## INDIAN MILITARY TECHNICAL AIRWORTHINESS REQUIREMENTS FORMS

## **IMTAR FORMS**



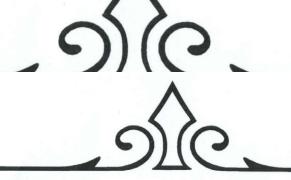
Centre for Military
Airworthiness and Certification



Directorate General of Aeronautical Quality Assurance

## MINISTRY OF DEFENCE GOVT. OF INDIA

VERSION	2.0
DATE	August 2023



## **FOREWORD**

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Complia n 2.0 shal The activities in the design, development and production of military air systems and airborne stores have so far been regulated largely by the Ministry of Defence document DDPMAS which was first released in 1975 and later revised in 2002. The current DDPMAS Version 1.0 comprising of a layered structure of Framework & Procedures, Indian Military Technical Airworthiness Requirements and Manuals was released in 2021 after a comprehensive review and restructuring to bring it in-line with the international approach.

Taking into account the expansion of military aviation technology and projects in the country and with more and more private industry participation in *Aatmanirbhar Bharat Abhiyan*, this document has been further revised to streamline and fast track certification activities imbibing the global best practices in airworthiness certification and quality assurance. DDPMAS which was the Framework & Procedure document for Indian military airworthiness has now been suitably renamed as Indian Military Airworthiness Procedure (IMAP) document. This revised & renamed IMAP-2023 document supersedes DDPMAS Version 1.0.

In line with the revised & renamed IMAP-2023 and IMTAR-21 Version 2.0, the Indian Military Technical Airworthiness Requirements (IMTAR) Forms Version 1.0 has also been revised and updated to IMTAR Forms Version 2.0. This IMTAR Forms Version 2.0 document needs to be read in conjunction with IMAP-2023 and IMTAR-21 Version 2.0 documents. This document is a part of the Manuals layer and shall facilitate the stakeholders in implementing the technical procedures and requirements leading to the issuance of airworthiness related clearances from the Technical Airworthiness Authorities.

IMTAR Forms Version 2.0 is conceived to be a live document with provision for updates. The amendments will be issued formally by the respective controlling authority i.e. CEMILAC and DGAQA.

Compliance to provisions in IMAP-2023 and technical airworthiness requirements in IMTAR-21 Version 2.0 shall be through the appropriate forms brought out in this document.

(Sanjay Chawla) DG, DGAQA

Dated: 04Aug 2023

(APVS Prasad) CE(A), CEMILAC

Dated: %Aug 2023

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#### PROCEDURE FOR AMENDMENT

All the IMTAR form have a unique number. Each form corresponds to a particular subpart, which is mentioned in the index and in the respective forms. The current version of the form is identified by IMTAR Forms Version number and date, which are inscribed at the bottom of each form.

The amendments to IMTAR Forms approved through JAC are controlled and recorded through the change in version number of the Form and Date. The amendment record sheet given below is updated after every amendment, indicating details of amendment / reason for amendment along with date.

The copy of the amendment record sheet along with the modified Forms will be made available to the stakeholders.

	Amendment Record Sheet							
Sl. No.	IMTAR Version	Form Number	Details of Amendment/ Reason for Amendment	Date of Amendment	JAC Approval Reference Number			



#### INTRODUCTION

The IMAP-2023 document is presented in a structured, coherent and a hierarchical manner, comprising of Procedure, Requirements and Manuals. The IMAP-2023 Procedure document defines roles, responsibilities and empowerment of stakeholders to address airworthiness in various scenarios and facets of the Air System and Airborne Stores life cycle. The requirements are captured in IMTAR-21 Version 2.0 document, which brings out the technical airworthiness requirements for technical airworthiness, that have to be followed to ensure airworthiness. Manuals serve to facilitate the stakeholders while implementing the requirements and seeking for necessary approvals and clearances from the airworthiness authorities. Manuals encompasses but is not limited to Forms, Templates, Airworthiness Certification Criteria, Airworthiness Circulars and Directives.

This document, IMTAR Forms is a part of the Manuals, that brings out the Forms that needs to be utilized by the stakeholder/applicant while complying to the appropriate regulations of the IMTAR-21 Version 2.0 document before seeking airworthiness clearances from the airworthiness authorities.

The Forms are mapped to the corresponding Subpart of the IMTAR-21 Version 2.0 document to facilitate traceability to the applicable requirement and its compliance. The same is also provided in Index of IMTAR Forms.

It is to be noted that IMTAR FORMS are meant to serve as guidelines, and can be adapted based on the application and nature of the Project.

IMTAR Forms document is conceived to be a live document with provisions for updates. The amendments will be issued formally by CEMILAC & DGAQA as per the Procedure for amendment.



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2.	Form – 2	Application for Maintenance Organisation Approval	V 2.0	Subpart G3, 21.G3.4
3.	Form – 2A	Application for Significant Changes or Variation of Scope and Terms of Organisation Approval	V 2.0	Subpart G3, 21.G3.4
4.	Form – 3	Maintenance Organisation Approval Certificate	V 2.0	Subpart G3, 21.G3.4
5.	Form – 4	Application for Approval of Management Personnel	V 2.0	Subpart G1, G2, G3
6.	Form – 10	Application for Airworthiness Assessment of Air system/Airborne Stores	V 2.0	Subpart B, 21. B1.4, 21. B2.5, 21. B3.5, 21. B4.4 Subpart C, 21.C1.4, 21.C1.5, 21.C2.3, 21.C2.4, 21.C3.1.4, 21.C3.1.5, 21.C4.2, 21.C4.3, 21.C6.1.2, 21.C6.1.3
7.	Form – 11A	Application for Issue of RSD	V 2.0	Subpart B, 21.B1.21, 21.B2.22, 21.B3.23, 21.B4.21
8.	Form – 12	Certificate of Design	V 2.0	Subpart B, 21.B1.15, 21.B2.16, 21.B4.14, 21. B4.18, Subpart C, 21.C1.24, 21.C1.25
9.	Form – 20	Engineering Change Note (ECN)	V 2.0	Subpart B, 21.B1.13, 21.B2.14, Subpart C 21.C1.12,21.C1.13, 21.C4.12, 21.C4.13
10.	Form – 21A	Design Criteria Form for Metallic Material / Semi-Finished Metallic Component	V 2.0	Subpart C3, 21.C3.1.9, 21.C3.1.10
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12.	Form – 21C	Design Criteria Form for Composites / Ceramic Components	V 2.0	Subpart C3, 21.C3.1.9, 21.C3.1.10
13.	Form – 21D	Design Criteria Form for Polymer / Metal Matrix Composite Brake Pads	V 2.0	Subpart C3, 21.C3.1.9, 21.C3.1.10
14.	Form – 21E	Design criteria form / input data sheet for non metallic materials and components, paints and coatings	V 2.0	Subpart C3, 21.C3.1.9, 21.C3.1.10
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19.	Form – 22C	Application / Request for Software Clearance	V 2.0	Subpart C6, 21.C6.1.17, 21.C6.1.18
20.	Form – 22D	Application / Request for CEH Clearance	V 2.0	Subpart C6, 21.C6.2.7, 21.C6.2.8
21.	Form – 22E	Application / Request for IP CORE LoA (To Be Filled In By IP Developer)	V 2.0	Subpart C6, 21.C6.2.8
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23.	Form – 22G	Application / Request for IP Core Certification of Design by IP Developer (To Be Filled In By IP Developer)	V 2.0	Subpart C6, 21.C6.2.8
24.	Form – 22H	Letter of Approval (LoA)	V 2.0	Subpart C6, 21.C6.2.8
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26.	Form – 23	Declaration of Design and Performance of Airborne Stores	V 2.0	Subpart C, 21.C5.9, 21.C5.10
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28.	Form – 25A	Application for Certificate of Airworthiness (CoA) / Signal out Certificate for Air System	V 2.0	Subpart H, 21.H.4
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35.	Form – 29E	Application for Amendment of Type Approval	V 2.0	Subpart C1, 21.C1.28, 21.C1.29

Sl. No.	Form Number	Form Name	Form Version Number	Reference of IMTAR-21 Section
36.	Form – 30	Military Type Certificate	V 2.0	Subpart B, 21.B1.20, 21.B2.21, 21.B3.22, 21.B4.20
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38.	Form – 30B	Type Certificate Data Sheet	V 2.0	Subpart B, 21.B1.20, 21.B2.21, 21.B3.22, 21.B4.20
39.	Form – 30C	Type Record for Air System	V 2.0	Subpart B, 21.B1.19, 21.B2.20, 21.B3.20, 21.B4.18
40.	Form – 30D	Application for Renewal of RMTC / MTC for Air System	V 2.0	Subpart B, 21. B1.26, 21. B2.27, 21.B3.28, 21.B4.26
41.	Form – 31	Details of Modification Proposed for Air System / Airborne Stores	V 2.0	Subpart D, 21.D.8 Subpart E, 21.E.5
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43.	Form – 32	Alteration / Amendment for Air System / Airborne Stores	V 2.0	Subpart D, 21.D.4 Subpart E, 21.E.4
44.	Form – 33	Advanced Modification Information for Air System / Airborne Stores	V 2.0	Subpart D, 21.D.8 Subpart E, 21.E.5
45.	Form – 34	Format of Index of Modifications for Air System / Airborne Stores	V 2.0	Subpart D, 21.D.8 Subpart E, 21.E.5
46.	Form – 35	Modification leaflet Format for Air system / Airborne Stores	V 2.0	Subpart D, 21.D.9 Subpart E, 21.E.5
47.	Form – 36	Application for Concession on Modification / SI / STI / SB	V 2.0	Subpart F, 21.F.22, Subpart D, 21.D.10, Subpart E, 21.E.10
48.	Form – 38A	Application for Transfer of RMTC / MTC	V 2.0	Subpart B, 21.B1.25, 21.B2.26, 21.B3.27, 21.B4.25
49.	Form – 38B	Application for Transfer of PC / TA / LoA / IMATSOA	V 2.0	Subpart C, 21.C1.26, 21.C1.27, 21.C2.3, 21.C2.4,21.C4.15, 21.C4.16, 21.C5.15, 21.C5.16
50.	Form – 40	Bought-out Item (BoI) Clearance	V 2.0	Subpart N, 21.N.3
51.	Form – 40A	Application for Clearance of Airborne Stores Imported from Foreign	V 2.0	Subpart N, 21.N.3, Subpart S, 21.S.2
52.	Form – 44	Defect Investigation Report Format	V 2.0	Subpart C, 21.C1.18, 21.C1.19
53.	Form – 45A	Servicing Instructions (SI)	V 2.0	Subpart L 21.L.3
54.	Form – 45B	Special Technical Instructions (STI)	V 2.0	Subpart L, 21.L.3
55.	Form – 45C	Urgent Operating Notice (UON)	V 2.0	Subpart L, 21.L.3
56.	Form – 50	Application for Production Organisation Approval	V 2.0	Subpart G2, 21.G2.1

Sl. No.	Form Number	Form Name	Form Version Number	Reference of IMTAR-21 Section
57.	Form – 51	Application for Significant Changes or Variation of Scope and Terms of Organisation Approval	V 2.0	Subpart G2, 21.G2.5
58.	Form – 52	Military Air System Statement of Conformity by Main Contractor	V 2.0	Subpart F, 21.F.16, 21.F.17
59.	Form – 53A	Application form for the Deviation Disposition during Design and Development	V 2.0	Subpart B, 21.B1.16, 21.B2.17, 21.B3.17, 21.B4.15 Subpart C, 21.C1.17, 21.C1.18, 21.C3.1.13, 21.C3.1.14, 21.C4.10, 21.C4.11
60.	Form – 53B	Application form for the Deviation Disposition / Production Permit During LSP / Production Phase (Deliverables) / Licensed Projects	V 2.0	Subpart F 21.F.21
61.	Form – 55	Production Organisation Approval Certificate	V 2.0	Subpart G2, 21.G2.1
62.	Form – 80	Design Organisation Approval Certificate	V 2.0	Subpart G1, 21.G1.2
63.	Form – 80A	Application for Design Organisation Approval (DOA)	V 2.0	Subpart G1, 21.G1.2
64.	Form – 82	Application for Significant Changes to Design Organisational Approval	V 2.0	Subpart G1, 21.G1.2 & 21.G1.6
65.	Form – 100	Flight Clearance Certificate for Air System	V 2.0	Subpart P, 21.P.10
66.	Form – 100A	Flight Clearance Certificate for Aircraft	V 2.0	Subpart P, 21.P.10
67.	Form – 100B	Flight Clearance Certificate for Helicopter	V 2.0	Subpart P, 21.P.10
68.	Form – 101	Flight Program Clearance Memo (FPCM)	V 2.0	Subpart P, 21.P.10
69.	Form – 1090	Certificate of Safety for Flight	V 2.0	Subpart P, 21.P.10, 21.P.4



## FORM - 1 AUTHORISED RELEASE NOTE CERTIFICATE

In accorda	ance with IMTAR	-21, Subpart H	I, 21.H.2							
No. Date:										
4. Consignor Organisation Name and address:  5. Consignee name and address:  6. Supply order / Contract / Work or Number:					k order					
7. Item:	8. Description:	9. Part Number:	10. Specification	Qty on order	Acct. Unit	Oty tender	Qty Accepted	Total Qty Accepted Till date	- Inspect stamp	cation mark of or's Inspection ee, Marking &
Govt. / repa	of India, New De ired / overhauled wise stated, confir Ver	elhi. It is certifit / serviced hav m in all respect	proval granted by Direct that whole of the vertical bear inspected and the specification and date	above nd test	menti ed as p	oned noer appract / c	nateria proved order re	l / goods / drawings eferred d Release	component/	s manufactured ions and unless
			User / Installer							
	rtant to understa article on aircra		existence of the doc ne / System.	ument	alone	e does	not au	itomatica	lly constitu	te authority to



## FORM - 2 APPLICATION FOR MAINTENANCE ORGANISATION APPROVAL

Note: This Form to be provided along with Form F1001, Appendix A of AFQMS 2018, Issue-II

	DIRECTORATE GENERAL OF ASSURANCE (DGAQA), GO MINISTRY OF DEFENCE, 'H'	OVERNMENT OF INDIA,
1.	Registered name and address of the organisation	DEOCK, NEW DELIII-110011
2.	Trade name (if different)	
3.	Locations for which the approval is applied for	
4.	Brief summary of proposed activities at the Block 3 addr	esses
	a) General	
	b) Scope of approval	
	c) Nature of privileges	
5.	Description of organisation	
6.	Links/arrangements with design approval holder(s)/ design Organisation (s) where different from Block 1	
7.	Approximate number of staff engaged or intended to be engaged in the activities	
8.	Position and name of the Accountable Manager	
9.	Details of Management Personnel To be filled and Submitted in Form 4 by the Individual.	
_	Date	Signature of the Accountable Manager
	Date	Signature of the Accountable Manager

Version: 2.0	Date: August 2023
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### FORM - 2 APPLICATION FOR MAINTENANCE ORGANISATION APPROVAL

#### **Guidelines for Completion of the IMTAR Form 2**

#### Block 1: Registered name and address of the organisation

The name of the organisation must be entered as stated in the register of the Companies Registration Office. For the initial application a copy of the entry in the register of the Companies Registration Office must be provided to the competent authority.

#### Block 2: Trade name (if different)

State the trade name by which the organisation is known to the public if different from the information given in Block 1. The use of a logo may be indicated in this Block.

#### Block 3: Locations for which the approval is applied for

State all locations for which the approval is applied for. Only those locations must be stated that are directly under the control of the legal entity stated in Block 1.

#### Block 4: Brief summary of proposed activities at the item 3 addresses

This Block must include further details of the activities under the approval for the addresses indicated in Block 3. The Block 'General' must include overall information, while the Block 'Scope of approval' must address the scope of work and products/categories following the principles laid down in IMTAR-21. The Block 'nature of privileges' must indicate the requested privileges as defined in IMTAR 21.

#### Block 5: Description of Organisation

This Block must state a summary of the organisation with reference to the outline of the production organisation exposition, including the organisational structure, functions and responsibilities. The nomination of the responsible managers in accordance with IMTAR 21 must be included as far as possible

#### Block 6: Links/arrangements with design approval holder(s)/design organisation(s) where different from 1

The information entered here is essential ascertaining the flow of relevant technical information and for the evaluation of eligibility of the application. Therefore special attention must be given concerning the completion of this Block either directly or by reference to supporting documentation in relation to the requirements of IMTAR 21.

#### Block 7: Approximate number of staff engaged or intended to be engaged in the activities

The information to be entered here must reflect the number of staff, or in case of an initial approval the intended number of staff, for the complete activities to be covered by the approval and therefore must include also any associated administrative staff.

#### Block 8: Position and name of the Accountable Manager

State the position and name of the Accountable Manager

#### Block 9: Details of Management Personnel:

State the name and qualification details of the Accountable Manager (AM) and Quality Department Head (QDH) in Form 4.

Version: 2.0	Date: August 2023
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# FORM - 2A APPLICATION FOR SIGNIFICANT CHANGES OR VARIATION OF SCOPE AND TERMS OF MAINTENANCE ORGANISATION APPROVAL

In accordance with IMTAR-21, Subpart G3, 21.G3.4	
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Note: This Form to be provided along with Form F1001, Appendix A of AFQMS 2018, Issue-II

	DIRECTORATE GENERAL OF ASSURANCE GOVERNMENT OF INDIA, I 'H' BLOCK, NEW	C (DGAQA) MINISTRY OF DEFENCE
1.	Name and address of the Approval holder	
2.	Approval reference number	
3.	Locations for which changes in the terms of approval are requested	
4.	Brief summary of proposed changes to the activities at the	e Block 3 addresses
a)	General	
b)	Scope of approval	
c)	Nature of privileges	
5.	Description of organisational changes	
6.	Position and name of the Accountable Manager or nominee	
<u>-</u>		Signature of the Accountable Manager
1	Date	(or nominee)

Version: 2.0	Date: August 2023
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# FORM - 2A APPLICATION FOR SIGNIFICANT CHANGES OR VARIATION OF SCOPE AND TERMS OF MAINTENANCE ORGANISATION APPROVAL

#### **Guidelines for Completion of the Form - IMTAR Form 2A**

#### Block 1: Name and address of the Organisation Approval holder

The name must be entered as written on the current approval certificate. Where a change in the name is to be announced state the old name and address here, while using Block 5 for the information about the new name and address. The change of name and/or address must be supported by evidence, e.g. by a copy of the entry in the register of companies.

#### Block 2: Approval reference number

State the current approval reference number.

#### Block 3: Locations for which changes in the terms of approval are requested

State the locations for which changes in the terms of approval are requested or state 'not applicable' if no change is to be anticipated here.

#### Block 4: Brief summary of proposed changes to the activities at the item 3 addresses

This Block should include further details for the variation of the scope of approval for the addresses indicated in Block 3. The Block 'General' must include overall information for the change (including changes e.g. in workforce, facilities etc.), while the Block 'Scope of approval' must address the change in the scope of work and products/categories following the principles laid down in the IMTAR 21. The Block 'nature of privileges' must indicate a change in the privileges as defined in IMTAR 21. State 'not applicable' if no change is anticipated here.

#### Block 5: Description of organisational changes

This Block must state the changes to the organisation as defined in the current production organisation exposition, including changes the organisational structure, functions and responsibilities. This Block must therefore also be used to indicate a change in the Accountable Manager in accordance with IMTAR 21 or a change in the nomination of the responsible managers in accordance with IMTAR 21. State 'not applicable' if no change is anticipated here.

#### Block 6: Position and name of the Accountable Manager or nominee

State the position and name of the Accountable Manager here. Where there is a change in the nomination of the Accountable Manager, the information must refer to the nominee for this position. State 'not applicable' if no change is anticipated here.

In case of an application for a change of the accountable manager the IMTAR Form 2A must be signed by the new nominee for this position. In all other cases the IMTAR Form 2A must be signed by the Accountable Manager.



