1ST BATTALION
212TH AVIATION REGIMENT
Fort Rucker, Alabama

15 AUGUST 2011

UH-60

FTG-TASK SUPPLEMENT GUIDE

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UH-60
FTG-TASK SUPPLEMENT GUIDE

APPROVAL PAGE

APPROVAL:  

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16 Aug 11

DATE
# UH-60
## FTG-TASK SUPPLEMENT GUIDE

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I. GENERAL

This booklet lists the UH60 task supplements and additional tasks authorized in this battalion. AQC, IERW and IPC students are not responsible for these standards unless the additional task is contained in their POI. Additional tasks are given a 3000 series task number. Standards listed are mandatory for any IP/SP/IE that teach and or evaluate UH-60s in this battalion. Supplemental information to ATM Task 1082 Perform Autorotation is also provided. The supplemental information is to reinforce IPs with information to effectively train and mitigate the risks associated with the complexity of the task. It is not assigned a task title and number.

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CAUTION:

During training in the aircraft, the IP will monitor systems and take appropriate action to prevent exceeding limitations.

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CAUTION:

NR response during autorotation is much faster, the IP will monitor systems and take appropriate action to prevent exceeding limitations.

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NOTE:

The student pilot on the controls will not be required to recite all of the underlined steps of an emergency procedure while in flight. Performance in the aircraft is to observe how the student will respond to the emergency procedure.

II. TASK SUPPLEMENTS

TASK 1070.01
RESPOND TO A SIMULATED ENGINE FIRE EMERGENCY

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NOTE:

The IP will not leave the fire detector test switch in either test position for more than 20 seconds.

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CONDITIONS: In a UH-60 or UH-60 flight simulator with an IP, VMC.

STANDARDS: Appropriate common standards plus these additions/modifications:

Identify the malfunction, determine the appropriate emergency procedure, and perform or describe the appropriate immediate action procedures outlined in the appropriate aircraft operator’s manual/checklist (CL).

DESCRIPTION: When the IP announces, "Simulated Engine Fire on the #1 or #2 Engine". The student will begin an immediate decent for landing. If possible, turn in the direction of the engine in question to confirm the smoke. Be aware that the smoke would be to the rear and up in the descent. If the IP confirms smoke, continue with the procedures outlined in OPERATOR’S MANUAL/CL for the aircraft conditions.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training – Aircraft or flight simulator
2. Evaluation – Aircraft

REFERENCES: Appropriate common references.
TASK 1070.02
RESPOND TO ENGINE FAILURE AT A HOVER

CONDITIONS: In a UH-60 helicopter with an IP or in a UH-60 flight simulator and given a simulated engine failure at a hover.

STANDARDS: Appropriate common standards plus these additions/modifications:

1. Identify the malfunction, determine the appropriate emergency procedure, and perform or describe the appropriate immediate action procedures outlined in the appropriate aircraft operator’s manual/checklist (CL).
2. Perform a smooth, controlled descent and touchdown with minimal lateral drift and no rearward drift.

DESCRIPTION:

1. Crew Actions:
   a. The P\* will remain focused primarily outside the aircraft throughout the maneuver to provide obstacle clearance. The P\* will initiate the appropriate action i.e., “Land as soon as possible or practical”.
   b. The P will assist in clearing the aircraft. He will monitor the cockpit instrument indications to warn the P\* of any impending low percent RPM R conditions. Time permitting, the P will verify the procedures with TMs 1-1520-237-10/CL.
   c. The P/NCM will continually monitor the condition of the aircraft. They will clear the aircraft and perform any other crew tasks as directed.
2. Procedures:
   a. Upon detecting an engine failure, immediately determine if the aircraft is continuing to hover or is settling to the surface. Maintain heading with the pedals and correct any lateral or rearward drift with the cyclic.
   b. If the aircraft is settling to the surface, apply collective as required to cushion the landing. If the aircraft is moving forward, adjust the cyclic to attain a landing attitude while avoiding an excessive tail-low condition. On a smooth or prepared surface, make surface contact with some forward speed. If over a rough area, touch down as close to zero ground speed as possible. When the helicopter is resting firmly on the ground, smoothly lower the collective fully down while neutralizing the pedals and cyclic. Apply brakes as necessary.
   c. If the aircraft continues to hover, and the area is suitable, land the aircraft. On a smooth or prepared surface, a landing with some forward speed may be desirable. If the area is unsuitable, move to a suitable area and land the aircraft.

NOTE:
During training in the aircraft, the IP will monitor the systems and take appropriate corrective actions to prevent exceeding any limitations.

NIGHT OR NVG CONSIDERATIONS: Use proper scanning techniques to avoid spatial disorientation.

REFERENCES: Appropriate common references.
TASK 1070.03
RESPOND TO ENGINE FAILURE AT CRUISE FLIGHT

CONDITIONS: In a UH-60 helicopter with an IP or in a UH-60 flight simulator and given a simulated engine failure at altitude.

STANDARDS: Appropriate common standards plus these additional modifications.
Identify the malfunction, determine the appropriate emergency procedure, and perform or describe the appropriate immediate action procedures outlined in the appropriate aircraft operator’s manual/checklist (CL).

DESCRIPTION:
1. Crew Actions:
   a. The P* will announce when he detects an engine malfunction.
   b. The P* will initiate the appropriate action i.e., Collective – Adjust, Airspeed - Adjust, and Land as soon as possible or practical. During VMC, the P* will focus primarily outside the aircraft maintain aircraft control, and provide adequate clearance from traffic and/or obstacles. He will announce when he begins the approach and whether the approach will terminate to a hover or to the surface. The P* will also announce the intended point of landing and any deviation to the approach, if required, to include go-around.
   c. The P will perform the emergency procedures underlined steps without reference to the checklist or, time permitting, utilize the checklist for the non-underlined emergency procedure steps. He will monitor cockpit instruments to warn the P* of an impending low percent RPM R conditions. He will request appropriate emergency assistance as described in the FIH.
   d. The P/NCM will continually monitor the condition of the aircraft, confirm the suitability of the landing area, assist in clearing the aircraft, and provide adequate WARNING: of traffic and obstacles. If a go-around is necessary, the P and NCM will focus primarily outside the aircraft to assist with obstacle avoidance. The P will acknowledge any deviation during the approach. They will clear the aircraft and perform any other crew tasks as directed.

2. Procedures. Upon detecting and verifying engine failure, immediately adjust to the emergency single-engine IAS, evaluate and determine if continued flight is possible. Adjust collective as required to maintain percent RPM R within limits. If required, adjust airspeed to be within the minimum to maximum single engine airspeed range, as determined by performance planning. Perform immediate action steps outlined in TMs 1-1520-237-10/CL and announce action to the other crew members of intentions. Complete a landing as appropriate.

NIGHT OR NVG CONSIDERATIONS: Take special precautions to identify the correct engine power control lever.

REFERENCES: Appropriate common references.
TASK 1070.04
RESPOND TO AN AUTOMATIC FLIGHT CONTROL SYSTEM (AFCS) MALFUNCTION

CONDITIONS: In a UH-60 helicopter with an IP or in a UH-60 flight simulator and with any or all AFCS components deactivated.

NOTE:
For evaluations, the following systems will be deactivated: SAS 1, SAS 2, TRIM, FPS, and BOOST (SAS/BOOST for UH60M).

STANDARDS: Appropriate common standards plus these additions/modifications:

1. Identify the malfunction, determine the appropriate emergency procedure, and perform or describe the appropriate immediate action procedures outlined in the appropriate aircraft operator’s manual/checklist (CL).
2. Select a suitable landing area.
3. Perform VMC flight maneuvers and terminate with a VMC approach with AFCS off.
4. When a hover is required, maintain altitude ±5 feet and maintain heading ±20 degrees.

DESCRIPTION:

1. Crew Actions:

   a. The P* will announce when he detects an AFCS malfunction.
   b. The P* will initiate the appropriate action i.e., Collective – Adjust, Airspeed - Adjust, or Land as soon as possible or practical. During VMC, the P* will focus primarily outside, to maintain aircraft control and to provide adequate clearance from traffic or obstacles. He will announce when he begins the approach and whether the approach will terminate to a hover or to the surface. The P* will also announce the intended point of landing and any deviation to the approach, if required, to include go-around.
   c. The P will perform the emergency procedures underlined steps without reference to the checklist or time permitting, utilize the checklist for the non-underlined emergency procedure steps. He will request appropriate emergency assistance as described in the FIH.
   d. The P/NCM will confirm the suitability of the landing area, assist in clearing the aircraft, and provide adequate warning of traffic and obstacles. If go-around is necessary, the P and NCM will focus primarily outside the aircraft to assist with obstacle avoidance. The P will acknowledge any deviation during the approach.

