ERL MAINTENANCE SUPPORT SDN BHD

Co. Reg. No. 199901023674 (498574-T)



OPERATIONS DEPARTMENT

EXAMINATION METHODOLOGY

Ref. No. G00.OMO.M10100.BC.0004.E

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Release

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			28.01.202	900

Amendments or additions to this procedure must be indicated with a vertical black line in the adjacent left margin

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Change Record and Configuration Control

E	25.02.2020	Revised to update changes to reflect ISO9001:2015 and ISO14001:2015 new requirements. Inclusion of abbreviation and handling of certificate to reflect the latest Company Training Procedure	Hazlan
D	28.06.2016	Revised rating scale for practical examination as per OI 02/2014 and link Theoretical exam paper to this document	Hazlan
С	10.09.2013	Review of entire document to adopt current practice and elimination of driving license issuance	Hazlan
В	2604.2002	Review of entire document and additional information	Schwake
Α	23.05.2001	New	Oberkampf
Revision	Date	Modification	Name

Planning Of Changes Reference For Revision: G00.OMO.M10100.BC.0004.E						
Issues To Consider	Checked	Checked (Please mark X)			Remarks	
1) Are there any negative impact?	YES		NO	Х		
2) Will the integrity of QEMS be affected?	YES		NO	Х		
3) Resources available?	YES	Х	NO		Adequate	
Allocation or relocation of responsibilities and authorities required?	YES		NO	Х		

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1 Introduction

E-MAStrain and system operations requires a high level of safety, reliability and punctuality; as well as proper service to the customers. These requirements can only be fulfilled by a well trained staff. The effectiveness of the training and the competence of the staffsare measured by tests and examinations.

This document is designed to standardise the examinations for Operations staff. The objective is to provide a basis for an independent evaluation.

The examination methodology considers:

- Common matters of the general procedure for the examination
- Distinctions of the examination characteristics for the different functional groups
- Evaluation of intermediate tests and final examinations (theoretical and practical)
- Conditions for passing the examinations

The successful passing of the examinations is proof that the trainee is able to work in accordance with the appropriate principles, rules and procedures.

This document does not cover medical tests or other preconditions for staff recruitment.

2 General

In general, there are two types of examinations:

- * Intermediate Tests (theoretical)
- * Final Examinations (theoretical and practical)

The parts and the methods of examinations are described in the following sections. Intermediate test will be conducted after the completion of the respective training module. In addition to the training modules, each trainee is obliged to prepare for a final examination.

For participation in the Final Examination, it is a precondition that the trainee has passed all of the Intermediate Tests.

After successful completion of the training, which is proved by passing the Final Examination, the employee is allowed to carry out their duties respectively in accordance to the relevant procedures, rules and regulations.

2.1 Abbreviation

Abbreviation	Description	
ATP	Automatic Train Protection	
CCTV	Closed Circuit Television	
CEO	Chief Executive Officer	
COCC	Chief of Control Centre (HOD of Operations Control Centre)	
EDMS	Electronic Document Management System	
E-MAS	ERL Maintenance Support Sdn. Bhd. Co.Reg.No. 199901023674(498574-T)	

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HOD	Head of Department
OCC	Operations Control Centre
OCL	Overhead Catenary Line
OSS	Operations Station Supervisor
OTD	Operations Train Driver
OTS	Operations Shift Supervisor
PA	Public Address
RST	Rolling Stock Department
SAP	System Application Product
SIG	Signaling Department
TMS	Traffic Management System

For details, refer to Abbreviation and Glossary (Operations) – G00.OMO.M15110.NA.1003.*

3 Examination Committee

The Examination Committee is established on a temporary basis during the final practical examination. The purpose of the committee is to evaluate, using this document as a basis, the knowledge of the general and specific items related to the job of the trainee.

The Examination Committee shall consist of 3 members nominated by the Operations Trainer before the examination takes place and shall be selected from any of the following designation / department representative (Supervisor level and above)

- i. Representative from Operation Management team
- ii. Representative from Rolling Stock Department
- iii. Representative from Signalling Department
- iv. Representative from Safety & Security Department

The formed Committee will make a collective decision on the trainee competency. These decisions must be laid down in an examination sheet (see annex 1) by each of the Examination Committee member. The examination sheet is prepared by the trainer.