## FORM - 3 MAINTENANCE ORGANISATION APPROVAL CERTIFICATE

In accordance with IMTAR-21, Subpart G3, 21.G3.4

Note: This format is made Optional / Not Mandatory, Format of POA (Form 55) can be used to cover MOA Certificate by DGAQA

[DGAQA, Ministry of Defence, Govt of India]			
MAINTENANCE ORGANISATION APPROVAL CERTIFICATE			
Reference: []			
Pursuant to IMTAR-21 regulation and subject to the conditions specified below, the DGAQA hereby certifies			
[COMPANY NAME AND ADDRESS]			
As a maintenance organisation in compliance with IMTAR 21, Subpart G, approved for Maintenance of products parts and appliances listed in the attached approval schedule and issue related certificates using the above references.			
CONDITIONS:			
1. This approval is limited to that specified in the enclosed terms of approval, and			
2. This approval requires compliance with the procedures specified in the approved Maintenance organisation exposition, and			
3. This approval is valid whilst the approved Maintenance organisation remains in compliance with IMTAR 21.			
4. Subject to compliance with the foregoing conditions, this approval shall remain valid for Years or an unlimited duration unless the approval has previously been surrendered, superseded, suspended or revoked.			
Date of original issue:			
Date of this revision:			
Revision No:			
Signed:			
For DGAQA:			



## FORM - 3 MAINTENANCE ORGANISATION APPROVAL CERTIFICATE

[DGAQA, Ministry of Defence, Govt of India]  Terms of Approval  Ref:[]					
This document is part of Maintenance Org	ganisation Approval	Number [	]:		
Company name:					
Section 1. SCOPE OF WORK					
REPAIR / MAINTENANCE OF PRODUCTS / CATEGORIES					
For details and limitations refer to the Ma	intenance Organisat	ion Exposition, Section	onxxx		
Section 2. LOCATIONS					
Section 3. PRIVILEGES					
The Maintenance Organisation is entitled of its Maintenance Organisation Exposition					
[keep only applicable text]					
Prior to approval of the design of the prod	duct an IMTAR Forn	n 1 or Equivalent may	be issued only for conformity purposes.		
A Statement of Conformity may not be iss	sued for a non-appro	ved aircraft			
Maintenance may be performed, until con Maintenance Organisation Exposition Sec			required, in accordance with the		
Flight Clearance may be issued in accorda	ance with the Mainte	enance Organisation I	Exposition Sectionyyy		
Date of original issue		Signed:			
Date of this revision					
Revision No. For DGAQA					

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## FORM - 4 APPLICATION FOR APPROVAL OF MANAGEMENT PERSONNEL

In a	ccordance with IMTAR-21,	, Subpart G1, C	G2, G3			
1.	Organisation :					
2.	Organisation Reference	:				
3.	Name :					
4.	Contact Details :					
5.	E-Mail Address :					
6.	Positions within the Organisation:					
	<ul><li>DOA:HOD</li><li>MOA: AM</li><li>POA:QDH</li></ul>	COA QM AM (Refer	CISM/QDH r, para 1.1,1.2 &1.3 of Section-III, PART – I of AFQMS 2018, Issue-II)			
7.	Qualifications relevant to	Qualifications relevant to position at Item 6:				
	ab					
8.	Work experience relevant	Work experience relevant to the position at Item 6: (Use continuation sheet if necessary):				
9.	List any supporting document	ments submitte	ed (not originals):			
10.	ab					
	I declare that the information provided on this form is true and correct					
		that for CEMII	LAC / DGAQA to proceed with this application, I have supplied all supporting			
11.	Applicants Signature		12. Date			
HOD	: Head of Design					
COA	: Chief of Airworthiness					
CISN	A: Chief of Independent S	Support Moni	toring / QDH: Quality Department Head			
AM :	Accountable Manager					
QM :	: Quality Manager					
DOA	: Design Organisation Ap	proval				
POA	: Production Organisation	n Approval				



## FORM - 10 APPLICATION FOR AIRWORTHINESS ASSESSMENT OF AIR SYSTEM / AIRBORNE STORES

In accordance with IMTAR - 21, Subpart B, 21.B1.4, 21.B2.5, 21.B3.5, 21.B4.4 Subpart C, 21.C1.4, 21.C1.5, 21.C2.3, 21.C2.4, 21.C3.1.4, 21.C3.1.5, 21.C4.2, 21.C4.3, 21.C6.1.2, 21.C6.1.3

1.	Reference						
1.1	Applicant's Referenc	e				Date	
2.	Applicant's Informat	ion					
2.1	<b>Applicant Company</b>	Data					
2.1.1	Name and Address	Applicant Number					
	(As per Registration with Registrar of	(Company) Name					
	Companies, India)	Door/Street / Area					
	Companies Act, 2013	Post Office					
	2013	City / State					
		PIN					
2.1.2	Contact Person	Title	□ Mr □	□ Ms	□ Dr		
	(Responsible for this application)	Name					
	,	Last Name					
		Job title					
		Phone/Fax					
		Email (Official)					
2.2	Address for Commun	nication					
2.2.1	Address	(Company) Name					
	(Required for communication with regard to this application)	Door/Street / Area					
		Post Office					
		City / State					
		PIN					
2.3	Organisation Approv	al Details					
2.3.1	DOA Details	DOA Number					
	(if applicable)	DOA Validity					
		DOA Scope					

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## FORM - 10 APPLICATION FOR AIRWORTHINESS ASSESSMENT OF AIR SYSTEM / AIRBORNE STORES

2.3.2	<b>POA Details</b>	POA Numb	per					
	(if applicable)	POA Valid	ity					
		POA Scope	e					
3.	Air System Descript	ion						
3.1	Name of the Air System	Not exceed	ling 30 word	ls.				
3.2	Brief about the Project			rds. <b>Shall include de</b> <b>cable).</b> Please add en			d software /	
3.3	Proposed IMTAR	□21.B1	□21.B2	□21.B3	□21.B4			
	Sub-part	□21.C1	□21.C2	□21.C3	□21.C4	□21.C5	□21.C6	
<ul> <li>Applicant's Declaration</li> <li>I declare that I am authorized by my Organisation to submit this application to CEMILAC and that all information provided in this application form is correct and complete.</li> <li>I acknowledge that I have read and understood the IMTAR – 21.</li> <li>I understand that the submission of the application does not entitle certification coverage by CEMILAC.</li> </ul>								
Date		Name of	the Authoris	sed Signatory	Signatur	Signature		
	rtant Note: CEMILA d and official seal stan		ccept appli	cations without sign	ature. Please ma	ke sure that the	application is	
This A	Application should be se	ent by fax, e-	mail or regu	ılar mail to :				
	The Chief Executive (Airworthiness)  Centre for Military Airworthiness & Certification (CEMILAC)  Defence R&D Organisation, Ministry of Defence  Marathahalli Colony Post,  Bengaluru - 560037  Fax +91 (0)80 25230856  E-mail: ce.cemilac@gov.in							

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## FORM - 10 APPLICATION FOR AIRWORTHINESS ASSESSMENT OF AIR SYSTEM / AIRBORNE STORES

## **Acknowledgement of Receipt of Application**

1.	Applicant's Reference	Date						
2.	Address	(Company) Name						
	(Required for communication with regard to this application)	Door / Street / Area						
		Post Office						
		City / State						
		PIN						
3.	Air System Title							
in due	The application has been received on The application will be reviewed and status will be informed and due course of time.							

The application has been received o in due course of time.	n The application	on will be reviewed and status will be informed
		CEMILAC For Chief Executive (Airworthiness)



In accordance with IMTAR - 21, Subpart B, 21.B1.21, 21.B2.22, 21.B3.23, 21.B4.21															
Issue o	Issue of RSD Under														
User S		IAI			IN			IA			INCG				
1.	Reference														
1.1	Applicant's Reference	e											Date:	 	
			<u>.                                    </u>									_ _			
2.	2. Applicant's Information														
2.1	<b>Applicant Company</b>	Data	a												
2.1.1	Name and Address	Ap	plicant N	Jumb	er										
	(As per Registration	(Co	ompany)	Nam	ne										
	with Registrar of Companies, India)	Do	or/Street	/Arc	ea										
	Companies Act,	Pos	st Office												
	2013	Cit	y / State												
		PIN	1												
2.1.2	<b>Contact Person</b>	Titl	le			□ Mr		Ms	□ Dr						
	(Responsible for this application)	Nai	me												
	· · · · · · · · · · · · · · · · · · ·	Las	st Name												
		Job	title												
		Pho	one/Fax												
		Em	nail (Offi	cial)											
2.2	Address for Commu	nicat	tion			•									
2.2.1	Address	(Co	ompany)	Nam	ne										
	(Required for	Do	or/Street	/Arc	ea										
	communication with regard to this	Pos	st Office												
	application)	Cit	y / State												
		PIN	1												
2.3	Organisation Approv	val D	etails			•									
2.3.1	DOA Details	DC	)A Numb	oer											
	(if applicable)	DO	A Validi	ity											
		DC	A Scope												



3.	Air System Description					
3.1	Air System Identifica	tion				
3.1.1	Air System Type Number / Part Number					
3.1.2	Air System Nomenclature					
3.2	CEMILAC Project Code					
3.3	Brief about the Project	Not exceeding	g 100 words. Ple	ease add enclosure	e for additional details	
3.4	Proposed IMTAR Sub-part	□ 21.B1	□ 21.B2	□ 21.B3	□ 21.B4	
3.5	RMTC / MTC Number					
4.	Air systems Requirer	nents Details				
4.1	<b>Staff Requirements</b>	If applicable				
4.2	Airworthiness Certification Criteria					
4.3	Air system Requirement Specification					
4.4	Type Certification Basis					
4.5	Airworthiness Certification Plan					
5.	Air Systems Configur	ration				
5.1	Standard of Preparation					
5.2	Standard of					



6.	Air Systems Type Certification Compliance								
6.1	TCB Compliance								
6.2	Limitations List								
6.3	Type Certificate Data Sheet (TCDS)								
7.	Release to Service De	tails							
7.1	User Acceptance Letter								
7.2	List of Technical and Flight Publications	Add as enclosure							
7.3	RSD Document Reference								
8. Applicant's Declaration  I declare that I am authorized by my Organisation to submit this application to CEMILAC and that all information provided in this application form is correct and complete.  I acknowledge that I have read and understood the IMTAR – 21.  I understand that the submission of the application, by itself, does not entitle RSD.									
Place									
Date	ate Name of the Authorised Signatory Signature								
	Important Note: CEMILAC does not accept applications without signature. Please make sure that the application is signed and official seal stamped.								

Note: This application along with the required documents shall be forwarded to dealing RCMA / CEMILAC for further process.



## **Acknowledgement of Receipt of Application**

1.	Applicant's Reference	Date:							
2.	Address	(Company) Name							
	(Required for communication with regard to this application)	Door/Street / Area							
		Post Office							
		City / State							
		PIN							
3.	Air System Title								
in due	The application has been received on The application will be reviewed and status will be informed n due course of time								
			CEMILAC						

For Chief Executive (Airworthiness)
Seal

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## FORM - 12 CERTIFICATE OF DESIGN

											-
In acc	ordance with IMTAR-	21, Subpart	B, 21.B	1.15,	21.B2.	16, 21.B4	1.14, 21.1	B4.18 & S	Subpart C,	21.C1.24, 2	1.C1.25
For iss	ue of	FCC		MTC		□ TA					
1.	Reference										
1.1	Applicant's Reference	ce								Date:	
2.	Applicant's Informa	tion									
2.1	Applicant Company	Data									
2.1.1	Name and Address	Applicant	Number	r							
	(As per Registration with Registrar of	(Company	y) Name								
	Companies, India)	Door/Stre	et / Area	ı							
	Companies Act, 2013	Post Offic	ee								
	2013	City / Stat	te								
		PIN									
2.1.2	Contact Person	Title			] Mr	□ Ms	□ Dr				
	(Responsible for this application)	Name									
	,	Last Nam	e								
		Job title									
		Phone/Fax	X								
		Email (Of	fficial)								
2.2	Address for Commu	nication									
2.2.1	Address	(Company	y) Name								
	(Required for	Door/Stre	et / Area	ı							
	communication with regard to this	Post Offic	e								
	application)	City / Stat	te								
		PIN									
2.3	Organisation Approv	val Details									
2.3.1	DOA Details	DOA Nur	nber								
	(if applicable)	DOA Vali	dity								
		DOA Sco	pe								
3.	Air System/Airborne	e Stores De	scription	n							
3.1	Air System/Airborne	Stores Ide	entificati	ion							

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## FORM - 12 CERTIFICATE OF DESIGN

3.1.1	Air System/ Airborne Stores Type Number / Part Number					
3.1.2	Air System/ Airborne Stores Nomenclature					
3.2	CEMILAC Project Code					
3.3	Brief about the Project	Not exceeding	ng 100 words. Ple	ase add enclosure	for additional deta	nils
3.4	IMTAR Sub-part	□ 21.B1	□ 21.B2	□ 21.B3	□ 21.B4	□ 21.C1
4.	Air System/Airborne					
4.1	Staff Requirements Airworthiness	If applicable	;			
4.2	Certification					
	Criteria					
4.3	Air System Requirement Specification/ Technical Specification of Airborne Stores					
4.4	Type Certification Basis/Type Approval Basis					
4.5	Airworthiness Certification Plan					
5.	Air System/Airborne	Stores Confi	guration			
5.1	Standard of Preparation					
5.2	Standard of Equipment (only for Air system)					



## FORM - 12 CERTIFICATE OF DESIGN

6.	Air System/Airborne Stores Type Certification Compliance						
6.1	TCB Compliance/ TAB Compliance						
6.2	Limitations List						
6.3	Type Certificate Data Sheet/Type Approval Data Sheet						
7. We,	Applicant's Declaration  (Name of Design firm) hereby declare and certify:						
i.	That the afore mentioned Air system/Airborne Stores is defined and accurately described by the above particulars and that it complies with the full requirements/experimental flight requirements subject to the exceptions mentioned in the compliance						
ii.	That all relevant design data, reports of specified tests, drawings and drawing lists have been completed and are a true record of the design and testing of the Stores to date.						
iii.	That if any statement or	this certificate becomes inaccurate the certificate w	ill be suitably amended and issued.				
Place							
Date		Name of Head of Design	Signature				
_	Important Note: CEMILAC does not accept applications without signature. Please make sure that the application is signed and official seal stamped.						



b.

Accessibility affected

Maintainability affected

## FORM - 20 ENGINEERING CHANGE NOTE (ECN)

In accordance with IMTAR-21, Subpart B, 21.B.13, 21.B2.14, Subpart C, 21.C1.12, 21.C1.13,21.C4.12, 21.C4.13

III acc	Jidance with hvi iAK-21	., Subpart B, 21.	.B.13, 21.B2.14, Subpart C, 21.C1.12,	, 21.01.15,21.04.	12, 21.04.13	
1.	Reference					
1.1	Applicant's Reference	,			Date:	
		•				
2.	System / LRU Descrip	otion				
2.1	Program / Project					
2.2	System / Sub Sytem					
2.3	LRU Description					
2.4	Part No. / Model No. w mod status	rith Rev/				
2.5	Software version No. (if applicable)					
2.6	Agency responsible to	supply				
3.	<b>Documentation Detail</b>	ls				
List o	f Documents (Approve	d Earlier)				
Sl. N	o. Document Title	Ref Doc	Document Control number	Rev. No.	Date of release	
3.1						
3.2						
3.3						
3.4						
4.	<b>Change Details</b>					
4.1	Reason for Change / Origin: Qualification Test / Ground Test on A/c / Flight Test					
4.2	Description of Design Change Proposed					
4.3	Authority of Change					
4.4	Applicability of Change State YES / NO If any answer is YES particulars are to be attached					
а	Interchangeability of Post-Mod & Pre-Mod Spares affected   Yes / No					

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Yes / No

Yes / No



## FORM - 20 ENGINEERING CHANGE NOTE (ECN)

d.	Documentation affected?	Yes / No
e.	Drawing Changes	Yes / No
f.	Total No. of unit on which the change will be embodied	
g.	New Parts required	Yes / No
h.	Weight change	Yes / No, then weight after change
i.	Dimensions Change	Yes / No
j.	Change in Power requirement	Yes / No, Power required after change
k.	Any other aspect	Yes / No

5. Comments / Remarks / Enclosures :	
Proposed by	
	(Signature, Name and Contact Number)
Reviewed and recommended by PD/PgD/HoD	
	Project Director /Program Director/Head of Design (Name and Signature or Seal)
Verified by	
	Quality Dept. Head / Airworthiness Group
	(Name and Signature)
Approved by	
	CEMILAC / RCMA
	(Name and Signature with Seal)

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## FORM - 20 ENGINEERING CHANGE NOTE (ECN)

	Instructions for filling ECN						
Item#	Description						
1.	ECN Reference number to be issued by Designer Group in the format Orgn / Div. No. / ECN / XYZ / XXX dated						
	DD/MM/YYYY. XYZ is LRU abbreviation is same as in SOP. XXX is three-digit control number. Date of proposal						
	of ECN is to be as per format DD / MM / YYYY. If the second change has been proposed in ABCD in PQRS Aircraft						
	on DD/MM/YYYY, then Reference number is "Orgn/Div.23/ECN/ABCD/002 dt DD/MM/YYYY.						
2.	Write description of the Project or program.						
3.	Write description of the system or subsystem.						
4.	Write the nomenclature of LRU. The LRU nomenclature should be as per Program / Project SOP.						
5.	Write Part Number or Model Number as per SOP and is to be same as engraved on the LRU.						
6.	Software details of Airborne Stores if applicable.						
7.	The manufacturing Agency or Agency responsible for modification of item.						
8.	Document Control number with revision No. & date of approval of the document is to be specified. The Original						
	Document shall be brought for ECN verification by Quality Dept.						
9.	Write down the proposed changes to the existing System / LRU / SRU.						
10.	Briefly explain the reason for changes to the design.						
11.	Reference of the authority for carrying out the Engineering Change is to be brought out (DIC, NCRC or additional						
	requirements from User through Project Monitoring Board.						
12.	Where all the changes shall be applicable needs to be brought out clearly. Select suitable option.						
13.	Remarks if any and the references of the enclosures if any (Process Sheet / Task Card /Work Order / Drawing /						
	Authority of Change Note / Others) to be recorded.						
14.	Design Rep proposing the change shall sign and confirm the details filled from Sl. no. 1 to 12. Name and contact						
	number of Designer Rep proposing the change to be given.						
15.	Project Director / Program Director to review the Changes in design and only forward the recommended ECN to						
	QCG office along with original document. If the ECN sent for reverification, then previous version ECN (verified)						
	also to be forwarded along with modified ECN.						
16.	The Head QC shall verify and sign the ECN.						
	NOTE: Electronic signature may be used. In this case, the following text can be added: "signature on file"						
	or "electronic signature available", or similar statement.						

### **Additional Instructions**

- a. *The ECN shall be raised by Design Rep for change in design* and is to be signed with Date & Time. All entries must be filled properly by Designer and must be legible, else it shall not be accepted.
- b. Minor changes in the document will be modified through Amendment.
- c. The Engineering Change Control Number shall be issued by Head QC or Rep of QC as per format. Orgn/ECN/ ABCD/XYZ/XXX dt DD/MM/YYYY. ABCD stands for Program or Project, XYZ stands for Airborne Stores description, XXX is 3-digit number.
- d. Any modification/correction needs to be signed by respective PD / PgD / HoD.
- e. All signatories should legibly write their name, designation and date of signature.

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# FORM - 21A DESIGN CRITERIA FORM FOR METALLIC MATERIAL/ SEMI-FINISHED METALLIC COMPONENT

In accordance with IMTAR-21, Subpart C3, 21.C3.1.9, 21.C3.1.10	

Reference			
Applicant's Reference			Date:
Project	:	Material Grade & Mill form	:
Name of Inspection Agency	:	<b>Heat Treatment Condition</b>	:
Name of Developing/	:	Size (mm)	:
Manufacturing Agency		Supply Condition	:

Manufacturing Process Route:

			Stress Con-	dition with the	magnitude				
Sl. No.	Comp- onent	Classifi- cation	Primary	Secondary	Static/ Dynamic loading conditions	Environ- mental Conditions	Tempe- rature Conditions	Weldability requirements*	Any other information
		Critical/ Non critical	Eg. Fracture Toughness, Fatigue, YS, UTS	Eg. Fracture Toughness, Fatigue, YS, UTS				*Type of Welding, No. of joints, Components details which are to be welded, Material type, WPS & PQR Status approved or not? Vendor details	

### **Enclosures:**

- 1. Brief write-up about the Project
- 2. End use of the Components along with justification for classification
- 3. Drawings, photographs of components
- 4. QA Plan

Signature Name & Designation Name of Organisation (with Seal)

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# FORM - 21B DESIGN CRITERIA FORM FOR CARBON-CARBON AIRCRAFT BRAKE DISCS

-	

Reference									
Applicant's Reference				Date:					
Project	:	Material	:						

Name of Inspection Agency : Manufacturing Process Route :

Name of the Developing/Manufacturing Agency: Supply Condition :

Nominal Dimensions :

In accordance with IMTAR-21, Subpart C3, 21. C3.1.9, 21.C3. 1.10

- C1	Comp-	G1 :0	Material Property Requirements	a .	Enviro-	Requirements	Any other
$\begin{bmatrix} SI. \\ No \end{bmatrix}$ of	onent Name	Classifi- cation	Physical, Mechanical, Thermal, Friction and Wear	Service Conditions	nmental and Temp Conditions	of Metallic Attachments, if any	inform- ation
		Critical/ Non critical	e.g., Physical Properties: Density, Porosity, etc.  Mechanical Properties: Flexural Strength. Tensile Strength, Compressive Strength, Shear Strength, Interlaminar Shear Strength, etc.  Thermal Properties Specific Heat, Thermal Diffusivity, Thermal Conductivity, CTE, Weight Loss by TGA (Bare + with Anti-Oxidant Coating), etc.  Friction and Wear Properties on Brake Dynamometer Co-efficient of Friction, Wear (Thickness Loss), etc.	Kinetic Energy (Normal, Overload, RTO), Brake Application Speed, Brake Pressure, Stop Time, Static Torque, Temperature Rise, Wear (Thickness Loss) etc.			

### **Enclosures:**

- 1. Brief write-up about the Project
- 2. End use of the Components along with justification for classification
- 3. Drawings, photographs of components
- 4. QA Plan

Signature Name & Designation Name of Organisation (with Seal)

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**Applicant's Reference** 

### FORM - 21C DESIGN CRITERIA FORM FOR COMPOSITES/ CERAMIC COMPONENTS

Reference		

Project : Material :
Name of Inspection Agency : Manufacturing Process Route :
Name of the Developing/Manufacturing Agency: Supply Condition :

Nominal dimension of the component (if applicable):

In accordance with IMTAR - 21, Subpart C3, 21.C3.1.9, 21.C3. 1.10

Sl. No.	Comp- onent Name	Classification	Material Property Requirements  Based on Static/ Dynamic loading conditions	Enviro- nmental Conditions	Temperature Conditions	Other Property Requirements (Physical, Thermal, Electromagnetic, Rain-erosion, etc.)	Any other information
		Critical / Non critical	Eg. Tensile Strength & Modulus, Flexural Strength & Modulus, Compressive Strength & Modulus Fracture Toughness, Fatigue, etc.			Density, Porosity, Specific Heat, Thermal conductivity, CTE, Moisture absorption co-efficient, Weight Loss (TGA), Tangent Loss, Dielectric Constant, etc	

### **Enclosures:**

- 1. Brief write-up about the Project
- 2. End use of the Components along with justification for classification
- 3. Drawings, photographs of components
- 4. QA Plan

Signature Name & Designation Name of Organisation (with Seal)

Date:

Version: 2.0 Date: August 2023
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### FORM - 21D DESIGN CRITERIA FORM FOR POLYMER / METAL MATRIX COMPOSITE BRAKE PADS

In accordance with IMTAR- 21, Subpart C3, 21.C3.1.9, 21.C3. 1.10						
Reference						
Applicant's Reference					Date:	
Project	:		Material	:		
Name of Inspection Agency :		Manufacturing Proces	s Route:			
Name of the Developing/Man	Agency:	<b>Supply Condition</b>	:			
Nominal dimension of the component (if applicable):						

1.	Reference No.	Date	
2.	Part No.	Part name	
3.	Brief description of application of part		
4.	Criticality of part		
5.	Type of Brake Pad		
6.	Operating temperature or temperature exposed		
	Parameter		Value
7.	Max. Design Landing weight of Aircraft at S	Sea level (Kgf)	
8.	Max. Brake Application Speed on Design Landing (m/sec)		
9.	No. of Landing Brakes per Aircraft (Nos.)		
10.	Max. Take-off weight of Aircraft		
11.	Mean Service life of brake linings		
12.	Nominal Friction material thickness per face	e of brake Disc	
13.	Max. Stopping Distance		

### **Enclosures:**

- 1. Brief write-up about the Project
- 2. End use of the Components along with justification for classification
- 3. Drawings, photographs of components
- 4. QA Plan

Signature Name & Designation Name of Organisation (with Seal)

Version: 2.0	Date: August 2023
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# FORM - 21E DESIGN CRITERIA FORM/ INPUT DATA SHEET FOR NON METALLIC MATERIALS AND COMPONENTS, PAINTS AND COATINGS

Reference					
Applicant's Reference		Date			
Project	Material				
Name of Inspection Agency	Manufacturing Process Ro	ute			
Name of the Developing/Manufacturing Agency	Supply Condition				
Nominal dimension of the component (if applicable	)				

1.	Reference No.	Date
2.	Nomenclature of the Product	
3.	Governing Specification	
4.	Brief description of application of part/End use	
5.	Criticality of part	
6.	Operating medium	
7.	Operating temperature or temperature exposed	
8.	List of main functional test carried out	
9	Any post treatment in the part before assembly	

### **Enclosures**

- 1. Brief write-up about the Project
- 2. End use of the Components along with justification for classification

In accordance with IMTAR-21, Subpart C3, 21.C3.1.9, 21.C3. 1.10

- 3. Drawings, photographs of components
- 4. QA Plan

Signature Name & Designation Name of Organisation (with Seal)

Version: 2.0 Date: August 2023
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# FORM - 21F INPUT DATA SHEET FOR FUEL, OIL AND LUBRICANTS (FOL)