2. Procedures. Analyze the situation and take the appropriate corrective action. Maintain aircraft control and complete a VMC approach. A slightly slower rate of closure may assist in maintaining aircraft control. Terminate the approach to the ground or to a hover, as appropriate. When terminating at a hover, select a suitable area, then land the aircraft. During training, perform taxi, hover, takeoff, cruise flight, turns, and landings as directed.

NIGHT OR NVG CONSIDERATIONS: To aid in preventing spatial disorientation, do not make large or abrupt attitude changes.

REFERENCES: Appropriate common references.
TASK 1070.05
RESPOND TO DECREASING RPM R or Nr

CONDITIONS: In a UH-60 helicopter with an IP or in a UH-60 flight simulator and given an emergency condition that requires operation in ECU/DEC lockout.

STANDARDS: Appropriate common standards plus these additions/modifications:
1. Identify the malfunction, determine the appropriate emergency procedure, and perform or describe the appropriate immediate action procedures outlined in the appropriate aircraft operator’s manual/checklist (CL).
2. Place the malfunctioning engine in LOCKOUT, and maintain torque at least 10 percent below the other engine.
3. Maintain TGT within limits.
4. Maintain percent RPM R or Nr within limits.

DESCRIPTION:
1. Crew Actions:
   a. The P* will announce when he detects an emergency situation requiring ECU/DEC lockout.
   b. The P* will initiate the appropriate action i.e., Collective – Adjust, Airspeed - Adjust, or Land as soon as possible or practical. During VMC, the P* will focus primarily outside the aircraft, maintain aircraft control, and provide adequate clearance from traffic or obstacles. He will announce when he begins the approach and whether the approach will terminate to a hover or to the surface. The P* will also announce the intended point of landing and any deviation to the approach, if required, to include go-around.
   c. The P will perform the emergency procedures underlined steps without reference to the checklist or, time permitting, utilize the checklist for the non-underlined emergency procedure steps. He will request appropriate emergency assistance as described in the FIH.
   d. The NCM will continually monitor the aircraft condition. He will clear the aircraft and perform other duties as directed.
2. Procedures:
   a. Acknowledge a malfunction requiring ECU/DEC lockout and announce execution of appropriate emergency procedures. Verify and pull the selected engine power control lever down and momentarily forward to the LOCKOUT position. Then adjust the engine power control lever to maintain percent RPM R or Nr within limits. Set torque on the malfunctioning engine to at least 10 percent below the other engine. Maintain TGT and percent RPM R or Nr within limits.
   b. To reset the ECU/DEC, retard the selected engine power control lever to the IDLE position. Cautiously advance the engine power control lever to the FLY position while monitoring Np, Ng, TGT, and torque to ensure that the ECU/DEC has properly reset.

NIGHT OR NVG CONSIDERATIONS: Take special precautions to identify the correct engine power control lever.

REFERENCES: Appropriate common references.
TASK 1070.06
RESPOND TO STABILATOR MALFUNCTION

CONDITIONS: In a UH-60 helicopter with an IP or in a UH-60 flight simulator and given a stabilator malfunction.

STANDARDS: Appropriate common standards plus these additions/modifications:

1. Identify the malfunction, determine the appropriate emergency procedure, and perform or describe the appropriate immediate action procedures outlined in the appropriate aircraft operator’s manual/checklist (CL).

2. Do not exceed placard limits when stabilator is not in the Auto Mode.

DESCRIPTION:

1. Crew actions:
   a. The P* will announce when he detects a stabilator malfunction.
   b. The P* will initiate the appropriate action, i.e., Cyclic Mounted Stabilator Slew-up Switch - Adjust as necessary, Collective – Adjust, Airspeed - Adjust, or Land as soon as practical. During VMC, the P* will focus primarily outside the aircraft, maintain aircraft control, and provide adequate clearance from traffic or obstacles. He will announce when he begins the approach and whether the approach will terminate to a hover or to the surface. The P* will also announce the intended point of landing and any deviation to the approach, if required, to include go-around.
   c. The P will perform the emergency procedures underlined steps without reference to the checklist or, time permitting, utilize the checklist for the non-underlined emergency procedure steps. He will request appropriate emergency assistance as described in the FIH.
   d. The P and NCM will clear the aircraft and perform other crew duties as directed.

2. Procedures: Announce and perform the emergency procedure per TMs 1-1520-237-10/CL.

REFERENCES: Appropriate common references.
II. SUPPLEMENTAL INFORMATION

TASK 1082
PERFORM AUTOROTATION

TERMINATE WITH POWER METHOD  This maneuver will be performed IAW the ATM plus the following additions/modifications:

CONDITIONS:  In a UH-60 helicopter with an IP, given an entry altitude and airspeed.

1.  The terminate with power method will be conducted at a Fort Rucker operational basefield or stagefield with a runway/lane.  In addition, Troy Municipal and Southeast Alabama Regional Airports are authorized.  Adhere to local guidance on civilian airfield usage.

2.  For Non-POI flights, the “terminate with power” method may be conducted at any civil airport within the Fort Rucker local flying area.  Civil airports located outside of AO Vanguard must have an operational control tower.

3.  The “terminate with power” method is not authorized at RTs.

4.  If autorotation training is performed at a site without an operational control tower, the crew must be flight following with HUB or Headhunter and FLATIRON must be on duty.

5.  In the aircraft, this task will be entered at the published downwind altitude.  Altitude deviations are not authorized at basefields or stagefields.

6.  This task must terminate to a stop. Transition from this task to a roll-on landing is prohibited.

7.  The aircraft must be brought to a complete stop prior to reaching the end of the lane/runway.

8.  Autorotation with turn will not be conducted using the "Terminate with Power” method.

NOTE:
Autorotations are prohibited at Florala.

STANDARDS:  Appropriate common standards plus the following additions/modifications.

1.  Pilot on the controls (P*).
   a.  Maintain the entry altitude.
   b.  Maintain entry airspeed as directed.
   c.  Select appropriate entry point.
   d.  Maintain airspeed at or above 80 KIAS before reaching 300 feet AGL and until the deceleration.
   e.  Perform a smooth progressive deceleration.
   f.  Do not exceed a decelerative pitch attitude greater than 20° nose high.
   g.  Maintain RPM R/Nr within limits.
   h.  Terminate at no less than 30 feet AGL.
   i.  Do not allow tail-wheel to touch the ground.

2.  Pilot not on the controls (P). Make steady-state descent call-outs and corrections as required.

NOTE:
The entry airspeed for the “terminate with power” autorotation will be 100 KIAS for FSXXI student training and for all POI evaluations.
DESCRIPTION:

1. Crew Actions.

   a. Rated: The P* for this description is the FSXXI or AQC student pilot. For the IPC/MOI course, the P* is either the student pilot or the IPC/MOI Instructor conducting “role reversal”.

   (1) Maintain an entry altitude and airspeed as directed until reaching the entry point. At the entry point, the IP/student IP will announce “Enter” (this is mandatory for FSXXI student training; for graduate student training, the IP may allow the P* to determine the correct entry point). The P* will smoothly lower the collective at a moderate rate to the full-down position. This will ensure the correct entry and establishment of a steady-state autorotation descent. The P* will adjust the pedals to maintain the aircraft in trim. The P* will adjust cyclic to establish a pitch attitude that will maintain a glide path to the desired landing area (not to go below 80 KIAS). The P*’s primary focus will be outside the aircraft and should cross RPM R/Nr, airspeed, and trim as time permits. The IP will monitor RPM R or Nr and if necessary, make adjustment of the collective to ensure that RPM R or Nr remains within operating limits. The P* will maintain ground track and trim above 100 feet, and ground track and alignment with the landing direction below 100 feet. Before reaching 300 feet AGL, the aircraft must be in a steady-state autorotation.

The P will call out the following steady-state factors and ensure all are within limits by 300 ft AGL:

1. The RPM R or NR is within operating limits.
2. Aircraft in trim (±½ ball width).
3. Required airspeed (not less than 80 KIAS).

WARNING:

The deceleration altitude during an autorotation must be determined using outside visual references and cockpit indications, as necessary. Pilots will avoid focusing on the radar altimeter during critical phases of the maneuver. The radar altimeter has a lag and is not reliable.

NOTE:

(for FSXXI student training)

If the aircraft is not in a steady state condition prior to 300 feet AGL, the IP will take corrective action by announcing “I have the flight controls”. Upon taking the controls, the IP may terminate the maneuver with a VMC approach or perform a go-around.

NOTE:

(for graduate student training)

If the aircraft is not in a steady state condition prior to 300 feet AGL, the IP/student IP will take corrective action by announcing “I have the flight controls”. Upon taking the controls, the IP/student IP may terminate the maneuver with a VMC approach or perform a go-around.

