

Advisory Circular

GUIDE TO COMPILATION OF SCHEDULE OF EXPERIENCE (SOE) AND ON-THE-JOB TRAINING (OJT)

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GENERAL

Pursuant to paragraph 88B of the Air Navigation Order, the Director General of the Civil Aviation Authority of Singapore (CAAS) may, from time to time, issue advisory circulars (ACs) on any aspect of safety in civil aviation. This AC contains information about standards, practices and procedures acceptable to CAAS. The revision number of the AC is indicated in parenthesis in the suffix of the AC number.

PURPOSE

This Advisory Circular (AC) provides guidance on the collection of experience for Schedule of Experience (SOE) and On-the-Job Training (OJT).

APPLICABILITY

This AC is applicable to any person (“applicant”) who intends to collect a Schedule of Experience (SOE) for the grant of an initial SAR-66 aircraft maintenance licence (AML) or an inclusion of a (sub)category onto a licence, or to collect an On-the-Job Training (OJT) experience on a specific aircraft type for the inclusion of a first aircraft type rating in the AML.

CANCELLATION

This Revision 1 of AC-66-2 supersedes Revision 0 dated 15 August 2006. Revision 1 introduces guidance to an AML candidate on the collection of SOE and OJT from a SAR-145 Approved Maintenance Organisation (AMO) with a CAAS approved SOE/OJT programme.

EFFECTIVE DATE

This AC is effective from 26 November 2020.

REFERENCES

SAR-66.30(d), SAR-66.45(d), AMC 66.45(d)

1 INTRODUCTION

This AC provides guidance to an applicant who is required to demonstrate:

- (a) maintenance experience in respect of an application for the initial grant or addition of a SAR-66 aircraft maintenance licence (sub)category, i.e. the SOE, in accordance with SAR-66.30, or
- (b) maintenance experience in respect of an application for the addition of first aircraft type rating, i.e. the OJT, in accordance with SAR-66.45(d) and AMC 66.45(d).

2 REQUIREMENTS ON THE ENVIRONMENT FOR THE COLLECTION OF SOE AND/OR OJT

An applicant may only collect the SOE/OJT for the purpose of qualifying for an AML category/first aircraft type rating from a SAR-145 AMO with a CAAS approved SOE/OJT programme. Work experiences collected under an AMO without an approved SOE/OJT programme will not be accepted for licensing purposes. Therefore, it is important to verify that the AMO has an approved SOE/OJT programme before embarking on the collection of SOE/OJT experiences in that AMO.

3 SCOPE OF MINIMUM TASKS FOR COLLECTION OF EXPERIENCE

- 3.1 The experiences to be collected for SOE/OJT should be grouped under suitable ATA chapters and tasks that the applicant has performed or actively participated in. It should cover all applicable systems related to the category/subcategory for the licence and/or aircraft type rating sought, together with a representative cross section of the maintenance tasks involved in each system on operating aircraft. The applicant, as a person undergoing collection of SOE or OJT, should not sign on any SAR-145 maintenance records.

Note: This does not prevent a person (e.g. qualified technician) from signing off a task that he or she is already qualified by the AMO to do so.

- 3.2 **Appendix 1** provides guidance on the suggested ATA chapters applicable for each licence category/subcategory and aircraft type rating.
- 3.3 **Appendix 2** provides a typical format for the SOE/OJT. The pre-approved task list for SOE/OJT for the specific aircraft types may be obtained from the AMO.
- 3.4 The SOE or OJT records should be maintained in separate volumes with each page carrying the detailed work tasks marked as either "SOE" or "OJT" respectively in its footer. An applicant may start acquiring experiences for SOE at any time, but CAAS may only consider those experiences obtained 2 years preceding the submission date of the AML application. Only OJT tasks obtained after the completion of an aircraft type rating course will be considered for the grant of an aircraft type rating.

4 COMPLETION OF TASKS

The applicant should ensure that:

- (a) each completed task in the SOE/OJT is signed-off by a designated Supervisor;
- (b) the completed ATA chapter is countersigned by a designated Assessor (i.e. only one signature of the Assessor is required for each ATA chapter); and
- (c) upon completion of the SOE/OJT, a designated Final Signatory issues a supporting letter to the DGCA for the declaration of proper completion of the SOE/OJT, and the recommendation for the grant of an initial licence, or an extension to a licence (sub)category, and/or an initial aircraft type rating.

APPENDIX 1 - RELEVANT ATA CHAPTER FOR DIFFERENT LICENCE CATEGORIES

Topic	ATA	Subcategory Applied For				
		A1/ B1.1	A2/ B1.2	A3/ B1.3	A4/ B1.4	B2
Towing	9	X	X	X	X	
Servicing	12	X	X	X	X	
Air Conditioning & Pressurisation, Safety & Warning Devices	21	X	X	X	X	X
Avionics Systems Autoflight, Communication, Radio and Navigation – replacement of LRUs where functional checks do not require use of special equipment	22/23/34	X	X	X	X	
Avionics Systems - Auto Flight: Yaw Damper, Stability Augmentation, Auto trim, Autopilot, FMS/FMGS, Autothrottle, Autoland.	22	-	-	-	-	X
Avionics Systems – Communications: VHF, HF Audio, CVR, SATCOM, GPS, ACARS.	23	-	-	-	-	X
Electrical Power: Battery, AC/DC Power Generation, Emergency Power generation, Power distribution, Voltage regulation, Circuit protection, External/Ground Power Supply.	24	X	X	X	X	X
Equipment & Furnishing: Cabin Equipment and Layout, Galley, Cargo, Emergency Equipment, Entertainment Equipment.	25	X	X	X	X	X
Fire Protection Systems	26	X	X	X	X	X
Flight Control Systems: Primary flying control (aileron, elevator, rudder, spoiler), Trim control, High lift devices, Electrical/Fly-by-Wire.	27	X	X	X	X	X
Fuel Systems	28	X	X	X	X	X

Topic	ATA	Subcategory Applied For				
		A1/ B1.1	A2/ B1.2	A3/ B1.3	A4/ B1.4	B2
Hydraulic Power	29	X	X	X	X	X
Ice & Rain Protection	30	X	X	X	X	X
Propeller Ice Protection	30	X	X	-	-	-
Instrument Systems: Pitot static, Gyroscopic, compass, AOA, other aircraft instrument systems – replacement of LRUs where functional checks do not require use of special equipment	31	X	X	X	X	-
Instrument Systems: Pressure measuring, Pitot static, Altitude reporting/alerting, ADC, Temperature and quantity indication, Gyroscopic instrument, GPWS, Compass and compass compensation, FDR, EFIS, Instrument warning, stall warning, AOA, Windshear, Vibration measurement and indication.	31	-	-	-	-	X
Landing Gear	32	X	X	X	X	X
Lights	33	X	X	X	X	X
Avionics Systems – Navigation: VOR, ADF, ILS/MLS, Flight Director, DME, Doppler navigation, Area navigation, RNAV, GPS, GNSS, INS/IRS, ATC, TCAS, Weather avoidance radar, Radio altimeter.	34	-	-	-	-	X
Oxygen	35	X	X	X	X	X
Pneumatics/Vacuum	36	X	X	X	X	X
Water/Waste	38	X	X	-	-	X
On Board Maintenance System	45	X	X	-	-	X
Auxiliary Power units (APUs)	49	X	X	-	-	X
Airframe Structure	51	X	X	X	X	-

