

3. Circuit breakers - Out. As each of the following steps is accomplished, check for indications of the source of the fire.

4. MAIN GEN switch - ON.
5. STARTER GEN switch - STBY GEN.
6. BAT switch - ON.

7. Circuit breakers - In. One at a time in the priority required, GEN BUS RESET first. When malfunctioning circuit is identified, pull the applicable circuit breaker out.

9-34. Overheated Battery.

WARNING

Do not open battery compartment or attempt to disconnect or remove overheated battery. Battery * fluid will cause burns and overheated battery may cause thermal burns and may explode. If an overheated battery is suspected or detected.

1. BAT switch - OFF.
2. Land as soon as possible.
3. EMFR SHUTDOWN after landing.

9-35. Smoke and Fume Elimination. Smoke and/or toxic fumes entering the cockpit and cabin can be exhausted as follows:

Doors, windows, and vents - Open

CAUTION

Do not jettison doors in flight

9-36. Hydraulic.

WARNING

During actual or simulated hydraulic failure, do not pull or push circuit breakers or move the HYD CONT switch during takeoff, map of

the earth flying, approach and landing or while the aircraft is not in level flight. This prevents any possibility of a surge in hydraulic pressure and the resulting loss of control.

P37. Hydraulic Power Failure. Hydraulic power failure will be evident when the force required for control movement increases; a moderate feedback in the controls when moved is felt, and/or the HYD PRESSURE caution light illuminates. Control movements will result in normal helicopter response. In the event of hydraulic power failure:

1. Airspeed - Adjust as necessary to attain the most comfortable level of control movements.
2. HYD CONT circuit breaker - Out. If hydraulic power is not restored:
 3. HYD CONT circuit breaker - In.
 4. HYD CONT switch - OFF.
 5. Land as soon as practicable at an area that will permit a run-on landing with power. Maintain airspeed at or above effective transitional lift until touchdown.

9-38. Control Stiffness. A failure within the irreversible valve may cause extreme stiffness in the collective or two of the four cyclic control quadrants. If the failure is in one of the two cyclic irreversible valves, caution is necessary to avoid over controlling between the failed and operational quadrants.

1. HYD CONT switch - OFF then ON.

Check for restoration of normal flight control movements.

Repeat as necessary.

If control response is not restored:

2. HYD CONT switch - OFF.
If normal operation is not restored!

3. Land as soon as practicable at an area that will permit a run-on landing with power. Maintain airspeed at or above effective transitional lift until touchdown.

9-39. Flight Control Servo Hardover.

a. Cyclic hardover is caused by a sequencing valve failure within the Irreversible valve on either or both cyclic servos. Cyclic servo hardover will cause the cyclic to move full right forward, full left rear, full left forward, or full right rear.

b. Collective hardover is caused by a sequencing valve failure within the Irreversible valve on the collective servo. The collective will move to the full up or full down position.

c. A failure of any flight control servo may render the helicopter uncontrollable unless the following action is taken.

1. HYD CONT select - Select opposite position.

2. LAND AS SOON AS POSSIBLE at an area that will permit a run-on landing with power. Maintain airspeed at or above effective translational lift at touchdown.

9-40. Flight Control/Main Rotor System Malfunctions.

a. Failure of components within the flight control system may be indicated through varying degrees of feedback, binding, resistance, or sloppiness. These malfunctions are normally in isolated controls, i.e. cyclic, cyclic/collective, or anti-torque. These conditions should not be mistaken for hydraulic power failure.

b. Imminent failure of main rotor components may be indicated by a sudden increase in main rotor vibration and/or unusual noise. Severe changes in lift characteristics and/or balance condition can occur due to blade strikes, skin separation, shift or loss of balance weights or other material. Malfunctions may result in severe main rotor flapping. In the event of a main rotor system malfunction, proceed as follows:

WARNING

Danger exists that the main rotor system could collapse or separate from the aircraft after landing. A decision must be made whether occupant egress occurs before or after the rotor has stopped.

1. Land as soon as possible.
2. EMER SHUTDOWN after landing.

9-41. Mast Bumping.