NOTE:

The IP must provide adequate warning for corrective actions and ensure that the aircraft is in a position to terminate at the intended termination point. (If the termination point appears to be to the last 1/3 of the lane, execute a go-around). Additionally, ensure the normal rate of descent (ex. 2300 FPM at 80 KIAS) and that %TRQ or Q (H-60M) is less than 10%.
2. At approximately 75 feet AGL (using outside references to determine altitude), the P* will apply aft cyclic to initiate a smooth, progressive deceleration (not to exceed 20° nose high) while maintaining the collective in the full down position. Ensure the deceleration is applied with a sufficient rate of aft cyclic for the conditions. If it is too fast, the main rotor may overspeed (particularly in a UH60M). If it is too slow, the aircraft will not decelerate sufficiently to attain the desired landing area. The rate and magnitude of aft cyclic is predicated on the aircraft GWT, rate of descent, airspeed, wind effects, and density altitude. The IP will cross monitor the RPM R or Nr and if it appears it may exceed 110%, he will apply adequate collective to control RPM R or Nr. The P* will adjust cyclic and pedals as necessary to maintain aircraft alignment with the landing area. The circle of action will not move when the correct rate of cyclic application resulting in the correct decelerative attitude is used until there is collective application. Once the deceleration is established, smoothly apply collective to arrest the descent at an altitude of no less than 30 feet AGL. The main rotor may droop slightly below 100% RPM R or Nr. IPs must maintain awareness of the power requirements necessary to execute a termination with power. It is critical to factor in turbine lag and transient rotor droop characteristics and plan for the application of power at the deceleration point. During the deceleration, do not allow the student to increase the collective until RPM R or Nr increases (the aircraft will arrest its decent during deceleration). As the aircraft comes to a stop, the P* will level the fuselage and carefully increase the collective while maintaining no less than 30 ft AGL. The IP will guard the rate and amount of collective application to prevent excessive rotor droop. When the aircraft has come to a complete stop, adjust flight controls as necessary to maintain no less than 30 foot hover altitude.

**WARNING:**
(for FSXXI and AQC student training)

The training or evaluation of the maneuver is finished after the deceleration phase and the IP announces “terminate”.
The IP (or student IP) must recover the aircraft if the student does not immediately respond to “terminate” command. At no time, will the aircraft descend below 30 feet AGL.

b. Nonrated. IAW TC 1-237 Task 1082

c. **COMMON STUDENT TENDENCIES:**

(1) Failure to completely lower the collective resulting in a low power VMC approach.

(2) Failure to maintain aircraft in trim resulting in a greater than normal autorotative rate of descent.

(3) Decelerating below 80 KIAS by applying aft cyclic during the entry due to Oculoaggravic Illusion and muscle memory.

(4) Failure to correctly determine the proper deceleration altitude.

(5) Failure to determine the circle of action.

(6) Deceleration rate too rapid or too slow.

(7) Drooping the rotor when terminating the maneuver due to the over-application of collective.

(8) Descending below 30 ft. AGL.

**NIGHT OR NVG CONSIDERATIONS:** Attitude control is critical during night autorotation training. The lack of visual references at night reduces the aviator’s ability to estimate airspeed and altitude. If the searchlight or landing light is used, it should be turned on prior to reaching 300 feet AGL.

**TRAINING AND EVALUATION REQUIREMENTS:**

1. Training – Aircraft or flight simulator

2. Evaluation – Aircraft
REFERENCES: Appropriate common references.

POWER RECOVERY METHOD: This maneuver will be performed IAW the ATM plus the following additions/modifications:

CONDITIONS: In a UH-60 helicopter with an IP, given an entry altitude and airspeed.

1. The power recovery method may be conducted at Fort Rucker stagefields, the AO Vanguard, or at any civil airport within the Fort Rucker local flying area. Those civil airports located outside of the AO Vanguard must have an operational control tower.

NOTE:

Autorotations are prohibited at Florala.

2. If autorotation training and evaluation is accomplished at an approved site without an operational control tower, the crew must be flight following with HUB, Headhunter and FLATIRON on duty.

3. In the aircraft, this task will be entered at the published downwind altitude. An altitude deviation at basefields or stagefields is prohibited. The minimum entry altitude is 1000 MSL in AO Vanguard.

4. A power recovery must be accomplished by 200 feet AHO.

5. Autorotation with turn are prohibited at stagefields.

6. Power recovery autorotations are day only in AO Vanguard.

STANDARDS: Appropriate common standards plus the following additions/modifications.

NOTE:

The entry airspeed for the “power recovery method” autorotation will be 100 KIAS for FSXXI student training and for all POI evaluations.

1. Pilot on the controls (P*).
   a. Maintain the entry altitude.
   b. Maintain entry airspeed as directed.
   c. Select appropriate entry point.
   d. Maintain airspeed at or above 80 KIAS during the descent.
   e. Perform a smooth power recovery by 200 feet AHO.
   f. Maintain RPM R/Nr within limits.

2. Pilot not on the controls (P). Make steady-state descent call-outs and corrections as required.

DESCRIPTION:

1. Crew Actions:
   a. Rated; The P* for this description is the FSXXI or AQC student pilot. For the IPC/MOI course, the P* is either the student instructor pilot or the IPC/MOI Instructor conducting “role reversal”.

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(1) Maintain an entry altitude and airspeed as directed until reaching the entry point. At the entry point, the IP/student IP will announce “Enter” (this is mandatory for FSXXI student training; for graduate student training, the IP may allow the P* to determine the correct entry point). The P* will smoothly lower the collective at a moderate rate to the full-down position. This will ensure the correct entry and establishment of a steady-state autorotation descent. The P* will adjust the pedals to maintain the aircraft in trim. The P* will apply appropriate cyclic to establish a pitch attitude that will maintain a glide path to the desired landing area (not to go below 80 KIAS). The P*’s primary focus will be outside the aircraft and should cross check RPM R/Nr, airspeed, and trim as time permits. The IP will monitor RPM R/Nr and if necessary, make adjustment of the collective to ensure that RPM R/Nr remain within operating limits. By 200 feet AHO, a power recovery shall be initiated.

**AUTOROTATION WITH TURN:** The crew must be aware of the tendency for RPM R/Nr to significantly increase depending on the rate and magnitude of cyclic application. When turning to the right, an increase in RPM R/Nr will develop more rapidly. When turning to the left, a slight to moderate increase in RPM R/Nr will normally occur. The increase in RPM R/Nr will be even greater with high gross weight, high density altitude, and higher airspeeds. In both cases, increase the collective as necessary to maintain RPM R/Nr within operating limits.

The P will call out the three **steady-state** factors:

1. The RPM R or NR is within operating limits.
2. Aircraft in trim (±½ ball width).
3. Required airspeed (not less than 80 KIAS).

**WARNING:**

The deceleration altitude during an autorotation must be determined using outside visual references and cockpit indications, as necessary. Pilots will avoid focusing on the radar altimeter during critical phases of the maneuver. The radar altimeter has a lag and is not reliable.

(2) By 200 feet AHO (using outside references to determine altitude,), the P* will smoothly increase collective for a power recovery. The rate and magnitude of collective increase is predicated on the aircraft GWT, rate of descent, airspeed, wind effects, and density altitude. The IP will cross monitor the RPM R or Nr and if it appears it may exceed 110%, he will apply adequate collective to control RPM R or Nr. The P* will adjust cyclic and pedals as necessary to maintain aircraft alignment with the simulated landing area. Smoothly apply collective to arrest the descent at an altitude of no less than 200 feet AHO. It is critical to factor in turbine lag and transient rotor droop characteristics and plan for the application of power at the power recovery altitude.

b. Nonrated. IAW TC 1-237 Task 1082
c. **COMMON STUDENT TENDENCIES:**

(1) Failure to completely lower the collective resulting in a low power VMC approach.
(2) Failure to maintain aircraft in trim resulting in a greater than normal autorotative rate of descent.
(3) Failure to maintain required airspeed.
(4) Failure to initiate a power recovery no lower than 200 ft. AHO

**NIGHT OR NVG CONSIDERATIONS:** Attitude control is critical during night autorotation training. The lack of visual references at night reduces the aviator’s ability to estimate airspeed and altitude. If the searchlight or landing light is used, it should be turned on prior to reaching 300 feet AGL.

**TRAINING AND EVALUATION REQUIREMENTS:**

1. Training – Aircraft or flight simulator
2. Evaluation – Aircraft

**REFERENCES:** Appropriate common references.
III. ADDITIONAL TASKS

TASK 3000
PERFORM MOI EMERGENCY PROCEDURES

NOTE:
Both methods mentioned below will be used with all students.

CONDITIONS: In a UH-60, OH-58, TH-67, with an IP, VMC, or in a flight simulator.

STANDARDS: Correctly setup a simulated emergency situation without exceeding aircraft limitations, SOPs, regulations, or FARs.

