



Transport of external loads with helicopters "Level 2" required by RFP Art. 133 g
After completion of training send this form to: Bundesamt für Zivilluftfahrt (BAZL), FA / Helikopter, Maulbeerstrasse 9, 3003 Bern

Name: First Name: Date of birth:

Tel Privat: Tel Mobile: Fax:

Change of address (indicate new address) ☐ oui / ja E-Mail:

Zip code / City: Street:

Pilot in charge of theoretical instruction (must have a minimum of 500h ECS experience):

Name: First Name: CH Licence N°:

EXTERNAL CARGO SLING GROUND INSTRUCTION

FOM

Flight and duty times ☐ ☐
Max. cycles / day ☐ ☐
Min. and max. fuel ☐ ☐
Refueling procedures ☐ ☐
Radio communications ☐ ☐
Human factors / CRM / nutrition ☐ ☐
Safety equipment / Operational Briefing ☐ ☐
Pilot / marshaller responsibilities ☐ ☐

Flight Manual

Limitations ☐ ☐
Performance / HOGE ☐ ☐
Cargo hook supplement ☐ ☐

Flight Procedures

Airspeed selection with load ☐ ☐
Flight path selection (3rd party) ☐ ☐
Bank / load factor / load drag ☐ ☐
Load stabilisation techniques / hover & in-flight ☐ ☐
Downwash / Load rotation ☐ ☐
Visual hover reference / vert, horiz ☐ ☐
Rotor clearance ☐ ☐
Marshaller Hand signals ☐ ☐
Environement / Slope / forest, canyon ☐ ☐
Manual & Electrical load release ☐ ☐
Decision / exposure time ☐ ☐

Load & Person Preparation

Vertical loads ☐ ☐
Horizontal loads ☐ ☐
Light, bulky and combined loads ☐ ☐

Minimum requirements before starting practical ECSC 2 instruction:

- CPL(H) / ATPL(H) ☐
- ECS Level 3 completed ☐
- Type rating completed ☐
- Min. 10 hours PIC on type of helicopter ☐
- ECS 2 Ground instruction completed ☐
- Marshaller syllabus reviewed ☐

Nets & bags ☐ ☐

Special Equipment

Concrete bucket ☐ ☐
Remote hook / swivel hook / Carousel ☐ ☐
Spansets ☐ ☐
Steel cables/ chains ☐ ☐
Long lines ☐ ☐
Load meter / printer ☐ ☐
Mirrors ☐ ☐
Bubble window / vertical references ☐ ☐
Audio / vibration warning ☐ ☐

Emergency / Limitations

Flight control stops ☐ ☐
TR failure ☐ ☐
Engine failure / OEI operation ☐ ☐
Height velocity diagram / exposure time ☐ ☐
Emergency procedures in sling ops ☐ ☐
Review of sling accidents ☐ ☐

Dangers

Flights in valleys / cables / wires ☐ ☐
Flight over cities / roads / 3rd party ☐ ☐
Airflow / up and downdrafts ☐ ☐
Sun / shadow / snow / rain / static electricity ☐ ☐
Settling with power / vortex ☐ ☐
Emergency load jettison ☐ ☐

Remarks:

I herewith certify that the trainee has received the required ECS 2 ground instruction and is found competent to begin the practical ECS 2 instruction.

Date:

Name:

Signature:

LEVEL 2 LONG LINE CONVERSION

Conditions:

- Maximum cargo weight 1'500 kg
- 1 marshaller (with radio) at pickup point
- 1 marshaller (with radio) at drop off point
- helicopter fitted with cargo mirror / bubble window*
*if applicable

VERTICAL REFERENCES

The trainee must be able to perform a stabilized hover flight by means of vertical references without any external cargo attached to the helicopter prior to commencing training with external loads.

DEFINITIONS

Mission:

One mission is an ECS flight or series of ECS flights, conducted from site A to site B, for a particular customer, on a particular day.

Cycle:

A cycle is a flight from site A to site B with an external load and subsequent return to site A.

Pilot (preferably Certified Flight Instructor) in charge of ECS practical training (must be qualified at minimum for ECS level 1 and 2 and must have a minimum experience of 500 hours ECS). **maximum 2 persons.**

Name: Licence Nr:

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Flight instruction DC/minimum 20 cycles: (every square is 1 cycle)

☐ Mirror ☐ Vertical ref.

Type of loads (use code in squares)

- 1 Concrete bucket
- 2 Vertical load
- 3 Horizontal load
- 4 Nets / bags
- 5 Light and bulky load

Date training started:

Trainee may perform **solo ECS2 with on site supervision** Date:..... Signature / License N°:.....

Flight instruction solo with on site supervision / min. 5 missions: (every square is 1 mission)

☐ Mirror ☐ Vertical ref.

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Cycles solo/minimum 25 cycles: (every square is 1 cycle)

Type of loads (use code in squares)

- 1 Concrete bucket
- 2 Vertical load
- 3 Horizontal load
- 4 Nets / bags
- 5 Light and bulky load

Trainee may perform **solo ECS2 under supervision** Date:..... Signature / License N°:.....

Flight instruction solo under supervision / min 10 missions: (every square is 1 mission)

☐ Mirror ☐ Vertical ref.

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SUPERVISOR NOT REQUIRED ON SITE

Trainee is found properly qualified for Long line External Cargo Sling (ECS2) operations without supervision
The trainee's logbook has been endorsed for ECS Level 2

Date: Signature / License N°:.....

Total Helicopter Flight experience:

☐ >300h PIC ☐ 300h<HEL<700h ☐ 700h<HEL<1000h ☐ 1000h<HEL<2000h ☐ HEL>2000h

TOTAL TIME ECS 2:N° of cycles ECS2:.....

Remarks: