

## CIVIL AVIATION AUTHORITY OF SRI LANKA AVIATION SAFETY NOTICE

ASN No 097	Ref No: AWS/2010/01	File Ref: AW/20/2/2	
Recipients	<ol> <li>All Aircraft Maintenance 7</li> <li>Approved Maintenance Or</li> <li>All Aircraft Maintenance I</li> <li>Sri Lanka Air Force</li> </ol>	<ol> <li>All Aircraft Maintenance Training Schools.</li> <li>Approved Maintenance Organisations.</li> <li>All Aircraft Maintenance Licence Holders.</li> <li>Sri Lanka Air Force</li> </ol>	
01.Subject	: Administrative Procedure Maintenance Licence Conversion of Existing Ai Basic Licence (AMEBL) to	s for the conduct of Aircraft Examination (AML) and rcraft Maintenance Engineers AML	
02.Nature	: Mandatory		
03.Issue no	: 02		
04.Status	: Replacement of ASN 097 fin	st issue on 22 September 2006	
05. Effective date	: With immediate effect		
06. Validity	: Until Further Notice		
07.Contact person	Deputy Director (Airworthiness), Civil Aviation Authority, No.64, Galle Road, Colombo 03, Sri Lanka. Telephone: +94 11 2391305. E mail <u>ddaw@caa.lk</u>		
08.Availability	: A copy of this document www.caa.lk and the techn Authority. Copies can be co the library.	nt is available on web site- nical library of Civil Aviation llected at reproduction cost from	
09.Applicability	<ul> <li>1. Any person who see procedure to obtain a (AML) in terms of A</li> <li>2. Any person who Maintenance Engine Aircraft Maintenance</li> </ul>	k information on administrative an Aircraft Maintenance Licence SN 083. seek to convert Aircraft ers Basic Licence (AMEBL) to e Licence (AML).	
10. Comments	: Comments (if any) on the Notice (ASN) may be for However the Aviation Safe on the date shown therein r comment made by any per- amendment to the Aviation the Director General of Civit	contents of this Aviation Safety warded to the contact person. ety Notice will come into effect notwithstanding any objection or son or party unless and until an Safety Notice is issued afresh by 1 Aviation.	

11.Notice	:	The procedures contained in this ASN will be applicable to the conduct of AML examination and the conversion of existing AME (BL), which are specified in the ASN 083 and ASN 008 issue no 02 respectively.	
12.Histroy of Revision	:	Amendment to Procedure for the issue of Aircraft Maintenance Licence described under paragraph 3 and note of paragraph 5.	
13. Related ASNs	:	ASN 083 and 008 issue no 02	
14.Action Required	:	Strict compliance of the contents in the attachment by the applicants for an Aircraft Maintenance Licence (AML).	

15. Checklist : List of current ASN numbers are as follows.

ASN No	Issue No	Date of Applicability	Remarks
ASN002	01	10.03.2000	nil
ASN003	01	18.08.2000	nil
ASN004	01	13.02.2001	nil
ASN005	01	26.03.2001	nil
ASN007	01	15.09.2001	nil
ASN008	02	16.11.2006	Replaced ASN no 008 issue no 01
ASN009	01	18.02.2002	nil
ASN010	01	18.02.2002	nil
ASN011	01	18.02.2002	nil
ASN012	01	18.02.2002	nil
ASN013	01	08.02.2002	nil
ASN014	01	01.03.2002	nil
ASN015	01	01.03.2002	nil
ASN016	01	01.03.2002	nil
ASN017	02	10.03.2005	Replaced ASN no 017 issue no 01
ASN018	01	20.03.2002	nil
ASN019	01	01.04.2002	nil
ASN021	01	01.04.2002	nil
ASN022	01	08.04.2002	nil
ASN023	01	01.06.2002	Replaced ASN no 003
ASN024	01	02.09.2002	nil
ASN025	02	15.10.2002	Replaced ASN no 001
ASN026	01	15.10.2002	nil
ASN027	01	20.12.2002	nil
ASN028	01	12.03.2003	nil
ASN029	01	21.03.2002	nil
ASN030	01	10.07.2002	nil
ASN031	01	15.07.2003	Replaced ASN no 006
ASN032	01	25.07.2003	nil
ASN033	02	25.08.2005	Replaced ASN no 033 issue no 01
ASN034	01	11.09.2003	nil
ASN035	01	12.09.2003	nil
ASN036	01	12.09.2003	nil
ASN037	01	13.10.2003	nil
ASN038	01	07.05.2004	nil
ASN039	04	19.08.2008	Replaced ASN no 039 issue no 03
ASN040	01	07.06.2004	nil
ASN041	01	16.06.2004	nil
ASN042	05	09.11.2009	Replaced ASN no 042 issue no 04
ASN043	02	12.08.2004	Amendment to ASN no 013

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ASN044	02	13.03.2006	Replaced ASN no 044 issue no 01
ASN045	02	05.01.2007	Replaced ASN no 045 issue no 01
ASN046	02	13.07.2009	Replaced ASN no 046 issue no 01
ASN047	03	05.01.2007	Replaced ASN no 047 issue no 02
ASN048	02	05.01.2007	Replaced ASN no 048 issue no 01
ASN049	01	20.09.2004	nil
ASN051	01	20.09.2004	nil
A\$N051	01	20.09.2004	nil
ASN052	01	14.07.2004	Banlaged ASN no 052 issue no 02
ASN053	04	14.07.2009	Replaced ASN no 053 issue no 03
ASN055	04	17.07.2009	Replaced ASN no 055 issue no 02
ASIN055	04	17.07.2009	Replaced ASN no 055 issue no 05
ASINUSO	02	20.07.2009	Replaced ASN no 056 issue no 01
ASN057	02	01.10.2009	Replaced ASN no 057 issue no 01
ASN058	03	21.07.2009	Replaced ASN no 058 issue no 02
ASN059	02	16.12.2009	Replaced ASN no 059 issue no 01
ASN060	02	05.08.2005	Replaced Page no 01 of the attachment to the ASN no 060 issue no 01
ASN061	02	05.08.2005	Replaced Page no 01 of the attachment
	-		to the ASN no 061 issue no 01
ASN062	01	01.03.2005	nil
ASN063	01	20.12.2004	pil
ASN065	01	06.04.2005	nil
A\$N066	01	16.05.2005	nil
A\$N067	01	16.05.2005	nil
A \$N068	01	18.05.2005	nil
ASN060	01	18.05.2005	nil
ASN009	01	18.05.2005	nil
ASN070	01	18.05.2005	nil
ASN071	01	10.05.2005	
ASN072	01	19.05.2005	
ASN073	01	19.05.2005	
ASN0/4	01	19.05.2005	<u>n11</u>
ASN075	01	19.05.2005	nii
ASN0/6	01	16.06.2005	nil
ASN0//	01	08.08.2005	nil
ASN0/8	01	21.12.2005	nil
ASN0/9	01	16.09.2005	nil
ASN080	01	07.11.2005	nil
ASN081	04	20.10.2009	Replaced ASN no 081 issue No. 03
ASN082	01	23.11.2005	nil
ASN083	01	01.12.2005	nil
ASN084	01	16.12.2005	nil
ASN085	01	05.01.2006	nil
ASN086	02	02.05.2008	Replaced ASN no 086,087,088
ASN087	01	06.04.2006	nil
ASN088	01	06.04.2006	nil
ASN089	01	10.05.2006	nil
ASN090	03	02.12.2009	Replaced ASN no 090 issue No. 02
ASN091	02	24.03.2008	Replaced ASN no 091 issue No. 01
ASN092	01	09.11.2007	nil
ASN093	01	26.05.2008	nil
ASN094	01	02.06.2006	nil
ASN095	01	25.09.2006	nil
ASN096	01	11.09.2007	nil
ASN097	02	20.01.2010	Replaced ASN no 097 issue No. 01
ASN098	01	04.04.2007	nil
ASN099	01	11.10.2007	nil
ASN100	02	08.05.2008	Replaced ASN no 100 issue No. 01
ASN101	01	28.01.2008	nil
ASN 102	01	04.03.2008	nil
A SN 102	01	01.08.2008	nil
ASIN 103	01	01.00.2000	1111

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ASN 104	01	28.08.2008	nil
ASN 105	01	07.08.2008	nil
ASN 106	01	03.12.2008	nil
ASN 107	01	12.01.2009	nil
ASN 108	01	20.05.2009	nil
ASN 109	01	07.09.2009	nil
ASN 110	01	08.09.2009	nil
ASN 111	01	25.09.2009	nil

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#### ADMINISTRATIVE PROCEDURES FOR THE CONDUCT OF AIRCRAFT MAINTENANCE LICENCE EXAMINATION (AML) AND CONVERSION OF EXISTING AIRCRAFT MAINTENANCE ENGINEERS BASIC LICENCE (AMEBL) TO AML

This ASN explains the requirements for the issue of an Aircraft Maintenance License and Ratings together with the administrative procedures connected with the issue of such Licenses and the privileges associated with such Licences / Ratings. This also explains the process involved in the conversion of Aircraft Maintenance Engineers Basic Licence issued by DGCA – Sri Lanka or Aircraft Maintenance Licences (Aircraft Maintenance Licences) issued by ICAO Contracting State, to an Aircraft Maintenance Licence.

## 1. HOW TO BECOME A HOLDER OF AIRCRAFT MAINTENANCE LICENCE

The ASN 083 – "Training Requirements and Standards relating to issue and renewal of Aircraft Maintenance Licence and Aircraft Type Ratings" provides the comprehensive guidance of the knowledge and experience requirements to become a holder of an Aircraft Maintenance Licence.

The Aircraft Maintenance Licence is divided broadly between Mechanical and Avionic trade disciplines. In view of the various technologies and combinations applicable to certain aircraft, the Mechanical licence category is further subdivided to simplify the complexity of the system. In addition, there are various levels within the licence that allow the holder to be authorized to perform certain roles within Line and/or Base maintenance. These reflect different levels of task complexity and are supported by different standards of experience and knowledge. An individual has the option to hold a combination of licence categories appropriately.

The categories within the Aircraft Maintenance Licence are:

Category A – Maintenance certifying Mechanic Category B1 – Maintenance Certifying Technician (Mechanical) Category B2 – Maintenance Certifying Technician (Avionics) Category C – Base Maintenance Certifying Engineer.

1.1 Category A

The Category A licence is a mechanical based licence and permits the holder to issue Certificates of Release to Service within the limits of tasks specifically endorsed on the authorisation, following minor scheduled line maintenance and simple defect rectification.

Category A is further divided into sub-categories as follows

- A1 Aeroplanes Turbine
- A2 Aeroplanes Piston.
- A3 Helicopters Turbine.
- A4 Helicopters Piston.

As per the explanations given in the ASN referred to above, the table below provides information on which full examination modules required for Category - A licence, at the initial issue.

Sub category	Description of sub divisions	Modules
A1	Aeroplanes Turbine	1,2,3,5,6,7,8,9.10,11A,15,17
A2	Aeroplanes Piston	1,2,3,5,6,7,8,9.10,11B,16,17
A3	Helicopter Turbine	1,2,3,5,6,7,8,9.10,12,15
A4	Helicopter Piston	1,2,3,5,6,7,8,9.10,12,16

The experience demonstrated as given in the application must be relevant to the sub category of licence being applied for and the criteria in respect of recent experience must be satisfied.

<u>Note</u>: The necessary description of the experience required and appropriate level definitions in respect of each module are described in ASN 083.

1.2 Category B1

The B1 licence is a mechanical based licence and permits the holder to issue Certificates of Release to Service (CRS) following line maintenance, including aircraft structure, power plants and mechanical and electrical systems. Replacement of avionic line replaceable units requiring simple tests without the use of test equipment to prove their serviceability is also included within the privileges of this licence.

A Category B1 licence holder also has a role in base maintenance in supporting the Category C certifier who is the final CRS signatory.

The sub categories for Category B1 Line Maintenance/Base Maintenance Certifying Technician are:

- B1.1 Aeroplanes Turbine
- B1.2 Aeroplanes Piston.
- B1.3 Helicopters Turbine.
- B1.4 Helicopters Piston

B2 – Avionics (No further sub divisions)

The B2 licence is avionic based and permits the holder to issue Certificates of Release to Service, following <u>line maintenance</u> on avionic systems. Category B2 licence holder also has a role in <u>base</u> maintenance in supporting the Category C certifier who is the final CRS signatory.

The B2 licence broadly covers the following areas:

Instrument Systems,

Automatic Pilot Systems (fixed and rotary wing), including Auto-throttle and Auto-land Systems, Radio Communication, Navigation and Radar Systems. Electrical Power Generation and Distribution to Avionic Systems

The reference table below provides information on which full examination modules are required for Category B licence.

Sub category	Description of sub divisions	Modules
B1.1	Aeroplanes Turbine	1,2,3,4,5,6,7,8,9.10,11A,15,17
B1.2	Aeroplanes Piston	1,2,3,4,5,6,7,8,9.10,11B,16,17
B1.3	Helicopter Turbine	1,2,3,4,5,6,7,8,9.10,12,15
B1.4	Helicopter Piston	1,2,3,4,5,6,7,8,9.10,12,16
B2	Avionics	1,2,3,4,5,6,7,8,9.10,13,14

The wider privileges of the Category B licence and the role of the Technician in defect diagnosis and rectification and system inspection require a more detailed knowledge than that for Category A. This requires a longer period of experience and examination at a higher level than for category A.

<u>Note</u>: The necessary description of the experience required and appropriate level definitions in respect of each module are described in ASN 083.

## 1.3 Category C

The requirements for Category C can be achieved with relevant to aircraft maintenance knowledge and experience and that has been accepted for this purpose by the DGCA or a B1 or B2 licence holder with a prescribed period of certifying experience as described in ASN 083.

The Category C licence permits the release of an aircraft to service in its entirety by a single certificate of release to service by one overall signatory, once all base maintenance work and checks have been completed in AMO. The Category C licence certifier will act primarily in a maintenance management role controlling the progress of aircraft maintenance work. A Category C licence alone does not permit the holder to act as a B1 or B2 certifier. Please also refer to paragraph 7.1.3.

**Note:** Holders of Aircraft Maintenance Licence in Category B1, B2 and C may apply for inclusion of an Aircraft Type Rating subject to meeting the relevant requirements. Category A licence does not contain type ratings.

#### 1.4 Extension of Category B1 to include Category B2

If Category B1 licence holder wishes to Extend/Convert his Aircraft Maintenance Licence to exercise the privileges of B2, he has to follow the route as described in the table below as appropriate.

Category Held	Modules or part modules required	Minimum No of Questions
B1.1	Module 4.1.1b, 4.1.2, 4.1.3b, 4.2, 4.3b	20
	Module 5.1 to 5.3, 5.6b, 5.7 to 5.10, Module 7.4	40
	Module 13.1, 13.3 and 13.4, 13.6, 13.8	100
B1.2	Module 4.1.1b, 4.1.2 , 4.1.3b, 4.2, 4.3b	20
	Module 5.1 to 5.3, 5.6b, 5.7 to 5.10 , Module 7.4	40
	Module 13.1c, 13.3 and 13.4, 13.6, 13.8	100
B1.3	Module 4.1.1b, 4.1.2, 4.1.3b, 4.2, 4.3b	20
	Module 5.1 to 5.3, 5.6b, 5.7 to 5.10, Module 7.4	40
	Module 13.1, 13.3 and 13.4, 13.6 to 13.8	100
B1.4	Module 4.1.1b, 4.1.2 , 4.1.3b, 4.2 , 4.3b	20
	Module 5.1 to 5.3 , 5.6b , 5.7 to 5.10 , Module 7.4	40
	Module 13.1, 13.3 and 13.4, 13.6, 13.8	100

## 1.5 Extension of Category B2 to include Category B1

If Category B2 licence holder wishes to Extend/Convert his/her Aircraft Maintenance Licence to exercise the privileges of B1, he/she has to follow the route as described in the table below.

To Category	Modules or part modules required	Minimum No of Questions
B1.1	Module 6.3b , 6.4b, 6.5.4, 6.6b, 6.7 , 6.10	20
	Module 7.6, 7.8, 7.9 to 7.15, 7.16b, 7.18b and c all, 7.19b.	40
	Module 11.1 to 11.4 , 11.7 to 11.13, 11.15 to 11.17	90
	Module 15.1 to 15.13, 15.15 to 15.22	70
	Module 17	30
B1.2	Module 6.3b, 6.4b, 6.5.4, 6.6b, 6.7, 6.10	20
	Module 7.6, 7.8, 7.9 to 7.15, 7.16b, 7.18b and c, 7.19b.	40
	Module 11.1 to 11.4, 11.7 to 11.13, 11.15 to 11.17	90

	Module 16.1 to 16.9, 16.11 to 16.13	55
	Module 17	30
B1.3	Module 6.3b, 6.4b, 6.5.4, 6.6b, 6.7, 6.10	20
	Module 7.6, 7.8, 7.9 to 7.15, 7.16b, 7.18b and c, 7.19b.	40
	Module 12.1 to 12.6, 12.9 to 12.14, 12.16	80
	Module 15.1 to 15.13, 15.15 to 15.22	70
B1.4	Module 6.3b, 6.4b, 6.5.4, 6.6b, 6.7, 6.10	20
	Module 7.6, 7.8, 7.9 to 7.15, 7.16b, 7.18b and c, 7.19b.	40
	Module 12.1 to 12.6, 12.9 to 12.14, 12.16	80
	Module 16.1 to 16.9, 16.11 to 16.13	55

## 1.6 EXTENSION OF A1 TO INCLUDE CATEGORY B1 OR B2

If Category A1 licence holder wishes to Extend/Convert his Aircraft Maintenance Licence to exercise the privileges of Category B1 or B2 as appropriate, he has to follow the route as described in the table below.

Category A1 to B1.1			
Module	Module or part module required	Minimum No of Questions	
1	Full B1 Examination	30	
2	Full B1 Examination	50	
3	Full B1 Examination	50	
4	Full B1 Examination	20	
5	Full B1 Examination	40	
6	Full B1 Examination	70	
7	7.4 to 7.16, 7.18 and 7.20	60	
8	Full B1 Examination	20	
10	10.5 and 10.7	20	
11	Full B1 Examination	130	

15	Full B1 Examination	90	
17	Full B1 Examination	30	
	A1 to B1.2, B1.3 or B1.4		
B1.2	M 16 in place of M15 Full B1 Examination		70
B1.3	M12 in place of M11	Full B1 examination	115
B1.4	M12 in place of M11 M16 in place of M15	Full B1 examination	115 70

## 1.6.1 Category A1 to Avionics B2

Module	Module or part module required	Minimum No of Questions
1	Full B2 Examination	30
2	Full B2 Examination	50
3	Full B1/2 Examination	50
4	Full B2 Examination	40
5	Full B2 Examination	70
6	Full B2 Examination	60
7	7.4, 7.5, 7.7, 7.15a, 7.16a, 7.18c and e, 7.20	30
8	Full B1/2 Examination	20
10	10.5 and 10.7	20
13	Full B2 Examination	130
14	Full B2 Examination	25

## 1.7. EXPERIENCE REQUIREMENT FOR EXTENSION OF CATEGORY

When applying for an additional licence category, it is only necessary to provide information on duration of experience relating to whichever licence that is applied for.

The table below provides information on the minimum experience required for each application.

