ENGINE OUT *voice message*	IN HOVER	• Control HDG – Vertical Descent – ROD
	IN FLIGHT	• Control HDG – 90-111% NR – IAS 60-100 KIAS
	RESTART	• Min ROD ..... Airspeed 50 KIAS / 90 NR • BLEED AIR ..... OFF • THROTTLE ..... FLY • ENGINE ..... OFF, then START/RUN • Start sequence ..... CONFIRM initiated automatically when NG < 8% • PSI ..... MONITOR starting limitations • ENG OIL PRESS ..... CHECK • THROTTLE ..... CONFIRM FLY / 104% NR
ENGINE UNDERSPEED	PSI DEcreasing NR / NP DEcreasing	*Power required to maintain level flight at 60 KIAS* • COLLECTIVE ..... SET to maintain ≥ 97% NR/NP • THROTTLE ..... CONFIRM FLY • Able to maintain NP/NR ? ◆ UNABLE ..... Enter AR ◆ ABLE ..... LAND ASA PRACTICAL
ENGINE OVERSPEED	PSI INcreasing NR / NP INcreasing	*Power required to maintain level flight at 60 KIAS* • COLLECTIVE ..... SET to maintain ≤ 105% NR/NP • IF able to maint. flight .... Fly to suitable landing site • ENGINE ..... OFF, enter AR
COMPRESSOR STALL	Engine pops High / erratic NP/NR PSI oscillations	• COLLECTIVE ..... REDUCE power, maintain 60 KIAS • PSI ..... CHECK for normal indications • BLEED AIR ..... ON • COLLECTIVE ..... INCREASE SLOWLY to achieve desired power level, if possible • PSI ..... MONITOR for normal response • LAND ASA PRACTICAL
	If engine condition deteriorates	• Engine still pops ..... Enter AR (LAND ASA POSSIBLE) • THROTTLE ..... IDLE • ENGINE ..... OFF
ENGINE HOT START	PSI needle increases rapidly during start	• ENGINE ..... OFF • WHEN NG ≤ 10% ..... CRANK until MGT @ normal temp • ENGINE ..... OFF
ENGINE OIL PSI LOW	ENG OIL PRESS < MIN	• COLLECTIVE ..... REDUCE power, maintain 60 KIAS • ENG OIL ..... MONITOR PRESS and TEMP • LAND ASA PRACTICAL
	If ENG OIL PRESS further decreases	• LAND ASA POSSIBLE
ENGINE OIL PSI HI	ENG OIL PRESS > MAX	• ENG OIL ..... MONITOR PRESS and TEMP • LAND ASA PRACTICAL

ENG OIL TEMP	ENG OIL TEMP > 110°C	• COLLECTIVE.....REDUCE power, maintain 60 KIAS • ENG OIL .....MONITOR PRESS and TEMP • LAND ASA PRACTICAL
	If ENG OIL TEMP further increases	• LAND ASA POSSIBLE
DRIVESHAFT FAILURE	Left yaw Rapid decrease NR Moment. increase NP **RPM** audio / light Increased noise level	• CONTROLS .....Maintain HDG and attitude • COLLECTIVE.....Adjust 90-111% NR • CYCLIC.....60 KIAS (50-70 KIAS) • THROTTLE .....KEEP in FLY position • LANDING .....IN AUTOROTATION • After Landing.....SHUT DOWN ENGINE
ECU FAIL *voice message*	DURING START	• ENGINE .....OFF • MGT .....MONITOR • If MGT excessive .....CRANK when NG < 10% • ENGINE .....OFF
	ON GROUND	*(NR fluctuations inversely to collective input, frozen fuel flow)* • ENGINE .....OFF
	INFLIGHT	• COLLECTIVE.....Adjust 97 – 105% NR/NP • Able to maintain level flight: LAND ASA PRACTICAL • Prepare for POWER OFF landing • If ENG switch not functional: use EMERG FUEL SHUT OFF
IBF CLOGGED	ABLE to avoid contaminated atmospheric conditions	• Avoid rapid power changes • MONITOR PSI for possible decrease in power margin available
	UNABLE to avoid contaminated atmospheric conditions, or power available decreasing	• LAND ASA POSSIBLE
ENGINE FIRE *voice message*	ON GROUND Smoke, fumes	• ENGINE .....OFF • GEN .....OFF • BATT.....OFF • ROTOR BRAKE.....ENGAGE • EVACUATE HELICOPTER
	IN FLIGHT Smoke, fumes Erratic ENG indications	• FIRE CONFIRMED .....LAND ASA POSSIBLE • ENTER AR.....60 – 100 KIAS / 90-111% NR • ENGINE .....OFF • EMERG FUEL SHUTOFF..... CLOSE • GEN .....OFF • BATT.....OFF
FIRE SMOKE FUMES	COCKPIT / CABIN	• DESCENT.....INITIATE, LAND ASA POSSIBLE • VENT / WINDOWS .....OPEN • BLEED AIR .....CLOSE • If time permits .....Identify source, use fire extinguisher