In acco	rdance with IMTAR-21, Subpart	C3, 21.C3.1.9, 21.C3. 1.	10	
Dafama				
Referen Applica	ant's Reference			Date:
				•
1	Nomenclature of FOL Stores			
2	User Reference, if applicable			
3	Criticality class			
4	OEM extract / maintenance m details, specification / propert			
5	Category			
	Indigenization, licensed products	action, Imported		
6	Shelf life / storage requiremen	nts		
7	Packaging Conditions			
8	Other applicable information,	if any		

Signature Name & Designation Name of Organisation (with Seal)



# FORM -21G APPLICATION FORM FOR LETTER OF APPROVAL (LOA) FOR MATERIALS

In accordance with IMTAR-21, Subpart C3, 21.C3.1.9, 21.C3. 1.1	0
--	---

Ref	erence			
App	olicant's Reference			Date:
1.	Name of the Firm		:	
2.	Address		:	
	i. Office		:	
	ii. Work		:	
3.	Item for which LoA is being soug With the trade name, if any	ht, together	:	
4.	Governing Specification of the M	aterial/ Item	:	
5.	Description of Material/ Item togo and drawing (if applicable) (copy		: d)	
6.	Information regarding technical c	ollaboration / license	:	
7.	End use of the material/item with Industry	particular reference to aircraft	:	
8.	Details of the test carried out and Firm to ascertain the properties ar	•	:	
9.	Scope and extend of LoA sought		:	
10.	List of other items and Specificati have developed/ manufactured an which the item has been supplied		:	
		Signature of the Applic Designation:	cant:	
		Date: Address:		



# FORM - 22A SOFTWARE CHANGE REQUEST (SCR)

In accordance with IMTAR-21, Subpart C6, 21.C6.1.16, 21.C6.1.17						
SCR No. and Date :						
System	Old Software		New Software			
LRU Name	Version		Version			
Platform Checksum Check sum						
oftware Problem Report Reference Supporting software used Compatible Hw Ver & part no.:						
Software modification necessitated due	to:					
☐ Requirement change	☐ Hardware o	change				
☐ Software Defect	☐ Feature En	hancement	☐ Other Improvements			
Brief Problem Statement						
Identified causes						
Suggested solutions						
Documents affected						
Change evaluation tests						
Any other subsystem/ external system / test environment affected by this change of version						
LCCB/ SCCB status						
Limitations/ Known problems						
Rep Design		Rep QA				

Version: 2.0 Date: August 2023



# FORM - 22B SOFTWARE PROBLEM REPORT (SPR)

In accordance with IMTAR-21, Subpart C6, 21.C6.1.16, 21.C6.1.17						
SPR No. and Date :						
System	Software CSCI Name					
LRU Name	Software Version					
Platform	Check sum					
Originator	Supporting software used	Compatible Hw Ver & part				
□ Design □ Customer / User		no.:				
Problem Reported during :  ☐ Service Use ☐ Development Flight Trials ☐ Taxi Trials						
☐ Aircraft integration ☐ Rig integration	☐ System integration	☐ LRU Lab testing				
Problem Description :						
References: (Flight feedback / rig report / test report)						
Severity of the Problem :						
☐ Critical, Urgent ☐ Critical, Not Urgent						
☐ Non Critical, Urgent ☐ Non Critical, Not Urg	ent					
Confirmation of the Software Problem on bench and rigs :						
☐ Confirmed ☐ Intermittent	□ Not Confirmed					
□ Not able to recreate the reported issue						
Remarks:						
Rep Design QA						



## FORM - 22C APPLICATION / REQUEST FOR SOFTWARE CLEARANCE

In accord	ance with IMTAR-21, Subpart C6, 21.C6.1.17, 21.C6.1.	18	
Annlicati	on No. & Date :		
Аррпсан	on No. & Date .		
Clearance	e Request for  Ground Integration  Flight	trials   Production	Service Use
1	System		
2	Platform		
3	Name and Address of the LRU design agency		
4	Name and Address of the Software developing agency		
5	Name of the LRU		
6	Compatible Hw Version & part no. of the LRU		
7	Programmable components in the LRU	CSCI/CEH/PDI Name	Check sum
8	Software Item changed in the current version		
9	New Software Version (s) & Check sum (s)		
10	Software Development Standard		
11	Functional Requirement Specification		
12	Bus ICD		
13	Software Requirement Specification		
14	Software Test Cases and Procedures		
15	Software Test Report		
16	Software Verification Records		
17	Software QA Report		
18	Version Description Document		
19	Test rig / ATE software version		
20	SPR, SCR and SCN Ref.		
21	IV & V Recommendation		
22	TARB Report (as applicable)		
23	Limitations, if any		

(Signature & Seal of the Applicant)

Version: 2.0 Date: August 2023
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## FORM - 22D APPLICATION / REQUEST FOR CEH CLEARANCE

In accord	lance with IMTAR-21, Subpart C6, 21.C6.2.7, 21.C6.	.2.8	
Applicati	ion No. & Date :		
Clearance	e Request for  Ground Integration  Fli	ight trials   Production	☐ Service Use
	,	Г	
1	System		
2	Platform		
3	Name and Address of the LRU design agency		
4	Name and Address of the CEH developing agency		
5	Name of the LRU		
6	Compatible Hw Version and Part No. of the LRU		
7	Programmable components in the LRU	CEH Name	Check sum
8	CEH Item changed in the current version		
9	New CEH Version(s) & Check sum(s)		
10	CEH development Standard		
11	CEH Requirement Specification		
12	CEH Test Cases and Procedures		
13	CEH Test Report		
14	CEH analysis verification reports		
15	Hardware Configuration Index		
16	Test rig / ATE software version		
17	SPR, SCR and SCN Ref.		
18	IV & V Recommendation		
19	TARB Report		
20	Limitations		

(Signature & Seal of the Applicant)

Version: 2.0 Date: August 2023
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# FORM - 22E APPLICATION / REQUEST FOR IP CORE LOA (TO BE FILLED IN BY IP DEVELOPER)

In acco	ordance with IMTAR-21, Subpart C6, 21.C6.2.8	
1	Name of the IP Developer	
2	Address of the IP Developer	
3	Nomenclature of the IP core	
4	Part number of the IP core for which the LoA is sought	
5	Version number of the IP core	
6	Brief description of the IP core	
7	Reference of the IP data sheet	
8	Certification doc References	
9	Remarks	

Place:	Signature of the applicant
Date:	Name, Designation
	Organisation name



In accordance with IMTAR-21, Subpart C6, 21.C6.2.8

## FORM - 22F FORMAT FOR IP CORE DATA SHEET (TO BE FILLED IN BY IP DEVELOPER)

1	Name of the IP Developer	
2	Address of the IP Developer	
3	Nomenclature of the IP core	
4	Part number of the IP core for which the LoA is sought	
5	Brief description of the IP core	
6	DAL level	
7	Category Hard/Firm/Soft	
8	Target Hardware ICs details	
9	Limitations	
10	Document References	
11	Remarks	

Signature of the Certification Authority Name, Designation Organisation name Signature of the applicant Name, Designation Organisation name

Version: 2.0	Date: August 2023
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# FORM - 22G FORMAT FOR IP CORE CERTIFICATION OF DESIGN BY IP DEVELOPER (TO BE FILLED IN BY IP DEVELOPER)

In acc	cordan	ice with IMTAR-21, Subpart C6, 21.C6.2.8	
1	Na	me of the IP Developer	
2	Ad	dress of the IP Developer	
3	No	menclature of the IP core	
4	Par	t number of the IP core for which the LoA is sought	
5	Bri	ef description of the IP core	
we	i ii iii	with the requirements given in document	ately described by the above particulars fully complying
Place: Date:			Signature of the applicant Name, Designation Organisation name



### FORM - 22H LETTER OF APPROVAL (LOA)

<IP core developer Application reference no.>

#### 1. Introduction:

- <Introduction to the IP core developer>
- <Brief on IP core and its necessity>

### 2. Integration and Configuration of IP Core:

<Refer IP core data sheet>

In accordance with IMTAR-21, Subpart C6, 21.C6.2.8

<User manual of IP core>

#### 3. Acceptance of IP Core:

- <IP core name> designed and developed by <IP core developer>is hereby accepted for use in
- < Application name>, subject to the conditions mentioned in this Letter of Approval (LoA).

### 3.1. Basis of acceptance and applicable documents:

<List of all docs including CoD of IP core, data sheet, CEMILAC directives, Patent Certificate/Copy Right certificate Details (if available) and other IP core documentation>

#### 4. Limitations:

<Mention limitations in design and usability of IP core>

#### 5. Conditions of Acceptance:

For IP Developer:

<Mention conditions for IP Developer and validity duration of LoA>

For IP Integrator:

<Mention conditions for IP Integrator>

<Signature>

<CEMILAC Authorized Signatory>

Encl: <Data sheet of IP core and CoD>

Version: 2.0 Date: August 2023



# FORM - 22J SOFTWARE CHANGE NOTE (SCN)

In accordance with IMTAR-21, Subpart	C6, 21.C6.1.16, 21.C6.1.17, 21.C	C6.1.18
SCN No. and Date :		
System	Old Software	New Software
LRU Name	Version	Version
Platform	Check sum	Check sum
Software Change Request Reference	Supporting software used	Compatible Hw Ver & Part No.:
Software Changes carried out from the	Previous version to current version	on
Test case document used for regression	testing	
Change Evaluation Reports		
V&V/ IV&V report		
TADD ((IC 1: 11))		
TARB report (If applicable)		
Changed Documents approval status		
Limitations/ Known problems		
Recommended Scope of software clear	0000	
Recommended Scope of Software clear	ance	
Verified by (Rep CEMILAC)	Approved	d by (Competent Authority)*

|--|

<sup>\*</sup>Competent authority for approval of Software Change Note can be RD RCMA, Chairman of IV&V team or Chairman of Software Evaluation Committee, as decided in the certification plan approved by CEMILAC.



# FORM - 23 DECLARATION OF DESIGN AND PERFORMANCE OF AIRBORNE STORES

In a	accordance with IMTAR-21, Subpart C, 21.C5.9, 21.C5.10
DoD	PP No
ISSU	UE No.
1.	Name and address of manufacturer.
2.	Description and identification of airborne Stores including:  i. Type No  ii. Modification Standard:
	iii. Master drawing record: iv. Weight and overall dimensions: v. Project Details: vi. Proposed Aircraft Name:
3.	Specification reference, i.e., Spec / IMATSO No. and Manufacturer's design specification:
4.	The rated performance of the article directly or by reference to other documents.
5.	Particulars of approvals held for the equipment.
6.	Reference to qualification test report.
7.	Service and Instruction Manual reference number.
8.	Statement of compliance with appropriate Spec / IMATSO and any deviations/Limitations thereof.
9.	A statement of the level of compliance with the Spec / IMATSO in respect of the ability of the article to withstand various ambient conditions or to exhibit various properties.
	The following are examples (not a complete list) of information to be given under this heading depending on the nature of the article and the requirements of the Spec / IMATSO.
	<ul> <li>a) Environmental Qualification including EMI / EMC</li> <li>i. (List of Tests)</li> <li>ii</li></ul>

Version: 2.0

Date: August 2023



# FORM -23 DECLARATION OF DESIGN AND PERFORMANCE OF AIRBORNE STORES

	b)	Power supply compatibility tests					
		(NOTE: The "categories" referred to are those listed in the current issue of MIL-STD-704, RTCA DO-160 or other military equivalent standard).					
	c)	Other relevant tests					
10.	A sta	tement of criticality of software or "None" if not applicable.					
		TE: Software levels are those defined in the current issue of DSSD / RTCA document DO-178 B/C or other valent)					
11.		tement of design assurance level for complex hardware or a statement indicating whether complex hardware is added or not in the product.					
		TE: Complex hardware design assurance levels are those defined in the applicable issue of RTCA document DO- or other equivalent methodology followed.)					
12.	The o	declaration in this document is made under the authority of					
		(name of Manufacturer)					
		nufacturer's name) cannot accept responsibility for equipment used outside the limiting conditions stated above out their agreement.					
	Date	: Signature (Manufacturer's Approved Head of Design by CEMILAC)					



### FORM - 25 SIGNALING OUT CERTIFICATE FOR AN AIR SYSTEM

In ac	ccordan	ce wit	h IMTAR-21, Subpart H, 21.H.2, 21.H.	5
Ref.	No.			Date:
То				
User	Service	HQrs		
IAF/	IA/ IN/			
		SIGN		(TYPE), TAIL NUMBER ()
			After	(Mfg / Upgrade / Servicing / Overhaul)
Sir,				
			Service HQ. Contract / SO / Task order I signalled out as per the details given bel	No.: dated, It is intimated that the subject Air ow:
	I.	Basi	s of Clearance:	
		a)	Approved RSD / SOP / SOE approve	ed by RCMA vide ref. Number with date
		b)	CEMILAC approved RMTC / MTC	Number with date
		c)	Main Contractor's Work Done Repor	t Number with date.
		d)	Contractor's Test Pilot's Acceptance	Report Number with date.
		e)	Customer's Test Pilot's Acceptance F	Report Number with date.
		f)	Signal Out request from Main contra	ctor vide ref. Number with date.
	II.	Airf	rame Hours	:
	III.	Engi	ine Number with completed Hours	:
	IV.	Rele	evant technical notes	: - As applicable -
	V.	Perr	nissions /Authorizations	: (From Service HQrs)
	VI.	Ope	rational Limitations	: (Refer : RMTC/MTC/RSD/OEM)
	VII.	Conc	cessions :	
		a)	By Service HQ :	Nos. (Details as per work done report referred above)
		b)	By Regulatory Authority :	Nos. (Details as per work done report referred above)
2.		-	Unit allocation and arrangements for or salid unless revoked by DGAQA.	collection of the subject Air system by Ferry pilot be made. This
Distri	ibution	s:		Regional Director, AQA
1.			QA, New Delhi	2. ADG (Zonal Office), DGAQA.
1.	-		ector Aircraft )	2. ADG (Zollar Ollice), DGAQA.
3.	RD,	RCM	A	4. CO, AFLE / NLC / AALC (as applicable)
5.			Contractor – This is valid subject to sa still arrival of ferry team.	tisfactory reservation / Storage / Servicing as per approved
6.			uality, Main Contractor	7. AO, DAD, MoD



# FORM - 25A APPLICATION FOR CERTIFICATE OF AIRWORTHINESS (COA)/ SIGNALING OUT CERTIFICATE FOR AN AIR SYSTEM

In accordance with IMTAR-21, Subpart H, 21.H.4

I.	Applicant's R								
1.1	Your Referen	ce:							
2.	Applicant Ad	dres	s and Contact Data	1					
2.1	Applicant Da	ta							
2.2	Name and Address		DGAQA POA/MOA Ref No. (if previous issued)						
			Organisation Name						
			Street No. and Nam	ie					
			City						
			State					Post Code	
			Country						
2.3 Contact Person		on	Title and Full Name	•					
			Position Title						
			Phone						
			Email						
3.	Aircraft / UAS	/ <b>A</b> ]	LM/Engine						
3.1	Registration	3.2	Manufacturer	3.3	Type and	3.4	Serial No.	3.5 Hour	s / Cycles
	Mark:				Model			Since New	Since Overhaul
Aircraft									
Engine									
UAS									
ALM									

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# FORM - 25A APPLICATION FOR CERTIFICATE OF AIRWORTHINESS (COA)/ SIGNALING OUT CERTIFICATE FOR AN AIR SYSTEM

4.	Type	Type Design and Other Information						
4.1	Milita	Military Type Certification / Type Approval Basis (List & attach)						
		MTC/RMTC No	0.:					
		Type Certificate Data Sheet No. and Revision No.:						
		License Agreements for Production:						
		Standard of Pre	paration (SOP):					
		Standard of Equ	ipment (SOE):					
		Customer's Test Pilot's Acceptance Report:						
		Contractor's Tes	st Pilot's Acceptance Report:					
4.2			and Repair Including Product	ion De	viations	,		
			ed since type certification)			1		
4.2.1		ΓΙ/ UON/ ir / Production	4.2.2. Description	4.2.3	Approval / Installation Status	4.2.4	ICA Supplements / Remarks	
	Devia				installation Status		Kemai Ks	
4.3	Modi	fication Details						
4.3.1	Modi No.	fication Leaflet	4.3.2 Description	4.3.3	Issuing Authority	4.3.4	Compliance Status / Comments	

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# FORM - 25A APPLICATION FOR CERTIFICATE OF AIRWORTHINESS (COA)/ SIGNALING OUT CERTIFICATE FOR AN AIR SYSTEM

4.4	Mass and Balance for Air System:
	Report No.:
	Loading Schedule:
4.5	Conformity documentation (provide all applicable – follow the note in the guidance section)
	Statement of Conformity for Air system after Production:
	Acceptance of Production Deviation / Concessions (if applicable):
	Statement of Work carried out for Air system after Maintenance:
	Other:
4.6	Manuals and Instructions for Continuing Airworthiness (ICA)
	Approved Aircraft Flight Manuals and Revision No.:
	Approved Aircraft Maintenance Program and Revision No.:
	Operational Limitations:
	Permission/Authorization from user:
	Other:
5.	Applicable Declaration
	by declared that:
I nore	by declared that.
	All requirements of approved maintenance program and applicable Modification Leaflets / Service Instructions have
	been complied with.
	been complied with.
	been complied with.  The aircraft described above had been inspected and found airworthy in conformance with its approved type data.
_ _	been complied with.  The aircraft described above had been inspected and found airworthy in conformance with its approved type data.  All information provided on this form is true and correct  I understand and accept that for DGAQA to proceed with this application. I have supplied all supporting documentation
_ _	been complied with.  The aircraft described above had been inspected and found airworthy in conformance with its approved type data.  All information provided on this form is true and correct  I understand and accept that for DGAQA to proceed with this application. I have supplied all supporting documentation to DGAQA.
_ _	been complied with.  The aircraft described above had been inspected and found airworthy in conformance with its approved type data.  All information provided on this form is true and correct  I understand and accept that for DGAQA to proceed with this application. I have supplied all supporting documentation to DGAQA.  Signature
_ _	been complied with.  The aircraft described above had been inspected and found airworthy in conformance with its approved type data.  All information provided on this form is true and correct  I understand and accept that for DGAQA to proceed with this application. I have supplied all supporting documentation to DGAQA.
_ _	been complied with.  The aircraft described above had been inspected and found airworthy in conformance with its approved type data.  All information provided on this form is true and correct  I understand and accept that for DGAQA to proceed with this application. I have supplied all supporting documentation to DGAQA.  Signature



### FORM - 28 CLEARANCE FOR SERVICE USE (CSU) OF AIRBORNE STORES

# CLEARANCE FOR SERVICE USE OF AIRBORNE Stores FOR ...... AIR SYSTEM <Name of the Platform>

In accordance with IMTAR-21, Subpart C1, 21.C1.22, 21.C1.23

1.	INTROD	UCTION:
I.	INTROD	UCHON

<Introduction of Airborne Stores to be provided>

### 2. SERVICE CLEARANCE:

<Statement of Service clearance for respective Platform shall be specified>

### 3. BASIS FOR CLEARANCE:

< Related basis of documents for clearance to be specified>

### 4. <u>LIMITATIONS:</u>

<Limitations wrt Airborne Stores to be specified if any>

### 5. <u>CONDITIONS OF CLEARANCE:</u>

- 5.1 This clearance is contingent upon the quality control aspects being cleared by DGAQA, Ministry of Defence, New Delhi.
- 5.2 This clearance will be invalid if any design/drawing changes are made resulting in variation in the build standard with respect to the standard of the equipment type tested.
- 5.3 The clearance is valid for service use on ...........Air System only.
- 5.4 Necessary action to be initiated for issue of renewal/amendment of Type Approval at the earliest.

### 6. <u>TECHNICAL PARTICULARS OF THE AIRBORNE Stores:</u>

i.

ii.

iii.

CEMILAC / RCMA



### FORM - 29 TYPE APPROVAL

Government of India
Ministry of Defence
Centre for Military Airworthiness and Certification



# **Type Approval Certificate**

Type Approval Number.: .....

This is to state that " <airborne name="" stores=""> ", bearing Part No.: designed, developed and</airborne>
manufactured by <contractor name=""> is hereby Type Approved as per the Approved Component Build Standard (ACBS)</contractor>
vide document No
Requirements approved by CEMILAC / RCMA ( <dealing rcma="">). The basis for this Type Approval and the relevant</dealing>
Airworthiness Approval information are described in the 'Type Approval Data Sheet (TADS)' at Appendix A.
This approval is valid subject to terms, conditions and renewal cum amendment details mentioned overleaf.

Chief Executive (Airworthiness)
CEMILAC

Ref. No. CEMILAC / / TA -.....

Date : DDMMYYYY

Encl : TADS

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### FORM - 29 TYPE APPROVAL

### **Terms and Conditions of Type Approval**

- 1. The Provisional Clearances accorded for this product are hereby superseded consequent to issuance of this Type Approval. The process adopted to manufacture this product is sealed henceforth. The Type Approval number quoted above must be reflected in all applicable documents.
- 2. This Type Approval is valid for 10 years unless otherwise cancelled or suspended or revoked. The vendor shall request the respective RCMA under intimation to CEMILAC, for subsequent renewal if required with all relevant documents including performance feedback.
- 3. Any changes to the type approved product shall be effected only with prior concurrence of CEMILAC, Bengaluru 560 037. The Type Approval is not transferable to any other agency without prior approval from CEMILAC.
- 4. This approval is contingent upon strict adherence to the quality control aspects of bulk production as stipulated by DGAQA, Ministry of Defence, Government of India.
- 5. Type Approval shall not constitute authority for fitment and integration on any platform unless called in the Equipment Standard of Preparation (ESOP) / Standard of Equipment (SOE) of the platform or specific clearance for service to that effect.

