



**Skilled
Trades**
Ontario

**Métiers
spécialisés**
Ontario

Apprenticeship
Training Standard
Logbook

Marine Engine Technician

435B

2004

Apprenticeship Training Standard

The Apprenticeship Training Standard or herein after referred to as “Logbook” is a document issued to Apprentices who sign a Registered Training Agreement in the Province of Ontario as an official record of training. It is to be used by the Apprentice and Sponsor/trainer to guide the process of skills development in a particular trade.

Training As An Apprentice

- ✓ Ensure you, your sponsor, and your witness sign a Training Agreement with the Ministry of Labour, Immigration, Training and Skills Development. Once it is registered, you will receive a copy of the registered Training Agreement for your records.
- ✓ Notify the local Service Delivery Office **immediately** if any changes to contact information or training agreement, especially if you change sponsors.
- ✓ Review the Logbook regularly with your trainer and sponsor to discuss your progress, ask questions, seek feedback and have the trainer **sign-off on competencies**
- ✓ Keep an accurate record of the hours you work.
- ✓ Attend classroom training when it is offered.
- ✓ Apply for the financial incentives for which you are eligible.



Completing Your Logbook

- ✓ **Complete the Sponsor Record Form** – A form must be completed for each Sponsor/Trainer used during your apprenticeship.
- ✓ **Confirm Skill Sign-off is Complete**
 - **You and your trainer** sign-off each required skill to confirm that you have demonstrated competency in that skill.
 - Shaded boxes in your Logbook mean the skills are optional and do not have to be confirmed by your trainer or sponsor. However, you are encouraged to complete them as part of your training.
- ✓ **Confirm Skill Set Sign-off is Complete**
 - After you and your trainer have signed-off all the required skills in a skill set, your sponsor signs the signature box on the form in **Appendix C – “Skill Set Completion for Sponsors”** to confirm your completion of all competencies within each skill set.

This document is the property of the apprentice named inside and represents the official record of your training. For information about completing your apprenticeship, see inside of back cover.



Apprentice Name: _____

Address: _____

Phone Number: _____

Email Address: _____

Trade: _____

Training Agreement # (for Compulsory and Non-Compulsory trades):

STO Account No. (for Compulsory trades only):

This document is the property of the Apprentice named herein and represents the official record of their training.

If you have questions about the use of this Logbook or about your Apprenticeship program, contact your local Service Delivery Office (see Appendix D in this book) or the Employment Ontario hotline at: 1-800-387-5656.

Apprenticeship Pathway to a Certificate of Qualification

Phase 1: Registration

Submit Application for Apprenticeship Training through the on-line portal or to local Service Delivery Office

For on-line portal, please follow instructions for registration. You will need to create a *My Ontario* account to access online services.

Training agreement signed and registered by both apprentice and sponsor

Access your Apprenticeship Training Standard Logbook**
skilledtradesontario.ca/about-trades/trades-information

** This is the official record of your training progress. You are responsible for keeping it up-to-date.

Complete on-the-job training

Demonstrate and receive sign-off on the competencies/skills in your Apprenticeship Training Standard Logbook

Complete in-school training

Attend and complete the in-class training set out in the Curriculum Training Standard

Apprentices eligible to apply for apprenticeship incentive grants (Red Seal trades) and loans.

Review and finalize your logbook with your sponsor

Submit proof of apprenticeship completion via email, in-person or digital portal

Your Apprenticeship Training Standard Logbook details completion requirements. Submit the following:

- completed Apprenticeship Training Standard Logbook with signatures
- proof of hours

Certificate of Apprenticeship is issued

Trades without examination

CofA is the final step of the program

Trades with examination (compulsory and non-compulsory trades)*

Provisional Certificate of Qualification issued for a 12 month term

To prepare for the CofQ examination download the Provincial and/or Red Seal Exam preparation guides.

Make payment for your Certificate of Qualification examination

Call to make a payment (647-847-3000 or 1-855-299-0028)

Schedule a date to write your Examination

To schedule your examination, contact your local Service Delivery Office.

Pass Certificate of Qualification examination

Apprentices eligible to apply for Apprenticeship Completion Grant (Red Seal trades) or Apprentice Completion Bonus (non-Red Seal)

Certificate of Qualification is issued

Upon completion, Sponsors may be eligible for Apprenticeship grants, incentives, bonuses or tax credits

Phase 2: Apprenticeship

Phase 3: Certification

* For a list of trades subject to a certification examination, visit: skilledtradesontario.ca

Table of Contents

Foreword: Purpose, Terms and Conditions of the registered Training Agreement.....	1
Trade Specific Resources and Links	2
Methodology-Standard Development	2
Introduction to the Logbook	3
Roles and Responsibilities	4
Roles and Responsibilities of the Apprentice	5
Roles and Responsibilities of Sponsors and Trainers	6
Health and Safety.....	7
Apprenticeship Program Summary/Guidelines.....	10
Scope of Practice	10
Program Guidelines	10
Program Requirements	11
Compulsory and Non-compulsory Classification	11
Skills for Success Summary	11
Standard of Performance	13
Training the Apprentice - Tips for Apprentices, Sponsors and Trainers	14
Notice of Collection of Personal Information	16
List of Trainers	17
Skill Sets	18
6380.0 Protect Self and Others	18
6381.0 Perform General Trade Practices	22
6382.0 Repair Shop Air Supply and Auxiliary Air Systems	29
6383.0 Perform Pre-Delivery Inspection (PDI).....	32
6384.0 Repair Electrical/Electronic Systems	36
6385.0 Repair Gasoline Engine Fuel Management Systems	44
6386.0 Perform Engine Tune-Ups	48
6387.0 Repair Engine Systems	50
6388.0 Repair Steering Systems	58
6389.0 Repair Hydraulic Systems.....	61
6390.0 Repair Drive and Propulsion Systems	64
6391.0 Repair Trailer Suspension and Hitching Systems.....	71

6392.0	Install Engine and Propulsion System	73
6393.0	Diagnose Marine Craft and Handling Equipment Operation	76
6394.0	Perform Marine Systems and Accessories Installation, Maintenance, Repair, and Winterizing	78
	Definitions	81
	Apprentice	81
	Ready to Write Your Exam?	84
	Instructions for Recording a Change in Sponsor	85
	Sponsor Record #1	86
	Change of Sponsor Record #2	87
	Change of Sponsor Record #3	88
	Change of Sponsor Record #4	89
	Appendix A — Instructions for Apprenticeship Program Completion	90
	Appendix B — Apprentice Completion Form	91
	Appendix C — Skill Set Completion for Sponsors	92
	Appendix D — Local Service Delivery Offices in Ontario	93
	Competency Analysis Profile (CAP) Chart	i

Please Note: This Standard has been revised to reflect the visual identity of Skilled Trades Ontario (STO) which replaced the Ontario College of Trades on January 1, 2022. The content of this Standard may refer to the former organization; however, all trade specific information or content remains relevant and accurate based on the original date of publishing.

Please refer to STO's website: skilledtradesontario.ca for the most accurate and up to date information. For information about BOSTA and its regulations, please visit [Building Opportunities in the Skilled Trades Act, 2021 \(BOSTA\)](#).

Any updates to this publication are available on-line; to download this document in PDF format, please follow the link: Skilled Trades Ontario.ca.

© 2022, Skilled Trades Ontario. All rights reserved. No part of this publication may be reproduced in any form whatsoever without the prior permission from Skilled Trades Ontario.

Foreword: Purpose, Terms and Conditions of the registered Training Agreement

Purpose:

- Prior to starting official apprenticeship activities, the apprentice, sponsor and a witness are required to sign a Training Agreement.
- The Training Agreement that you have signed is an important legal document that outlines your responsibilities as an apprentice and the responsibilities of your sponsor.
- Once registered, this training agreement (or contract) marks the start of your formal agreement between the apprentice, the sponsor and the Ministry.
- For compulsory trades, the apprenticeship registration document must be accessible when working.

The Apprentice agrees:

- **To inform the local Service Delivery Office of any change to your contact information or change in sponsor within 7 days;**
- To follow the Sponsor's and Trainer's lawful instructions and make every effort to acquire the skills identified in the Logbook for the Trade which is part of the apprenticeship program established by Skilled Trades Ontario for the trade;
- To obtain written verification from the Sponsor and the Trainer(s) that the requirements in the Logbook for the trade have been met.
- When you receive an "Offer of Classroom Training", confirm your attendance by following the instructions in the offer. Failure to do so may result in losing your opportunity to attend school which delays the completion of your apprenticeship.

The Sponsor agrees:

- To ensure that the Apprentice is provided with the training required as part of the apprenticeship program established by Skilled Trades Ontario for this trade;
- To review the progress of training with the Apprentice, and with the Trainer(s) where the Sponsor and the Trainer are not the same party.
- Release your apprentice from work to attend in-school training without penalty to the apprentice.
- To maintain the journeyman/apprentice ratio for your trade, if applicable.
- To monitor their apprentice(s) progress
- To ensure that the Trainer(s) verifies, in writing, when each skill identified in the Logbook for the trade has been successfully completed by the Apprentice;
- To contact the Ministry should any changes in your capacity to train, your contact information, or your apprentice's status in the program change.

Trade Specific Resources and Links

Trade Specific Resource	Link
Red Seal Program	red-seal.ca
Apprenticeship in Ontario	ontario.ca/page/apprenticeship-ontario
Employment Ontario	employmentontario.ca
Service Canada	servicecanada.gc.ca
<i>Building Opportunities in the Skilled Trades Act, 2021</i>	Building Opportunities in the Skilled Trades Act, 2021, S.O. 2021, c. 28 - Bill 288 (ontario.ca)
Ministry of Labour, Immigration, Training and Skills Development	Ministry of Labour, Immigration, Training and Skills Development ontario.ca
Exam Preparation Guide	Exam Resources – Skilled Trades Ontario
Skills Zone (Ontario Skills Passport)	http://www.skillszone.ca/

**Please note, all website addresses are current at time of printing*

Methodology-Standard Development

A standard is developed with a broad group of trade representatives who form the initial working group. This includes subject matter experts/ tradespeople/ instructors and employers from a cross section of the sector/industry, with varying years of work experience in the field. The working group reviews, develops and recommends revision to the content of the standard. Their role also involves harmonizing and updating other supporting content for the product.

An essential part of the standard development is the validation process. This is the opportunity to have a broader representation of the sector provide feedback on the content of draft standard. This process is conducted in various ways and may include sending out a survey or the draft document (or both) directly to the sector. The comments received are reviewed by the working group and revisions are made as required based on a consensus model.

Introduction to the Logbook

This “on-the job” Logbook is the training standard for Marine Engine Technician 435B and was developed by Skilled Trades Ontario in consultation with representatives from industry. It identifies all the skills associated with and required to learn the trade.

The Logbook is divided into skill sets, which are further divided into skills. These skill sets and skills are written in statements that describe what the Apprentice must perform and to what standard, in order to be considered competent in that skill.

The successful performance of these skills is tracked in the Logbook. Once achieved, this skills’ sign-off, along with the completion of in-school program requirements or equivalent, is how the apprenticeship program is completed and apprentices receive a Certificate of Apprenticeship.

The Sponsor/trainer and Apprentice are required to sign-off and date each skill after the Apprentice has demonstrated proficiency in these skills. However, if a skill is shaded, it is optional and does not need to be signed-off, though it has been defined as a part of the scope of practice for the trade.

All practices described in this standard must be performed by the apprentice according to the specific criteria identified. In general, the standard of performance for this trade is to be performed according to all applicable jurisdictional codes and standards and all health and safety standards must be respected and observed.

All skills within the Apprenticeship Training Standard are to be performed, as applicable, according to and in compliance with the following:

- Occupational Health and Safety Legislation and Regulations;
- Other applicable legislation, regulation, codes and standards;
- Industry best practices;
- Company policies and procedures.

The information presented in this standard is, to the best of our knowledge, current at time of printing and is intended for general application. Please refer to the Skilled Trades Ontario website for the most accurate and up-to-date information: skilledtradesontario.ca

Roles and Responsibilities

Under the [Building Opportunities in the Skilled Trades Act, 2021 \(BOSTA\)](#)

Skilled Trades Ontario (STO) is responsible for:

- Establishing and maintaining qualifications;
- Establishing Apprenticeship Programs and other training programs including training Standards, curriculum standards and certifying examinations;
- Issuing certificates for the purposes of this Act such as Certificates of Qualification;
- Maintaining a Public Registry for compulsory trades skilledtradesontario.ca/public-register/;
- Determining whether the experience and qualifications obtained by applicants for a certificate of qualification who do not complete an apprenticeship are equivalent to those received through completing an apprenticeship (Trade Equivalency Assessments)
- Promoting the skilled trades and conducting research.
- Conducting research and evaluate whether a trade should be prescribed as a trade for the purposes of this Act and to make recommendations on these matters to the Minister.

