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05/24/2000
Revision 5



Rocky Mountain Holdings, L.L.C.
800 South 3110 West, Provo, Utah 84603

**PILOT TRAINING PROGRAM
AS350**

Rocky Mountain Holdings, L.L.C.
Training Program, AS350

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05/24/2000
Revision 5

REVISION RECORD

| <u>Revision</u> | <u>Instructions</u> | <u>Date</u> |
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| <u>2</u> | <u>REPLACE: Pages iii-vii, 16, 20, 23, 24, 28-57</u> <u>ADD: Pages 58-61</u> | <u>05/17/96</u> |
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General

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SECTION 1 - General

1. Purpose

This manual describes the training program and policies of Rocky Mountain Holdings, L.L.C. for training in the Eurocopter AS350 aircraft. This includes pilots in command, check airmen, and flight instructors. The end product of the flight and ground training prescribed herein is to be used by instructors in conducting the various courses of training to ensure that all pilots in command, check airmen, and flight instructors have and maintain the necessary skills, knowledge, proficiency and judgment to perform all assigned flight duties in a safe and efficient manner and to be in compliance with the FARs.

2. Definitions And Type Of Training

- a. Initial Training. The training required for crewmembers who have not qualified and served in the same capacity on an aircraft.
- b. Recurrent Training. The training required for crewmembers to remain qualified in accordance with the annual recurrent training requirements of FAR 135.343 and 135.351.
- c. Transition Training. The training required for a crewmember who has been previously trained and qualified for a specific duty position by the operator and who is being assigned to the same duty position on a different aircraft type.
- d. Check Airman/Instructor Training. The training required for pilots to serve as RMH flight instructors and/or check airmen.
- e. Regualification Training. The training required for employees who have been trained and qualified by Rocky Mountain Holdings, L.L.C., but has become unqualified to serve in a particular duty position and/or aircraft due to not having received recurrent training and/or a required flight or competency check within the appropriate eligibility period.

3. Terms (See also FAR 1)

| | |
|-------|--|
| AEO | all engines operating |
| CDP | critical decision point |
| CG | center of gravity |
| DA | density altitude |
| DP | decision point |
| ETL | effective translational lift |
| FPM | feet per minute |
| GOM | general operations manual |
| HNVGO | helicopter night vision goggle operation |
| IGE | in ground effect |
| LDP | landing decision point |
| N1 | gas producer speed |
| N2 | power turbine speed |
| NVG | night vision goggle |
| Nr | rotor speed |
| OGE | out of ground effect |
| PA | pressure altitude |
| PIC | pilot in command |
| PIS | point in space |

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SIC second in command
T4 turbine temperature
TOT turbine outlet temperature
Tq torque
VEMD vehicle and engine multifunction display

4. Training Standards

Each crewmember employee must successfully complete all applicable portions of the training program as specified herein. All flight maneuvers must be trained to the standards specified in the FAA Commercial Pilot Practical Test Standards.

5. Authorized Instructors

Ground and flight training and the appropriate written, oral, and flight tests will only be conducted by persons who have satisfactorily completed the FAA approved RMH flight instructor/check airman training program and who have those duties listed as authorized assignments in his pilot record. A representative from the RMH Human Resources Department may teach Operator Specific Basic Indoctrination modules 3, and 5.

6. Training Records

The instructor will complete the RMH Training Record (RMH GOM, Appendix 5) and send it to Pilot Records at RMH headquarters.

7. Examiner/Instructor Responsibility

Examiners/Instructors shall place special emphasis upon areas of aircraft operations considered critical to flight safety. Among these are positive aircraft control, positive exchange of the flight controls procedure (who is flying the aircraft), collision avoidance, wake turbulence avoidance, use of available automation, communication management, crew resource management, and other areas deemed appropriate to any phase of the practical test. Although these areas may not be specifically addressed under each TASK, they are essential to flight safety and will be critically evaluated during the practical test. In all instances, the pilot being trained/tested will relate to the complete situation. The examiner's role regarding ATC, crew resource management, and the duties and responsibilities of the examiner through all phases of the practical test must be explained to and understood by the pilot being trained/tested.

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Training Program, AS350
Initial New Hire Training

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SECTION 2 - Initial New Hire Training

1. The Initial New Hire Training program is comprised of Ground Training Curriculum, General Emergency Training Curriculum, Aircraft Ground Training Curriculum, and Flight Training Curriculum.
2. The minimum training times are:
 - a. Ground Training: 18 hours
 - b. Flight Training: 4 hours

Minimum flight training time will be 2 hours for pilots if a pilot has a minimum of 250 hours in the AS350 and has a current 135.293 (a),(b) evaluation in the AS350 and a current 135.299 evaluation in any aircraft.

Ground Training Curriculum

Operator Specific Training Segment

1. RMH History, Organization, And Description
2. Authorized Types Of Operations
3. RMH Forms, Records, And Administrative Procedures
Courseware: RMH Employee Handbook
 - a. W2s
 - b. I9, Eligibility for employment
 - c. Updating personal information
4. Employee Standards And Rules Of Conduct
Courseware: RMH Employee Handbook
 - a. Employee work attire/uniform
 - b. Notification when not available for duty
 - c. Grooming standards

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5. Employee Compensation, Benefits, And Contracts
Courseware: RMH Employee Handbook
 - a. Explanation of benefits
 - 1) Health insurance
 - 2) Vacation
 - 3) Sick leave
 - 4) Other time off
 - 5) Holidays
 - 6) Retirement
 - b. Pay Periods and pay schedules
 - c. Direct Deposit
 - d. Promissory notes
 - e. Moving expenses

6. Authority And Responsibility Of Duty Position.
Courseware: RMH GOM
 - a. Maintenance of RMH GOM
 - b. Required aircraft documents
 - c. Aircraft log books
 - d. Load manifest
 - e. Preflight actions
 - 1) Aircraft preflight at the start of duty
 - 2) Before flight walk around inspections
 - 3) Verification of before takeoff passenger/crew brief
 - f. PIC authority
 - g. Required equipment on board
 - h. Flight time limitations and rest requirements and documentation

7. Overview Of Federal Aviation Regulations
Courseware: Federal Aviation Regulations
 - a. FAR 61:

| | |
|-------|-------|
| 61.14 | 61.53 |
| 61.15 | 61.56 |
| 61.16 | 61.57 |
| 61.23 | 61.59 |
| 61.29 | 61.60 |
| 61.51 | |

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b. FAR 91:

| | | |
|--------|--------|--------|
| 91.3 | 91.123 | 91.203 |
| 91.7 | 91.126 | 91.205 |
| 91.13 | 91.127 | 91.207 |
| 91.15 | 91.129 | 91.209 |
| 91.17 | 91.130 | 91.211 |
| 91.19 | 91.131 | 91.213 |
| 91.21 | 91.133 | 91.215 |
| 91.25 | 91.135 | 91.409 |
| 91.103 | 91.137 | 91.411 |
| 91.105 | 91.151 | 91.413 |
| 91.107 | 91.153 | |
| 91.117 | 91.155 | |
| 91.119 | 91.157 | |
| 91.121 | 91.159 | |

c. FAR119:

119.1
119.25

d. FAR 135:

| | | |
|---------|---------|---------|
| 135.1 | 135.117 | 135.249 |
| 135.19 | 135.119 | 135.251 |
| 135.21 | 135.121 | 135.253 |
| 135.41 | 135.123 | 135.255 |
| 135.63 | 135.128 | 135.263 |
| 135.65 | 135.149 | 135.267 |
| 135.67 | 135.155 | 135.293 |
| 135.69 | 135.157 | 135.299 |
| 135.71 | 135.159 | 135.301 |
| 135.73 | 135.161 | 135.323 |
| 135.75 | 135.171 | 135.337 |
| 135.79 | 135.179 | 135.343 |
| 135.81 | 135.183 | 135.415 |
| 135.83 | 135.185 | 135.417 |
| 135.85 | 135.203 | |
| 135.87 | 135.205 | |
| 135.89 | 135.207 | |
| 135.91 | 135.209 | |
| 135.93 | 135.211 | |
| 135.95 | 135.213 | |
| 135.100 | 135.227 | |
| 135.105 | 135.229 | |
| 135.113 | 135.243 | |
| 135.115 | 135.247 | |

e. HMR 175:

175.10
175.30
175.31

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- f. NTSB 830:
 - 830.2
 - 830.5
 - 830.10
 - 830.15

- 8. Air Carrier Certificate And Operations Specifications
Courseware: Air Carrier Certificate and RMH GOM Appendix 3 (Operations Specifications)
 - a. Regulatory basis is FAR 135
 - b. Definitions, description, and organization
 - c. Limitations and authorizations of operations specifications

- 9. RMH General Operations Manual
Courseware: RMH GOM
 - a. General information
 - b. Flight operations
 - c. Maintenance operations
 - 1) Airworthiness checks
 - 2) Procedures for obtaining service and maintenance
 - 3) Deferred items
 - 4) Deferral of items
 - d. Refueling operations
 - e. Hazardous materials operations
 - f. Helicopter operations
 - g. Medical oxygen/compressed gas
 - h. FAA approved training procedures allowing pilots to perform authorized maintenance

- 10. Flight Control
Courseware: RMH GOM
 - a. Operational control
 - b. Dispatch and flight following
 - c. Communications with following agency
 - d. Weather and NOTAM information
 - e. Flight locating procedures

Airman Specific Training Segment

- 1. Aircraft Performance And Airport Analysis.
Courseware: AC 00-6A
 - a. Definitions
 - b. Effects of temperature and pressure altitude

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2. Meteorology

Courseware: AC 00-6A, AC 00-45D, and AC 00-24B

- a. Atmosphere
- b. Temperature, pressures, and winds
- c. Moisture, and precipitation
 - 1) Fog
 - 2) Frost
- d. Stable and unstable air
- e. Clouds
- f. Airmasses and frontal systems
- g. Turbulence and wind shear
 - 1) Convective activity
 - 2) Mountain wave
 - 3) Wake turbulence
- h. Icing
 - 1) Clear ice
 - 2) Rime ice
 - 3) Mixed ice
 - 4) Degrees of icing
 - 5) Freezing Rain
- i. Thunderstorms
 - 1) Life cycle
 - 2) Airmass and steady state
 - 3) Hazards
 - a) Tornadoes
 - b) Squall lines
 - c) Turbulence
 - d) Icing
 - e) Hail
 - f) Low ceilings and visibility
 - g) Effect on altimeter setting
 - h) Lightning
 - 4) Operating in or near thunderstorms
 - a) Avoidance
 - b) Airspeeds
- j. Recognizing and avoiding severe weather situations
 - 1) Detection
 - 2) Visual signs and indicators
- k. Escaping from severe weather situations in case of inadvertent encounters
- l. Interpreting aviation weather forecasts and reports
 - 1) METARS
 - 2) Transcribed weather
 - 3) Enroute facilities
 - 4) FSS

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3. Principles Of Navigation
Courseware: Aeronautical Information Manual, Aircraft Flight Manual
 - a. Definitions
 - b. Use of navigational aids
 - c. Navaid service volume
 - d. Basic navigation instruments
 - e. Area NAV principles
 - 1) VOR/DME
 - 2) LORAN
 - 3) GPS

4. Airspace And ATC Procedures
Courseware: Aeronautical Information Manual
 - a. Different classes of airspace
 - b. Controller and pilot responsibilities
 - c. ATC procedures and phraseology
 - d. Normal and emergency communications procedures
 - e. Separation standards and wake turbulence

5. Enroute/Terminal Charting And Flight Planning
Courseware: Jeppesen enroute, terminal area charts, NOS WAC/sectional charts
 - a. Chart symbology
 - b. Flight planning procedures VFR

6. Aeronautical Decision Making
Courseware: Aeronautical Decision Making for Rocky Mountain Helicopters Pilots
 - a. Decision making concepts
 - b. Assessment of risk factors
 - c. ADM process
 - d. Hazardous attitudes and antidotes
 - e. Attitude and the decision making process

7. Helicopter Cold Weather Operations
Courseware: FAR 135, AC 20-117, AC 120-58
 - a. Background
 - 1) Clean aircraft concept
 - 2) Accident history

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- b. Helicopter surface contamination recognition
 - 1) Frost
 - 2) Freezing fog
 - 3) Snow
 - 4) Freezing rain
 - 5) Rain or high humidity on a cold soaked rotor
 - 6) Under rotor frost
- c. Effects of ground icing
 - 1) Drag/weight
 - 2) Loss of lift
- d. Helicopter De-icing/anti-icing procedures
 - 1) Methods of de-icing
 - a) Safety requirements
 - b) De-icing/anti-icing
 - 2) Responsibilities during de-icing/anti-icing
- e. Cold weather preflight inspection procedures
 - 1) Preflight inspection specific to the AS350
 - 2) Areas requiring special attention

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General Emergency Training Curriculum

Emergency Situation Training Segment

1. Duties And Responsibilities
Courseware: RMH GOM
 - a. Emergency assignments
 - b. PIC emergency authority
 - c. Reporting incidents and accidents
 - d. PIC responsibilities

2. Crew Coordination And RMH Communication
Courseware: RMH GOM
 - a. Passenger notification procedures
 - b. ATC notification
 - c. RMH or dispatch communication procedures
 - d. Coordination among crewmembers
 - e. Emergency assignments

3. Aircraft Fires
Courseware: Aircraft Flight Manual, AMEREX fire extinguisher guide
 - a. Principles of combustion
 - b. Types of aircraft fires
 - 1) Classes of fires
 - 2) Fires on the surface
 - 3) Fires in flight
 - c. Toxic fumes
 - d. Portable fire extinguisher location/types of extinguisher to be used on different classes of fires
 - e. Smoke control procedures
 - 1) Electrical equipment and circuit breakers found in the cabin area
 - 2) Venting the cabin

4. First Aid Equipment
 - a. First aid kit location
 - b. Contents of first aid kit
 - c. Function and operation of individual items

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5. Illness, Injury, And Basic First Aid- Crewmembers/Passengers
Courseware: "American Red Cross First Aid Fast"
 - a. Heart attack/principles of CPR
 - b. Ear and sinus blocks
 - c. Seeking medical assistance
 - d. Treatment of shock