DESCRIPTION:
1. Method 1: (IP not on the controls)
   a. The IP while NOT ON THE CONTROLS will describe the appropriate emergency situation to be trained and manipulate a lever or disable a system by turning a switch off to simulate the malfunction.
   b. The student pilot ON THE CONTROLS will initiate the appropriate action for the pilot on the controls, i.e., "Collective - Adjust", "Airspeed - Adjust", or "Land as soon as possible".
2. Method 2: (IP on the controls)
   a. The IP while ON THE CONTROLS will describe the emergency situation and initiate the required steps for the pilot on the controls.
   b. The student pilot NOT ON THE CONTROLS will proceed with the appropriate emergency actions for the pilot not on the controls by performing the required emergency procedures underlined steps without reference to the checklist or utilize the checklist for the non-underlined emergency procedure steps.

TRAINING AND EVALUATION REQUIREMENTS:
1. Training – Aircraft or flight simulator
2. Evaluation – Aircraft

REFERENCES: Appropriate common references.

TASK 3001
Manage individual aircrew training program

CONDITIONS: Given a Rated Crewmember (RCM)/Nonrated Crewmember (NCM) requiring integration into the unit's Aircrew Training Program.

STANDARDS: Integrate RCM/NCM into the Individual Aircrew Training Program, determine proficiency and Annual Proficiency and Readiness Test (APART) requirements IAW TC 3-04.11, TC 1-237, and AR 95-1.

DESCRIPTION:
1. Review or establish an Individual Aircrew Training Folder (IATF) for Rated/Nonrated Crewmember.
   a. Determine RCM’s/NCM’s qualifications and readiness level.
   b. Ensure required documents are in IATF, and in the proper location.
c. Correct deficiencies noted in records IAW TCs 3-04.11 and 1-237.

d. Determine RCM’s/NCM’s qualifications by comparing with duty position, unit mission requirements, and Commander’s Task List.

2. Determine tasks to be performed by the RCM/NCM.
   a. Determine Commander’s Task List for RCM/NCM’s duty position, to include required tasks, task flight modes, and frequency.
   b. Identify additional training requirements.
   c. Initiate DA Form 4507.

3. Identify proficiency requirements for RCM/NCM.
   a. Identify flight hour requirements.
   b. Identify task iteration requirements.
   c. Identify annual proficiency requirements.
   d. Identify RL progression requirements.

4. Determine Annual Proficiency and Readiness Test (APART) requirements: Identify APART requirements to include flight evaluations, oral and written examinations.

REFERENCES: Appropriate common references.

TASK 3002
ADMINISTER FLIGHT EVALUATION

CONDITIONS: Academic examination will be conducted in an appropriate instructional setting. Flight evaluation will be conducted in a UH-60, OH-58, TH-67, with an SP/IP/IE/SI/FI, VMC, IMC, Simulated IMC, D/N/NVG, or in a flight simulator.

STANDARDS: IAW TC 1-237, POI or command’s directives.

DESCRIPTION:

1. RCM: The student IP will explain the purpose and method of conducting the evaluation. The student IP will select at least two topics from the subject area of the academic evaluation section to which the examinee must correctly respond. The student IP will select tasks, at his discretion, as a minimum, those procedures/maneuvers identified as mandatory evaluation tasks. The student IP will discuss deficiencies, make recommendations for improvement, and inform the examinee whether he passed or failed and complete the gradeslip.

2. NCM: The student FI will explain the purpose and method of conducting the evaluation. The ACSI Instructor will select the appropriate number of topics from the subject area of the academic evaluation section to which the student FI will evaluate the examinee ability to correctly respond. The ACSI Instructor will select tasks, at his discretion, as a minimum, those procedures/maneuvers identified as mandatory evaluation tasks for the student FI to evaluate. The student FI will discuss deficiencies, make recommendations for improvement, and inform the examinee whether he passed or failed and complete the grade slip.

REFERENCES: Appropriate common references.
TASK 3003
CONDUCT FLIGHT INSTRUCTION

CONDITIONS: In a UH-60, OH-58, TH-67, with an SP/IP/IE/SI/FI, VMC, IMC, Simulated IMC, D/N/NVG, or in a flight simulator.

STANDARDS:
1. Conduct flight briefing to include operational data, tasks/procedures to be performed, and safety precautions.
2. Determine RCM’s or NCM’s knowledge of tasks/procedures prior to flight.
3. Explain tasks/procedures in which RCM or NCM has insufficient knowledge.
4. Flight demonstration performed with accompanied verbal explanation.
5. RCM or NCM practices tasks/procedures without criticism.
6. Student IP or student FI conducts review and critique.
7. Recommendations are made following the flight and the gradeslip completed.

DESCRIPTION:
1. **RCM**: The student IP will conduct a flight briefing covering operational data (PPC, flying area, etc.), the tasks/procedures to be instructed including the performance standards of each, standard procedures to be followed during flight instruction (e.g., transfer of controls, emergency procedures, etc.) and special safety precautions. The student IP should determine the pilot's knowledge of tasks/procedures prior to flight to determine if further explanation is required. The flight instruction should include a demonstration of the task or procedure with accompanied verbal explanation. The student IP should then allow the pilot to practice the task/procedure without questions or criticism. This does not prohibit short coaching phrases; e.g., adjust rate of descent, check trim, etc. Following the flight, the student IP will review the instructional flight, the objectives achieved, pilot's strong and weak areas and recommendations for correction.

2. **NCM**: The ACSI Instructors will conduct a flight briefing covering operational data, the tasks/procedures to be instructed including the performance standards of each, standard procedures to be followed during flight instruction and special safety precautions. The instructor should determine the student’s knowledge of tasks/procedures prior to flight to determine if further explanation is required. The student’s flight instruction should include a demonstration of the task or procedure with accompanied verbal explanation (“Telling-and-Doing Technique”) of how to achieve the standards. The instructor should then allow the student to practice the task/procedure without questions or criticism. This does not prohibit short coaching phrases. Following the flight, the instructor will review the instructional flight, the objectives achieved, students strong and weak areas and recommendations for correction.

REFERENCES: Appropriate common references.

TASK 3004
Conduct academic instruction

CONDITIONS: Assigned a subject to instruct and furnished an instructional training area.

STANDARDS:
1. Major training objectives identified.
2. Proper instructional method selected (e.g., conference, lecture, guided discussion or demonstration).
3. Lesson plan completed.
4. Training aids selected and available.
5. Correctly present the instruction.
6. Correctly answer questions arising from instruction.

**DESCRIPTION:** The student IP or FI will develop a training strategy and identify the major training objectives. The student IP or FI should determine which instructional method would best meet the training objectives, considering such areas as number of attendants, complexity of subject matter, time allotted, etc. The student IP or FI should then develop a lesson and secure any training aids that would enhance the instruction. The student IP or FI will then present the instruction, ideally following the lesson plan and answering any questions that arise from the instruction.

**NOTE:**

In the event the student IP or FI is unable to answer a question, he should inform the student that he will research it and give him an answer at a later date.

**REFERENCES:** Appropriate common references.

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**TASK 3005**  
**CONDUCT SPANISH LANGUAGE FLIGHT INSTRUCTION (SMOI)**

**CONDITIONS:** In a UH-60, OH-58, TH-67, with an IP, or in a flight simulator, academically IAW B Company Spanish MOI FTG and the appropriate ATM.

**STANDARDS:** Appropriate common standards plus the following additions/modifications.

1. Correctly conduct mission training and evaluation in Spanish.
2. Given a task, correctly MOI the task in Spanish.
3. Given an academic subject from Chapter 3 of the appropriate ATM, explain the subject and/or critique the student’s knowledge of the subject in Spanish.
4. Conduct a thorough debrief/AAR in Spanish; including critique and grade folder.

**DESCRIPTION:** The purpose of this task is to measure the IP’s ability to perform his or her duties in the Spanish language. The task includes but is not limited to: conducting crew and mission briefings, correctly MOI the task, and complete the debrief/AAR, critique, and grade folder in Spanish. The IP should be able to present the SMOI in a logical and easy-to-follow sequence. Instructor pilots will be trained utilizing the current B Company Spanish MOI flight training guide. Instructor pilots who have been previously qualified as instructors in Spanish will received a PFE given by a Battalion/B CO SP to determine the instructor’s training requirements. Annual SMOI evaluations will be conducted during ANY component of the aviator’s APART, hands on performance evaluation.

**TRAINING OR EVALUATION REQUIREMENTS:**

1. Training. Training will be conducted academically, in the aircraft, and flight simulator by a qualified and current SMOI SP/IP IAW SMOI FTG.
2. Evaluation. Evaluation will be conducted IAW the SMOI FTG by a qualified and current SMOI Battalion/B CO SP.

**REFERENCES:** Appropriate common references.
TASK 3006
Oral knowledge

CONDITIONS: In an UH60 OH-58A/C or TH-67 helicopter, or flight simulator, or in an appropriate instructional classroom setting and given access to weather information, and flight planning aids, necessary charts, forms, and publications.