Ministry of Labour, Immigration, Training and Skills Development (MLITSD)

is responsible for:

- Classifying trades as compulsory trades;
- Prescribing scopes of practice for trades;
- Approving which persons may provide in-class training for apprenticeship programs (TDAs);
- Registering Training Agreements;
- Providing those who successfully complete an apprenticeship program with a certificate of apprenticeship (CofA);
- Administering examinations, including certifying examinations;
- Promoting the skilled trades and conducting research;
- Exercising such other powers and perform such other duties and functions as are provided for in this Act or the regulations.

For any matter related to your registered Training Agreement or completing your apprenticeship, you must contact your local Service Delivery Office.

Roles and Responsibilities of the Apprentice

An Apprentice is an individual who has entered into a registered Training Agreement (refer to Foreword: *“Purpose, Terms and Conditions of TA” page 1*) with a Sponsor to receive training in a trade as part of an apprenticeship program established by Skilled Trades Ontario. As an Apprentice, you have certain roles and responsibilities to follow throughout your apprenticeship training:

1. As an Apprentice, you signed the Training Agreement and have entered into a contract with the Ministry of Labour, Immigration, Training and Skills Development and your Sponsor.
2. If you are registered as an Apprentice in a compulsory trade, your name will automatically appear in the Skilled Trades Ontario Public Register.
3. You are responsible for informing the staff at your local Service Delivery Office regarding changes to the following:
 - Your Sponsor’s address;
 - Your name and address; and/or,
 - Your Sponsor, including starting employment with a new Sponsor
4. As an Apprentice, you are responsible for completing skills or skill sets in this Logbook (as detailed in the *“Eligibility for Apprenticeship Program Completion”* section of this document) and ensuring that they are dated and signed by both you and your Trainer.
5. Once you have demonstrated competency in all the mandatory skills and received a sign off on each skill by your sponsor/trainer, you must have the Skill Set Completion Form completed and signed by your current Sponsor.
6. Submit your Logbook to your local Service Delivery Office.
7. Present your Apprentice Completion Form (Please refer to Appendix B), along with your authorized Logbook to your local Service Delivery Office.

Roles and Responsibilities of Sponsors and Trainers

Sponsors are responsible for ensuring all terms are met as per the registered Training Agreement. They are named on the registered Training Agreement as the entity responsible for ensuring Apprentices receive the training required as part of an apprenticeship program. As a signatory to this agreement, they are designated as the 'Signing Authority' for the Apprentice's Skill Set Completion Form and are required to attest to successful achievement by signing the appropriate box at the completion of each skill set. Some sponsors may also act as the Trainer.

A **Trainer** is an individual who oversees the performance of a task and sets the workplace expectations and practices for the Apprentice.

In compulsory trades, a Trainer must hold a valid Certificate of Qualification and be registered with Skilled Trades Ontario.

In non-compulsory trades, a Trainer is an individual who holds one of the following:

- A Certificate of Qualification;
- A Certificate of Apprenticeship in the trade; or,
- Has completed both the workplace-based training (competencies and/or hours as applicable) and classroom training components of the trade's apprenticeship program; or,
- Has workplace experience equivalent to the apprenticeship program) and has the skills outlined in the Logbook.

Competency means being able to perform to the required standard (please refer to "*Introduction to the Logbook*"). Trainers/Sponsors and Apprentices are required to sign-off and date the skills in the Logbook following each successful acquisition. The Logbook forms a record of this achievement.

The Trainer must provide their signature based on their assessment and professional judgment that the apprentice is competent in the skills described above. The Trainer's signature is not a general warranty or guarantee of the apprentice's future conduct.

Sponsors participating in this training program will be designated as the Signing Authority and are required to attest to successful achievement by signing the appropriate box included at the end of each skill set.

Health and Safety

Safe working procedures and conditions, accident prevention and the preservation of health are of primary importance for apprenticeship programs in Ontario. These responsibilities are shared and require the joint efforts of government, sponsors, employers, supervisors, workers, apprentices and the public to achieve the goal of making Ontario's workplaces safe and healthy.

The [Occupational Health and Safety Act](#) (OHSA) provides us with the legal framework and the tools to do this. It sets out the rights and duties of all parties in the workplace, placing ultimate responsibility on the employer for the health and safety of workers (in this case apprentices) by ensuring procedures, controls, and training are established for dealing with workplace hazards. Therefore, it is imperative that all parties become aware of circumstances that may lead to injury, illness or harm. Safe learning experiences and environments can be created by controlling the variables and behaviours that may contribute to or cause an accident injury or illness.

A sponsor who is not the employer is reminded that the employer has legal responsibilities respecting health and safety over the apprentice who is their worker. The sponsor should encourage safe work habits and adherence to the employer's occupational health and safety requirements for the workplace.

It is generally recognized that a positive attitude about safety in partnership with health and safety competency contributes to an accident-free environment. Everyone will benefit as a result of a healthy attitude towards the prevention of accidents.

Workers and apprentices can be exposed to a multitude of hazards and, therefore, should be familiar with the Occupational Health and Safety Act and regulations.

The Internal Responsibility System:

One of the primary purposes of the Occupational Health and Safety Act (OHSA) is to facilitate a strong Internal Responsibility System (IRS) in the workplace. To this end, the OHSA lays out the duties of employers, supervisors, workers, apprentices, constructors and workplace owners.

Workplace parties' compliance with their respective statutory duties is essential to the establishment of a strong IRS in the workplace.

Simply put, the IRS means that everyone in the workplace has a role to play in keeping workplaces safe and healthy. Workers and apprentices in the workplace who see a health and safety problem such as a hazard or contravention of the OHSA in the workplace have a statutory duty to report the situation to the employer or a supervisor. Employers and supervisors are, in turn, required to address those situations and acquaint workers with any hazard in the work that they do.

The IRS helps support a safe and healthy workplace. In addition to the workplace parties' compliance with their legal duties, the IRS is further supported by well-defined health and safety policies and programs, including the design, control, monitoring and supervision of the work being performed.

Roles and Responsibilities under the Occupational Health and Safety Act

Employer's Responsibilities include but are not limited to the following:

- Instruct, inform and supervise workers and apprentices to protect their health and safety.
- Appoint competent persons as supervisors.
- Inform a worker, apprentice, or a person in authority, about any hazard in the workplace and train them in the handling, storage, use, disposal and transport of any equipment, substances, tools, material, etc.
- Take every precaution reasonable in the circumstances for the protection of a worker/apprentice.
- In workplaces in which more than five workers are regularly employed, prepare and post a written occupational health and safety policy and set up and maintain a program to implement it.
- Prepare and post policies with respect to workplace violence and workplace harassment and develop programs supporting workplace harassment and workplace violence policies.
- Ensure knowledge of applicable legislative, regulatory, codes and standards so requirements to be followed are clear to all workers/apprentices.

Trainer/Supervisor Responsibilities include but are not limited to the following:

- Ensure that a worker or apprentice works in compliance with the Act and regulations.
- Ensure that any equipment, protective device or clothing required by the employer is used or worn by the worker or apprentice.
- Advise a worker/apprentice of any potential or actual health or safety dangers known by the supervisor.
- Take every precaution reasonable in the circumstances for the protection of workers.

Worker/Apprentice Responsibilities include but are not limited to the following:

- Work in compliance with the Act and regulations.
- Use or wear any equipment, protective devices or clothing required by the employer.
- Report to the employer or supervisor any known missing or defective equipment or protective device that may endanger the worker or another worker.
- Report any hazard or contravention of the Act or regulations to the employer or supervisor.
- Not remove or make ineffective any protective device required by the employer or by the regulations.
- Not use or operate any equipment or work in a way that may endanger any worker.

The Three Rights of Workers/Apprentices

The OHSA gives workers and apprentices three important rights:

1. The right to know about hazards in their work and get information, supervision and instruction to protect their health and safety on the job.
2. The right to participate in identifying and solving workplace health and safety problems either through a health and safety representative or a worker member of a joint health and safety committee.
3. The right to refuse work that they believe is dangerous to their health and safety or that of any other worker in the workplace.

Ministry of Labour, Immigration, Training and Skills Development

The Ministry of Labour, Immigration, Training and Skills Development conducts periodic inspections of workplaces to ensure that safety acts and regulations are being followed. Please direct any questions to the Occupational Health and Safety Contact Centre at 1-877-202-0008.

Apprenticeship Program Summary/Guidelines

Scope of Practice

The Scope of Practice for the trade of Marine Engine Technician is set out in section 86 of Ontario Regulation 875/21 under BOSTA and reads as follows:

86. The scope of practice for the trade of marine engine technician includes inspecting and maintaining,

- (a) marine craft engines; and
- (b) electronic, steering, hydraulic, drive and propulsion and braking systems of marine craft, for dealer and independent service shops and marina operators.

*While the Logbook draws on the scope of practice regulation (Section 86 of Ontario Regulation 875/21 under BOSTA). The Logbook does not purport to add to or modify the scope of practice as provided in regulation. *

Program Guidelines

On-the-Job Training Duration

Industry has identified 4280 hours as the benchmark necessary for any Apprentice to become competent in the skills required. There may be circumstances in which the duration varies from this guideline.

In-Class Training Duration

Industry has identified 720 hours of in-school training as the duration necessary for an Apprentice to complete the in-school curriculum for this program.

Total Training Hours

5000 hours

Journeyman to Apprentice Ratio

Industry Recommended Ratios:

While some of the trades regulated under BOSTA are subject to Journeyman to Apprentice ratios set out in regulation, this trade is not one of them. Instead, **industry has recommended a Journeyman to Apprentice ratio guideline of 1 Journeyman (or individual who is deemed equivalent to a journeyman) to 1 Apprentice** as the ratio necessary for an Apprentice to be properly trained on the job in this program.

Program Requirements

Compulsory and Non-compulsory Classification

Regulations under the *Building Opportunities in the Skilled Trades Act, 2021*, classify each trade as either “compulsory” or non-compulsory.” This trade is non-compulsory.

It is the responsibility of an Apprentice to maintain a training record in the form of a Logbook. The Sponsor and Trainer are required to sign-off when competencies in the trade are achieved.

Skills for Success Summary

Skills for Success are needed in a quickly changing world for work, learning and life. They are foundational for building other skills and important for effective social interaction. Everyone benefits from having these skills as they help individuals get a job, progress at their current job and change jobs. They also help individuals become active members of their community and succeed in learning.

Through extensive research and consultations, the Government of Canada launched the new Skills for Success model renewing the previous Essential Skills framework to better reflect the needs of the current and future labour market.

The occupational specific Essential Skills profiles are available online. These will be updated over time to align with the new Skills for Success model found here: [Skills for Success model](#)

Restricted Skill Sets

This program does not contain any restricted skill sets as per Ontario Regulation 565/99, Restricted Skill Sets. Therefore, an individual is not required to be registered apprentice or possess certification in order to perform skills contained in the program.

Academic Standard

The Industry Committee has identified the minimum academic standard for entry to this program as completion of Grade 12 or ministry-approved equivalent.

(See ACA Policy 102, Confirming Academic Requirements)

Eligibility for Exam Challenge *(for Non-apprentice C of Q Applicants)*

The challenger must:

- provide proof of competency in all mandatory (unshaded) skills as identified in the Training Standard or Schedule of Training; and
- demonstrate that he/she has acquired 5,000 hours of on-the-job training.

(See ACA Policy 150, Assessing Applicants for the Certificate of Qualification)

Eligibility for Program Completion (*for Apprentices*)

The apprentice must:

- achieve competency in all mandatory (unshaded) skills as identified in the Training Standard or Schedule of Training.
- complete the in-school training as outlined in the industry and ministry- approved Curriculum Standard.

(ACA Policy 309, Completion of an Apprenticeship Program)

Other Resources

Complete program requirements, policies, and standards can be obtained by referring to the following resources:

- *Apprenticeship and Certification Act, 1998 (ACA)*;
- ACA General Regulation 573/99;
- ACA Exemption Regulation 566/99;
- Program-specific Apprenticeship Training Standards or Schedules of Training; and
- ACA Program and Policy Manual

Academic Background

Industry has identified relevant secondary school course(s) likely to increase an individual's chances of success if completed prior to program entry. For details, see the document Apprenticeship Subject Pathways.

Standard of Performance

In general, the standard of performance for the trade of Marine Engine Technician are to be performed, as applicable, according to and in compliance with the following:

Industry Safety Standards which are based upon:

- Occupational Health and Safety Legislation and Regulations;
- Jurisdictional legislation and regulations, codes and standards (municipal bylaws etc.)
- Company policies and procedures
- All applicable manufacturers specifications and engineering specifications

Other Suggested or Required Certification(s) and Training

While an apprentice receives health, safety and occupational specific training and/or certification in a variety of fields during their apprenticeship, it is important to be aware that other occupational health and safety training and certification renewal or updating may also be required during their career before performing new types of work.