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To From	A1	A2	A3	A4	B1.1	B1.2	B1.3	B1.4	B2
		6	6	6	2	6	2	1	2
A1	-	months	months	months	years	months	years	year	years
4.2	6		6	6	2	6	2	1	2
AZ	months	-	months	months	years	months	years	year	years
A 2	6	6		6	2	1	2	6	2
AS	months	months	-	months	years	years	years	months	years
A 1	6	6	6		2	1	2	6	2
A4	months	months	months	-	years	years	years	months	years
B1.1 N	Nono	6	6	6		6	6	6	1
	INDITE	months	months	months	-	months	months	months	year
D1 2	6	Nono	6	6	2		2	6	2
D1.2	months	None	months	months	years	-	years	months	years
<b>P13</b>	6	6	None	6	6	6		6	1
D1.5	months	months	INOILE	months	months	months	-	months	year
D1 /	6	6	6	Nono	2	6	2		2
D1.4	months	months	months	None	years	months	years	-	years
B٦	6	6	6	6	1	1	1	1	
В2	months	months	months	months	years	years	years	years	-

#### 2. CONVERSION OF AME (BL) LICENSES TO B1 AIRCRAFT MAINTENACNE LICENCE

2.1 Conversion to B1.1 Aeroplanes Turbine

AME (DL) Licence Category	AML Modules a	AML Modules and Sub/Part Modules required		
AME (BL) Licence Category	Full Modules	Sub/Part Modules		
Category A – Pressurized		3.9 to 3.18, Module 5 (excluding 5.7 to 5.9)		
Metal Aeroplanes	4, 9,10,15, 17	7.7		
		11.5, 11.6, 11.14		
Category C – Jet Turbine	1 8 0 10 11	3.9 to 3.18, Module 5 (excluding 5.7 to 5.9)		
Engines	4, 0, 9,10,11,	6.3, 6.4.2, 6.7, 6.10		
	17	7.4, 7.14, 7.16, 7.17, 7.19		
		Module 5 (excluding 5.7 to 5.9)		
Catagory V Electrical	8, 9,10,11,15,	6.1, 6.2, 6.3, 6.4, 6.5.4, 6.7, 6.9		
Category A - Electrical	17	7.4, 7.5, 7.8, 7.10, 7.13, 7.14, 7.16, 7.17, 7.18,		
		7.19,11.1 to 11.5, 11.7 to 11.13, 11.15 to 11.18		
Category A & C – Pressurized		3.9 to 3.18, Module 5 (excluding 5.7 to 5.9)		
Metal Aeroplanes and Jet	4,9,10,17	7.7		
Turbine Engines		11.5.2, 11.6, 11.14		

2.2 C	onversion	to	B1.2	Aerop	lanes	Piston
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AME (DL) Licence Cotecom	AML Modules a	nd Sub/Part Modules required
AME (BL) Licence Category	Full Modules	Sub/Part Modules
Category A – Un-Pressurized		3.9 to 3.18,
Metal Aeroplanes	1 0 10 16 17	5.1, 5.10, 5.12, 5.13, 5.14, 5.15
	4, 9, 10,16, 17	7.7
		11.1.2, 11.4, 11.5, 11.6 to 11.17
		3.9 to 3.18,
Catagory C Diston Engines	4, 8, 9, 10, 11	5.1, 5.10, 5.12, 5.13, 5.14, 5.15
Category C – I iston Elignies		6.3, 6.4.2, 6.7, 6.10
		7.4, 7.7, 7.8, 7.14, 7.16 to 7.19
Category A & C – Un-		3.9 to 3.18
Pressurized Metal Aeroplanes	4.0.10	5.1, 5.10, 5.12, 5.13, 5.14, 5.15
and Piston Engines	4,9,10	7.7
		11.1.2, 11.4, 11.5, 11.6 to 11.17

## 2.3 Conversion to B1.3 Helicopters Turbine

AME (BL) Liconce Catagory	AML Modules and Sub/Part Modules required		
AME (BL) Licence Category	Full Modules	Sub/Part Modules	
Category A – Un Pressurized		3.9 to 3.18, Module (excluding 5.7 to 5.9),	
Metal Aeroplanes	1 0 10 12 15	6.3.2, 6.3.3,	
	4, 9,10,12,13,	7.7	
		11.5.2, 11.6, 11.14, 12.15	
Category C – Jet Turbine		3.9 to 3.18, Module 5 (except 5.7 to 5.9)	
Engines	4, 8, 9,10,12	6.3.2, 6.3.3,	
		7.7, 11.5.2, 11.6, 11.14, 12.15	
	8 9 10 11 4	Module 5 (except 5.7 to 5.9),	
Category X - Electrical	0, 9,10,11A, 12 15	6.3, 6.4.2, 6.5.4, 6.6.2, 6.7, 6.10	
	12,15	7.4, 7.8, 7.14, 7.16, 7.17, 7.18, 7.19, 11.5.2,	
Category A & C – Un-		3.9 to 3.18, Module 5 (except 5.7 to 5.9),	
Pressurized Metal Aeroplanes	4,9,10,12,17	6.3.2, 6.3.3	
and Jet Turbine Engines		7.7	
		11.5.2, 11.6, 11.14, 12.15	
Category A & C – Un	101011012	3.9 to 3.18, Module 5 (except 5.7 to 5.9),	
Pressurized Metal Aeroplanes	15 17	6.3.2, 6.3.3,	
and Piston Engines	13,17,	7.7	

## 2.4 Conversion to B1.4 Helicopters Piston

AME (DL) Licence Category	AML Modules and Sub/Part Modules required		
AME (BL) Licence Category	Full Modules	Sub/Part Modules	
Category A –Un Pressurized		3.9 to 3.18, 5.1, 5.10, 5.12, 5.13, 5.14, 5.15,	
Metal Aeroplanes	4 0 10 10 10	6.3.2, 6.3.3,	
	4, 9,10,12,10	7.7	
		11.5.2, 11.6, 11.14, 12.8, 12.15	
Category C – Jet Turbine		3.9 to 3.18, 5.1, 5.10, 5.12, 5.13, 5.14, 5.15,	
Engines	4, 8,	6.3.2, 6.3.3,	
	9,10,12,16,17	7.7	
		11.5.2, 11.6, 11.14, 12.8, 12.15	
Catagory V Electrical	8 0 10 12	5.1, 5.10, 5.12, 5.13, 5.14, 5.15,	
Category A - Electrical	0, 9, 10,12	6.3, 6.4.2, 6.5.4, 6.6.2, 6.7, 6.10	

		7.4, 7.8, 7.14, 7.16, 7.17, 7.18, 7.19, 11.5.2,
Category C – Piston Engines	4 9 0 10 11D	3.9 to 3.18, 5.1, 5.10, 5.12, 5.13, 5.14, 5.15,
	4, 8, 9, 10,11B,	6.3.2, 6.3.3,
	12, 17,	7.7
Category A & C – Pressurized		3.9 to 3.18, 5.1, 5.10, 5.12, 5.13, 5.14, 5.15,
Metal Aeroplanes and Jet	4 0 10 12	6.3.2, 6.3.3,
Turbine Engines	4, 9,10,12	7.7
		11.5.2, 11.6, 11.14, 12.8, 12.15
Category A & C – Un-		3.9 to 3.18, 5.1, 5.10, 5.12, 5.13, 5.14, 5.15,
Pressurized Metal Aeroplanes	4 0 10 12 17	6.3.2, 6.3.3,
and Jet Turbine Engines 4, 9, 10,12, 17		7.7
		11.5.2, 11.6, 11.14

2.5 Conversion of Electrical, Instrument and Radio licences to B2

	AML Modules and Sub/Part Modules required		
AME (BL) Licence Category	Full Modules	Sub/Part Modules	
Category X - Electrical	5, 6, 8, 9, 10,13, 14		
Category X - Instrument	8, 9,10	6.3, 6.4, 7.1 to 7.7, 13.1c, 13.2, 13.4, 13.5, 13.6, 13.9, 13.10	
Category X - Radio	8, 9, 10,14	6.3, 6.4, 13.1, 13.3, 13.4, 13.5, 13.6, 13.8, 13.9, 13.10	
Category X – Electrical and Instrument	8, 9,10	6.3, 6.4, 13.1c, 13.2, 13.4, 13.6, 13.10	
Category X – Electrical and Radio	8, 9,10, 14	6.3, 6.4, 13.1, 13.3, 13.4, 13.7, 13.8, 13.10	
Category X – Instrument and Radio	8, 9,10	6.3, 6.4, 13.1c, 13.3, 13.5, 13.6, 13.9, 13.10	
Category X – E, I, R	8, 9,10	6.3, 6.4 13.1, 13.2, 13.10	

**Note:** Number of questions for each examination and time allocation will be decided as per the guidance given in Appendix II – Basic Examination Standards of ASN 083.

## 3. CONVERSION OF GRANTED PRIVILEDGES (RIGHTS)

A holder of existing AME (BL) is given the opportunity of converting his license to Aircraft Maintenance License before the end of year 2012 unless an exception is sought and obtained from the DGCA for reasons to be justified. The validity of all AME (BL) issued by DGCA-Sri Lanka will be expiring on 31 December 2012 and hence the DGCA will not issue /renew any AME (BL) with a validity period extending beyond  $31^{st}$  December 2012. The facility of conversion is provided to a holder of existing AME (BL) into Category B1 and B2 before the above-mentioned date. The privilege of exercising "granted privileges" is confined to either Category A and C holders (both inclusive) or Category X – E, I and R holders (all together) of AME (BL) only.

However, these privileges are subject to the limitations given in the under mentioned table in paragraph 3.2 and partial Category holders of AME (BL) are not entitled for this concession.

The partial Category holders have to follow the appropriate examination path to obtain B1 or B2 licence appropriately. Successful completion of Module 9 – "Human Factors" is a prerequisite for the applicant to consider the conversion of any AME (BL) licence to B1 or B2.

The DGCA accepts the certificate issued by Approved Training Organisation for the completion of Module 9. AME (BL) licence holders, such as managerial position holders, who do not exercise the certification privileges, has the option of holding the limited privileged AML. An applicant who has completed the module 9 – Human Factors in an approved training facility of MRO (Maintenance Repair and Overhaul Organisation)/AMO (Approved Maintenance Organisation) of a Contracting State is also accepted for the conversion of AME (BL) license to limited privileged AML.

The Category A and C of AME (BL) holders who are working under AMO and authorized to exercise the privileges of issue Certificate of Release to Service for at least one type of aircraft may be considered to convert their licenses to B1 with a Certificate issued by Approved Technical Training school covering the Modules and Sub-Module listed in table 2.1, 2.2, 2.3 and 2.4 appropriately.

The Category X (E, I, R) – Electrical, Instrument, and Radio licence holders who are working under AMO and authorized to issue Certificate of Release to Service for at least one type of aircraft may be considered to convert their licenses to B2 with a Certificate issued by Approved Technical Training school by DGCA – Sri Lanka, covering the Modules and Sub-Modules as listed in table 2.5 appropriately.

The above type approval would have either been obtained directly from DGCA – Sri Lanka or the type training organisation approved by DGCA for the purpose of issuing aircraft maintenance release will be endorsed in the license appropriately. In case if an applicant failed to submit proof evidences that the type approval is not current, will be taken out from the AML license with immediate effect.

In addition to the above, granted privileges are extended for AME (BL) license holders who obtained Category A and C (both inclusive) or Category X - E, I, R (all together) licenses before  $22^{nd}$  September 2006 and continuously working for AMO is also entitled to convert their licenses to AML appropriately by producing the training course completion certificate issued by approved technical training school covering respective modules and sub-modules. The applicant has to prove recent six month experience on appropriate discipline by producing separate recommendation letter from person responsible for Quality Assurance in the AMO.

In case a holder of existing AME (BL) mentioned above is unable to fulfil the aforesaid requirements, he will be provided with a facility to obtain adequate knowledge Certificate through a channel to be developed by the DGCA. Such facility will be provided twice a year till 2012.

## 3.1 LIMITATIONS ON A CONVERTED LICENCE

The following limitations are defined to facilitate the AME (BL) licence holders to convert their licenses either to B1 or B2 within defined limitations to exercise the privileges of issue Certificate of Release to Service under the valid AMO.

- 1. Excluding electrical power generation & distribution systems.
- 2. Excluding instrument systems, INS/IRS and Flight Directors systems.
- 3. Excluding autopilot systems on aeroplanes.
- 4. Excluding autopilot systems on helicopters.
- 5. Excluding automatic landing and auto throttle systems on aeroplanes.
- 6. Excluding radio communication/navigation and radar systems.
- 7. Excluding avionic LRUs.
- 8. Excluding airframe.
- 9. Excluding engine.
- 10. Excluding all pressurised aeroplanes.
- 11. Excluding pressurised aeroplanes above 5700 Kg MTWA.

- 12. Excluding supercharged piston engines in aeroplanes.
- 13. Excluding navigational and electronic instrument systems, FDR, GPWS and vibration monitoring systems.
- 14. Excluding radio-coupled autopilot systems in aeroplanes.
- 15. Excluding radio-coupled autopilot systems in helicopters.
- 16. Excluding all tasks with the exception of Compass Compensation and adjustment only.
- 17. Excluding propeller-turbine engines.
- 18. Excluding all tasks with the exception of minor scheduled line maintenance up to and including Daily Inspections.
- 19. Excluding all tasks with the exception of Cabin Maintenance tasks.
- 20. Excluding all tasks with the exception of DC electrical components in mechanical systems.
- 21. Excluding all systems with the exception of LRUs within In-flight Entertainment Systems.
- 22. Excluding Avionic LRU replacement and BITE checks on aircraft above 5700 Kg MTOW.

# 3.2 LIMITATIONS ON CONVERTING A AND C LICENCE TO B1 WITHOUT REQUIREING TO SIT FOR THE EXAMINATIONS

AME (BL) Held	AML Category	Limitations
Category A – Pressurised Metal Aeroplanes	B 1.1	<ol> <li>Excluding electrical power generation and distribution system.</li> <li>Excluding avionics LRUs.</li> <li>Excluding Engines.</li> </ol>
Category C – Jet Turbine Engines	B 1.1	<ol> <li>Excluding electrical power generation and distribution system.</li> <li>Excluding avionics LRUs</li> <li>Excluding Airframe</li> <li>Excluding propeller turbine engines</li> </ol>
Category A and C – Pressurised Metal Aeroplanes and Jet Turbine Engines	B 1.1	<ol> <li>Excluding electrical power generation and distribution system.</li> <li>Excluding avionics LRUs</li> <li>Excluding propeller turbine engines</li> </ol>
Category A – Un Pressurised Metal Aeroplanes	B 1.2	<ol> <li>Excluding electrical power generation and distribution system.</li> <li>Excluding avionics LRUs</li> <li>Excluding Engines</li> <li>Excluding pressurized aeroplane above 5700Kg MTOW.</li> </ol>
Category C – Piston Engines	B 1.2	<ol> <li>Excluding electrical power generation and distribution system.</li> <li>Excluding avionics LRUs</li> <li>Excluding Airframe.</li> </ol>
Category A and C – Un Pressurised Metal Airplanes and Piston Engines	B 1.2	<ol> <li>Excluding electrical power generation and distribution system.</li> <li>Excluding avionics LRUs</li> <li>Excluding pressurized aeroplanes above 5700Kg MTOW.</li> </ol>
Category A – Un Pressurised Metal Aeroplanes	В 1.3	Limitations are not defined and required to appear for the conversion examination
Category C – Jet Turbine Engines	B 1.3	<ol> <li>Excluding electrical power generation and distribution system.</li> <li>Excluding avionics LRUs</li> <li>Excluding Airframe.</li> </ol>

		17 Excluding propeller turbine engines
Category A and C– Un Pressurised Metal Aeroplanes and Jet Turbine Engines	В 1.3	Limitations are not defined and required to appear for the conversion examination
Category A – Un Pressurised Metal Aeroplanes	B 1.4	Limitations are not defined and required to appear for the conversion examination
Category C – Piston Engines	B 1.4	<ol> <li>Excluding electrical power generation and distribution system.</li> <li>Excluding avionics LRUs</li> <li>Excluding Airframe.</li> </ol>
Category A and C – Un Pressurised Metal Airplanes and Piston Engines	B 1.4	Limitations are not defined and required to appear for the conversion examination.

## 3.3 LIMITATIONS ON CONVERTING E, I AND R LICENCE TO B2

AME (BL) Held	AML Category	Limitations
Category X – Electrical	B 2	Limitations are not defined and required to appear for the conversion examination.
Category X – Instrument	B 2	<ol> <li>Excluding electrical power generation and distribution system</li> <li>Excluding radio communication/navigation and radar systems</li> <li>Excluding navigational and electronic instrument systems, FDR, GPWS, and vibration monitoring systems.</li> </ol>
Category X - Radio	B 2	<ol> <li>Excluding electrical power generation and distribution system</li> <li>Excluding instrument systems, INS/IRS and Flight Directors systems</li> <li>Excluding autopilot systems on aeroplanes.</li> <li>Excluding autopilot systems on helicopters.</li> <li>Excluding automatic landing and auto throttle systems on aeroplanes.</li> </ol>
Category X – Electrical and Instrument	В 2	<ul> <li>6 Excluding radio communication/navigation and radar systems</li> <li>13 Excluding navigational and electronic instrument systems, FDR, GPWS, and vibration monitoring systems.</li> </ul>
Category X – Electrical and Radio	В 2	<ol> <li>Excluding instrument systems, INS/IRS and Flight Directors systems</li> <li>Excluding autopilot systems on aeroplanes.</li> <li>Excluding autopilot systems on helicopters.</li> <li>Excluding automatic landing and auto throttle systems on aeroplanes.</li> <li>Excluding navigational and electronic instrument systems, FDR, GPWS, and vibration monitoring systems.</li> </ol>
Category X – Instrument and Radio	B 2	1         Excluding electrical power generation and distribution system

Detail Syllabus for review in

Limitations are not defined and required to appear for the conversion examination.

## 4. AML EXAMINATION SCHEDULE

The examination syllabus is comprehensive and consists of 17 Modules. The applicants who fulfil the age, skill, knowledge and experience requirements are allowed to apply for the examination. There will be at least two examinations conducted within a period of one year. Dates of examinations will be published through an AIC and full details about these examinations will appear on the CAA website <u>www.caa.lk</u>. The examination Modules 1 to 10 are common for all applicants and they are allowed to sit for the examination at their convenience.

The examinations applicable for the extension of Categories are also conducted on the request of the applicant on the same scheduled dates. The experience requirement for the extension of any Category is subject to the details given under paragraph 1.8 of this ASN.

	Existing AME (BL) Licence	Certified Copy of Passport/ Birth Certificate	Certified copy of Authorization Documents	Copy of Examination Module results (If applicable)	Support Documents	Certified copies of course completion Certificates	Certified copies of worksheets or logbook	respect of foreign licenses
Initial issue		$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$	$\sqrt{*}$	
AME (BL) Conversion	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	√ *	
Inclusion of another category	$\checkmark$			$\checkmark$		$\checkmark$	$\sqrt{*}$	$\checkmark$
Type Rating	$\checkmark$					$\checkmark$	$\sqrt{*}$	
Duplicate Licence Request							$\sqrt{*}$	

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## 5. APPLICATIONS AND SUPPORTING DOCUMENT REQUIREMENT

Note: \* The worksheet or logbook requirement to be decided by the officials of CAA depending on nature of the module and sub-module. The format of workbook is attached to this ASN

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## 6. TYPE RATINGS

Conversion of Maintenance

Licence issued by ICAO

contracting State

Holders of Aircraft Maintenance Licence in Category B1, B2 and C may apply for inclusion of an Aircraft Type Rating subject to meeting the relevant requirements. A Category A licence does not contain type ratings.

In order that an Approved Maintenance Organisation can issue a certification authorisation to an AML holder in categories B1 and B2, the relevant type rating must be held. Without the relevant type rating and authorisation, the licence holder cannot sign the Certificate of Release to Service for work carried out on the aircraft.