6. Ground Evacuation
Courseware: Aircraft Flight Manual, RMH GOM
 - a. Aircraft configuration
 - b. Exiting the aircraft
 - c. Blocked or jammed exit
 - d. Fuel spills and other ground hazards
 - e. Patients/injured persons
 - f. Evacuation equipment

7. Previous Accidents And Incidents
Courseware: NTSB Accident Reports, RMH AIDMOR reports
 - a. Reports review
 - b. Human factors considerations
 - c. NASA reporting systems

8. Crewmember Incapacitation
Courseware: NTSB 830
 - a. NTSB reporting requirements
 - b. Symptoms and onset of incapacitation
 - c. Actions upon recognition

9. Hijacking And Other Unusual Situations
Courseware: Aeronautical Information Manual
 - a. Pilot's procedures during hijack
 - 1) Transponder codes
 - 2) Communications procedures
 - 3) Pilots interaction with hijacker
 - b. Bomb threat procedures
 - 1) Evacuation of the area
 - 2) Notification of authorities

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Emergency Drill Training Segment

1. Hand Held Fire Extinguisher
 - a. Inspection tags, dates, and proper charge levels
 - b. Removal and stowage of extinguisher
 - c. Hands on demonstration of extinguisher and fire extinguishing in accordance with 8400.10 item 395c
 - d. Smoke control
 - e. Maintenance procedures

2. Emergency Exits
 - a. Operation of each exit
 - b. Emergency evacuation of aircraft

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Aircraft Ground Training Curriculum

General Operational Subjects Segment

1. Weight And Balance
Courseware: Aircraft Flight Manual, RMH GOM, FAR 135
 - a. Weight and balance terms
 - b. Weighing of aircraft
 - c. Weight and balance computations
 - 1) Manual Computations
 - 2) Computer Computations
 - d. Weight and balance charts
 - e. Actual weights of medical personnel
2. Operations Specifications Authorizations And Deviations
Courseware: Operations Specifications
 - a. Area NAV authorization
 - b. Use of estimated weight for incapacitated medical patients
 - c. Use of persons other than the PIC to conduct the before takeoff briefing
3. Adverse Weather
Courseware: Aircraft Flight Manual
 - a. Turbulent air penetration speeds
 - b. Maneuvering speed
4. Flight Planning
Courseware: Aircraft Flight Manual
 - a. Fuel consumption
 - b. RMH recommended power settings
 - c. Cruise Control
5. RMH General Operations Manual
6. Aircraft Flight Manual

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7. Performance.
Courseware: Aircraft Flight Manual

- a. Substantiated Wind Envelope
- b. A.S.I. Calibration
- c. Speed Versus Height Envelope
- d. Hover Performance I.G.E./O.G.E.
- e. Rates of Climb
- f. Weight and Balance

Aircraft Systems Segment

Courseware: Aircraft Flight Manual, Eurocopter Systems Instruction Manual

1. Aircraft General

- a. AS350 Design
- b. Major Components
- c. AS350 Performance
- d. Principal Dimensions
- e. Technical Publications
- f. Weight and Balance and Performance Charts
- g. Differences
 - 1) AS350B - Arriel B1 engine installation
 - 2) AS350BA - Arriel B1 engine or Allison C30 engine installation
 - 3) AS350B2 - Arriel 1D1 engine installation
 - 4) AS350D - Allison C30 engine installation
- h. Walk around/preflight inspection

2. Equipment And Furnishings

EMS equipment modifications

3. Powertrain

- a. Main Transmission
 - 1) Oil cooling motor driven fan
 - 2) Oil cooler
 - 3) Rotor shaft suspension strut
 - 4) Main rotor shaft
 - 5) Oil filter
 - 6) Oil level sight gauge
 - 7) Main casing
 - 8) Lower casing

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- b. Tail rotor drive shaft
 - 1) Hanger bearings
 - a) Type and location
 - b) Lubrication
 - 2) Flex couplings
 - c. Tail rotor gear box
 - 1) Lubrication
 - 2) Metallic chip detection
 - d. Operational limitations
 - e. Emergency Operations
4. Rotor System
- a. Rotor Brake System
 - 1) Rotor brake handle
 - 2) Rotor brake assembly
 - b. Main Rotor System
 - 1) Rotor head
 - 2) Rotor RPM monitoring
 - 3) Pitch change mechanism
 - 4) Main rotor blades
 - c. Operational limitations
 - d. Emergency operations
5. Flight Controls
- a. Cyclic control system
 - b. Collective control system
 - c. Tail rotor control system
 - d. Cyclic and collective mixing unit
 - e. Operational limitations
 - f. Emergency operations
6. Hydraulic System
- a. Hydraulic servos
 - b. Hydraulic pump
 - c. Accumulators
 - 1) Cyclic
 - 2) Collective
 - 3) Tail rotor (AS350B2 & AS350B3 only)
 - d. Reservoir
 - e. Filter
 - f. Warning horn and lights
 - g. Test switch
 - h. Isolation switch
 - i. Operational limitations
 - j. Emergency Operations

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7. Powerplant. This module will include instruction on the Arriel B1 engine, Allison C30 engine, Arriel 1D1 engine and the Arriel 2B engine
 - a. Power plant attachment
 - b. Major modules
 - c. Oil system
 - 1) Monitoring
 - 2) Oil cooling and bypass
 - 3) Oil pump
 - d. Engine controls.
 - e. Engine power monitoring
 - f. Accessories
 - 1) Starter generator
 - 2) Fuel control
 - 3) Governor
 - 4) Ng tach generator
 - g. Engine igniter system
 - h. Fuel atomizers
 - i. T4/TOT monitoring
 - j. Operational limitations
 - k. Emergency operations
8. Aircraft Fuel System
 - a. Fuel tank
 - b. Quantity monitoring
 - c. Boost pumps
 - d. Fuel pressure monitoring
 - e. Fuel filler
 - f. Manual shutoff valve
 - g. Fuel filter and bypass
 - h. Fuel shutoff control lever
 - i. Authorized fuels and additives
 - j. Operational limitations
 - k. Emergency operations
9. Electrical System
 - a. Power distribution
 - b. External power
 - c. Battery
 - d. Generator
 - e. Over voltage and return current detection
 - f. Generator reset function
 - g. Emergency cutoff
 - h. Circuit breakers and fuses
 - i. Operational limitations
 - j. Emergency operations

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10. Emergency Equipment

- a. ELT
- b. First Aid Kits
- c. Fire extinguisher

11. Ice And Rain Protection - Pitot heat

12. Landing Gear

- a. Tube type gear
- b. Ground handling wheels
- c. Operational Limitations
- d. Emergency operations

13. Communications Equipment.

(Pilot will be trained on the specific communications equipment installed in assigned aircraft after arrival at assigned base.)

- a. VHF comm. equipment
- b. UHF comm. equipment
- c. FM comm. equipment
- d. Operating limitations
- e. Emergency operations

14. Flight Instruments

- a. Attitude indicator
- b. Vertical speed indicator
- c. Turn and bank indicator
- d. Trim string
- e. Airspeed indicator
- f. Directional gyro
- g. Operational Limitations
- h. Emergency operations

15. Navigation Equipment

(Pilot will be trained on the specific navigation equipment installed in assigned aircraft after arrival at assigned base.)

- a. LORAN NAV equipment
- b. GPS NAV equipment
- c. VOR NAV equipment
- d. ADF NAV equipment
- e. Operation Limitations
- f. Emergency Operations

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16. Warning Systems

- a. Annunciator panel
- b. Low rotor RPM horn
- c. Hydraulic failure horn

17. Fire Protection

- a. General
- b. Fire detection
Description and operation
- c. Portable fire extinguisher
- d. Operational limitations
- e. Emergency operations

18. Emergency Locator Transmitter

- a. General
- b. Operation and test
- c. Operational limitations
- e. Emergency operations

19. Performance

- a. Standard Performance Conditions
- b. Variable Factors Affecting Performance
- c. Rules of Thumb
- d. Engine Condition Check/Engine Power Check
- e. Hovering Ceiling
- f. Rate of Climb
- g. Operational Limitations

Aircraft Systems Integration Segment

1. Cockpit Familiarization

2. Use Of Checklists

- a. Normal procedures
- b. Abnormal
- c. Emergency procedures

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3. Navigation Systems
(Pilot will be trained on the specific navigation equipment installed in assigned aircraft after arrival at assigned base.)
 - a. Controls
 - b. System programming
4. Flight Planning
 - a. Fuel
 - b. Weight and Balance
 - c. Weather
5. Communications Systems
 - a. Controls
 - b. Headsets
 - c. ICS control panel

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Flight Training Curriculum

Flight Training Segment

The minimum training times are: 4 hours

Minimum flight training time will be 2 hours for pilots with a minimum of 250 hours in the AS350 and has a current 135.293 (a),(b) evaluation in the AS350 and a current 135.299 evaluation in any aircraft, the minimum flight training time is: 2 hours.

Pilots will be trained on all maneuvers listed in the following flight training module.

Flight Training Module

1. Preparation
 - a. Performance Limitations
 - b. Pre-Flight Inspection
2. Surface Operations
 - a. Cockpit Management
 - b. Starting
 - c. Hover Taxi/Air Taxi
 - d. Hovering Maneuvers
 - 1) Lift off to a hover
 - 2) Hovering turns
 - 3) Sideward and rearward hovering
 - 4) Slope operations (Discuss Dynamic Rollover)
 - e) Ground resonance (oral)
 - l) Before-takeoff checks
3. Takeoff
 - a. Normal
 - b. Crosswind
 - c. Obstacle clearance
 - d. High Altitude
 - e. Confined, Slope and/or Pinnacle
 - f. Rejected Takeoff
4. Climb
 - a. Normal
 - b. Best Rate of Climb

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5. Enroute
 - a. Medium banked turns
 - b. Low speed characteristics
 - c. High speed characteristics
6. Descent
 - a. Normal
 - b. Maximum rate
 - c. Autorotative glide
7. Approaches
 - a) Normal
 - b) Obstacle clearance
 - c) High altitude
 - d) Elevated landing site
 - e) Balked landing
8. Landings
 - a. Normal
 - b. Crosswind
 - c. Shallow approach to running landing
 - d. Landing with hydraulics off
9. After Landing
 - a. Taxi
 - b. Parking
 - c. Stopping the rotors
 - d. Emergency evacuation
10. Unprepared Site Operations (Discuss Dynamic Rollover)
 - a. Confined areas
 - b. Pinnacles
 - c. Ridgelines
 - d. Contaminated landing site
 - e. Snow operations

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11. Other Flight Procedures During Any Airborne Phase
 - a. Ice accumulation on airframe/rotors
 - b. Air hazard avoidance
 - c. Windshear/microburst
12. Systems Procedures Training During Any Airborne Phase (Normal, Abnormal, Alternate)
 - a. Hydraulic system malfunction
 - b. Anti-torque system failure
13. Systems Procedures Training During Any Airborne Phase (Emergency)
 - a. Powerplant malfunctions/engine failure
 - b. Settling with power (oral)
 - c. IFR Procedures
 - 1) Unusual attitude recovery
 - 2) Inadvertent IMC recovery
 - 3) Precision approach (if available and if aircraft is equipped, if not, a nonprecision approach)

Flight Qualification Segment

Flight Checking Module

1. Written or oral test IAW FAR 135.293(a)
2. Ground operations
 - a. Preflight inspection
 - b. Start procedures
 - c. Hover Taxi/Air Taxi
 - d. Pre-takeoff checks
3. Takeoffs and Departures
 - a. Normal
 - b. Rejected takeoff
4. Inflight Maneuvers
 - a. Settling with power (oral)
 - b. Unusual attitude recovery
5. Landings and Approaches to Landings

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Training Program, AS350
Initial New Hire Training**

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6. Nonnormal and Emergency Procedures

- a. Systems malfunctions
- b. Maneuver by partial panel
- c. Instrument approach (ILS if available)
- d. Dynamic rollover (oral only)
- e. Low rotor RPM (oral only)
- f. Anti-torque system failure
- g. Confined area operation
- h. Pinnacle operation
- i. Slope operation
- j. Power plant failure and autorotation to a power recovery
- k. Hovering autorotation

Rocky Mountain Holdings, L.L.C.
Training Program, AS350
Transition Training

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SECTION 3 - Transition Training

The Transition Training program consists of a Ground Training Curriculum and a Flight Training Curriculum.

The minimum training times are:

1. Ground Training: 8 hours
2. Flight Training: 2 hours

Ground Training Curriculum

Pilots will complete ground training from the following:

1. Initial New Hire Training, Ground Training Curriculum, Operator Specific Training Segment, modules 6, 7, 8, 9, 10.
2. Initial New Hire Training, Ground Training Curriculum, Airman Specific Training Segment, modules 2, 3, 4, 5, 6, 7.
3. Initial New Hire Training, General Emergency Training Curriculum, Emergency Situation Training Segment, modules 3, 4, 6, 7.
4. Initial New Hire Training, General Emergency Training Curriculum, Emergency Drill Training Segment in entirety.
5. Initial New Hire Training, Aircraft Ground Training Curriculum, General Operational Subjects Segment, modules 1, 3, 4, 6; 7.
6. Initial New Hire Training, Aircraft Ground Training Curriculum, Aircraft Systems Integration Segment in entirety.

Flight Training Curriculum

Pilots will complete the following:

1. Initial New Hire Training, Flight Training Curriculum, Flight Training Segment, Flight Training module.
2. Initial New Hire Training, Flight Training Curriculum, Flight Qualification Segment, Flight Checking module.

Rocky Mountain Holdings, L.L.C.
Training Program, AS350
Recurrent Training

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SECTION 4 - Recurrent Training

The recurrent training program consists of a Ground Training Curriculum and a Flight Training Curriculum.