Training the Apprentice - Tips for Apprentices, Sponsors and Trainers

Tips for Apprentices

Remember, it takes time to learn. The following is a list of additional tips and tools to help make the most of your apprenticeship training:

- Practice safe work procedures early to create good habits;
- Use your Logbook as a journal to keep track of the skills you have achieved;
- Review your training plan with your Training Consultant, Trainer, or Sponsor;
- Discuss your training needs with your Trainer and/or Sponsor;
- Listen to the suggestions of your Trainer;
- Ask your Trainer questions if you are unsure of any skill you need to perform or any tools or equipment you need to use to perform your duties;
- Show enthusiasm and develop good work habits; and,
- Upon demonstration of competency, ensure that you and your Trainer sign-off the individual skills.

To get the most from this mentoring experience, request exposure to the full scope of the trade; meet regularly with your Sponsor/Trainer to discuss your progress, ask questions and seek feedback.

Tips for Sponsors

- Select Trainers with good communication skills and who work well with others;
- Ensure that the Apprentice always works under the direction of or has access to a qualified Trainer;
- Encourage Trainers to take upgrading courses (e.g. Train the Trainer, Mentor, Coach, etc.);
- Set out clear expectations and involve both the Apprentice and Trainer in developing the training plan
- Encourage safe work habits;
- Allow time for the Trainer to train and demonstrate skills to the Apprentice;
- Provide opportunities and time for the Apprentice to learn the trade;
- Ensure that the Apprentice receives the varied on-the-job trade training experience outlined in this document;
- Recognize good performance;
- Observe frequently;
- Provide constructive feedback and conduct regular performance reviews involving the Apprentice and Trainer;
- Use the Logbook as a monitoring tool and a part of regular performance evaluations; and,
- Complete the Skill Set Completion Form once the Apprentice has demonstrated competency in the skills.

- The detailed content listed for each skill is not intended to represent an inclusive list; rather, it is included to illustrate the intended direction for the skill acquisition.

Tips for Trainers

Trainers are responsible for ensuring the Apprentice is developing the skills outlined in this document. Here is a list of tips and tools to help Trainers in their supervision of Apprentices:

- Demonstrate model safe work habits;
- Provide opportunities and time for the Apprentice to learn the trade;
- Treat Apprentices fairly and with respect;
- Review the Logbook with the Apprentice and develop a training plan;
- Set out clear expectations and recognize good performance;
- Expose Apprentices to the full scope of the trade by providing training on the skills outlined in this document;
- Encourage and respond to all questions;
- Be patient;
- Explain, show and demonstrate the skill;
- **Meet regularly with the Apprentice to discuss the apprentice's progress**
- Provide continuous feedback;
- Sign-off skills when your Apprentice demonstrates competency, and,
- Use the Logbook as a guide to evaluate competence in each skill area. By using the Logbook, Trainers will be able to guide the process to and assist Apprentices to develop skills outlined in this document.

The best mentoring experience is when an Apprentice is given as much training/exposure to the full scope of the trade as possible. If this is not possible, help them to determine other ways this may be possible.

Notice of Collection of Personal Information

1. At any time during your apprenticeship training, you may be required to show this Logbook to the local Service Delivery Office. You will be required to submit the signed Apprenticeship Completion form to the Service Delivery Office in order to complete your program. The Service Delivery Office will use your personal information to administer and finance Ontario's apprenticeship training system, including confirming your completion and issuing your Certificate of Apprenticeship.
2. The Service Delivery Office will disclose information about your program completion and your Certificate of Apprenticeship to Skilled Trades Ontario, as it is necessary for Skilled Trades Ontario to carry out its responsibilities.
3. Your personal information is collected, used and disclosed by the Ministry of Labour, Immigration, Training and Skills Development under the authority of the *Building Opportunities in the Skilled Trades Act, 2021 (BOSTA)*.
4. Questions about the collection, use and disclosure of your personal information by the Ministry may be addressed to the:

Manager, Employment Ontario Contact Centre
Ministry of Labour, Immigration, Training and Skills Development
33 Bloor St. E, 2nd floor, Toronto, Ontario M7A 2S3
Toll-free: 1-800-387-5656; Toronto: 416-326-5656
TTY: 1-866-533-6339 or 416-325-4084

6380.0 Protect Self and Others

General Performance Objective

Comply with occupational health and safety procedures by identifying potential workplace health and safety hazards; handling, storing, and disposing of hazardous materials; wearing and maintaining personal protective equipment; complying with workplace-related legislation; interpreting and applying service-related information; practising good housekeeping in the workplace; and complying with Workplace Hazardous Materials Information System (WHMIS) guidelines; according to the *Occupational Health and Safety Act*, government safety regulations, accepted industry standards, and manufacturers' recommendations.

Performance Objectives

Skills

6380.01 Identify and take corrective action against potential workplace health and safety hazards, including excessive exhaust and explosive fumes, dust, sound levels, and electrical and mechanical hazards (i.e., damaged or faulty air lines and inadequate ventilation), so that the potential for personal injury, damage to equipment, water craft, and the environment are minimized, according to government safety regulations, accepted industry standards, and manufacturers' recommendations.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor.**

6380.02 Handle, store, and dispose of hazardous workplace materials, including cleaning solvents, antifreeze, hydraulic fluids, engine oil, gear oil, bilge sewage, battery acid, refrigerants, and gases, by using personal protective equipment and specified handling and storage equipment; so that individuals are protected from injury, the environment is protected from contamination, and safety procedures are followed, according to government safety regulations, accepted industry standards, and manufacturers' recommendations.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6380.03 Wear and maintain personal protective equipment, including eye, ear, hand, respiratory, body, and foot protection, by ensuring that correct fit and optimum protection is provided to the wearer for the specific task performed, according to government safety regulations, accepted industry standards, and manufacturers' recommendations.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6380.04 **Comply with workplace-related legislation** relating to water and highway traffic safety, parts, warranties, occupational health/safety, environmental protection, and business and trade practices, including the *Occupational Health and Safety Act*, the *Motive Vehicle Repair Act*, the *Highway Traffic Act*, the *Environmental Protection Act*, and the Coast Guard regulations, by identifying the personal and legal liabilities of technicians and water craft owners when performing and conducting safety inspections, emissions tests, and work estimates, and repairing or replacing defective parts, according to government safety regulations, accepted industry standards, and manufacturers' recommendations.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6380.05 **Practise good housekeeping in the workplace** by applying fire hazard prevention methods, including maintaining a clean and orderly work area; identifying, removing and disposing of potential fire hazards; cleaning up grease, oil spills and fluids; ensuring work area is free of obstructions; and safely storing tools and shop equipment, to minimize accident or injury to self and others, according to government safety regulations, accepted industry standards, and manufacturers' recommendations.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6380.06 **Comply with Workplace Hazardous Materials Information System (WHMIS) guidelines**, including reading and interpreting labels and Material Safety Data Sheets (MSDS), and ensuring receipt of training in WHMIS regulations and practices, according to the *Occupational Health and Safety Act*.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6380.07 **Communicate with supervisors and co-workers**, identifying any unsafe or non-compliant conditions, tools and equipment requirements, scheduling and operational issues, and all other information required to create a safe and successful work environment.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6381.0 Perform General Trade Practices

General Performance Objective

Perform general trade practice procedures by interpreting and applying service- related information; demonstrating effective customer relations and activities; performing seasonal storage of water craft and powered equipment; performing oxyacetylene heating, cutting, welding, and soldering; and performing metal inert gas (MIG) welding and shielded metal arc welding; according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

Performance Objectives

Skills

6381.01 Interpret and apply service-related information, including service bulletins, manuals, and parts catalogues, by locating and identifying marine craft and powered equipment identification numbers, and accessing microfiche and computerized service information systems so that service/repair is performed, according to accepted industry standards and manufacturers' recommendations.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor.**

6381.02 Demonstrate effective customer relations by using attentive listening skills, communicating clearly and effectively, accurately recording customer service requirements and related information, and describing to the customer the recommended maintenance and operation of marine craft and powered equipment and the manufacturers' warranty provisions and limitations.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6381.03 Perform customer relations activities, including providing an honest interpretation of the marine craft and powered equipment condition, explaining repairs and costs, providing a written statement of work performed, as well as resolving customers' complaints, so that customers' expectations are met and information is communicated in a courteous and friendly manner.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6381.04 Perform seasonal storage of marine craft and powered equipment by draining and winterizing cooling system, lubricating and draining carburettor, stabilizing fuel systems, draining and refilling drive units, and protecting intake and exhaust system, interior and exterior, from the elements, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6381.05 Perform a visual inspection of oxy/fuel heating and cutting equipment, including tanks, gauges, oxyacetylene valves, hoses, fittings, regulators, lines, and tips, by checking for tank pressure, cracks, leaks, foreign matter, wear, and specific regulator settings, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6381.06 Prepare repair area and set up and operate oxy/fuel heating and cutting equipment, including opening gas valve, checking regulator for specified pressure, setting the regulators for cutting or heating, selecting tip, setting mixture, igniting gas, fine-tuning and adjusting flame, by heating or cutting seized bolts, nuts, and other metal assemblies as specified by manufacturers’ repair procedures; using hand, power, specialized, precision, and electronic service tools, lifting devices and safety stands, personal protective equipment, and fire retardant shielding; and covering or removing exposed parts to prevent injuries and vehicle damage, according to manufacturers’ recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6381.07 Verify condition of heating and cutting area by visually inspecting and checking for damage or distortion to surrounding area and components, according to manufacturers’ and industry approved repair procedures and safety requirements.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6381.08 Perform a visual inspection of metal inert gas (MIG) welding equipment, including tanks, gases, hoses, fittings, regulators, lines, electrical connectors, cables, ground clamps, tips and nozzles, drive assembly, and ventilation fans, by checking for pressure, cracks, leaks, corrosion, fraying, foreign matter, wear, proper settings, connections, obstructions, and ventilation; according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6381.09 Prepare repair area and set up and operate metal inert gas (MIG) welding equipment, including attaching ground clamp to repair area to protect vehicle electronic components, turning on power switch, opening gas valve; checking regulator for specified pressure, adjusting wire speed, selecting required amperage, fine-tuning the welder to the repair area, and applying weld-through primer to repair area, by performing welding on mild steel and aluminum components, and silicon bronze welding for cosmetic repairs only, using personal protective equipment, and fire retardant shielding, and covering or removing exposed parts to prevent injuries and vehicle damage, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6381.10 **Verify integrity of the weld**, including correct penetration and the absence of visible cracks, undercuts, melt-through, porosity, craters, excessive spatter, and edge defects, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6381.11 **Perform a visual inspection of arc welder**, including ground clamp and holder, power cables, electrical connectors, electrodes, and ventilation fans, by checking for wear, fraying, burns, corrosion, loose connections, and electrode condition, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6381.12 Prepare repair area and set up and operate arc welding equipment, including cleaning and preparing work area, selecting specified electrodes, adjusting amperage, attaching ground clamp, turning on power switch, and fine-tuning the welder to the repair area, as specified by manufacturers' repair procedures, by performing welding limited to heavy gauge steel when recommended by manufacturers' repair procedures; and using personal protective equipment, fire retardant shielding, and covering or removing exposed parts to prevent injuries and vehicle damage, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6381.13 Verify integrity of the arc weld, including correct penetration, without any slag in the weld, or visible cracks, undercuts, melt-through, porosity, craters, excessive spatter, and edge defects, by visually inspecting and checking for damage to surrounding area and components, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6382.0 Repair Shop Air Supply and Auxiliary Air Systems

General Performance Objective

Diagnose and repair shop air supply systems and components, by performing a visual inspection, diagnosing and troubleshooting, repairing, and verifying the repair of air supply systems and components, according to; manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

Performance Objectives

Skills

6382.01 Perform a visual inspection of shop air supply systems and components, identifying system type and application, including compressors, drive mechanisms, regulator, cooling, and lubrication systems, air filters, air manifolds, reservoirs, lines, hoses, fittings, seals, valves, gauges, moisture drains, fasteners and mounting devices; and checking for worn, loose, damaged, missing, leaking, restricted, or defective components, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor.**

6382.02 Diagnose and troubleshoot shop air supply systems and components, including compressors, drive mechanisms, regulator, cooling and lubrication systems, air filters, air manifolds, reservoirs, lines, hoses, fittings, seals, valves, gauges, moisture drains, fasteners, and mounting devices, by visually inspecting, testing, and analysing performance and function, checking for wear, temperature, lubrication, leaks, contamination, pressure, flow/velocity, routing of lines and hoses, belt tension and condition, vibration or noise, corrosion, erosion, distortion and fractures; and using hand, power, specialized, precision, and electronic service tools, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6382.03 Repair shop air supply systems and components, including compressors, drive mechanisms, regulator, cooling, and lubrication systems, air filters, air manifolds, reservoirs, lines, hoses, fittings, seals, valves, gauges, moisture drains, fasteners, and mounting devices by exchanging, reconditioning, servicing, or calibrating, using hand, power, specialized, precision, and electronic service tools, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6382.04 **Verify repair of shop air supply and auxiliary air systems and components**, by visually inspecting, testing, and analysing performance and function, and using hand, power, specialized, precision, and electronic service tools, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6383.0 Perform Pre-Delivery Inspection (PDI)