ELECTRICAL FIRE	Fire, smoke, fumes Abnormal AMP indication	• DESCENT ..... INITIATE, LAND ASA POSSIBLE • VENT / WINDOWS ..... OPEN • BLEED AIR ..... CLOSE • If time permits ..... INFORM PASSENGERS • GEN ..... OFF • BATT ..... OFF • STANDBY INSTR ..... USE (VNE placard) • AFTER LANDING ..... USE EMERG FUEL SHUTOFF
TAIL ROTOR MAL-FUNCTIONS	General	Malfunctions involving the anti-torque system: 1. Drive system failure 2. A failure leading to fixed T/R pitch 3. T/R cable failure
	Establish 90 KIAS level flight. Verify T/R pedal authority by gently applying left and right pedal inputs in sequence.	
COMPLETE LOSS OF T/R THRUST	The left and right pedals can be moved freely without any yaw response from the aircraft.	
	IN HOVER	• THROTTLE ..... IDLE, HOVER AR LANDING
	IN FLIGHT	• If UNABLE to maintain level flight ◆ AUTOROTATION ..... ENTER (90-111% NR, 60-100 KIAS) ◆ MINIMUM AIRSPEED ..... 40 KIAS ◆ THROTTLE ..... IDLE • If ABLE to maintain level flight & reach suitable landing site ◆ Do approach while maintaining left yaw on final approach, maintain helicopter in a mild flare ◆ Land with forward airspeed and minimal sideslip
RIGHT T/R CABLE FAILURE	The right pedal authority is lost; left pedal authority is available	
		• Adjust power and airspeed to a value where a comfortable yaw angle can be maintained • Fly to nearest suitable landing area • Do approach while maintaining left yaw • On final approach, decrease airspeed and increase power while applying left pedal to maintain minimum sideslip • Maintain minimum sideslip and land with forward speed
LEFT T/R CABLE FAILURE	The left pedal authority is lost; right pedal authority is available	
		• Adjust power and airspeed to a value where a comfortable yaw angle can be maintained • Fly to nearest suitable landing area • THROTTLE ..... IDLE • AUTOROTATION ..... ENTER (90-111% NR, 60-100 KIAS)

FIXED PITCH T/R FAILURE	T/R pedals cannot be moved. Establish MCP level flight, verify sideslip indicator to assess condition and severity of the fixed pitch failure.	
	IN HOVER	• Slightly reduce COLLECTIVE and land • If severe right yaw occurs: - THROTTLE..... IDLE - Before touchdown. raise COLLECTIVE to cushion landing
	IN FLIGHT LEFT PEDAL APPLIED	• Adjust power and airspeed to a value where a comfortable yaw angle can be maintained • Do approach while maintaining left yaw • On final approach, decrease airspeed and increase power to eliminate sideslip • Maintain minimum sideslip and land with forward speed, if necessary
	IN FLIGHT RIGHT PEDAL APPLIED	• Adjust power and airspeed to a value where a comfortable yaw angle can be maintained • Do approach while maintaining left yaw • On final approach, decrease airspeed and increase power to eliminate sideslip • Maintain minimum sideslip and land with forward speed, if necessary • If right yaw becomes excessive: - THROTTLE..... IDLE - Perform a HOVER AR landing
HYDRAULIC FAILURE	Possibly uncommanded manoeuvres High flight control forces	• ATTITUDE .....MAINTAIN • HYD SYS .....OFF • AIRSPEED.....50-80 KIAS (100 KIAS possible to extend flight) • LAND ASA PRACTICAL .. Run-on landing ca. 15 KIAS, hard surface
GEN	AMP 0 A VOLT < 28V	• GEN .....OFF, then ON If GEN not restored: • GEN .....OFF • LAND ASA PRACTICAL (ca. 33min ELEC power available)
GEN OVERLOAD	AMP excessive load	• Electrical load.....REDUCE If overload situation persists: • GEN .....OFF • LAND ASA PRACTICAL (ca. 33min ELEC power available)
MFD / PFD FAIL	MFD failed	• REV.....Select PFD REV • LAND ASA PRACTICAL
	PFD failed	• REV.....Select MFD REV • **MFD REV** .....Displayed • LAND ASA PRACTICAL

ADAHRS failures	ASI, ALT, VSI, OAT, ATT, HDG may not be available (X)	• STANDBY INSTR .....USE • LAND ASA PRACTICAL
GIA FAILURE	COM1, NAV1 and GPS1 crossed out (X)	• Secondary failures not displayed – refer to Table 3-5 • COM / NAV .....USE COM2 / NAV2 • LAND ASA PRACTICAL
GEA FAILURE	FUEL QT, XMSN OIL PRESS/TEMP, GEN AMPS, BUS VOLT crossed out (X)	• Secondary failures not displayed – refer to Table 3-5 • LAND ASA PRACTICAL
TOTAL ELEC FAILURE	ECU maintains 104% NP All instruments OFF except STBY instrument	• BATT .....OFF, then ON • GEN .....OFF, then ON If electrical power not restored: • STBY INSTR.....USE (refer to VNE placard) • LAND ASA POSSIBLE • For ENG shutdown after landing, use EMERG FUEL SHUTOFF, if ENG switch not functional
GMA failure	Audio alerts only audible from RH seat audio	• If flying from LEFT seat..... MONITOR CAS messages • LAND ASA POSSIBLE

Audios include the following:

FAILURE	TONE CHARACTERISTIC
ENGINE OUT	PING + ENGINE OUT (continuous voice message)
Low rotor RPM	PING + Continuous warble
Airspeed above V_{NE}	Continuous TING tones
ECU failure	PING + ECU FAIL (continuous voice message)
Engine fire	PING + ENGINE FIRE (continuous voice message)
Master warning	PING repeating 3 times
Master Caution	PING only

TERMS	LEVEL OF EMERGENCY DEFINITION
LAND AS SOON AS POSSIBLE	Land without delay at nearest suitable area (i.e., open field) at which a safe approach and landing is reasonably assured.
LAND AS SOON AS PRACTICAL	Landing site and duration of flight are at discretion of pilot. Extended flight beyond nearest approved landing area is not recommended.