

QUALITY MANUAL QUALITY MANAGEMENT SYSTEM

Second Issue



**PAWAN HANS HELICOPTERS LTD
CORPORATE OFFICE
SAFDARJUNG AIRPORT
NEW DELHI**

APPROVAL OF QUALITY MANUNAL

1. This Quality Manual Issue is hereby approved on this Twenty Fifth Day of September 2003.
2. All subsequent revisions of this manual will be reflected in the amendment sheet after approval by me.

(NAGAR V. SRIDHAR)
Chairman Cum Managing Director

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QUALITY MANUAL

CHAPTER 0 :- GENERAL

INSTRUCTION:

1. The adoption of Quality Management System has been a strategic decision of Pawan Hans Helicopters Ltd. The design and implementation of PHHL's quality management system adopted initially by PHHL was in line with ISO 9002:1994 in view of its needs, objectives, the processes employed for Operations and Maintenance and its size and structure. With revision of the ISO Standard, the system has been transitioned to be in accordance with the revised standard ISO 9001:2000.
2. This Manual Issue has superseded manual issue 1 issued in 1998 and is to be used by internal and external parties, including certification bodies to assess PHHL's ability to meet customer, regulatory and its own requirements.
3. The Quality management system established promotes adoption of a process approach. PHHL has established, documented, implemented and maintained and continually improves the effectiveness of the quality management system in accordance with the requirements of ISO 9001:2000.


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CHAPTER 0 :- TABLE OF CONTENTS


Chapter	Description	Page No.	No of Page
	Cover	1	1
	Document Approving Authority	1	1
0	General	0.1	1
0	Table of Contents	0.2	1
0	Amendment Sheet	0.3	1
0	Distribution List	0.4	2
	PART-I: QUALITY MANUAL		
1	Scope	1.1	1
2	Company profile	2.1	4
3	Abbreviations	3.1	3
	Definitions	3.4	7
4	Quality management system	4.1	9
5	Management responsibility	5.1	11
6	Resource management	6.1	3
7	Product realization	7.1	7
8	Measurement analysis and Improvement		6
	PART-II: QUALITY SYSTEM PROCEDURE		
9	Document control	9.1	5
10	Control of Non-Conforming Product Helicopter Operations	10.1	2
11	Control of Quality Products	11.1	2
12	Internal quality Audit	12.1	6
13	Control of Non-Conforming Product Helicopter maintenance	13.1	5
14	Corrective and Preventive Action	14.1	5

PAWAN HANS HELICOPTERS LTD. 	QUALITY MANUAL CHAPTER 0 :- AMENDMENT SHEET
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SL.NO	CHAPTER NO.	PAGE NO.	REV NO.	DATE	AMENDMENT DETAILS
1	4	4.9	01	25.05.07	ADDITION - MISSION/STATEMENT AMENDMENT - QUALITY OBJECTIVES
2	4	4.9	02	31.03.08	AMENDMENT - QUALITY OBJECTIVES

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16 TO 24, 32-33	BASE MANAGER(BASES UNDER NORTHERN REGION)
25 TO 28	BASE MANAGER(BASES UNDER WESTERN REGION)
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30	CONSULTANTS
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CHAPTER 1 :- SCOPE

SCOPE:

The QMS implemented in PHHL covers all departments and locations connected with helicopter operations and maintenance both internal and external.

All requirements of ISO 9001: 2000 except clause 7.3 are applicable to QMS. ISO 9001:2000 clause 7.3 requirements are excluded from this QMS as PHHL does not undertake any design & development activity as only well developed and validated processes are used for the flying and maintenance operations.



1. Background

1.1 Pawan Hans Helicopters Ltd. (PHHL) was incorporated in Oct. 1985 as a company under the provision of Companies Act, 1956 with the following objectives:

- (a) Providing helicopter support services to meet the requirement of oil sector.
- (b) Operating in hilly and remote terrain, connecting inaccessible areas and
- (C) Providing tourist charters for promotion of travel and tourism

1.2 When the company was formed, helicopter operation in civil sector were virtually non-existent and expertise in this field was limited. Consequent upon its formation, PHHL inducted large number of helicopters in records time due to the unstinted effort of its employees. Within an year of inception the company made a beginning in replacing foreign helicopter operation and by Sept 14987, the company was able to accomplish the crucial; task of providing cent percent helicopter support services to ONGC, primary customer thereby saving outflow of precious foreign exchange.

1.3 The company has paid-up equity capital of Rs. 113.76 crores held by central Govt. (78.5%) and ONGC (21.5%).

2.0 Broad Organization

2.1 The Corporate office (C.O) is located in Delhi with two regional offices located in at Mumbai and Delhi , which are designated as Western region (WR) and Northern Region) respectively. The Western Region takes care of helicopter operations including maintenance of helicopter in Western and Southern part of India whereas Northern region takes care of the Northern and eastern parts of India

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QUALITY MANUAL

CHAPTER 2 :- COMPANY PROFILE

2.0 Operations

2.1 Helicopter Operation

2.1.1 Pawan Hans is the biggest helicopter in India and one of the largest on Asia. As on 31st march 2003, PHHL has a balanced fleet of 31 helicopters consisting of 3 bell 206 L4, 2 bell 407, 19 Dauphin SA365N, 2 Dauphin AS 365 N3, 3 Mi-172 and 2 R-44. In addition, it also operates and maintains helicopters of other clients under the operation and maintenance contracts.

2.1.2 Pawan Hans operates from its two regional offices located at Mumbai and Delhi with operational bases in various parts of the country. For its primary customer ONGC, Pawan Hans has been conducting off-shore operations with high precision and skill at Mumbai high. Each helicopter based at Mumbai performs an average of 100 hours of flying per month and does 35 multiple landings per day on off-shore rigs. Besides Andaman and Nicobar islands, Ministry of Home, Oil India, Gail India and private Indian companies like Punj Lloyd (Indo-Pacific) foreign companies like Hardy Explorations and religious institutions like Baba Darbar.

2.2 Maintenance

2.2.1 Pawan Hans has made relentless effort towards achieving self-reliance in maintenance of its helicopter fleet. Pawan Hans has created maintenance infrastructure with state-of-the-art facilities and workshops. These are upgraded time to time to ensure high availability of helicopters. Pawan Hans has also developed in-house expertise for major overhaul of helicopters effecting substantial saving in terms of time and foreign exchange. Our maintenance facilities at D level have been approved by Eurocopter for Dauphin helicopters.



2.2.2 Presently Pawan Hans has in-house maintenance facilities/workshops such as :-

- i. Major servicing of helicopter
- ii. Electrical and instrument repair shop
- iii. Radio-radar equipment repair shop
- iv. Synthetic equipment repair shop
- v. Safety equipment repair shop
- vi. Structural repair shop
- vii. Main rotor blade shop
- viii. Engine shop
- ix. Transmission assemblies repair shop
- x. Test laboratory for analysis of oil sample commonly called SOAP Lab (Spectrometric Oil Analysis Program)

2.3 Training Facilities

2.3.1 PHHL has established the following training facilities

- a. DGCA approved training school for pilots and other technical personal in their respective fields
- b. Instrument Procedure training at Delhi and Mumbai including annual refresher training jobs

3.0 Quality Initiative

A strategic management decision was taken to develop and implement a world class quality management system which is effective and appropriate to our role and operations.

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CHAPTER 2 :- COMPANY PROFILE

In the year 2000, systems implemented was completed and United Registrar of System (URS) U.K. was appointed as Certification Audit Agency, which successfully completed the Audit in December 2000 certificate for compliance with ISO 9002 requirements was awarded . Pawan Hans Helicopters Ltd. Thus become one to the few airlines in the world with a certified ISO-9002 Quality System covering all activities of organization.

In the meanwhile ISO Standard has been revised from ISO-9002:1994 to ISO 9001:2000. Accordingly the present system has been transitioned as per current standard ISO-9001:2000.

4.0 Future Plan

4.1 Besides consolidating the present operations, the company is on the threshold of a new era to discharge its important responsibility of serving the nation and to face the challenges posted by competitors with the liberalization of the economy. To meet these challenges, some of the steps planned are :-

- Replenishment/ expansion of fleet to meet the emerging requirements.
- Providing air maintenance support in difficult areas.
- Increasingly achieving self reliance in the field of maintenance and repair
- Modernization of communication facilities.



List of Abbreviations

1	ADC	Air Defence Control
2	AME	Aircraft Maintenance Engineer
3	AOG	Aircraft on Ground
4	ATF	Aviation turbine Fuel
5	ATC	Air Traffic Control
6	AVGAS	Aviation Gasoline
7	AWB	Airway Bill
8	BOD	Board Of Directors
9	BLC	Bin Location Card
10	BSF	Border Security Force
11	CAA	Civil Aviation Authority
12	CAF	Corrective Action Form
13	CAR	Civil Airworthiness requirements
14	CFA	Competent Financial Authority
15	CMD	Chairman and Managing Director
16	CO	Corporate office
17	Coy Secy	Company Secretary
18	DGCA	Director general Of Civil Aviation
19	DGM	Deputy General Manager
20	ED	Executive Director
21	ENGG	Engineering
22	ETA	Expected Time o Arrival
23	F&A	Finance and Accounts
24	FAA	Federal Aviation Authority
25	FFS	First Flight Servicing



26	FIC	Flight Information Center
27	FIFO	First-in-First-out
28	FRC	Flight release Certification
29	FTD	Functional Test Data
30	GET	Graduate Engineer Trainee
31	GM	General Manager
32	GRAN	Goods receipt and Acceptance Note
33	GSE	Ground support equipment equipment
34	HOD	Head of department
35	IGRUA	Indira Gandhi rashtriya uran acadmeny
36	IOC	Indian oil corporation
37	IOM	Internal office memo
38	IPC	Illustrated parts catalogue
39	IPT	Instrument procedure trainer
40	JLB	Journey log book
41	LFS	Last flight servicing
42	LPC	Local purchase committee
43	MAT	Material
44	M&P	Marketing and planning
45	MR	Management representative
46	NC	Non-Conformance
47	NCR	Non-Conformity report
48	NR	Northern region
49	OEM	Original Equipment manufacturer
50	ONGC	Oil and natural gas corporation LTD.
51	OPS	Operational



52	PDR	Pilot's defect report
53	P&A	Personnel and administration
54	PHHL	Pawan Hans helicopters limited
55	P&HRD	Personnel and human resource development
56	PIC	Pilot in command
57	PPC	Production planning and control
58	PSU's	Public sector undertakings
59	QC	Quality council
60	QCM	Quality control manager
61	Q-Cord	Quality CO-ordination
62	QM	Quality manual
63	RQC	Regional quality committee
64	SB	Service bulletin
65	SLL	Service life limitation
66	SOP	Standard operating procedure
67	SRAF	Stores receipt and accounting form
68	TBO	Time between overhaul
69	TRG	Training
70	TSN	time since new
71	TSO	time since overhaul
72	WI	Work instructions
73	WR	western regions



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| 1. | Accident | <p>In relation to helicopter, an occurrence associated with the operation of a helicopter which takes place between the time any person boards the helicopter with the intention of flight until such time as all such persons have disembarked, in which any person suffers death or serious injury as a result of being in or upon the helicopter or by direct contact to the helicopter or by direct contact to the helicopter or any attachment there to</p> <p style="text-align: center;">Or</p> <p>The helicopter receives substantial damage which necessitates the replacement or extensive repair of any major component.</p> |
| 2. | Airframe | <p>The structure of helicopter that does not include power plant</p> |
| 3. | Air Traffic Control | <p>The control of aircraft traffic from the ground. Air traffic control is done from control towers, whose personnel direct air traffic in the vicinity of an airport</p> |
| 4. | Airworthiness | <p>The continuing capability of the helicopter to perform in a satisfactory manner the flight operations for which it was designed.</p> |
| 5. | Bench check | <p>Means checking the performance of the equipment mainly radio, communication and navigation equipment on a test bench having proper equipment and meters etc to ascertain deterioration in the performance before undertaking dismantling /overhaul.</p> |



QUALITY MANUAL
CHAPTER 3 :- DEFINATIONS

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| 6. | Calibration | The procedure in which the indication of an instrument is compared with a standard value. Calibration is done to determine just how accurate the instrument is. |
| 7. | Certificate of flight release | A certificate issued in respect of a helicopter/helicopter component/item of equipment by appropriately licensed AME or approved persons, certifying that the helicopter has been inspected as per approved maintenance schedule system, and is airworthy in all respect and is safe for flight for the period specified in the certificate. |
| 8. | Certificate of Maintenance | A certificate issued in respect of a helicopter/helicopter component/item of equipment by appropriately licensed AME or approved persons after carrying out major modification, major repair, overhaul, test, operation and inspection and inspection certifying that the work has been performed in accordance with the airworthiness requirement stipulated by DGCA. |
| 9. | Certificate of Airworthiness | A certificate issued in respect of helicopter in pursuance of aircraft rules implementing airworthiness compliance with minimum standards of airworthiness as acceptable to the Director General of Civil Aviation (DGCA). |
| 10. | Component/Rotable | Means any part, the soundness and correct functioning of which, when fitted on helicopter, is essential to continued airworthiness or safety of the helicopter, or its occupants. |



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| 11. | Consumables | Means any item which participates in or is required for a manufacturing/maintaining process, but does not form a part of end product. Items which are sub-Stanly or totally consumed during a manufacturing/maintenance process will be deemed to consumables, |
| 12. | Co-Pilot | Means a licensed pilot serving in any piloting capacity other than as pilot in command but excluding pilot who is on board the helicopter or the sole purpose of receiving flight instruction. |
| 13. | Defect | Means a condition existing is a helicopter(including its system) or helicopter components arising from any cause other than damage, which precludes it or another helicopter component from performing their internal function or reduce expected service life of helicopter or helicopter component. |
| 14. | Duplicate Inspection | Inspection which is made by one inspection approved/authorized/licensed person and is then repeated, before the helicopter is flown by another approved/authorized/licensed person and again certified by him. |
| 15. | Engine (GAS Turbine) | An internal combustion engine that burns its fuel in a constant pressure cycle |
| 16. | Flight Test | Means the flying of a helicopter exclusively for the purpose of ensuring that the performance and characteristics of the helicopter and functioning of the helicopter components/systems do not differ significantly in adverse sense from those of its prototype. |



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| 17. | Fueling | Means dispersion of fuel into helicopter for the generation of engine power and augmentation of thrust and includes both fueling and defueling. |
| 18. | Functional Test Data (FTD) Check | FTD check means the checks that would compare service ability of avionic components with the manufacturer test data. These checks are undertaken at interval as prescribed by the manufacturer in their manuals. |
| 19. | Ground Support Equipment (GSE) | All of the equipments that are needed to service and maintain helicopter on ground |
| 20. | Hanger | A building/covered structure that is built for the purpose of housing aircraft/helicopter |
| 21. | Helicopter | Means a heavier-than-air, aircraft supported in flight by the reactions of the air on one or more power driven rotors substantially in vertical axis. |
| 22. | Helicopter Service | Means a service for the transport by air of persons, cargo or any other thing, animate or inanimate, for any kind of remuneration what-so-ever whether such service consists of a single flight or series of flight. |
| 23. | Incident | In relation to a helicopter, it means an occurrence which takes place either on ground or in flight, in which (a) the helicopter suffers damage or a person associated either with maintenance, operation, or both, suffers injury in circumstances other than those specified in "accident". |



		(b) The helicopter makes a forced landing, or lands due to condition ion which continuance of flight is in advisable or safety of the helicopter or its components or its occupants is jeopardized in any manner.
24	Landing	It is the action under normal conditions of making contact with the ground or a solid platform or water by a helicopter equipped for this purpose.
25	Maintenance	Means performance of all work necessary for the purpose of ensuring that the helicopter is airworthy and safe including servicing of helicopter and all modification, repairs, replacement, overhaul, processes, treatment, tests, operations and inspections of helicopter, helicopter component and items of equipment required for this purpose.
26.	Manufacturer	Means an organization engaged in the manufacturer if helicopter, engines, helicopter components, spares or other items of equipment to approved specifications and drawings.
27	Overhaul	Means striping a unit and restoring it to its original designed performance level after replacing/ reworking parts to a given standard.
28.	Pilot -in-Command	Means the pilot responsible for the operation and safety of helicopter during the flight time.
29.	Product	Includes al helicopter services (delivery) provided to the customer including maintenance/ repair/ overhaul of helicopter /components belonging to PHHL as well as external customer.



30	Rejection Note	Means a document issued by approved organization for the purpose of advising details of the rejection of certified aircraft goods which fails to meet applicable requirements
31.	Release Note	Means a document accompanying the sale of helicopter components, spares, materials and goods and certifying the same where obtained from an approved source, after manufacture/repair/overhaul and all the relevant airworthiness of the DGCA are satisfied.
32.	Repairs	Restoration of helicopter and/or its components to a condition of airworthiness after a failure or damage.
33	Scheduled Maintenance	This concerns maintenance task at prescribed intervals. It includes replacement of life limited items, components requiring replacement for periodic overhaul, special inspections such as x-rays, checks, tests on-condition items etc.
34.	Service Bulletin	A bulletin that is issued by the manufacturer of helicopter, engine or component that describes a service procedure that the manufacturer recommends to make the device safer, or to improve its service life.
35.	Spares	Means a part or a sub-assembly or assembly for substitution, that is ready to replace an identical or similar part or assembly. Spares include a component or an accessory
36.	Take-off	Includes all successive positions of a helicopter from the moment it moves from rest until the moment to starting a normal flight.

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QUALITY MANUAL

CHAPTER 3 :- DEFINATIONS

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| 37 | Tarmac | A hard surface area in the an airport where aircraft/helicopter can be kept , tied down and where there may be serviced |
| 38. | Un-scheduled Maintenance | This provides procedures, instructions and standards for the accomplishment of maintenance task genrated by the inspection and scheduled maintenance work, pilot reports, failure analysis or other indications of a need for the maintenance. |



1.Requirements

1.1 General- Requirements

1.1.1 PHHL has identified the processes needed for the QMS and determined the sequence and iteration for these processes. These are shown in Appendix 'A'. Department wise responsibilities with respect to these processes are shown in the process application department matrix at Appendix 'B'.

1.1.2 The criteria and methods to ensure that both the operation and control of the processes are effective, have been determined by the department/ processes owners given in the respective department manuals

1.1.3 The resources and information necessary to support the operation and monitoring of these processes are made available by the management.

1.1.4 Monitoring and /or measurement and analysis of the processes is carried out as per details contained in the respective manuals and actions necessary to achieve planned results and continual improvement and implemented.

1.1.5 Where any process that affects product conformity with requirements is out sourced the process owner identifies and ensures control over such process.

1.2 Documentation Requirements.

1.2.1 The quality management system documentation includes:-

- a) Documented statements of quality policy and quality objectives. These are given in Appendix 'C'.
- b) Quality manual




- c) Documented procedures required by the ISO 9001:2000 QMS are included in Part II of this manual.
- d) The following documents are needed to ensure effective planning operation and control of the processes:-
 - OPS manual
 - Flight Safety Manual
 - Personnel Policy & Rules
 - Mats Manual
 - Mktg. Manual
 - Quality Control Manual
 - Engg. manual
- e) Records needed for the QMS

1.2.2 Quality Manual:

This manual includes:


- a) The scope of quality management system which includes justification for exclusions (Refer Chapter1)
- b) The following procedures established for the quality management system and included in Part II of the manual:-
 - Control of quality documents procedure
 - Control of quality records procedure
 - Internal Audit procedure
 - Control of Non conforming products procedure: Helicopter maintenance
 - Control of Non conforming products procedure: Helicopter Operations
 - Corrective and Preventive Action Procedure

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- c) Appendix 'A' and 'B' description of the interaction between the processes of the quality management system.
- d) Quality Policy and Quality Objectives (Refer Appendix C)
- e) Summary of how the requirement of ISO 9001:2000 have been implemented and integrated with the processes of the QMS.