	Record of Provisional Clearances issued by RCMA	<b>\</b>
Sl. No.	Reference of Provisional Clearance issued/ renewed with date	Validity
1		
2		

	Record of Amendments Approved by CEMILAC					
Sl. No.	Amendment details	<b>Basis and Reference</b>				
1						
2						

Version: 2.0	Date: August 2023

# FORM - 29A APPLICATION FOR ISSUE OF TYPE APPROVAL (TA) / PROVISIONAL CLEARANCE (PC) / LOA (LETTER OF APPROVAL) / INDIAN MILITARY AVIATION TECHNICAL STANDARD ORDER APPROVAL (IMATSOA)

In acc 21.C5		21,Subpart C, 21.C1.22	2, 21.C1.2	23, 21.C1.24, 21	.C1.25, 21.C2.9, 21.C4	1.13, 21.C4.14,21.C5.8,
Select	Applicable	PC 🗆	TA	□ LoA	□ IMATSOA	
1.	Reference					Date:
-						·
2.	Applicant's Informa	tion				
2.1	Applicant Company					
2.1.1	Name and Address	Applicant Number				
	(As per Registration	(Company) Name				
	with Registrar of	Door/Street / Area				
	Companies, India) Companies Act, 2013	Post Office				
		City / State				
		PIN				
2.1.2	<b>Contact Person</b>	Title	□ Mr	□ Ms		
	(Responsible for this application)	Name				
		Last Name				
		Job title				
		Phone/Fax				
		Email (Official)				
2.2	Address for Commu		,			
2.2.1	Address	(Company) Name				
	(Required for communication	Door/Street / Area				
		Post Office	<u> </u>			
	with regard to this application)	City / State	<u> </u>			
		PIN				
2.3	Organisation Approv					
2.3.1	DOA Details	DOA Number	ļ			
	(if applicable)	DOA Validity				
		DOA Scope				
3.	Airborne Stores Des	-				
3.1	Airborne Stores Idea	ntification				

	Version: 2.0	Date: August 2023
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# FORM - 29A APPLICATION FOR ISSUE OF TYPE APPROVAL (TA)/PROVISIONAL CLEARANCE (PC) / LOA (LETTER OF APPROVAL)/ INDIAN MILITARY AVIATION TECHNICAL STANDARD ORDER APPROVAL (IMATSOA)

3.1.1	Airborne Stores Type Number / Part	
	Number	
3.1.2	Airborne Stores Nomenclature	
3.2	CEMILAC Project Code	
3.3	Brief about the Project	Not exceeding 100 words. Please add enclosure for additional details
3.4	IMTAR Subpart	□ 21.C1 □ 21.C2 □ 21.C4 □ 21.C5
4.	Airborne Stores Requ	
4.1	<b>Staff Requirements</b>	If applicable
4.2	Airworthiness	
	Certification Criteria	
4.3	Airborne Stores	
	Requirement	
	Specification	
4.4	Airworthiness Certification Plan	
5.	Airborne Stores Con	figuration
5.1	Standard of	List out all the documents that defines the build standard of airborne Stores. This may
	Preparation	include but not limited to MDI, BOM, VDD, Process document.
6.		Approval Compliance
6.1	<b>Limitations List</b>	
6.2	Type Record	As per Form 29C
6.3	TAB Compliance	
6.4	User Performance	
( =	feed back	A
6.5	DoDP	As per Form 23 for IMATSOA

Version: 2.0 Date: August 2023
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# FORM - 29A APPLICATION FOR ISSUE OF TYPE APPROVAL (TA)/PROVISIONAL CLEARANCE (PC) / LOA (LETTER OF APPROVAL)/ INDIAN MILITARY AVIATION TECHNICAL STANDARD ORDER APPROVAL (IMATSOA)

7.	Applicant's Declaratio	n				
		orized by my Organisation to submit this application form is correct and complete.	on to CEMILAC and that all information			
	PC / TA / LoA / IMATSOA.					
Place						
Date		Head of Design	Signature			
Impo	portant Note: CEMILAC cannot accept applications without signature. Please make sure that the application is					

**Note:** Only references of the documents to be provided in the respective places. This application shall be accompanied by **Form 29C** along with the necessary documents. This application shall be forwarded to dealing RCMA / CEMILAC for further process.

signed and official seal stamped.

Version: 2.0 Date: August 2023

# FORM - 29A APPLICATION FOR ISSUE OF TYPE APPROVAL (TA)/PROVISIONAL CLEARANCE (PC) / LOA (LETTER OF APPROVAL)/ INDIAN MILITARY AVIATION TECHNICAL STANDARD ORDER APPROVAL (IMATSOA)

### **Acknowledgement of Receipt of Application**

1.	Applicant's Reference	Da	ate:
		(Company) Name	
2.	Address	Door/Street / Area	
	(Required for communication with regard to this application)	Post Office	
		City / State	
		PIN	
3.	Airborne Stores Title		

The application has been received on	The application will be reviewed and status will be informed
in due course of time	

RCMA/ CEMILAC For Chief Executive (Airworthiness)

Version: 2.0 Date: August 2023



# FORM - 29B TYPE APPROVAL DATA SHEET (TADS)

In accordance with IMTAR-21, Subpart C, 21.C1.23, 21.C1.24, 21.C1.25, 21.C1.26

Sl. No.	Description	Details / Document Reference
1	Product Name	
2	Part number <sup>1</sup>	
3	Name & address of Design & Development Agency <sup>2</sup>	
4	Name and Address of the Manufacturing agency <sup>3</sup>	
5	Brief Product end use application (about 10 words)	
6	Type Approval Basis (TAB)	
7	Technical Specification <sup>4</sup>	
8	Master Drawing Index (MDI) and Bill of Materials (BOM) <sup>5</sup>	
9	Standard of Preparation (SOP) /ACBS <sup>6</sup>	
10	Qualification Test Schedule (QTS) / Qualification Test Plan (QTP) / Qualification Test Procedure (QTP) <sup>7</sup>	
11	Qualification Test Report (QTR) <sup>8</sup>	
12	Provisional Clearance & renewals / extensions (PC) <sup>9</sup>	
13	Any other relevant information	

QTS / QTP	Compliance Statement
(as per QTS / QTP Reference No.	Issue x, Dated

Sl. No.	QTS / QTP Clause No.	Name of Test	Requirement	Compliance Status / Remarks	Means of Compliance (By testing /Analysis / Simulation/ Similarity Basis / any other means)	Test Report / Supporting Document Reference Number

### <u>Note</u>

1. Part number shall be unique to the product type approved (as in Provisional Clearance) and shall not be changed even if the product undergoes modifications in due course. In exceptional cases where the form, fit and function of the product is affected due to major modifications arising due to end use requirements, the modified product shall be taken up for supplementary type approval with a new part number. The extent of modification and the incremental qualification required for supplementary TA shall be evolved in consultation with RCMA and adequately documented as supplementary type record.

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### FORM - 29B TYPE APPROVAL DATA SHEET (TADS)

- Generally, IPR rests with D&D agency and D&D agency(ies) shall be responsible for any Design changes, Modifications, Defect Investigations, Repair schemes, Lifing studies, etc., that may arise during the life cycle. Any thing contrary to the above shall be explicitly captured in the TOT document duly approved by CEMILAC.
- 3. Manufacturer can be D&D agency itself or may be a development partner during D&D phase or any other agency that may acquire manufacturing rights based on TOT from the D&D agency. Although multiple agencies may manufacture the type approved item with same part number, the product label should adequately capture the name and address of the manufacturer for traceability.
- 4. All technical specifications shall be approved and authenticated by RCMA. Partial compliance and Deviations to Technical specifications are generally NOT acceptable. However, in exceptional cases the product deviations to the technical specification shall be adequately captured and included in the type approval data sheet duly concurred by RCMA.
- 5. The DAL and MDI shall be updated whenever there are issue changes and/ or modifications to the product. The same shall be approved by RCMA and taken up for incorporation in the type record and TA certificate at the time of subsequent TA renewal.
- 6. The product build standard shall be completely defined in the SOP/ ACBS document incorporating the latest issues of the applicable DAL/ MDI and Modifications that may be approved during the product life cycle. The mod leaflets duly approved by RCMA shall be the authority for incorporating such changes till the amendment cum renewal to the TA is issued.
- 7. QTS / QTP shall capture the type certification test requirements in totality and shall be approved by RCMA.
- 8. QTR shall adequately capture the Compliance to QTS requirements and shall be vetted by DGAQA. DGAQA to coordinate all the Test reports carried out as per the QTS. Any deviations to test procedures and results shall be addressed completely and accepted by RCMA before recommending for type approval.
- 9. The renewal and validity and PC shall comply with relevant CEMILAC directives. The Type Approval issued supercedes all earlier PCs issued to the product. Even if the product undergoes modification that warrant field evaluation feedback, fresh PC shall not be issued.
- 10. D&D agency shall follow suitable Configuration Control mechanism (Document reference number, Issue/version numbers, Sections, Page numbers, dates) for easy identification and traceability of all the above documents and their subsequent updates from time to time.

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## FORM - 29C TYPE RECORD FOR AIRBORNE STORES

In accordance with IMTAR-21, Subpart C, 21.C1.23, 21.C1.24 21.C1.25, 21.C1.26

Sl. No.	Contents of Type Record	Details, Reference Number & Date	Identification in Type Record (as Appendix-A onwards with Page numbers)
1	Brief description of the product with end use application (Not more than 50 words)		
2	Identification of aeronautical Stores:		
	a Nomenclature		
	b Part Number		
3	High resolution colour photographs of the aeronautical Stores, Three views – Post Card Size (except for materials / consumables)		
4	Approved Component Build Standard (ACBS)/		
	Standard of Preparation (SoP) Document duly signed by the Designer and RCMA (which shall contain following documents like)***		
	a DAL / MDI (1 set of drawings to be enclosed)		
	b BOM / Index (as applicable)		
	c Process document		
	d Software Version Description Document (VDD)		
	e Any other applicable document that describe the build standard (Eg. Applicable Standards / Specifications for raw materials, paints, FOL items etc)		
5	Request letter for TA by Design and Developing agency to RD, RCMA (IPR holder for the product) Incase manufacturing agency is applying for renewal the application shall be countersigned by D&D agency unless ToT document indicates that IPR has been transferred to manufacturing agency.		
6	Technical Specification		
7	Qualification Test Schedule and Test procedure document duly approved by RCMA.		
8	Qualification Test Reports (QTR) duly vetted by DGAQA (Report shall be uniquely identified by Document Number and Date)		
9	Certificate of Design		
10	Type Approval Basis (TAB)		
11	TAB Compliance (TABC)		
12	Type Approval Data Sheet (TADS) (As per Form 29B)		

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### FORM - 29C TYPE RECORD FOR AIRBORNE STORES

13	ToT document (if applicable). [Scope of ToT shall clearly highlight whether Manufacturing (or) Design & manufacturing. Also clearly mention transfer of IPR if included in scope of ToT]. In case of multiple ToT same shall be indicated.			
14	User Performance feedback, if available (from DGAQA/QA of DPSU/ User Services) and other trial reports			
15	a Cost of the product per unit in rupees			
	b Quantity produced till date			
16	Provisional Clearance and subsequent extensions, amendments issued			
17	Deviations/ Concessions/ limitations w.r.t approval duly / authenticated by RD, RCMA or GD or Director			
18	Any other Remarks			
19	Recommendations of RD, RCMA for Type Approval with comments and observations, if any			

Signature of Head of Design

(With Office Seal)

Date:

Signature of the Main Contractor (If applicable) (Note 1)

(With Office Seal)

Date:

Recommendations of Regional Director (SIGNATURE OF RD WITH SEAL)

#### Note:

- 1. If the applicant is not under DOAS Scheme, Main contractor signature to be obtained
- 2. Type record shall contain all the documents listed.
- 3. Contents of Type Record to be suitably indexed as appendix and flagged for easy identification and traceability
- 4. A soft copy of the Type Record shall be forwarded along with filled application for RMTC/MTC (Form 29A)

\*\*\* DAL / MDI, BOI, Process Document, Software version document, any other document which describe the build standard of the item (identified with Reference & date); shall form part of ACBS/ SoP which shall be identified with suitable reference and date.



### FORM -29D APPLICATION FOR RENEWAL OF TYPE APPROVAL

In accordance with IMTAR – 21, Subpart C, 21.C1.28, 21.C1.29

1 Type Approval No. and Date of Issue 2 Supplementary Type Approvals, if any 3 Product Nomenclature 4 Part Number Name of the firm with Postal Address 5 (If more than one firm is approved for manufacturing, the details of all firms with associated ToT references to be mentioned\*1) Previous Renewals/ Amendments references 6 7 Details of Changes/ Modifications since last renewal that require amendment to the TA, if any (Supporting documents to be enclosed) 8 Current build standard of the item with DAL/ MDI, BoM and SOP/ ACBS references 9 Quantity supplied since last renewal with details: of rejections, if any, and corrective actions 10 Performance Feedback Report from User/ DGAQA/DPSU (Copy to be enclosed)

(Signature of Head of the Design)

Recommendations of Regional Director with comments & observations if any

### (SIGNATURE OF RD WITH SEAL)

#### Note:

1. Copies of complete ToT document shall be forwarded to CEMILAC as and when the ToT is effected

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## FORM - 29E APPLICATION FOR AMENDMENT OF TYPE APPROVAL

In accordance with IMTAR – 21, Subpart C, 21.C1.28, 21.C1.29

1	Type A	Approv	val Number	:
2	Part Number			:
3	Nomenclature of the Stores			
4	Category of Amendment proposed		Amendment proposed	: A/B/C (Refer Note 1)
	i	If category A, Flight trial or User feedback		:
		i) ii) iii)	Company Name Change Company Address Change Inclusion of multiple manufacturer (All applicable documents like TOT, PC, QTR etc. to be submitted) (Relevant documents to be submitted as Category A i) & ii)	per applicable CEMILAC Directive for
	supported with (Add and reference)		egory B, list of limitations and justification orted with flight trial feedback and refer the separate sheets as kure, if necessary)	:
		a)		
		b)		
		c)		
	iii)	If cat	egory C, list of new limitations and reasons	:
5)	Governing Specification :			:
6)	Standard of Preparation or Build Standard :			:
7)	Qualit	fication	n Test Plan / Test record	:
	The S	erial N	Tumbers 4, 5 and 6 above are applicable ON	Y if there is change in the issue / version from the issued Type
Appro				
				(Hardafala Dadan)
				(Head of the Design
				(Same authority as the issuer of Certificate of Design

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Recommendations of Regional Director (SIGNATURE OF RD WITH SEAL)



#### FORM - 29E APPLICATION FOR AMENDMENT OF TYPE APPROVAL

#### Note 1:

Amendment is needed for the following category:

Category A: i) Company Name Change

- ii) Company Address Change
- iii) Inclusion of multiple manufacturer (All applicable documents like TOT, PC, QTR etc. to be submitted)

Inclusion of other platforms in addition to those mentioned in the Type Approval.

Category A: Inclusion of other platforms in addition to those mentioned in the Type Approval.

**Category B:** Overcoming of limitations stated in the initial approval. This is to be supported with details of Design MODs/Upgrades/ Revisions taken up and proven adequately through ground runs and flight trials as deemed necessary.

**Category C:** Additional limitations / conditions that arise during service exploitation. These limitations / conditions might not have been foreseen during the initial approval.

#### Note 2:

The following DO NOT qualify to be taken up with CEMILAC through Form 29E:

- a Modifications under the purview of LMC
- b Changes to the Type record that do not lead to addition or removal of limitations/ conditions stated in the initial approval and
- c Changes to the Type record that do not alter the Compliance Matrix given in the Appendix 'A' of the initial TA.

The above mentioned aspects have to be ratified by the respective RCMA through LMC, as an interim endorsement to TA till it comes up for renewal. The ratification document issued by the RCMA shall restrict the scope and validity of to the subject purpose under consideration only



#### FORM - 30 MILITARY TYPE CERTIFICATE

Government of India
Ministry of Defence
Centre for Military Airworthiness and Certification



## **Military Type Certificate**

MTC Num	
	certifies that the type design for the following refore as specified in the Type Certificate Data Sheet, meets the Airworthiness Regulations-21.
This certificate, and the Type Certificate Data Shee suspended, revoked or a termination date is otherwise esta	et which is a part hereof shall remain in affect until surrendered, ablished by Chief Executive (Airworthiness).
Issued under the seal	Chief Executive (Airworthiness)
File Number : Date : This certificate has pages. Enclosure : Details of MTC	
Version: 2.0	Date: August 2023



## FORM - 30 MILITARY TYPE CERTIFICATE

In accordance with IMTAR-21, Subpart B, 21.B1.20	<u>9, 21.B2.21, 21.B3.22, 21.B4.20</u>
Details of the TC Holder	
ASDOA Number	
(Company) Name	
Address	
Air System Details	
Air System Type Number / Part Num-ber	
Air System Nomenclature	
CEMILAC Project Code	
IMTAR Sub-part	
Staff Requirements	
Airworthiness Certification Criteria	
Air System Requirement Specification	
Type Certification Basis	
Airworthiness Certification Plan	
Standard of Preparation	
Standard of Equipment	
TCB Compliance	
Limitations List	
Type Certificate Data Sheet	

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In acc	ordance with IMTAR-2	21, Subpart B, 21.B1.1	9, 21.B1.20, 21.B2.2	20, 21.B2.21, 21.B3.20, 21.	B4.18
Select	Applicable	RMTC	МТС		
1.	Reference	,			
1.1	Applicant's Reference	ce			Date:
		•			•
2.	Applicant's Informa	tion			
2.1	Applicant Company	Data			
2.1.1	Name and Address	Applicant Number	]		
	(As per Registration	(Company) Name			
	with Registrar of Companies, India)	Door/Street / Area			
	Companies Act,	Post Office			
	2013	City / State			
		PIN			
2.1.2	<b>Contact Person</b>	Title	□ Mr □ Ms	□ Dr	
	(Responsible for this application)	Name			
	upplication)	Last Name			
		Job title			
		Phone/Fax			
		Email (Official)			
2.2	Address for Commu	nication			
2.2.1	Address	(Company) Name			
	(Required for	Door/Street / Area			
	communication with regard to this application)	Post Office			
		City / State			
		PIN			
2.3	Organisation Approv	val Details			
2.3.1	<b>DOA Details</b>	DOA Number			
	(if applicable)	DOA Validity			
		DOA Scope			
3.	Air system Description				
3.1	Air system Identifica	ition			
3.1.1	Air system Type Number / Part Number				

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3.1.2	Air system Nomenclature				
3.2	CEMILAC Project Code				
3.3	Brief about the Project	Not exceeding 100 words. Please add enclosure for additional details			
3.4	IMTAR Sub-part	□ 21.B1	□ 21.B2	□ 21.B3	□ 21.B4
4.	Air systems Requirer				
4.1	Staff Requirements	If applicable			
4.2	Airworthiness Certification Criteria				
4.3	Air system Requirement Specification				
4.4	Type Certification Basis				
4.5	Airworthiness Certification Plan				
5.	Air systems Configuration				
5.1	Standard of Preparation				
5.2	Standard of Equipment				
6.	Air systems Type Certification Compliance				
6.1	TCB Compliance				
6.2	<b>Limitations List</b>				
6.3	Type Certification Data Sheet	As per Form 3	30B		
6.4	Type Record	As per Form	30C		



7.	Applicant's Declaration
, •	11ppiicant 5 Deciai ation

I declare that I am authorized by my Organisation to submit this application to CEMILAC and that all information provided in this application form is correct and complete.

I acknowledge that I have read and understood the IMTAR - 21.

I understand that the submission of the application, by itself, does not entitle RMTC / MTC.

Place			
Date	Authorized Signatory Head of Design	Signature	Office Seal

**Important Note:** CEMILAC does not accept applications without signature. Please make sure that the application is signed and official seal stamped.

**Note:** Only references of the documents to be provided in the respective places and this application shall be accompanied by **Form 30C** along with the necessary documents. This application shall be forwarded to dealing RCMA / CEMILAC for further process.

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#### **Acknowledgement of Receipt of Application**

1.	Applicant's Reference	Date	
2. Address	(Company) Name		
	(Required for communication with regard to this application)	Door/Street / Area	
		Post Office	
		City / State	
		PIN	
3.	Air System Title		
	The application has been received	ot CEMIL AC on	The application will be reviewed and status

will be informed in due course of time.	
	RCMA/ CEMILAC
	For Chief Executive (Airworthiness)



#### FORM - 30B TYPE CERTIFICATE DATA SHEET

### **Type Certificate Data Sheet**

**Revision History** 

Document 1	vumber	, version	, Date
	Air Syste	em Type Number	/ PN
	Air Syste	m Nomenclature	
	ASDO N	Name	
	ASDO A		

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#### FORM - 30B TYPE CERTIFICATE DATA SHEET

#### **Contents**

#### I. GENERAL

- 1. Type/Model
- 2. Performance Class
- 3. Certifying Authority
- 4. Manufacturer
- 5. CEMILAC Certification Application Date
- 6. CEMILAC Type Certification Date

#### II. CERTIFICATION BASIS

- 1. Type Certification Basis
- 2. Special Conditions
- 3. Exemptions / Deviations
- 5. Environmental requirements
- 6. Operational Suitability Data

#### III. TECHNICAL CHARACTERISTICS AND OPERATIONAL LIMITATIONS

#### IV. OPERATING AND SERVICE INSTRUCTIONS

- 1. Air System Flight Manual
- 2. Maintenance Instructions and Airworthiness Limitations

#### V. OPERATIONAL SUITABILITY DATA (OSD)

- 1. Master Minimum Equipment List
- 2. Flight Crew Data
- 3. Cabin Crew Data
- VI. CERTIFICATE OF CONFORMITY AS PER FORM NO. 52 (By the Quality Head of the Organisation duly endorsed by DGAQA as Applicable)



## FORM - 30C TYPE RECORD FOR AIR SYSTEM

In accordance with IMTAR-21, Subpart B, 21.B1.19, 21.B2.20, 21.B3.20, 21.B4.18

Sl. No.	Contents of Type Record	Details, Reference Number & Date	Identification in Type Record (as Appendix-A onwards with Page numbers)
1	Brief description of the Air System (Not more than 50 words)		
2	Identification of Air System		
	a Nomenclature		
	b Part Number		
3	High resolution colour photographs of the Air System, Three views – Post Card Size (except for materials / consumables)		
4	Standard of Preparation (SoP) Document duly signed by the Designer and RCMA (which shall contain following documents like)		
	a MDI (1 set of drawings to be enclosed) at Air System level.		
	b Standard of Equipment (SOE)/ Equipment Standard of Preparation (ESOP)		
	c Process document		
5	Reference of the application for issue of RMTC/MTC by Design and Developing agency to RD, RCMA.		
6	Air System Requirement Specification (ARS)		
7	Airworthiness Certification Criteria & Airworthiness Certification Plan		
8	Qualification Test Schedule and Test procedure document for all the airborne Stores duly approved by RCMA/CEMILAC		
9	Qualification Test Reports (QTR), Ground Test Report, Flight Test Report for all the airborne Stores duly vetted by DGAQA (Report shall be uniquely identified by Document Number and Date)		
10	Certificate of Design (CoD)		
11	Type Certification Basis (TCB)		
12	TCB Compliance (TCBC)		
13	Type Certificate Data Sheet (TCDS) (As per Form 30B)		
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### FORM - 30C TYPE RECORD FOR AIR SYSTEM

Sl. No.	Contents of Type Record	Details, Reference Number & Date	Identification in Type Record (as Appendix-A onwards with Page numbers)
14	ToT document (if applicable). [Scope of ToT shall clearly highlight whether Manufacturing (or) Design & manufacturing. Also clearly mention transfer of IPR if included in scope of ToT]. In case of multiple ToT same shall be indicated.		
15	User Performance feedback, if available (from DGAQA/QA of DPSU/ User Services) and other trial reports		
16	<ul><li>a Cost of the product per unit in rupees</li><li>b Quantity produced till date</li></ul>		
17	RMTC and subsequent extensions, amendments issued if applicable		
18	Deviations/ Concessions/ limitations w.r.t approval duly / authenticated by RD, RCMA or GD or Director		
19	Any other Remarks		

Signature	of Hood	of Docian
Signature	от неяа	or Design

Date:

#### Note:

- 1. Type record shall contain all the documents listed.
- 2. Contents of Type Record to be suitably indexed as appendix and flagged for easy identification and traceability
- 3. A soft copy of the Type Record shall be forwarded along with filled application for RMTC / MTC (Form 30A)

\*\*\* DAL / MDI, BOI, Process Document, Software version document, any other document which describe the build standard of the item (identified with Reference & date); shall form part of ACBS / SoP which shall be identified with suitable reference and date.