4 Examinations

4.1 Intermediate Tests (Theoretical)

Intermediate Tests will be given during the theoretical training period in order to determine the learning progress of the trainees.

A test will be conducted after completion of each module. The test format consists of both subjective and multiple-choice question. The multiple-choice questions may consist of more than 1 answer. A mark will be deducted on each wrong selection of answer. The passing mark is 60% and the trainee will not be allowed to progress to the next module if their marks are lower than 60%. The trainee will be allowed to repeat the test with different set of questions for their second attempt.

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4.2 Final Examination

The Final Examination consists of two parts:

- * Theoretical Examination
- * Practical Examination

For participation in the final practical examination, it is a precondition that the trainee has passed the final theoretical examination.

4.2.1 Theoretical Examination

In the Theoretical Final Examination, the trainee must prove his knowledge on rules, regulations, procedures and established facts of the system. This part of the examination will be a "Multiple Choice" test. This means that, for each question, there is normally more than one possible answer. The trainee must determine the correct answer(s) and mark it (them) on the answer sheet. The questions consist of all modules taught during the training. Different groups of questions shall be prepared for repeated test. This part of the examination shall consist of 25 questions with the passing mark of 60% and the time given is two (2) hours.

4.2.2 Practical Examination

This examination takes place under the supervision of the Examination Committee (min 3 members). The examination must be performed in accordance with the relevant procedures of Operations. For the simulation of failures the responsible examiners must ensure that neither people nor equipment is endangered. Normal Operations (Revenue Service) shall not be hindered by the examination.

Only one trainee will be examined at a time. During this examination the trainee must prove that he:

- * has a good knowledge about the E-MAS system (operations)
- * acts in accordance with the applicable procedure
- * is able to operate the equipment which is assigned to his workplace
- * is able to resolve situations involving faults, irregularities, failures and emergencies in accordance with applicable rules, regulations and procedures.

The examination may consists any of the following:

- Normal, degraded and emergency Operations
- Failure simulation. Conducted with some simulation of technical errors, signaling scenarios and some movement in the depot area which require basic troubleshooting
- Train driving on the mainline
- Station operations (for Station Supervisor)
- OCC operations (for Line/Depot Controller)
- Safety at work / operations

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The examination shall take place at the future working place of the trainee under supervision of the Examination Committee.

The Examination Committee evaluates performance in accordance with checklists and the given time limits for the tasks. If safety relevant mistakes are made by the trainee, the Practical Examination cannot be evaluated as "passed".

Evaluation of the Practical Examination

The evaluation of the scores is as follows:

Rating Scale		Evaluation	Remark
9 - 10	Excellent		
7 – 8	Good	Passed	Achieved score will be used to calculate the Overall Score
5 – 6	Satisfactory		
0 – 4	Inadequate	Failed	One repetition is possible within two weeks

4.3 Certificates

Certificate of Competency is issued by Operations department and signed by the trainer, Operation Manager and HOD HRD (Human Resource). The certificates shall be retained by the Company and kept by HRD. No copy will be issued to the employee. Upon resignation, the employee may appeal to retrieve the certificate, subject to management approval and in accordance with the HRD Procedure - Training (G00.OMH.M10580.SD.0006.*)

4.4 Documentation

Records for training, examinations and certificates are kept by the trainer within the Department in accordance to the HRD Procedure - Training (ref G00.OMH.M10580.SD.0006.*. The Trainer is responsible for ensuring that all training matters are properly documented.

5 Guidelines for Examinations of Different Operational Groups

5.1 Guidelines for Driver Examinations

5.1.1 Final Theoretical Examination

In addition to the rules specified in section 4.2.1, the following requirements are to be included in the Theoretical Examination for Train Drivers (G00.OMO.M10580.SG.1016.*):

The examination shall cover questions mainly on the following subjects:

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- * Signalling and ATP (Automatic Train Protection) System
- * Rolling Stock and basic troubleshooting
- * Safety at work/operations
- * Radio Communications

The examination shall cover at least the following questions:

- * Questions concerning signalling (including a change of running modes)
- * Questions about failure management
- * Questions about actions required in the case of emergencies
- * Questions about the organisational structure of E-MAS and reporting / function line (e.g. communication Driver / Controller and reporting Driver / Shift Supervisor)

5.1.2 Final Practical Examination

In addition to the rules specified in section 4.2.2, the additional items listed below are to be applied to the Practical Examination for Train Drivers. The examination shall be given without hindering normal revenue operations.