STANDARDS: The student will demonstrate a working knowledge and understanding of the topic/subject area selected based with the level of the course (graduate vs. undergraduate) and by the P3 hour level per the POI.

DESCRIPTION: After an oral topic is introduced, the student will review and build a working knowledge and understanding of topics in the respective subject area. Academic evaluation topics and requirements are detailed in the Flight Training Guide (FTG).

REFERENCES: Appropriate references and topics listed in the FTG.

TASK 3100
PERFORM/Demonstrate Np OVERSPEED PROTECTION (Flight Simulator Only).

CAUTION:
When engine is controlled with the ENG POWER CONT lever in LOCKOUT, engine response is much faster and TGT limiting system is inoperative. Care must be taken not to exceed TGT limits and keeping % RPM R and % RPM 1 and 2 in operating range.

CONDITIONS: In a UH-60 flight simulator.

STANDARDS: Appropriate common standards plus these additions/ modifications.

Correctly place an engine in ECU/DEC LOCKOUT.

DESCRIPTION: The purpose of this maneuver is to show the engine/aircraft reactions when the Np overspeed protection system is activated at 106±1 for the UH60A and 120±1 for the UH60L/M. The P will place an engine into ECU/DEC LOCKOUT, once the RPM R (UH60A/L) or NR (UH60M) and % RPM 1 and 2 are stabilized at 100% the P will slowly advance the engine power control lever until the Np overspeed system is activated, note engine and aircraft responses. Return the power control lever to IDLE to re-engage the ECU/DEC.

TRAINING AND EVALUATION REQUIREMENTS:
1. Training – Training will only be conducted in the flight simulator.
2. Evaluation – Evaluation will only be conducted in the flight simulator.

REFERENCES: Appropriate common references.
TASK 3101
PERFORM/Demonstrate TGT Limiting

CAUTION:
Ensure aircraft remains within limitations.

NOTE: (UH60A)
This task will only be accomplished at a hover in the aircraft. The maximum hover altitude is 20 feet AGL due to the potential for engine failure. Ensure RPM R remains within limits.

NOTE: (UH60L/M)
This task will only be accomplished at a hover in the aircraft. The maximum hover altitude for training is 70 feet wheel height due to the potential for engine failure. Ensure Nr remains within limits.

NOTE:
Consideration should be made to turn on the engine anti-ice and/or heater switch (of the full power engine) during colder environmental conditions.

NOTE:
The IP will be on the controls for AQC and IERW training. The student IP may be on the controls for IPC/MOI training.

NOTE: (UH60M)
The purpose of this maneuver is to show the correlation of TGT temperature ranges to power pod TGT symbols as well as the effect of TGT limiting on % Nr and ENG % RPM (1 or 2) when maximum torque available is exceeded.

CONDITIONS: In an H-60 helicopter with an IP or in a H-60 flight simulator.

STANDARDS: Appropriate common standards plus the following additions/modifications:

Maintain TGT TEMP, % RPM R (or Nr), Ng, and % TRQ within limits.

DESCRIPTION: The purpose of this maneuver is to show the correlation/effects of TGT limiting on % RPM R and ENG % RPM (1 or 2) when maximum torque available is exceeded.

1. AIRCRAFT: While on the ground, the IP will instruct the student to slowly retard the selected engine power control lever to obtain as close to 0% TRQ as possible. Throughout the task, the IP will ensure that the ENG % RPM on the engine being retarded is kept out of the avoidance range. The IP will direct the student’s attention inside the cockpit and explain the correlation of % TRQ and the subsequent %RPM R (or Nr) droop that will take place when the TGT limiting system activates at approximately 843°C TGT for UH60A or approximately 903°C TGT for the UH60L/M. The IP will bring the aircraft to a hover. The student will keep attention to the CDU/PDU or MFD and NOTE: the TGT value when the % RPM R (or Nr) droop takes place. After the P has acknowledged the % RPM R (or Nr) droop, the IP will descend and land. Once on the ground, the P will advance the engine power control lever to fly and turn off the engine anti-ice and heater switches as required.

2. FLIGHT SIMULATOR: Set the initial conditions to a high temp, high PA, and aircraft GWT value that will facilitate the demonstration. Have the P* attain 120 KIAS, the P will retard an engine power control lever and allow the other engine to reach TGT limiting. Ensure ENG % RPM on the engine being retarded is kept out of the avoidance range. Once TGT limiting has been demonstrated, advance the retarded engine power control lever to fly.
NIGHT OR NVG CONSIDERATIONS: Take special precautions to identify the correct switches/levers when performing this maneuver at night or while wearing night vision goggles (NVGs).

TRAINING AND EVALUATION REQUIREMENTS: Training or evaluation – Aircraft or flight simulator.

REFERENCES: Appropriate common references.

Task 3102
DEMONSTRATE THE STABILATOR FUNCTIONS

CONDITIONS: In an H-60 helicopter day VMC with an IP or an UH-60 flight simulator.

STANDARDS: Appropriate common standards

DESCRIPTION:
1. Align stabilator and main rotor downwash in low speed flight to minimize nose-up attitude resulting from downwash.
   a. While in the AUTO MODE at a hover, note the stabilator position indicator. The stabilator position should indicate between 34 to 42 degrees down.
   b. During cruise flight, position the stabilator to 0 degrees in the MANUAL MODE. Perform an approach to a hover and observe the pitch attitude may be 4 to 5 degrees higher than normal in the 20 to 40 KIAS range.
2. Decrease angle of incidence with increase airspeed to improve static stability. During an accelerated takeoff, observe that the stabilator position indicator programs up.
3. Provide collective coupling to minimize pitch attitude excursions due to collective inputs from the pilot.
   a. Establish 100 KIAS, aircraft in trim and the stabilator in the AUTO MODE. Lower the collective. Observe the stabilator position indicator program up. Increase the collective. Observe the stabilator position indicator program down.
   b. Establish 100 KIAS, aircraft in trim, and the stabilator positioned at 0 degrees in the MANUAL MODE. Release the cyclic and lower the collective. Observe the nose of the helicopter pitch down. Increase the collective. Observe the nose of the helicopter pitch up.
4. Provide sideslip to pitch coupling to reduce susceptibility to gust.
   a. Establish 100 KIAS and the stabilator in the AUTO MODE. Apply left pedal to set up one ball width out of trim. Observe the stabilator position indicator program down. Apply right pedal to set up one ball width out of trim. Observe the stabilator position indicator program up.

Establish 100 KIAS and the stabilator positioned at 0 degrees in the MANUAL MODE. Release the cyclic and apply left pedal to set up one ball width out of trim. Observe the nose of the helicopter pitch up. Release the cyclic and apply right pedal to set up one ball width out of trim. Observe the nose of the helicopter pitch down.
5. Provide pitch rate feedback to improve dynamic stability. Establish 100 KIAS, aircraft in trim, and the stabilator in the AUTO MODE. Without releasing trim, apply forward cyclic to change pitch attitude 5 degrees nose down. Observe the stabilator position indicator program up.

TRAINING AND EVALUATION REQUIREMENTS:
1. Training – Aircraft or flight simulator
2. Evaluation – Aircraft

REFERENCES: Appropriate common references.
TASK 3103
PERFORM/INITIATE A STABILATOR MALFUNCTION

CONDITIONS: In a UH-60 helicopter with an IP or in a UH-60 flight simulator.

STANDARDS: Appropriate common standards plus these additions/modifications:

The IP or student IP will initiate a stabilator malfunction using the Cyclic Mounted Stabilator Slew-up Switch. Identify the malfunction, determine the appropriate emergency procedure, and perform or describe the appropriate immediate action procedures outlined in the appropriate aircraft operator’s manual/checklist (CL). Do not exceed placard limits when stabilator is not in the Auto Mode.

NOTE:
Simultaneously activating the Cyclic Mounted Stabilator Slew-up Switch while pressing the Master on the Master Warning Panel to disable the stabilator audio is prohibited.

DESCRIPTION:
1. Crew actions:
   a. The P* will announce when he detects a stabilator malfunction.
   b. The P* will initiate the appropriate action, i.e., Cyclic Mounted Stabilator Slew-up Switch - Adjust as necessary, Collective – Adjust, Airspeed - Adjust, or Land as soon as practical. If VMC, the P* will focus primarily outside the aircraft, maintain aircraft control, and provide adequate clearance from traffic or obstacles. He will announce when he begins the approach and whether the approach will terminate to a hover or to the surface. The P* will also announce the intended point of landing and any deviation to the approach, if required, to include go-around.
   c. The P will perform the emergency procedures underlined steps without reference to the checklist or, time permitting, utilize the checklist for the non-underlined emergency procedure steps.
   d. The P and NCM will clear the aircraft and perform other crew duties as directed.

2. Procedures. Announce and perform the emergency procedure per TMs 1-1520-237-10/CL.

REFERENCES: Appropriate common references.