#### FORM -30D APPLICATION FOR RENEWAL OF RMTC/MTC FOR AIR SYSTEM

In accordance with IMTAR – 21, Subpart B, 21. B1.26, 21. B2.27,21. B3.28,21. B4.26

1)	RMTC/MTC No. and Date of Issue	:
2)	Air System Details	:
3)	Name of the firm with Postal Address	:
4)	Previous Renewals If any	:
5)	Details of Changes/ Modifications since last renewal that require amendment to the RMTC/MTC, if any(Supporting documents like AMTC/SMTCor Approved Modification leaflets to be enclosed)	
6)	Current build standard of the Air System with SOP, SOE references	:
7)	Quantity supplied since last renewal with details of rejections, if any, and corrective actions	:
8)	Performance Feedback Report from User/ DGAQA/DPSU (Copy to be enclosed)	:

(Signature of Head of the Design)



## FORM - 31 DETAILS OF MODIFICATION PROPOSED FOR AIR SYSTEM / AIRBORNE STORES

In ac	ccordance with IMTAR -21, Subpar	rt D, 21.D.8, Subpart E,	21.E.5	
I.	Originator		S	Serial No.
	Mod No	Class	I	Date
	Mod proposed for embodiment	at		
	Title			
II.				
1	Reason for introducing Mod			
2	Trial Installation Required Yes			
3	Flight Trials Required Yes	/ No		
4	Effect or Relationship with any o	ther Mod, STI or SI		
5				
6				
7	List of new Parts required per Air			
	Part Number	<u> </u>		
	Issue			
	Nomenclature			
	Qty per Air system /Airborne St	ores		
8	Agency responsible to supply kit			
9	Existing Part Rendered Redundar			
,	Existing Fart Rendered Redundar			
	Part Number			
	Issue			
	Nomenclature			
	Qty per Air system / Airborne S	tores		
10	Existing parts which can be recov	vered after rework		
	Old Pt. No.		New Pt. No.	
	Issue		Issue	
	Description		Description	
	Qty per Air System / Airborne Stores		Qty per Air System / Airborne Stores	



## FORM - 31 DETAILS OF MODIFICATION PROPOSED FOR AIR SYSTEM / AIRBORNE STORES

(a)	Cost of Modification Kit per Air System /Airborne Stores: Rs									
	Mod	Kit	Issue N	Nomenclature		Qty. per				
	Pt. N	0.				Air System /Airborne Stores				
(b)	New	Parts		Cost		No. of Air System /Airborne Store				
	(i)	Tooling								
	(ii)	Materials								
	(iii)	Fabrication								
	(iv)	Proprietary Item	ns							
	(v)	Man-hours for	embodiment							
(c)	Rewo	ork								
	(i)	Tooling	Rs		<u></u> ·					
	(ii)	Parts	Rs		(No. of sets	)				
(d)	Total	cost of introducing	ng Mod for the	No. of Air Sys	stem given in Para (6	) above				
	(b+c)	)	Rs		_					
(e)	Redu	ndancy								
	(i)	Tooling	Rs							
	(ii)	Parts	Rs		_					
Fore	ign excl	nange requiremen	t							
Whe	ther Fre	sh allotment requ	ired: Yes/N	lo						



## FORM - 31C APPLICATION FOR APPROVAL OF REPAIR SCHEME

In accordance with IMTAR-21, Subpart M, 21.M.3, M, 21.M.4

Refe	rence				
Appl	icant'	s Reference			Date:
1.	Oper	rator	:		
2.	Airc	raft Type	:		
3.	Airc	raft Registration / Tail No.	:		
4.	Man	ufacturer of Aircraft	:		
5.	Agei	ncy Carrying out Repair	:		
6.	Repa	air Reference No.	:		
7.	-	air Classification along with justification thereof e carried out as per provisions of 21.M.2)	:	Minor /Major	
8.	Brie	f Description of Repair	:		
9.	Original Drawings Affected		:	Yes / No	
10.	New	Drawings Introduced	:	Yes / No	
11.	Any	of the following is Affected			
	a.	Operating Limitations	:	Yes / No	
		(Safety / Strength / Life / Configurations)			
	b.	Operating Procedures	:	Yes / No	
		(Performance / Functioning)			
	c.	Maintenance procedures	:	Yes / No	
	d.	Interchangeability	:	Yes / No	
12.	List	of Affected Manuals	:		
13.	Brie	f on Affected Manuals	:		



14.

15.

Requirement for S I/STI

Brief on SI / STI

#### FORM - 31C APPLICATION FOR APPROVAL OF REPAIR SCHEME

Yes / No

Signatory (Design)	
(with Remarks)	
Signatory (Methods)	
(with Remarks)	
Authorization from Chief of Design	
Approval:	
(By RCMA / CEMILAC For Repairs classified as Major of if	
any of 11(a)(b)(d) is Yes)	
(By RCMA / CEMILAC / DO if authorized through privileges,	
For Repairs classified as Minor or if 11(a)(b)(d) is No)	



#### FORM - 32 ALTERATION / AMENDMENT FOR AIR SYSTEM / AIRBORNE STORES

In accordance with IMTAR-21, Subpart D, 21.D.4 Subpart E, 21.E.4

#### AMENDMENT / ALTERATION / DRAWING CHANGE FORM

	Name	& Sign	nature	Da	ate	ALT / AMD N	No.	LRU / AIRFRAME
PREPARED BY						REASON FOR CHA	ANGE	PROJECT
CHECKED BY								REF. DRG. / DAL NO.
INTERNAL APPROVAL BY								
LIAISON BY						DRAWING / DAL N	NAME:	PARTS AFFECTED
COORDINATED BY RDAQA								
APPROVED BY RCMA								
RELEASED BY *								
DISPOSITION OF FABRICATED PARTS	NOT AFFECTED	USE **	REWORK **	SCRAP **	NO STOCK	EFFECTIVE ON PA	ART NO.	AMD. CLASS
BLOCK AFFECTED	~					AMD. INCORPORATED IN DRAWING YES	ISSUE NO.: DATE	AMD NO.

Sl. No.	Old Drawing No.	New Drawing No.	Old MDI No.	New MDI No.	Change Description	Change Notice (CN) No. / Project Slip (PS) No.	Applicability
1.							
2.							
3.							
4.							

_				
Orga	nic	atıor	ı Nan	ne:

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<sup>\*</sup>Concerned Liaison / Release agency

<sup>\*\*</sup> Specific applicable cases shall be discussed with concerned field establishment of CEMILAC & DGAQA and production agencies.



### FORM - 33 ADVANCE MODIFICATION INFORMATION FOR AIR SYSTEM /AIRBORNE STORES

In accordance with IMTAR-21, Subpart D, 21.D.8, Subpart E, 21.E.5

NAME ( DESIGN A		ADVA MODIFI INFORM	CATION	PROJECT		ICATION O.	CLASS	AMEND. NO.	DATE
1 Title				4 Applicabilit	у		5 Requir	ement	
2 Reason				6 Relations w	ith other M	ODs, STI, S	I, Etc.		
3 History				7 Trial Comp	liance repor	t details if re	equired		
10 Comments by Originators Remarks				8 Drawings/P	8 Drawings/P.S				
Production Engg -					NEW	R	evised	Not Requir	ed
Quality Control - Platform RCMA ORDAQA - User Rep-				<ul><li>9 Other Aspect</li><li>a New Compound</li><li>Ref. Part No</li><li>b Manf./Supp</li><li>c MTC/RMTO</li><li>d MOD status</li></ul>	Components e Performance Part No. f Interface C/Supplier g Materials /RMTC h Process			j EMI/EM k Safety l GSE	IC
Approval (Originators)	Compiled by	Checked by	Approved by	Clearance  Regional Director  RCMA			Sheet 1 of 2	Sheets	

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#### FORM - 33 ADVANCE MODIFICATION INFORMATION FOR AIR SYSTEM /AIRBORNE STORES

11 Interchangeshilit	v affected?		Yes/No		
11 Interchangeabilit	y affecteu?		I CS/INO		
12 Operation by Air	crew affected?		Yes/No		
13 Operation by Gro	ound crew affected?	?	Yes/No		
14 Accessibility affe	ected?		Yes/No		
15 Maintainability a	ffected?		Yes/No		
16 Documentation a	iffected?		Yes/No		
17 Spares affected?			Yes/No		
18 Equipment affect	ted?		Yes/No		
19 Retro embodime	nt man hours (Estin	nated)			
20 a. Weight change					
20 b. Moment chang	<u> </u>				
21 Dimension Changes			Yes/No		
				Clearance	
Approval				Regional Director	
(Originators)	Compiled by	Checked by	Approved by	RCMA	Sheet 2 of 2 Sheets

NOTE: Give full details if answer to Sl. No. 11 to 18 is "Yes".



### FORM - 34 FORMAT OF INDEX OF MODIFICATIONS FOR AIR SYSTEM /AIRBORNE STORES

In accordance with IMTAR – 21, Subpart D, 21.D.9 Subpart E, 21.E.5

Mod No.	Category	Description @	LMC Meeting No. at which approved	Applicab- ility*	\$P.O.E in Prodn. No. of AC/ Eng/ Rotable	Whether retro compliance required and if so when? i.e Whether during O/H or at any other point	Remarks	
*-Specific Mk No. of Air system /Airborne Stores Engine or Rotable is to be indicated and As many separate columns as needed to cover all marks to be opened. @-Description should be brief.\$-P.O.E stands for Point of Embodiment in production.								
Signatu	re of Main c	ontractor Design		Signature	e of Methods	Si	gnature of Quality	
Coordination of CEMILAC								



## FORM - 35 MODIFICATION LEAFLET FORMAT FOR AIR SYSTEM /AIRBORNE STORES

In ac	ccorda	nce with IMTAR – 21, Subpart D, 21.D.9 Subpart E, 21.E	.5	
	ΑU	JTHORITY	Number  Date	
	(Nan	ne & Address of Contractor / Firm)		
		MODIFICATION L	EAFLET	
			Sheet No	
Title			Class Type	
1	Reas a b c d e f	Substantiation Objective Operation Repair Scheme Interchangeability Compliance Approval		
2	Emb a b	odiment  Whether retro mod is applicable: Compliance of retro mod  i Immediate  ii During MR / CR  Whether the mod is within the capability of complianc	e	
		<ul><li>i By user unit</li><li>ii At user unit by Organisation</li><li>iii At Organisation only</li></ul>		



### FORM - 35 MODIFICATION LEAFLET FORMAT FOR AIR SYSTEM /AIRBORNE STORES

- d Cost of Embodiment
  - i Mod Kit per Air System / Airborne Stores supplied to User unit
  - ii Embodiment of Mod per Air System / Airborne Stores by Organisation team at User unit
  - iii Embodiment of mod per Air System / Airborne Stores at Organisation
- 3 Approximate Time Required
  - i Supply of Mod Kit
  - ii Embodiment of Mod on Air System
- 4 Documents / Drawing Required
- 5 Parts and Special Tools Required
- 6 Modification of Spares
- 7 Change of Reference Nos. or Assembly No.
- 8 Sequence of Operation
- 9 Special Tests after Embodiment
- 10 Record Action
- 11 Disposal of Redundant Parts
- 12 Effect on Weight and Balance
- 13 Effect on Air System or Equipment Operation, Handling and Maintenance
- 14 Effect on Publications
- Relationship of the mod with other existing modifications

Amendment to be introduced to technical Data Book / Maintenance and Servicing Manual / Parts catalogue and other publications as applicable

Signature Signature Signature Head of Design Head of Methods Head of Quality

Approval by CEMILAC



Sl. No.

#### FORM - 36 APPLICATION FOR CONCESSION ON MODIFICATION / SI/ STI/ SB

In accordance with IMTAR – 21, Subpart F 21.F.22, Subpart D 21.D.10, Subpart E 21.E.10

#### PART A

(To be completed by the Main Contractor / Firm)

Date:

Signature of Head of Quality

1	Nam	e and Address of the Contractor / Firm	:	
2	Nam	e / Description of the Modification	:	
3	SOP	/ SOE Ref No. and Date:		
4		of the Modification / Bulletin / Change Notice ete whichever is not applicable)	:	
5		s of Modification along with reference to C Decision.	:	
6	Reas	sons for Concession		
	i	Drawing / Tech. data not available	:	
	ii	Modified Component / Material / Spares		
		not available	:	
	iii	Tooling / Machinery not available	:	
	iv	Any Other	:	
7.	Actio	on taken for overcoming the problem		
	state	d in Para (6) above	:	
8.	Perio	od for which Concession is sought	:	
9.	Nos.	of Air Systems / Airborne Stores	:	
		eted by this Concession		
	•	ntion Serial Nos. and part numbers		
	also	wherever applicable).		

Signature of Design Rep



### FORM - 36 APPLICATION FOR CONCESSION ON MODIFICATION / SI/ STI/ SB

	<u>PART - B</u> Remarks of ORDAQA	
1	Reference No.	
		[Signature] ORDAQA
	PART - C (To be completed by Chairman L.C.C.)	
1	Decision of LCC:	
2	Reference No. LCC Meeting:	
		[Signature] Chairman LCC
(7)	PART - D	5/2 1/3
(10	be completed by concerned Directorate of User service HQ for Class I Decision of User service Headquarters:	B/2 modifications).
1	Reference No.	
		[Signature] Dated :



## FORM - 38A APPLICATION FOR TRANSFER OF RMTC/MTC

In ac	cordance with IM7	TAR – 21, Subpart B, 21.B1.25, 2	1.B2.26, 21.B3.	.27, 21.B4.25		
1.	Grantor's Refe	erence			Date:	
		•			<u>.</u>	
2.	MTC / RMTC	Details				
2.1	RMTC / MTC	MTC Number and Date of Issue	;			
	Details	Validity of MTC				
		Type Number / Part Number				
		Air System Nomenclature				
		MTC issued under Subpart	□ 21.B1	□ 21.B2	□ 21.B3	□ 21.B4
		Latest TCDS Reference				
3.	Grantor's (MT	C Holder) Information				
3.1	Applicant Com					
Nam	e and Address	Applicant Number				
(As p	per Registration	(Company) Name				
	Registrar of	Door/Street / Area				
	panies, India)	Post Code				
Com	panies Act, 2013	City / State				
		PIN				
3.2		pproval Details				
	<b>Details</b>	DOA Number				
(if ap	oplicable)	DOA Validity				
		DOA Scope				
4.	Receiver's Info	rmation				
4.1	Address	(Company) Name				
	(Required for	Door/Street / Area				
	communication with regard	Post Code				
	to this	City / State				
	application)	PIN				
4.2	<b>DOA Details</b>	DOA Number				
	(if applicable)	DOA Validity				
		DOA Scope				

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#### **FORM - 38A APPLICATION FOR TRANSFER OF RMTC/MTC**

5.	Transfer Details						
5.1	Reasons for Transfer						
5.2	Transfer Agreement						
6.	Grantor's Declaration						
this a	pplication form is correct	y my Organisation to sign this application to CEMII and complete.  and understood the IMTAR – 21.	LAC and that all information provided in				
	· ·	n of the application, by itself, does not entitle transfe	or of PMTC / MTC				
Place		if of the appreciation, by fisch, does not entitle transfer	of the Rivire / Ivire.				
Date:		Name	Signature				
7.	Receiver's Declaration						
provi		norized by my Organisation to sign this application m is correct and complete.	to CEMILAC and that all information				
	I acknowledge that I have	ve read and understood the IMTAR – 21.					
	I understand that the submission of the application, by itself, does not entitle transfer of RMTC / MTC.						
_	I understand that the transfer entitles the privileges of a MTC holder but also assumes all responsibilities. These responsibilities include the continued airworthiness responsibilities for all aircraft produced under that MTC (inclusive of those aircraft produced by previous MTC holders).						
Place	:						
Date	:	Name	Signature				

Important Note: CEMILAC does not accept applications without signature. Please make sure that the application is signed and official seal stamped. This Application should be sent by fax, e-mail or regular mail to: The Chief Executive (Airworthiness) Centre for Military Airworthiness & Certification (CEMILAC) Defence R&D Organisation, Ministry of Defence Marathahalli Colony Post, Bengaluru - 560037 Fax: +91 (0)80 25230856 E-mail: ce.cemilac@gov.in

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### FORM - 38A APPLICATION FOR TRANSFER OF RMTC/MTC

#### **Acknowledgement of Receipt of Application**

1.	Applicant's Reference		Date
2.	Address	(Company) Name	
	(Required for communication with regard to this application)	Door/Street / Area	
		Post Office	
		City / State	
		PIN	
3.	Air System Title		
n du	The application has been received on ecourse of time.	on The appl	lication will be reviewed and status will be informed



### FORM - 38B APPLICATION FOR TRANSFER OF PC/TA/ LOA/IMATSOA

In accordance with IMTAR – 21, Subpart C, 21.C1.26, 21.C1.27, 21.C2.3, 21.C2.4,21.C4.15, 21.C4.16, 21.C5.15, 21.C5.16

						1		
1.	Grantor's Reference					Date:		
2.	PC / TA / LoA / IMA	TSOA Details						
2.1	PC / TA / LoA / IMTSOA Details	PC / TA / LoA / IMATSOA Number and Date of Issue						
		Validity of PC / TA / LoA / IMATSOA						
		Type Number / Part Number						
		Airborne Stores Nomenclature						
		TA issued under	□ 21.C1	□ 21.C2	□ 21.C3	□ 21.C4		
		Subpart	□ 21.C5	□ 21.C6				
		Latest TADS Reference						
3.	3. Grantor's (TA Holder) Information							
3.1	Applicant Company							
	and Address	Applicant Number						
(As pe	er Registration with	(Company) Name						
Regis	trar of Companies,	Door/Street / Area						
India)		Post Code						
Comp	anies Act, 2013	City / State						
		PIN						
3.2	Organisation Approv	val Details						
DOA	Details	DOA Number						
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		DOA Validity						
		DOA Scope						
			•					
4.	Receiver's Informati	on						
4.1	Address	(Company) Name						
	(Required for	Door/Street / Area						
	communication	Post Code						
	with regard to this application)	City / State						
		PIN						

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## FORM - 38B APPLICATION FOR TRANSFER OF PC/TA/ LOA/IMATSOA

4.2	<b>DOA Details</b>	D	OA Number			
	(if applicable)	D	OA Validity			
		D	OA Scope			
5.	Transfer Details					
5.1	Reasons for Trans	sfer				
5.2	Transfer Agreeme	ent				
6.	Grantor's Declara	ation				
				•	n to CEMILAC and that all information	
	provided in this app	plicatio	on form is correct a	nd complete.		
	I acknowledge that	I have	e read and understo	od the IMTAR – 21.		
	I understand that th	ie subn	nission of the appli	cation, by itself, does not entitle	transfer of PC / TA / LoA / IMATSOA	
Place	:					
Date	:		Name		Signature	
		,				
7.	Receiver's Declar	ation				
	I declare that I am provided in this app			•	n to CEMILAC and that all information	
	I acknowledge that I have read and understood the IMTAR – 21.					
	I understand that the submission of the application, by itself, does not entitle transfer of PC / TA / LoA / IMATSO					
		nese re	sponsibilities inclu	de the continued airworthiness	IMATSOA holder but also assumes all responsibilities for all Airborne Stores	
Place	:					
Date	· ·			Name	Signature	

	Note:	: This application shall be forwarded to dealing RCMA/CEMILAC for further process.	
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#### FORM - 38B APPLICATION FOR TRANSFER OF PC/TA/ LOA/IMATSOA

## **Acknowledgement of Receipt of Application**

1.	Applicant's Reference	Date			
2.	Address	(Company) Name			
	(Required for communication with regard to this application)	Door / Street / Area			
		Post Office			
		City / State			
		PIN			
3.	Airborne Stores Title				

The application has been received on	The application will be reviewed and status will be informed
in due course of time.	

CEMILAC
For Chief Executive (Airworthiness)



#### FORM - 40 BOUGHT-OUT ITEM CLEARANCE

#### CLEARANCE OF AIRBORNE STORES FOR ......

#### AIR SYSTEM <Name of the Platform>

In a	iccorda	ance with IMTAR-21, Subpart N, 21.N.3
1.		RODUCTION: roduction of Airborne Stores to be provided>
2.		VICE CLEARANCE: tement of BoI clearance for respective Platform shall be specified>
3.		ICS FOR CLEARANCE: ated basis of documents for clearance to be specified>
4.		ITATIONS: nitations wrt Airborne Stores to be specified if any>
5.	5.1 5.2	This clearance will be invalid if any design/drawing changes are made resulting in variation in the build standard with respect to the standard of the equipment type tested.  The clearance is valid for service use on
6.	TEC	HNICAL PARTICULARS OF THE AIRBORNE Stores:  i.  ii.  iii.

CEMILAC / RCMA



# FORM - 40A APPLICATION FOR CLEARANCE OF AIRBORNE STORES IMPORTED FROM FOREIGN COUNTRY

#### In accordance with IMTAR-21, Subpart N, 21.N.3 & Subpart S, 21.S.2

- 1. Whether clearance required for development flight trials/series production:
- 2. Requirements / Technical Specification approved by CEMILAC:
- 3. Brief Description and Intended usage:
- 4. Details of the airborne Stores meeting the spec / Req referred at para 2:
  - a. Part No. of the Airborne Stores:
  - b. OEM of the airborne Stores:
  - c. Country of Origin:
  - d. OEM Technical Specification reference (Copy to be enclosed)
- 5. Details of the OEM:
  - a. Name & address:
  - b. DOA from country of Origin (if available copy to be enclosed):
  - c. Details of airborne Stores delivered:
- 6. Details of the proposed airborne Stores:
  - Whether the airborne Stores is approved /Certified by National Civil/Military Airworthiness Authority: if yes following to be provided
    - Name of the Airworthiness Authority:
    - Certificate / Approval reference: (Copy to be enclosed)
    - Validity of the approval referred above:
    - Limitations &Conditions of Approval:
  - b) If already installed/in service with other Aircraft / Helicopter / Engines, details thereof:
  - c) Qualification Test Plan & Reports: (To be enclosed)
  - d) Design Declaration Performance by OEM: (To be enclosed)
- 7. Compliance Report by the applicant to Spec referred at para 2:
- 8. Details required to be submitted for issue of Development Flight Clearance / Integration Clearance.
  - Compliance Report by the applicant to meet the SOFT/LQT requirements:
  - Compliance Report by the applicant to meet the Software / CEH certification requirements as defined in Sl. No. 2:
  - Lab Integration Test details:
  - Aircraft ground integration test details:
  - Conditions / Limitations for use on the Platform: (To be provided by the applicant)

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# FORM - 40A APPLICATION FOR CLEARANCE OF AIRBORNE STORES IMPORTED FROM FOREIGN COUNTRY

- 9. Details required to be submitted for issue for series Production / Procurement / Bol Clearance:
  - Compliance Report by the applicant to meet the QT requirements:
  - Compliance Report by the applicant to meet the Software / CEH certification requirements as defined in Sl. No. 2
  - Flight Test Reports:
  - Lifing details of the airborne Stores:
  - M.T.B.F & M.T.B.R:
  - Documents required for continued airworthiness:
  - Documents required for in service maintenance:
  - Details of TTGE:

#### 10. Design Declaration:

I declare that I am authorized by my Organisation to submit this form to CEMILAC and that all information provided in this form is based on the technical data provided by the OEM of the airborne Stores.