Reference:

ISO 9001:2000 Clause 4, 4.1, 4.2


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Appendix ‘A’

SEQUENCE AND INTERACTION OF PROCESSES

<u>BUISNESS PROCESSES</u>
For details see Annexure 1: Operations Annexure 2 Engineering

Other QMS Processes
1. Control of Documents 2. Control of Records 3. Internal audit 4. Corrective Action 5. Preventive Action 6. Management Responsibility Review 7. M&M of Processes 8. Resource Management 9. Data Analysis 10. Continual Improvement 11. Internal Communication 12. Customer satisfaction

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Annexure 1: **Business Processes: Operations**

Interaction with Customer
Determination and Review of Requirements (1)

Receive Contractor Service requirement (2)

Purchase of helicopter and services (4)	Planning Operations (3)
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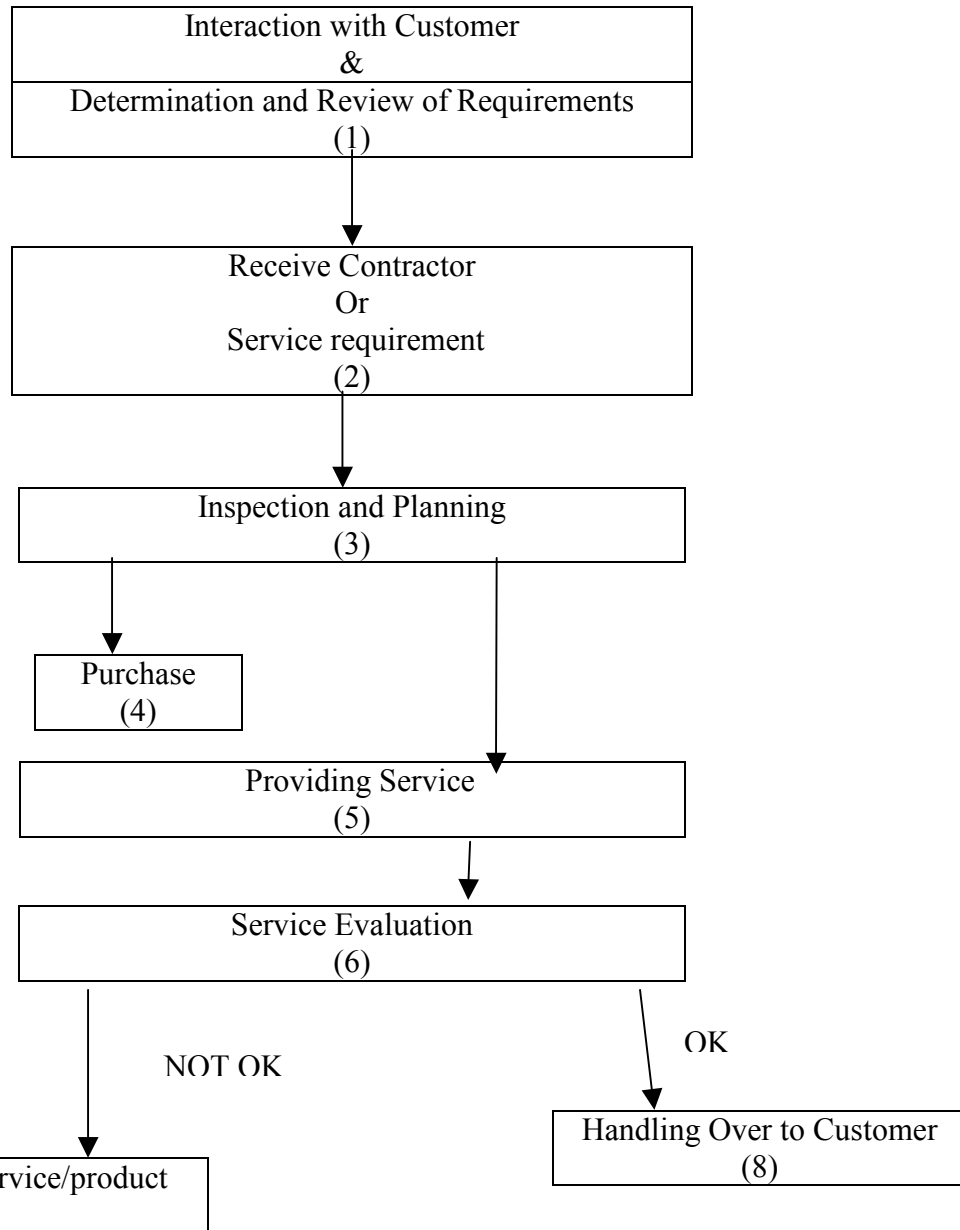
Providing services (5)	Engineering (6)
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Service evaluation (7)

Control of NC service (8)



Annexure 2: **Business Processes: Engineering**



Annexure 2 Continued.

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CHAPTER 4 :- QUALITY MANAGEMENT SYSTEM

Appendix 'B'

PROCESS APPLICATION DEPARTMENT WISE MATRIX

P: Primary responsibility

@: Applicable

Process Description	Applicable Departments						
	Para Ref of QM	Op s	Engg	Mats	Mktg.	H R	Top Mgt/MR
Quality Management Processes							
1. Doc Control	4.2.3	@	@	@	@	@	P
2. Record Control	4.2.4	@	@	@	@	@	P
3. Internal Audit	8.2.2	@	@	@	@	@	P
4. Corrective Action	8.5.2	@	@	@	@	@	P
5. Preventive Action	8.5.3	@	@	@	@	@	P
6. Management Responsibility and Review	5.1 TO 5.6 LESS 5.5.3	@	@	@	@	@	P
7. M & M Process	8.2.3	P	@	@	@	@	@
8. Resource Management	6.1 to 6.4	@	@	@	@	@	P
9. Data Analysis	8.4	P	@	@	@	@	@
10. Continual Improvement	8.5	P	@	@	@	@	@
11. Internal Communication	5.5.3	@	@	@	@	@	P
12. Customer Satisfaction	8.2.1	@	@	@	P	@	

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QUALITY MANUAL

CHAPTER 4 :- QUALITY MANAGEMENT SYSTEM

Business Processes: Operations							
1. Interaction with Customers for determination and review of requirements	7.2	1 @	2 @	3 @	4 P	5 @	6
2. Receive and Process contract and service requirements	7.2	@	@	@	P	@	
3. Planning of Operations/services	7.1	P	@	@	@	@	
4. Purchase of Product/service	7.4	@	@	P	@	@	
5. Providing of Services	7.5	P	@	@	@	@	
6. Services Evaluation	8.2.4	P	@	P	@	@	
7. Control of Non-conforming services	8.3	P	@	@	@	@	

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QUALITY MANUAL

CHAPTER 4 :- QUALITY MANAGEMENT SYSTEM

Business Processes: Engineering							
1. Interaction with Customers for determination and review of requirements	7.2	1 @	2 @	3 @	4 P	5 @	6
2. Receive contract or service requirements	7.2	@	@	@	P	@	
3. Planning of services	7.1	P	P	@	@	@	
4. Purchasing	7.4	@	@	P	@	@	
5. Providing Service	7.5	P	P	@	@	@	
6. Services Evaluation	8.2.4	P	P	@	@	@	
7. Control of Non-conforming services	8.3	P	P	@	@	@	
8. Preservation & Storage	7.5.5	@	@	P	@	@	
9. Control of MMD's	7.6	@	P				

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CHAPTER 4 :- QUALITY MANAGMENT SYSTEM

Appendix-‘C’

Mission:

“To become a market leader in Asia in helicopter operation and provide repair/overhaul services of helicopters components/assemblies at par with international standard”.

QUALITY POLICY:

- Together we will create and maintain environment, where each one of us, individually and collectively motivate each other to make our company the market leader in Asia, in helicopter operation as well as globally competitive in the repair/overhaul of aviation products.
- We are committed to build and ensure safety in all our operation, in air and on ground, comparable to the best in the Aviation Industry.
- We resolve to continuously improve customer satisfaction.
- We will strive for excellence through good work culture by mutual trust, transparency, personal pride and involvement.
- We will achieve sustained growth and profitability.
- We are committed to comply with requirements and continually improve the effectiveness of the QMS

QUALITY OBJECTIVES:

- *To enhance the fleet upto 55 helicopters to present 35 helicopters by year 2012.*
- *To achieve optimum utilization of the fleet by ensuring sleet serviceability of 80% plus.*
- *To ensure continuous improvement in safety both in air and on ground, comparable to the best in the Aviation Industry.*
- *To expand and modernize repair /overhaul facilities.*
- *To seek Mini Ratna Status.*



5. Management Responsibility

Top management consists of CMD, GMs of regions and Corporate HODs.

5.1 Management Commitment

Top management of PHHL is committed to the development and implementation of the quality management system and continually improving its effectiveness by-

- a) Communicating the importance of meeting customer as well as DGCA requirements during various meetings and interactions
- b) Establishing the quality policy
- c) Ensuring that quality objectives are established at relevant functions and levels.
- d) Conducting management reviews periodically
- e) Ensuring the availability of resources

4.2 Customer Focus

Top management of PHHL ensures that customer requirements are determined and are met with aim of enhancing customer satisfaction by:

- a) Laying down responsibility & authority
- b) Interaction with the concerned departments & regions
- c) Interaction with the customers
- d) Regular reviews



4.3 Quality Policy

Top management of PHHL has formulated quality policy given at Appendix 'C'
The policy:

- a) Is appropriate to the purpose of the organization
- b) Includes a commitment to comply with requirements and continually improve the effectiveness of the quality managment system.
- c) Provides a framework for establishing and reviewing quality objectives
- d) Is communicated and understood within organization
- e) Is reviewed for continual suitability during Management Review Meetings.

4.4 Planning

4.4.1 Quality Objectives


Top management has established corporate quality objectives, given in Appendix 'C' to deploy these objectives down the line; departmental objectives have been formulated, which are deployed at relevant levels within the departments.

