

TYPICAL SUNDANCE PILOT PROGRESSION

1. FAR 135 QUALIFIED –AS350 AND/OR BH206
REQUIREMENTS FOUND IN TRAINING PROGRAM FOR
135 OPERATIONS
2. SFAR 50-2 QUALIFIED
REQUIREMENTS FOUND IN GRAND CANYON NATIONAL
PARK SPECIAL FLIGHT RULES AREA PROCEDURES
MANUAL
3. NON-MOUNTAIN CHARTER QUALIFIED
4. PHOTOFLIGHT QUALIFIED
5. MOUNTAIN QUALIFIED
6. OAS QUALIFIED
7. LOCKHEED QUALIFIED
8. SHORT LINE SLING AND BUCKET QUALIFIED
9. LONG LINE SLING QUALIFIED
10. INSTRUCTOR QUALIFIED -AS350 AND/OR BH206
REQUIREMENTS FOUND IN TRAINING PROGRAM FOR
FAR 135 OPERATIONS
11. CHECKAIRMAN QUALIFIED -AS350 AND/OR BH206
REQUIREMENTS FOUND IN TRAINING PROGRAM FOR
FAR 135 OPERATIONS

PILOTS MAY OR MAY NOT FOLLOW THIS TYPICAL PROGRESSION. AFTER
135 AND SFAR 50-2 QUALIFICATION PILOTS WILL BE TRAINED AS
NEEDED BY THE COMPANY.

TRAINING CURRICULUM SUPPLEMENTAL TRAINING FOR OAS FLIGHTS INCLUDING HELITACK AND FIRE FIGHTING

Initial Training – 2 hours of ground and 2 flights in each type of helicopter a pilot is carded to operate. This flight training to take place after a pilot has satisfactorily completed the company course on mountain flying. Ground training to emphasize safety of flight procedures as well as the inspection and administrative aspects of conducting DOI and USFS flights. Flight training to emphasize bucket and sling training with lines up to 50 ft. (non-long line, non vertical reference). For long line training there is a separate training course.

Recurrent Training – 1 hour of ground and 1 flight in a type of helicopter used for fire fighting.

Ground Training:

1. Helicopter/ Pilot inspection
 - a. OAS data card, Pilot card, Form 23's, Load Calculation forms, flight manual, ELT, fire extinguisher, survival gear, survival water, radio cords for front and back observers, aux fm radio cord, copy of aircraft rental agreement, copy of haz mat manual, bambi bucket, remote hook, extended baggage compartment, cargo basket.
2. Fuel Truck/Driver inspection
 - a. OAS inspection card, haz mat placards, spill kit, driver CDL with haz mat endorsement.
3. Personnel Protective Clothing
 - a. Flight suit, gloves, boots, helmet
 - b. Leatherman
4. Sling operations (non long line)
 - a. Hook release checks (1, 2, 3)
 - b. Sling cables and riggings
 - c. Remote hook test and operations
 - d. Duct tape
 - e. Mirror usage

- f. Remote release of loads
 - g. Manual release of loads
 - h. Release at belly hook (manual only for remote hooks)
 - i. Emergency jettison
 - j. Swivels
- 5. Bambi Bucket operation (non long line)
 - a. Pre flight (storage, assembling, lanyard grooping, release test, duct tape)
 - b. Hook up
 - c. Water release switches in different helicopters
 - d. Dip site evaluation
 - e. Pumpkin tanks
 - f. Creeks and rivers
 - g. Ponds and Lakes
- 6. Radio operations (NAT FM, Techsonic FM, aux FM usage, hand held cloning, audio control panel, observer radio ops, rear observers radio cord usage)
- 7. GPS operations (Trimble, Garmin)
- 8. Aircraft Rental Agreement Contract
- 9. Engine Power Checks
- 10. AOS Form 23 Usage
- 11. Load Calculation Form Usage
- 12. Fire Terminology (Helitack, Hot Shots, Engine Crews, Irregulars, Type 1, 2, 3 fires, Type 1, 2, 3 helicopters, IC, Initial Attack, Helitack Manager, TFR, lead plane, tanker, air attack, back haul, line or trail drop, spot drop)
- 13. Fire behavior
 - A. Do not overfly active fire
 - B. Smoke – low visibility conditions
- 14. Slope landings (no toe-ins or one skids)