The minimum training times are:

1. Ground Training: 8 hours
2. Flight Training: 1 hour

Ground Training Curriculum

Pilots will complete the following:

1. Initial New Hire Training, Ground Training Curriculum, Operator Specific Training Segment, modules 6, 7, 8, 9, 10.
2. Initial New Hire Training, Ground Training Curriculum, Airman Specific Training Segment in entirety.
3. Initial New Hire Training, General Emergency Training Curriculum, Emergency Situation Training Segment in entirety.
4. Initial New Hire Training, General Emergency Training Curriculum, Emergency Drill Training Segment in entirety.
5. Initial New Hire Training, Aircraft Ground Training Curriculum, General Operational Subject Segment in entirety.
6. Initial New Hire Training, Aircraft Ground Training Curriculum, Aircraft Systems Segment in entirety.

Flight Training Curriculum

Pilots will complete the following:

1. Initial New Hire Training, Flight Training Curriculum, Flight Training Segment, Flight Training module.
2. Initial New Hire Training, Flight Training Curriculum, Flight Qualification Segment, Flight Checking module.

**Rocky Mountain Holdings, L.L.C.
Training Program, AS350
Requalification Training**

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SECTION 5 - Requalification Training

The Requalification Training program consists of a Ground Training Curriculum and a Flight Training Curriculum. This training is required for a pilot who has been unqualified for more than 12 months in the AS350. A pilot who has been unqualified for 12 months or less in the AS350, will complete the Recurrent Training program in its entirety.

The minimum training times are:

1. Ground Training: 8 hours
2. Flight Training: 2 hours

Ground Training Curriculum

Pilots will complete the following:

1. Initial New Hire Training, Ground Training Curriculum, Operator Specific Training Segment, modules 6, 7, 8, 9, 10.
2. Initial New Hire Training, Ground Training Curriculum, Airman Specific Training Segment in entirety.
3. Initial New Hire Training, General Emergency Training Curriculum, Emergency Situation Training Segment in entirety.
4. Initial New Hire Training, General Emergency Training Curriculum, Emergency Drill Training Segment in entirety.
5. Initial New Hire Training, Aircraft Ground Training Curriculum, General Operational Subject Segment in entirety.
6. Initial New Hire Training, Aircraft Ground Training Curriculum, Aircraft Systems Segment in entirety.

Flight Training Curriculum

Pilots will complete the following:

1. Initial New Hire Training, Flight Training Curriculum, Flight Training Segment, Flight Training module.
2. Initial New Hire Training, Flight Training Curriculum, Flight Qualification Segment, Flight Checking module.

Rocky Mountain Holdings, L.L.C.
Training Program, AS350
Flight Instructor/Check Airman Training

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SECTION 6 - Flight Instructor/Check Airman Training

Courseware: FAA Air Transportation Operations Inspector's Handbook 8400.10, Volume 2,
Chapter 3, AC 60-14.

1. This program specifies the training required for persons to become qualified as a RMH Flight Instructors or Check Airmen. Prior to being designated as a RMH Flight Instructor or Check Airman the pilot must meet the requirements of FAR 135.337 as applicable to the duty position and have completed training in accordance with this program.
2. Flight Instructor/Check Airman Training is comprised of a Ground Training Curriculum and a Flight Training Curriculum. All flight instructor/check airman flight training will be conducted with the flight instructor/check airman candidate in the left seat with the emphasis on factors such as the proper configuration of the aircraft, the proper scenario setting for the maneuver, and the safe and timely input of corrective action so as to avert any hazardous conditions.
3. There are no minimum training times specified for Flight Instructor/Check Airman Training. Each flight instructor/check airman candidate will train to proficiency and standards set forth in the RMH GOM and this training program.

Ground Training Curriculum

1. Duties And Responsibilities
 - a. Functions
 - b. Duties
 - c. Responsibilities
2. Regulations
 - 135.293
 - 135.297
 - 135.299
 - 135.301
3. Policies and Procedures
 - a. Training documentation
 - b. Scheduling of training
 - c. FAA Notification of training to be given
 - d. Evaluation documentation
 - e. Appropriate corrective action for unsatisfactory student progress/checks

**Rocky Mountain Holdings, L.L.C.
Training Program, AS350
Flight Instructor/Check Airman Training**

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4. Proper Evaluation of Pilot Performance

- a. Detection of improper and insufficient training
- b. Personal characteristics that could adversely affect safety
- c. Approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures in the aircraft.
 - 1) Simulated engine failures
 - 2) Collision avoidance procedures
 - 3) Use of view limiting devices
 - 4) Approved procedures for simulating systems malfunctions.
Circuit breakers

For Persons Who Do Not Hold Flight Instructor Certificates:

- 5. Fundamental Principles of the Teaching-Learning Process**
- 6. Teaching Methods and Procedures**
- 7. Instructor-Student Relationship**

Rocky Mountain Holdings, L.L.C.
Training Program, AS350
Flight Instructor/Check Airman Training

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Flight Training Curriculum

Flight Training (Instructor will conduct training from the left seat)

1. Ground operations
 - a. Preflight inspection
 - b. Start procedures
 - c. Taxiing and ground hover
 - d. Pre-takeoff checks
2. Takeoffs and departures
 - a. Normal
 - b. With power plant failure
 - c. Emergency deceleration
3. Inflight Maneuvers
 - a. Settling with power (oral)
 - b. Unusual attitude recovery
4. Landings and approaches to landings
 - a. Normal
 - b. Landing with engine out
5. Nonnormal and Emergency Procedures
 - a. Systems malfunctions
 - b. Maneuver by partial panel
 - c. Instrument approach (ILS if available)
 - d. Dynamic rollover (oral only)
 - e. Low rotor RPM (oral only)
 - f. Anti-torque system failure
 - g. Confined area operation
 - h. Pinnacle operation
 - i. Slope operation

Rocky Mountain Holdings, L.L.C.
Training Program, AS350
RMH Approved Maneuvers

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SECTION 7 - RMH Approved Maneuvers

Cruise Flight

Procedure: The pilot is expected to maintain airspeed, altitude, and heading for any power setting selected.

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Training Program, AS350
RMH Approved Maneuvers

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Hovering Flight

This maneuver allows the pilot to fly the helicopter near the ground when repositioning is necessary.

- Procedure:
1. **Takeoff to a hover:** With the collective full down, place the cyclic in the neutral position. Increase the collective with a smooth, positive pressure; apply pedals to maintain heading; coordinate the cyclic for a vertical ascent. As the helicopter leaves the ground, check for proper control response and helicopter CG.
 2. **Hovering flight:** Adjust the cyclic to maintain a stationary hover or to go in the desired direction. Control heading with the pedals and maintain altitude with the collective.
 3. **Hovering turns:** Apply pressure to the desired pedal to begin the turn. Use pressure and counter-pressure on the pedals to maintain a constant rate of turn. Coordinate cyclic control to maintain position over the pivot point while maintaining altitude with the collective. Hovering turns can be made around the vertical axis, nose or tail of the helicopter. Turns other than about the mast will increase the turn radius.
 4. **Landing from a hover:** From a stationary hover, lower the collective to effect a smooth descent to touchdown. Make necessary corrections with the pedals and cyclic to maintain a constant heading and position. Upon ground contact, ensure the helicopter remains stable. Continue decreasing the collective smoothly and steadily until the entire weight of the helicopter rests on the ground. Reduce the collective to the full down position and neutralize the pedals and cyclic.