TASK 3104
PERFORM/INITIATE A SIMULATED ENGINE FIRE EMERGENCY

NOTE:
The IP will not leave the fire detector test switch in either test position for more than 20 seconds.

CONDITIONS: In a UH-60 VMC with an IP or in a UH-60 flight simulator.

STANDARDS: Appropriate common standards plus these additions/modifications:

1. Correctly set up the emergency.

2. Identify the malfunction, determine the appropriate emergency procedure, and perform or describe the appropriate immediate action procedures outlined in the appropriate aircraft operator’s manual/checklist (CL).
DESCRIPTION: The IP will initiate the maneuver by turning the fire detector test switch to either the #1 or #2 positions. When the student recognizes the fire indications, the IP will announce, "Simulated Engine Fire on the #1 or #2 Engine". If VMC, the student will begin an immediate decent for landing. If possible, turn in the direction of the engine in question to confirm the smoke being aware that the smoke would be to the rear and up in the descent. If the IP confirms smoke, continue with the procedures outlined in OPERATER’S MANUAL/CL for the aircraft conditions.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training – Aircraft or flight simulator
2. Evaluation – Aircraft

REFERENCES: Appropriate common references.

TASK 3105
PERFORM/INITIATE A SIMULATED ENGINE FAILURE AT A HOVER

CAUTION:

During training in the aircraft, the IP will monitor the systems and take appropriate actions to prevent exceeding any limitations. Adjust the retarded engine power control lever as necessary to maintain %RPM (1 or 2) within limits.

NOTE:

The maximum altitude for this maneuver is 20 feet AGL (70 feet AGL for UH60M) due to the potential for an engine failure.

NOTE:

If the indicated dual engine torque is above critical torque, the IP must be prepared for a decreasing RPM R condition.

NOTE:

The engine anti-ice and heater switches may be turned ON to decrease maximum torque available.

NOTE:

If the engine anti-ice and heater switches are ON, they may be turned OFF to increase maximum torque available.

CONDITIONS: In an H-60 helicopter with an IP at or in an H-60 flight simulator.

STANDARDS: Appropriate common standards plus the following additions/ modifications.

1. Retard the engine power control lever to simulate a single engine condition.

2. Identify the malfunction, determine the appropriate emergency procedure, and perform or describe the appropriate immediate action procedures outlined in the appropriate aircraft operator’s manual/checklist (CL).

3. Do not exceed aircraft limits.

4. Do not land on a slope.

DESCRIPTION: Prior to initiating the maneuver the IP will ensure that the aircraft is over a suitable level landing area. The IP will initiate the maneuver by retarding an engine power control lever from the fly position. All attention will focus on controlling the aircraft by guarding the controls until the aircraft is safely on the ground. The IP may describe engine and rotor indications, along with engine out light and engine out audio.
NIGHT OR NVG CONSIDERATIONS: Take special precautions to identify the correct switches/levers when performing this maneuver at night or while wearing night vision goggles (NVGs).

Common student errors:
1. Allows the aircraft to drift.
2. Accelerated collective input, up or down.
3. Malfunction analysis conducted while flying the aircraft.

TRAINING AND EVALUATION REQUIREMENTS:
1. Training – Aircraft or flight simulator
2. Evaluation – Aircraft

REFERENCES: Appropriate common references.

TASK 3106
PERFORM/INITIATE A SIMULATED ENGINE FAILURE AT CRUISE FLIGHT

NOTE:
During training in the aircraft, the IP will monitor the systems and take appropriate actions to prevent exceeding any limitations. Adjust the retarded engine power control lever as necessary to maintain %RPM (1 or 2) within limits.

NOTE:
The IP should consider keeping his or her hand on the Engine Power Control Lever that has been retarded to ensure recovery if the opposite engine fails.

NOTE:
If the indicated dual engine torque is above critical torque, the IP must be prepared for a decreasing RPM R condition.

CONDITIONS: In an H-60 helicopter with an IP or an H-60 flight simulator.

STANDARDS: Appropriate common standards plus the following additions/ modifications.
1. Retard the engine power control lever to simulate a single engine condition.
2. Identify the malfunction, determine the appropriate emergency procedure, and perform or describe the appropriate immediate action procedures outlined in the appropriate aircraft operator’s manual/checklist (CL).
3. Do not exceed aircraft limits.
4. The minimum altitude to initiate this emergency procedure is 200 feet AHO.

DESCRIPTION: Prior to initiating the maneuver the IP will ensure that the aircraft has single engine capabilities. The IP will initiate the maneuver by retarding as engine power control lever from the fly position. The IP may describe engine and rotor indications, along with engine out light and engine out audio. The IP will be prepared to advance the engine power control lever of the “simulated failed” engine to fly should the opposite engine fail.

NIGHT OR NVG CONSIDERATIONS: Take special precautions to identify the correct switches/levers when performing this maneuver at night or while wearing night vision goggles (NVGs).

Common student errors and IP corrective action:
1. Deviates from assigned altitude.
2. Deviates from ground track.
3. No consideration when, where, or how landing should be made.
4. Malfunction analysis conducted while flying the aircraft.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training – Aircraft or flight simulator
2. Evaluation – Aircraft

REFERENCES: Appropriate common references.

TASK 3107
PERFORM/INITIATE A FLIGHT WITH AUTOMATIC FLIGHT CONTROL SYSTEM (AFCS) OFF MALFUNCTION

CONDITIONS: In a UH-60 helicopter with an IP or in a UH60 flight simulator and with any or all AFCS components deactivated.

NOTE:
For evaluations, the following systems will be deactivated: SAS 1, SAS 2, TRIM, FPS, and BOOST (SAS/BOOST for UH60M).

STANDARDS: Appropriate common standards plus these additions/modifications:

1. Initiate the simulated emergency by turning off the appropriate AFCS switches.
2. Identify the malfunction, determine the appropriate emergency procedure, and perform or describe the appropriate immediate action procedures outlined in the appropriate aircraft operator’s manual/checklist (CL).
3. Select a suitable landing area.
4. Perform a VMC approach.
5. When a hover is required, maintain altitude ±5 feet and maintain heading ±20 degrees.

DESCRIPTION:

1. Crew actions.
   a. The P* will announce when he detects an AFCS malfunction.
   b. The P* will initiate the appropriate action, i.e., Collective – Adjust, Airspeed - Adjust, or Land as soon as possible or practical. During VMC, the P* will focus primarily outside, to maintain aircraft control and to provide adequate clearance from traffic or obstacles. He will announce when he begins the approach and whether the approach will terminate to a hover or to the surface. The P* will also announce the intended point of landing and any deviation to the approach, if required, to include go-around.
   c. The P will perform the emergency procedures underlined steps without reference to the checklist or time permitting, utilize the checklist for the non-underlined emergency procedure steps. He will request appropriate emergency assistance as described in the FIH.
   d. The P/NCM will confirm the suitability of the landing area, assist in clearing the aircraft, and provide adequate warning of traffic and obstacles. If go-around is necessary, the P and NCM will focus primarily outside the aircraft to assist with obstacle avoidance. The P will acknowledge any deviation during the approach.
2. Procedures. Analyze the situation and take the appropriate corrective action. Maintain aircraft control and complete a VMC approach. A slightly slower rate of closure may assist in maintaining aircraft control. Terminate the approach to the ground or to a hover, as appropriate. When terminating at a hover, select a suitable area, then land the aircraft. During training, perform taxi, hover, takeoff, cruise flight, turns, and landings as directed.

**NIGHT OR NVG CONSIDERATIONS:** To aid in preventing spatial disorientation, do not make large or abrupt attitude changes.

**REFERENCES:** Appropriate common references.

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**TASK 3108**
**PERFORM/INITIATE A ELECTRONIC CONTROL UNIT/DIGITAL ELECTRONIC CONTROL (ECU/DEC) MALFUNCTION**

**WARNING:**
Moving the ENG RPM INC/DEC switch in flight is prohibited.

**NOTE:**
When introducing the task to the student, discuss how to correctly identify the engine power control lever. Have the student close their eyes and place their hand on the engine power control lever quadrant. Discuss the unique shape and the location of the engine power control lever.

**NOTE:**
If the student places the incorrect engine power control lever into LOCKOUT, do not correct the student until the task is completed.

**CONDITIONS:** In a UH-60 helicopter with an IP or UH-60 flight simulator given a specific emergency condition of the indications of a specific malfunction that cause student to perform ECU/DEC lockout.

**STANDARDS:** Appropriate common standards plus the following additions/ modifications.
Initiate the simulated emergency by describing the simulated engine instrument indications.

a. Identify the malfunction, determine the appropriate emergency procedure, and perform or describe the appropriate immediate action procedures outlined in the appropriate aircraft operator’s manual/checklist (CL).

b. Do not allow the student to exceed aircraft limitations.