- <u>Note:</u> There are additional requirements to be satisfied for authorisation issue. 'Certification Authorisation' means the authorisation issued to certifying staff by the organisation specifying the fact that they may sign certificates of release to service within the limitations stated in such authorisation on behalf of the approved maintenance organization. The procedure relating to the issue of authorisation must be included in MOE/MCM for approval before the issue of any authorisation to certifying staff by the AMO holder.
- <u>Important:</u> All aircraft type rating on AML will be issued by the DGCA or an officer authorized by him, on the recommendation of the AMO or the airline/organization which employ the holder of the AML. The application for the issue of aircraft type rating is available to the Personnel Licensing Section.

#### 6.1 APPROVED TYPE TRAINING

The prospective users of training should check the status of the courses with the organisation concerned.

The DGCA does not accept applications to grant permission to conduct type training by the operator unless the airline has conformed to the stipulated requirements in the ASN 085.

6.1.1 Category A

In respect of the Category A licence, authorizations will be granted following completion of the relevant category A, task training carried out by the appropriately approved organisation. The training will include practical hands-on training and theoretical training appropriate for each task authorized. Specific training on each aircraft type will be required reflecting the authorized task(s). A list of Category A minor scheduled line maintenance tasks can be found below.

The definition of minor scheduled line maintenance tasks is any minor scheduled inspection or check up to and including a weekly check specified in the operators approved aircraft maintenance programme.

Training will be completed before the appropriate tasks are permitted to be carried out by the Category A licence holder.

Replacement of wheel assemblies.

Replacement of wheel brake units.

Replacement of emergency equipment.

Replacement of ovens, boilers and beverage makers.

Replacement of internal and external lights, filaments and flash tubes.

Replacement of windscreen wiper blades.

Replacement of passenger and cabin crew seats, seat belts and harness.

Closing of cowlings and refitment of quick access inspection panels.

Replacement of toilet system components but excluding gate valves.

Simple repairs and replacement of internal compartment doors and placards but excluding doors forming part of a pressure structure.

Simple repairs and replacement of overhead storage compartment doors and cabin furnishing items.

Replacement of static wicks.

Replacement of aircraft main and APU aircraft batteries.

Replacement of in-flight entertainment system components but excluding public address.

Routine lubrication and replenishment of all system fluids and gases.

The de-activation only of sub-systems and aircraft components as permitted by the operator's minimum equipment list where such de-activation is agreed by the competent authority as a simple task.

Replacement of any other components as agreed by the DGCA for a particular aircraft type only where it is agreed that the task is simple.

Note: 1. Category A licence authorizations can be limited to one or more areas given below.

- a. Full Cat A approval including limited and simple tasks.
- b. Minor schedule servicing up to and including pre flight/daily checks.
- c. Cabin maintenance servicing.
- d. In flight entertainment servicing.

In case of doubt or ambiguity the operator / AMO is advised to seek clarification from the DGCA.

#### 6.1.2 Category B1 and B2

The approved training should include theoretical and practical elements in relation to the licence privileges. Theoretical and practical training must comply with the requirements in Appendix III to ASN 083. This training coupled with relevant type experience is a prerequisite for licence type endorsement and forms the basis for an AMO Authorisation to be issued.

Category B1 licence authorizations can be limited to one or more areas given below.

- a. Airframe systems
- b. Engine systems
- c. Avionics Extension (LRU replacement and bite check on Avionics system)
- d. Electrical power generation and distribution

Category B2 licence authorizations can be limited to one or more areas given below

- a. Autopilot aeroplanes.
- b. Autopilot helicopters.
- c. Instrument system.
- d. Auto throttle/Auto land system
- e. Radio communication/navigation system
- f. Radio Radar system
- 6.1.3 Category C

Type training for Category C must comply with requirements in Appendix III to ASN 083. The Category C licence permits the release of an aircraft to service in its entirety by a single Certificate of Release to Service by one overall signatory, once all base maintenance work and checks have been completed in accordance with AMO, the Category C licence certifier will act primarily in a maintenance management role controlling the progress of aircraft maintenance work. A Category C license does not permit the holder to act as a B1 or B2 certifier.

The Category C licence may be obtained by experience gained through holding a Category B1 or B2 licence. The Category C licence is issued only on the recommendations submitted by Chief of Quality Assurance of Approved Maintenance Organization. In case the Category C holder wishes to revert back to exercise his Category B1 or B2 authorization privileges, he has to undergo practical training requirements in paragraph 7.4 of this ASN.

#### 6.2 AIRCRAFT TYPE TRAINING

Aircraft type training is sub-divided to airframe, power plant or avionic systems and the organisation shall be approved to conduct all or only one of the sub-sections below.

Airframe type training means type training including all relevant aircraft structure and systems, excluding the bare engine.

**Power plant** type training means type training on the bare engine, including the build-up to a quick engine change unit.

**Avionic systems** type training means type training on avionics systems. Type training levels are split into three, according to what the training is intended to achieve, as follows;

General Familiarization (Level 1) – a brief overview of the airframe, systems and power plants as outlined in the Systems Description Section of the Aircraft Maintenance Manual.

**Ramp and Transit (Level 2)** – basic system overview of controls, indicators, principal components including their location and purpose, servicing and minor troubleshooting.

Line and Base Maintenance Training (Level 3) – detailed description, operation, component location, removal/installation and bite and troubleshooting procedures to maintenance manual level.

#### 6.3 AIRCRAFT TYPE EXAMINATIONS & TASK ASSESSMENTS

#### 6.3.1 Category A

Satisfactory completion of training will be determined by an approved procedure laid down in the Training Control Manual or Maintenance Organization Exposition and in accordance with the approval procedure of technical training organisation, demonstrated by an examination and/or by a workplace assessment, carried out by DGCA. The practical assessment will determine a person's competence to perform task(s). The examiner will provide a written report to explain whether a candidate has passed or failed.

#### 6.3.2 Category B1, B2 and C

The completion of aircraft type training will be demonstrated by a multi-choice written examination carried out by a technical training organization approved by the DGCA.

The examination will be written and must comply with the requirements of Appendix III to ASN 083. The examiner will mark the paper and provide a written report to explain whether a candidate has passed or failed.

#### 6.4 AIRCRAFT TYPE RATING EXPERIENCE REQUIREMENT

The ASN 083 requires that a satisfactory amount of experience for an aircraft rating, in addition to the training. As a guide, 4 months may consider to be acceptable although the experience required will largely depend on the licence(s) and rating(s) already held. Where a similar aircraft type is held to that which is being applied for, experience can be reduced however; the experience should not be less than two weeks for a structured course.

The following factors will have to be taken into account by the Approved Maintenance Training organisations, to calculate the experience requirement, in accordance with the AML system;

- Experience on aircraft type of a similar technology, construction and systems, including engines (as mentioned above);
- Recency on type;
- The quantity of the practical experience (for example experience gained will depend on the environment i.e. line maintenance environment with one aircraft per week would permit limited experience compared with the constant base maintenance check environment);
- The quality of the practical experience. The type of tasks carried out. These tasks should reflect, at a minimum, those tasks specified by the practical training needs matrix developed by the approved maintenance training organisation.

## Attachment

## Aircraft Maintenance Engineer's Logbook

## CONTENTS

Section 1	1.1	Instructions for use				
	1.2	Personal Data				
		Change of permanent address				
		Licence Data				
		Type Ratings				
	1.3	Employment Record				
Section 2	2.1	Basic Training				
	2.2	Basic Skills				
Section 3	3.1	Type Training and Supplementary Training				
Section 6		Type Training and Supprementary Training				
	3.2	Maintenance Experience				
	3.3	Aircraft Type Practical Experience - List of Tasks				

## Section 1.1 Instructions for Use

## **General Information**

This Logbook is the preferred means of demonstrating compliance with the training and experience requirements for the issue and endorsement of an Aircraft Maintenance Licence. Maintaining this Logbook does not eliminate the need to comply with the relevant requirements, which at all times take precedence; however, the evidence herein should allow an assessment of compliance with the requirements to be made more readily.

The Logbook has been produced in loose-leaf to allow for additional pages to be used to extend the Logbook's life. The additional pages could be generated on A4 size pages without damaging the format addressed in this document and follow on from the previous Logbook/Work sheet.

**Note**; The Logbook means a pack of work sheets incorporated in an orderly manner to prepare an experience Workbook.

#### Instruction for Completion of the Logbook/Worksheets

Entries in the logbook are made by 3 categories of persons:

**The engineer (Technician),** who is the logbook holder. It is important to note that holders may not certify their own entries. However, certain pages require the holder's signature.

**The validator** may be a supervisory licensed aircraft maintenance engineer who has regular professional contact with the holder and who may confirm certain entries; and

**The assessor** who will have either been authorised by the DGCA or, appointee of maintenance organisation, has been authorised by that organisation to confirm that the contents of the logbook when submitted to the CAA in support of a Licence application are correct and meets the requirements. An assessor may also perform the role of validator where appropriate. The assessor shall ensure that the Logbook holder has completed a sufficient number of tasks and is competent to:-

- Identify the appropriate standards
- Select the correct tools
- Perform the task to the required standard without direct supervision and in a timely manner
- Complete the required documentation

Instructions for the completion of each section are shown below. When confirming entries, validators and assessors shall sign and print their names and quote their position and the organisation.

All entries shall be made in ink. Dates entered shall follow the format DD/MM/YY. When submitted in support of an application for a licence any false entry in the Logbook will constitute an offence under the legislation currently in force.

Where additional pages are used, please complete the name and signature block.

#### Section 1.2 Personal Data

The holder shall record personal data, changes of permanent address and licence data during the currency of the logbook.

## Section 1.3 Employment Record

The holder shall record changes of employer during the currency of the logbook. The validator shall confirm the information recorded.