15. Helibase Procedures

- a. Initial safety briefing**
- b. Air traffic procedures and communications**
- c. Medivac ship**

Flight Training

1. Bucket hook up with and without 30 or 50 ft cable extension
2. Take off
3. Enroute (max airspeed)
4. Approach to dip site
5. Dipping (references, mirror use, clearing main and tail rotors, power applications, liftoff, load cell)
6. Take off
7. Approach to fire
8. Communications with crew
9. Spotting crew and determining drop requests
10. Spot drops
11. Trail drops
12. Drops on slopes
13. Setting down empty bucket (with and without 30 or 50 ft cable extension)
14. Remote hook operation
 - a. electrical release
 - b. hand signal
 - c. manual release
 - d. cargo sling operation

TRAINING CURRICULUM SUPPLEMENTAL TRAINING FOR PHOTO FLIGHT OPERATIONS

INITIAL TRAINING - 90 minutes of ground instruction plus a quiz on the following subjects:

1. Photo Flight Operations Manual
2. Permission to operate
 - a. Property Owners
 - b. Appropriate agencies contacted (Police, Fire Dept, Park Service, etc.)
 - c. Permits and Fees acquired by and paid by Producer.
 - d. FAA FSDO notification/permission if necessary
3. Special Provisions and Specific Area of Operations
 - a. Security
 - i. Security to exclude all persons not covered by written or verbal permission
 - ii. Filming halted if unauthorized persons or aircraft enter operations area
 - iii. Filming halted for any other reason that may jeopardize safety
 - b. Communications
 - i. Air to Ground Communication
 - ii. Air to Air Communications
4. Special Provisions of Actual Flight Operations Within A Specific Area
 - a. Briefing
 - b. Necessary Crew and Persons Authorized
 - c. Special Circumstances
 - d. Running of Aircraft
 - e. Halting of Filming or Photography
 - f. Deadlines
 - g. FAR 91.119 (b) (c)
 - h. Roads and Highways
5. Non-Specific Areas of Operations
 - a. Over Water
 - b. Mountains, Deserts, Large Agricultural Areas
6. Actual Flight Operations Within Non-Specific Areas of Operation
7. Flights to and from Filming Sites
8. Special Provisions - Aerobatics
 - a. Radical Flight Maneuvers
 - b. Visibility
 - c. Communications
 - d. Crew Areas

- e. Temporary Hold or Cancellation
- f. Signature of Pilots
- g. Deadlines
- h. FAR 91.119 (b) (c)
- i. Central Control
- j. FAA Flight Service Station Notification

9. Accident Notification Procedure

10. Certificate of Waiver or Authorization (FAA Form 7711-1)

11. Camera Mounts

- a. Tyler Middle/Major Mount
- b. Tyler Nose Mount
- c. Weight & Balance

RECURRENT TRAINING - 60 minutes of ground instruction on the above subjects.

TRAINING CURRICULUM SUPPLEMENTAL TRAINING FOR MOUNTAIN FLYING

Initial Training – 1 hour of ground and at least 2 training flights in which all or part of the flight is dedicated to mountain flying techniques. A competency check flight by a company instructor or check airman in which a pilot is tested on mountain flying techniques will complete this course. At successful completion pilots will be awarded a course completion certificate, a copy of which will be kept in each pilot's file. Pilots will be required to complete this course before being assigned to charter flights which require mountain landings or takeoffs. (The chief pilot may shorten this course at his discretion for pilots with considerable mountain flying experience).

Recurrent Training – Pilots initially trained and qualified in mountain flying will be tested annually either on a dedicated check flight or in combination with an annual Part 135 competency check.

