



# PERSONAL RECORD BOOK

## Marine Electrician Endorsement





This is your Record Book!

## **DO NOT SUBMIT TO THE ITA**

This is not required to achieve certification

- **It is a record of your progress towards achieving certification in the trade**
- **It provides a record of your experience**
- **It is your responsibility to keep it up-to-date**
- **Take it with you if you change employers**

*Note: Employers and supervisors are not responsible for keeping your Record Book up-to-date. They are responsible for sign-off of hours and sign-off of competencies once you have achieved the required level of skills and knowledge.*

# APPRENTICE IDENTIFICATION

**Trade: MARINE ELECTRICIAN ENDORSEMENT**

Legal First Name:		Legal Last Name:	
Suite Number:	Street Number and Name:		
City:		Province:	Postal Code:
Telephone Number:		Email Address:	

## Work Safely!

A safe work attitude contributes to an accident free environment. Accident prevention and safe working conditions are the responsibility of both employers and employees.

Wear the required personal protective equipment, follow safe work practices and follow all safety regulations applicable to specific job activities.

Employer's responsibilities:

- Provide and maintain safety equipment and protective devices
- Ensure proper safe work clothing is worn
- Enforce safe work procedures
- Provide safeguards for machinery, equipment and tools
- Observe all accident prevention regulations
- Train employees in safe use and operation of equipment

Employee's responsibilities:

- Work in accordance with the safety regulations pertaining to job environment
- Work in such a way as not to endanger themselves or fellow workers.

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# EMPLOYER INFORMATION

## Originating Employer

Start Date:	End Date:
Employer:	
Contact Person:	
Address:	Phone:
	Email:
	Fax:
Supervisor/Journeyman 1:	*TWID #:
	Phone:
	Email:
Supervisor/Journeyman 2:	TWID #:
	Phone:
	Email:

**\*TWID # – Trade Worker Identification Number**

*If you have more than one employer during your apprenticeship, record the information for subsequent employers on the following page(s).*

If your job ends or you change employers...

### **Before leaving your place of employment:**

- Update Workplace Hours through a [Work-Based Training Hours form](#) for the current reporting period and get signoff by your employer.
- Update Record of Competencies with your supervisor.
- Confirm with your employer that your workplace hours have been reported to ITA, and if possible get a copy of all Work-Based Training Hours reports submitted.
- Notify the ITA of the change in your employment by submitting an [Apprentice and Sponsor Registration form](#) with your new employer.

When re-employed...

**You must be registered with your new employer before submitting any work-based training hours to the ITA.**

## Subsequent Employers

Start Date:	End Date:
Employer:	
Contact Person:	
Address:	Phone:
	Email:
	Fax:
Supervisor/Journeyperson 1:	TWID #:
	Phone:
	Email:
Supervisor/Journeyperson 2:	TWID #:
	Phone:
	Email:

## Subsequent Employers

Start Date:	End Date:
Employer:	
Contact Person:	
Address:	Phone:
	Email:
	Fax:
Supervisor/Journeyperson 1:	TWID #:
	Phone:
	Email:
Supervisor/Journeyperson 2:	TWID #:
	Phone:
	Email:

# WORKPLACE HOURS

## Instructions

Make an entry in this section each time your hours are reported to the ITA.

1. Get a copy of the *Workplace Hours Report* from your employer.
2. Fill in the dates of the reporting period and the hours reported.
3. Enter your employer name, address and phone number.
4. Keep your Record Book in a safe place.

### Workplace Hours

**Workplace hours** must be submitted to the ITA by your employer on a regular basis. Your hours should be reported at least every six months; however, every three months is preferred.

At the beginning of your apprenticeship discuss the frequency of reporting with your employer.

Keeping Workplace hours up-to-date in your Record Book gives you the tools to better manage your apprenticeship. It provides you with the opportunity to:

- Follow up with your employer each reporting period to ensure your hours are reported on a regular basis.
- Discuss your progress with your direct supervisor/journeyperson on a regular basis.





# RECORD OF COMPETENCIES

## Instructions

The Record of Competencies is filled out and signed-off by the journeyperson supervising your work.

