variety of roles in varying terrain. The same machine can be used for roles as divergent as flying VIPs to rescuing persons stranded in inaccessible areas in terrains ranging between snow clad high mountains to high seas. The change in roles are generally infrequent as regular commercial flying is mostly undertaken in similar operating conditions.
- 1.2 This circular provides guidelines to the operator for the safe conduct of special helicopter operations.

2. External Load Operations (ELO)

- 2.1 Helicopter External Load Operation means—
 - (a) Helicopter external load towing operation; or
 - (b) Helicopter sling / swing load operation.
- 2.2 Helicopter External Load Towing Operation means towing, lowering, and laying down of external cargo by a helicopter, which includes Helicopter Banner Towing.
- 2.3 Helicopter Sling Load Operation means external carriage, lowering, or picking up, of a load, cargo, or passengers by a helicopter by means of a bucket, net, harness, sling, or stretcher, suspended beneath the helicopter.
- 2.4 Classification of External Load.
 - (a) Class A. An external load that cannot be moved freely or jettisoned and does not extend below the under carriage. Ski-pods, TV camera,

survey equipment, crop spraying equipment attached to helicopter will come under this category.

- (b) Class B. An external load that can be jettisoned and is not in contact with surface (land, water etc.) e.g. a normal sling load, mining, surveys, firefighting equipment, anti-pollution pads, a container, part of wrecked aircraft, military stores and vehicles.
- (c) Class C. An external load that can be jettisoned and that remains in contact with the land or water or any other surface eg. wire pulling, cable laying, power line maintenance, etc.

2.5 Requirements.

- (a) Helicopter. A helicopter shall meet airworthiness and certification requirements for external load equipment.
- (b) Each operator performing helicopter external load operation shall ensure the helicopter has:
 - (i) An electrical quick release device; and
 - (ii) A mechanical or independent electrical quick release device.
- (c) The operator shall ensure that the quick release devices functions properly, with all external loads, up to and including the helicopter's maximum external load. The operator shall ensure that the quick release system has:
 - (i) A primary control installed on one of the pilot's primary flight controls; and designed and located in such a manner, so that it may be operated by the pilot, without limiting the pilot's ability to control the helicopter during an emergency situation; and
 - (ii) A secondary control readily accessible to a crew member.
- (d) Maintenance instructions for ELO equipment, including hooks, slings, nets and straps etc., must be established by the operator, in liaison with the manufacturer, included in the operator's helicopter maintenance programme, and approved by the DGCA.

2.6 SOP. The operator shall ensure that the SOP is approved by DGCA and includes material specific to ELO. In particular it will address:

- (a) Relevant extracts from the RFM providing technical, operational and performance information regarding ELO. This shall include modification/additions to normal and emergency checklists, if any. When required, relevant extracts from the Flight Manual supplement shall be made available to the organization for which the ELO is being conducted.

- (b) Performance criteria including calculation of permissible load as per prevailing conditions.
- (c) Load inspection technique.
- (d) Weather limitations for ELO.
- (e) Procedures for determining minimum crew.
- (f) Criteria for the selection of flight crew members for the ELO task, taking previous experience into account.
- (g) Method by which crew members record ELO.

2.7 Crew. Refer CAR Section 8 Series H Part II for details on qualification, currency and recent experience for ELO flying.

2.8 Restrictions.

- (a) Operations shall be conducted out of ground effect.
- (b) External load operation shall be conducted under VFR or Special VFR conditions only.
- (c) External Load operations with Class B or Class C load shall not be carried out over congested areas.
- (d) Only Performance Class I operations shall be undertaken for ELO over congested areas.
- (e) Performance Class 2 or 3 operations may be undertaken for ELO over non-congested areas.

3. **Helicopter Hoist Operations (HHO)**

3.1 Terminology.

- (a) Helicopter Hoist Operations (HHO) Flight. A flight by a helicopter operating under an HHO approval, the purpose of which is to facilitate the transfer of persons and/or cargo by means of a helicopter hoist.
- (b) HHO Crew Member. A crew member who performs assigned duties relating to the operation of a hoist.
- (c) Hoist Cycle. For the purpose of the setting of crew qualifications, one down-and up cycle of the hoist hook shall be counted as one cycle.
- (d) HHO Site. A specified area at which a helicopter performs a hoist transfer.

- (e) HHO Passenger. A person who is to be transferred by means of a helicopter hoist.

3.2 Requirements.

- (a) Helicopter. During HHO, the helicopter shall be capable of sustaining a critical power unit failure with the remaining engine(s) at the appropriate power setting, without hazard to the suspended person(s)/cargo, third parties, or property. (Except for HEMS HHO at a HEMS operating site where the requirement need not be applied.)
- (b) A helicopter shall meet airworthiness and certification requirements for helicopter hoist equipment.
- (c) HHO Equipment. The installation of all helicopter hoist equipment including any subsequent modifications and where appropriate, its operation, shall have an airworthiness approval appropriate to the intended function. Ancillary equipment must be designed and tested to the appropriate standard and acceptable to the DGCA.
- (d) Equipment Check. Serviceability of the hoist equipment and the hoist cable shall be ensured by carrying out one hoist cycle before undertaking the actual operation.

3.3 SOP. The operator shall ensure that the SOP is approved by DGCA and includes information specific to HHO. In particular it will address:

- (a) Relevant extracts from the RFM providing technical, operational and performance information regarding HHO. This shall include modification/additions to normal and emergency checklists, if any. When required, relevant extracts from the Flight Manual supplement shall be made available to the organization for which the HHO is being conducted.
- (b) Weather limitations for HHO.
- (c) The criteria for determining the minimum size of the HHO site - appropriate to the task.
- (d) Procedures for determining minimum crew.
- (e) Criteria for the selection of flight crew members for the HHO task, taking previous experience into account.
- (f) Method by which crew members record hoist cycles.
- (g) If required, the conditions under which offshore HHO transfer may be conducted, including the relevant limitations on vessel movement and wind speed.

3.4 Crew. Refer CAR Section 8 Series H Part II for details on qualification, currency and recent experience for HHO flying.

3.5 Restrictions.

- (a) Conduct of operations shall be limited to performance specified in OGE (out of ground effect) Performance Graph given in the Flight Manual.
- (b) HHO shall be conducted under VFR or Special VFR conditions only.
- (c) Only Performance Class I operations shall be undertaken for HHO over congested areas.
- (d) Performance Class 2 or 3 operations may be undertaken for HHO over non-congested areas.

4. **Helicopter Emergency Medical Services (HEMS)**

Refer CAR Section 8 Series S Part VII and Operations Circular 02 of 2016, dated 11th February 2016.

5. **International Helicopter Operations**

5.1 Indian registered helicopters shall obtain separate approval for undertaking operations abroad. This approval shall be accorded on the operator demonstrating the following: -

- (a) Availability of relevant navigation maps / data;
- (b) Details of all heliports/ landing platforms including dimensions, obstructions, facilities etc;
- (c) RT / communications procedures;
- (d) Sources for weather information;
- (e) Procedures to be followed in an emergency including communications failure;
- (f) Search and rescue procedure; and
- (g) Any other relevant information.

5.2 The operator shall prepare a comprehensive SOP containing all of the above information and get the same approved from DGCA before undertaking operations abroad.

Sd/-
(Atul Chandra)
Chief Flight Operations Inspector
For Director General of Civil Aviation