## Section 2.1 Basic Training Record

The holder shall record the satisfactory completion of a basic training course conducted at an Approved Basic Training organisation or other relevant institution accepted by DGCA. The Assessor shall record in the Remarks box any information relevant to the course; this should include whether the course was completed successfully, record of attendance or other relevant information. An Assessor must certify that the information in this section is correct.

## Section 2.2 Basic Skills

This records achievement of the practical competencies that are required to be assessed for basic licence issue in the relevant category. The skills are annotated according to AML licence categories.

The training and assessment may be carried out on in-service aircraft, in workshops, on training equipment or simulators. Completion will be managed by the Assessor. Where training is conducted other than at an approved basic training organisation (such as within an approved maintenance organisation) an Assessor must still certify that the holder has achieved competence in the relevant skills listed.

Basic skills should be completed appropriate to the category required.

## Section 3.1 Type Training and Supplementary Training

The holder shall record the satisfactory completion of any type training course. Other specialist training courses may also be recorded. An Assessor must certify that the information in this section is correct.

## Section 3.2 Maintenance Experience

The holder shall record in this section, experience gained on in-service aircraft. The holder should make entries in the logbook on completion of the task. Individual entries shall be confirmed by a Validator at that time as the experience is gained. In confirming the entry, the Validator is certifying that the holder has performed the task. These entries will be evaluated by an Assessor periodically or before licence application to determine whether the range and content of the experience meets the required standard for the grant of a basic licence or type rating as appropriate.

When applying for a basic licence the range of tasks shall be appropriate to the licence category applied for. The 70% of tasks identified under main subjects listed under 3.2 should be supplemented with the basic licence application.

The experience required for a type rating will be dependent on previous experience. Where a type rating is sought on a type where the holder has no recent practical experience on another aircraft of comparable construction and systems, 6 months experience is required and at least 75% of the appropriate tasks listed in 3.3 must have been satisfactorily completed; this can be reduced to a minimum of 2 weeks and 25% of tasks where there is experience of a similar aircraft type of the same manufacturer. In all cases this must include knowledge of critical systems, component changes, operators modifications and Airworthiness Directives.

## Section 3.3 Typical Acceptable Experience

This section gives examples of typical maintenance tasks, based on system definition. It is not a definitive list and may be added to in order to support application for the licence category being sought.

**Section 1.2 – Personal Data** 

Title :	Forename(s) :		
Surname :	Date of Birth :		
Nationality :	Licence No :		
Address :			
Post Code :	(Record changes of address overleaf)		
Name: Signature:			

## **Changes of Permanent address**

1:	2:		
3:	4 :		
Name: Signature:			

Licence Number :	List of Type Ratings:			
Date of Issue :				
Basic Licence Categories held :				
Details of other licences held:				
Name: Signature:				

Licence Data (To be completed when licence issued)

## Licence Data – Type Ratings

List of Type Ratings :					
Name: Signature:					

Section	1.3 -	Employment	t Record
---------	-------	------------	----------

Employer :						
From:		To: Position in Company:			on in Company:	
Nature of Du	ties:					
Type of Airci	raft or othe	r products:				
Validated by:	Signature	gnature: Date:			Position in Company:	
Employer:						
From:	То:		Position in Company:			
Nature of Du	Nature of Duties:					
Type of aircraft or other products:						
Validated by:	Signature	: Date:			Position in Company:	
Name: Signature:	·····					

## **Section 2.1 – Basic Training**

Name of T	Name of Training Organization or Institution:					
Title of Co	ourse:					
Date comm	nenced:		Date o	completed:		
Remarks:						
Assessor:	Signature:	Date:		Position:		
Name of T	raining Organization or	Institution:				
Title of Co	ourse:					
Date comm	nenced:		Date o	completed:		
Remarks:						
Assessor:	Signature:	Date:		Position:		
Name: Signature:						

Section 2.2 – Basic Skills

Date	Competence obtained	Category	Assessor Signature, Name Position, Organization, Approval No.
	General Aircraft Maintenance		
	Awareness of hazards when working with aircraft – noise, heat, moving surfaces, propellers, intakes, exhausts.	A, B1, B2	
	Safety precautions when using fluids, gasses and chemicals.	A, B1, B2	
	Mechanical Fitting Practices (Common)		
	Related safety practices.	B1	
	Use a range of hand tools and power tools to achieve a dimensional accuracy of $\pm$ 0.010 in / 0.25 mm.	B1	
	Interpret and work to engineering drawings.	B1	
	Use basic tools and equipment for: cutting, forming and joining commonly used materials. (Ferrous and non-ferrous).	B1	
	Mark out use measuring equipment e.g. micrometers, rulers, verniers, height gauges, squares, vee blocks and surface tables.	B1	
	Select and use feeler, slip, limit, go / no go gauges.	A, B1	
	Fit and remove thread inserts.	A, B1	
	Drill and tap a threaded hole.	B1	
	Drill and ream perpendicular holes in ferrous and non-ferrous material.	B1	
	Assembly / Disassembly Practices (Common)		
	Apply correct procedures: Material storage and handling.	B1, B2	
	Identification of a range of materials.	B1, B2	
	Cleaning and Contamination control.	A, B1, B2	
	Use of a range of common assembly and disassembly tools plus specific application tools.	A, B1, B2	
Date	Competence obtained	Category	Assessor Signature, Name Position, Organization, Approval No.
	Adjust, set and use torque spanners.	A, B1,	

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		DJ	
		D2	
	Identify standards and specifications of common use parts i.e. nuts, bolts, washers and split pins.	A, B1, B2	
	Identify part numbers and serial numbers from an approved component overhaul manual or illustrated parts catalogue.	A, B1, B2	
	Assembly / Disassembly Practices (Common) (cont.)		
	Fit and remove a range of common use components e.g. split pins, tabs, spring and plain washers, plain and lock nuts.	A, B1, B2	
	Demonstrate competence when wire locking a variety of assemblies.	A, B1, B2	
	Measure shafts, bores, flanges, and adjacent surfaces using a variety of precision measuring instruments & record dimensions.	B1	
	Disassemble and assemble an aircraft component IAW manufacturer's overhaul manual.	B1, B2	
	Wiring and Looming (Common)		
	Identify cables and cables values by reference to the maintenance manuals.	B1, B2	
	Identify a range of electrical component symbols.	B1, B2	
	Interpret typical electrical wiring diagrams and schematics circuits.	B1, B2	
	Select and use appropriate cable stripping tools.	B1, B2	
	Using at least two crimping systems, select appropriate cable crimping tools and crimp cables to prepare cable ends or plug / socket terminals.	B1, B2	
	Solder cables to single and multipin connectors / tag boards.	B1, B2	
	Check an aircraft electrical circuit for continuity in conjunction with an electrical wiring diagram.	B1, B2	
Date	Competence obtained	Category	Assessor Signature, Name Position, Organization, Approval No.
	Carry out basic fault finding techniques using a range of test meters.	B1, B2	
	Prepare, and install a simple loom, using at least two binding methods.	B1, B2	
	Discuss and demonstrate the use of a range of test meters to measure volts, amps and resistance in practical task circumstances.	B1, B2	

 Carry out bonding and insulation tests.	B1, B2	
 Explain / demonstrate how to inspect aircraft areas for HIRF protection.	B1, B2	
Carry out an inspection for lightning strike protection.	A, B1, B2	
Insertion / extraction of electrical inserts in a variety of electrical connectors.	B1, B2	
Inspection of electrical cable looms / bundles and cable trunking.	B1, B2	
Electrical Power / Avionic Systems (Common)		
Reading and interpretation of electrical schematic and wiring diagrams.	B1, B2	
Replace a range of Avionic LRUs and apply associated BITE.	B1, B2	
Remove / Refit Power Distribution Control & Protection equipment.	B1, B2	
Generator power check / voltage adjustment.	B1, B2	
Internal lighting bulb and filament changes.	A, B1, B2	
Replace and function test IFE Equipment (excludes public address).	A, B1,B2	
Replacement of ovens, boilers and beverage makers.	A, B1	
Compass / Standby Compass compensation swing and calculations.	B1, B2	
External lighting bulb and filament changes.	A, B1	
Implement ESDS procedures.	A, B1, B2	
Sheet Metal Practices		
Use a range of hand tools, folding and bending machines and guillotine to shape aluminium alloy to achieve an accuracy of: $\pm 0.5 \times$ of bend angle, $\pm 0.030$ ins / 0.075 mm.	B1	
Interpret engineering drawings and calculate size of material required to produce a component of material with one or more bends.	B1	
Bend metal to a bend radius, angle and dimensions as given in the engineering drawing.	B1	
Use a range of hand & power tools to position rivet holes to an accuracy of: $\pm$ 0.30ins/ 0.75mm.	B1	
Identify a range of solid and blind rivets and fasteners.	B1	
Identify, select and use a range of rivet setting equipment.	B1	

	Set arange of rivets in aluminium sheet. Range to include raised and countersunk rivets.	B1	
	Select and use a range of appropriate rivet closing tools.	B1	
	Select and fit sheet gripping pins.	B1	
	Identify rivet setting faults.	B1	
	Sheet Metal Practices (cont.)		
	Remove defective rivets without causing further damage to skin.	B1	
	Select and install oversize rivets as instructed in SRM.	B1	
	Set a range of other fasteners in aluminium sheet.	B1	
	Removal of corrosion and re-protection of aluminium sheet metal.	B1	
	Cut and shape material to required profile, finish edges and deburr using approved procedures.	B1	
Date	Competence obtained	Category	Assessor Signature, Name Position, Organization, Approval No.
	Maintenance Practices		
	Inspection of a structure using a mirror and a light source.	A, B1	
	Use at least one of the following NDT procedures: dye penetrant or fluorescent dye.	B1	
	Remove & replace a range of flexible hoses including clips and brackets.	A, B1	
	Remove & replace a range of rigid pipes, including clips and brackets.	A, B1	
	Locate components using referencing system, e.g. station numbers.	B1	
	Carry out a heavy landing / turbulence check.	A, B1	
	Assist in the raising / lowering of an aircraft on or off jacks.	A, B1	
	Jack aircraft level to rigging position.	A, B1	
	Assist in the towing of an aircraft.	A, B1	
	Remove and refit a range of aircraft panels.	A, B1	
	Lubrication of bearings, flight controls and undercarriages.	A, B1	
	Carry out Pre-Departure inspections a - Refuel aircraft. B - Check & replenish oil, hydraulic and pneumatic systems. Tyre Pressures.	A, B1	

Carry out Daily inspections a - Service toilet and potable water		
system. b - Connect and use correctly ground electrical power.	A, B1	
c - Connect and use correctly ground air supply.		