General Performance Objective

Perform marine craft and powered equipment pre-delivery and set-up procedures by performing a visual inspection, diagnosing and troubleshooting, completing a pre-delivery inspection report, and verifying the pre-delivery inspection report's accuracy, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

Performance Objectives

Skills

6383.01 Check marine craft and powered equipment systems and components by visually inspecting, diagnosing, troubleshooting, testing, and verifying performance and function, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor.**

6383.02 Perform a visual inspection of marine craft and powered equipment, including the condition of exterior and interior components, accessories, engine systems, fuel system, electrical and electronic systems, steering systems, drive systems and controls, hydraulic systems and controls, and fastening and mounting devices, and by checking for cleanliness, structural integrity, cracks, distortion, corrosion, leaks, worn, loose, damaged, missing and defective components, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

63830.03 Diagnose and troubleshoot marine craft and powered equipment, including the condition of exterior and interior components, accessories, engine systems, fuel system, electrical and electronic systems, steering systems, drive systems and controls, hydraulic systems and controls, and fastening and mounting devices, by visually inspecting, testing, and analysing performance and function; checking for structural integrity, leaks, pressure, venting, flow, temperature, corrosion, vibration, noise, wear, misalignment, fractures, odour, and colour; and by using hand, power, and specialized electronic service tools, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6383.04 Complete a pre-delivery inspection report, recording the results of the visual inspection, diagnosis, and troubleshooting activities, including the condition of exterior and interior components, accessories, engine systems, fuel system, electrical and electronic systems, steering systems, drive systems and controls, hydraulic systems and controls, and fastening and mounting devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6383.05 Perform marine craft and powered equipment, pre-delivery and set-up procedures, including re-torquing specified fasteners, installing required accessories and attachments, cleaning and applying corrosion protection, adjusting belt tensions and drive control linkage, and topping up fluid levels, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6383.06 **Verify the pre-delivery inspection report's accuracy**, including the condition of exterior and interior components, accessories, engine systems, fuel system, electrical and electronic systems, steering systems, drive systems and controls, hydraulic systems and controls, and fastening and mounting devices, by visually inspecting, testing, and analysing performance, function, and structural integrity; and using hand, power, and specialized electronic service tools, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6384.0 Repair Electrical/Electronic Systems

General Performance Objective

Diagnose and repair electrical/electronic systems by performing a visual inspection; diagnosing and troubleshooting batteries; servicing and boosting or charging batteries; and diagnosing, troubleshooting, repairing, and verifying the repair of starting, charging, ignition, electrical, and electronic lighting and accessory systems and components, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

Performance Objectives

Skills

6384.01 Perform a visual inspection of electrical/electronic systems, identifying system types and applications, including batteries, electrolyte levels, mechanical pull starting mechanisms, electric starters, generators, alternators, drive mechanisms, electrical/electronic accessories, cables, connectors, solenoids, relays, sensors, modules, regulators, circuit protection devices, wiring harnesses, gauges, magneto systems, and fastening and mounting devices, by checking for worn, damaged, corroded, loose, or defective components, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor.**

6384.02 Diagnose and troubleshoot batteries by visually inspecting, testing, and analysing performance and function; checking for damaged, worn, loose, and missing components, electrolyte specific gravity, voltage, fluid level, leaks, cracks, corroded connections, distortion, and cleanliness; and using hand, power, specialized, precision, and electronic service tools, load testers, chargers, and hydrometers, according to manufacturers’ recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6384.03 Service and boost or charge batteries, including single batteries and multi- battery group, by removing, charging, or replacing using hand and power tools, booster cables, booster packs, chargers, electrolyte, distilled water, pullers, cleaning tools, and hydrometers, according to manufacturers’ recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6384.04 Diagnose and troubleshoot starting systems and components, including mechanical pull starting mechanisms, electrical starting motors and drive mechanisms, batteries, cables, connectors, circuit protection devices, neutral safety devices, switches, solenoids, relays, wiring harnesses, fasteners, and mounting devices, by visually inspecting, testing, and analysing performance and function; checking for wear, opens, shorts, and grounds, high-resistance connections, routing of wires, noise or vibration, odour, distortion, corrosion, fractures, and temperature, and using hand, power, specialized, precision, and electronic service tools, digital volt ohmmeter, ammeter, and load testers, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6384.05 Repair starting systems and components, including mechanical starting mechanisms, electrical starting motors and drive mechanisms, batteries, neutral safety devices, cables, connectors, circuit protection devices, switches, solenoids, relays, wiring harnesses, fasteners, and mounting devices, by exchanging, reconditioning, or servicing using hand, power, specialized, and electronic service tools, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6384.06 **Verify repair of starting systems and components** by visually inspecting, testing, and analysing performance and function using hand, power, specialized, and electronic service tools, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6384.07 **Diagnose and troubleshoot charging systems and components**, including magneto systems, generators, alternators, drive mechanisms, batteries, cables, connectors, circuit protection devices, voltage regulators, switches, relays, sensors, modules, wiring harnesses, fasteners, and mounting devices, by visually inspecting, testing, and analysing performance and function; checking for wear, pins, shorts, grounds, high-resistance connections, parasitic draw, routing of wires, system voltage and amperage, vibration or noise, odour, corrosion, distortion, contamination, and temperature, and using hand, power, specialized, precision, and electronic service tools, digital volt ohmmeter (DVOM), amperage voltage resistance (AVR) testers, and stethoscopes; according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6384.08 **Repair charging systems and components**, including magneto systems, generators, alternators, drive mechanisms, batteries, cables, connectors, circuit protection devices, voltage regulators, switches, relays, sensors, modules, wiring harnesses, fasteners and mounting devices, by exchanging, reconditioning, or servicing, and using hand, power, specialized, precision, and electronic service tools, and digital volt ohmmeter (DVOM), according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6384.09 **Verify repair of charging systems and components** by visually inspecting, testing, and analysing performance and function using hand, power, specialized, precision, and electronic service tools, according to manufacturers' recommendations, and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6384.10 Diagnose and troubleshoot electrical and electronically controlled systems and components, including batteries, connectors, cables, display panels, gauges, switches, solenoids, relays, sensors, modules, data links, warning devices, lighting/illumination systems, circuit protection devices, theft-deterrent and electrical accessory devices, wiring harnesses, and fasteners and mounting devices, by visually inspecting, testing, and analysing performance and function; checking for wear, opens, shorts, grounds, parasitic draw, diagnostic codes, routing of wires, temperature, corrosion, distortion, vibration or noise, colour, and odour; and using hand, power, specialized, precision, and electronic service tools and digital volt ohmmeter (DVOM); according to manufacturers’ recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6384.11 Repair electrical and electronically controlled systems and components, including batteries, connectors, cables, display panels, gauges, switches, solenoids, relays, sensors, modules, data links, warning devices, lighting/illumination, circuit protection, theft-deterrent and electrical accessory devices, wiring harnesses, fasteners, and mounting devices, by exchanging, reconditioning, or servicing; and using hand, power, specialized, precision, and electronic service tools, according to manufacturers’ recommendations and specifications, and government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6384.12 **Verify repair of electrical, electronically controlled systems and components**, by visually inspecting, testing, and analysing performance and function, using hand, power, specialized, precision, and electronic service tools, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6384.13 **Diagnose and troubleshoot electrical/electronic ignition systems and components**, including distributor components, coils, resistors, ignition modules, ignition timing components, spark advance mechanisms, high-tension wires, spark plugs, data links, switches, sensors, pick-up assembly, modules, circuit protection devices, wiring harnesses, fasteners, and mounting devices, by visually inspecting, testing, and analysing performance and function; checking for wear, pins, shorts, grounds, diagnostic codes, routing of wires, temperature, colour, system voltage and amperage, electrical leakage, coil oil leakage, corrosion, and vibration or noise; and using hand, power, specialized, precision, and electronic service tools and digital volt ohmmeter (DVOM); according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6384.14 Repair electrical/electronic ignition systems and components, including distributor components, coils, resistors, ignition modules, ignition timing components, spark advance mechanisms, high-tension wires, spark plugs, data links, switches, sensors, pick-up assembly, modules, circuit protection devices, wiring harnesses, fasteners and mounting devices, by exchanging, reconditioning, or servicing; and using hand, power, specialized, precision, and electronic service tools, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6384.15 Verify repair of electrical/electronic ignition systems and components by visually inspecting, testing, and analysing performance and function using hand, power, specialized, precision, and electronic service tools, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6385.0 Repair Gasoline Engine Fuel Management Systems

General Performance Objective

Diagnose and repair gasoline engine fuel management systems by performing a visual inspection; diagnosing, troubleshooting, repairing, and verifying the repair of fuel control systems and components, ignition systems and components, and computer-controlled systems and components, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

Performance Objectives

Skills

6385.01 Perform a visual inspection of mechanically and electronically controlled gasoline engine fuel systems and components, identifying system types and applications, including fuel, tanks, valves, filters, pumps, lines, hoses and fittings, carburetors, injectors, fuel rails, pressure regulators, intake manifolds, ventilation systems, diagnostic codes, warning devices, solenoids, relays, sensors, modules, actuators, data links, circuit protection devices, wiring harnesses, and fastening and mounting devices, by checking for worn, loose, damaged, leaking, missing, or defective components, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor.**

6385.02 Diagnose and troubleshoot mechanically and electronically controlled gasoline engine fuel control systems and components, including fuel, tanks, valves, filters, pumps, lines, hoses and fittings, carburettors, injectors, fuel rails, pressure regulators, intake manifolds, ventilation systems, diagnostic codes, warning devices, solenoids, relays, sensors, modules, actuators, data links, circuit protection devices, wiring harnesses, and fastening and mounting devices, by visually inspecting, testing, and analysing performance and function; checking for odour, temperature, corrosion, colour, vibration or noise, leaks, pressure, vacuum, and flow, and using hand, power, specialized, and electronic service tools, and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6385.03 Repair mechanically and electronically controlled gasoline engine fuel control systems and components, including fuel, tanks, valves, filters, pumps, lines, hoses and fittings, carburettors, injectors, fuel rails, pressure regulators, intake manifolds, ventilation systems, diagnostic codes, warning devices, solenoids, relays, sensors, modules, actuators, data links, circuit protection devices, wiring harnesses, and fastening and mounting devices, by exchanging, reconditioning, or servicing using hand, power, specialized, and electronic service tools, and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6385.04 **Verify repair of gasoline engine fuel control systems and components** by visually inspecting, testing, and analysing performance and function using hand, power, specialized, and electronic service tools, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6385.05 **Diagnose and troubleshoot diesel engine fuel control systems and components**, including fuel, tanks, valves, filters, pumps, lines, hoses and fittings, injectors, fuel rails, intake manifolds, diagnostic codes, warning devices, solenoids, relays, sensors, modules, actuators, data links, circuit protection devices, wiring harnesses, and fastening and mounting devices, by visually inspecting, testing, and analysing performance and function; checking for odour, temperature, corrosion, colour, vibration or noise, leaks, pressure, vacuum, and flow; and using hand, power, specialized, and electronic service tools, and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6385.06 **Repair diesel engine fuel control systems and components**, including fuel, tanks, valves, filters, pumps, lines, hoses and fittings, injectors, fuel rails, intake manifolds, diagnostic codes, warning devices, solenoids, relays, sensors, modules, actuators, data links, circuit protection devices, wiring harnesses, and fastening and mounting devices, by exchanging, reconditioning, or servicing, using hand, power, specialized, and electronic service tools, and lifting, rigging, and blocking devices, according to manufacturers’ recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6385.07 **Verify repair of diesel fuel control systems and components** by visually inspecting, testing, and analysing performance and function, using hand, power, specialized, and electronic service tools, according to manufacturers’ recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6386.0 Perform Engine Tune-Ups

General Performance Objective

Perform engine tune-ups by performing a visual inspection; diagnosing and troubleshooting engine operating systems; checking compression; replacing filters, crankcase oil, sparkplugs, fuel injectors, and ignition components; checking and adjusting ignition and fuel pump timing and fuel pump pressure; and verifying the tune-up, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

Performance Objectives

Skills

6386.01 Perform gasoline engine tune-ups by checking or replacing spark plugs, performing compression, vacuum, and leak-down tests, checking or replacing air filters, intake system, and flame arresters, checking fuel pressure, lines, and hoses, adjusting, cleaning, or replacing carburetors or injectors, checking or replacing batteries, cables, and connectors, ignition system components, fuel filter, and positive crankcase ventilation (PCV) valve, checking, and adjusting ignition timing, timing control mechanisms, governors, idle speed, and emission control devices, checking, adjusting the level, or replacing engine oil, checking, or repairing exhaust restrictions, using hand, power, specialized, and electronic service tools, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor.**

6386.02 Perform diesel engine tune-ups by performing compression and leak-down tests, checking or replacing air filters, intake system components, and fuel filters, checking fuel pressure, lines, and hoses, checking or repairing exhaust restriction, checking manifold boost pressure, electrical system, and valve adjustment, including injectors and pumps, checking or adjusting injection timing, governors, idle speed, and emission control devices, and using hand, power, specialized, and electronic service tools, according to manufacturers' recommendations, and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6386.03 Verify engine tune-up by visually inspecting, testing, and analysing performance and function using hand, power, specialized, and electronic service tools, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6387.0 Repair Engine Systems