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RMH Approved Maneuvers

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Normal Takeoff

This maneuver allows the pilot to transition from the ground or from a hover to forward flight.

- Procedure:
1. From the ground. Select reference points to maintain ground track. With the cyclic in the neutral position, increase the collective until the helicopter becomes light on the skids. Apply pressure and counter-pressure to the pedals to ensure the helicopter is free to ascend. While maintaining heading with the pedals, continue increasing the collective until the helicopter leaves the ground. As the helicopter leaves the ground, apply forward cyclic as required to accelerate through ETL at an altitude that is appropriate for the terrain and obstacles. As the helicopter reaches ETL, adjust the cyclic to obtain the desired climb attitude (65 KIAS) and to maintain ground track. Position the collective to establish the desired rate of climb (500 FPM) and use pedals to maintain heading aligned with ground track below 50 feet and in trim above 50 feet.
 2. From a hover. Select reference points to maintain ground track. Apply forward cyclic to accelerate the helicopter while maintaining heading with the pedals and altitude with the collective. Continue to apply forward cyclic as required to accelerate through ETL at an altitude that is appropriate for the terrain and obstacles. Perform the rest of the maneuver as for the takeoff from the ground.

- Note:
1. Achieve 55 KIAS (V_y) prior to 200 feet AGL.
 2. For training, climb airspeed of 65 KIAS and a rate of climb of 500 FPM are recommended.

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Simulated Maximum Performance Takeoff

This maneuver provides training for the pilot in the recognition of power limitations of the aircraft.

Procedure: Align the helicopter with the desired takeoff direction. Select reference points to maintain ground track. Place the cyclic in the neutral position, smoothly increase the collective and maintain heading with the pedals. As the helicopter leaves the ground, simultaneously increase the collective to obtain power necessary to clear obstacles safely (hover power +10% torque not to exceed gas producer, torque and engine temperature).* Maintain takeoff heading with the pedals and a 40 knot attitude and ground track with the cyclic. Maintain required power until clearing the obstacles. At 100 feet AGL or after obstacles are cleared, apply cyclic to attain an attitude that will result in the desired climb airspeed (65 KIAS). Maintain helicopter in trim. Ten knots prior to reaching climb airspeed, adjust power to establish the desired rate of climb.

- Note:**
1. This is a training maneuver only. It should not be confused with a confined area takeoff.
 2. For training, a climb airspeed of 65 KIAS and a rate of climb of 500 FPM are recommended.
 3. 10% does not denote percent of hover, but an additional 10% torque added on, not to exceed power limitations.

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RMH Approved Maneuvers

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Quick Stop/Rejected Takeoff

Quick Stop is a maneuver that will demonstrate the pilot's ability to properly control the helicopter during rapid attitude changes and power adjustments.

- Procedure:
1. The pilot will begin a normal takeoff.
 2. After passing through ETL, the helicopter will be climbed to approximately 50 feet AGL.
 3. At 50 Feet AGL, takeoff power will be maintained and the attitude changed to accelerate to 50 knots airspeed while maintaining 50 feet altitude.
 4. At 50 knots airspeed, the power is reduced rapidly and a decelerating attitude will be maintained until the airspeed is reduced to the point of coming out of ETL. The aircraft should be rotated about the tail rotor axis while maintaining a constant altitude.
 5. As the helicopter comes out of ETL, the maneuver is completed by terminating with a steep approach to a hover.

Note: Caution, tail rotor height awareness.

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Standard Approach

This maneuver allows the pilot to execute a landing to a suitable area by maintaining a constant approach angle to clear obstacles.

- Procedure:
1. To a hover. Determine an approach angle which allows safe obstacle clearance while descending to the intended point of landing. Once the approach angle is intercepted (on base or final), adjust the collective as necessary to establish and maintain the angle. Maintain entry airspeed until apparent ground speed and a rate of closure appear to be increasing. Progressively decrease the rate of descent and the rate of closure until appropriate hover is established over the intended termination point. Maintain ground track alignment with the landing direction by maintaining the helicopter in trim above 50 feet AGL and aligning the helicopter with the landing direction below 50 feet AGL.
 2. To the ground. Proceed as for an approach to a hover, except continue the descent to the ground. Make the touchdown with minimum ground movement. After the skids contact the ground, ensure the helicopter remains stable with all movement stopped. Smoothly reduce collective to the full down position and neutralize the pedals and cyclic.

- Note:
1. The decision to go-around should be made before descending below obstacles or decelerating below ETL. It should also be made if visual contact with the touchdown point is lost.
 2. The recommended entry airspeed 65 KIAS.
 3. An approach to the ground should be made if dust or loose snow is known or suspected in the touchdown area to minimize loss of visual references. (Discuss Dynamic Rollover)

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RMH Approved Maneuvers

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Shallow Approach To A Running Landing

This maneuver allows the pilot to execute a landing to a suitable landing area utilizing minimum power.

- Procedure:
1. On final approach, determine an approach angle that allows safe obstacle clearance to arrive at the intended point of landing.
 2. Once the approach angle is intercepted, adjust the collective as necessary to establish and maintain the angle.
 3. Maintain entry airspeed until apparent ground speed and rate of closure appear to be increasing.
 4. Maintain ground track alignment with the landing direction by maintaining the helicopter in trim above 50 feet AGL and aligning the helicopter with the landing direction below 50 feet AGL.
 5. Control the rate of descent at touchdown with the collective.
 6. Maintain helicopter attitude and landing alignment with the cyclic and heading with the pedals.
 7. The touchdown speed should be the minimum possible dictated by landing area conditions and power available.
 8. After initial surface contact, collective pitch may be increased to bring the aircraft to a 3 foot hover to minimize wear of the skid shoes. If the run on landing is continued, anti-torque pedals should be used to maintain heading and cyclic stick should be used to maintain surface track. After touchdown, reduce collective pitch slowly to full down.

Note: 65 KIAS on crosswind and base legs and 100 KIAS on downwind leg are recommended.

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RMH Approved Maneuvers

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Revision 4

Confined Area/Pinnacle Operations

This maneuver allows the pilot to land in areas that are small in size and/or have obstacles to the approach path and/or departure path.

- Procedure:
1. Upon approaching the area, evaluate the overall suitability of the terrain. Select a flight path, an airspeed and an altitude that afford best observation. If landing is intended, determine if the landing area is suitable, identify obstacles and estimate the effects of the wind. Select the best touchdown point in the landing area and a tentative flight path for the approach and departure. Maintain visual contact with the landing area at all times.
 2. On final approach, perform a low reconnaissance, check power reserve (PIS) and confirm the suitability of the selected landing area. Evaluate obstacles which constitute a possible hazard and confirm the suitability of the departure path selected during the landing area reconnaissance. If a successful landing is doubtful, initiate a go-around before descending below obstacles. Maintain landing area alignment below obstacles. If instability is detected during the touchdown, reposition the helicopter. After landing and before takeoff or movement in the landing area, perform a ground reconnaissance to formulate the takeoff plan. (The ground reconnaissance may be performed from the cockpit.) Formulate the takeoff plan by evaluating the wind, obstacles and shape of the area. Complete the before takeoff check and perform a hover power check. During takeoff, clear the helicopter. (Plan an airspeed over altitude takeoff for pinnacle operations). Use power as necessary, not to exceed gas producer, torque and engine temperature, to clear the obstacle by 50 feet while maintaining selected takeoff path.