Ground training:

1. Aircraft Performance
 - a. HIGE charts
 - b. HOGE charts
2. Weather
 - a. Company wind limits
 - b. Clouds, fog, rain, snow considerations
3. Navigation
 - a. Landmark navigation
 - b. GPS
4. Deep Snow
 - a. Snow shoes – when required
 - b. Blowing snow whiteout
 - c. Choosing a landing sight
 - d. Landing techniques
 - e. Takeoff techniques
5. Mountain flying – enroute phase
 - a. Flying along the side of a canyon versus in the middle

- b. Crossing ridgelines
 - c. Windward versus leeward sides of mountains and ridges
6. Mountain top landings
- a. High recon
 - b. Low recon
 - c. Selecting an LZ: size, shape, surroundings, slope, surface
 - d. Wind direction
 - e. Go around path
 - f. ~~Flat~~ approaches *SIDEWIND*
 - g. Approach to hover
 - f. Hover to touchdown (clearing tail rotor)
7. Landings on sides of mountains below the tops
- a. Wind directions
 - b. Go around path
8. Toe in landings
- a. Crew experience/briefing
 - b. Approach to landing
 - c. Skid alignment
 - d. Touchdown
 - e. Exiting helicopter
 - f. Takeoff and departure
9. One skid landings
- a. Crew experience/briefing
 - b. Approach to landing
 - c. Skid alignment
 - d. Touchdown
 - e. Exiting helicopter
 - f. Takeoff and departure
10. Landings at base of mountains
- a. Lack of go around path
 - b. Low recon/wind direction
 - c. Takeoff considerations before landings
 - d. Approach to a hover

- e. Hover to landing (clearing tail rotor)
- 11. Takeoff techniques
 - a. Takeoff to a hover
 - b. Wind direction
 - c. Power check
 - d. Airspeed over altitude
- 12. Takeoff to clear a vertical obstacle
 - a. HOGE technique
- 13. Slope Landings
 - a. Limits for Bell 206, AS350B *12° up - 5° side - 6° down*
 - b. Side Slopes *12° up - 5° side - 6° down*
 - c. Nose up or down slope landings
- 13. Mountain emergencies
 - a. Engine failure
 - b. Power settling
 - c. Downdrafts and updrafts
 - d. Dynamic rollover
- 14. Survival
 - a. Finding shelter
 - b. Water and food
 - c. Signalling (radios, mirrors, fires, smoke, waving clothing)
 - d. Staying with helicopter

Flight Training:

- 1. Mountain approaches and landings
- 2. Landings on sides of mountains
- 3. Landings at bases of mountains

4. Slope landings
 - a. Side slopes
 - b. Up slopes
5. Deep snow landings (if possible)
6. Takeoff techniques
 - a. Normal takeoff – airspeed over altitude
 - b. Vertical obstacles – HOGE takeoffs
7. Emergency procedures
 - a. Mountain autorotations

**TRAINING CURRICULUM
SUPPLEMENTAL TRAINING FOR NELLIS RANGE OPERATIONS**

INITIAL TRAINING- 2 hours of ground instruction plus a quiz on the following subjects:

1. Threats

- a. Mid-air collision
 - i. Fast moving aircraft
 - ii. Aircraft masked by terrain
- b. Wake turbulence
 - i. Fast moving aircraft
 - ii. Large aircraft low level
- c. Explosive ordinance
 - i. Air to ground- 60 series ranges
 - ii. Ground to ground- Silver Flag A
 - iii. On ground- area used since WWII
- d. Weather
 - i. Different from Las Vegas
 - 1. cooler
 - 2. wetter
 - ii. Changes rapidly
 - iii. High density altitude
 - 1. high temperature
 - 2. high altitude
- e. Radiation
 - i. Above ground tests
 - ii. Below ground tests
- f. Laser target designators- wear goggles

2. Ranges

- a. Military operations areas- diagrams with latitudes and longitudes
- b. Restricted areas- diagrams with latitudes and longitudes
- c. Sites
 - i. Masters- coordinates and elevations for each
 - ii. Remotes- coordinates, elevations, and ranges for each
 - iii. Angel Peak

3. Missions

- a. Maintenance and repair or masters and remotes
 - i. sling propane bottles to Mt. Irish
 - ii. carry electronic remotes in helicopter
 - iii. remotes sites difficult to find