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4.4.2 Quality Management System Planning

Top management ensures that

- a) The planning of the quality management system has been carried out in order to meet the requirements of QMS given in para4.1 of the manual as well as the quality objectives.
- b) The integrity of the quality management system is maintained when changes to the system are planned and implemented.

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4.5 Responsibility, Authority and Communication

4.5.1 Responsibility & Authority

Top management has defined responsibilities of various functions in Appendix 'D'. The responsibility and authority of various functionaries in each department are however defined in the respective Department Manuals. These have been communicated within organization.

The organization structure of PHHL relating to QMS is shown in Appendix 'D'. The respective GMs decide the organization stricture at the regional level in detail.

4.5.2 Management Representative

Top management of PHHL has appointed a member of management who, irrespective of other responsibilities, has responsibility and authority that includes:

- a) Ensuring that processes needed for the quality management system are established , implemented and maintained.
- b) Reporting to top management on the performance of the quality management system and any need for improvement, and
- c) Ensuring the promotion of awareness of customer requirements throughout the organization
- d) Liaison with external agencies on the matters relating to QMS.

4.5.3 Internal Communication

Top management has ensured that the following communication processes are established within organization so that communication takes place regarding the effectiveness of the quality management system.

- a) Adequate Documentation



- b) Intra and Internal departmental meetings and reviews.
- c) Telephone network
- d) Captive V-Sat Communication system
- e) Personal visits
- f) Fax
- g) E-mail
- h) Website
- i) Correspondence

4.6 Management Review

4.6.1 General


Top management reviews the quality management system, minimum twice a year to ensure its continuing suitability adequacy and effectiveness. This review includes assessing opportunities for the improvement and the need for changes to the quality management system, including the quality policy and quality objectives.

MR issues records of management reviews in the form of minutes of the meeting.

4.6.2 Review Input

The input to management review includes information on

- a) Follow-up actions from previous management reviews
- b) Result of audits
- c) Status of preventive and corrective actions
- d) Customer feedback
- e) Process performance and product conformity
- f) Recommendations for improvement
- g) Changes that could affect the Quality Management System.

PAWAN HANS HELICOPTERS LTD. 	QUALITY MANUAL CHAPTER 5 :- MANAGMENT RESPONSILIBILITY
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4.6.3 Review Output

The output from the management review includes decisions and actions related to :


- a) Improvement of the effectiveness of the quality management system and its processes
- b) Improvement of product related to customer requirements
- c) Resource needs

4.7 Reference

- a) ISO 9001:2000 Clause 5.1, 5.2, 5.3,5.4,5.5,5.6
- b) Appendix 'C' Quality Policy and Objectives
- c) Appendix 'D' responsibility and Authority
- d) Departmental manuals

4.8 Records

Management Review Meeting Minutes

PAWAN HANS HELICOPTERS LTD. 	QUALITY MANUAL CHAPTER 5 :- MANAGMENT RESPONSILIBILITY
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Appendix 'D'

Chairman and Managing Director (CMD)

He's the chief of the company and is directly responsible to the Board of Directors. He is responsible for all the activities of the company, including personnel management, planning & project implementation. Development of business plans and effective deployment of helicopter fleet is the constant concern of CMD. He is the chairman of the Quality Council and ensures evaluation of Quality System through Management Reviews.

Western / Northern Region

General Manager

He is overall in-charge of all activities of the Region including

- a) Organizing offshore and on-shore bases requires
- b) Optimum use of resources (helicopter, manpower and facilities and exercising cost control)
- c) Co-ordination and supervision of various departments of the region such as Operation, Engineering, Finance, Personnel and administration etc.
- d) Implementing an effective flight safety program.
- e) Interaction with customers to achieve high customer satisfaction.

He ensures implementation of quality assurance system in the various departments/ work areas of the region and evaluates its effectiveness through quality council/regional quality committee (member of QC at CO and chairman of Quality committee of the region)



HODs

Plan monitor and ensure effective utilization of all resources to achieve the objectives set for various functions.

Functional Responsibilities

Operations

- Accountable for flying operations of all helicopters, including their optimum deployment flight safety, evolving and implementing operational policies / strategies and planning for the future business growth of the company.
- Ensure that all flying operations in the company are done as per laid down standards Monitor and control operational activities and ensure that all pilots are trained and checked as per policy of DGCA
- Ensure that all air safety requirements are met during helicopter operations as per laid Down standards of DGCA
- Monitors and reviews accident /incident investigation and initiatives preventive and corrective action.
- Ensure implementation of quality assurance system in the company pertaining to operational department and evaluates its effectiveness through management reviews (Member of Quality Council)

Human Resource Department

- Responsible to create a corporate culture, for self-motivation of employees implement progressive policies and establish harmonious industrial relations in the company.



- Manpower planning, recruitment, manpower development, performance appraisal and compliance to statutory provisions.
- Responsible for career planning, development promotion and training of personnel in the company including liaison/interaction with various training institutes for organizing training personnel on HRD
- Ensure implementation of quality assurance system in the company pertaining to personnel & HRD department and evaluates its effectiveness through management reviews (member of quality council)

Engineering

- Accountable for all engineering activities including ensuring optimum serviceability/availability of helicopters.
- Responsible for maintenance management of Dauphin & cheatak / cheetah bell, Mi-72, Ecureuil & Robinson helicopter in the company.
- Formulation of policy/procedures, liaison with DGCA/ manufactures of Dauphin helicopter
- Ensure high serviceability /availability of helicopters
- Planning /ensuring availability of spares etc, evolving and implementing sound engineering projects/ strategies.
- Planning for future growth/ modernization of helicopter maintenance facility.
- Responsible for manpower planning, induction, training, licensing of technical personnel in the company.
- Liaise with DGCA and other govt. depts. for maintenance policy/procedures.
- Ensure department and evaluates effectiveness through management reviews.(member of quality council)



F & A

Formulation and implementation of progressive financial policies in the company including all aspects of accounting, budgeting, costing, tax planning, working capital management etc.

Ensure implementation of quality assurance system in the company pertaining to F&A department and evaluates its effectiveness through management reviews (member of quality council)

Marketing

- Responsible for all marketing and commercial activities of the company including planning public relations and parliamentary queries
- Implementation of dynamic, profit making, marketing, and sales strategies, customer deployment, negotiation for lease/charter rates and payments ad sales promotion.
- Prepare annual 5 year plans and co-ordinates answers to parliamentary questions. PR and advertising campaign
- Ensure implementation of quality assurance system in the company pertaining M&P department and evaluates its effectiveness through management reviews (member of quality council)

Material

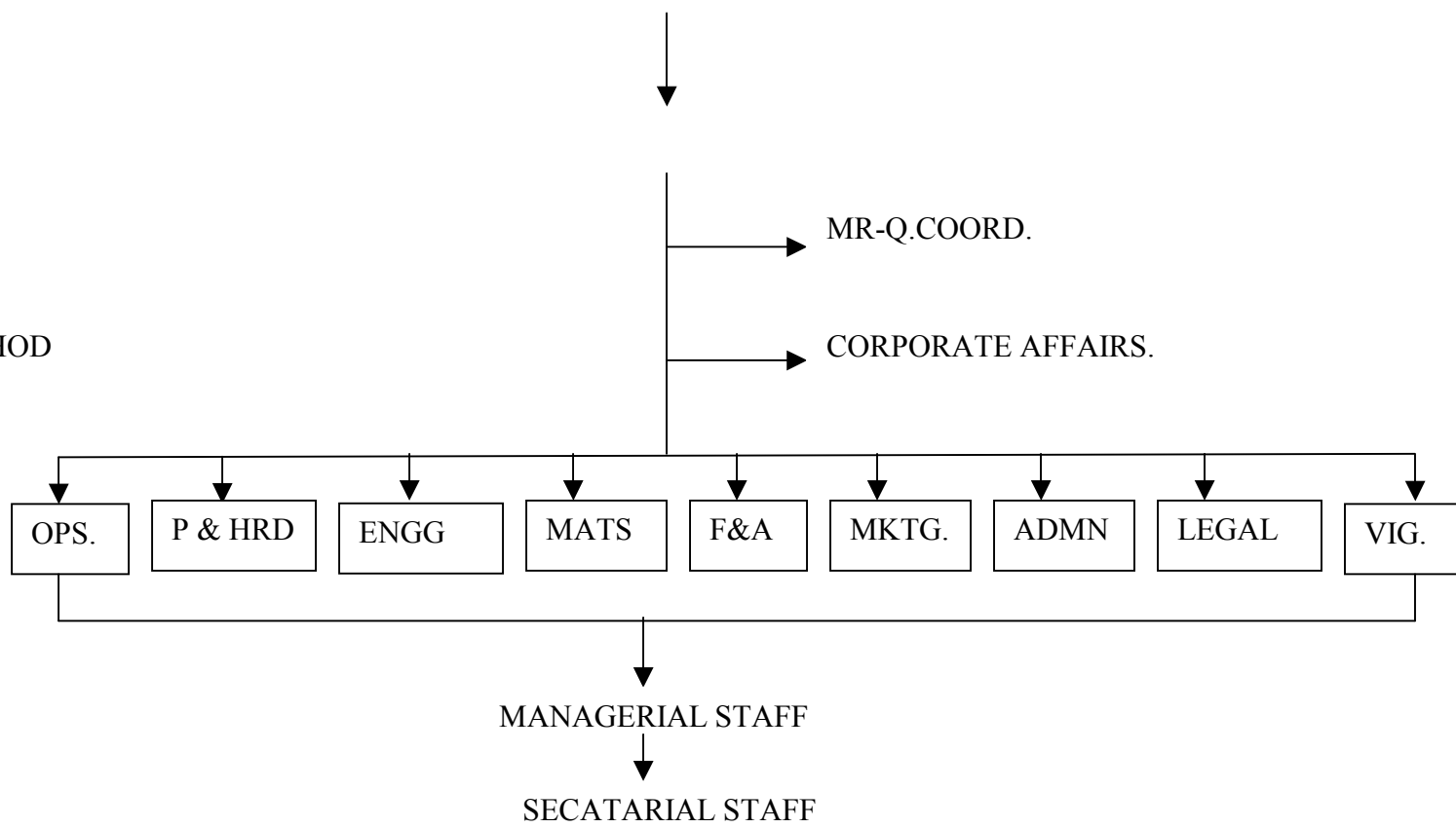
- Responsible for product support and arranging spares at economical costs for different types of helicopter of the company
- Laying down guidelines on all aspects of inventory control and material management
- Over seeding and monitoring the functioning of material depts. at the regions