General Performance Objective

Diagnose and repair engine systems by performing a visual inspection; diagnosing and troubleshooting; repairing and verifying repairs of cooling system and components, engine lubricating system and components, cylinder head and components, and engine block and components, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

Performance Objectives

Skills

6387.01 Perform a visual inspection of engine cooling systems by identifying system types and applications, including coolant, reservoirs, cooling fins, surge tanks, coolant pumps, raw water pump, belts, hoses, lines, fittings, heat exchangers, gaskets, o-rings, seals, pipes, valves, sensors, temperature control devices, drive mechanisms, wiring harnesses, fastening and mounting devices; and checking for coolant level, worn, loose, damaged, missing, leaking, or defective components, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor.**

6387.02 Diagnose and troubleshoot cooling systems and components, including coolant, reservoirs, surge tanks, coolant pumps, belts, raw water pump, hoses, lines, fittings, heat exchangers, seals, gaskets, o-rings, pipes, valves, sensors, relays, temperature control devices, drive mechanisms, wiring harnesses, fastening and mounting devices, by visually inspecting, testing, and analysing performance and function; checking for leaks, odour, temperature, corrosion, colour, vibration or noise, coolant type, quantity, and condition; and using hand, power, electronic service, and specialized tools, and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6387.03 Repair cooling systems and components, including coolant, reservoirs, surge tanks, coolant, coolant pumps, raw water pump, belts, hoses, lines, fittings, heat exchangers, seals, gaskets, o-rings, pipes, valves, sensors, relays, temperature control devices, drive mechanisms, wiring harnesses, fasteners, and mounting devices, by exchanging, reconditioning, or servicing using hand, power, electronic service, and specialized tools, and lifting, rigging, and blocking devices, according to manufacturers' recommendations, and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6387.04 **Verify repair of cooling systems and components** by testing and analysing performance and function using hand, power, electronic service, and specialized tools, according to manufacturers’ recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6387.05 **Perform a visual inspection of engine lubrication systems** by identifying system types and applications, including pumps, housings, filters, lines, fittings, seals, oil, lubrication jets, gaskets, o-rings, heat exchangers, bypass valves, auxiliary devices, sensors, modules, gauges, warning devices, wiring harnesses, and fastening and mounting devices, by checking for oil levels, worn, loose, damaged, missing, leaking, or defective components, according to manufacturers’ recommendations, and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6387.06 Diagnose and troubleshoot engine lubricating systems and components, including pumps, housings, filters, lines, fittings, seals, oil, lubrication jets, gaskets, o-rings, heat exchangers, bypass valves, auxiliary devices, sensors, modules, gauges, warning devices, wiring harnesses, and fastening and mounting devices, by visually inspecting, testing, and analysing performance and function; checking for leaks, odour, temperature, distortion, corrosion, colour, vibration or noise, pressure, contamination, and oil analysis; and using hand, power, electronic service, and specialized tools, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6387.07 Repair engine lubricating systems and components, including pumps, housings, filters, lines, fittings, seals, oil, lubrication jets, gaskets, o-rings, heat exchangers, bypass valves, auxiliary devices, sensors, modules, gauges, warning devices, wiring harnesses, and fastening and mounting devices, by exchanging, reconditioning, or servicing using hand, power, electronic service, and specialized tools, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6387.08 **Verify repair of engine lubricating systems and components** by testing and analysing performance and function using hand, power, electronic, and specialized tools, according to manufacturers’ recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6387.09 **Perform a visual inspection of engine cylinder heads, block, and components**, identifying system types and applications, including cylinder heads, cover plates, seats, guides, seals, gaskets, o-rings, springs, retainers, rotators, injector tubes, expansion plugs, valves, actuating mechanisms, camshafts, follower assemblies, drive mechanisms, engine blocks, piston assemblies, connecting rods, bearings, liners, counter-balancers, crankshafts, flywheel assemblies, balance shafts, gear trains, harmonic balancers, pulleys, auxiliary drives, oil pans, sensors, modules, gauges, warning devices, wiring harnesses, fastening and mounting devices, and checking for worn, loose, damaged, missing, leaking, or defective components, ventilation, and pressure, according to manufacturers’ recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6387.10 Diagnose and troubleshoot cylinder heads and components, including cylinder heads, cover plates, seats, guides, seals, gaskets, o-rings, springs, retainers, rotators, injector tubes, expansion plugs, valves, actuating mechanisms, camshafts, follower assemblies, drive mechanisms, sensors, modules, gauges, warning devices, wiring harnesses, and fastening and mounting devices, by visually inspecting, testing, and analysing performance and function; checking for corrosion, erosion, vibration or noise, carbon build-up, fractures, leaks, distortion, temperature, pressure and ventilation; and using hand, power, electronic service, and specialized tools, and lifting, rigging, and blocking devices, according to manufacturers' recommendations and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6387.11 Repair cylinder heads and components, including cylinder heads, cover plates, seats, guides, seals, gaskets, o-rings, springs, retainers, rotators, injector tubes, expansion plugs, valves, positive crankcase ventilation systems, actuating mechanisms, camshafts, follower assemblies, drive mechanisms, sensors, modules, gauges, warning devices, wiring harnesses, and fastening and mounting devices, by exchanging, reconditioning, or servicing using hand, power, electronic service, and specialized tools and equipment, and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6387.12 **Verify repair of cylinder heads and components** by testing and analysing performance and function using hand, power, electronic service, and specialized tools, and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6387.13 **Diagnose and troubleshoot engine block and components**, including engine blocks, expansion plugs, cover plates, positive crankcase ventilation systems, piston assemblies, connecting rods, bearings, seals, gaskets, liners, counter- balancers, crankshafts, flywheel assemblies, balance shafts, gear trains, camshafts, follower assemblies, harmonic balancers, pulleys, auxiliary drives, oil pans, and fastening and mounting devices, by visually inspecting, testing, and analysing performance and function; checking for temperature, corrosion, erosion, vibration or noise, carbon build-up, fractures, distortion, alignment, leaks, ventilation and pressure; and using hand, power, electronic service, and specialized tools, and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6387.14 **Repair engine block and components**, including expansion plugs, cover plates, positive crankcase ventilation systems, piston and connecting rod assemblies, bearings, seals, gaskets, sealants, liners, counter-balancers, crankshafts, flywheel assemblies, balance shafts, gear trains, camshafts and follower assemblies, harmonic balancers, pulleys, auxiliary drives, oil pans, and fastening and mounting devices, by exchanging, reconditioning, or servicing using hand, power, electronic service, and specialized tools; heating, cutting, and welding equipment; and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6387.15 **Verify repair of engine block and components** by testing and analysing performance and function using hand, power, electronic service, and specialized tools, and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6388.0 Repair Steering Systems

General Performance Objective

Repair steering systems by performing a visual inspection; diagnosing and troubleshooting; repairing and verifying repair of steering systems and components, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

Performance Objectives

Skills

6388.01 Perform a visual inspection of steering systems and components by identifying system types and applications, including lines, hoses, fittings, gauges, valves, controls, actuators, pumps, drive mechanisms, cylinders, reservoirs, seals, bearings, gaskets, steering boxes/racks/motors, struts, rudders, linkages, tie rod ends, cables, bushings, guides, column assemblies, and fastening and mounting devices; and checking for worn, loose, missing, leaking, damaged, or defective components, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor.**

6388.02 Diagnose and troubleshoot steering systems and components, including lines, hoses, fittings, gauges, valves, controls, actuators, pumps, drive mechanisms, cylinders, reservoirs, seals, bearings, gaskets, steering boxes/racks/motors, struts, rudders, linkages, tie rod ends, cables, bushings, guides, column assemblies, and fastening and mounting devices, by visually inspecting, testing, and analysing performance and function; checking for vibration or noise, corrosion, fractures, leaks, pressure, colour, alignment, stability, and controls; and using hand, power, and specialized tools, and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6388.03 Repair steering systems and components, including lines, hoses, fittings, gauges, valves, controls, and actuators, pumps, drive mechanisms, cylinders, reservoirs, seals, bearings, gaskets, steering boxes/racks/motors, struts, rudders, linkages, tie rod ends, cables, bushings, guides, column assemblies, and fastening and mounting devices, by exchanging, reconditioning, aligning, or servicing using hand, power, and specialized tools; heating, cutting, and welding equipment; and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6388.04 **Verify repair of steering systems and components** by visually inspecting, testing, and analysing performance and function using hand, power, and specialized tools; and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6389.0 Repair Hydraulic Systems

General Performance Objective

Diagnose and repair hydraulic systems by performing a visual inspection; diagnosing, troubleshooting, repairing, and verifying the repair of mechanically controlled hydraulic systems and components; and electrically controlled hydraulic systems and components, according to manufacturers' recommendations and specification, government safety regulations, and accepted industry standards.

Performance Objectives

Skills

6389.01 Perform a visual inspection of mechanically and electrically controlled hydraulic systems and components identifying system types and applications, including pumps, valves, actuators, motors, cylinders, accumulators, reservoirs, atmospheric ventilating devices, controls, display panels, screens, filters, heat exchangers, drive mechanisms, fittings, lines, hoses, oil, seals, bearings, bushings, gaskets, switches, solenoids, relays, sensors, modules, circuit protection devices, wiring harnesses, fasteners, and mounting devices, and checking for worn, loose, damaged, leaking, missing, or defective components, oil level, and condition, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor.**

6389.02 Diagnose and troubleshoot mechanically and electrically controlled hydraulic systems and components, including pumps, valves, actuators, motors, cylinders, accumulators, reservoirs, atmospheric ventilating devices, controls, display panels, screens, filters, heat exchangers, drive mechanisms, fittings, lines, hoses, oil, seals, bearings, bushings, gaskets, switches, solenoids, relays, sensors, modules, circuit protection devices, wiring harnesses, fasteners, and mounting devices, by visually inspecting, testing, and analysing performance and function; checking for wear, opens, shorts, grounds, fluid level, leaks, odour, colour, distortion, corrosion, cavitation, contamination, fractures, pressure, flow, routing of lines and hoses, temperature, and vibration or noise; and using hand, power, specialized, precision, and electronic service tools, and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6389.03 Repair mechanically and electrically controlled hydraulic systems and components, including pumps, valves, actuators, motors, cylinders, accumulators, reservoirs, atmospheric ventilating devices, controls, display panels, screens, filters, heat exchangers, drive mechanisms, fittings, lines, hoses, oil, seals, bearings, bushings, gaskets, switches, solenoids, relays, sensors, modules, circuit protection devices, wiring harnesses, fasteners, and mounting devices, by exchanging, reconditioning, or servicing using hand, power, specialized, precision, and electronic service tools, and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6389.04 **Verify repair of mechanically and electrically controlled hydraulic systems and components** by visually inspecting, testing, and analysing performance and function using hand, power, specialized, precision, and electronic service tools, and lifting, rigging, and blocking devices, according to manufacturers’ recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6390.0 Repair Drive and Propulsion Systems

General Performance Objective

Diagnose and repair drive and propulsion systems, including outboard drive assemblies, stern drive assemblies, inboard drive assemblies, and jet pump drive assemblies, by performing a visual inspection, and diagnosing, troubleshooting, repairing, and verifying repair, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

Performance Objectives

Skills

6390.01 Perform a visual inspection of drive and propulsion systems and components by identifying system types and applications, including bell and gimbal housings, grease fittings, shafts, couplings, tubes, universal joints, packing, gears, bearings, seals, gaskets, shims, linkages, cables, controls, actuators, switches, relays, solenoids, sensors, wiring harnesses, fluids/lubricants, water pump, filters, propellers, struts, rudders, bushings, hydraulic tilt cylinders and motors, and fastening and mounting devices; and checking for worn, loose, damaged, leaking, missing, or defective components, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor.**