The first part of the examination, which takes place under the conditions of Normal Operations and in line with the train driver examination checklist (G00.OMO.M15012.SG.1006.*), shall include the following practical tests:

- * The trainee shall prepare a train for operations.
- * The second part of the examination consists of failure simulation exercises. Each driver must identified and attend few failures consist of rolling stock failures and other equipment, e.g., Signalling system
- * Perform shunting agreement and depot movement
- * Train driving on the mainline. Train driver to adhere to the ESP driving profile and performing some radio communication and standard announcement.

The Examination Committee will evaluate the Train Driver's performance (taking proper action in a timely manner) via the Practical Examination Sheet. There are 2 types of Practical Examination Sheet for Train Drivers i.e.

- i. Train Preparation to be evaluated by 3 examination committee as specified in section 3
- ii. Train Driving to be evaluated only by the Operations examination committee

5.2 Controllers

5.2.1 Theoretical Examination

In addition to the rules specified in chapter 4.2.1 the additional items listed below are to be applied to the Theoretical Examination for Controllers(G00.OMO.M10580.SG.1017.*):

The examination shall cover at least the following questions:

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- * Questions concerning safety at work/Operations
- * Questions concerning signalling principal and understanding
- * Questions concerning Procedure for Communication and Signal Book
- * Questions about failure management (including Signalling, Train and technical failures)
- * Questions on Track Possession Request (TPR) and Notice Call (NC)
- * Questions about actions required in the case of emergencies (including isolation of traction power and the detraining/evacuation of passengers)
- * Questions about the organisational structure of E-MAS and reporting systems

5.2.2 Final Practical Examination

In addition to the rules specified in section 4.2.2, the additional items listed below are to be applied to the Practical Examination for OCC. The examination shall be carried out without hindering normal revenue operations. In general the examination for OCC is a combination of the execution of practical actions and additional explanations by the trainee. The examination should last approximately one hour.

The examination, which takes place under the conditions of Normal Operations, shall include the following practical tests:

- * Action during degraded and emergency operations
- * Manual Route Setting
- * Explanation on TMS (Traffic Management System) and other OCC equipment
- * Creating of train data for feeding the Line according to a given timetable or swapping of train
- * Depot movement
- * Execution of communications in accordance to the procedures
- * Operating the ATP MMI
- * Action in the event of technical failures
- * OCC documentation

The Examination Committee will evaluate the Controller's performance (taking proper action in a timely manner) via the Practical Examination Sheet.

5.3 Station Supervisors

5.3.1 Final Theoretical Examination

In addition to the rules specified in chapter 4.2.1, the additional items listed below are to be applied to the Theoretical Examination for Station Supervisors(G00.OMO.M10580.SG.1021.*).

The examination shall cover questions mainly about the following subjects:

- * Evacuation of train / station
- * Safety at work (including manual operation of turnouts, isolation of traction power)
- * Questions concerning the basic knowledge about train operations

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- * Questions about failure management with the crucial point about station equipment, the organisational structure of E-MAS, reporting line, some processes and communications
- * Questions about actions required in case of emergencies and co-operation with Emergency Services

Part of the Theoretical Final Examination shall be used for testing the capability of the Station Supervisor and the Station Staff to describe their normal activities, especially customer relations and the management of the Station Staff.

5.3.2 Practical Examination

In addition to the rules specified in section 4.2.2, the additional items listed below are to be applied to the Practical Examination for Station Supervisors.

The examination, which takes place under the various conditions of operation, shall cover the following items:

- * Taking / handing over duty
- * Knowledge of the station equipment and facilities
- * Station journal entry
- * Manual operation of turnout
- * Station patrolling
- * Announcement and passenger handling
- * Detraining and evacuation procedures

The Examination Committee will evaluate the performance of the Station Supervisors (taking proper action in a timely manner) via the Practical Examination Sheet.

