

RELIABILITY PROGRAMMES APPROVAL CHECKLIST

OPERATOR NAME					
Reference number for Part 91					
AOC number for Part 121/135/127					
Date					
Aircraft type & registration number					
Aircraft serial number					
		YES	NO	N/A	NOTES
1.	Applicability				
1.1	Developed in the following cases:				
	a. Programme is based upon MSG-3 logic.				
	b. Programme includes condition monitored components.				
	c. Programme does not contain overhaul time periods for all significant system components.				
	d. Specified by the Manufacturer's MPD or MRB.				
1.2	Need not be developed in the following cases:				
	a. Programme is based upon the MSG-1 or 2 logic (only hard times or on condition items)				
	b. Not a large aircraft (= or < 5700 Kgs MTWA or single engine helicopter)				
	c. Programme provides overhaul time periods for all significant system components.				
1.3	Operator may develop own reliability monitoring programme.				
2	Applicability, small fleets.				
2.1	Less than 6 aircraft of the same type.				
2.2	Reliability programme is irrespective of the fleet size.				
2.3	Tailor reliability programmes to suit the size and complexity of operation.				
2.4	Use of "Alert levels" should be used carefully				
2.5	When establishing a reliability programme, consider the following:				
	a. Focus on areas where a sufficient amount of data is likely to be processed.				
	b. How is engineering judgement applied?				
2.6	Pool data and analysis (paragraph 6.6 specifies conditions)				
2.7	If unable to pool data / additional restrictions on the MRB/MPD tasks intervals specified.				
3	Engineering judgement.				
3.1	Are there appropriately qualified personnel (with appropriate engineering experience and understanding of reliability concept) for the reliability programme?				
4	Contracted maintenance.				
4.1	Maintenance programme / may delegate certain functions to the Part-145 organisation.				

4.2	These are:				
	a. Developing the maintenance and reliability programmes.				
	b. Collection and analysis of the reliability data.				
	c. Providing reliability reports.				
	d. Proposing corrective actions.				
4.3	Approval to implement a corrective action / Subpart G prerogative and responsibility.				
4.4	Maintenance contract, CAME and MOE procedures.				
5	Reliability programme				
5.1	Objectives.				
5.1.1	Statement summarising the prime objectives of the programme.				
	a. Recognise the need for corrective action.				
	b. Establish what corrective action is needed.				
	c. Determine the effectiveness of that action.				
5.1.2	The extent of the objectives should be directly related to the scope of the programme.				
5.1.3	All MSG-3 related tasks are effective and their periodicity is adequate				
5.2	Identification of items.				
	The items controlled by the programme should be stated.				
5.3	Terms and definitions.				
	Significant terms and definitions should be clearly identified.				
5.4	Information sources and collection.				
5.4.1	Sources and procedures in the Exposition.				
5.4.2	Type of information to be collected should be related to the objectives, examples of the normal prime sources:				
	a. Pilots Reports				
	b. Technical Logs				
	c. Aircraft Access Terminal / On-board readouts				
	d. Maintenance Worksheets				
	e. Workshop Reports				
	f. Reports on Functional Checks				
	g. Reports on Special Inspections				
	h. Stores Issues/Reports				
	i. Air Safety Reports				
	j. Reports on Delays and Incidents				
	k. Other sources: i.e. ETOPS, RVSM, CAT II/III				
5.4.3	Due account of Continuing Airworthiness information promulgated under Part-21				
5.5	Display of information				
	Information displayed graphically or tabular or a combination				
5.5.1	Provisions for "nil returns"				
5.5.2	Where "standards" or "alert levels", information oriented accordingly.				
5.6	Examination, analysis and interpretation of the information.				

	Method for examining, analysing and interpreting the information should be explained.				
5.6.1	Methods of examination may be varied - content & quantity.				
5.6.2	The whole process should enable a critical assessment of the effectiveness of the programme as a total activity. May involve:				
	a. Comparisons of operational reliability with established or allocated standards.				
	b. Analysis and interpretation of trends.				
	c. Evaluation of repetitive defects.				
	d. Confidence testing of expected and achieved results.				
	e. Studies of life-bands and survival characteristics.				
	f. Reliability predictions				
	g. Other methods of assessment				
	h. Stores Issues/Reports				
	i. Air Safety Reports				
	j. Reports on Delays and Incidents				
	k. Other sources: i.e. ETOPS, RVSM, CAT II/III				
5.6.3	Range and depth of analysis should be related to the particular programme:				
	a. Flight defects and reductions in reliability				
	b. Defects – line and main base				
	c. Deterioration observed - routine maintenance				
	d. Workshop and overhaul findings				
	e. Modification evaluations				
	f. Sampling programmes				
	g. Adequacy of maintenance equipment and publications				
	h. Effectiveness of maintenance procedures				
	i. Staff training				
	j. Service bulletins, technical instructions, etc.				
5.6.4	Contracted maintenance – arrangements established and details for information input included				
5.7	Corrective Actions				
5.7.1	Procedures / time scales for implementing corrective actions / monitoring – should be fully described & could include:				
	a. Changes to maintenance, operational procedures or techniques.				
	b. Changes requiring amendment of the approved maintenance programme?				
	c. Amendments to approved manuals				
	d. Initiation of modifications				
	e. Special inspections/fleet campaigns				
	f. Spares provisioning				
	g. Staff training				
	h. Manpower and equipment planning				
5.7.2	Procedures for effecting changes should be described				

5.8	Organisational Responsibilities				
	Organisational structure – chains of responsibility should be defined.				
5.9	Presentation of information to the competent authority.				
	Information submitted to the CAA for approval of the reliability programme:				
	a. Format and content of routine reports.				
	b. Time scales for reports / distribution.				
	c. Format and content of reports requesting amendments.				
5.10	Evaluation and review.				
	Describe procedures and individual responsibilities - continuous monitoring of the effectiveness of the programme.				
5.10.1	Procedures for revising the "standards" or "alert levels".				
5.10.2	Criteria to be taken into account during the review includes:				
	a. Utilisation (high / low / seasonal)				
	b. Fleet commonality.				
	c. Alert Level adjustment criteria.				
	d. Adequacy of data.				
	e. Reliability procedure audit.				
	f. Staff training.				
	g. Operational and maintenance procedures				
5.11	Approval of organisation to implement maintenance programme changes arising from the reliability programme results:				
	a. Does the reliability programme monitor the content of the maintenance programme in a comprehensive manner?				
	b. Is appropriate control exercised by the owner / operator over the internal validation of such changes?				
6	Pooling Arrangements.				
6.1	Pooling information – must be substantially the same, including:				
	a. Certification / modification / SB compliance				
	b. Operational Factors				
	c. Maintenance factors				
6.2	Is there a substantial amount of commonality/has the CAA agreed?				
6.3	Is the aircraft on short-term lease? CAA may grant more flexibility.				
6.4	Changes to any M.A.(G) requires assessment in order that the pooling benefits can be maintained.				
6.5	Reliability programme managed by the aircraft manufacturer if agreed by the CAA.				