6390.02 Diagnose and troubleshoot outboard drive and propulsion systems and components, including housings, grease fittings, shafts, couplings, tubes, packing, gears, bearings, seals, gaskets, shims, linkages, cables, controls, actuators, switches, relays, solenoids, sensors, wiring harnesses, fluids/lubricants, water pump, filters, propellers, bushings, hydraulic tilt cylinders and motors, and fastening and mounting devices, by visually inspecting, testing, and analysing performance and function; checking for odour, temperature, corrosion, contamination, vibration or noise, alignment, colour, fluid level, pressure, free play, internal adjustments, slippage, disengagement, and dragging; using hand, power, electronic service, and specialized tools, and lifting, rigging, and blocking devices, according to manufacturers' recommendations, and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6390.03 Repair outboard drive and propulsion systems and components, including housings, grease fittings, shafts, couplings, tubes, packing, gears, bearings, seals, gaskets, shims, linkages, cables, controls, actuators, switches, relays, solenoids, sensors, wiring harnesses, fluids/lubricants, water pump, filters, propellers, bushings, hydraulic tilt cylinders and motors, and fastening and mounting devices, by exchanging, reconditioning, or servicing using hand, power, electronic service, and specialized tools, and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6390.04 **Verify repair of outboard drive and propulsion systems and components** by testing and analysing performance and function using hand, power, electronic service, and specialized tools, and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6390.05 **Diagnose and troubleshoot stern drive and propulsion systems and components**, including drive shafts, universal joints, housings, grease fittings, shafts, couplings, tubes, packing, gears, bearings, seals, gaskets, shims, linkages, cables, controls, actuators, switches, relays, solenoids, sensors, wiring harnesses, fluids/lubricants, water pump, filters, propellers, bushings, hydraulic tilt cylinders and motors, and fastening and mounting devices, by visually inspecting, testing, and analysing performance and function; checking for odour, temperature, corrosion, contamination, vibration or noise, alignment, colour, fluid level, pressure, free play, internal adjustments, slippage, disengagement, and dragging; and using hand, power, electronic service, and specialized tools, and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6390.06 Repair stern drive and propulsion systems and components, including drive shafts, universal joints, housings, grease fittings, shafts, couplings, tubes, packing, gears, bearings, seals, gaskets, shims, linkages, cables, controls, actuators, switches, relays, solenoids, sensors, wiring harnesses, fluids/lubricants, water pump, filters, propellers, bushings, hydraulic tilt cylinders and motors, and fastening and mounting devices, by exchanging, reconditioning, or servicing using hand, power, electronic service, and specialized tools, and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6390.07 Verify repair of stern drive and propulsion systems and components by testing and analysing performance and function using hand, power, electronic service, and specialized tools, and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6390.08 **Diagnose and troubleshoot inboard drive and propulsion systems and components**, including couplers, clutch assemblies, input shafts, housings, gear trains, synchronizers, shift mechanisms, bearings, seals, packing, lubrication systems, oil, switches, relays, sensors, modules, circuit protection devices, wiring harnesses, drive shafts, propellers, struts, rudders, bushings, and fastening and mounting devices, by visually inspecting, testing, and analysing performance and function; checking for: odour, temperature, corrosion, contamination, colour, leaks, vibration or noise, wear, alignment, gear clash; and using hand, power, specialized, and electronic service tools, and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6390.09 **Repair inboard drive and propulsion systems and components**, including couplers, clutch assemblies, input shafts, housings, gear trains, synchronizers, shift mechanisms, bearings, seals, packing, lubrication systems, oil, switches, relays, sensors, modules, circuit protection devices, wiring harnesses, drive shafts, propellers, struts, rudders, bushings, and fastening and mounting devices, by exchanging, reconditioning, or servicing using hand, power, specialized, and electronic service tools, and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6390.10 **Verify repair of inboard drive and propulsion systems and components** by testing and analysing performance and function using hand, power, electronic service, and specialized tools, and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6390.11 **Diagnose and troubleshoot jet pump drive and propulsion systems and components**, including couplers, input shafts, jet pump, nozzles, bearings, seals, packing, impellers, and fastening and mounting devices, by visually inspecting, testing, and analysing performance and function; checking for temperature, corrosion, contamination, colour, leaks, vibration or noise, wear, and alignment using hand, power, and specialized service tools, and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6390.12 Repair jet pump drive and propulsion systems and components, including couplers, input shafts, jet pump, nozzles, bearings, seals, packing, impellers, and fastening and mounting devices, by exchanging, reconditioning, or servicing using hand, power, specialized, and electronic service tools, and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6390.13 Verify repair of jet pump drive and propulsion systems and components by testing and analysing performance and function using hand, power, and specialized tools, and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6391.0 Repair Trailer Suspension and Hitching Systems

General Performance Objective

Diagnose trailer suspension and hitching systems by performing a visual inspection, diagnosing and troubleshooting, and repairing and verifying the repair according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

Performance Objectives

Skills

6391.01 Perform a visual inspection of trailer suspension and hitching system components, identifying type and application, including tires, tubes, flaps, rims, hubs, bearings, bushings, seals, lugs, guides, valves, caps, spacers, springs, shocks, frame and hitch assemblies, fasteners, and mounting devices; and checking for worn, misaligned, loose, damaged, missing, overheated, or defective components and leaks, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor.**

6391.02 Diagnose and troubleshoot trailer suspension and hitching system components, including tires, tubes, flaps, rims, hubs, bearings, bushings, seals, lugs, guides, valves, caps, spacers, tire ballast, springs, shocks, frame and hitch assemblies, fasteners, and mounting devices, by visually inspecting, testing and analysing performance and function; checking for wear, alignment, tire matching, condition, corrosion, fraying, belt separation, contamination, pressure, leaks, temperature, vibration or noise, and distortion; by using hand, power, specialized, precision, and service tools; torquing devices; and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6391.03 Verify repair of trailer suspension and hitching system components by visually inspecting, testing, and analysing performance and function using hand, power, specialized, and precision service tools; torquing devices; lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6392.0 Install Engine and Propulsion System

General Performance Objective

Install engines and propulsion systems by performing a visual inspection, diagnosing and troubleshooting, installing, and verifying the installation of engine and propulsion systems and components, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

Performance Objectives

Skills

6392.01 Perform a visual inspection of engine and propulsion system installation area identifying type and application, including template locations, jig locations, engine mounts, struts, throttle, shift, steering and cut-off control locations, cable routing, fuel tank location and line routing, wiring, electrical controls and instrumentation locations, hydraulic power trim and trim plate component locations, jack plate location, propeller selection specifications, sealing requirements, fasteners, and mounting devices, and checking for worn, loose, damaged, defective, or missing components, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor.**

6392.02 Diagnose and troubleshoot engine and propulsion systems and component installation process, including template and jigs, engine mounts and struts, shafts, stuffing boxes, couplings, throttle, shift, steering and cut-off controls, cables, fuel tank and lines, wiring, electrical controls and instrumentation, hydraulic power trim and trim plates, jack plates, propellers, sealing materials, fasteners, and mounting devices, by visually inspecting, testing, and analysing performance and function; checking for wear, lubrication, contamination, clearances, vibration or noise, alignment, corrosion, distortion, fractures, and sealing; and using hand, power, specialized, precision, and electronic service tools; templates and jigs; and lifting, rigging, and blocking devices; and personal protective and environmental control equipment, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6392.03 Install engine and propulsion systems and components, including template and jigs, engine mounts and struts, shafts, stuffing boxes, couplings, throttle, shift, steering and cut-off controls, cables, fuel tank and lines, wiring, electrical controls and instrumentation, hydraulic power trim and trim plates, jack plates, propellers, fasteners, and mounting devices, by installing templates and jigs; laying out, aligning, adjusting, drilling, and cutting mounting holes; lifting and placing engines and propulsion units into position; sealing, fastening, and torquing; and using hand, power, specialized, precision, and electronic service tools, and lifting, rigging, and blocking devices, and personal protective and environmental control equipment, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6392.04 Verify installation of engine and propulsion systems and components by visually inspecting, testing, and analysing performance and function using hand, power, specialized, precision, and electronic service tools; lifting, rigging, and blocking devices; and personal protective and environmental control equipment, according to manufacturers' recommendations, and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6393.0 Diagnose Marine Craft and Handling Equipment Operation

General Performance Objective

Inspect, equip, and operate marine craft and handling equipment by performing a visual inspection, diagnosing and troubleshooting operation and verifying the operation, according to Ministry of Transportation (MTO) regulations, manufacturers' recommendations and specifications, Coast Guard regulations, and approved industry standards.

Performance Objectives

Skills

6393.01 Perform a visual inspection of marine craft, trailers, and handling equipment identifying type and application, including starting procedures, shift controls, throttle controls, lifting controls, gauge configuration, fluid levels, lights, horns, required safety devices, fasteners, and mounting devices, and checking for worn, misaligned, loose, damaged, missing, or defective components, and fluid leaks and gasoline fumes, according to manufacturers' recommendations and specifications, and government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor.**

6393.02 Diagnose and troubleshoot, marine craft and handling equipment, operating systems, and components, including starting procedures, shift controls, throttle controls, lifting controls, gauge configuration, fluid levels, lights, horns, required safety devices, fasteners, and mounting devices, by visually inspecting, testing and analysing performance and function; checking for wear, alignment, condition, corrosion, fraying, belt separation, contamination, pressure, leaks, temperature, vibration or noise, and distortion; and using hand, power, specialized, precision, and service tools, torquing devices, and lifting, rigging, and blocking devices, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6393.03 Verify marine craft handling equipment, operating systems, and components by visually inspecting, testing, and analysing performance and function using hand, power, specialized, precision, and electronic service tools, lifting, rigging, and blocking devices, personal protective and environmental control equipment, and appropriate water source, according to manufacturers' recommendations, and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6394.0 Perform Marine Systems and Accessories Installation, Maintenance, Repair, and Winterizing

General Performance Objective

Install, maintain, repair and winterize marine craft systems and accessories by performing a visual inspection; diagnosing and troubleshooting, installing, and verifying the installation, maintenance, and repair of boat systems and accessories, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

Performance Objectives

Skills

6394.01 Perform visual inspection of marine craft systems and accessories, identifying type and application, including plumbing systems, ventilation and refrigeration systems, radio and navigation systems, 110/24 volt AC generating systems, cooking and cleaning appliances, heating systems, freeze protection, fire extinguishing systems, specified safety equipment, fibreglass, wood and metal hulls and decks, masts and rigging systems, fasteners, and mounting devices, and checking for worn, loose, damaged, defective, leaking, or missing components, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

*** A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor.**

6394.02 Diagnose and troubleshoot, marine craft systems and accessories, including plumbing systems, ventilation and refrigeration systems, radio and navigation systems, 110/24 volt AC generating systems, cooking and cleaning appliances, heating systems, fire extinguishing systems, specified safety equipment, fibreglass, wood and metal hulls and decks, masts and rigging systems, fasteners and mounting devices, by visually inspecting, testing, and analysing performance and function; checking for leaks, wear, lubrication, contamination, clearances, vibration or noise, alignment, corrosion, discoloration, odours, temperatures, freeze protection, distortion, and fractures; and using hand, power, specialized, precision, and electronic service tools, lifting, rigging, and blocking devices, and personal protective and environmental control equipment, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6394.03 Install, maintain, repair, and winterize marine craft systems and accessories, including plumbing systems, ventilation and refrigeration systems, radio and navigation systems, 110/24 volt AC generating systems, cooking and cleaning appliances, heating systems, fire extinguishing systems, specified safety equipment, fibreglass, wood and metal hulls and decks, masts and rigging systems, fasteners, and mounting devices, by exchanging, repairing, servicing, cleaning, and winterizing using hand, power, specialized, precision, and electronic service tools; lifting, rigging, and blocking devices; and personal protective and environmental control equipment, according to manufacturers' recommendations and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

6394.04 **Verify installation, maintenance, repair, and winterizing of marine craft systems and accessories** by visually inspecting, testing, and analysing performance and function using hand, power, specialized, precision, and electronic service tools; lifting, rigging, and blocking devices; and personal protective and environmental control equipment, according to manufacturers' recommendations, and specifications, government safety regulations, and accepted industry standards.

mm/dd/yy	Trainer Print Name	*Trainer Signature
mm/dd/yy	Apprentice Print Name	Apprentice Signature

Definitions

Apprentice

- An individual who, pursuant to a registered Training Agreement, is receiving or is to receive training in a trade that is required as part of an apprenticeship program
- Holds a Training Agreement in either a compulsory or non-compulsory trade;
- Are subject to any ratios that have been set out in regulation and or recommended by industry for their trade(s);
- Remain as an Apprentice until they receive their Certificate of Apprenticeship

BOSTA

Building Opportunities in the Skilled Trades Act, 2021 (BOSTA)

Certificate of Apprenticeship (C of A)

A certificate issued to individuals who have demonstrated that they have completed an apprenticeship program in Ontario.

Certificate of Qualification (C of Q)

A certificate issued to an individual who has completed an apprenticeship or equivalent AND passed the Certificate of Qualification examination.

Competence

The ability of an individual to perform a skill, consistently without assistance, in the workplace as set out in the Logbook.

Competency Analysis Profile (CAP Chart)

A chart that identifies the training needs of an individual trade and details the skills/skill sets that must be demonstrated during an apprenticeship program.

Journeyman

Journeyman means an individual who holds a certificate of qualification (in a compulsory or non-compulsory trade) and/or an individual who practices as a journeyman in a non-compulsory trade who does not hold a certificate of qualification and has equivalent experience in that trade.

Mandatory Skill

Status assigned to unshaded individual skills, skill sets or general performance objectives which must be signed-off for the Apprentice to complete their program.

Optional Skill

Status assigned to shaded individual skills, skills sets or general performance objectives for which sign-off is not required for the Apprentice to complete the program.