1. Know what skills are expected at each level of the program.
2. Ask the journeyperson to sign off on the competency when you have acquired the skills and are able to perform the task without supervision.
3. If the journeyperson agrees that you have the required skills, he/she will:
  - Record the date that the competency was achieved
  - Sign off on the competency
  - Enter his/her Trades Worker Identification Number (TWID #)

### What is a Record of Competencies?

The Record of Competencies lists all competencies you should be knowledgeable in prior to receiving your certification. Keeping this section up to date will allow you to track your progress towards certification and demonstrate proficiency in the skills within the scope of your trade. Completion of the entire program should result in you becoming a skilled and knowledgeable journeyperson.

- Refer to this section periodically to ensure you are getting the work experience you need.
- Use the competencies as a guide to ensure work tasks are assigned so that you acquire the skills and knowledge required to be successful in the trade.

Review the Record of Competencies on a regular basis with your direct supervisor/journeyperson to ensure they have been completed.

### Program Outline

The Program Outline provides detailed information on the scope of knowledge and skills expected at each level of the program, further defining the competencies listed in the Record Book. The Program Outline is a great resource for developing a training plan.

Download from: <https://www.itabc.ca/program/electrician-endorsement-marine>

### Apprenticeship Toolkit

For general information on apprenticeship and tips for navigating the apprenticeship system in BC visit ITA's website to learn about the [apprenticeship basics](#).

# MARINE ELECTRICIAN ENDORSEMENT

## **IMPORTANT!**

Download the Program Outline!

<https://www.itabc.ca/program/electrician-endorsement-marine>

Read the competency tables

Some competencies are taught in many levels

For detailed information about that competency, go to the Program Outline

## THEORY

### LINE A: MARINE INDUSTRY KNOWLEDGE

- ☐ USE CORRECT TERMINOLOGY FOR SHIPBOARD STRUCTURES, SPACES, EQUIPMENT AND SYSTEMS
- ☐ USE CORRECT TERMINOLOGY FOR SHIPYARD FIXTURES AND EQUIPMENT
- ☐ DESCRIBE HAZARDS COMMON TO MOST SHIPBOARD AND SHIPYARD WORK ENVIRONMENTS

### LINE B: MARINE WIRING METHODS

- ☐ DESCRIBE MARINE CABLES AND CABLE TRANSITS
- ☐ DESCRIBE CORROSION PROTECTION METHODS IN A MARINE ENVIRONMENT

### LINE C: POWER GENERATION

- ☐ DESCRIBE THE INSTALLATION AND MAINTENANCE OF PRIME MOVER CONTROLS
- ☐ DESCRIBE TYPES OF POWER GENERATOR PROTECTIVE RELAYS
- ☐ DESCRIBE MAIN AND AUXILIARY POWER GENERATION SYSTEMS
- ☐ DESCRIBE CONTROLS RELATED TO MAIN AND AUXILIARY POWER SYSTEMS

## **LINE D: POWER DISTRIBUTION**

- ☐ DESCRIBE TRANSFORMER AND PANELBOARD CONFIGURATION
- ☐ DESCRIBE SINGLE LINE DIAGRAMS
- ☐ DESCRIBE EQUIPMENT GROUNDING AND GROUND DETECTION SYSTEMS
- ☐ DESCRIBE TYPES OF SWITCHBOARDS FOUND ON VESSELS
- ☐ DESCRIBE MOTOR CONTROL CENTRES FOUND ON VESSELS
- ☐ DESCRIBE SHORE POWER SYSTEMS
- ☐ DESCRIBE DIFFERENT TYPES OF POWER SYSTEMS

## **LINE E: SHIPBOARD SYSTEMS AND CONTROLS**

- ☐ DESCRIBE TYPES OF SHIPBOARD SYSTEMS AND THEIR PRINCIPLE OPERATION
- ☐ DESCRIBE TYPES OF ALARM SYSTEMS AND MONITORING EQUIPMENT
- ☐ DESCRIBE THE COMPONENTS AND PRINCIPLE OPERATION OF ALARMS AND MONITORING EQUIPMENT
- ☐ DESCRIBE THE PRINCIPLE OPERATION OF INTERNAL COMMUNICATION SYSTEMS
- ☐ DESCRIBE THE PRINCIPLES OF CATHODIC PROTECTION
- ☐ DESCRIBE THE COMPONENTS AND INTEGRATION OF NAVIGATION SYSTEMS
- ☐ DESCRIBE THE OPERATION OF NAVIGATION SYSTEMS
- ☐ DESCRIBE INSTALLATION OF BATTERIES