ORGANISATION STRUCTURE OF PHL : CORPORATE OFFICE

BOARD OF DIRECTORS

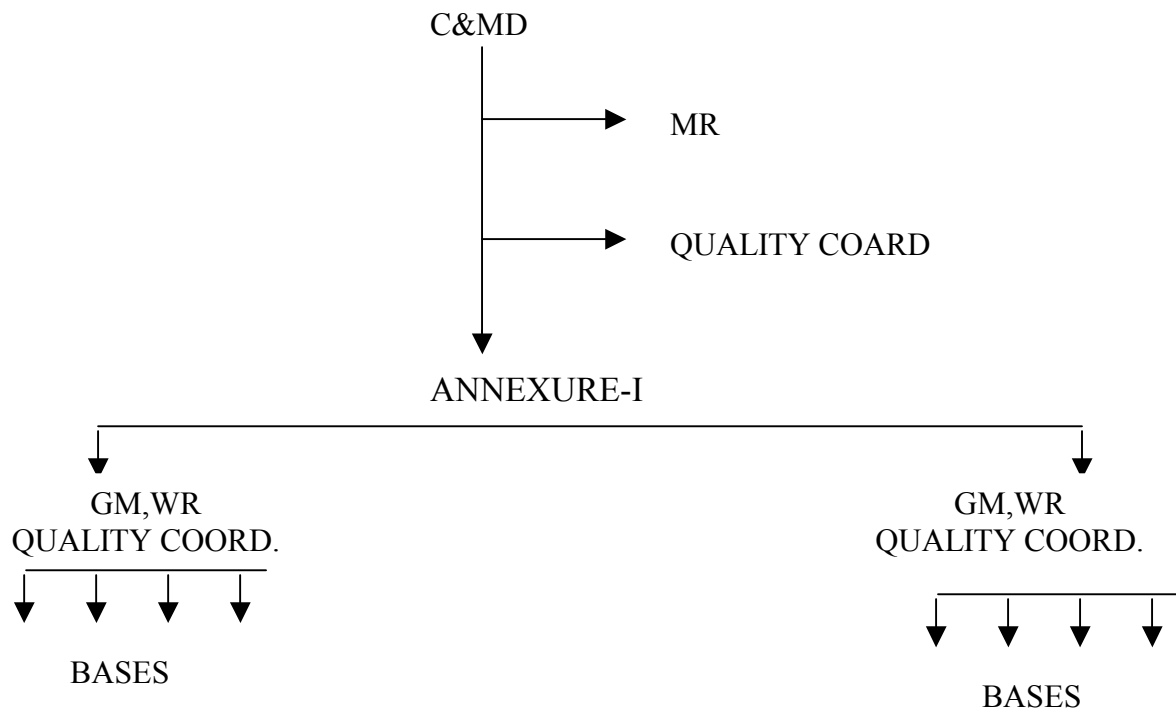
CMD


HOD



ANNEXURE-I

QUALITY MANUAL ORGANISATION STRUCTURE OF PPHL : OPREATION LINKAGE RELATED TO QUALITY ASSURANCE SYSTEM



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5.0 RESOURCE MANAGEMENT

5.1 PROVISION OF RESOURCES

PHHL HAS DETERMINED AND PROVIDED THE RESOURCES NEEDED TO:

- a) Implement and maintain the QMS and continually improve its effectiveness.
- b) Enhance customer satisfaction by meeting customer requirements.

5.2 Human Resources

5.2.1 General


PHHL ensures that personnel performing work affecting product quality are competent on the basis of appropriate education, training, skills and experience through-

- a) Departmental Manual "Personnel Policies & Rules:" chapter 2
Recruitment, promotion and transfer policy.
- b) Departmental manual : engineering
- c) Ops manual

6.2.2 Competence, Awareness and Training

- a) PHHL has determined the necessary competence for personnel performing work affecting product quality vide chapter 2"Personnel Policies & Rules, supported by Ops and engineering manuals.

- b) Providing training or take actions to satisfy the identified training needs as per the above. Pers depts. organize general training; job related training is organized within the concerned departments.
- c) The HODs/ regularity authority evaluates effectiveness of the actions taken. Training sponsored by HRD department to put side agency is evaluated by feedback given by the trainees. Incase any retraining is considered necessary, the case is referred to Pers Depts. for general training

PAWAN HANS HELICOPTERS LTD. 	QUALITY MANUAL CHAPTER 6 :- RESOURCE MANAGMENT
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d) PHHL ensures that personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of the quality objectives through

- I. Documentation
- II. Interaction
- III. Monitoring
- IV. training

e) Records of education, training, skills and experience are maintained as

- I. Individual personnel files
- II. Trainer register maintained by personnel department at CO
- III. Trg record mentioned in departmental manuals


6.3 Infrastructure

6.3.1 Infrastructure needed to achieve conformity to product requirements includes:

- a) Buildings, hangar age, workspace
- b) Associate Utilities
- c) Workshop Facilities
- d) Ground department
- e) Helicopter maintenance and repair facilities.
- f) Logistic support such as transport, communication, medical, fire fighting, security, etc.

6.3.2 Five year plans are prepared by F&A to determine the infrastructure requirements based on projections made by various departments. The plans are approved by the BOD. These plans form the basis for infrastructure to be provided every year. The infrastructure is maintained as under

- a) Engineering departments: Helicopter, ground equipment and machinery
- b) Admin department: Civil works and connected utilities and logistics such as transport, communication equipment, computers, A/c.

PAWAN HANS HELICOPTERS LTD. 	QUALITY MANUAL CHAPTER 6 :- RESOURCE MANAGMENT
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5.3 Work Environment

6.4.1 PHHL has determined the work environment needed to achieve conformity to product requirements. This includes

- safety both in air and on ground
- protective equipment
- other aspects such as adequate lightning, cleanliness, ventilation temperature and humidity control where required

6.4.2 Respective departments manage their work environment with the support of admin, where necessary

Reference

- e) ISO 9001:2000 Clause 6.1, 6.2, 6.3,6.4
- f) Pers policy and rules
- g) Ops manual
- h) Engg. manuals

Records

Training record Pers files



6.0 Product realization

6.1 Planning of Product realization

6.1.1 PHHL undertakes flying operation and maintenance of helicopter /components for its customers.

6.1.2 Planning and development of the processes needed to make available these services are undertaken by the operation and engineering departments as require. Whenever new types of helicopters are inducted or additional maintenance facilities are added. For long term contracts of existing fleet /facilities, or when a new base is started, Mktg carries out the planning in consultation with Engg/ops and any other departments as applicable. It is ensured that these processes are consistent with the requirements of the other processes of the QMS. The following are determined, as appropriate, during planning:-

- A) Quality objectives and requirements for providing the services
- B) The need to establish processes documents and provides resource specific to these service.
- C) Required verification, validation, monitoring, inspection and test activities specific to the product and he criteria for product acceptance.
- D) Records needed to provide evidence that the realization processes and resulting product meet requirements.

6.1.3 The output of the planning is in a form suitable for the PHHL's method of operations.

6.2 Customer Related Processes

6.2.1 Determination of requirements related to the product



- a) Requirements specified by the customer, including the requirements for delivery and post delivery activities are determined by M&P department
- b) Requirements not stated by the customer but necessary for specified or intended use, where known are determined by M&P depts. and / or Ops and Engg.
- c) The respective department determines statutory and regulatory requirements related to the product
- d) Any additional requirements are determined, if any, by the respective department.

6.2.2 Review of requirement related to the product

7.2.1 All proposals (tenders) are reviewed before submission to customers. All contracts (orders) placed on the company by any means i.e. verbal or written, are reviewed before acceptance to ensure that:

- a) Product requirements are defined
- b) Contract or order requirements differing from those previously expressed are resolved.
- c) PHHL has the ability to meet the defined requirements.

7.2.2.2 Records of the result of the review and actions arising from the review are maintained by the marketing department (refer marketing manual)

7.2.2.3 Where the customer provides no documented statement of requirement, the customer requirements are confirmed by marketing department before acceptance.

7.2.2.4 Where product requirements are changed, marketing departments ensures that relevant documents are amended and the relevant personnel are made aware of the changed requirements (refer marketing manual)



7.2.3 Customer Communication

PHHL has determined and implemented effective arrangements for communicating with customers in relation to

- a) Product information
- b) Enquires, contract or order handling, including amendments and
- c) Customer feedback, including customer complaints (refer marketing manual)

7.3 Design and Development Not included since excluded (refer chapter 1)

7.4 Purchasing

7.4.1 Purchasing purposes

7.4.1.1 PHHL has ensured that purchased product including helicopter, spares, consumables; fuels and services conform to specified purchase requirements. Marketing department is responsible for the purchase of the helicopter, material department for the purchasing all the remaining items, the type and extent of control applied to the supplier and the purchased product is dependent upon the effect of the purchased product on subsequent product realization or the final product.

7.4.1.2 PHHL evaluates and selects suppliers based on their ability to supply product in accordance with PHHL's requirements. Criteria for selection, evaluation and re-valuation are established. Records of the results of evaluation and any necessary actions arising from the evaluation are maintained. (refer marketing manual and materials manuals)



7.4.2 Purchasing information

7.4.2.1 Purchasing information describe the product to be purchased, including where appropriate

- a) Requirements for approval of product, procedures, processes and equipment
- b) Requirement for qualification of personnel
- c) Quality management system requirements

7.4.2.2 PHL ensures the adequacy of specified purchase requirements prior to their communications to the supplier. (refer marketing manual and materials manuals)

7.4.3 Verification of purchased product

7.4.3.1 Inspection or other activities necessary for ensuring that purchased product meets specified purchase requirements are carried out under arrangements of the purchasing departments concerned. Where PHHL or its customer intends to perform verification at the supplier's premises, PHHL states the intended verification arrangements and methods of product release in the purchasing information. (refer marketing manual and materials manuals)

7.5 Service Provision

7.5.1 Control of production and service provision

PHHL undertakes helicopter operations and maintenance of helicopter/ components OPS and Engg department plan and carry out service provision under controlled conditions including as applicable.