**CONDITIONS:**

**GROUND OPERATIONS:** While on the ground, with the student monitoring the flight controls, have the student look away from the PDU, CDU or MFD. Retard and engine power control lever to induce a torque split (more than 5%). If the training objective is to induce a simulated decreasing RPM R (UH60A) or Nr (UH60M) situation, decrease engine RPM using the engine speed trim switch. Transfer the flight controls and have the student look back at the PDU, CDU or MFD. The student should identify the low percent RPM R or Nr condition. When the student correctly determines the low percent RPM R/Nr, administratively stop the emergency procedure and have the student advance the retarded engine power control lever to the FLY position. The IP will increase the ENG RPM 1 and 2 to 100% using the engine speed trim switch. The student will then place that engine into ECU/DEC LOCKOUT and set percent torque to 10% below the other engine.
**AIRBORNE OPERATIONS:** The IP will adjust the airspeed to no less than 80 KIAS as he or she complies with the first step of the emergency procedure. The IP will perform the duties of the pilot on the controls and allow the student to perform the duties of the pilot not on the controls. When performing emergency procedures in the aircraft, each pilot will announce his or her actions and perform as required by his or her duty position. The IP, while on the controls will establish level flight no less than 700 feet AGL. When operating at any Basefield, Stagefield, or Civil Airport no lower than the base altitude. The IP will announce the emergency situation and describe all engine and rotor indications along with any audio and MASTER WARNING indications associated with the emergency. The IP will adjust airspeed to the briefed emergency single-engine airspeed. When the student initiates the ECU/DEC LOCKOUT maneuver, the IP may need to further reduce the collective and adjust airspeed to prevent an overtemp of the engine not in lockout and to maintain altitude. Once ECU/DEC LOCKOUT has been established, increase the collective to maintain altitude and airspeed.

**UH60M Specific Considerations:**

1. Thoroughly brief the differences between the UH60M and the legacy aircraft (i.e. reaction time, Np overspeed limiter) for DEC lockout prior to conducting the maneuver.

2. Due to the rapid response of NP 1 or 2 and/or NR and increased likelihood of an Np or Nr overspeed, IPs will incorporate this task during the initial TBOS training days. The training of this task in the TBOS should be scenario based. Rotor and engine performance continuously degrade in high density altitude environments.

3. The initial conditions for the TBOS should be set to 22,000 pounds, ETF .92, and temperature to 50°C. This will ensure a desired training effect and necessitate an immediate crew performance action to control Nr (an effect that would be less viable in the actual aircraft due to the greater aircraft performance characteristics).

4. Once the student has demonstrated proficiency in the TBOS he/she may then perform the maneuver in the aircraft but is restricted to ground operations only. After the IP is convinced the student thoroughly understands H-60M lockout characteristics (i.e. response and reaction time, Np limiter settings and Nr overspeed), the student will then be allowed to perform the maneuver in flight.

5. This control measure reflects the “crawl, walk, run” philosophy and should effectively reduce the risk of Np 1 or 2 and Nr overspeed.

6. In flight, the IP will demonstrate DEC lockout to the student prior to allowing the student to perform lockout operations.

**Common student errors:**

1. Maintaining ENG %RPM at 106% ± 1% (UH-60A) on the engine in lockout for an extended period of time or exceeding 107% Np or Nr (UH-60M).

2. Failing to place the engine in lockout by not placing the engine power control lever fully into lockout.

3. Chasing the torque of the non-lockout engine.

4. Incorrectly identifies the malfunctioning engine/places the incorrect engine into lockout.

**TRAINING AND EVALUATION REQUIREMENTS:**

1. Training – Aircraft or flight simulator

2. Evaluation – Aircraft

**REFERENCES:** Appropriate common references.
### CAUTION:
In the event of an actual emergency the P* will return the aircraft to straight and level flight at or below critical torque.

### NOTE:
One flight maneuver will be terminated before another flight maneuver is initiated. The P* will announce the start and termination of each maneuver.

### NOTE:
The definition of Vh according to Aeronautical Design Standard 24 is: “The maximum attainable level flight speed at intermediate rated power”. As such, Vh is the level flight speed coinciding with the achievement of any, or a combination of the following conditions: 100% dual engine average torque (or placard limits), and/or TGT or Ng limiting.

### NOTE:
Emergency procedure training will not be conducted during maneuvering flight.

**CONDITIONS:** In a UH-60 helicopter with doors closed, VMC, or in a UH-60 flight simulator.

**STANDARDS:** Appropriate common standards plus these additions/modifications:
1. Maintain dual engine maximum torque +0%, -5% torque.
2. Establish Vh airspeed + 5 KIAS.

**DESCRIPTION:**
1. Crew actions.
   a. Conduct a briefing defining the corrective actions and crew duties in response to an emergency.
   b. The P* will focus primarily outside the aircraft throughout the maneuver. The P* will announce when the maneuver is initiated, intent to begin recovery, and termination. Maintain straight and level flight until the maneuver is terminated and returned to normal cruise flight.
   c. The P will assist in monitoring %TRQ, RPM R, TGT, aircraft trim, and airspeed and provide adequate warning of corrective action needed if limits may be exceeded.

2. Procedures:
   a. Brief other crewmembers how to conduct the maneuver. Direct the other crewmembers to assist with airspace surveillance. Confirm the maneuver area is clear.
   b. Established in straight and level flight, at 1000 feet MSL and 100 KIAS, smoothly increase collective to maximum torque available dual engine without exceeding aircraft limits. Simultaneously adjust cyclic to accelerate the aircraft to the computed airspeed for Vh while maintaining altitude. Maintain Vh IAS for a minimum of 30 seconds and note pitch attitude, collective position, %TRQ, cyclic position, and system instruments.
   c. Smoothly decrease collective to cruise power and adjust the flight controls as necessary to return to cruise airspeed while maintaining altitude.

**TRAINING AND EVALUATION REQUIREMENTS:** Training and Evaluation – Aircraft

**REFERENCES:** Appropriate common references.
TASK 3110
DEMONSTRATE/PERFORM MAXIMUM BANK ANGLE

CAUTION:
In the event of an emergency the P* will return the aircraft to straight and level flight at or below critical torque.

NOTE:
One flight maneuver will be terminated before another flight maneuver is initiated. The P* will announce the start and termination of each maneuver. Turn left and turn right are two different maneuvers and will be performed separately, i.e., these maneuvers will not be performed back to back, except as provided in paragraph d. below. Each task must start from and terminate to straight and level flight at 100 KIAS.

NOTE:
Emergency procedure training will not be conducted during maneuvering flight.

CONDITIONS: In a UH-60 helicopter with doors closed, DAY VFR, in a maneuver box, or in a UH-60 flight simulator.

STANDARDS: Appropriate common standards, plus these additions/modifications: Maintain maximum bank +0 degrees, -5 degrees.

DESCRIPTION:
1. Crew actions.
   a. Conduct a briefing defining the corrective actions and crew duties in response to an emergency.
   b. The P* will focus primarily outside the aircraft throughout the maneuver. Confirm the maneuvering area is clear before starting the turn and continue to clear the turn until the maneuver is terminated. The P* will announce when the maneuver is initiated, intent to begin recovery, and termination.
   c. The P will assist in monitoring %TRQ, RPM R, airspeed, aircraft trim and bank angle and provide adequate warning of corrective action needed if limits may be exceeded.

2. Procedures:
   a. Brief the other crewmembers how to conduct the maneuver. Direct other crewmembers to assist with maintaining airspace surveillance. Confirm the maneuver area is clear.
   b. IP DEMO ONLY: In an authorized maneuvering area, establish a straight and level flight at 1000 feet MSL and 100 KIAS. Ensure the aircraft is in trim. note the power (%TRQ) setting before initiating the maneuver. Apply cyclic in the direction of the turn until a sufficient bank is achieved, followed immediately by applying cyclic in an opposite direction bank. The P should closely monitor the %TRQ while the IP is performing the maneuver; in a left turn there should be an increase in torque as the angle of bank increases, and a decrease in torque as the angle of bank increases in a right turn. The transient %TRQ increase or decrease will depend on rate of cyclic displacement, magnitude of cyclic displacement, airspeed, and aircraft GWT.
c. **Altitude with cyclic.** Established in the authorized maneuvering area in straight and level flight, at 1000 feet MSL and 100 KIAS, in trim. Note the power setting before initiating the maneuver. Apply cyclic in the direction of the turn until the maximum angle of bank is achieved. Adjust cyclic as necessary to maintain the maximum bank angle. Maintain the maximum angle of bank throughout a minimum of 270 degrees. Note the pitch attitude, %TRQ, and airspeed.

   Adjust the cyclic as necessary to maintain altitude without adjusting the collective position. Maintain the maximum angle of bank by adjusting the cyclic as necessary to establish an attitude that will maintain altitude without adjusting collective position. Maintain the maximum angle of bank throughout a minimum of 270 degrees. Note the pitch attitude, %TRQ, and airspeed.