Date	Competence obtained	Category	Assessor Signature, Name Position, Organization, Approval No.
	Maintenance Practices (cont.)		
	Replenish oxygen system.	A, B1	
	Inspect engine using boroscope.	B1	
	Assist in pressurisation test.	B1	
	Operational check of ground power.	A, B1	
	Carry out a VHF Radio check.	B1	
	Remove / Refit Main and APU Batteries.	A, B1	
	Remove / Refit Emergency Battery.	A, B1	
	Replace carpets.	A, B1	
	Replace crew seats.	A, B1	
	Replace passenger seats.	A, B1	
	Check seat belts for serviceability.	A, B1	
	Replace and test a range of electrical airframe / engine system components / boards.	B1	
	Check emergency equipment.	A, B1	
	Functional test of emergency equipment.	A, B1	
	Inspect toilet / vestibule unit for serviceability.	A, B1	
	Inspect Galley unit for serviceability.	A, B1	
	Inspect and test Engine and Airframe fire detecting systems.	B1	
	Inspection and functional testing of fire protection systems.	B1	
	Replace fire bottle.	B1	
	Removal / refit of Flight Control and subsequent rigging of system.	B1	
	Functional checks on hydraulically operated flight control systems.	B1	
	Hydraulic PFCU change.	B1	
	Replace and test fuel pump.	B1	
	Hydraulic Reservoir inspection, fluid replenishment and recharging.	A, B1	

	Hydraulic System Component Changes.	B1	
	Engine driven Hydraulic pump change (EDP).	B1	
	Electrical Hydraulic Pump Change (ACMP).	B1	
	Hydraulic pump quill drive inspection.	B1	
	Functional test of windscreen wiper system.	A, B1	
	Removal / refit of windscreen wiper blade.	A, B1	
Date	Competence obtained	Category	Assessor Signature, Name Position, Organization, Approval No.
	Maintenance Practices (cont.)		
	Wheel removal / installation.	A, B1	
	Wheel Brake removal / installation.	A, B1	
	Bleed hydraulic brakes.	A, B1	
	Replace oleo seals.	B1	
	Assess fluid levels and charge oleo.	B1	
	Functional test of Anti Skid system.	B1	
	Replace vacuum pump.	B1	
	Retrieve data from central maintenance system (CMU).	B1	
	Assist in APU removal / refit.	B1	
	Windows & Transparencies cleaning & polishing.	A, B1	
	Replacement of door seals.	B1	
	Remove / Refit cockpit windshield.	B1	
	Assist in a Power Plant Removal & Refit.	B1	
	Rig engine thrust lever.	B1	
	Replenish water / methanol system.	A, B1	
	Application of one / two component sealers and compounds.	B1	
	Assist in propeller removal / refit.	B1	
	Check propeller track.	B1	
	Mooring and picketing (Helicopter only).	A, B1	
	Removal / refit main rotor head (Helicopter only).	B1	
	Removal / refit transmission drive shaft (Helicopter only).	B1	
	Removal / refit main rotor gearbox (Helicopter only).	B1	
	Removal / refit tail rotor (Helicopter only).	B1	
	Flight control rigging.	B1	

	Main rotor track and balance.	B1	
	VHF Comms LRU replacement and	B2	
	Communication Check.		
	HF LRU replacement and Communication Check.	B2	
	VHF Nav LRU replacement and system tests.	B2	
	Aerial replacement (various).	B2	
	Radio Standing Wave Measurement Tests	B2	
Date	Competence obtained	Category	Assessor Signature, Name Position, Organization, Approval No.
	Maintenance Practices (cont.)		
	ATC / TCAS system component replacement and tests.	B2	
	Intercommunication / Passenger Address Component replacement and testing.	B2	
	Removal / installation of Pitot Static Instruments.	B1, B2	
	Check calibration of a Pitot Static System using a Pitot Static Leak tester.	B1, B2	
	Inertial Reference Unit / Platform Initialisation Check.	B2	
	Test ILS / VOR Systems using appropriate test equipment e.g. Nav 401/402.	B2	
	Gyroscopic Instrument component replacements and functional tests.	B2	
	Fuel Quantity Indicating systems functional testing.	B2	
	General Engine and aircraft temperature / pressure and flow instrumentation component replacement and testing.	B2	
	Flight Director Systems functional tests.	B2	
	Radio Altimeter system test utilising appropriate (555) test set.	B2	
	DME Functional Testing utilising appropriate test set.	B2	
	Weather Radar system component replacements and functional tests.	B2	
	Autothrottle systems experience and Functional Testing. (optional, fixed wing only).	B2	
	Automatic Flight Modes experience and Functional Testing. (optional, fixed wing only).	B2	
	Stability Augmentation Systems experience and functional testing. (optional, helicopters only).	B2	
	ADF component replacements and functional tests.	B2	

Discuss / demonstrate typical maintenand practices on Electronic Flight Instrument systems.	ce B2			
Discuss / demonstrate typical maintenand practices on Flight Management systems.	ce B2			
Name: Signature:				

## Section 3.1 – Type Training and Supplementary Training

Name of Training Organization or Institution:						
Title of Co	ourse:					
Date commenced:		Date completed:			Examination Result:	
Remarks:		<u> </u>				
Assessor:	Signature:	Date: Position:		ition:		
Name of T	Name of Training Organization or Institution:					
Title of Co	ourse:					
Date commenced: D		Date of	Date completed:			Examination Result:
Remarks:						<u> </u>
Assessor:	Signature:		Date:		Posi	ition:
Name: Signature	:	• • • • • • • • • •	•••••	••••		

## **Section 3.2 – Maintenance Experience**

A/C Type : Organization					
Date	A/C Reg.	Job No.	Task Details	Signature, Name, Organization, Approval No.	
Name: Signature:					

## Section 3.3 – Aircraft Type Practical Experience List of Tasks

## Time limits/Maintenance checks

1 00 hour check (general aviation aircraft)."B" or "C" check (transport category aircraft).Review records for compliance with airworthiness directives.Review records for compliance with component life limits.Procedure for Inspection following heavy landing.Procedure for Inspection following lightning strike.

#### **Dimensions/Areas**

Locate component(s) by station number. Perform symmetry check

#### Lifting and Shoring

Assist in : Jack aircraft nose or tail wheel. Jack complete aircraft. Sling or trestle major component.

#### Levelling/Weighing

Level aircraft. Weigh aircraft. Prepare weight and balance amendment. Check aircraft against equipment list.

#### **Towing and Taxiing**

Tow aircraft. Be part of aircraft towing team.

#### **Parking and Mooring**

Tie down aircraft. Park, secure and cover aircraft. Position aircraft in dock. Secure rotor blades.

#### **Placards and Markings**

Check aircraft for correct placards. Check aircraft for correct markings.

#### Servicing

Refuel aircraft. Defuel aircraft. Check tyre pressures. Check oil level. Check hydraulic fluid level. Check accumulator pressure. Charge accumulator. Grease aircraft. Connect ground power. Service toilet/water system. Perform pre-flight/daily check.

## Vibration and Noise Analysis

Analyse helicopter vibration problem. Analyse noise spectrum.

## Air Conditioning

Replace combustion heater. Replace outflow valve. Replace vapour cycle unit. Replace air cycle unit. Replace cabin blower. Replace heat exchanger. Replace pressurisation controller. Clean outflow valves. Check operation of air conditioning/heating system. Check operation of pressurisation system. Troubleshoot faulty system.

## Autoflight

Install servos. Rig bridle cables Replace controller. Replace amplifier. Check operation of auto-pilot. Check operation of auto-throttle. Check operation of yaw damper. Check and adjust servo clutch. Perform autopilot gain adjustments. Perform mach trim functional check. Troubleshoot faulty system. Check autoland system. Check flight management systems. Check stability augmentation system.

## Communications

Replace VHF comm unit. Replace HF comm unit. Replace existing antenna. Replace static discharge wicks. Check operation of radios. Perform antenna VSWR check. Perform Selcal operational check. Perform operational check of passenger address system. Functionally check audio integrating system. Repair co-axial cable. Troubleshoot faulty system. Check ELT for compliance with regulations.

## **Electrical Power**

Charge lead/acid battery. Charge ni-cad battery. Check battery capacity. Deep-cycle ni-cad battery. Replace generator/alternator. Replace switches. Replace circuit breakers. Adjust voltage regulator. Amend electrical load analysis report. Repair/replace electrical feeder cable. Troubleshoot faulty system.

## **Equipment/Furnishings**

Replace carpets. Replace crew seats. Replace passenger seats. Check inertia reels. Check seats/belts for security. Check emergency equipment. Repair toilet waste container. Repair upholstery. Change cabin configuration.

## **Fire Protection**

Check fire bottle contents. Check operation of warning system. Check cabin fire extinguisher contents. Check lavatory smoke detector system. Install new fire bottle. Replace fire bottle squib. Inspect engine fire wire detection systems Troubleshoot faulty system.

## **Flight Controls**

Replace horizontal stabiliser. Replace elevator. Replace aileron. Replace rudder. Replace trim tabs. Install control cable and fittings Replace flaps. Replace flaps. Replace flap actuator Adjust trim tab. Adjust control cable tension. Check control range and sense of movement. Check for correct assembly and locking. Troubleshoot faulty system.