Topic	ATA	Subcategory Applied For				
		A1/ B1.1	A2/ B1.2	A3/ B1.3	A4/ B1.4	B2
Fuselage: Doors, Fuselage, Windows	52/53/56	X	X	-	-	-
Nacelles/Pylons	54	X	X	-	-	-
Wings, Flight Control Surfaces, Stabilizers	55/57	X	X	-	-	-
Propeller: Construction, Pitch Control, Synchronizing, Maintenance	61	X	X	-	-	-
Blade tracking and vibration analysis, Transmissions, Airframe structure, Main Rotor, Tail rotor/rotor drive, Rotor flight control	62/64/65/67	-	-	X	X	-
Piston Engines: Engine Performance, Powerplant Installation, Engine Monitoring and Ground Operation, Engine Storage and Preservation	71	-	X	-	X	-
Piston Engines: Engine Fuel Systems, Carburetors, Fuel injection systems	73	-	X	-	X	-
Piston Engines: Ignition Systems	74	-	X	-	X	X
Piston Engines: Engine Indication Systems	77	-	X	-	X	X
Piston Engines: Starting	80	-	X	-	X	X
Piston Engines: Supercharging/Turbocharging	81	-	X	-	X	-
Piston Engines: Engine Construction, Lubricants and Fuels, Lubricants Systems, Induction, Exhaust and Cooling	85	-	X	-	X	-
Turbine Engines: Constructional arrangement and operation, FADEC	71	X	-	X	-	X
Turbine Engines:	71	X	-	X	-	-

Topic	ATA	Subcategory Applied For				
		A1/ B1.1	A2/ B1.2	A3/ B1.3	A4/ B1.4	B2
Engine Performance, Inlet, Powerplant Installation, Engine Monitoring and Ground Operation, Engine Storage and Preservation.						
Turbine Engines: Compressors, Combustion Section, Turbine Section	72	X	-	X	-	-
Turbine Engines: Turbo-prop Engines	72	X	-		-	-
Turbine Engines: Turbo-shaft Engines	72	-	-	X	-	-
Turbine Engines: Fuel Systems	73	X	-	X	-	X
Turbine Engines: Ignition Systems	74	X	-	X	-	X
Turbine Engines: Air System	75	X	-	X	-	X
Engine Control	76	X	-	X	-	X
Turbine Engines: Engine Indicating Systems	77	X	-	X	-	X
Turbine Engines: Exhaust	78	X	-	X	-	X
Turbine Engines: Bearing and Seals, Lubricants, Lubrication Systems	79	X	-	X	-	X
Turbine Engines: Starting Systems	80	X	-	X	-	X
Turbine Engines: Power Augmentation Systems	82	X	-	X	-	X
Zonal & Station Identification Systems	-	X	X	X	X	X
Defect Diagnosis and Rectification	-	X	X	X	X	X
Mandatory Inspection and Modification	-	X	X	X	X	X

APPENDIX 2 - TYPICAL FORMAT FOR SOE/OJT

Table 1 below provides a typical format sample of the SOE/OJT. A complete submission of the schedule should include the following:

- (a) A summary of tasks carried out for each ATA system related to Inspection, Component Replacement, Testing and Troubleshooting & Rectification. The number of times a particular type of task is performed should be indicated for each ATA chapter.
- (b) A **SOE/OJT duration checklist**. A cross "X" should be marked against each day that the work was performed.
- (c) **Work Details**. Information provided for both (a) and (b) above must be supported by details of work carried out. The work details should contain information necessary to demonstrate the experience necessary to meet the applicable SAR-66 requirements. The depth and amount of practical experience required will vary depending on the category/subcategory of the licence applied for.

Each entry in the work details should be signed-off by the designated Supervisor or Assessor. The designated Supervisor who has signed-off the entry in the work details should also be the AME responsible for the sign-off of the task as Certifying or Support Staff.

For the purposes of the SOE/OJT, the following terms apply:

Inspection: Inspection, servicing, cleaning or any work done on a component or installation.

Component Change: Removal/replacement of components.

Testing: Functional/operational check, adjustment, calibration, compensation, circuit testing or rigging of a component or installation.