I acknowledge that I have read and understood the IMTAR – 21.

I understand that the submission of the application does not entitle certification by CEMILAC

Signature Head D&D

- 11. Quality Assurance / Inspection Approval details
  - a) Is the Company supply the airborne Stores has/have the approval of the Civil / Military authorities of the country of origin.
  - b) Name and rank of the release note signatory.
  - c) A brief outline of the Quality Assurance Program / Plan prevailing at the works of the supplier.
- 12. Chief of Quality Declaration:

I have studied the Quality Assurance / Inspection approval details submitted by the OEM of the airborne Stores and found to be satisfactory.

The airborne Stores manufactured by this OEM will meet all the necessary Quality requirements for the subject airborne Stores and the same can be installed on the Air System.

Name Signature

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## FORM - 44 DEFECT INVESTIGATION REPORT FORMAT

In accordance with IMTAR – 21, Subpart C, 21.C1.18, 21.C1.19

Part - I: (Reference): Incident / Accident/ Snag / Explosive									
a)	Defect Report (DR) No.	:	(as per DR Control form)	b)	Date of Occurrence		DD/MM/YYYY		
c)	Installation Details	:		(Airci	raft / Main Equipment Sl. 1	No.	)		
Part - II: (Details of Defective Component)									
a)	Trade	:		b)	Date Component received	:			
c)	System/Sub System	:		d)	Main Assembly *	:			
e)	Nomenclature	:		f)	MOD Status	:			
g)	Part No.	:		h)	Sl. No.	:			
i)	Firmware Version	:		j)	Software Version	:			
k)	Date of Installation	:	DD/MM/YYYY	1)	Date of Removal	:	DD/MM/YYYY		
m)	Manufacturing Agency	:		n)	Date, Month & Year of Manufacturing	:			
o)	Life completed since New	:	Flight Hrs Mission Hrs	p)	Repair Agency	:			
q)	Time Between Overhaul (TBO) or Repair	:		r)	Life completed since O/H or repair	:			
s)	Date of last overhaul / Repair and place	:		t)	No. of overhaul / Repair Done	:			
u)	Has there been a similar defect in any of the Airborne Stores with same Part No.? if yes, then respective DR reference No. to be given.								
v)	Date of induction of part at main contractor (to be filled by main contractor)								
Part - III: Brief particulars of defect including hours flown:									
a)	Defect Reported:								

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## FORM - 44 DEFECT INVESTIGATION REPORT FORMAT

b)	<b>Defect Observed:</b>									
D	Di I			1						
a)	Part - IV: Investigation: (Details of Examination including previous similar Defects)  a) Root Cause Analysis:									
")	Root Cause Manysis.									
b)	Findings / Conclusions:									
	D. P.IM									
c)	Remedial Measures									
	i. Corrective Action:									
	ii. Preventive Action:									
d)	Attributable Code:									
(i)	Lapses on the part of User	:	U	(ii)	Failure / ageing / Corrosion / Material Failure		F			
(iii)	Lapses on the part of Repair Agency	:	R	(iv)	Not established	:	N			
	/ Manufacturer			(v)	Defect confirmed but reason not established	:	N1			
				(vi)	Defect Not Confirmed	:	N2			
(vii)	Due to features inherent in the design	:	D	(viii)	Other Reasons	:	M			
(ix)	No Failure Found	:	NFF							
Remarks:										
   D /										
Date:					Signatory of Design Rep					



## FORM - 44 DEFECT INVESTIGATION REPORT FORMAT

Part - V: Remarks by Design.	
Date:	Signature
Part - VI: Remarks by Quality Dept.	
Date:	Signature
Part - VII: Remarks by User(Project):(if applicable)	
Date:	Signature
Part - VIII: Remarks by ORDAQA (Quality Aspects)	
Date:	Signature
Part - IX: Remarks by CEMILAC / RCMA (Design Aspects)	
Date:	Signature



# FORM - 44 DEFECT INVESTIGATION REPORT FORMAT

# INSTRUCTIONS

T4 "	INSTRUCTIONS
Item #	
<u> </u>	Part – I (Reference) Incident / Accident / Snag / Explosive
a)	Write down Defect Control Number which is issued by Head QC.
b)	Write down date of occurrence of Defect (Incident / Accident / Snag / Explosive)
c)	Write down the appropriate serial number of Air System / Main Equipment Sl. No. where defective Airborne Stores was installed
	Part – II Details of Defective Component
a)	Write description of system trade. i.e. Electrical, Mechanical, Avionics, etc.
b)	Please mention date on which component was received by DI Agency.
c)	Write description of the system or subsystem.
d)	Specify the main assembly which means the location where the Airborne Stores mounted/ installed. i.e Rack 'D'. *This is not applicable for explosives.
e)	Write down the nomenclature of defective Airborne Stores. The Airborne Stores nomenclature should be as per Program / Project SOP.
f)	If there is any Modification, the MOD number to be specified.
g)	Write Part Number as per SOP and is to be same as engraved on the Airborne Stores.
h)	Write Serial Number as per name plate engraved on the Airborne Stores
i)	Write the firmware version details if applicable. Otherwise write "NA".
j)	Write the Software version details if applicable. Otherwise write "NA".
k)	Date of installation of Airborne Stores on Aircraft to be specified. Where ever applicable Page No. & line No. of form - 700 entry for installation activity to be given.
1)	Date of removal of Airborne Stores from the aircraft to be mentioned. Where ever applicable Page No. & line No. of form -700 entry for removal activity to be given.
m)	Enter the manufacturer details, If the item / Airborne Stores is outsourced for manufacturing.
n)	Indicate the date, month and year of manufacture.
o)	Please Select appropriate option for warranty of the defective component / SRU / LRU If answer is Yes, specify the period.
p)	Please Select appropriate option either AMC or repair Contract available for the defective component / $SRU$ / $LRU$ . If answer is Yes, specify the period.
q)	Specify the life completed since installation on Aircraft. i.e. Flight Hours (Aircraft Hours) and Mission Hours.
r)	Enter the repair Agency details.
s)	Time between overhaul or repair to be specified as per manual.
t)	Life completed since overhaul or repair to be identified
u)	The details of date and place of last overhaul to be given.
v)	Number of overhauls or repair completed as on date of occurrence of Defect to be recorded.
w)	In case there has been a similar defect in any of the Airborne Stores with same Part No. then respective DR reference No. is to be given.
	Part – III Brief Particulars of Defect
a)	Details defect/snag/incident/accident to be given as reported in DR.
b)	The observation found during checks and rectification of reported defect at ground / STIR /ATE to be recorded.



# **FORM - 44 DEFECT INVESTIGATION REPORT FORMAT**

	Part – IV Investigation					
a)	The exact root cause for failure/defect to be identified and recorded.					
b)	Detailed findings to be brought out.					
c)	i. Correction is "Action to eliminate a reported defect". A correction shall be made in conjunction with a corrective action. A correction can be, for example, repair, rework or regrade.					
	ii. Corrective Action is to eliminate the cause (root cause) of a reported defect/snag/incident/ accident or other undesirable situation. Also Corrective action is taken to prevent recurrence. There can be more than one cause for a Defect.					
d)	Select appropriate Attributable code of defect.					
	Part – V Remarks by Design					
a)	Comments/Observations of reported Defect, Investigation findings, Root cause, Correction and corrective action from design point of view to be provided in this column.					
	Part – VI Remarks by Quality Dept.					
a)	This section used to record the flow down process for implementing the corrective action to avoid recurrence of Defect. Head QC shall forward a copy of the DIR to concerned design team as an intimation for carrying out necessary activities towards completion of flow down process.					
	Part – VI Remarks by User (respective System Coordinator from project Team)					
a)	Whenever applicable, this section is used to record the remarks and opinion of user Rep (i.e. Rep of Customer Project Team) including confirmation of amplification of the statement given in Part I to IV.					
	Part – VIII Remarks by ORDAQA (Quality Aspects)					
a)	This section is used to record the remarks and opinion of ORDAQA related to Quality aspects including confirmation of amplification of the statement given in Part I to IV. Decision by rep of ORDAQA to be recorded.					
	Part – IX Remarks by RCMA/CEMILAC (Design Aspects)					
a)	Comments/Observations of reported Defect, Investigation findings, Root cause, Correction and corrective action related to design aspects must be obtained from CRE. (RD,RCMA / Rep of RCMA / CEMILAC).					
	: Electronic signature may be used. In this case, the following text can be added: "signature on file" or onic signature available", or similar statement.					
Addit	ional Instructions					

- a) The QC Control Number shall be issued by Head QC or Rep of QC as per approved format.
- b) The designer shall compile information in part I to IV and coordinate with all stake holders for their Remarks.
- c) All entries in part I must be filled legibly and properly by Design Rep. No. entries to be left blank and 'N/A' may be written where not applicable. Incomplete DIR shall not be accepted.
- d) Use of white ink correction is prohibited. Any modification / correction in the form shall be done by circling the erroneous entry and writing the correct details. Respective Officer/Rep is to countersign at the place of modification / correction.
- e) All signatories should legibly write their name, designation and date of signature.
- f) The approved original defect Investigation Report to be placed in ATR / Repair ATR of respective Airborne Stores as annexure by Designer.
- g) The Soft copy of approved DIR to be maintained in QCG for record as well as to be forwarded to all as per distribution
- h) Attach separate sheets if necessary

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# FORM - 45A SERVICING INSTRUCTIONS

In ac	cordance with IMTAR – 21	, Subpart L, 21.L.	3			
User S	Service   IAF	□ IN	□ IA		l INCG	
1.	Reference					
Serv	ice Instruction No.				Date:	Issue No.
Title	,					
	•			•		
2.	<b>ASDO Details</b>					
2.1	Name and Address	Name				
		Door/Street / An	rea			
		Post Code				
		City / State /PIN	N			
2.2	Responsible Person (Responsible for this SI)	Title				
	, ,	Address				
		Phone/Fax				
		Email (Official)	)			
3.	Applicable Air systems	•				
3.1	Type Number(s)					
3.2	Nomenclature (s)					
4.	Reasons	•	•			



# FORM - 45A SERVICING INSTRUCTIONS

5.	Service Instruction			
5.1	Instruction			
(a)	Effectivity			
(b)	Remedial			
(c)	Description			
(d)	Compliance			
(e)	Approval			
(f)	Man Power			
(g)	Material			
(h)	Special Tooling			
(i)	Weight & Balance			
(j)	Operation & handling			
(k)	Electrical Load			
(l)	Interchangeability			
(m)	Servicing and Ground Support Equipment			
(n)	References			
(0)	Publications			
6.	Coordination & Appr	roval		
	ASDO - Design	ASDO - QA	ASDO - Airworthiness	CEMILAC

Distributions: TAA, Relevant User Services HQ

Note: User Services Hq to distribute to all the relevant Field Units



# FORM - 45A SERVICING INSTRUCTIONS

# **Compliance Certificate for Service Instruction**

Note: On completion of the instruction as per the SI, please complete the certificate and mail to the address below:

Service Instruction	No.			Date:	Issue No.
Title					
Name of the Service :		Servi	ice Unit		
Aircraft Tail Num	ıber	Date of Compliance	Observat	ion (SAT / UNSAT)	Work Carried out by
Certified that the abov	e mentio	oned aircraft has been compl	ied according	the instruction given	in the SI
Date:	Name	: De	esignation:		Signature:
Address for Commu	nication				
Title					
ASDO Name					
Address					
Phone/Fax					
Email (Official)					



# FORM - 45B SPECIAL TECHNICAL INSTRUCTIONS (STI)

In acc	In accordance with IMTAR – 21, Subpart L, 21.L.3				
User S	ervice 🗆 IAF	□ IN □ IA	[	I INCG	
1.	Reference				
STI N	No.			Date:	Issue No.
Title					
2.	ASDO Details				
2.1.	Name and Address	Name			
		Door / Street / Area			
		Post Code			
		City / State / PIN			
2.2	Responsible Person (Responsible for this ST	Title			
		Address			
		Phone / Fax			
		Email (Official)			
2.3	Applicable Air systems	5			
2.4	Type Number (s)				
2.5	Nomenclature (s)				
3.	Reasons				
4.	Compliance				

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# FORM - 45B SPECIAL TECHNICAL INSTRUCTIONS (STI)

				,
4.	Technical Instruction	1		
4.1	Checks			
4.2	Rectification Action			
(a)	Tools			
(b)	Consumables			
(c)	Shop Facility			
(d)	Weight & CG affected			
(e)	Documentation affected			
( <b>f</b> )	Spares affected			
5.	Coordination & App	roval		
	ASDO - Design	ASDO - QA	ASDO - Airworthiness	CEMILAC

Distributions: TAA, Relevant User Services HQ

Note: User Services Hq to distribute to all the relevant Field Units



# FORM - 45B SPECIAL TECHNICAL INSTRUCTIONS (STI)

# **Compliance Certificate for Service Instruction**

Note: On completion of the instruction as per the STI, please complete the certificate and mail to the address below:

STI No.				Date:	Issue No.
Title					
Name of the Service :		Serv	vice Unit		
Aircraft Tail Nun	nber	Date of Compliance	Observat	ion (SAT / UNSAT)	Work Carried out by
Certified that the abov	e mentio	ned aircraft has been compl	lied according t	the instruction given	in the STI
Date:	Name :		Designation:		Signature:
Address for Commu	nication				
Title					
ASDO Name					
Address					
Phone / Fax					
Email (Official)					



# FORM - 45C URGENT OPERATING NOTICE (UON)

				A □ ICG	
1.	Reference				
UON	No.			Date:	Issue No.
Title	!				
2.	ASDO Deta	ils			
2.1	Name and A	ddress	Name		
			Door/Street / Area		
			Post Code		
			City / State /PIN		
2.2	Responsible		Title		
	(Responsible UON)	e for this	Address		
	,		Phone/Fax		
			Email (Official)		
2.3	Applicable A	Air systems	S		
2.4	Type Numbe	er(s)			
2.5	Nomenclatur	re (s)			
3.	Reasons				
4.	Notes				
Fligh	t Manual Refer	rence			
Cond	lition				
Crew	Action				
5.	Coordinatio	n & Appro	oval		<u></u>
ASD	O - Design		ASDO –Flight Test Agency	ASDO - Airworthiness	CEMILAC



# FORM - 50 APPLICATION FOR PRODUCTION ORGANISATION APPROVAL

In accordance with IMTAR – 21, Subpart G2, 21.G2.1	
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Note: This form to be provided along with Form F1001, Appendix A of AFQMS 2018, Issue – II

	DIRECTORATE GENERAL OF	_
	ASSURANCE	- /
	GOVERNMENT OF INDIA,	
	'H' BLOCK, NEW	DELHI-110011
1.	Registered name and address of the organisation	
2.	Trade name (if different)	
3.	Locations for which the approval is applied for	
4.	Brief summary of proposed activities at the Block 3 add	resses
	a) General	
	b) Scope of approval	
	c) Nature of privileges	
5.	Description of organisation	
6.	Links/arrangements with design approval holder(s)/ design Organisation (s) where different from Block 1	
7.	Approximate number of staff engaged or intended to be engaged in the activities	
8.	Position and name of the Accountable Manager	
9.	Details of Management Personnel To be filled and Submitted in Form 4 by the Individual.	
	Date	Signature of the Accountable Manager

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# FORM - 50 APPLICATION FOR PRODUCTION ORGANISATION APPROVAL

## **Guidelines for Completion of the IMTAR Form - 50**

## Block 1: Registered name and address of the organisation

The name of the organisation must be entered as stated in the register of the Companies Registration Office. For the initial application a copy of the entry in the register of the Companies Registration Office must be provided to the competent authority.

# Block 2: Trade name (if different)

State the trade name by which the organisation is known to the public if different from the information given in Block 1. The use of a logo may be indicated in this Block.

## Block 3: Locations for which the approval is applied for

State all locations for which the approval is applied for. Only those locations must be stated that are directly under the control of the legal entity stated in Block 1.

# Block 4: Brief summary of proposed activities at the item 3 addresses

This Block must include further details of the activities under the approval for the addresses indicated in Block 3. The Block 'General' must include overall information, while the Block 'Scope of approval' must address the scope of work and products/categories following the principles laid down in IMTAR-21. The Block 'nature of privileges' must indicate the requested privileges as defined in IMTAR 21.

## Block 5: Description of organisation

This Block must state a summary of the organisation with reference to the outline of the production organisation exposition, including the organisational structure, functions and responsibilities. The nomination of the responsible managers in accordance with IMTAR 21 must be included as far as possible

## Block 6: Links/arrangements with design approval holder(s)/ design organisation(s) where different from 1

The information entered here is essential for the evaluation of eligibility of the application. Therefore special attention must be given concerning the completion of this Block either directly or by reference to supporting documentation in relation to the requirements of IMTAR 21.

## Block 7: Approximate number of staff engaged or intended to be engaged in the activities

The information to be entered here must reflect the number of staff, or in case of an initial approval the intended number of staff, for the complete activities to be covered by the approval and therefore must include also any associated administrative staff.

## Block 8: Position and name of the Accountable Manager

State the position and name of the Accountable Manager

# Block 9: Details of Management Personnel:

State the name and qualification details of the Accountable Manager (AM) and Quality Department Head (QDH) in Form 4.

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In accordance with IMTAR – 21, Subpart G2, 21.G2.5	
Note: This Form is made Optional / Not Mandatory	

# DIRECTORATE GENERAL OF AERONAUTICAL QUALITY **ASSURANCE (DGAQA) GOVERNMENT OF INDIA, MINISTRY OF DEFENCE** 'H' BLOCK, NEW DELHI-110011 1. Name and address of the Approval holder 2. Approval reference number 3. Locations for which changes in the terms of approval are requested 4 Brief summary of proposed changes to the activities at the Block 3 addresses General b) Scope of approval c) Nature of privileges 5. Description of organisational changes Position and name of the Accountable Manager or nominee Date Signature of the Accountable Manager (or nominee)

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# FORM - 51 APPLICATION FOR SIGNIFICANT CHANGES OR VARIATION OF SCOPE AND TERMS OF PRODUCTION ORGANISATION APPROVAL

## Guidelines for Completion of the Form - IMTAR Form - 51

### Block 1: Name and address of the Organisation Approval holder

The name must be entered as written on the current approval certificate. Where a change in the name is to be announced state the old name and address here, while using Block 5 for the information about the new name and address. The change of name and/or address must be supported by evidence, e.g. by a copy of the entry in the register of companies.

# Block 2: Approval reference number

State the current approval reference number.

# Block 3: Locations for which changes in the terms of approval are requested

State the locations for which changes in the terms of approval are requested or state 'not applicable' if no change is to be anticipated here.

# Block 4: Brief summary of proposed changes to the activities at the item 3 addresses

This Block should include further details for the variation of the scope of approval for the addresses indicated in Block 3. The Block 'General' must include overall information for the change (including changes e.g. in workforce, facilities etc.), while the Block 'Scope of approval' must address the change in the scope of work and products/categories following the principles laid down in the IMTAR 21. The Block 'nature of privileges' must indicate a change in the privileges as defined in IMTAR 21. State 'not applicable' if no change is anticipated here.

## Block 5: Description of organisational changes

This Block must state the changes to the organisation as defined in the current production organisation exposition, including changes the organisational structure, functions and responsibilities. This Block must therefore also be used to indicate a change in the Accountable Manager in accordance with IMTAR 21 or a change in the nomination of the responsible managers in accordance with IMTAR 21. State 'not applicable' if no change is anticipated here.

## Block 6: Position and name of the Accountable Manager or nominee

State the position and name of the Accountable Manager here. Where there is a change in the nomination of the Accountable Manager, the information must refer to the nominee for this position. State 'not applicable' if no change is anticipated here.

In case of an application for a change of the accountable manager the IMTAR Form - 51 must be signed by the new nominee for this position. In all other cases the IMTAR Form - 51 must be signed by the Accountable Manager.



In accordance with IMTAR – 21, Subpart F, 21.F.16, 21.F.17	

1.	Statement Ref No.:		
2.	Organisation		
3.	Air System Type	4. Military Type Certificate Refs	
5.	Air System Registration or Mark	6. Manufacturer's Identification No.	
7.	Engine/Propeller Details (1)		
8.	Modifications and/or Service Bull	etins (or national equivalents) (1)	
9.	Modification Leaflets (or national	equivalents)	
10.	Concessions (2)		
11.	Exemptions, Waivers or Derogation	ons <sup>(3)</sup>	
12	Remarks		
13	Military Certificate of Airworthine	ess	
14	SOP ref No. and Date:		
15	Additional Requirements		
16	Statement of Conformity		
I hereby certify that this Air System has been inspected, tested and confirms fully to the Military Type Certificated design and to the items above in boxes 7, 8, 9, 10, 11 and 14. The Air System is hereby recommended for DGAQA clearance/ acceptance. The Air System is in a condition for safe operation. The Air System is found satisfactory during flight tests. Final FDR has been examined and it is certified that all the parameters are meeting the requirement			
17	Signature 1	8 Name	19 Date (dd/mm/yyyy)
20	Production Organisation Approva	l Reference	
1.	Delete as applicable		
:	2. Concession: Authorization to use or release a product that does not conform to specified requirements. A concession is generally limited to the delivery of a product that has nonconforming characteristics within specified limits for an agreed time or quantity of that product.		
]		s: Authorization to depart from the original nit is generally given for a limited quantity	• •



## Instructions for the use of the Air System Statement of Conformity IMTAR Form 52

# 1. Purpose and scope

- 1.1. Use of the Air System Statement of Conformity issued by a manufacturer producing under IMTAR 21, Subpart F is described under IMTAR 21, Subpart F, 21.F.16 and 21.F.17.
- 1.2. The purpose of the Air System Statement of Conformity (IMTAR Form 52) issued under IMTAR 21, Subpart F is to enable the holder of an appropriate production organisation approval to exercise the privilege to obtain an individual Air System certificate of airworthiness from the DGAQA of the participating Member State of registry.

# 2. General

- 2.1. The Statement of Conformity must comply with the format attached including block numbers and the location of each block. The size of each block may however be varied to suit the individual application, but not to the extent that would make the Statement of Conformity un-recognizable. If in doubt consult the DGAQA.
- 2.2. The Statement of Conformity must either be pre-printed or computer generated but in either case the printing of lines and characters must be clear and legible. Pre-printed wording is permitted in accordance with the attached model but no other certification statements are permitted.
- 2.3. Completion may be either machine/computer printed or hand-written using block letters to permit easy reading. English, and where relevant one or more of the official language(s) of the issuing participating Member State, are acceptable.
- 2.4. A copy of the Statement and all referenced attachments are to be retained by the approved production organisation.

## 3. Completion of the Statement of Conformity by the originator

- 3.1. There should be an entry in all blocks to make the document a valid statement.
- 3.2. A Statement of Conformity may not be issued to the DGAQA of the participating Member State of registry unless the design of the Air System and its installed products are approved.
- 3.3. The information required in Blocks 9, 10, 11, 12, and 14 may be by reference to separate identified documents held on file by the production organisation, unless the DGAQA agrees otherwise.
- 3.4. This Statement of Conformity is not intended to include those items of equipment that may be required to be fitted in order to satisfy applicable operational rules. However, some of these individual items may be included in Block 10 or in the approved type design. Operators are therefore reminded of their responsibility to ensure compliance with the applicable operational rules for their own particular operation.