Provisional Certificates of Qualification

- A Provisional Certificate of Qualification is issued to an individual who has obtained a Certificate of Apprenticeship (in both compulsory and non-compulsory trades) in a program that has a Certificate of Qualification examination, to which the individual has not yet passed the Certificate of Qualification examination.
- A Provisional Certificate of Qualification shall have the prescribed term or, if no term is prescribed, a term of one year.
- In a compulsory trade, the Provisional Certificate of Qualification allows a person to continue working legally in the trade for up to 12 months while they work to pass the certifying exam.
- Individuals with a Provisional Certificate of Qualification are subject to any ratios that have been set out for their trade(s).

Ratios

For the purpose of an Apprenticeship program, a ratio is the maximum number of Journeypersons to Apprentices. The purpose of ratios is to provide consistent supervision, training and continuity of work.

Sign-off

Signature of the Sponsor of record, or an individual to whom that Sponsor has delegated signing authority, (e.g. Trainer) indicating an Apprentice's demonstration of competence.

Skill

Individual competency/task described in the Logbook.

Skill Sets

Group or selection of individual skills found in the Logbook.

Skill Set Completion for Sponsors

Listing for all skill sets and includes space for sign-off by Sponsor of record.

Sponsor

Means a person that has entered into a registered Training Agreement under which the person is required to ensure that an individual is provided with workplace-based training in a trade as part of an apprenticeship program.

Sponsor of Record

Refers to the Sponsor documented as being signatory to the registered Training Agreement or Contract of Apprenticeship. In order for a Sponsor to be considered for the training of Apprentices, they must identify that the workplace has qualified persons or the equivalent on site, and can identify that the workplace has the tools, equipment, materials, and processes which have been identified by the Industry representatives for the trade.

Trainer

An individual who oversees the performance of a task and sets the workplace expectations and practices for the Apprentice. For a compulsory trade, a qualified Trainer is an individual who holds a Certificate of Qualification. In a non-compulsory trade, a Trainer is an individual who either holds a CofQ, CofA, or is considered equivalent.

Ready to Write Your Exam?

Many of the skilled trades in Ontario have a final certification examination that you must pass to become certified in your trade. Passing the examination gives you the right to hold yourself out as a Journeyperson and receive a Certificate of Qualification in your trade.

There are two types of trade certification examinations in Ontario:

1. Provincial (Ontario) examinations - which lead to a Certificate of Qualification.
2. Red Seal examinations – which lead to a Certificate of Qualification with an Interprovincial Red Seal endorsement.

If a trade is designated as Red Seal in Ontario, you will be writing the Red Seal examination. To access the Red Seal preparation guide please visit: red-seal.ca

Ontario's Exam Preparation Guide

[Exam Resources – Skilled Trades Ontario](#)

Basic Examination Details for You to Know

- You will have **up to four hours to write your examination.**
- Accommodations must be requested and approved prior to scheduling your examination.
- You can leave the examination centre if you complete the examination in less than four hours.
- Exam questions are multiple choice with four options from which you must choose the correct answer. Your examination may have between 90 and 150 multiple choice questions.
- You need a mark of 70% to pass.

Scheduling Your Examination

The examination scheduling process is currently outlined in detail on the Skilled Trades Ontario website: [Exam Scheduling – Skilled Trades Ontario](#)

Remember these 3 basic steps:

1. Confirm your eligibility to write the examination with Skilled Trades Ontario.
2. Contact Client Services at Skilled Trades Ontario to pay your examination fee.
3. Contact the local Service Delivery Office to schedule your examination in their examination centre: <https://www.ontario.ca/page/employment-ontario-apprenticeship-offices>

Instructions for Recording a Change in Sponsor

1. Record your first sponsor's information in Sponsor Record #1 – this would be the sponsor who has signed your initial apprenticeship Training Agreement for this trade.
2. If you do change sponsors prior to completing this apprenticeship, please contact your local Service Delivery Office immediately to update your sponsor record.
3. Please make sure you record all the information regarding any additional sponsors of record towards your apprenticeship using the Sponsor Records on the following pages (if applicable).

You must fill out a Change of Sponsor Record each time you change your sponsor.

Sponsor Record #1

Sponsor Information		
Apprentice Name		
Training Agreement #		Date (mm/dd/yy)
Sponsor Name		
Address		
Telephone		
E-mail Address		

Summary of Training	
Employment Start Date	
Employment End Date	
Total hours of training & instruction between dates of employment.	
Skill Sets Completed	

As the Sponsor, I hereby confirm that the above information is true and accurate to the best of my knowledge.

Signature: _____ Date: (mm/dd/yy) _____

The Sponsor is required to sign-off and date the skills after the Apprentice has proven competence in those skills. However, if a skill is shaded, it is optional and does not need to be signed-off.

***If you need additional copies of the Sponsor Record, visit SkilledTradesOntario.ca and search Sponsor Record Form.**

Change of Sponsor Record #2

Sponsor Information		
Apprentice Name		
Training Agreement #		Date (mm/dd/yy)
Sponsor Name		
Address		
Telephone		
E-mail Address		

Summary of Training	
Employment Start Date	
Employment End Date	
Total hours of training & instruction between dates of employment.	
Skill Sets Completed	

As the Sponsor, I hereby confirm that the above information is true and accurate to the best of my knowledge.

Signature: _____ Date: (mm/dd/yy) _____

The Sponsor is required to sign-off and date the skills after the Apprentice has proven competence in those skills. However, if a skill is shaded, it is optional and does not need to be signed-off.

***If you need additional copies of the Sponsor Record, visit SkilledTradesOntario.ca and search Sponsor Record Form.**

Change of Sponsor Record #3

Sponsor Information		
Apprentice Name		
Training Agreement #		Date (mm/dd/yy)
Sponsor Name		
Address		
Telephone		
E-mail Address		

Summary of Training	
Employment Start Date	
Employment End Date	
Total hours of training & instruction between dates of employment.	
Skill Sets Completed	

As the Sponsor, I hereby confirm that the above information is true and accurate to the best of my knowledge.

Signature: _____ Date: (mm/dd/yy) _____

The Sponsor is required to sign-off and date the skills after the Apprentice has proven competence in those skills. However, if a skill is shaded, it is optional and does not need to be signed-off.

***If you need additional copies of the Sponsor Record, visit SkilledTradesOntario.ca and search Sponsor Record Form.**

Change of Sponsor Record #4

Sponsor Information		
Apprentice Name		
Training Agreement #		Date (mm/dd/yy)
Sponsor Name		
Address		
Telephone		
E-mail Address		

Summary of Training	
Employment Start Date	
Employment End Date	
Total hours of training & instruction between dates of employment.	
Skill Sets Completed	

As the Sponsor, I hereby confirm that the above information is true and accurate to the best of my knowledge.

Signature: _____ Date: (mm/dd/yy) _____

The Sponsor is required to sign-off and date the skills after the Apprentice has proven competence in those skills. However, if a skill is shaded, it is optional and does not need to be signed-off.

***If you need additional copies of the Sponsor Record, visit SkilledTradesOntario.ca and search Sponsor Record Form.**

Appendix A — Instructions for Apprenticeship Program Completion

Once an Apprentice has completed all the classroom training and benchmark on-the-job hours specified for the trade and has acquired all the mandatory skills included in this Logbook.

The Apprentice and the Sponsor complete the Apprentice Completion Form and the Skill Set Completion for Sponsors Form located on the following pages.

1. They sign the forms and submit them to their local Service Delivery Office. To find the closest office, check the contact information at ontario.ca/page/employment-ontario-apprenticeship-offices or call the *Employment Ontario* toll free number at (1-800-387-5656).
2. For All Trades: All mandatory skills (or the combination indicated in the completion requirements for the trade) in the Logbook must be signed-off. The recommended hours are a benchmark. If the Sponsor is completing the Apprentice before the industry recommended training hours are done, staff may request further information regarding the Apprentice's on-the-job training. An example of a request would be a letter from the Sponsor confirming the Apprentice worked for some time in the trade before the initial Training Agreement was registered, thereby acquiring some skills beforehand.

If Apprentices are submitting the completion request form and supporting documentation to their local Service Delivery Office by mail, fax, or email (as a scanned document), they should not include their Logbook; if they are presenting this form in person at the local Service Delivery Office, they should bring their Logbook with them.

After staff verifies all the information in the completion request, they may contact either the Apprentice or the Sponsor for further information or documentation. Once the completion has been confirmed, the local Service Delivery Office will issue a Certificate of Apprenticeship to the Apprentice.

Skilled Trades Ontario will receive notification of this completion.

- If the Apprentice has completed a program in a **compulsory trade**, Skilled Trades Ontario will automatically register the Apprentice for a Provisional Certificate of Qualification to continue to work legally for one year while preparing for the certification examination.
- If an Apprentice completes their apprenticeship in a **non-compulsory trade** and there is a Certificate of Qualification exam, they must write and pass the exam to receive a Certificate of Qualification from Skilled Trades Ontario.

For permission to schedule an exam once completion is confirmed, the individual must first contact the Skilled Trades Ontario Client Services Department at 647-847-3000 or toll free at 1-855-299-0028 to pay the certification examination fee. Once you have paid your exam fee with Skilled Trades Ontario, book your exam by contacting your nearest Employment Ontario local Service Delivery Office.

Appendix B — Apprentice Completion Form

Please fill out both sides of this form, including the Skill Set Completion for Sponsors (see back of form). Once both sides are completed, submit the form to your local Service Delivery Office (find contact information at ontario.ca/page/employment-ontario-apprenticeship-offices or by calling Employment Ontario at (1-800-387-5656).

Apprentice Information	
Name (print)	
Client ID # Issued by Ministry	
Telephone Number(s)	

Sponsor Information	
Legal Name	
Address	
Telephone Number(s)	
Sponsor's Signing Authority <i>(print name)</i>	
E-mail Address	

Program Information	
Trade Name	
Number of hours required as per Training Agreement <i>(hours-based trades only)</i>	
Hours completed? <i>(documentation attached)</i>	Yes () No () Not applicable ()
Classroom training completed or exempt?	Yes () No () Not applicable ()

I hereby confirm that the information submitted on both sides of this form is true and accurate.

X _____
Apprentice's Signature Date

X _____
Signature of Sponsor's Signing Authority Date

Appendix C — Skill Set Completion for Sponsors

You will find the skill set numbers and titles in the Logbook's Table of Contents. By signing off each skill set in the table below, you are providing final confirmation, as the Apprentice's Sponsor, that the Apprentice has demonstrated competency in all the mandatory skills included in the skill set.

Skill Set #	Skill Set Title	Signing Authority Signature
6380.0	Protect Self and Others	
6381.0	Perform General Trade Practices	
6382.0	Repair Shop Air Supply and Auxiliary Air Systems	
6383.0	Perform Pre-Delivery Inspection (PDI)	
6384.0	Repair Electrical/Electronic Systems	
6385.0	Repair Gasoline Engine Fuel Management Systems	
6386.0	Perform Engine Tune-Ups	
6387.0	Repair Engine Systems	
6388.0	Repair Steering Systems	
6389.0	Repair Hydraulic Systems	
6390.0	Repair Drive and Propulsion Systems	
6391.0	Repair Trailer Suspension and Hitching Systems	
6392.0	Install Engine and Propulsion System	
6393.0	Diagnose Marine Craft and Handling Equipment Operation	
6394.0	Perform Marine Systems and Accessories Installation, Maintenance, Repair, and Winterizing	

Ministry of Labour, Immigration, Training and Skills Development use only:

Sponsor verified as most recent sponsor of record: Yes () No ()

Documentation to support completion of hours attached: Yes () No ()

Completion of classroom training verified: Yes () No ()

Staff Name _____ Signature _____

Date _____

Appendix D — Local Service Delivery Offices in Ontario

For current office listings visit: ontario.ca/page/employment-Ontario-apprenticeship-offices