If mast bumping occurs:

1. Reduce severity of maneuver.
2. Land as soon as possible.

9-8 Change 17

9-42. Fuel System.

9-43. Fuel Boost Pump Failure.

If both FUEL BOOST caution lights come on:

1. Check fuel pressure.

If fuel pressure is zero:

2. Descend to a pressure altitude of 4600 feet or less if possible.
3. Land as soon as practicable. No attempt should be made to troubleshoot the system while in flight.

9-44. Electrical System

9-45. Main Generator Malfunction. A malfunction of the main generator will be indicated by zero indication of the Main Generator Loadmeter and DC GENERATOR caution light illumination. An attempt may be made to put the generator back on line as follows:

1. GEN and BUS RESET circuit breaker - In.
2. MAIN GEN switch - RESET then ON. Do not hold the switch in the RESET POSITION. If the main generator is not restored or If it goes off again:
3. MAIN GEN switch - OFF.

NOTE

Check that the standby generator loadmeter is indicating a load. Flight may be continued using the standby generator.

9-46. Landing and Ditching.

9-47. Landing In Trees. A landing in trees should be made when no other landing area is available. Select a landing area containing the least number of trees of minimum height. Decelerate to a zero ground speed at tree-top level and descend into the trees vertically, applying collective pitch as necessary for minimum rate of descent. Prior to the main rotor blades entering the trees, ensure throttle is OFF and apply all of the remaining collective pitch.

9-48. Ditching-Power ON. If it becomes necessary to ditch the helicopter, accomplish an approach to an approximate 3-foot hover above the water and proceed as follows:

1. Cockpit doors — Jettison at a hover.
2. Cabin doors — Open.
3. Crew (except pilot) and passengers — Exit.
4. Hover a safe distance away from personnel.
5. Throttle — OFF and autorotate. Apply full collective pitch prior to the main rotor blades entering the water. Maintain a level attitude as the helicopter sinks and until it begins to roll, then apply cyclic in direction of the roll.
6. Pilot — Exit when the main rotor is stopped.

9-49. Ditching-Power OFF. If ditching is imminent, accomplish engine malfunction emergency procedures. Decelerate to zero forward speed as the helicopter nears the water. Apply all of the collective pitch as the helicopter enters the water. Maintain a level attitude as the helicopter sinks and until it begins to roll, then apply cyclic in the direction of the roll. Exit when the main rotor is stopped.

1. Cockpit doors — Jettison prior to entering water.
2. Cabin Doors — Open prior to entering water.
3. Exit when main rotor has stopped.

Table 9-1 Emergency Procedures for Caution Segments

Light	Corrective Action
MASTER CAUTION	Check the CAUTION panel for the condition. If master caution only (no segment light), <u>land as soon as possible.</u>
AUX FUEL LOW DC GENERATOR	INT AUX FUEL transfer switches-OFF, Check GEN AND BUS RESET circuit breaker in MAIN GEN switch RESET then ON. Switch to STBY GEN. Close door.
INST INVERTER EXTERNAL POWER	<u>Land as soon as possible.</u> (Ref to para 9-19)
XMSM OIL PRESS XMSM OIL HOT	<u>Land as soon as possible.</u> (Ref to para 9-19)
ENGINE INLET AIR CHIP DETECTOR	Land as soon as practicable.
LEFT FUEL BOOST	<u>Land as soon as possible.</u> Land as soon as practicable.
RIGHT FUEL BOOST	Land as soon as practicable.
20 MINUTE FUEL IFF	Land as soon as practicable. Information/System Status
ENGINE OIL PRESS	<u>Land as soon as possible.</u>
ENGINE CHIP DET	<u>Land as soon as possible.</u>
GOV EMER	Information/System Status
ENGINE ICE DET	<u>Land as soon as possible.</u>
ENGINE FUEL PUMP	<u>Land as soon as possible.</u>
ENGINE ICING	<u>Land as soon as possible.</u>
FUEL FILTER	Land as soon as practicable.
HYD PRESSURE	Land as soon as practicable.
SPARE	<u>Land as soon as possible.</u>