## **LINE F: TESTING AND TROUBLESHOOTING**

- ☐ DESCRIBE ROUTINE TESTING AND CERTIFICATION REQUIREMENTS
- ☐ DESCRIBE HI-POT AND IMPULSE TESTING
- ☐ DESCRIBE AND INTERPRET ELECTRICAL SINGLE LINE DRAWINGS, LAYOUT DRAWINGS, SCHEMATICS AND WIRING DIAGRAMS APPLICABLE TO THE MARINE INDUSTRY

# PRACTICAL

## LINE A: MARINE INDUSTRY KNOWLEDGE

- ☐ DESCRIBE AND APPLY SITE OR JOB SPECIFIC REGULATIONS AND STANDARDS RELATED TO ELECTRICAL WORK IN THE SHIPBUILDING AND REPAIR INDUSTRY

## LINE B: MARINE WIRING METHODS

- ☐ DESCRIBE AND DEMONSTRATE TERMINATION OF CABLE SHIELDING
- ☐ DESCRIBE AND DEMONSTRATE PACKING OF TRANSITS AND DECK TUBES
- ☐ DESCRIBE AND INSTALL WIREWAYS

## LINE D: POWER DISTRIBUTION

- ☐ INSTALL AND MAINTAIN POWER SOURCES
- ☐ DESCRIBE, INSTALL AND MAINTAIN TEMPORARY SERVICES
- ☐ DESCRIBE, INSTALL AND SERVICE DIFFERENT TYPES OF LIGHTING SYSTEMS

## LINE E: SHIPBOARD SYSTEMS AND CONTROLS

- ☐ DESCRIBE AND PERFORM BATTERY TESTING
- ☐ REPLACE BATTERIES

## LINE F: TESTING AND TROUBLESHOOTING

- ☐ DESCRIBE AND PERFORM INSULATION MEGOHM (MEGGER) TESTING

Supervisor Signature

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## NOTES FROM MARINE ELECTRICIAN ENDORSEMENT

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## MISSING COMPETENCIES?

**To develop the best journey person possible employers should attempt to provide training in all competencies for the trade. This is not always possible.**

If your employer is unable to provide training in any competency required for your trade, note that competency below.

Competencies listed here will remain unsigned until your employer can provide training in that area or until you find an alternate way to gain the experience needed.

Competency:	Date:
Reason:	
Alternate plan:	

Competency:	Date:
Reason:	
Alternate plan:	

# TECHNICAL TRAINING

## Instructions

Keep a record of each level of technical training completed.

### Marine Electrician Endorsement

Date Completed:	Training Provider:
Mark:	Instructor:

# COMPLETION REQUIREMENTS

## Instructions

Keep a record of each program completion requirement achieved.

## MARINE ELECTRICIAN ENDORSEMENT

- ✓ Construction Electrician Certificate of Qualification  
*or*
- ✓ Industrial Electrician Certificate of Qualification
- ☐ Marine Electrician Endorsement - Technical Training
- ☐ 1,680 Work-Based Training Hours
- ☐ ITA Standardized Written examination
- ☐ Recommendation for Certification signed by sponsor

Note: After all other completion requirements have been met, ITA sends a Recommendation for Certification form to the sponsor requesting signoff.

# CERTIFICATIONS

## Instructions

Keep a record of the credentials and endorsements you have earned, including the certification number and date of issue.

CREDENTIAL EARNED	NUMBER	DATE OF ISSUE

***If you have any questions, please contact ITA Customer Service at [customerservice@itabc.ca](mailto:customerservice@itabc.ca) 778-328-8700 or toll free (within BC) at 1-800-660-6011***