- Note:
1. Hover OGE power is required for confined area operations.
 2. Rule of thumb: 1% Ng = 7% torque and approximately 200 pounds. (This is based on an aircraft that weighs 4100 pounds under a no-wind condition.)

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RMH Approved Maneuvers

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Slope Operations

This maneuver allows the pilot to land the helicopter on surfaces that are not level.

- Procedure:
1. Select a suitable area for slope operations.
 2. If possible, orient the helicopter into the wind.
 3. The degree of slope chosen should not be so great as to create a need for large cyclic inputs to accomplish the landing.
 4. After selecting the area, establish the helicopter perpendicular to the slope.
 5. Reduce the collective until the up slope skid contacts the ground.
 6. Continue reducing the collective and simultaneously apply lateral cyclic into the slope to maintain the position of the up slope skid until both skids are firmly on the ground.
 7. When the collective is fully down, neutralize the pedals and cyclic. (Caution: Return cyclic to neutral before final cancellation of collective pitch).
 8. For takeoff, apply lateral cyclic into the slope to maintain the position of the up slope skid (only enough cyclic to allow the rotor tip path to become parallel to the horizon).
 9. Increase collective to raise the down slope skid, maintain heading with the pedals and coordinate the cyclic until the helicopter is level.
 10. Ascend slowly to a hover.

Note: Prior to conducting slope operations, the pilot must understand dynamic rollover characteristics.

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Revision 4

Unusual Attitude Recovery

This maneuver allows the pilot to correctly respond to unusual attitudes that may be encountered in an inadvertent IMC condition.

Procedure: Upon detecting an unusual attitude, immediately initiate a recovery to straight and level flight by:

1. Establishing a level bank and pitch attitude.
2. Establishing and maintaining a heading.
3. Adjusting to cruise or climb power setting.
4. Trimming the helicopter.

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12/04/97
Revision 4

Hovering Autorotations

This maneuver allows the pilot to apply correct emergency procedures in the event of an engine failure while at a hover.

- Procedure:
1. From a stabilized 3 foot hover, the instructor will retard the fuel control lever to engine idle.
 2. The pilot at the controls will simultaneously apply pedal to maintain heading and adjust cyclic to maintain position over the ground.
 3. As the helicopter settles, apply sufficient collective to make a smooth, controlled descent and touch down.
 4. With the helicopter resting firmly on the ground, neutralize pedals and cyclic, smoothly lower the collective to the full down position.

Caution: Low inertia rotor system.

- Note:
1. Do not stop the helicopter's descent by over applying collective.
 2. As the helicopter settles, be alert for lateral or rearward drift.

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Revision 5

Hydraulics Off Landing

This maneuver allows the pilot to apply the correct emergency procedures for a hydraulic failure of the flight controls.

- Procedure:
1. Prior to flight training of the Hydraulics Off maneuver, the instructor will insure that the pilot has completed a hydraulics systems check.
 2. The instructor will move the hydraulic test switch to the "test" position. The instructor will keep his hand on the hydraulic test switch until it is returned to the "normal" position.
 3. The pilot will respond to the warning horn by lowering the collective and adjusting airspeed to 65 KIAS.

- Caution: For AS350B2 and AS350B3 aircraft, the instructor will place the hydraulic test switch to the "normal" position and note the return of the hydraulic assist to the tail rotor pedals, hydraulic light "out" and horn "off".
4. The pilot will turn off the hydraulic control switch located on the collective and note hydraulic light "on" and loss of hydraulic assist.
 5. On base leg descend to appropriate altitude to intercept a shallow approach angle. When a shallow approach angle is intercepted, adjust collective as necessary to establish and maintain the angle.
 6. Maintain entry airspeed until apparent ground speed and rate of closure appear to be increasing. Continue forward movement to arrive 3 feet above the surface and above ETL. **Note: Do not terminate to a hover.**
 7. The instructor will announce "go around". The pilot will smoothly and slowly increase power and adjust cyclic to begin a climb to arrive at 500' AGL, 65 KIAS and straight and level on the downwind leg.
 8. To return the hydraulic control switch to the "on" position, the instructor will guard the flight controls. The instructor will then direct the pilot to relax pressures on the controls and return the switch to the "on" position.

Caution: Due to heavy control forces encountered in this maneuver, the instructor must be immediately ready to assist in control of the aircraft.

Note: When the decision to "go around" is made, the pilot will accomplish the "go around" unless the instructor sees fit to take the controls. At that time, a positive exchange of the controls will be made, and the instructor will complete the "go around". Once above 65 KIAS and at a minimum safe altitude of 500' AGL, establish straight and level flight.

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Dynamic Rollover (Discussion Only)

Discuss the conditions that will induce dynamic rollover.

Factors effecting dynamic rollover:

1. Pivot point
2. Unbalanced rotor system in relation to the airframe.
3. Roll rate that becomes unrecoverable.
4. Landing on too steep of a slope.

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Low Rotor RPM (Discussion Only)

Procedure: Discuss the effect low rotor RPM will have on the flight characteristics of the AS350.

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Governor Failures (Discussion Only)

Procedure: Discussed with the pilot to include symptoms (NG, T4, TQ, and N2) for both high side and low side failures.

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Revision 5

Standard Autorotation

This maneuver allows the pilot to apply correct emergency procedures for an engine failure at altitude.

- Procedure:
1. Maintain entry altitude and airspeed as directed until desired entry point is reached.
 2. Initiate the maneuver by lowering the collective to the full down position, while maintaining trim with pedals.
 3. Maintain ground track, in trim above 100 feet.
 4. Adjust cyclic to attain a 65 knot attitude.
 5. Call out rotor RPM, gas producer and helicopter in trim.
 6. By 300 feet AGL, the helicopter must be at the correct airspeed, rotor RPM within limits, have a normal rate of descent and be in a position to terminate over the intended touchdown area (steady state). (If steady state requirements are not within the specified parameters, execute a go around.)
 7. At approximately 65 feet AGL, apply aft cyclic to initiate a smooth and progressive deceleration. At this time, ensure that the collective is raised to give a positive indication of torque to allow the engine time to respond to the impending power recovery.
 8. Maintain the helicopter aligned with the landing area direction by proper application of pedals and cyclic.
 9. Adjust collective, as required, to prevent rotor RPM from increasing above the high limit.
 10. As necessary, adjust attitude to obtain a vertical descent commensurate with wind conditions.
 11. At approximately 10 feet AGL, apply sufficient collective to control rate of descent and ground speed. (The amount of collective applied and the rate at which it is applied will depend on the rate of descent.)
 12. Adjust cyclic to attain a level attitude. Use collective, as necessary to terminate at three to five feet with a ground speed of a brisk walk.

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Revision 5

Standard Autorotation With Turn

This maneuver allows the pilot to apply correct emergency procedures for engine failure at altitude requiring a turn into the wind.