### Block 1: Statement Ref No.

A unique serial number should be pre-printed in this block for statement control and traceability purposes. Except that in the case of a computer generated document the number need not be pre-printed where the computer is programmed to produce and print a unique number.

## Block 2: Organisation

The full name and location address of the organisation issuing the statement. This Block may be pre-printed. Logos etc. are permitted if the logo can be contained within the Block.

## Block 3: Air System Type

The Air System type in full as defined in the Military Type Certificate and its associated data sheet.

## Block 4: Military Type Certificate Refs

The Military Type Certificate reference numbers and issue for the subject Air System.

## Block 5: Air System Registration or Mark

If the Air System is registered then this mark will be the registration mark. If the Air System is not registered then this will be such a mark that is accepted by the DGAQA of the participating Member State and, if applicable, by the DGAQA of a third country.

## Block 6: Manufacturer's Identification Number

The identification number assigned by the manufacturer for control and traceability and product support. This is sometimes referred to as a Manufacturers Serial Number or Constructors Number.

## Block 7: Engine / Propeller Details

The full identification of the engine or propeller type(s) in full as defined in the relevant Military Type Certificate and its associated data sheet. Their manufacturer identification number and associated location should also be shown.

## Block 8: Modifications and / or Service Bulletins (or national equivalents)

The identification of the approved design changes to the Air System definition.

# Block 9: Airworthiness Directives (or national equivalents)

A listing of all applicable Airworthiness Directives (or national equivalent) and a declaration of compliance, together with a description of the method of compliance on the subject individual Air System including products and installed. Parts, appliances and equipment. Any future compliance requirement time should be shown.

## Block 10: Concessions

Approved unintentional deviation to the approved type design sometimes referred to as concessions, divergences, or non-conformances.



## Block 11: Exemptions, Waivers or Derogations

Only agreed exemptions, waivers or derogations may be included here and should be marked 'Not Used' if there are no exemptions, waivers or derogations.

### Block 12: Remarks

Any statement, information, particular data or limitation which may affect the airworthiness of the Air System. If there is no such information or data, state; 'NONE'.

## Block 13: Military Certificate of Airworthiness

Enter 'Military Certificate of Airworthiness', or 'Military Restricted Certificate of Airworthiness', or for the Military Certificate of Airworthiness requested.

## Block 14: SOP for the air system details to be provided

## Block 15: Additional Requirements

Additional requirements such as those notified by an importing country should be noted in this block.

## Block 16: Statement of conformity

Validity of the Statement of Conformity is dependent on full completion of all Blocks on the Form. A copy of the flight test report together with any recorded defects and rectification details should be kept on file by the MPOA holder. The report should be signed as satisfactory by the appropriate certifying staff and a flight crew member, e.g. test pilot or flight test engineer. The flight tests performed are those defined under the control of the quality system, as established by EMAR 21.A.139 in particular EMAR 21.A.139(b)(1)(vi), to ensure that the Air System conforms with the applicable design data and is in condition for safe operation. The listing of items provided (or made available) to satisfy the safe operation aspects of this statement should be kept on file by the POA holder.

## Block 17: Signed

The Statement of Conformity may be signed by the person authorised to do so by the production approval holder in accordance with IMTAR Subpart G2 & G3. A rubber stamp signature should not be used.

### Block 18: Name

The name of the person signing the certificate should be typed or printed in a legible form.

### Block 19: Date

The date the Statement of Conformity is signed should be given.

## Block 20: Production Organisation Approval

Refer the DGAQA approval reference should be quoted



# FORM - 53A APPLICATION FORM FOR THE DEVIATION DISPOSITION DURING DESIGN AND DEVELOPMENT

In accordance with IMTAR -21, Subpart B, 21. B1.16,21.B2.17, 21.B3.17, 21.B4.15 Subpart C, 21.C1.17, 21.C1.18, 21.C3.1.13, 21.C3.1.14,21.C4.10, 21.C4.11

Main (	Contractor's Ref. No.	Dated
	ontractor's Ref. No.	
NOTE	€:	
1. 2.	The granting of this deviation is strictly limited to this specific a If the application is prepared by a sub-contractor, it must be sign	
PART	-I	
1.	Main Contractor (Name & Address)	
2.	Main Contractor Reference Number with date	
3.	Sub-Contractor (Name & address)	
4.	Sub Contract Reference Number with date	
5.	Description of the item and Part Number & Platform	
6.	Stage at which Deviation is observed (SOFT, QT, Flight trial)	
7.	Hardware SOP	
8.	Software Version & Check Sum	
9.	Standard / Specification / Drawing Number / Process documents (which ever applicable)	
10.	a) Affected Quantity b) Batch / Heat / Lot No. / Serial No.	
11.	If the deviation is sought, are any of the following adversely affected?  (State YES / NO or N.K (not know)  If answer is YES particulars are to be attached.  a) Functioning / Performance  b) Life of item  c) Interchangeability  d) Maintenance  e) Strength  f) Safety  Note: If answer is No then full justification to be given  (Use separate sheet wherever required)	
12.	Description of Deviation in the item (Continue on separate sheet if necessary)	



# FORM - 53A APPLICATION FORM FOR THE DEVIATION DISPOSITION DURING DESIGN AND DEVELOPMENT

13.	Reference number of deviations previously granted.  a) of a similar nature  b) For the quality / period at items '7' above	
14.	Root Cause for deviation	
15.	Corrective and Preventive action as remedial measures to Prevent recurrence giving full details with PDC etc.	
16.	Remarks by Designer of Main contractor (Agreed / Conditions attached)	
Signat	ture and Designation of Design Rep	Date:
Subm	itted by: -	
Date		Signature of Quality Head
PART 1.	T-II: TO BE COMPLETED BY THE TAA REMARKS OF DGAQA  (DGAQA may refer to CEMILAC if answer to para 12 is Yes of (including confirmation of amplification of the Statements made	
Date	Signature of DGAQA Rep	Designation/Rank



# FORM - 53A APPLICATION FORM FOR THE DEVIATION DISPOSITION DURING DESIGN AND DEVELOPMENT

## 2. REMARKS BY CEMILAC

(CEMILAC may refer to NCRB if necessary)

Date

Signature of CEMILAC / RCMA Rep

Designation / Rank

3. NCRB REFERENCE (If Applicable)
(Main Contractor shall bring out the details of NCRB Here)

Date

Signature of Quality Head

4. DISPOSITION BY CEMILAC (If referred to NCRB)
(NCRB decision should be binding on the disposition by CEMILAC)



11.

Root Cause for deviation

# FORM - 53B APPLICATION FORM FOR THE DEVIATION DISPOSITION / PRODUCTION PERMIT DURING LSP / PRODUCTION PHASE (DELIVERABLES) / LICENSED PROJECTS

In acc	cordance with IMTAR - 21, Subpart F, 21.F.21	
Main (	Contractor's Ref. No	Dated
	ontractor's Ref. No.	
NOTE		
1.	The granting of this deviation is strictly limited to this sp IT IS NOT AN AMENDMENT TO THE CONTRACT DEPARTMENT'S RIGHT THEREUNDER.	AND IS WITHOUT PREJUDICE TO ANY OF THE
2.	If the application is prepared by a sub-contractor, it must be	signed and submitted by the main contractor.
PART	-I	
1.	Main Contractor (Name & Address)	
2.	Main Contractor Reference Number with date	
3.	Sub-Contractor (Name & address)	
4.	Sub Contract Reference Number with date	
5.	Description of the item and Part Number	
6.	Standard/ Specification / Drawing Number / Process documents (which ever applicable)	
7.	<ul><li>a) Affected Quantity</li><li>b) Batch / Heat / Lot No. / Serial No.</li></ul>	
8.	If the deviation is sought, are any of the following adversely affected?	
	(State YES, NO or N.K (not know) If answer is YES particulars are to be attached.  a) Functioning / Performance b) Life of item c) Interchangeability d) Maintenance e) Strength f) Safety Note: If answer is <b>No</b> then full justification to be given (Use separate sheet wherever required)	
9.	Description of Deviation in the item (Continue on separate sheet if necessary)	
10.	Reference number of deviations previously granted.  a) of a similar nature  b) For the quality / period at items 7 above	

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# FORM - 53B APPLICATION FORM FOR THE DEVIATION DISPOSITION / PRODUCTION PERMIT DURING LSP / PRODUCTION PHASE (DELIVERABLES) / LICENSED PROJECTS

12.	Corrective and Preventive action as remedial measures to Prevent recurrence giving full details with PDC etc.	
13.	Design clearance from the Main contractor Agreed / Conditions attached	
Signat	ture and Designation of Methods / Production Planning	Date:
Subm	itted by: -	
Date		Signature of Quality Head
PART	- II : TO BE COMPLETED BY THE TAA	
1.	REMARKS OF DGAQA	
	(Including confirmation of amplification of the Statements made in Part-I, Section-12) (DGAQA may refer to CEMILAC)	
Date	Signature of DGAQA Rep	Designation/Rank
2.	REMARKS BY CEMILAC (If Referred to)	
	(CEMILAC may refer to NCRB, if necessary)	
Date	Signature of CEMILAC / RCMA Rep Designation/Rank	
3.	NCRB REFERENCE (If Applicable)	
	(Main Contractor shall bring out the details of NCRB Here)	
Date	Signature of Quality Head	
4.	DISPOSITION BY DGAQA (NCRB/CEMILAC decision should be binding on the disposit	tion by DGAQA)
Date	Signature of DGAQA Rep Designation/Rank	



# FORM - 55 PRODUCTION ORGANISATION APPROVAL CERTIFICATE

In accordance with IMTAR – 21, Subpart G2, 21.G2.1	

Note: In lieu of this form Existing AFQMS Certificate Format may also be used by DGAQA

[DGAQA, Ministry of Defence, Govt of India]
[DOTOTS, Filmself of Detence, Gove of India]
PRODUCTION ORGANISATION APPROVAL CERTIFICATE
Reference:
Pursuant to IMTAR-21 regulation and subject to the conditions specified below, the DGAQA hereby certifies
[COMPANY NAME AND ADDRESS]
As a production organisation in compliance with IMTAR - 21, Subpart G, approved to produce products, parts and appliances listed in the attached approval schedule and issue related certificates using the above references.
<u>CONDITIONS</u> :
1. This approval is limited to that specified in the enclosed terms of approval, and
2. This approval requires compliance with the procedures specified in the approved production organisation exposition, and
3. This approval is valid whilst the approved production organisation remains in compliance with IMTAR - 21
4. Subject to compliance with the foregoing conditions, this approval shall remain valid for Years or an unlimited duration unless the approval has previously been surrendered, superseded, suspended or revoked.
Date of original issue :
Date of this revision:
Revision No.:
Signed :
For DGAQA:



# FORM - 55 PRODUCTION ORGANISATION APPROVAL CERTIFICATE

[DGAQA, Ministry of Defence, Govt of India]	Terms of Approval	Ref:
This document is part of Production Organisation A	pproval Number	:
Company name:		
Section 1. SCOPE OF WORK:		
Production of		Products/Categories
For details and limitations refer to the Production O	rganisation Exposition, Section	XXX
Section 2. LOCATIONS:		
Section 3. PRIVILEGES:		
The Production Organisation is entitled to exercise, its Production Organisation Exposition, the privileg		
[keep only applicable text]		
Prior to approval of the design of the product an IMTAR Form 1 or Equivalent may be issued only for conformity purposes		
A Statement of Conformity may not be issued for a	non-approved Air System	
Production may be performed, until compliance wit Organisation Exposition Section	h Production regulations is requ xxx	ired, in accordance with the Production
Permits to Fly may be issued in accordance with the	Production Organisation Expos	sition Sectionyyy
Date of original issue:	Signed:	
Date of this revision:		
Revision No.:	For DGAQA	



# FORM - 80 DESIGN ORGANISATION APPROVAL CERTIFICATE

In ac	ccorda	ance with IM	ITAR – 21, Subpart G1, 21.G1.2		
[CEM	11LA	C, MINISTI	RY OF DEFENCE, GOVT. OF INDIA]		
DESI	GN O	ORGANISA	TION APPROVAL CERTIFICATE		
DESI	GN O	ORGANISA	ΓΙΟΝ APPROVAL NUMBER (DOAN):	·	
Pursua	ant to	IMTAR-21	regulation and subject to the conditions spe	cified below, the CEMILAC hereby certifies	
[COM	[COMPANY NAME AND ADDRESS]				
	_	•	n in compliance with IMTAR – 21 and Subtraction states are supported in the scope of approximation in the scope of approximati	opart G1, approved to carried out activities towards design, proval enumerated below: -	
SCOF	PE OI	F APPROVA	AL:		
		(a)	Class:		
		(b)	Activities:		
VALI	DITY	<b>/:</b>			
Subjec	ct to c	ompliance w	vith the conditions stipulated in this certificate	te, this approval shall remain valid for an unlimited duration.	
PRIV	TLEG	GES:			
			n is entitled to operate the privileges enume	erated below: -	
Sl. No.			Name of the Privilege	Applicable guidelines for operation	

Name of the 1 Hynege	Applicable guidennes for operation
	Traine of the Fifthege

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CON	DI	TI	ON	Ç.
CON	ועו	. 1 1		

1.	This approval is limited to the specified scope.		
2.	This approval requires compliance with the approved Design Organisation Exposition (DOE) Ref. No		
3.	This approval is valid whilst the approved DO	remains in compliance with IMTAR $-21$ , Sub	ppart G1.
LIMI	TATIONS:		
Date	of Original Issue:		
Date	of Preceding Revision:		
Date	of this revision:		
Revis	sion No.:		
Signe	ed:		
Chief	Executive (A) CEMILAC:		
[CEN	MILAC, Ministry of Defence, Govt of India]	Schedule of Approval	Ref:



# FORM - 80A APPLICATION FOR DESIGN ORGANISATION APPROVAL

In accordance with IMTAR – 21, Subpart G1, 21.G1.2

	CEMILAC, MINISTRY OF DEFENCE, GOVT OF INDIA MARATHAHALLI COLONY POST, BANGALORE - 560037				
1.	Registered name and address of the Organisation	:			
2.	Registration and GST Details of the Organisation	:			
3.	Name, Designation and Contact Details of Nodal Point of Contact	:			
4.	Locations for which the approval is applied for	:			
5.	Brief Summary of the Organisation	:			
6.	Brief summary of proposed Design activities at the Locations for which approval is applied for (add additional sheets if required)	:			
7.	List of Air Systems/Air Borne Stores approved by CEMILAC in the past (add additional sheets if required)	:			
8.	List of Air Systems/Air Borne Stores under certification by CEMILAC  (add additional sheets if required)	:			
9.	Period of active engagement with CEMILAC	:			
10.	Scope of approval	:			
	(a) Class	:			
	(b) Activity	:			
11.	Design Organisation Exposition Number (Copy of DOE to be attached along with the application)	:	Refer Appendix 'A' of this Airworthiness Directive regarding Format for Design Organisation Exposition (DOE)		
12.	Details of Quality Management System (QMS) Certification ( Attach proof )	:			
13.	National/International Accreditations/ Approvals (Attach proof)	:			
14.	List of Authorised Signatories (Attach Details)	:	Refer Appendix 'B' of this Airworthiness Directive regarding summary sheet of Authorized Signatories		

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# FORM - 80A APPLICATION FOR DESIGN ORGANISATION APPROVAL

15.	Infrastructure and Resource Details	:	
	(add additional sheets if required)		
16.	Self-Assessment by DO as per Evaluation Criteria (add additional sheets for details)	:	Refer Appendix 'C' of this Airworthiness  Directive regarding Evaluation Criteria.
17.	Any other relevant information supporting Organisation's claim for DOA (Add as annexure if needed)	:	
	Date:		(Signature of Head of the Organisation)



# FORM - 82 APPLICATION FOR SIGNIFICANT CHANGES TO DESIGN ORGANISATIONAL APPROVAL

In accordance with IMTAR – 21, Subpart G1, 21.G1.2 & 21.G1.6

1.	Name	e and address of the Approval holder	
2.	Appro	oval reference number	
3.	Locat	ions for which changes of approval are sted	
4.	Brief	summary of proposed changes to the activities at the	e Block 3 addresses
	4.1	General	
	4.2	Scope of approval	
	4.3	Change in DAS	
	4.4	Change in DOE	
	4.5	Changes to key Signatories	
	4.6	Nature of privileges	
	4.7	Description of Procedural changes	
		Date	Signature of Head of the Design Organisation

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In accordance with IMTAR – 21, Subpart P, 21.P.10

Note: Form 100 is a generic format for FCC. Applicable information from Form 100A & Form 100B for Aircraft and Helicopters respectively may also be supplemented to Form 100. FCC form is meant to serve as guidelines and can be adapted to suit the nature of the air system, emphasizing on the necessary information, that affects safety of flying.

# FLIGHT CLEARANCE CERTIFICATE FOR DEVELOPMENT TRIALS

Air System type : Engine Type :	
release and limitations specified in the following pages of	is cleared for development flight trials within the conditions of this document.  ending on the changes to the standard of preparation of the Air
	fly unless accompanied by an individual or block Flight Program d by CEMILAC & Airworthiness Group of Design Agency and ated by RDAQA ().
Head of Design ()	
Design agency	CEMILAC
Date:	Date:
REF: CEMILAC/FCC/ ISSUE: NIL DATED:	
Version: 2.0	Date: August 2023



The incorporation of each amendment to this document is to be certified by entering below the amendment number, date and signature of the person responsible.

Amendment & Date	Document Number	Signature	Date

# **CONTENTS**

Sl. No.	Chapter	Page No.
1	Introduction	
2	Standard of Preparation of Air System	
3	Basis for Clearance	
4	Operational Limitations	
	<ul> <li>4.1 Airfield Operating Limitations</li> <li>4.2 Taxi, Take-Off and Landing Limitations <ul> <li>Tyre, Wheel Brake</li> <li>Air System Weight and Center of Gravity Limits</li> </ul> </li> <li>4.3 Engine Operating Limitations</li> <li>4.4 General Flight Limitations</li> <li>4.5 Other System Limitations</li> </ul>	
5	Flight Envelopes	
6	Conditions of Release	

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1.1	OBJE	The systems are describ	, ou 011011	
		of the flight trials are:		
a.	To ass	ess the performance / behavior of	the Air System	and its systems, compare the same with analysis
h		carried out.		
b. c.		idate the aero-data. ibrate aero-data, systems and flow	direction senso	oro
d.	Others		direction senso	15.
STA	NDARD	OF PREPARATION (SOP) OF	AIR SYSTEM	I
		he Air System includes Equipment		_
2.1		PMENT SOP		5 Fr 5
	_		or	flight trials is given in document titled
				rrent by updating whenever any changes occurs
2.2		VING APPLICABILITY	· · · · · · · · · · · · · · · · · · ·	
			ic given	in Ref. No, Issue: Nil, Amd: date
		which is kept current by u	ndating at regui	ar intervals.
	-	which is kept current by u	pdating at regul	lar intervals.
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10	Electrical Power Generation System	
11	Lighting System	
12	Avionics system (Including , Navigation & Communication)	
13	Engine	

## 4. **OPERATIONAL LIMITATIONS**

## 4.1 AIR FIELD OPERATIONS

## 4.1.1. Taxying Limitations:

• Speed not more than xx knot if canopy is partially open.

## 4.1.2. Emergency arrester system

• Cleared for emergency entry into arrester barrier system at speeds up to

Ground Speed	xx knot
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# 4.2 TAXY, TAKE-OFF AND LANDING LIMITATIONS – TYRES, WHEEL BRAKES

## 4.2.1. The tyres are cleared for rolling at the following ground speeds

Tyre ground speed limits (Knot)	
Main Nose	
XXX	XXX

# 4.2.2. Brake application speed limit:

Air System Configuration	Mass (kg)	Condition	Speed in TAS (knot)
Clean Configuration		Normal (xx MJ per Air System)	xx
Clean Configuration	XXX	Emergency / RTO (xx MJ per Air System)	XX

# 4.3 TAXY, TAKE-OFF AND LANDING LIMITATIONS - AIR SYSTEM WEIGHT AND CENTRE OF GRAVITY LIMITS

# 4.3.1. Take-off weight limitations:

• Maximum take-off weight is xxx Kg.

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# 4.3.2. Landing weight Vs Sink rate:

<b>Air System Configuration</b>	Max Landing Mass (Kg)	Max Sink rate (m/sec)
Clean Configuration	XXX	XXX

# 4.3.3. Cross winds during landing and take-off:

Air System is cleared to operate within the following crosswind limitations.

Runway condition		Cross wind Speed (Knots)
D.m.	Take off	xx
Dry	Landing	XX
Fl	ooded	Not Cleared

# 4.3.4. Centre of gravity limits before Take-off:

Allowable centre of gravity range is **xx% to xx% MAC** for the following pilot weight configuration. **Solo Pilot Configuration:** 

- Front cockpit: xxx Kg to xxx Kg

- Rear cockpit: Nil

# Two pilot Configuration:

Front cockpit: xxx Kg to xx KgRear cockpit: xx Kg to xx Kg

# 4.4 ENGINE OPERATING LIMITATIONS:

The xxxx engine is cleared for operation subjected to following Limitations:

# 4.4.1. Operating conditions:

Maximum absolute flying altitude, <b>ft</b>	xxx
Maximum air starting altitude, ft	xxx
Maximum indicated airspeed, Mach	XX
Maximum ambient temperature at sea level, °C	xx
Minimum Ambient temperature range for ground starting, °C	xxx
Minimum oil temperature range for air starting, °C	XX

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# 4.4.2. Operating Limits on Engine Parameters and Actions:

Sl. No.	Parameters	Normal range	Action if exceed the limit
1	Torque		
2	Rotor speed		
3	EGT During Start Other than Start		
4	Fuel Flow		
5	Oil Pressure		
6	Oil Temperature		
7	Starting Time		

# 4.4.3. Wind Milling Limit:

Wind Milling Rpm	Operating Limits	Action If Exceeded
28 to 100 %		
18 to 28 %		
10 to 18 %		
5 to 10 %		
0 to 5 %		

# 4.4.4. Warnings and cautions:

# 4.4.5. Conditions of release:

This clearance is contingent upon the following:

- This clearance is valid for xxxx hours of flight (inclusive of Ground run, LSTT, HSTT)
- All the maintenance / installation procedures are to be followed as stipulated in the respective OEM manuals.
- This clearance stands invalid if any changes are made from the present Configuration / SOP for the flight tests without the concurrence of CEMILAC (\_\_\_\_\_\_).