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- 6 Annex 1 Sample of Practical Examination Sheet
- 6.1 For Train Drivers (Train Preparations and Train Driving)

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Operations Department PRACTICAL EXAMINATION SHEET TRAIN PREPARATION

Name:		ID No:	
Topic	Description	Points	Remarks (if any)
Train Preparation	External Check Visual inspection underneath & running rails Train equipments / parts explanation Internal Check Safety equipment Driver's cab Passengers saloon		
	 3. Starting Up/shutting down of train Observe DDU Observe Main Component & Auxiliary Brake test – DDU & ATP 		
Communication	 4. Radio Test with OCC Hand portable & Train borne 5. Reporting of train failures Proper flow of reporting 		
Failure	 6. Train equipments Fault events message Train door failure and isolation Brake systems 		
Handling	7. ATP Identify fault at ATP MMI Release EB activation Loss position/re-enter new position		
	Stabling yard to Head shunt 1 (Buffer end) Stabling yard to Head shunt 143 (Buffer stop)		
Dispatching Train	9. From Depot to Test track Signal & turnouts- override Track ahead clear from obstruction		
	10. From Test track to Depot Signal & turnouts-override		

Shunting mode

RATING SCALE		Final Score	COMMENTS		
9 - 10	Excellent	*Average: Total score / 10			
7 - 8	Good				
5 - 6	Satisfactory				
0 – 4	Inadequate (Fail)				

Verify – Practio	al exam has been conducted:-	Evaluation of Examiner:-		
Examiner's nam	ne / ID:			
Signature:		Competence or NOT Competence		
Date:				

Prepared by: HAB

Doc No: G00.OMO.M15012.SG.1001.G

^{*}Maintenance RST examiner representative to evaluate up to item 7 (final score to average by 10)

^{*}Refer to Examiner Question Checklist. Reference no: G00.OMO.M15012.SG.1006.B

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Name:



ID No:

Operations Department PRACTICAL EXAMINATION SHEET DRIVING OF TRAIN

Т	opic		Description		Points	Remarks (if any)
		1. Ro	ute knowledge Passing station & approachir Speed limits, Signal locations			
Driving On The Main Line		2. Cha	anging of Cab at Terminal/Re Activation of Cab Observation at platform before			
		3. Tra	ck observation Driving 'On Sight and Under Track activities & TPR	Caution'		
		4. Ack	nowledge of Track Possessi	on activities		
Com	nunication	5. Rep	oorting of failure & incidents LC/DC & Maintenance			
		6. Anr	ouncement Manual & Pre-recorded			
		7. Fail	ure of passenger door/ramp			
Failure Handling 8.		•	Isolation of door/ramp steps			
		8 Res	etting of main switch & MCB			
		•	Item to be observed at DDU			
Driving On The		9. Acc	eleration and driving with val ATP permissible speed/Drivin Resetting of Deadman			
		10. Br	aking of Train Target Braking for PSD(+ / - 3 Terminal stations Braking/stopping train at oper			
*Operatio	n examiner rep	oresentat	ive to evaluate up to item 10 (final	score to average by	10)	
RAT	ING SCALE		Final Score	COMMENT	s	
9 - 10	Excelle	ent	*Average: Total score / 10			
7 - 8	Good	d Average. Total score / To				
	Satisfac	tory				
5 - 6		(Fail)				

Prepared by: HAB

Signature:

Date:

Doc No: G00.OMO.M15012.SG.1007.A

Competence or NOT Competence

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6.2 For OCC (For LC/DC and EC)

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Operations Department PRACTICAL EXAMINATION SHEET