- a) Availability of information that describes the characteristics of the services.
- b) Availability of work instructions, as necessary
- c) Use of suitable equipment
- d) Availability and use of monitoring and measuring devices
- e) Implementation of monitoring and measurement
- f) Implementation of release, delivery and post delivery activities (refer ops and Engg depts. manual)

7.5.2 Validation of processes for service provision

PHHL is using well-established processes, which stand already validated. Whenever any new process are introduced where the resulting output cannot be verified by subsequent monitoring or measurement which include any processes where deficiencies become apparent only after the product is in use or the service has been delivered these will be validated to demonstrate the ability of these processes to achieve planned results.

Arrangements for such processes include, as applicable

- a) Defined criteria for review and approval of the processes
- b) Approval of equipment and qualification of personnel
- c) Use of specific methods and procedures,
- d) Requirements for records
- e) Revalidation

7.5.3 Identification and Traceability

Where appropriate, Engg & ops department identify product by suitable means throughout product realization



Engg & ops department also identify the product status with respect to monitoring and measurement requirements.

Where traceability is a requirement, these departments control, and record the unique identification of the product. (Refer ops manual, material, and Engg manual)

7.5.4 Customer Property

Engg & ops care with customer property while it is under their control or being used by the PHHL. They identify, verify, protect and safeguard customer property provided for use or incorporation w\into the product. If any customer property is lost, damaged or otherwise found to unsuitable for use, they report this to customer and records maintained (refer mats manual)

7.5.5 Preservation of product

Engg department preserves the conformity of product during internal processing and delivery to the intended destination, this preservation includes identification, handling, packaging, storage and protection. Preservation also applies to the constituent parts of a product (refer ops manual, and Engg manual)

7.6 Control of monitoring and measuring devices

7.6.1 PHHL determines the monitoring and measurement to be undertaken at the monitoring and measuring devise needed to provide evidence of conformity of product to determined requirements.



7.6.2 PHHL establishes processes to ensure that monitoring and measurement can be carried out in a manner that is consistent with the monitoring and measurement requirements

7.6.3 Where necessary to ensure valid results, measuring equipment is :

- a) Calibrated or verified at specified intervals, or prior to use against measurement standards traceable to international or national measurement standards, where no such standards exist, the basis used for calibration or verification is recorded
- b) Adjusted or re-adjusted as necessary
- c) Identified to enable the calibration status to be determined
- d) Safeguarded from adjustments that would invalidate the measurement result
- e) Protected from damage and deterioration during handling, maintenance and storage

7.6.4 In addition, PHHL assesses and records the validity of the previous measuring results when the equipment is found not to confirm the requirements. PHHL takes appropriate action on the equipment and any product affected. Records of the results calibration and verification are maintained

7.6.5 When used in monitoring and measurement of specified requirements, the ability of computer software to satisfy the intended application is confirmed. This is undertaken prior to initial use and reconfirmed as necessary (refer Mats, Engg manual)

7.7 Reference

- a) ISO 9001:2000 clauses 7.1, 7.2, 7.4, 7.5, 7.6
- b) Departmental manuals marketing Engg Mats and ops



8.1.1 PHHL plans and implements the monitoring measurement, analysis and improvement processes needed

- A) To demonstrate conformity of the product
- B) To ensure conformity of the quality management system
- C) To continually improve the effectiveness of the quality management system

8.1.2 This includes determination of applicable methods, including statistical techniques and extent of their use

8.2 Monitoring and Measurement

8.2.1 Customer satisfaction


PHHL believes that customer is supreme and its very existence depends upon achieving the highest customer satisfaction. PHHL monitors information relating to customer perception as to how far it has met their requirements. The methods for obtaining and using this information are laid down in the marketing manual.

8.2.2 Internal Audit: Procedure

8.2.2.1 Internal audits are conducted twice annually to determine whether QMS:

- a) Conforms to the planned arrangements as per the requirements of ISO 9001-2000 and to the QMS.
- b) Is effectively implemented and maintained

8.2.2.2 More details are given in the internal audits procedure contained in Part II of this manual

PAWAN HANS HELICOPTERS LTD. 	<p style="text-align: center;">QUALITY MANUAL</p> <p style="text-align: center;">CHAPTER 8 :- MEASUREMENT ANALYSIS AND IMPROVEMENT</p>
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8.2.3 Monitoring and measurement of processes

The respective process owners carry out monitoring and measurement of QMS processes. They ensure that the methods used demonstrate the ability of the processes to achieve planned results. When the planned results are not achieved, appropriate corrective and preventive actions are taken, to ensure conformity of the product.

8.2.4 Monitoring and measurement of product

8.2.4.1 Ops and Engg departments monitor and measure the characteristics of their respective product to verify that product requirements have been met. This is carried out at appropriate stages of the product realization processes in accordance with the planned arrangements.

8.2.4.2 Evidence of conformity with the acceptance criteria is maintained. Records indicate the person(s) authoring release of product

8.2.4.3 Product release and service delivery does not proceed until the planned arrangements have been satisfactorily completed, unless, otherwise approved by a relevant authority and, where applicable, by the customer. (refer Ops/Engg manual)

8.3 Control of Non-conforming product

8.3.1 PHHL ensures that the product which does not conform to product requirements is identified and controlled to prevent its un-intended use or delivery. The controls and related responsibilities and authorities for dealing with non-conforming product are defined in respective Dept. manuals.



8.3.2 Non-conforming products are dealt with by one or more of the following ways:

- A) By taking action to eliminate the detected nonconformity
- B) By authorizing its se, release or acceptance under concession by a relevant authority given in dept. manual
- C) By taking action to preclude its original intended use or application

8.3.3 Records of the nature of non-conformities and any subsequent actions taken, including concessions obtained are maintained (refer Ops/Engg/mats manual)

8.3.4 When con-conforming product is corrected, it is subjected to re-verification to demonstrate conformity to the requirements.

8.3.5 When non-conforming product is detected after delivery or use has started, PHHL takes action appropriate to the effects, or potential effects of the non-conforming

8.3.6 More details are given in the control of non-conforming products procedure contained in Part II of this manual.

8.4 Analysis of Data

8.4.1 Every dept. determines, collects and analyses appropriate data to demonstrate the suitability and effectiveness of the quality management system and to evaluate where continual improvement of the effectiveness of the quality management system can be made. This includes data generated as a result of monitoring and measurement and from other relevant sources.



8.4.2 The analysis of data provides information relating to

- A) Customer satisfaction
- B) Conformity to product requirements
- C) Characteristics and trends of processes and products including opportunities for preventive action
- D) Suppliers (refer dept manuals)

8.5 Improvement

8.5.1 Continual Improvement

PHHL continually improves the effectiveness of the quality management system through the use of the quality policy, quality objectives, audit results, analysis of data, corrective and preventive action and management review.

8.5.2 Corrective Action

8.5.2.1 Every dept. initiates CAF, F852-01 with a copy to QCoord for non-conformity detected and takes action to eliminate the cause of non-conformities in order to prevent recurrence. CAF are raised for major system NCs or improvements and all customer complaints. These may not be raised for minor deficiency observed in meeting the product or process requirements, which are not recurring nature and are rectified with correction. Major non-conformities are related back to procedures, systems standard or persistent deviation from agreed quality data standards. Corrective actions are appropriate to the effects of non-conformities encountered.



8.5.2.2 The following requirements are fulfilled as under

a) Reviewing nonconformities (including customer complaints) :

MR, Q-Coord, audite, the person responsible for activity, is to review the CAF. They are to take the inter-departmental help, whenever required, in proposing and undertaking corrective and preventive action.

b) Determining the causes of nonconformities.

After review of the observed or potential non-conformance or improvement/suggestion or complaint, the reviewer analyses and determines the root cause of the problem, which is recorded in CAF action in section 4 of the CAF. A copy of CAF is passed to the initiator and q-cord/MR.

c) Evaluating the need for action to ensure that nonconformities do not recur

The possible actions options available for eliminating of root cause are evaluated by the concerned previous to ensure that the selected action the NC, do not secure.

d) Determining and implementing action needed

The corrective action, which is most effective, is determined and implemented by the person nominated in CAF.

e) Records of the results of action taken

The results of the corrective action are monitored and if possible measured and recorded in CAF.



f) Reviewing corrective actions taken

The results of the CA tasks are received to determine how far the planned results have been achieved in eliminating inn identified root cause.

8.5.2.3 More details are given in corrective action procedure contained in Part II of this manual.

8.5.3 Preventive action

8.5.3.1 Every dept. determines the potential NCs and action required to eliminate these in order to prevent their occurrence. Preventive actions are appropriate to the effects of the potential problems

8.5.3.2 The following requirements are fulfilled as under

- a) Documented procedure established to define requirements for
- b) Determining potential non conformities and their causes
- c) Evaluating the need for action to prevent occurrence of nonconformities
- d) Determining and implementing actions needed
- e) Record of actions taken
- f) Reviewing preventive actions taken

8.5.3.3 More details are given in corrective action procedure contained in Part II of this manual.

Reference

- a) ISO 9001:2000 clauses 8.1,8.2, 8.3, 8.4, 8.5
- b) Internal Audit procedure
- c) Control of Non-conforming product procedure
- d) Corrective action
- e) Preventive action procedure

QUALITY SYSTEM PROCEDURE



PURPOSE

- 1 The purpose of this procedure is to provide a uniform and consistent method for control and handling of quality management system documents.