Location	Contact	Location	Contact
Barrie 705-737-1431	55 Cedar Pointe Dr Unit 609, Barrie, ON L4N 5R7	Marathon 807-346-1550	52 Peninsula Road, Suite 103 Marathon, Ontario, P0T 2E0
Belleville 613-968-5558 1-800-953-6885	135 North Front St, Belleville, ON K8P 3B5	Markham 905-513-2695	140 Allstate Parkway, Suite 505, Markham, Ontario L3R 5Y8
Brantford 519-756-5197	505 Park Rd North Suite 201, Brantford, ON N3R 7K8	North Bay 705-495-8515 1-800-236-0744	200 First Ave West, North Bay, ON P1B 3B9
Chatham 519-354-2766 1-800-214-8284	870 Richmond St West 1st Floor, Chatham, ON N7M 5J5	Ottawa 613-731-7100 1-877-221-1220	Preston Square, 347 Preston Street, Suite 310, Ottawa, ON K1S 3H8
Cornwall 613-938-9702 1-877-668-6604	132 Second St East Ste 202, Cornwall, ON K6H 1Y4	Owen Sound 519-376-5790 1-800-838-9468	1450 1st Ave West, Suite 100, Owen Sound, ON N4K 6W2
Dryden 807-456-2665 1-800-734-9572	Provincial Government Building, 479 Government St, Dryden, ON P8N 3K9	Peel 905-279-7333 1-800-736-5520	The Emerald Centre, 10 Kingsbridge Garden Circle, Suite 404, Mississauga, ON L5R 3K6
Durham 905-433-0595 1-800-461-4608	78 Richmond Street West, Oshawa, ON L1G 1E1	Pembroke 613-735-3911 1-800-807-0227	615 Pembroke St East, Pembroke, ON K8A 3L7
Elliot Lake 1-800-236-8817	50 Hillside Dr North, Elliot Lake, ON P5A 1X4	Peterborough 705-745-1918 1-877-433-6555	901 Lansdowne St West, Peterborough, ON K9J 1Z5
Fort Frances 807-274-8634	922 Scott St 2nd Flr, Fort Frances, ON P9A 1J4	Sarnia 519-542-7705 1-800-363-8453	162 Lochiel Street, Suite 101, Sarnia, ON N7T 7W5
Geraldton 807-854-1966	208 Beamish Avenue West Geraldton, Ontario P0T 1M0	Sault Ste. Marie 705-945-6815 1-800-236-8817	477 Queen St East 4th Flr, Sault Ste Marie, ON P6A 1Z5
Halton 905-842-5105 1-844-901-5105	700 Dorval Dr., Suite 201, Oakville, ON L6K 3V3	St Catharines 905-704-2991 1-800-263-4475	Garden City Tower, 301 St Paul St East, 10th Flr, St Catharines, ON L2R 7R4
Hamilton 905-521-7764 1-800-668-4479	Ellen Fairclough Bldg, 119 King St West 8th Flr, Hamilton, ON L8P 4Y7	Sudbury 705-564-3030 1-800-603-5999	159 Cedar St Ste 506, Sudbury, ON P3E 6A5
Kapuskasing 705-465-5785 705-235-1950	Ontario Government Complex, 122 Government Rd West, Kapuskasing, ON P5N 2X8	Thunder Bay 807-346-1550 1-800-439-5493	189 Red River Rd Suite 103, Thunder Bay, ON P7B 1A2
Kenora 807-468-2879 1-800-734-9572	227 1/2 Second St South, Kenora, ON P9N 1G4	Timmins 705-235-1950 1-877-275-5139	Ontario Government Complex, 5520 Highway 101 East Wing B, South Porcupine, ON P0N 1H0
Kingston 613-548-1151 1-866-973-4043	Alliance Business Centre, 299 Concession St Ste 201, Kingston, ON K7K 2B9	Toronto Centre 416-927-7366 1-800-387-5656	2 St Clair West, 11 th floor Toronto, ON M4A 1L5
Kitchener 519-653-5758 1-866-877-0099	4275 King St East, Kitchener, ON N2P 2E9	Toronto South 416-326-5800	625 Church St 1st Fl, Toronto, ON M7A 2B5
London 519-675-7788 1-800-265-1050	1200 Commissioners Rd E, Unit 72, London, ON N5Z 4R3	Windsor 519-973-1441	Roundhouse Centre, 3155 Howard Ave 2nd Fl, Suite 200, Windsor, ON N8X 4Y8

Competency Analysis Profile (CAP) Chart

6380.0 Protect Self and Others	6380.01 Identify and take corrective action against potential workplace health and safety hazards	6380.02 Handle, store, and dispose of hazardous workplace materials	6380.03 Wear and maintain personal protective equipment	6380.04 Comply with workplace-related legislation	6380.05 Practise good housekeeping in the workplace
	6380.06 Comply with Workplace Hazardous Materials Information System (WHMIS) guidelines	6380.07 Communicate with supervisors and co-workers			
6381.0 Perform General Trade Practices	6381.01 Interpret and apply service-related information	6381.02 Demonstrate effective customer relations	6381.03 Perform customer relations activities	6381.04 Perform seasonal storage of marine craft and powered equipment	6381.05 Perform a visual inspection of oxy/fuel heating and cutting equipment
	6381.06 Prepare repair area and set up and operate oxy/fuel heating and cutting equipment	6381.07 Verify condition of heating and cutting area	6381.08 Perform a visual inspection of metal inert gas (MIG) welding equipment	6381.09 Prepare repair area and set up and operate metal inert gas (MIG) welding equipment	6381.10 Verify integrity of the weld
	6381.11 Perform a visual inspection of arc welder	6381.12 Prepare repair area and set up and operate arc welding equipment	6381.13 Verify integrity of the arc weld		

Competency Analysis Profile: Marine Engine Technician 435B *(all unshaded skill sets must be completed)*

<p>6382.0 Repair Shop Air Supply and Auxiliary Air Systems</p>	<p>6382.01 Perform a visual inspection of shop air supply systems and components</p>	<p>6382.02 Diagnose and troubleshoot shop air supply systems and components</p>	<p>6382.03 Repair shop air supply systems and components</p>	<p>6382.04 Verify repair of shop air supply and auxiliary air systems and components</p>	
<p>6383.0 Perform Pre-Delivery Inspection (PDI)</p>	<p>6383.01 Check marine craft and powered equipment systems and components</p>	<p>6383.02 Perform a visual inspection of marine craft and powered equipment</p>	<p>6383.03 Diagnose and troubleshoot marine craft and powered equipment</p>	<p>6383.04 Complete a pre-delivery inspection report recording the results of the visual inspection, diagnosis, and troubleshooting activities</p>	<p>6383.05 Perform marine craft and powered equipment pre-delivery and set-up procedures</p>
	<p>6383.06 Verify the pre-delivery inspection report's accuracy</p>				
<p>6384.0 Repair Electrical/Electronic Systems</p>	<p>6384.01 Perform a visual inspection of electrical/electronic systems</p>	<p>6384.02 Diagnose and troubleshoot batteries</p>	<p>6384.03 Service and boost or charge batteries</p>	<p>6384.04 Diagnose and troubleshoot starting systems and components</p>	<p>6384.05 Repair starting systems and components</p>
	<p>6384.06 Verify repair of starting systems and components</p>	<p>6384.07 Diagnose and troubleshoot charging systems and components</p>	<p>6384.08 Repair charging systems and components</p>	<p>6384.09 Verify repair of charging systems and components</p>	<p>6384.10 Diagnose and troubleshoot electrical and electronically controlled systems and components</p>

Competency Analysis Profile: Marine Engine Technician 435B *(all unshaded skill sets must be completed)*

<p>6384.0 Repair Electrical/ Electronic Systems <i>(continued)</i></p>	<p>6384.11 Repair electrical and electronically controlled systems and components</p>	<p>6384.12 Verify repair of electrical, electronically controlled systems and components</p>	<p>6384.13 Diagnose and troubleshoot electrical/electronic ignition systems and components</p>	<p>6384.14 Repair electrical/electronic ignition systems and components</p>	<p>6384.15 Verify repair of electrical/electronic ignition systems and components</p>
<p>6385.0 Repair Gasoline Engine Fuel Management Systems</p>	<p>6385.01 Perform a visual inspection of mechanically and electronically controlled gasoline engine fuel systems and components</p>	<p>6385.02 Diagnose and troubleshoot mechanically and electronically controlled gasoline engine fuel control systems and components</p>	<p>6385.03 Repair mechanically and electronically controlled gasoline engine fuel control systems and components</p>	<p>6385.04 Verify repair of gasoline engine fuel control systems and components</p>	<p>6385.05 Diagnose and troubleshoot diesel engine fuel control systems and components</p>
	<p>6385.06 Repair diesel engine fuel control systems and components</p>	<p>6385.07 Verify repair of diesel fuel control systems and components</p>			
<p>6386.0 Perform Engine Tune-Ups</p>	<p>6386.01 Perform gasoline engine tune-ups</p>	<p>6386.02 Perform diesel engine tune-ups</p>	<p>6386.03 Verify engine tune-ups</p>		

Competency Analysis Profile: Marine Engine Technician 435B *(all unshaded skill sets must be completed)*

6387.0 Repair Engine Systems	6387.01 Perform a visual inspection of engine cooling systems	6387.02 Diagnose and troubleshoot cooling systems and components	6387.03 Repair cooling systems and components	6387.04 Verify repair of cooling systems and components	6387.05 Perform a visual inspection of engine lubrication systems
	6387.06 Diagnose and troubleshoot engine lubricating systems and components	6387.07 Repair engine lubricating systems and components	6387.08 Verify repair of engine lubricating systems and components	6387.09 Perform a visual inspection of engine cylinder heads, block, and components	6387.10 Diagnose and troubleshoot cylinder heads and components
	6387.11 Repair cylinder heads and components	6387.12 Verify repair of cylinder heads and components	6387.13 Diagnose and troubleshoot engine block and components	6387.14 Repair engine block and components	6387.15 Verify repair of engine block and components
6388.0 Repair Steering Systems	6388.01 Perform a visual inspection of steering systems and components	6388.02 Diagnose and troubleshoot steering systems and components	6388.03 Repair steering systems and components	6388.04 Verify repair of steering systems and components	
6389.0 Repair Hydraulic Systems	6389.01 Perform a visual inspection of mechanically and electrically controlled hydraulic systems and components	6389.02 Diagnose and troubleshoot mechanically and electrically controlled hydraulic systems and components	6389.03 Repair mechanically and electrically controlled hydraulic systems and components	6389.04 Verify repair of mechanically and electrically controlled hydraulic systems and components	

Competency Analysis Profile: Marine Engine Technician 435B (all unshaded skill sets must be completed)

6390.0 Repair Drive and Propulsion Systems	6390.01 Perform a visual inspection of drive and propulsion systems and components	6390.02 Diagnose and troubleshoot outboard drive and propulsion systems and components	6390.03 Repair outboard drive and propulsion systems and components	6390.04 Verify repair of outboard drive and propulsion systems and components	6390.05 Diagnose and troubleshoot stern drive and propulsion systems and components
	6390.06 Repair stern drive and propulsion systems and components	6390.07 Verify repair of stern drive and propulsion systems and components	6390.08 Diagnose and troubleshoot inboard drive and propulsion systems and components	6390.09 Repair inboard drive and propulsion systems and components	6390.10 Verify repair of inboard drive and propulsion systems and components
	6390.11 Diagnose and troubleshoot jet pump drive and propulsion systems and components	6390.12 Repair jet pump drive and propulsion systems and components	6390.13 Verify repair of jet pump drive and propulsion systems and components		
	6391.0 Repair Trailer Suspension and Hitching Systems	6391.01 Perform a visual inspection of trailer suspension and hitching system components	6391.02 Diagnose and troubleshoot trailer suspension and hitching system components	6391.03 Verify repair of trailer suspension and hitching system components	

Competency Analysis Profile: Marine Engine Technician 435B (all unshaded skill sets must be completed)

6392.0 Install Engine and Propulsion System	6392.01 Perform a visual inspection of engine and propulsion system installation area	6392.02 Diagnose and troubleshoot engine and propulsion systems and component installation process	6392.03 Install engine and propulsion systems and components	6392.04 Verify installation of engine and propulsion systems and components
6393.0 Diagnose Marine Craft and Handling Equipment Operation	6393.01 Perform a visual inspection of marine craft, trailers, and handling equipment	6393.02 Diagnose and troubleshoot marine craft handling equipment, operating systems, and components	6393.03 Verify marine craft handling equipment, operating systems, and components	
6394.0 Perform Marine Systems and Accessories Installation, Maintenance, Repair, and Winterizing	6394.01 Perform a visual inspection of marine craft systems and accessories	6394.02 Diagnose and troubleshoot marine craft systems and accessories	6394.03 Install, maintain, repair, and winterize marine craft systems and accessories	6394.04 Verify installation, maintenance, repair, and winterizing of marine craft systems and accessories

Completing Your Apprenticeship Program

Once your sponsor agrees you are competent in the required skills, your hours are complete and you have completed all the levels of classroom training required for your trade:

- ✓ Follow the completion instructions on the Completion Form (Appendix A) in the Logbook.
- ✓ Answer any questions that MLITSD staff may have and provide any additional completion documentation that may be required.
- ✓ Once completion is confirmed, MLITSD will issue you a Certificate of Apprenticeship and notify Skilled Trades Ontario.

After Your Apprenticeship

If you are in a trade with a certification exam, Skilled Trades Ontario will receive notice of your completion.

For compulsory trades, you will be issued a Provisional Certificate of Qualification which will allow you to work legally for up to 12 months until you write and pass your examination.

For a non-compulsory trade, once you pass your examination, you will be issued a Certificate of Qualification for your trade.

Preparing For Your Exam

- **To pay for a Certificate of Qualification examination, contact Skilled Trades Ontario** Client Services Department at: 647-847-3000 or toll free at 1-855-299-0028
- **To schedule your exam:** Once you have paid, contact your local Service Delivery Office to book your exam.
- **Download Skilled Trades Ontario exam preparation guide at:** [Exam Resources – Skilled Trades Ontario](#) and/or view the exam preparation guide for Red Seal trades at: red-seal.ca



**Skilled
Trades**
Ontario

**Métiers
spécialisés**
Ontario

skilledtradesontario.ca