Operations Control Centre

Name:			ID No:				
1	opic		Description		Points	Remarks (if any)	
Commu	Communication		Radio Icon Explain and operate each funct Radio patching	ionalities			
			Radio test with OTD / OSS and m Emergency Call	anaging			
Workpla Manage			Explain each monitors and their Show all required docs for OCC				
		4. 7	rain failures Passenger door, air-cond, Bogy Redundancy Mode	Lock and			
			Signalling ATP Loss position and Reset as	de counter			
Managin Failures	g of						
			Power trip: auto reclosed and po	ermanent			
		-	afety and Security Unauthorised entry on track				
		_	perations EXP delay arrival				
	anagement	10. N	lenu Demo & explain all menu / optin Alert message, create reminder Timeway diagram & printing				
System [TMS]	11. R	oute – demo on creating route			s:	
		12. C	perations Operating the turnout & signal				
Track Possession Request 13. P		13 . P	Processing, managing and implementation				
Washing Plant			Describe / differentiate, operate and explain train washing process				
RAT	ING SCALE		Final Score	COMMENTS			
9 - 10	Exceller	nt	*Average: Total score / 14	30			
7 - 8	Good						
5 - 6	Satisfacto	ory					
0 – 4	Inadequate (Fail)						

Prepared By: Hazlan

Signature:

Date:

Examiner's name:

Verify - Practical exam has been conducted: -

EDMS: G00.OMO.M15011.SG.1001.C

Evaluation of Examiner: -

Competence or NOT Competence

Operations Department PRACTICAL EXAMINATION SHEET

Operations Control Centre- EC

Name:				ID No:			
1	Горіс		Description		Points	Remarks (if any)	
Communication		1.	Communication Procedure - Explain and operate each fur - PABX - Communication with 3 rd party				
			Radio test with OTD / OSS and Emergency Call				
Workpla Manage		3.	Explain each monitors and the Show all required docs for Office or Office of Scapa Scapa PA system Line of Communication SAP failure report Fire alarm				
Demons	trate	2	SCADA (Demonstrate) - Demo & explain all menu / op - Alarm, Command lock - Failure Log arrangement	otimal display			
5.			PA System (Demonstrate) Able to operate and demonstroperform pre recorded and material announcement via PA system				
Managing of Failures 6.			OCL Power trip: auto reclosed and Sectioning switching MWS and KLIA manual switch				
Track Possession Management		7.	Managing and implementation TPR switching procedure (sin				
Washing	Plant	1000	Describe / differentiate and expla process	in train washing			
RAT	ING SCALE		Final Score	COMMENTS			
9 - 10	Excelle	nt	*Average: Total score / 8	30			
7 - 8	Good			1			
5 - 6							
0 – 4	Inadequate	_					
xaminer' D / Depar				Ev	aluation of	Examiner: -	
ignature:				Compoto	nce or NOT	Competence	
ate:				Compete	nce of NOT	Competence	

Prepared By: Hazlan

EDMS: G00.OMO.M15011.SG.1002.B

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6.3 For Station Supervisors



Operations Department PRACTICAL EXAMINATION SHEET STATION SUPERVISOR

Name:				ID No:	ID No:		
Topic Description				Points	Remarks (if any)		
Turnout	Operation		Reading turnout position and installation on manual point lock	of			
Handover Duty Procedures			Handover / Taking over duty and Station Journal update				
			Other OSS documents and checklist (OSS folders and station documents filing)	3			
			Station safety equipments identification / ocation				
Station S Equipme		5. 3	Safety equipment operating procedures				
		6. /	Action during alarm panel activation				
			Radio check / test				
Communication			Operating PA system and make passenge announcement	er e			
			Handling information to passengers / passengers complaint				
CCTV Op	CCTV Operation 10. Op		Operating the CCTV system	3			
		11. L	ift rescue procedure				
Station Equipment		12 . E	Escalators: Operating and safety procedure	es			
		13. 5	Station lighting system operations				
		14. F	PSD & Roller shutter operations				
Station Pa	atrolling And	15. S	Station patrolling and cleanliness monitorin	ıg			
RATING SCALE			FINAL SCORE	COMM	COMMENTS		
9 - 10	Exceller	nt	*Average: Total score / 15				
7 - 8	Good						
5 - 6 Satisfactory 0 - 4 Inadequate (F		ory					
		(Fail)	1				

Competence or NOT Competence Examiner's name: ID / Department: Signature: Date:

Prepared By: Hazlan

G00.OMO.M15013.SG.1001.C

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7 Annex 2 Certificate