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# 4.4.6. Technical parameters:

Туре		
Compressor		
Turbine		
Direction of rotation		
SHP		
Max Torque		
100 % rpm of Ng		
Specific Fuel Consumption, kg / (hr.kgf)		
Prop rpm		
Max allowable Exhaust Temp during starting		
Bleed Extraction		
OIL SYSTEM		
Type		
Oil specification		
Oil tank capacity, quartz		
Oil consumption rate, gallon / hour		
Oil pressure in pressure line, psi		
Inverted flying, sec		
Fuel Specification		

# ENGINE FLIGHT ENVELOPE Mach No. Vs Altitude & CAS

# 4.5 GENERAL FLIGHT LIMITATIONS

# 4.5.1. Speed limitations:

# Flight speed limitation (Level Flight) (CAS in knot)

Minimum speed (knot) Corresponds to xx° AOA for xx Kg AUW	Clean configuration (Flap Level)	XX
	Take-off & Landing configuration (30 deg Flap)	xx
Max speed / Mach with UC up		XXX
Max speed with UC down and locked		XX

Note: 1'g' stall speeds at Sea level (CAS in knot) for various Air System configuration and AUW are as follows:

Clean configuration : xx Knots With UC and Takeoff flap : xx Knots

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### Take off speed limitations (CAS in knot):

Recommended take off rotation speed with deg Flap	XX
Unstick speed with max power	XX
Decision speed for RTO	XX

### **Approach speed limitations (CAS in knot):**

Mass (kg)	Approach speed
xxx	XX

### 4.5.2. Altitude limitations

Maximum pressure altitude with U/C up	xxx ft
Maximum pressure altitude with U/C down	xxxx ft

#### 4.5.3. AOA Limitations

AOA range for Wings-level operations	Max	Min
As indicated on PFD	xx°	*****
• xx° (Never Exceed)	XX	XX <sup>o</sup>
AOA range for maneuvering operations	0	0
As indicated on PFD	XX°	XX <sup>o</sup>

### 4.5.4. Fuselage scrape attitude:

• With Oleo collapsed and Tyres flat = xxx deg.

### 4.5.5. Side slip limitations:

Maximum side slip with U/C up	xx deg
Maximum side slip with U/C down	xx deg

### 4.5.6. Maneuver limitations:

Maneuver limits are permitted within the following:

Inverted flying	xx sec max
360 deg roll (Recommended)	Left and Right

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### 4.5.7. Normal Acceleration limitation:

Normal Acce	leration limitation for various Air System AUW weight.	xxx Kg
LIC	Minimum permitted	xx g
UC up	Max permitted	xx g
LIC dover	Minimum permitted	xx g
UC down	Max permitted	xx g

#### 4.5.8. Roll rate limitation:

Maximum Roll rate with U/C up	xxx deg/sec
Maximum Roll rate with U/C down	xxx deg/sec

### 4.5.9. Roll acceleration limit:

Maximum Roll acceleration with U/C up	xx rad/sec <sup>2</sup>
Maximum Roll acceleration with U/C down	xx rad/sec <sup>2</sup>

### 4.5.10. Yaw rate limitation:

Maximum Yaw rate permitted with U/C up	xx rad/sec <sup>2</sup>
Maximum Yaw rate permitted with U/C down	xx rad/sec <sup>2</sup>

### 4.5.11. Yaw acceleration limits:

Maximum Yaw acceleration permitted with U/C up	xx rad/ sec <sup>2</sup>
Maximum Yaw acceleration permitted with U/C down	xx rad/ sec <sup>2</sup>

#### 4.5.12. Pitch acceleration limits

Maximum Pitch acceleration permitted with U/C up	xx deg/sec <sup>2</sup>
Maximum Pitch acceleration permitted with U/C down	xx deg/sec <sup>2</sup>

### 4.5.13. Stalling and spinning:

• Air System is not cleared for intentional stalling and spinning.

#### 4.5.14. Weather related limitations:

• The Air System is cleared to fly in fair weather and day light conditions only.

The minimum visibility shall be xx km for demonstration flights

#### 4.6 OTHER SYSTEM LIMITATIONS

### 4.6.1. AERODYNAMICS

• Angle of Attack limitation for the first block of flights are \_\_\_\_\_ and Angle of side slip limitations are.

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COMPLAC - DRO	FOR AIR SYSTEM						
	4.6.2. STRUCTURE AND ANALYSIS 4.6.3. ENVIRONMENTAL CONTROL S 4.6.4. LIFE SUPPORT SYSTEM (LSS) 4.6.5. HYDRAULIC 4.6.6. LANDING GEAR AND BRAKE S 4.6.7. ESCAPE SYSTEM 4.6.8. FCS 4.6.9. FUEL 4.6.10.ELECTRICAL AND POWER GEN 4.6.11.LIGHTING 4.6.12.AVIONICS	YSTEM					
5. <u>FLI</u>	GHT ENVELOPES						
a)	The flight envelopes for the development flig  1. Load Factor – Mach No. Envelope  2. Altitude – Mach No. Envelope	ghts are :	Ref: Fig. 1 Ref: Fig. 2				
b)	Operating Envelopes of Air S Amendment: Nil, dated:	System AUW xxx Kg	g,, Issue: Nil,				
c)	Aerodynamic operating limitations for vide Technical Memo						
d)	Computation of Mass and CG data for (Computed based on weighing carrie/, Issue: Nil Amendment: Nil	d on	) on this weighing vide report No.				
	Fig 1: V-n diag	ram (wt =xxxx) kg					
	Fig 2: Flight Er	ivelope for xxxx kg					
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6. CONDITIONS OF REL	LEASE
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- xxxx is cleared for operations in \_\_\_\_\_ airfields. It is also cleared for outstation trials and demonstration flights (Air Shows) at other airfields, with prior concurrence of CEMILAC.
- The Air System is cleared to fly in fair weather and day light conditions. The minimum visibility shall be xx km for demonstration flights during Air shows.
- The Air System will not carry any Stores.
- Arrester barrier system shall be made available for all flights.

### IMAP-2023 Part II, Chapter 5 & IMTAR 21 Subpart P

### Persons authorised for undertaking flight tests:

Only test pilots / test engineers, who have successfully undergone a course in experimental flight testing are authorized
to undertake flight testing of experimental, prototype or technology demonstrator Air System under development as a
flight crew member. Similarly, persons who have successfully undergone the production test pilots course are authorized
to flight-test production Air System of, BRDs / NAY or any other main contractor. Non qualified persons
are not authorized to be crew members in any developmental flight testing or even as passengers in multi crew Air System
during such developmental flight testing. In exceptional cases, however, the CTP / Head of flight testing can authorize in
writing specific individuals (non flight test crew) on specific flights.

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# FORM - 100A FLIGHT CLEARANCE CERTIFICATE FOR AIRCRAFT

In a	ccorda	nce with IMTAR – 21, Subpart P, 21.P.	10	
The f	lying a	and other LIMITATIONS of		are detailed herein:
1.	Cent	tre of Gravity Range :		
2.	Fligl	ht Envelope :		
	For l	Flight Envelope (Subsonic), Refer Fig-	1.	
		Design Speed and Mach Number Lim r Fig-3.	its with Altitude, Refer Fig-2. For Values	of Load Factor Supersonic case
3.	Max	imum Limiting Speeds : □Clean' Air	rcraft	
	(a)	Max. Speed for □Clean' aircraft with	h controls in 'Power'	
	(b)	Max. Speed for □Clean' aircraft with	h controls in `Manual'.	
	(c)	Max. Speed for selecting controls from	om $\square$ Manual' to $\square$ Power' or from $\square$ Power	'to □Manual'.
	(d)	Max. Speed for extending Air brakes	S:	
		(i) With controls in $\square$ Power'		
		(ii) With controls in $\square$ Manual'.		
	(e)	Max. speed for operating flaps to Tal	ke-off position, including Combat-selection	of Flaps.
	(f)	Max. speed for operating Flaps to $\Box$	Landing' position.	
	(g)	Max. speed for raising or lowering u	ındercarriage.	
	(h)	Max. speed with undercarriage locked	ed □Down'.	
4.	Max	imum Limiting Speeds for Carriage	& Release of External Stores	
	The	speed Limits should be separately stipu	ulated for flying with controls in □Power' a	nd in □Manual'.
	Carr	iage Release		
5.	Min	imum Speeds : □Clean' Aircraft		
	Buff	_		
	Min	imum Speed (U/C & Flap : UP) :		
	Min	imum Speed (U/P & Flaps : DOWN)		
6.	Max	imum Normal Acceleration: □Clean	n' Aircraft	
	Des	ign Value	Flight Test Value	
7.		imum Normal Acceleration with Ext Max. g' limits should be separately s	ternal Stores stipulated for flying with controls in  Powe	er' and □Manual'.
		ernal Stores Carried	Max. □g' Permissible	
8.		Maneuvers Limitation : □Clean' Air	_	
•		Roll :		
		Pull-Out :		



## FORM - 100A FLIGHT CLEARANCE CERTIFICATE FOR AIRCRAFT

		JK AIRCKAI I
Roll	Maneuvers Limitations - External S	tores
		rately stipulated for flying in \( \propto \text{Power'} \) and \( \propto \text{Manual'} \)
For I	Design Limits, See Fig-4 & 5	
Exte	rnal Stores carried	Limiting $\Box g'$ / Max. rate of roll in Degree per second
Max	imum Angle of Side Slip with referei	nce to speed and Configuration
Max	. Take-off Weights	
Note	e: Recommended Tyre inflation pressur	re for main wheels against different Take-off weights to be indicated below:
Land	ling	
(a)	Max. Landing Weights	:
(b)	Landing with Asymmetric Stores	:
(c)	Use of Brake Parachute	:
Sing	le Engine Performance: (Where mor	re than one engine is used)
(a)	Minimum Safety Speed	:
(b)	Drift Ceiling	:
One	Engine Failure During Take-off: (W	Where more than one engine is used) (Min Safety Speed)
Engi	ne Relights (Relight envelop speed /	mach no. vs altitude)
Maxi	imum speeds for engine relighting in fl	light, as established by flight tests, are:
Succ	essful Relights are more probable at lo	ower speeds than specified above in each of the altitudes.
Pres	sure Error Correction	
Use	of AVTAG (JP-4) Fuel	
Gun	Firing	
Ejec	tion Seat	
(a)	Ejection Limits	:
(b)	Thigh Length and Sitting Height	:
Engi	ne Limitations	
		t Trials only and it does not constitute any authority to fly unless accompanied (F-1090) issued by DGAQA.
		Head of Design Contractor's Firm
		CEMILAC / RCMA
	(Rolli For I External	For Design Limits, See Fig-4 & 5 External Stores carried  Maximum Angle of Side Slip with reference Max. Take-off Weights Note: Recommended Tyre inflation pressure  Landing  (a) Max. Landing Weights (b) Landing with Asymmetric Stores (c) Use of Brake Parachute  Single Engine Performance: (Where more (a) Minimum Safety Speed (b) Drift Ceiling  One Engine Failure During Take-off: (Weight envelop speed / Maximum speeds for engine relighting in fits Successful Relights are more probable at lower Pressure Error Correction  Use of AVTAG (JP-4) Fuel  Gun Firing  Ejection Seat  (a) Ejection Limits  (b) Thigh Length and Sitting Height  Engine Limitations

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# FORM - 100B FLIGHT CLEARANCE CERTIFICATE FOR HELICOPTERS

In a	iccorda	nce with IMTAR – 21	, Subpart P, 21.P.10						
	The	flying and other LIMI	TATIONS of			are detailed herein			
Whe	rever a	pplicable, values of the		rified for sea level ISA con		se indicated.			
1.	Max	aximum all up weight							
2.	2. Centre of gravity range								
				Refer figure 1					
3.	Flig	ht envelope							
	2 an	_	ocity diagram (H-V d	ope with single hydraulic s liagram) pertaining to the o	•	•			
4.	Clut	tch wheel engagemen	t time if applicable an	nd speed					
5.	Mai	n rotor/tail rotor trac	ck and balance	On ground	In flight				
	a)	Main rotor : (ips)	Lateral						
			Vertical						
	b)	Tail rotor: (ips)	In plane						
			Out of plane						
6.	Mai	n rotor speed limits (	% normal RPM)						
	a)	Engagement speed							
	b)	Maximum speed							
	c)	Maximum transien	t speed						
	d)	Minimum speed							
	e)	Minimum Transien	t Speed						
	f)	Maximum Power C	N Speed						
	g)	Minimum Power O	N Speed						

Maximum speed for Rotor brake application

h)

Maximum limiting helicopter speeds (without external Stores)



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<ul><li>i)</li><li>ii)</li><li>iii)</li><li>b)</li></ul>	Forward (VH) Sideward Rearward									
iii)										
	Dearword									
b)	ixeal walu									
υ)	Never exceed speed									
c)	Maximum auto rotational forwar	rd speed								
d)	Maximum speed with door kept	open/removed								
Maxi	mum operational altitude									
a)	Maximum altitude for take-off a	nd landing								
b)	Maximum altitude for flying									
c)	Zero speed hover out of ground	effect ceiling.								
Maximum normal acceleration - (without external Stores)										
Instar	ntaneous		Sustained							
a)	Positive									
b)	Negative									
10. Maximum angle of side slip at various speeds.										
a)	V min P									
b)	V cruise									
c)	V NE									
Maxi	mum bank angle									
	_									
Maxi	mum rate of turn		Altitude/S	Speed						
Maxi	mum mast moment									
Cont	rols margin									
		d□ (%)	d□ (%)	d□(%)	d□(%)					
a)	VH									
b)	Vne									
c)	Left sideward Flight									
d)	Right sideward Flight									
e)	Rearward Flight									
f)	Hover									
	a) b) c) Maxi a) b) Maxi a) b) C) Maxi Turn Maxi Cont a) b) c) d) e)	b) Maximum altitude for flying c) Zero speed hover out of ground of Maximum normal acceleration - (with Instantaneous a) Positive b) Negative  Maximum angle of side slip at various a) V min P b) V cruise c) V NE  Maximum bank angle  Turn on spot  Maximum rate of turn  Maximum mast moment  Controls margin  a) VH b) Vne c) Left sideward Flight d) Right sideward Flight e) Rearward Flight	a) Maximum altitude for take-off and landing b) Maximum altitude for flying c) Zero speed hover out of ground effect ceiling.  Maximum normal acceleration - (without external Store Instantaneous a) Positive b) Negative  Maximum angle of side slip at various speeds. a) V min P b) V cruise c) V NE  Maximum bank angle  Turn on spot  Maximum rate of turn  Maximum mast moment  Controls margin  d (%) a) VH b) Vne c) Left sideward Flight d) Right sideward Flight e) Rearward Flight e	a) Maximum altitude for take-off and landing b) Maximum altitude for flying c) Zero speed hover out of ground effect ceiling.  Maximum normal acceleration - (without external Stores)  Instantaneous Sustained a) Positive b) Negative  Maximum angle of side slip at various speeds. a) V min P b) V cruise c) V NE  Maximum bank angle  Turn on spot  Maximum rate of turn Altitude/S  Maximum mast moment  Controls margin  d (%) d (%) a) VH b) Vne c) Left sideward Flight d) Right sideward Flight e) Rearward Flight e) Rearward Flight e	a) Maximum altitude for take-off and landing b) Maximum altitude for flying c) Zero speed hover out of ground effect ceiling.  Maximum normal acceleration - (without external Stores)  Instantaneous a) Positive b) Negative  Maximum angle of side slip at various speeds. a) V min P b) V cruise c) V NE  Maximum bank angle  Turn on spot  Maximum rate of turn Altitude/Speed  Maximum mast moment  Controls margin  UH b) Vre c) Left sideward Flight C) Left sideward Flight C) Rearward Flight C) Rearward Flight C) Left sideward Flight C) Left sideward Flight C) Rearward Flight C) Rearward Flight C) Left sideward Flight C) Rearward Flight C) Rearward Flight C) Left sideward Flight C) Rearward Flight					

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Maximum rate of climb

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	i)	Vertical						
	ii)	Oblique						
16.	Land	Landing on inclined surface						
	i)	Slope						
	ii)	Landing	direction	on				
17.	Maxi	Maximum tyre inflation pressure  In the case of wheeled version						
18.	Maxi	mum oleo	pressu	ire	J			
19.	Limit	tations wi	th Exte	rnal Stores	and under slu	ing loads		
		Item Ma			g' Max Bank A	Angle Side Sli	p	
	a)	Armame						
	b)	Under sl	_					
		· ·	-	sity loads sity loads				
20.	Engir	ne limits (						
20.	Ratin				Torque	NG	ANG	
	Katili	g Pov	wei	TGT (□C)	Torque	NG	ANG	
		_						
21.	Singl	e engine p	erform	nance - (Whe	ere more than	one engine is	used)	
	a)	Maximu	m level	speed				
	b)	Minimu		_				
	c)	Maximu	m rate o	of climb				
22.	Engi	ne relight	enveloj	pe				
	Max	Altitude		Speed		OAT		
23.	Engi	ne manua	l handl	ing				
24.	Use of AVTAG (JP-4) and JP-5 Fuel							
25.	Trans	smission I	Limits					
		Rating		Pow	<u>ver</u>	Torque	<u>e</u>	
					_			

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	TOR HELICOTTERS
26.	Gun firing
	a) Calibre :
	b) Burst length:
27.	Pressure error correction
28.	Minimum airspeed indicator reading
	This ECC is issued for Davidonmental Eliabt Trials only and it does not constitute any outbority to fly unless accommonised
	This FCC is issued for Developmental Flight Trials only and it does not constitute any authority to fly unless accompanied by a current Certificate for safety for flight (F-1090) issued by DGAQA.
	Head of Design
	Contractor's Firm
	CEMIL A.C. / Decisional Director (Helicontens)
	CEMILAC / Regional Director (Helicopters)



# FORM - 101 FLIGHT PROGRAM CLEARANCE MEMO (FPCM)

In ac	cordan	ce with IMTAR – 21,	Subpart P, 21.P.10			
	Proj F	Ref :				Date:
	Air S	ystem Type & No. ::	xxxxxx			FLT: xxx
1.	Condi	ition of the Air System	1			
	1.1	Configuration	: xxxxxxxxxxx			
	1.2	AUW (at start)	: xxx lb (xxx Kg)			
	1.3	C.G. at T/o	: xxxx% (LG Dn), xxxx% of	MAC	LG up	
	1.4	Fuel Status	: Fuselage – xxx Lb; LH Wing	g – xx	xx Lb; RH Wing – xxx Lb	
			Total – xxx Lb.			
2.	Flying	g Program Ref.	: Reference to the flying progr	ram		
3.	Flight	Clearance Certificate	: Ref. No.: Issue: _		, Amdt:	
			Dt			
4.	Air S	ystem Status				
	(a) Data Analysis Ref. of Previous sortie (if applicable):					
	(b) Work done report Ref:(Annexure-II).					
5.	Limit	ations (not affecting sa	afety / flight test planning):			
6.	Cleara	ance is subject to the I	Form 1090 to be issued by RDA	AQA		
Coord	linated	by				
Coord	imateu	бу				
CEM	ILAC				Main Contractor	
Сору	to::					
	CEMI	II AC		2	DDAGA	
1. 2.	CEMI CTP (			<ul><li>3.</li><li>4.</li></ul>	RDAQA AGM (Q)	
۷.	CII (	1 / W J		٦.	AOM(Q)	



## FORM - 1090 CERTIFICATE OF SAFETY FOR FLIGHT

In accordance with IMTAR – 21, Subpart P, 21.P.10, 21.P.4

<u>Part</u>	<u>-I (To be complete</u>	d by the Main Contractor	<u>o</u>					
1	(a) Type of Air S	ystem:	(b) Air System tail no.:					
2	Airworthiness Certification / Flight Clearance Reference:							
3	SOP reference:							
4	Purpose of Taxi/I	Flight Trial: LSTT / HSTT	/ Development test flight Contractor / Customer / Handling / Ferry					
5	Flight Details	(a) Flight Number:	(b) Flight Configuration:					
6	Last Flight FDR	Analysis: Satisfactory / No	t Satisfactory					
7	QC memo & Daily Inspection reference:							
8	Limitation if any	:						
9	Aerodrome:							
10	Authority of the l	Pilot:						
11	Name of the Pilo	t: (I)	(II)					
12	, ,	•	fully inspected, including the engines, engine installations, instruments and and hereby request permission for the flight to proceed herewith.					

#### Part-II (To be completed by the DGAQA Rep)

- 13 Authorization for flight:
  - a) Permission is hereby granted on DD/MM/YY at ...hrs to proceed with the above flight and valid for one flight only.
  - b) The F-1090 will remain in force, subject to routine flight servicing and daily inspections being carried out in accordance with approved schedules, for the period stated there on or until invalidated under the conditions stated at in AQA directive 01/16 (Air System) dated 22 Sep 2016.
  - c) In an exceptional case of non-utilization of the 1090 on the same calendar day, the revalidation of the F-1090 on subsequent calendar day within 24hrs from the time of issue may be accorded by DGAQA approved contractor's QC officer after ensuring complete DI checks as per schedule in consultation with DGAQA. DGAQA approved Contractor's QC officer shall endorse the same in the Part-III of F-1090 certificate.

(DGAQA Rep Signature with date & time)

Name & Designation

(DGAQA Approved QC Rep)

Signature with Stamp

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# FORM - 1090 CERTIFICATE OF SAFETY FOR FLIGHT

### Part-III - Revalidation

14	<b>Revalidation:</b> I hereby certify that complete DI checks have be DGAQA and found satisfactory. The results are recorded in DI she II is revalidated.	•
		(DGAQA Approved QC Rep)
		Signature & Stamp with date & time
<u>Part</u>	<u>- IV</u>	
		(Authorized Pilot signature with date &time)
		Name & Designation
	<b>Distribution:</b> (To be done by the contractor)	
	Original - To the contractor	
	First Copy – To the pilot	
	Second Copy (duly singed by Pilot) - To DGAQA office	



## FORM - 1090 CERTIFICATE OF SAFETY FOR FLIGHT

### Instruction for filling the details in Certificate of Safety for Flight (F - 1090)

- 1. (a) Type of Air System: The brief about the type of Air System like LCA (LSP-07), Su-30 MKI Phase-1, HTT-40 PT-01 etc.
  - **(b) Air System Tail No. :** Registration number of Air System likes SB304, TSR-001, KH-2014 etc.
- 2. Airworthiness Certification / Flight Clearance Reference: Military Type Certificate / Release to Service Document (RSD) / Type Approval / Flight Clearance Certificate(FCC) / Flight Program Clearance Memo (FPCM) ref number from the applicable airworthiness authority / RCMA (CEMILAC) wherever is applicable
- 3. SOP reference: Standard of Preparation against which the Air System is manufactured
- **4. Purpose of Flight / Taxi Trial:** Which are not applicable shall be strikeout for example if the 1090 is sought for HSTT than other, which are not applicable may be strike out HSTT / <del>Development test flight/ Contractor/Customer/Handling/ Ferry.</del>
- 5. Flight Details
  - (a) Flight number: Total number of flight done by the Air System till date
  - **(b) Flight Configuration:** The detail of the system checks to be performed during the flight like Engine performance check, FBW maneuvering etc.
- 6. QC memo & Daily Inspection reference: DGAQA memo clearance and Daily Inspection reference be mentioned
- 7. **Limitation if any:** Any authorized flight restriction, limitation and notification shall be recorded in this column for the information and concurrence of the flight
- **8. Aerodrome:** The name of the airfield
- 9. Authority of the Pilot: Authority letter issued by Service HQrs / CTP of main contractor
- 10. Name of the Pilot: (i) Name of the main pilot (ii) Name of the trainee / Co-pilot
- 11. Numbering Scheme: Each F-1090 issued should be assigned a unique number in X / NNN / DDMMYY format. Where X-Projects like A for Su-30 MKI, B for MiG-21 etc, NNN-Running serial number i.e 001 to 999 for Production year followed by date & month of issue. The F-1090 register should be maintained project wise.