## Fuel

Replace booster pump. Replace fuel selector. Replace fuel tank cells. Check filters. Flow check system. Check calibration of fuel quantity gauges. Check operation feed/selectors Troubleshoot faulty system.

## Hydraulics

Replace engine driven pump. Replace standby pump. Replace accumulator. Check operation of shut off valve. Check filters. Check indicating systems. Perform functional checks. Troubleshoot faulty system.

## Ice and Rain Protection

Replace pump. Replace timer. Install wiper motor. Check operation of systems. Troubleshoot faulty system

## Indicating/recording systems

Replace flight data recorder (FDR). Replace cockpit voice recorder. Replace clock. Replace master caution unit. Perform FDR data retrieval. Implement ESDS procedures. Inspect for HIRF requirements. Troubleshoot faulty system.

## Landing Gear

Build up wheel. Replace main wheel. Replace nose wheel. Replace shimmy damper. Rig nose wheel steering. Replace shock strut seals. Replace brake unit. Replace brake control valve. Bleed brakes. Test anti skid unit. Test gear retraction. Change bungees. Adjust micro switches. Charge struts. Test outbrake system. Troubleshoot faulty system.

## Lights

Repair/replace rotating beacon. Repair/replace landing lights. Repair/replace navigation lights. Repair/replace interior lights. Repair/replace emergency lighting system. Perform emergency lighting system checks. Troubleshoot faulty system.

## Navigation

Calibrate magnetic direction indicator. Replace airspeed indicator. Replace altimeter. Replace air data computer. Replace VOR unit. Replace ADI. Replace HSI. Check pitot static system for leaks. Check operation of directional gyro. Functional check weather radar. Functional check doppler. Functional check TCAS. Functional check DME. Functional check ATC Transponder. Functional check flight director system. Functional check inertial nav system. Complete quadrantal error correction of ADF system. Update flight management system database. Check calibration of pitot static instruments. Check calibration of pressure altitude reporting system. Troubleshoot faulty system. Check marker systems. Compass replacement direct/indirect. Check Satcom. Check GPS. Test AVM.

## Oxygen

Inspect on board oxygen equipment. Purge and recharge oxygen system. Replace regulator. Replace oxygen generator. Test crew oxygen system. Perform auto oxygen system deployment check. Troubleshoot faulty system.

## **Pneumatic Systems**

Replace filter. Replace compressor. Recharge dessicator. Adjust regulator. Check for leaks. Troubleshoot faulty system.

## Vacuum Systems

Replace vacuum pump. Check/replace filters. Adjust regulator. Troubleshoot faulty system.

#### Water/Waste

Replace water pump. Replace tap. Replace toilet pump. Troubleshoot faulty system.

## **Central Maintenance System**

Retrieve data from CMU. Replace CMU. Perform BITE check. Troubleshoot faulty system.

## Airborne Auxiliary power

Install APU. Inspect hot section. Troubleshoot faulty system.

## Structures

Sheet metal repair. Fibre glass repair. Wooden repair. Fabric repair. Recover fabric control surface. Treat corrosion. Apply protective treatment.

## Doors

Rig/adjust locking mechanism. Adjust air stair system. Check operation of emergency exits. Test door warning system. Troubleshoot faulty system.

## Windows

Replace windshield. Replace window. Repair transparency.

## Wings

Skin repair. Recover fabric wing. Replace tip. Replace rib. Check incidence/rig.

## Propeller

Assemble prop after transportation. Replace propeller. Replace governor. Adjust governor. Perform static functional checks. Check operation during ground run. Check track. Check setting of micro switches. Dress out blade damage. Dynamically balance prop. Troubleshoot faulty system.

## **Main Rotors**

Install rotor assembly. Replace blades. Replace damper assembly. Check track. Check static balance. Check dynamic balance. Troubleshoot.

## **Rotor Drive**

Replace mast. Replace drive coupling. Replace clutch/f reewheel unit Replace drive belt. Install main gearbox. Overhaul main gearbox. Check gearbox chip detectors.

## **Tail Rotors**

Install rotor assembly. Replace blades. Troubleshoot.

## **Tail Rotor Drive**

Replace bevel gearbox. Replace universal joints. Overhaul bevel gearbox. I Install drive assembly. Check chip detectors.

## **Rotorcraft Flight Controls**

Install swash plate. Install mixing box. Adjust pitch links. Rig collective system. Rig cyclic system. Rig anti-torque system. Check controls for assembly and locking. Check controls for operation and sense. Troubleshoot faulty system.

## **Power Plant**

Build up ECU. Replace engine. Repair cooling baffles. Repair cowling. Adjust cowl flaps. Repair faulty wiring. Troubleshoot.

## **Piston Engines**

Check crankshaft run-out. Check tappet clearance. Check compression. Extract broken stud. Install helicoil. Perform ground run. Establish/check reference RPM. Troubleshoot.

## **Turbine Engines**

Replace module. Hot section inspection. Engine ground run. Establish reference power. Trend monitoring/gas path analysis. Troubleshoot.

## **Fuel and Control – Pistion**

Replace engine driven pump Adjust AMC Adjust ABC Install carburettor/injector Clean injector nozzles Replace primer line Check carburettor float setting Troubleshoot faulty system

### **Fuel and control – Turbine**

Replace FCU Replace engine driven pump Clean/test fuel nozzles Clean/replace filters Adjust FCU Troubleshoot faulty system

## **Ignition Systems – Piston**

Change mangneto Change ignition vibration Change plugs Test plugs Check H. T. leads Install new leads Check timing Check system bonding Troubleshoot faulty system

## **Ignition Systems – Turbine**

Check glow plugs/ignitors Check H. T. leads Check ignition unit Troubleshoot faulty system

## **Engine Controls**

Rig thrust lever Rig RPM control Rig LP/HP fuel control Check propeller synchronisation system Check controls for correct assembly and locking Check controls for range and sense of operation Troubleshoot faulty system

## **Engine Indicating**

Replace engine instrument(s) Replace oil temperature bulb Replace thermocouples Check calibration Troubleshoot faulty system

#### Exhaust – Piston

Replace exhaust gasket Inspect welded repair Pressure check cabin heater muff Troubleshoot faulty system

#### **Exhaust – Turbine**

Change jet pipe Change shroud assembly Install trimmer

## Oil

Change oil Check filter(s) Adjust pressure relief valve Replace oil tank Replace oil pump Replace oil cooler Replace firewall shut-off valve Perform oil dilution Troubleshoot faulty system

#### Starting

Replace starter Replace Start relay Replace start control valve Check cranking speed Troubleshoot faulty system

#### **Turbocharger – Piston Engines**

Replace PTR Replace turbo-blower Replace heat shields Replace waste gate Adjust density controller

## **Engine water Injection**

Replace water/methanol pump Flow check water/methanol system Adjust water/methanol control unit Check fluid for quality Troubleshoot faulty system

#### **Accessory Gearboxes**

Replace Gearbox Replace Drive shaft Check chip detector

#### **RECOMMENDED TEXTBOOKS**

BOOK TITLE	AUTHOR	ISBN
Basic Knowledge		
Ordinary Level Physics ASA-AMT-G Mechanics of Flight Principles of Flight Principles of Flight Principles of Flight The Foundations of Helicopter FlightSimon The Helicopter How it Flies The Art & Science of Flying Helicopters	Abbott Dale Crane A.C. Kermode Mike Burton Jeppesen Nordian Newman J Fay Shawn Coyle	0-435-6700-5 1-56027-152-3 0-582-23740-8 1-85310-779-4 0-88487-358-7 82-8107-014-5 0-340-58702-4 0-7153-8940-8 0-340-65249-7
Airframe and Mechanical.		
Aircraft Maintenance and Repair The Aeroplane Structure ASA-AMT-Structure Jeppesen General Jeppesen Airframe ASA-AMT-A Engineered Materials Handbook Vol 1 Light Aircraft Inspection Light Aircraft Maintenance ASA – AMT – SYS Fundamentals of Helicopter Maintenance <b>Powerplant.</b> The Jet Engine Aircraft Powerplants Aircraft Powerplants ASA – AMT – P Aircraft Gas Turbine Engine Technology Aircraft Gas Turbine Engine Technology	Kroes.Watkins.Delp A.C. Kermode Dale Crane ASM International J.E. Heywood J.E. Heywood Dale Crane Schafer Rolls Royce Bent & McKinley Kroes. Wild Dale Crane I. E. Treager I. E. Treager	0-07-112991-X 0-273-25229-1 1-56027-339-9 0-88487-203-3 0-88487-205-1 1-56027-153-1 0-87170-279-7 0-85661-016-X 0-24611-909-8 1-56027-340-2 0891002812 0-902-121235 0-07-035569-X 0-07-113429-6 1-56027-410-7 0028018281 007065199X
Electrical / Electronic and Avionics		
Electrical Technology Aircraft Electrical Systems Aircraft Electricity and Electronics Art of Electronics Elements of Electronics Modern Aviation Electronics Micro Electronics in Aircraft systems Digital Logic Fiber Optics	E Hughes E Pallet Eisman Horowitz /Hill Hickey/Villines A Helfrich E Pallet Boyce Zanger	0470207337 0-582-98819-5 0-02-801859-1 0-521-37095-7 0070286957 0-13-118803-8 0-273-08612-X 0-13214619-3 0-675-20944-7

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Collinson	0-412-48550-9
Commission	0.80100.203.6
	0-09100-295-0
B Kendal	0-632-01863-1
E Pallet	0-632-03495-5
E Pallet	0-582-08627-2
GRS Spitzer	0-07-060333-2
Wild	0-88487-232-7
J Powell	0-273-08444-5
J Powell	0-89100-356-8
Forssell	0-13-751058-6
Kayton/Fried	0-471-54795-6
Kodali	0-7803-117-5
	Collinson B Kendal E Pallet E Pallet GRS Spitzer Wild J Powell J Powell Forssell Kayton/Fried Kodali

Most of the books in this list are available from Amazon.co.uk which also gives previews and readers feedback on the publications.