   **TRAINING AND EVALUATION REQUIREMENTS:** Training and evaluation – Aircraft

   **REFERENCES:** Appropriate common references.

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**TASK 3111**

**DEMONSTRATE/PERFORM MAXIMUM PITCH ANGLE**

**CAUTION:**

In the event of an emergency the P* will return the aircraft to straight and level flight at or below critical torque.

**NOTE:**

One flight maneuver will be terminated before another flight maneuver is initiated. The P* will announce the start and termination of each maneuver. The P* will announce the start and termination of each maneuver. Pitch down and pitch up are two different maneuvers and will be performed separately, i.e., these maneuvers will not be performed back to back. Each task must start from and terminate to straight and level flight at 100 KIAS.

**NOTE:**

This task will be performed with doors closed.

**NOTE:**

Emergency procedure training will not be conducted during maneuvering flight.

**CONDITIONS:** In a UH-60 helicopter with doors closed, DAY VFR, in a maneuver box, or in a UH-60 flight simulator.

**STANDARDS:** Appropriate common standards, plus these additions/modifications: Maintain maximum pitch +0 degrees, - 5 degrees.

**DESCRIPTION:**

1. Crew actions.
   a. Conduct a briefing defining the corrective actions and crew duties in response to an emergency.
b. The P* will focus primarily outside the aircraft throughout the maneuver. Confirm the maneuvering area is clear before starting the climb or descent and continue to clear the aircraft until the maneuver is terminated. The P* will announce when the maneuver is initiated, intent to begin recovery, and termination.

c. The P will assist in monitoring %TRQ, RPM R, aircraft trim and pitch angle and provide adequate warning of corrective action needed if limits may be exceeded.

2. Procedures:
   a. Brief the other crewmembers how to conduct the maneuver. Direct the other crewmembers to assist with maintaining airspace surveillance. Confirm the maneuver area is clear.

   b. Pitch up. Established in an authorized maneuvering area at approximately 400 AGL, establish straight and level flight at 100 KIAS, in trim. While maintaining collective position smoothly apply aft cyclic until the maximum pitch up angle is achieved. Maintain the maximum pitch up angle until the airspeed decreases to 70 KIAS. Airspeed will continue to decrease below 70 KIAS when recovery is initiated at 70 KIAS, this is acceptable. Then adjust cyclic as necessary to level the aircraft and return to 100 KIAS.

   c. Pitch down. Established in an authorized maneuvering area at 2000 MSL, establish straight and level flight at 100 KIAS, in trim. Smoothly reduce collective until torque is 5% below cruise then apply forward cyclic until the maximum pitch down angle is achieved. Maintain the maximum pitch down angle until the airspeed increases to 130 KIAS. Airspeed will exceed 130 KIAS when recovery is initiated at 130 KIAS, this is acceptable. Smoothly apply collective to cruise power no later than 1000 MSL, then apply aft cyclic to level the aircraft to prevent rotor droop. Level the aircraft and return to 100 KIAS without descending below 400 feet AGL.

TRAINING AND EVALUATION REQUIREMENTS: Training and evaluation – Aircraft

REFERENCES: Appropriate common references.

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TASK 3112
DEMONSTRATE/PERFORM DECELERATING TURN

CAUTION:

In the event of an emergency the P* will return the aircraft to straight and level flight at or below critical torque.

NOTE:

One flight maneuver will be terminated before another flight maneuver is initiated. The P* will announce the start and termination of each maneuver.

NOTE:

This task is to be trained after the student has demonstrated proficiency in Task 3110 and 3111

NOTE:

Emergency procedure training will not be conducted during the task.

CONDITIONS: In a UH-60 helicopter VFR or in a UH-60 flight simulator.

STANDARDS: Appropriate common standards.

DESCRIPTION:

1. Crew actions.
a. Conduct a briefing defining the corrective actions and crew duties in response to an emergency.

b. The P* will focus primarily outside the aircraft throughout the maneuver. P* will announce when the maneuver is initiated and termination. He will confirm the maneuvering area is clear before starting the decelerating turn and continue to clear until the maneuver is terminated.

c. The P will assist in monitoring %TRQ, RPM R, aircraft trim and altitude and provide adequate warning of corrective action if limits may be exceeded.

2. Procedures:

   a. Brief other crewmembers on the conduct of the maneuver. Direct the other crewmembers to assist with airspace surveillance.

   b. Established at terrain flight altitude and no lower than 50 feet AHO at cruise airspeed. While on the downwind abeam or beyond the abeam point of the intended point of termination start the maneuver. Simultaneously apply lateral and aft cyclic until the desirable angle of bank and decelerative attitude is achieved. Progressively decelerate while intercepting an approach angle that will clear all obstacles to the point of termination. Adjust the collective as necessary to establish and maintain a constant angle of approach. Progressively decrease the rate of closure until an appropriate intended point of termination.

TRAINING AND EVALUATION REQUIREMENTS: Training and evaluation – Aircraft

REFERENCES: Appropriate common references.

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TASK 3113
RESPOND TO DUAL GENERATOR FAILURE AT A HOVER (MP ONLY)

CAUTION:
Prior to initiating the maneuver the ME will ensure that the aircraft has adequate clearance from all traffic and obstacles.

CAUTION:
Ensure aircraft is not over sloping terrain when landing the aircraft.

CONDITIONS: In a UH-60 helicopter with an ME or in a UH-60 flight simulator and given a dual generator failure at a hover.

STANDARDS: Appropriate common standards plus these additions/ modifications.

1. Identify the malfunction, determine the appropriate emergency procedure, and perform or describe the appropriate immediate action procedures outlined in the appropriate aircraft operator’s manual/checklist (CL).

2. Select a suitable landing area.

3. Perform a smooth, controlled descent and touchdown.

DESCRIPTION: The IP will initiate the maneuver by turning off both main generator switches with SAS 1 engaged. The P* will focus primarily outside to maintain aircraft control and to provide adequate clearance from traffic and obstacles. The P* shall confirm that SAS 1 is ON. The P* shall then direct the P to turn OFF SAS 1 on the AFCS panel. Ensure the aircraft has stabilized prior to selecting a suitable landing area.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training – Aircraft or flight simulator

2. Evaluation – Aircraft

REFERENCES: Appropriate common references.
TASK 3114   LOSS OF #2 PITCH RATE GYRO (MP ONLY)

CAUTION:
Prior to initiating the maneuver the ME will ensure that the aircraft has adequate clearance from all traffic and obstacles.

CONDITION: In a UH-60 helicopter with an ME given a failure of the #2 Pitch Rate Gyro

STANDARDS: Appropriate common standards plus the following additions/modifications:

Student MP correctly performs the SAS2 Pitch check IAW TM 1-1520-237-MTF.

DESCRIPTION:
1. At a 30’ hover, with the student MP on the controls, ensuring the aircraft has adequate clearance from all traffic and obstacles. The ME will identify the 5 amp STAB CONTR circuit breaker on the #2 AC PRI BUS panel and pull it out. The IP will then reset the Master Caution and to reset the stabilator audio.

2. The ME will take the controls and initiate the SAS 2 Pitch check IAW TM 1-1520-237-MTF to demonstrate the aircraft response during a failure of the SAS 2 pitch component (Pitch Rate Gyro in the #2 Stabilator Amplifier).

3. The ME will then transfer the controls to the student MP who will then repeat the maneuver with the IP guarding the controls.

4. Once a stable, 30’ hover is again established, the ME will reset the circuit breaker and return the stabilator to the auto mode.

TRAINING AND EVALUATION REQUIREMENTS:
1. Training – Aircraft or flight simulator
2. Evaluation – Aircraft

REFERENCES: Appropriate common references.

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TASK 3115   DEMONSTRATE APU T-HANDLE FUNCTIONS (MP ONLY)

CONDITIONS: In a UH-60 helicopter with an ME on the ground.

STANDARDS: Appropriate common standards plus the following additions/modifications:

Student MP required knowing the APU compartment fire emergency procedure per the operators’ manual.

DESCRIPTION:
1. While on the ground, engines OFF and rotors not turning, and with the APU generator as the primary source of power. The ME will brief the student MP on APU fire procedures per the operators’ manual prior to initiating the maneuver.

The ME will pull down on the APU fire T-handle, demonstrating its functions (turns off fuel to the APU, sends a stop signal to the ESU, arms the fire extinguisher system, and sets the extinguisher directional control valve to the APU position.)
2. Once the APU shuts down, the ME will turn the battery OFF, removing the last electrical source.

3. The IP will re-brief the APU fire procedures per the operators’ manual. The IP will then turn the battery ON and push the APU fire T-handle up into the reset position, demonstrating the APU’s return to full power.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training – Aircraft or flight simulator

2. Evaluation – Aircraft

REFERENCES: Appropriate common references.