Troubleshooting & Rectification: Troubleshooting and/or rectification of component or system faults.

TABLE 1 - TYPICAL FORMAT FOR SOE/OJT

SUMMARY OF TASKS					
I declare that the information given in this form is true in every respect.				Page xx of xxx	
Name : _____			Signature: _____		
<input type="checkbox"/> General Experience		<input type="checkbox"/> Aircraft Type : _____			
ATA Chapter		Inspection	Component Replacement	Testing	Troubleshooting & Rectification
Towing	9				
Servicing	12				
Air Conditioning & Pressurisation	21				
Auto Flight	22				
Communications	23				
Electrical power	24				
Equipment/Furnishing	25				
Fire Protection	26				
Flight Controls	27				
Fuel	28				
Hydraulic Power	29				
Ice & Rain	30				
Propeller Ice Protection	30				
Indication & Recording System	31				
Landing Gear	32				
Lights	33				
Navigation	34				
Oxygen	35				
Pneumatics	36				
Vacuum	37				
Water & Waste	38				
Cabin Systems	44				
On board Maintenance System	45				
Information Systems	46				
APU	49				
Aircraft Structures	51				
Doors	52				
Fuselage	53				
Nacelles/Pylons	54				
Stabilizer	55				
Windows	56				
Wings	57				

TABLE 1 - TYPICAL FORMAT FOR SOE/OJT (Continued)

SOE/OJT DURATION CHECKLIST																									
I declare that the information given in this form is true in every respect.													Page xx of xxx												
Name : _____													Signature : _____												
<input type="checkbox"/> General Experience													<input type="checkbox"/> Aircraft Type : _____												
Year :													Year :												
Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1													1												
2													2												
3													3												
4													4												
5													5												
6													6												
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27													27												
28													28												
29													29												
30													30												
31													31												
Total Number of days : _____																									
Mark with a cross (x) against the date on which work was performed or actively participated in																									

TABLE 1 - TYPICAL FORMAT FOR SOE/OJT (Continued)

WORK DETAILS										
I declare that the information given in this form is true in every respect.								Page xx of xxx		
Name : _____					Signature : _____					
ATA 21 - Air Conditioning & Pressurisation										
	A/c Regn	A/c Type	Description of work carried out	Date performed	Inspection	Component Replacement	Testing	Troubleshooting & Rectification	Supervisor	Assessor
1	9V-XYZ	B744	C/out inspection of recirculation fan per AMM xx-xx-xx	11 Jan 04	✓				Sign/ date	Sign/ date
2	N4321	MD11	ACM replaced per AMM xxxx. Operational check carried out per AMM xx-xx-xx	12 Jan 04		✓		✓	Sign/ date	
3	N1234	B767	Ref: T/Log xxxx – Assisted in the troubleshooting of intermittent outflow valve operation. O/flow valve replaced as per AMM xx-xx-xx	15 Jan 04	✓		✓	✓	Sign/ date	
4							
...										
ATA 22 - Auto Flight										
1	VH-ABC	A320	Carried out Land Category III capability check as per MM xx-xx-xx.	1 Jan 04			✓		Sign/ date	Sign/ date
2	9M-DEF	B744	Ref T/Log xxxxx – Carried out troubleshooting of Auto Flight Control System to ascertain cause of failure to engage all the three autopilots. Found autopilot disengage switch on Captain's control column faulty. Disengage switch replaced as per MM xx-xx-xx. Carried out ground test of AFCS as per MM xx-xx-xx.	11 Jan 04	✓	✓	✓	✓	Sign/ date	
3	9V-GHI	A345	Carried out replacement of Flight Management Guidance and Envelop Computer Number 1 (FMGEC 1) in accordance with Component Change Sheet CCS/xxx. Performed functional check of FMGS as per MM xx-xx-xx	2 Feb 04	✓	✓	✓		Sign/ date	
4							
...										