- b. Video ordinance on ranges
 - i. safety briefing from range safety officer
 - ii. diagrams of targets
 - iii. traffic patterns
- c. VIP tours
 - i. rank plates- proper orientation
 - ii. coffee and donuts- if required
 - iii. arrival time- 30 minutes prior to departure
 - iv. routes- as directed
- d. Mission Sheets

4. Communications

a. Telephone

- i. numbers

Black Jack	6523707
Block House 63	6523899
Indian Springs	6520308
Lockheed- Dick Stienhook	6523714
shop	6526895
Mt. Irish	6523969
Nellis- Base Operations	6524600
Combat Camera	6527878
Radar	6523656
Tower	6522998
- ii. To call Sundance office from any Nellis phone dial ⁹⁹ first

b. Radio-VHF

- i. frequencies

Black Jack	134.85
Block House 63	122.90
Dreamland	126.15
Indian Springs Tower	118.30
Nellis- Approach	124.95
Control North	126.65
Control West	119.35
Departure	135.10
Ground	121.80
Tower	132.55
Sandia or Guns	118.70
Silver Bow	120.15
Silver Bow Tower	124.75

c. Radio- FM- frequencies are preset-Use Fox 4

- i. take one with you
- ii. put back on charger

5. Weight and Balance

If you are flying DOD personnel, military or DOD civilian, you must fill out a weight and balance form and file it in Tom's desk.

- a. weight calculation must be done on form
- b. center of gravity does not have to be calculated but the square must be initialed

6. Fuel

- a. Available from military- Requires Identaplate
 - i. Indian Springs A.A.F.B.
 - ii. Nellis A.F.B.
 - iii. O. & M. Compound- combination 3-8-1-0 SEE attached Operations Memo No. 33
 - iv. Tolicha Peak Compound
 - v. Tonopah Test Range Airport- TTR
- b. Available from civilian airports- use company credit card
 - i. Mesquite Airport
 - ii. McCarran Intl. Airport
 - iii. North Las Vegas Airport
 - iv. Tonopah Airport

7. Nellis Procedures

- a. Parking
 - i. inside red line which represents a fence- across line from operations building
 - ii. cross red line at Entry Control Point, red and white dashed line
- b. Departures
 - i. Class B West- 300 degrees, 4000 feet MSL
 - ii. Class B East- 070 degrees, 4000 feet MSL
 - iii. Class B Northeast- 340 degree to I-15 then 030

RECURRENT TRAINING- 1 hour of ground instruction on the above subjects.

TRAINING CURRICULUM

Vertical Reference - Long Line 75 ft. and longer

Initial Training

1. General Information
 - a. Introduction
 - b. General policies
 - c. Safety
 - d. Defininitions
2. Operating Limitations
 - a. General
 - b. Specific Aircraft Operating Limitations
3. Load Combination Operating Procedures
 - a. Pre-Flight Actions
 - b. Placard and Certificate Checks
 - c. Work Site Preparation
 - d. Class A Loads
 - e. Class B and C loads
 - f. Ground Crew Briefing
4. Inflight Procedures
 - a. Recon of the Route
 - b. Attaching the Load
 - c. Takeoff
 - d. Enroute
 - e. Approach and Landing
5. Aircraft Servicing
 - a. Normal Fueling
 - b. "Hot" Refueling
6. Emergency Procedures
 - a. Electrical Failure
 - b. Engine Failure, Hovering
 - c. Engine Failure, Inflight
 - d. Static Electricity Discharge
7. Planning
 - a. Rotorcraft Load Calculations
 - b. Center of gravity Calculations
 - c. Congested Area Plan
8. Standard Hand Signals

NOTE: Initial Training is approximately 25 hrs. of ground School and no less than 20 hrs. of Dual and Solo Instruction . The candidate must also pass a skill test per FAR 133 to receive an External Load Certificate issued by the Chief External Load Pilot.

If the Pilot in training can pass the skill test in less than the above listed time, then that reduced time shall be sufficient initial training.

RECURRENT TRAINING- 4 hrs of ground on the above subjects and enough flight training to allow the pilot to pass the skill test per FAR 133.