SCOPE

2.0 This procedure is applicable to all documents including external documents relating to quality management system of PHL. Documents include but are not limited to the following

Internal Documents

Quality manual
Departmental manuals
Standard Operating Procedures
Forms/format

Manual for base
Operational manual
Quality control manual

External Documents

Aircraft manual (India)
AIP (India)
AICs
Air Safety Circulars
DGCA –CARs
Helicopter maintained
Flight manual
ISO-9001:2000 standard

RESPONSIBILITY

3.0 MR IS RESPONSIBLE TO CONTROL QUALITY MANUAL (QM), AND INTERNATIONAL STANDARD (ISO: 9001-2000).



3.1 HODs at Co and regions are responsible for their departmental manuals and other documents relation to their areas of functioning.

3.2 Quality control manger (QCM) at each region is responsible for control of quality control manuals and external documents like DGCA (CARs), Helicopter flight and maintenance manual, etc.

PROCEDURE

4.0 Internal Documents

4.1 All documents have a unique identity by appropriate names.

4.2 All documents generated by PHL are approved for adequacy by CMD/Functional Heads/HODs, as the case may be, before issue, indicated by affixing signatures in the approval/amendments sheet, placed at the beginning of the document.

4.3 Revised documents are subjected to same approvals and controls as the original documents.

4.4 The documents are reviewed and updated as and when it becomes necessary due to major changes taking place in the QMS.

4.5 Any employee having need for new documentation or changes to existing documentation can report this to controlling authority through his HOD. All such requests are to be made in writing on internal office memo (IOM)/application on plain paper. If the request is not accepted, the IOM/application is to be returned to the initiator along with reason (s) for non-acceptance.

4.6 corrective action form (CAF) can also be used to identify the need for new documents or changes to existing documents.



4.7 Changes made in a document are issued in the form of loose replacement page (s)

4.8 The text affected by the recent change is identify by italics or a vertical bar near the right hand margin, if italicized text is revised.

4.9 The current revision status is indicated in the approval/amendment sheet.

4.10 The documents are controlled by:

- * Identifying recipients in the distribution list
- * Giving distinct copy numbers
- * Obtaining signatures or recipients

4.11 The recipients are responsible to ensure that relevant versions of applicable documents are available at points of use.

4.12 Authorities mentioned in Para 3.0 to 3.2 maintain a master list of current revision of documents of their responsibility. The master list is maintained as per the Form (attached).

4.13 It is the responsibility of document holders/recipients to ensure that the documents remain legible and readily identifiable as mentioned in the master list. In case a document becomes illegible for any reason, a fresh legible copy is obtained from the concerned authority (Ref Para 3.0 to 3.2) and illegible copy is destroyed by the user.

4.14 It is responsibility of the holder not to use super-seeded documents.

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QUALITY MANUAL

CHAPTER 9 :- DOCUMENT CONTROL

4.15 Superseded documents are destroyed by the copy holder, unless otherwise specified by the concerned authority

4.16 One copy of the Superseded document is maintained in the file by concerned authority for future reference and stamped as superseded.

4.17 Documents stored in electronic form are controlled by access code. Only the authorized personnel with their pass word are allowed to make changes to document. Others can access the documents for read only. Authorizers maintain a back up copy of each of the document.

5. Documents of external origin

5.1 Documents of external origin are identified by their title or number as the case may be and issue number, where applicable. Their distribution is controlled by authorities as mentioned in Para 3.0 to 3.2

REFERENCES

6.0 Quality manual, Chapter 4.2.3.

RECORDS

7.1 Master list of documents.

MASTER LIST OF DOCUMENTS

Part I : Internal Documents

PAGE----- OF-----

Document/Form No. (Where Applicable)	REV No.	Documents Description	Approved By	Date of Approval	Remarks

Part II: External Documents

Document No. (Where Applicable)	Rev No.	Document Description	Received	Date Received	Remarks

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QUALITY SYSTEM PROCEDURE

CHAPTER 9 :- CONTROL OF NON-CONFORMING PRODUCT: HELICOPTER OPERATIONS

PURPOSE

1.0 The purpose of this procedure is to provide a uniform and consistent procedure for handling non-conformances during helicopter operations.

SCOPE

2.0 This procedure is applicable to all non-conformances encountered during helicopter operation.

RESPONSIBILITY

3.0 PIC/base manager at detachment/Base is responsible for control of all NCs in helicopter operation.

3.1 DGM (O)/GM (region) is responsible for control of NCs at the corporate level.

PROCEDURE

4.0 Types of Non-conformances

4.1 Normal types of non-conformities encountered in helicopter operations are:

- (a) Delay in take-off/departure.
- (b) Cancellation of flight.
- (C) Diversion of light.

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QUALITY SYSTEM PROCEDURE

CHAPTER 10 :- CONTROL OF NON-CONFORMING PRODUCT: HELICOPTER OPERATIONS

- (d) Emergency reaction time not adhered to
- (E) Discomfort in flight
- (f) Special arrangements/services for customer in-adequately provided.
- (g) Accident/incident in flight.
- (H) Flying task not met.

5.0 IDENTIFICATION

5.1 Non-conformities (NCs) during helicopter operation are identified by PIC/Crew or customer or regulatory body i.e. DGCA.

5.2 Identification of NCs is done before commencement of flight. Or during flight, or post flight

6.0 DOCUMENTATION

6.1 Non-conformities in helicopter operations are documented in the concerned helicopter document (JLB, PDR, Manifest etc) Pilots feedback report, Customer feedback report, ATC records, as the case may be.

7.0 EVALUATION/Review

7.1 Evaluation/Review of non-conformities is done by DGM (O) at the region and by base manager (detachment operation) at bases.



PURPOSE

1.0 The purpose of this procedure is to provide a uniform and consistent method for identification storage, protection, retrieval, retention time and disposition of quality records.

SCOPE

2.0 This procedure is applicable to all quality system related records.

RESPONSIBILITY

3.0 The personnel responsible for controlling various quality records are nominated in the index of records as per format (Attached).

PROCEDURE

4.0 IDENTIFICATION

Quality records are identified by name or description or number, wherever applicable. A few examples are:

- (i) “Contract of helicopter operation between PHL and Govt. of Punjab”
- (ii) “Purchase order-Dauphin spares”
- (iii) “Airframe log book /engine log book”

5.0 REVIEW and ACCEPTANCE

5.1 All quality records including sub contractor supplied records are reviewed by the nominated personnel (as indicated in index of records) for completeness and accuracy before acceptance.

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QUALITY SYSTEM PROCEDURE

CHAPTER 9 :- CONTROL OF NON-CONFORMING PRODUCT: HELICOPTER OPERATIONS

6.0 PROTECTION and STORAGE

6.1 For major job (Helicopter operation, repair/Overhaul of products), separate job-wise file to be opened and all services/product related quality records are filed in the appropriate job-file. All system related quality records are, however, filed in general life.

6.2 For small jobs or regular job under long term contract, customer orders, and delivery details are filed under respective customer name.

6.3 All records are filed in suitable folder/files.

6.4 All quality records are stored in filing cabinet when not in use

7.0 RETENTION TIME

7.1 Retention time indicated in the index of records is based on legal/utility requirements.

7.2 At the end of nominated retention period, the records in store room/filing cabinet are destroyed as per methods indicated in index of records.

7.3 Document may be stored in the form of electronic data (Computer discs) with proper backup.

REFERENCES

7.0 Quality manual chapter 4.2.4

RECORD

8.0 Index of records format.



PURPOSE

1.0 The purpose of this procedure is to establish a uniform and consistent method for internal audit of the quality management system. The internal audit is to be carried out to evaluate and verify that:

- (a) All quality activities comply with planned
- (b) The quality system is effective; and
- (c) Corrective and preventive actions are implemented and are effective.

SCOPE

2.0 This procedure is applicable to all internal audits carried out by PHL. All quality system elements applicable to ISO 9001:200 are to be audited for compliance as per this procedure.

RESPONSIBILITY

3.0 It is the responsibility of the auditor to conduct the audit and report the results as per this procedure

3.1 HODs in corporate office and general managers in the regions are responsible to ensure that full co-operation and facilities are provided.

3.2 HODs and MR/Q-cord are responsible for implementing the corrective action in the areas of their control.



PROCEDURE

4.0 AUDIT SCHEDULE AND FREQUENCY

4.1 Audits are scheduled by MR on the basis of the status and importance of the processors, areas to be audited and previous audit findings.

4.2 audits are to be performed regularly and the interval between audits of any particular system element is not to exceed six months.

4.3 Additional audits may be carried out at the discretion of CMD or MR.

5.0 PLANNING OF AUDIT

Based on the schedule, Q cords plan the audit defining the audit criteria and scope.

5.1 The auditors are selected and assigned to ensure, objectivity of the audit process, so that no one audits his own work.

5.2 Auditor is responsible for planning and reporting the audit results in accordance with the procedure

5.3 Non-conformances observed are reported on CAF

5.4 The auditor hands over a copy each of the CAFs raised to the auditee and the Q- cord.



5.5 Q-cord prepares a summary of the audit as per form F/8.2.2-01

6.0 FOLLOW UP OF AUDIT

6.1 The auditee is to respond to all the NCs raised with proposed corrective action and target dates of implementation normally within 10 working days.

6.2 The auditor or the person nominated by Q. Cord is to undertake necessary review and or follow-up visit to verify implementation of effectiveness of corrective action. If found satisfactory, the CAFs are to be closed out; if unsatisfactory, a review date is decided mutually between the auditee and the auditor and fresh follow up is carried out till the corrective action is found satisfactory.

7.0 MONITORING by MR

7.1 All outstanding CAFs are reviewed by Q. Cord as regions/CO. CAF summary is forwarded to MR as and when requested by him.