- Procedure:
1. Maintain entry altitude and airspeed as directed until entry point is reached.
 2. Initiate the maneuver by lowering the collective to the full down position, while maintaining trim with pedals.
 3. Smoothly apply cyclic to attain a 65 knot attitude descending turn.
 4. Adjust collective, as required, to maintain rotor RPM within limits.
 5. Call out rotor RPM, gas producer and helicopter in trim.
 6. Adjust bank angle, as necessary, to ensure the turn is completed and the helicopter is aligned with the landing area direction by 200 feet AGL.
 7. By 300 feet AGL, the helicopter must be in a 65 knot attitude, rotor RPM within limits, have a normal rate of descent, and be in a position to terminate over the intended touchdown area. (If these requirements are not within the specified parameters, execute a go-around.)
 8. At 100 feet AGL, continue as in the termination of a standard autorotation.

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Simulated Anti-Torque Malfunction (Fixed)

This maneuver allows the pilot to apply correct emergency procedures for a tail rotor failure in a fixed position.

- Procedure:
1. Nose right setting.
 2. The instructor will take control of the pedals and have the pilot rest his feet on the pedals.
 3. The pilot will place the hydraulic test switch in the "on" position for no more than 5 seconds.
 4. The pilot will then return the hydraulic test switch to the "off" position.
 5. On final, the instructor will ensure the helicopter is in the appropriate cruise configuration and nose right condition, not to exceed 45° from runway heading.
 6. When an 8 to 12° approach angle is intercepted in relation to the intended touchdown point, adjust collective as necessary to establish and maintain the angle.
 7. Maintain entry airspeed until apparent ground speed and rate of closure appear to be increasing. (Establish an initial rate of closure faster than a brisk walk.)
 8. Maintain the 8 to 12° approach angle while progressively decreasing the rate of descent and rate of closure so as to lose ETL approximately 3 to 5 feet above the ground.
 9. As the helicopter descends due to the loss of ETL, smoothly increase the collective to allow the helicopter to align with the intended landing area approximately 1 foot above the surface.
 10. The instructor will then return pedal control to the pilot. The pilot will then terminate the maneuver to a 3 foot hover.

Note: Due to the timing necessary to have the helicopter in position to touchdown as it aligns with the landing area, a decision to "go-around" should be made prior to the loss of ETL. The pilot will accomplish the "go around" unless the instructor asks for the flight controls. At that time, a positive exchange of the flight controls will be made. Once above 65 KIAS and climb established, the instructor will transfer the flight controls to the pilot.

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Tail Rotor Failures

1. Loss Of Tail Rotor Drive (Discussion Only)

Procedure: The pilot will be able to describe the aircraft response to a loss of power to the tail rotor, and the corrective action to control flight.

The pilot will be instructed that in the event of a complete anti-torque failure that cruise flight at reduced power may be possible, but the flight must terminate in an autorotation.

2. Loss Of Tail Rotor Effectiveness (Discussion Only)

Loss of tail rotor effectiveness usually occurs in a down wind or down wind turn condition. With a cross wind and full right pedal applied, the tail rotor may stall or get into a condition similar to that experienced by the main rotor blades in settling with power.

Conditions conducive to LTE are:

- a. Airspeed below 35 knots.
- b. Downwind condition.
- c. Wind speed of 5 to 25 knots.
- d. Abrupt full right pedal movement.

Corrective action with sufficient altitude for recovery:

- a. Reduce collective pitch.
- b. If full right pedal, neutralize.
- c. Apply forward cyclic to increase airspeed.

Corrective action with insufficient altitude for recovery:

- a. Maintain collective.
- b. Maintain full right pedal.
- c. Apply forward cyclic.

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Revision 5

Instrument Approach Procedures/Inadvertent IMC

This procedure is to give the student the opportunity to perform an approach, as well as to train him or her in the proper recovery procedure if IMC conditions are inadvertently encountered.

Procedure: In the event of inadvertent IMC:

1. Control the aircraft.
 - a. Level the wings on the attitude indicator.
 - b. Maintain heading; turn only to avoid known obstacles.
 - c. Adjust the torque to climb power.
 - d. Adjust the airspeed to climb airspeed.
2. Climb to the minimum obstruction clearance altitude.
3. Confess to yourself that you are IMC and accept the fact that you will be operating accordingly.
4. Communicate with ATC including declaring an emergency.
5. Control the aircraft
6. Complete the procedure per local regulations and policies.

The following standard instrument approach procedures will be used for training:

1. Using approved approach procedures the pilot will initiate an ILS, VOR, LOC or PAR/ASR approach.
2. The approach will include approach, descent and missed approach.
3. The pilot must be able to fly the published approach within normal parameters and be able to recognize the missed approach point and perform a missed approach.

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Revision 5

Settling With Power (Discussion Only)

Discuss the conditions of and the factors that cause settling with power. Insure that there is a clear understanding of the aerodynamics involved and methods of recovery from settling with power.

Settling with power is a condition of powered flight in which the helicopter settles in its own downwash. This condition may also be referred to as the vortex ring state. Conditions that may contribute to or help set the pilot up for settling with power are:

1. High DA/PA.
2. High ambient temperature.
3. Turbulence.
4. High gross weight.
5. Adverse winds.
6. Low rotor RPM.

Conditions necessary for settling with power are:

1. Zero or near zero forward airspeed.
2. 20 to 100% of available power.
3. A rate of descent of at least 300 fpm.

Note: The pilot is most likely to encounter these conditions during downwind approaches, night line approaches, downslope approaches and steep approaches and hover OGE.

The most generally accepted method of recovery is to lower the nose to gain airspeed and simultaneously lowering the collective pitch.

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Partial Panel

If some flight instruments should fail, the pilot should be able to fly the aircraft safely until a landing can be made.

With one or more flight instruments covered the pilot should be able to maintain normal flight using the remaining instruments.

The pilot should use the RMI should the primary instruments fail.

Turn rates should never exceed standard rate and pitch attitude changes no greater than plus or minus 5 degrees.

The pilot's crosscheck rate should increase to preclude unusual attitudes.

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Point in Space Approach

Note: The point in space approach (PIS) is a hover out of ground effect (HOGGE) maneuver used for confined area landings, pinnacle or roof top landings, night landings and high altitude landings. The objective is to position the helicopter at a point from which the pilot can evaluate the LZ and determine power required and power reserve.

- Procedure:
1. Initiate the approach at an altitude and angle commensurate with terrain and obstacles. Plan the first part of the approach to arrive at the point in space at a hover and determine the following:
 - a. Hover out of ground effect power
 - b. Hover in ground effect power.
 - c. Power reserve.
 2. Reduce power and begin a slow approach at an angle commensurate with terrain and obstacles, not to exceed 300ft/min. to a minimum of 50 ft above the highest obstacle, directly over the touchdown point. In a no wind situation, the aircraft is essentially hovering to the LZ. As ground effect comes into play, reduce power appropriately for touchdown.

Note: Rule of thumb: 1% Ng = 7% torque and approximately 200 pounds. (This is based on an aircraft that weighs 4,100 pounds, under no wind conditions.)