REFERENCES

8.0 QM – Chapter 4.2.2

RECORDS

9.0 Audit Summary F/8.2.2-01

9.1 Corrective action and preventive action report F/8.5.2-01

9.2 CAF Summary F/8.2.2-02

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QUALITY SYSTEM PROCEDURE

CHAPTER 13 :- CONTROL OF NON-CONFORMING PRODUCT: HELICOPTER MAINTENANCE

PURPOSE

1.0 The Purpose of this procedure is to provide a uniform and consistent system so that all non-conformities noticed during maintenance of helicopters; ground support equipment and receipt inspection of spares are identified and controlled to prevent their unintended use or delivery.

SCOPE

2.0 This procedure is applicable to the following:

- (a) Helicopter spares including, engines, component, rotables, consumable ad ground support equipments etc received from the manufacturer/vendor/supplier.
- (b) Non-conformities (NCs) observed/detected by pilot/AME during test flights/normal flights after maintenance of the helicopter.

RESPONSIBILITY

3.0 Manager (line maint)/manager (major maint)/ AME are region/ Base is responsible for control o NCs observed/detected in helicopter maintenance during test flight as well as during normal \flights of operation (pre-flight, in-flight, post-flight).

3.1 DGM (Engg)/QCM is the final authority for disposition of NCs in consultation with DGCA.

3.2 Manager (mat)/store inspector is responsible for control of all NCs connected with helicopter spares.

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QUALITY SYSTEM PROCEDURE

CHAPTER 13 :- CONTROL OF NON-CONFORMING PRODUCT: HELICOPTER MAINTENANCE

PROCEDURE

4.0 TYPES of NON-CONFORMANCE

4.1 Normal types of non-conformities (NCs) encountered in maintenance during test flights/normal flights are:

- (a) Defects/malfunction of system during ground run.
- (b) Defects/performance deviation during test flight.
- (C) System malfunction/defects noticed during normal flight.
- (d) incident/accident due to system malfunction.

4.2 Normal types of non-conformities (NCs) observed during pre-receipt inspection of new helicopter spares are:

- (a) Incorrect/incomplete documentation
- (b) Discrepancy in quality
- (C) Discrepancy in quality/specification.

5.0 IDENTIFICATION

5.1 NCs in maintenance work during ground un/test flight/normal flight are identified by PIC/AME or by body i.e. DGCA.

5.2 NCs in spares are identified by store inspector during pre-receipt inspection in store.

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QUALITY SYSTEM PROCEDURE

CHAPTER 13 :- CONTROL OF NON-CONFORMING PRODUCT: HELICOPTER MAINTENANCE

6.0 DOCUMENTATION

6.1 All NCs observed/reported during the test flight/normal flight/ground run are documented by PIC/AME in the concerned helicopter document i.e. PDR, JLB, log book, Log card, worksheet etc.

6.2 Non-conforming spares are identified and segregated from other spares and kept in 'QUARANTINE' store and documented in the register maintained in Ma. Deptt

7.0 EVALUATION

7.1 Evaluation of NCs connected with maintenance of helicopter is done by AME/Manager (maint) and QCM, wherever required.

7.2 Evaluation of NCs connected with flying incident/accident is done by DGCA along with QCM

7.3 During evaluation of NCs analysis is carried out to ascertain the exact cause of detect/malfunction, where required.

7.4 Evaluation of NCs in helicopter spares is carried out by store-inspector with reference to purchase order/contract/release note and action is initiated with the manufacturer/ supplier through Mat dept. for corrective action.

8.0 DISPOSITION

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QUALITY SYSTEM PROCEDURE

CHAPTER 13 :- CONTROL OF NON-CONFORMING PRODUCT: HELICOPTER MAINTENANCE

8.1 All NCs connected with maintenance work are reviewed and disposed of by AME at base. At the region these are reviewed and disposed of by AME or manager (maint). In case disposition of any NCs is beyond capacity/Experience of the AME, these are referred to QCM/DGM (Engg)/GM (Engg) for disposition.

8.2 NCs. Which need evaluation and review by DGCA, are disposed off only after obtaining due clearance from DGCA.

8.3 NCs observed in helicopter spares are disposed off as under:

(A) In case documentation is in-Correct or in in-Complete, the item is 'QUARANTINED' till all clarifications are obtained and/or 'BONDED' store, if found to be 'Serviceable'

(b) If the item is not acceptable, it is returned to the manufacturer/supplier with 'Un-Serviceable' tag giving reasons for non-acceptance.

(C) In certain case, where applicable, rework may be done to bring up the item to the required standard.

REFERENCES

9.0 Quality manual chapter 8.3

9.1 Quality control manual (DGCA approved)

9.2 DGCA-CAR

9.3 helicopter maintenance & Flight manual

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QUALITY SYSTEM PROCEDURE

CHAPTER 13 :- CONTROL OF NON-CONFORMING PRODUCT: HELICOPTER MAINTENANCE

RECORDS

9.4 Pilot Defect Report.

9.5 Journey Log book.

9.6 Log book/log card/worksheet.

9.7 Defect Report

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QUALITY SYSTEM PROCEDURE

CHAPTER 14 :- CORRECTIVE AND PREVENTIVE ACTION

PURPOSE

1.0 The Purpose of this procedure is to provide a uniform and consistent method for undertaking corrective and preventive actions to eliminate the causes of actual or potential non-conformities

SCOPE

2.0 This procedure is applicable to all type of non-conformances or potential non-conformances in order to prevent their recurrence/ occurrence, as applicable

RESPONSIBILITY

3.0 Persons observing Non-conformances (NCs) during review of quality records, processes, helicopters operation, etc, raise. Corrective Action Form (CAF) as per format (attached) and issue to the Q-cord / MR where required

3.1 GM (M&P) is responsible for dealing with all customer complaints either verbal or written and is to acknowledge receipt of complaint in writing with 72 hours

PROCEDURE

4.0 Identification and recording

4.1 CAF is to be issued for major non-conformances under the following salutations:

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QUALITY SYSTEM PROCEDURE

CHAPTER 14 :- CORRECTIVE AND PREVENTIVE ACTION

- a) Non-conformances observed in the products/ services as part of regular delivery, supervision, inspection and testing
- b) Non-conformances or improvements identified during reviews of quality records, helicopters operation and processes.
- C) Non-conformances observed during internal quality audits
- d) Customer or third party complaints either verbal or written (Ref. Mktg. manual)

4.2 Major non-conformances are those which relate to lack of procedure, system, standard or persistent deviation from agreed quality standard.

4.3 Minor Non-conformances such as single instances where agreed requirements are not adhered to, genuine mistakes or deficiencies with processes limitations are to be fixed on the spot.

4.4 CAF is not required to be raised for minor Non-conformances and every little deficiency observed in implementation of system and procedures.

4.5 CAFs raised in the regions/ CO are to be copied to the Q-cord who are to co-ordinate and ensure that these are investigated and suitable corrective and preventive actions are taken. The q-cord maintain a sequential numbering system and a register for CAFs for the effective control and follow up.

4.6 The initiator of CAF is to fill in a section 1, 2, & 3 is CAF before issue to the HOD in whose area the Non-conformances has been observed.



5.0 Review, Investigation and Implementing

5.1 MR, Q-cord, auditee or the person responsible for the activity is to review the CAF depending on the nature of the NC. They are to take inter-departmental help, wherever required, in proposing and undertaking corrective action

5.2 After review and investigation of the observed or the potential non-conformance or improvement/ suggestion or complaint, the reviewer is to purpose corrective and preventive actions in section 4 of CAF. A copy of the CAF is to be passed to the Q-cord/ MR.

5.3 The purposed actions are to be implemented by the responsible person nominated in CAF. The effects of the corrective and preventive actions are to be monitored by implementing person

5.4 Changes in documents recommended in CAFs are implemented and recorded by q-cord/ MR

6.0 Follow up

6.1 follow up monitoring or other actions are undertaken by HOD concerned/MR/Q-cord or his nominated representative to verify that corrective and preventive actions are implemented and the desired goals are achieved.

6.2 CAF is signed off and closed if the corrective and preventive actions are satisfactory.



6.3 Section 5 of CAF is to be completed by auditor or MR or Q-cord or his nominated representative in case of internal audits and the HOD concerned in case of other NCs

6.4 In case where CAF has been raised for improvement, the initiator is informed of the results achieved.

7.0 Records

7.1 Records of the CAFs are to maintained by MR/HODs/Q-cords

7.2 All CAFs related to customer complaints are to be maintained by marketing.

REFRENCENCES

8.0 Quality Manual Chapters 8.5.2 & 8.5.3

RECORDS

9.0 Corrective action form (CAF)

9.1 Records of CAF

S.NO	Department	Clause no.	No. of NCs	CAF No.	Remarks
1.					
2.					
3.					
4.					
5.					
6.	Good Areas Observed				
7.	Areas Needing Focus / Improvement				

Q-cord

Date:

CORRECTIVE ACTION FORM (Including Preventive Action)

No. _____

1. Issued to _____ by _____ on _____ as a result of

☐ Internal Quality Audit No.

☐ Customer Complaint

☐ Review and Analysis of

☐ identifying an improvement

(Tick the applicable & delete the others)

2. Applicable clause of of the standard and document:

3. Description of Non-conformance or potential Non-conformance ir improvement

Signature of Initiator

Date:

Signature of Recipients

Date:

4. Corrective Action / Preventive Action (Strike out whichever is not applicable)

Purposed by :

Date:

To be implemented by:

By Date:

5. Follow up

Satisfactory

Not Satisfactory

Remarks:

Review On _____

b) Review Remarks (where required)

Signature:

Date:

FORM 8.2.2-01

SUMMARY OF INTERNAL AUDIT

CO/WR/NR

(Tick as applicable)

PART – I: AUDIT PLAN

1. Audit objective:
2. Audit criteria documents
3. Department To be audited, auditors and time plan

<u>S.NO</u>	<u>Dept.</u>	<u>Clauses</u>	<u>Auditors</u>	<u>Time</u>
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4. Distribution

Signature of Q-cord

Date:

FORM 8.2.2-02

CAF SUMMARY AS ON DATE _____

Dept.	CAF no.	NC details	Corrective and	Status	Remarks
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			preventive actions details	closed/open	

Notes:

- 1. CAFs are to be listed in chronological order commencing with the earliest one.

Signature

Date: