Trade essentials

More skills … more opportunities

Professional Skills Record

Oil Burner Mechanic

NOC 7331

Funding for Trade Essentials is provided by the Government of Canada's Pan-Canadian Innovations Initiative and is co-managed by the Apprenticeship Section of the PEI Department of Innovation and Advanced Learning

Canada

Prince Edward Island CANADA

ACKNOWLEDGEMENTS

This project is the result of the collaboration of the following dedicated adult educational consultants in Prince Edward Island:

Ruth Rogerson
Karen Chandler
Gaelyne MacAulay
Karen Dempsey.

Our sincere thanks to the *Trade Essentials Advisory Committee* for their suggestions, input and ongoing support.

We also recognize the valuable contribution made by the apprentices and challengers who volunteered to participate in this research project. It is our sincere hope that they have gained as much from their participation as we have. We also hope that their contributions will assist many more tradespeople to reach their goals.

We are grateful to the assessors, tutors and classroom instructors who patiently piloted our materials and who gave back invaluable insights and advice.

All Trade Essentials materials have been validated by teams of tradespeople who hold Certificates of Qualification, Red Seal Endorsement. We gratefully acknowledge the crucial contribution made by the following team members:

Glenn Ellsworth (Automotive Service Technician)
Cecil Banks (Automotive Service Technician)
Scott Bagnall (Automotive Service Technician)
Darcy MacKenzie (Automotive Service Technician)
Elmer MacDougall (Cabinet Maker)
Graham Hicken (Cabinet Maker)
Gerard Lund (Carpenter)
Leo MacDonald (Carpenter)
Ryan Rogerson (Carpenter)
Darren Richards (Construction Electrician)
Mark Seaman (Construction Electrician)
Ken Zakem (Cook)
Rod Lukeman (Cook)

Barry Strongman (Industrial Electrician)
Gregg Francis (Industrial Electrician)
Jake Shaw (Machinist)
Sue LeFort (Machinist)
John Hebert (Metal Fabricator / Welder)
Joe Johnson (Metal Fabricator)
Jim Arsenault (Metal Fabricator)
Kent Mitchell (Oil Burner Mechanic / Steamfitter-Pipefitter)
Rod Arsenault (Oil Burner Mechanic / Refrigeration & Air Conditioning Mechanic)
Kent Mitchell (Plumber)
Scott Carter (Plumber)
Charlie Redmond (Refrigeration & Air Conditioning Mechanic)
Scott Lacey (Steamfitter-Pipefitter)
Vincent Jenkins (Welder)

Thanks to the Apprenticeship Section of the PEI Department of Innovation and Advanced Learning and to the government of Canada's Pan-Canadian Innovation Initiative for financial assistance and for continuing support to trades and apprentices in Canada.

Journeyperson's Handbook

Trade essentials

More skills … more opportunities

TABLE OF CONTENTS

This handbook is designed to help skilled trades Journeypersons manage the skills and learning of their Apprentices who are using a Professional Skills Record.

1 Why Do I Need this Handbook?

Eighty percent of all learning in a trade happens on the job. This means the apprentice has the responsibility to learn and you, as their journeyperson, have the responsibility to mentor and teach.

Signing off for the learning an apprentice has completed under your supervision is a huge responsibility. With all the skills needed in a trade, it is important that both you and the apprentice have a tool to help you record and sign off on that learning.

2 But We Have Logbooks

When a tradesperson registers as an apprentice in most provinces or territories in Canada, they are given a Logbook.

A Logbook:

- is issued by the apprenticeship authority within a jurisdiction
- is created from the National Occupational Analysis (NOA) in a trade
- is a list of all the general skill areas (**Blocks and Tasks**) in a trade
- records an apprentice's progress in the general skill areas of a trade
- is signed off by a journeyperson to guarantee that an apprentice is performing these tasks to Industry Standard.

A Logbook lists the Blocks and Tasks from the NOA **but** the Interprovincial Red Seal exam and trades training courses in colleges and trade schools use **all** the information in the NOA. This includes the Blocks, Tasks, **Sub-tasks and the Knowledge and Abilities** listed in the NOA.

Each apprentice needs a tool that lists **all** the skills and learning they need in their trade career. Then, if they have one employer or several employers over their entire term of apprenticeship, both the apprentice and the journeyperson know what learning has been completed:

- the journeyperson knows what skills they are signing off to verify what has been taught; and
- the apprentice knows what they need to learn to be successful in their Red Seal exam.

3 What is a National Occupational Analysis (NOA)?

The Canadian Council of Directors of Apprenticeship, which is made up of managers and directors of apprenticeship from every province and territory in Canada, guides a Human Resources and Skills Development Canada (HRSDC) sponsored program to develop NOAs.

Under this partnership, joint planning committees made up of tradespeople who have a Certificate of Qualification, Red Seal endorsement from each province and territory in Canada, come together in Ottawa every four to five years to review and revise the NOA in all of the 45 skilled trades.

Each NOA is accepted as the national standard in that trade. The NOA is then used to:

- identify and group tasks performed by skilled workers in each trade in every province and territory in Canada
- group these tasks by Blocks, Tasks, Sub-tasks, Knowledge, Skills and Abilities (also called "**competencies**") required in a trade
- give information on the breakdown of questions from all sections of the NOA in the Interprovincial Red Seal exam
- create all the questions for the Red Seal exam
- create curriculum for trade school programs and Block Release/Period/Level* programs in a trade.

* *The in-school portion of apprenticeship has several names across Canada. In some provinces and territories it is called Block Release, in others it is called Period Training or Level.*

4 If there is an NOA, why do we need a Professional Skills Record (PSR)?

The NOA is designed to be used for creating curriculum and for developing test questions for the Red Seal exam.

The PSR is designed to be used by an apprentice and a journeyperson in the workplace. The PSR provides a fair and objective assessment tool to record the apprentice's learning and skills.

The PSR has been developed **with** apprentices during a three-year research project on PEI called Trade Essentials. Recommendations made by the apprentices who tested the tool have been built into the document.

The PSR was then validated by teams of tradespeople who have a Certification of Qualification, Red Seal endorsement in each trade who came together and discussed what an apprentice is expected to learn from their journeyperson in the workplace.

The apprentice has the main responsibility for completing the PSR. It is designed as a self-assessment tool so the apprentice can keep track of his/her skills and learning and make plans to fill any technical skills training gaps.

The PSR takes information from the NOA and:

- lays it out in a chart
- lists the percentage and number of questions for the Red Seal exam from each task on every page
- takes the skills from the NOA and describes them in terms of what a tradesperson does on the job, for example:

  In the **NOA**, the skill says – "knowledge of blueprints and drawings"

  In the **PSR**, the skill says – "read and interpret blueprints and drawings"
- has a rating chart so the apprentice can judge his/her level of learning and have it all recorded for you to review
- provides you, the journeyperson, with a tool to discuss details of an apprentice's skill areas that are great and areas that may need to improve
- helps the apprentice make a plan so he/she can improve skills
- helps you know what skills you still have to teach the apprentice.

5 Am I expected to teach all the skills in a PSR?

No. A PSR contains **all** the skills and learning a tradesperson has to learn over all their years as an apprentice. You, as their journeyperson, can help make this tool useful by completing the sign-off on the learning and skill you know they have. Some of the ways you can assess the skills your apprentice has are:

- **OBSERVATION** – you watch them use their knowledge, skills and abilities or competencies to perform a task or sub-task

  For example, you ask them to select a tool for a specific job, then watch them use that tool to do a task.

- **INTERVIEW** – you have a discussion with your apprentice to find out if they can demonstrate an understanding of what they are doing

  For example, you ask them to tell you about any safety precautions that have to be followed before they start a certain task.

- **DOCUMENTATION** – an apprentice may have a document that provides proof of skills they already have. You can use the PSR to sign-off on tasks the document covers. The document or certificate could be from:

  - another employer,
  - a trade school or college,
  - an industry training course,
  - another province or territory,
  - or even from another country.

  For example, you need all your employees to be trained in WHMIS. A new apprentice you just hired shows you a WHMIS certificate he/she have from a job they were working on a couple of months ago in northern Canada.

Apprentices will also tell you, through their self-assessments, the best way they think they can prove the skills they have. This can help guide you, as their mentor, to choose a way to assess your apprentice that works best for both of you.

6 Are there any tips on how to be a good mentor to my apprentice?

Mentoring has always been the foundation of apprenticeship. In trades, a mentor is a person who has a great deal of learning and skills from experience in a trade who helps a less experienced person by guiding, teaching and sharing their skills and learning.

Along with having learning and experience in their trade, the most successful mentors are:

- **Patient** - and understand the apprentice needs time to learn and practise their skills to become as good as their mentor.
- **Organized** - and set a schedule to meet regularly with their apprentice to track their learning and make plans for new learning.
- **Positive** – and supportive in helping an apprentice tackle new learning and encourage them to keep working on skills they find difficult to learn.
- **Respectful** – so that other employees in the workplace accept the apprentice and are willing to help and encourage the new apprentice.

As a mentor, you are a role model for your apprentice. To create a successful relationship between you and your apprentice you can:

- **Lead by example**. If you set safety and quality assurance as firsts on your list each and every day, so will your apprentice.
- **Build trust**. If you want your apprentice to trust and respect you, you can show trust in them by assigning them some responsibility as soon as you see an opportunity.
- **Communicate**. Communication is a two-way street. Be willing to listen as you give directions and be available to your apprentice when they need you. Always treat every question seriously. If your apprentice has the confidence to ask, it is important to give a respectful answer.
- **Be reliable.** Your apprentices need to know they can depend on you when they run into a problem. Create supportive relationships with other employees so if you are away from the workplace, your apprentice feels confident in approaching another employee for help.

6.1 Tips

- **Give clear instructions**. When assigning a task and giving direction, give step-by-step instructions, then ask your apprentice to repeat the instructions. This gives them the opportunity to ask questions on things that might not be clear to them.

  Checklist for giving instructions:

  - ✓ **explain the task**
  - ✓ **show them how it is done**
  - ✓ **answer their questions**
  - ✓ **oversee the work**
  - ✓ **give them time to practise**
  - ✓ **give feedback on how they are doing**
  - ✓ **take time to show them how to do the task better**

- **Give feedback.** Giving feedback often helps your apprentice to have a clear understanding of what you want them to do and how you want them to perform. The PSR helps you to give feedback because each knowledge, skills and ability (competency) statement is clear.

  There are three types of feedback that work best in the workplace:

  Positive feedback means you want your apprentice to continue what they are doing. People are motivated by hearing they are doing a good job. They usually do more and try harder.

  Constructive feedback means you want your apprentice to change how or what they are doing. Offering support and guidance to your apprentice to make the changes you need usually brings the best results.

  Direct feedback focuses on what you have seen, not on secondhand information. Focus on how the apprentice is doing and what you have planned for them to do.

- **Give your apprentice experience in many skills.** Sometimes apprentices end up performing the same set of skills over and over again because they are really good at them. They are required to learn the scope of the entire trade during their apprenticeship. If you have the capability, it would be helpful to take advantage of the opportunity to cover a wide range of skills by moving your apprentice from one set of skills to another on a regular basis.

- **Track and Document learning.** Every employer cannot offer an apprentice training in every skill in a trade because each workplace is unique. Some workplaces are specialists in one area of a trade.

  As a journeyperson, you have the responsibility to sign off on the skills your apprentice learns under your guidance in your workplace. A PSR can help you identify those skills.

  Setting a regular review date once every month or two, and keeping that time just for you and your apprentice, can increase their scope in their trade and increase their knowledge which will be an asset in the workplace.

  This meeting time gives you the best opportunity to:

  - monitor your apprentice's progress,
  - make a plan with him/her to learn more skills, and
  - find out if there are any problem areas where he/she may need help.

  Regular meeting dates also help your apprentice to be prepared and able to track his/her learning. This can be done by using a Professional Skills Record (PSR).

7 So how do I use a Professional Skills Record (PSR) with my apprentice?

The PSR is laid out in a chart. Each skill your apprentice has to learn has an action word to tell them how they are supposed to perform a skill. It gives you a level you can use to judge whether they are performing that skill properly. **Industry standard** is the term used to describe when your apprentice can complete a task to the level and quality of performance required by industry without assistance or supervision.

When you see the words "demonstrate an understanding of," you may find it easier to ask them questions about the skill to make sure they know what they are doing.

Your apprentice has the responsibility to complete the "Knowledge, Skills and Abilities – Competencies" section.

When you are sure your apprentice has proven to you they have completed the learning they say they have, you verify it by initialing the sub-task.

Trade Name

IP Exam – 125 Questions

BLOCK A
5% - 6 questions on the IP

Learning Category
OCCUPATIONAL SKILLS

Task 1 – A
3 questions on the IP exam

Learning Outcome
Uses and maintains tools and equipment

Journeyperson Sign-off Task 1

Complete ☐

Incomplete ☐

⇩ Knowledge, Skills and Abilities - Competencies

SUB-TASK 1.01 Learning Objective **Uses hand tools** **JP Sign-off ____**	**1.01.01** Identify boring tools **Rating ____ Complete** **Proof ____** ☐ **Use ____**	**1.01.02** Identify hand cutting tools **Rating ____ Complete** **Proof ____** ☐ **Use ____**

⇦ When your apprentice proves to you that he/she has finished enough sub-tasks to have a good grasp of the task, you verify that learning by initialing "complete".

⇦ If your apprentice has not completed enough sub-tasks or you do not agree with the ratings they have given themselves, initial "incomplete".

Task I
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

If you have any sub-tasks you want your apprentice to work on, list them in this section and add any comments you have.

You might

- set a timeframe when you want these skills to improve
- suggest some manuals they could read
- suggest they go to their local college or training school for technical skills help
- suggest they go for help to an adult education facility if they need any academic help, for example, help in math or help in using the code book.

You have now created a learning plan for your apprentice using a PSR.

Your apprentice can then begin working on these sub-tasks or follow up on suggestions you have made to help them be successful in their trade career. By using a PSR, you now have a documented, written performance review that you can use in later sessions with your apprentice.

The PSR can help you give a fair assessment of your apprentice's ability to perform each technical skill task. If you are assigned an apprentice from another employer, province, territory or country, you can use the PSR to review his/her skills so you do not waste your valuable time teaching them skills they already know and can do.

Professional Skills Record

Trade essentials

More skills … more opportunities

PROFESSIONAL SKILLS RECORD

A tool for recording and recognizing skills and learning of trade apprentices

Oil Burner Mechanic

NOC 7331

A project of:
The Province of PEI
and
Human Resources and Skills Development Canada

Prince Edward Island

Human Resources and Skills Development Canada
Ressources humaines et Développement des compétences Canada

The **Professional Skills Record (PSR)** is a technical skills assessment tool designed to be used in the workplace by an apprentice and a journeyperson. The PSR has taken the content from the National Occupational Analysis (NOA) and arranged it so apprentices can use it to measure their progress in their trade from the time they sign up for apprenticeship through to Red Seal certification.

This PSR has been through a validation process with a team of trade professionals with Certificate of Qualification, Red Seal endorsement, who reached agreement on the wording of each and every knowledge and skill *(competency)* to make it measurable.

The PSR was originally designed as a tool to help apprentices move through a Recognition for Skills and Learning (RSL) process so they can receive recognition for skills they have, no matter where they learned them. Through completion of a PSR, they can avoid relearning what they already know and can do by entering the apprenticeship Block/Period/Level in-school process at a higher level. For example, move directly into Block/Period/Level three rather than relearning Block/Period/Level One and Two.

Feedback from testing and validation of the PSR has opened many new possibilities for using this tool.
The PSR can be used:

- as a tool for valid assessment in a Recognition for Skills and Learning (RSL) process
- as a tool that new Canadians and people planning to emigrate can use, to assess their skills against Canadian standards, receive recognition for skills they already have and, if necessary, make a plan to fill any technical skill gaps they may still have
- in the secondary-school system and in post-secondary trades training so students can know the full scope of the trade they are entering
- as a tool to guide journeypersons while they are mentoring apprentices so they are aware of all the skills apprentices need to learn to be fully competent in their professional trade designation.

INFORMATION SITES:

PROJECT SITE	CANADIAN RED SEAL SITE
www.tradeessentials.ca	www.red-seal.ca

TABLE OF CONTENTS

Oil Burner Mechanic Trade Information

Name: _____ Full Address: _____

Email Address: _____ _____

Phone: Home _____ Work _____ Cell _____

Technical Skills Journeyperson Assessor/s

Name: _____ Business Name: _____

Phone: Home: _____ Work: _____ Cell: _____ Business Address: _____

Email Address: _____ _____

Name: _____ Business Name: _____

Phone: Home: _____ Work: _____ Cell: _____ Business Address: _____

Email Address: _____ _____

Name: _____ Business Name: _____

Phone: Home: _____ Work: _____ Cell: _____ Business Address: _____

Email Address: _____ _____

Apprenticeship Program Start Date: _____ Completion Date: _____ Red Seal Certification Date: _____

Apprenticeship Training Officer:

Signature: _____

Provincial/Territorial Apprenticeship Manager:

Signature: _____

Province/Territory: _____

Professional Skills Record (PSR) Development

Professional Skills Record (PSR)

The Professional Skills Record (PSR) is designed as a tool of assessment. Learning and skills are validated through the PSR when they are signed off by a licensed journeyperson in the trade in which the apprenticeship is being served.

All skills and learning assessed in this PSR are measured against the standards listed in the National Occupational Analysis (NOA). The NOA is recognized by the Canadian Council of Directors of Apprenticeship (CCDA) as the national standard for the occupation of Oil Burner Mechanic.

PSR Oil Burner Mechanic Document Validation

To conduct a reliable assessment through a formal recognition process, skills and learning statements must be measurable. To assess skills and learning using a PSR in the trades, the Knowledge, Skills and Abilities listed in the NOA have been made into measurable competency statements by adding an "action word." This action word describes the skill and learning level which must be reached by an apprentice on the job in order to meet industry standards. Each PSR has been validated by a trades team, all of whom hold a Certificate of Qualification with Red Seal endorsement, and who reached consensus on each action word used in every knowledge, skill and ability statement.

Where Technical Trade Learning Happens

This Professional Skills Record (PSR) records and recognizes directly related trade technical skills and knowledge learned through:

- **Formal Learning** – structured learning that occurs in formal education and training institutions (for example, high school, trades school, apprenticeship programs, registered union and industry training programs)

- **Non-formal Learning** – learning that happens through planned, structured training or education outside the formal education system (for example, workshops, seminars, community school)

- **Informal/Experiential Learning** – learning that results from experience, occurs outside a structured environment, and is controlled by the learner (for example, experience on-the-job, volunteer work, self-study and life experiences). Informal or experiential learning must be current and essential to the trade.

Definitions: Adopted and/or interpreted from Work-related Informal Learning: Research and Practice in the Canadian Context, CAPLA 2008

Academic Trade Requirement

Trade Designation: Oil Burner Mechanic National Occupational Classification (NOC) 7331

One of the following prerequisites must be met before writing the Interprovincial (Red Seal) Exam: an academic Grade 12 certificate or a General Education Diploma (GED) or successful assessment in the following Essential Skills**.**

Essential Skills common to all trades are listed in Appendix B of this document. Specific Essential Skills for the Oil Burner Mechanic trade are listed on the Red Seal website: www.red-seal.ca. (Once on that site, you will find the Essential Skills Profiles under “National Occupational Analysis.”)

A document can prove valuable learning that is recognized by industry and learning institutions.
Record and save every document earned in industry, trade school or union.

Document Record							
Document Name	Issued By	Place Issued	Date Issued	Evidence of recognition for:			Recognition Awarded
				Block/s Learning Category/s Completed	Task/s Learning Outcome/s Completed	Academic Requirement	

PLAR is a formal recognition process in which a variety of tools are used to help people identify, demonstrate and receive recognition for skills and learning they have from the workplace, educational institutions, credentialing organizations or regulatory bodies.

The **Professional Skills Record (PSR)** is a tool designed to assist a trades apprentice to record skills and learning, and then receive recognition for the skills and learning through a PLAR trades process called:

RECOGNITION FOR SKILLS AND LEARNING (RSL)

Traditionally, 80% of learning in a trade happens in the workplace. Through a **Recognition for Skills and Learning (RSL)** process, an apprentice can advance in a trade when they prove they have the required hours, skills and learning for that trade. Proof of skills and learning is **recorded** by the apprentice in a **PSR** and **verified** when signed-off by a journeyperson in that trade.

Through the completion of a **PSR**, an apprentice can avoid relearning what they already know and can do. Through an **RSL** process, a trade apprentice can submit a PSR for assessment to:

- advance in Block/Period/Level in-school training by not having to complete a Block/Period/Level in which proof is provided that skills and learning have already been achieved for that Block/Period/Level.
- transfer common skills from one trade to another - **Skills and learning must be transferred prior to writing the Interprovincial Red Seal exam. The same skills and learning cannot be recognized toward certification in two trades.**
- compare skills and learning in a trade from another country to Canadian standards **(as stated in the National Occupational Analysis)** and receive recognition for the skills and learning that meets Canadian standards.

The following assessment indicators (Rating, Proof, Use) have been developed to help record and then assess skills and learning in accordance with the standards of the trade outlined in the National Occupational Analysis (NOA).

Assessment Standard ONE

Rating: Self-assessment performance rating in the workplace

Workplace Performance	Rating	Examples of Workplace position/s
Can perform this task and series of sub-tasks: - to meet or shorten task timelines - beyond the expected level and quality of performance required by industry - can **manage, lead and train others** to perform this task and series of sub-tasks	**6**	**Journeyperson with a Certificate of Qualification, Red Seal endorsement** and/or **Gold Seal tradesperson** who is an expert in their field - Project Manager/Foreman - Highly skilled and experienced Manager/Supervisor - Expert who comes from industry to serve as an instructor in a trades training program
Can perform this task and series of sub-tasks: - to meet or shorten task timelines - to the highest level and quality of performance required by industry - take the initiative to **respond to unexpected situations when they arise and supervise others**	**5**	**Highly skilled and experienced journeyperson with a Certificate of Qualification, Red Seal endorsement** to whom co-workers turn for **direction and help**
Can perform this task and series of sub-tasks: - to meet task timelines - to the **highest level and quality required by industry without supervision**	**4**	**Experienced, skilled journeyperson with a Certificate of Qualification, Red Seal endorsement**
Can perform this task and series of sub-tasks: - to the level and quality required by industry **without assistance or supervision**	**3**	**Newly certified journeyperson with a Certificate of Qualification, Red Seal endorsement**
Can perform this task and series of sub-tasks: - to the required level and quality of performance **with direction, some assistance and supervision**	**2**	**Apprentice** working **under the direction** of a **journeyperson with a Certificate of Qualification, Red Seal endorsement**
Can perform this task and series of sub-tasks: - to the required level and quality of performance **with assistance and constant supervision**	**1**	**A helper or new apprentice** who must work directly under the **constant supervision** of a **journeyperson with a Certificate of Qualification, Red Seal endorsement**

Proof: Self-assessment options to prove skills and learning have been achieved

Type of Proof – Observation … Interview … Documentation

Observation

When you choose "Observation" to prove that you can perform a task, the person who verifies your work must be Red Seal Certified in the trade in which you are an apprentice.

Interview

When you choose "Interview" to prove that you can perform the task, the person who verifies your work must be Red Seal Certified in the trade in which you are an apprentice. In the case of a panel, at least one person on the panel must be Red Seal Certified in the trade in which you are an apprentice.

Documentation

When you choose "Documentation" to prove that you can perform a task, the document must be from a certified training school or from an industry training course. Course content must be part of the requirements of your trade. If the document is from another country, it must be verified as equivalent to Canadian requirements in the trade.

NOTE: Gather all your documents and keep them with your PSR.

Assessment Standard THREE

Use: Self-assessment rating to help make a plan for additional learning and skill updates needed to be successful in achieving goals in a trade

Use of Knowledge, Skills and Abilities – 1 Daily 2 Often 3 Seldom 4 Never

Show how often you use a skill. This will help you to know:

- what skills you do well because you do them on a regular basis
- what skills you have to update if you want to transfer to another employer or move to another province or territory
- what skills you have to get from a training school, industry program or other employer

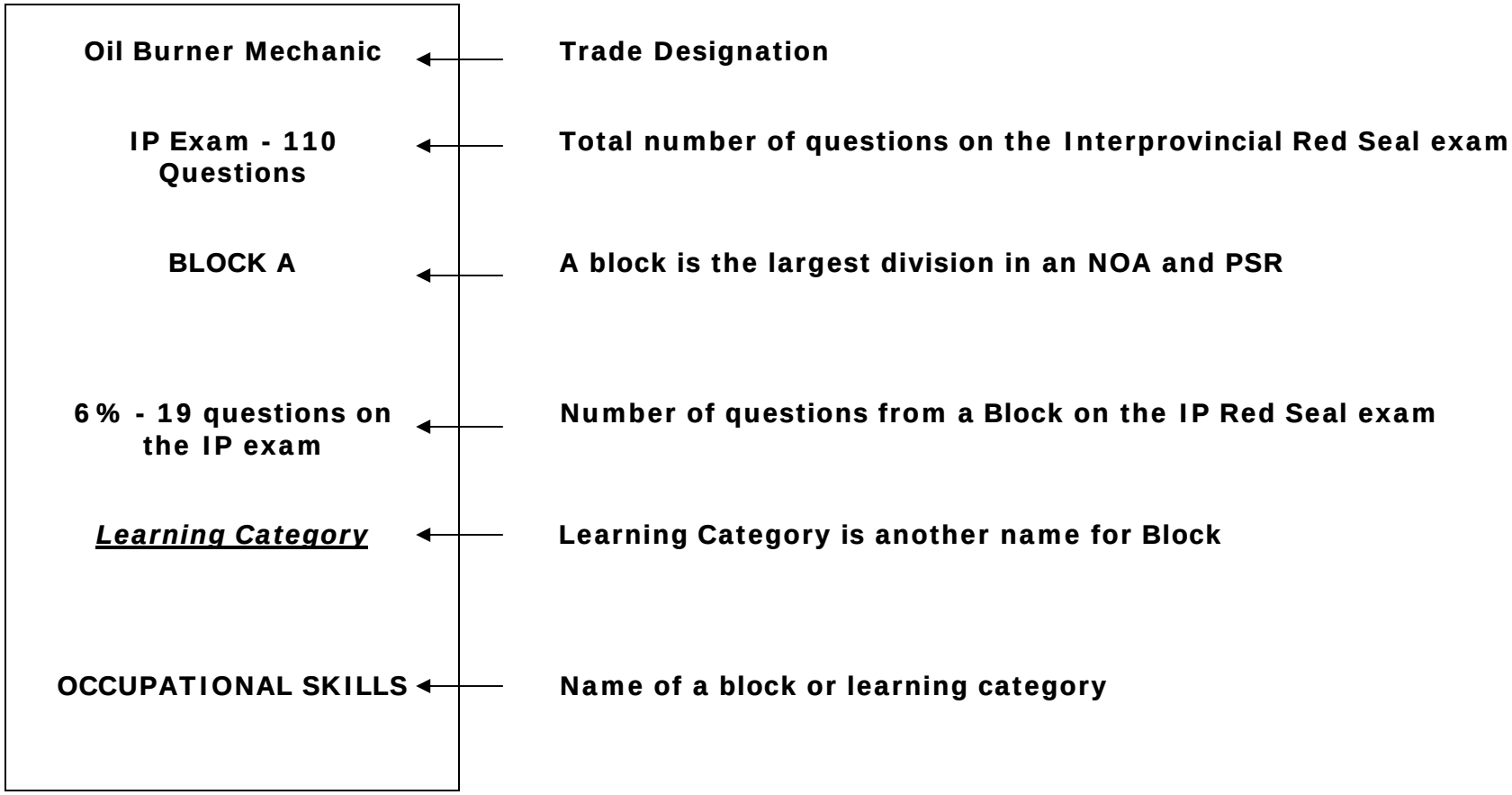
Completing this PSR can help you:

- know the full scope of your trade by exploring all the technical skills in your trade
- highlight the skills you already have
- identify any gaps that you may have to fill so you can be successful in writing your Interprovincial Red Seal certification exam
- create a plan you can follow to fill these technical skills gaps

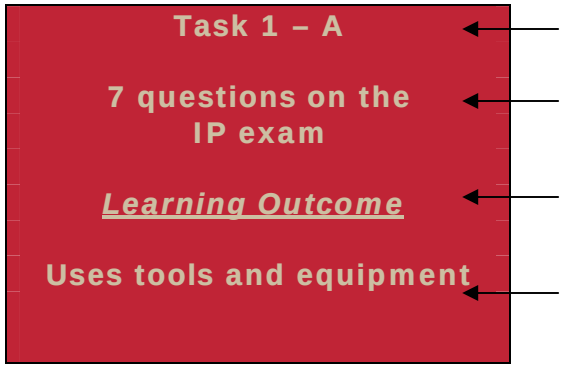
Professional Skills Record (PSR) Components

Information from the National Occupational Analysis (NOA) is the foundation document for the Professional Skills Record (PSR). The PSR has been designed so that information is easily found to help a trade apprentice take control and direct his/her own individual skills and learning path.

Information in the PSR includes:



Professional Skills Record (PSR) Components (cont'd)

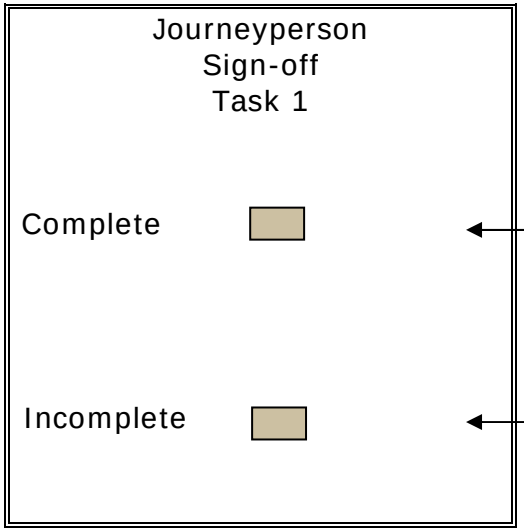


Task Number and Block/Category (letter number)

Number of questions on the IP Red Seal exam from the task

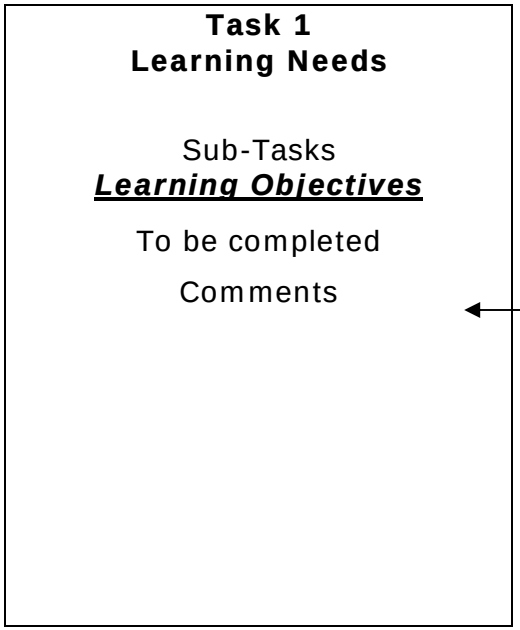
Learning Outcome is another name for a task

Task or learning outcome description



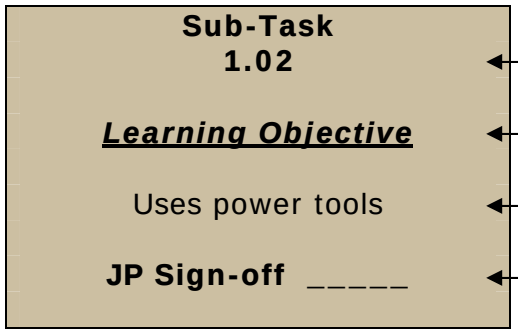
Journeyperson's initials verify that an apprentice can perform the task to industry standards.

Journeyperson's initials indicate "incomplete" when the apprentice requires more work because the task is not being performed to industry standards.



Journeyperson lists any Sub-Tasks (Learning Objectives that an apprentice must improve before they can have their Task (Learning Outcome) signed off).

When completed, this column becomes a learning plan for the apprentice.



Sub-Task Number

Learning Objective is another name for sub-task

Sub-task or learning objective description

Journeyperson assesses and signs off when the apprentice can perform a sub-task or learning objective to industry standard

For easier use, the self-assessment charts have been shortened into an assessment key which is located at the top of each two-page section in a PSR. The "3" rating is considered "Industry Standard."

RATING:

6 - Expert perform a task beyond expected level and quality of performance, lead and/or teach others

5 - Highly skilled perform a task to the highest level and quality of performance, supervise others

4 - Meet task timelines and perform tasks to the highest level and quality required by industry, without supervision

3 - Complete a task to the level and quality of performance required by industry without assistance or supervision

2 - Complete a task with some assistance and supervision

1 - Complete task with assistance and constant supervision

TYPE OF PROOF: O - Observation I - Interview D - Documentation

USE: 1 – Daily 2 – Often 3 – Seldom 4 - Never

How to Record Skills and Learning Using a PSR

Self-assessment takes place where the learning of skills takes place in each of the *Knowledge, Skills and Abilities*. (Knowledge, Skills and Abilities can also be called ***Competencies)***.

1.02.01
Recognize all types of power tools ← Skill and Learning that must meet industry standard.

Rating __5__ ← Choose and insert a number from the RATING key that best describes your level of performance in the workplace.

Proof __I__ ← Choose and insert a letter from the PROOF key that indicates your best choice to provide proof that you have this knowledge, skill and ability in the trade.

Use __2__ ← Choose and insert a number from the USE key that indicates how often you use the knowledge, skills and ability (competency).

Complete ☑ ← Insert a check mark in the box to indicate completion of the competency to industry standard.

Tips to making sure you get recognition for all your skills and learning:

- take your **time** when you are working on your PSR
- do not try to complete **too much** at any one time
- be **fair and honest** with yourself; remember**,** this is a **self-assessment** tool
- **focus** on each task *(learning outcome)* and sub-task *(learning objective)*

Oil Burner Mechanic
IP Exam - 110 Questions

BLOCK A
6% -19 Questions on the IP exam

Learning Category
OCCUPATIONAL SKILLS

Task 1 - A
7 questions on the IP exam

Learning Outcome
Uses tools and equipment

Journeyperson
Sign-off
Task 1

Complete ☐

Incomplete ☐

Task 1
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Rating:
6 - Expert, perform a task beyond expected level and quality of performance, lead and/or teach others
5 - Highly skilled, perform a task to the highest level and quality of performance, supervise others
4 - Meet task timelines and perform tasks to the highest level and quality required by industry, without supervision
3 - Complete a task to the level and quality of performance required by industry without assistance or supervision
2 - Complete a task with some assistance and supervision
1 - Complete task with assistance and constant supervision

Type of Proof: O - Observation I - Interview D - Documentation

Use: 1 -Daily 2 - Often 3 - Seldom 4 - Never

Knowledge, Skills and Abilities - Competencies

SUB-TASK 1.01 Learning Objective **Uses hand tools** **JP Sign-off** _____	**1.01.01** Identify types of hand tools **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.01.02** Apply hand tool operating procedures **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.01.03** Recognize limitations of use of hand tools **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.01.04** Organize hand tools **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.01.05** Select hand tools **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	1.01.06 Maintain hand tools **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.01.07** Store hand tools **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.01.08** Recognize worn, damaged or defective hand tools **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.01.09** Apply hand-eye coordination **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	
SUB-TASK 1.02 Learning Objective **Uses power tools** **JP Sign-off** _____	**1.02.01** Recognize all types of power tools **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.02.02** Apply power tool operating procedures **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.02.03** Recognize limitations of use of power tools **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.02.04** Organize power tools **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.02.05** Select power tools **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	1.02.06 Maintain power tools **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.02.07** Store power tools **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.02.08** Recognize worn, damaged or defective power tools **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.02.09** Apply hand-eye coordination **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	

Task 1 - A (cont'd)

Learning Outcome
Uses tools and equipment

Task 1
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Knowledge, Skills and Abilities - Competencies

SUB-TASK 1.03 Learning Objective **Uses powder- actuated tools** **JP Sign-off** _____	**1.03.01** Recognize types of powder-actuated tools **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.03.02** Identify types of shots **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.03.03** Meet certification requirements **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.03.04** Apply powder- actuated tool operating procedures **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.03.05** Recognize limitations of use of powder-actuated tools **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	1.03.06 Select powder-actuated tools **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.03.07** Maintain powder- actuated tools **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.03.08** Store powder-actuated tools **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.03.09** Recognize worn, damaged or defective powder-actuated tools **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.03.10** Apply hand-eye coordination **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____

SUB-TASK 1.04 Learning Objective **Uses measuring and testing equipment** **JP Sign-off** _____	**1.04.01** Identify types of measuring and testing equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.04.02** Apply measuring and testing equipment operating procedures **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.04.03** Perform basic calculations **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.04.04** Convert between imperial and metric measurements **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.04.05** Interpret measurements **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	1.04.06 Organize measuring and testing equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.04.07** Select measuring and testing equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.04.08** Verify calibration of measuring and testing equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.04.09** Maintain measuring and testing equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.04.10** Store measuring and testing equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____

Task 1 - A (cont'd)

Learning Outcome
Uses tools and equipment

Task 1
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Rating:
6 - Expert, perform a task beyond expected level and quality of performance, lead and/or teach others
5 - Highly skilled, perform a task to the highest level and quality of performance, supervise others
4 - Meet task timelines and perform tasks to the highest level and quality required by industry, without supervision
3 - Complete a task to the level and quality of performance required by industry without assistance or supervision
2 - Complete a task with some assistance and supervision
1 - Complete task with assistance and constant supervision

Type of Proof: O - Observation I - Interview D - Documentation

Use: 1 -Daily 2 - Often 3 - Seldom 4 - Never

Knowledge, Skills and Abilities - Competencies

SUB-TASK 1.05 Learning Objective **Uses measuring and testing equipment** **JP Sign-off** _____	**1.05.01** Identify types of hoisting, lifting and rigging equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.05.02** Apply operating procedures **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.05.03** Evaluate the applications of hoisting, lifting and rigging equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.05.04** Estimate limitations of hoisting, lifting and rigging equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.05.05** Recognize safe lifting locations or points **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	1.05.06 Maintain hoisting, lifting and rigging equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.05.07** Recognize worn, damaged or defective hoisting, lifting and rigging equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.05.08** Store hoisting, lifting and rigging equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____		

SUB-TASK 1.06 Learning Objective **Uses ladders and platforms** **JP Sign-off** _____	**1.06.01** Classify all types of ladders such as step ladders and extension ladders **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.06.02** Select types of platforms such as scaffolds, hydraulic lifts and scissor lifts **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.06.03** Apply government regulations **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.06.04** Apply operating procedures **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.06.05** Recognize limitations of ladders and platforms **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	1.06.06 Secure ladders and platforms **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.06.07** Maintain ladders and platforms **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.06.08** Recognize worn, damaged and defective ladders and platforms **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____		

Task 1 - A (cont'd)

Learning Outcome
Uses tools and equipment

Task 1
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Knowledge, Skills and Abilities - Competencies

SUB-TASK 1.07 Learning Objective **Uses soldering, flaring and threading tools** **JP Sign-off** _____	**1.07.01** Interpret and practice Workplace Hazardous Materials Information System (WHMIS) **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.07.02** Identify types of soldering, flaring and threading equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.07.03** Identify alloys and fluxes **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.07.04** Interpret and apply Transportation of Dangerous Goods (TDG) regulations **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.07.05** Interpret and apply ventilation requirements **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	1.07.06 Recognize flammable materials **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.07.07** Match alloy to specific component to be soldered, flared and threaded **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.07.08** Select soldering, flaring and threading equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.07.09** Organize soldering, flaring and threading equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.07.10** Maintain soldering, flaring and threading equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	1.07.11 Store soldering, flaring and threading equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____				
SUB-TASK 1.08 Learning Objective **Uses personal protective equipment (PPE) and safety equipment** **JP Sign-off** _____	**1.08.01** Identify types of PPE **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.08.02** Recognize types of safety equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.08.03** Practice PPE and safety equipment operations **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.08.04** Recognize training requirements for PPE and safety equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.08.05** Locate PPE and safety equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	1.08.06 Interpret and apply workplace safety and health regulations **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.08.07** Select PPE and safety equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.08.08** Maintain PPE and safety equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.08.09** Store PPE and safety equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**1.08.10** Recognize worn, damaged and defective PPE and safety equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____

Task 2 - A
4 questions on the IP exam

Learning Outcome
Organizes work

Journeyperson
Sign-off
Task 2

Complete ☐

Incomplete ☐

Task 2
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Rating:
6 - Expert, perform a task beyond expected level and quality of performance, lead and/or teach others
5 - Highly skilled, perform a task to the highest level and quality of performance, supervise others
4 - Meet task timelines and perform tasks to the highest level and quality required by industry, without supervision
3 - Complete a task to the level and quality of performance required by industry without assistance or supervision
2 - Complete a task with some assistance and supervision
1 - Complete task with assistance and constant supervision

Type of Proof: O - Observation I - Interview D - Documentation

Use: 1 -Daily 2 - Often 3 - Seldom 4 - Never

Knowledge, Skills and Abilities - Competencies

SUB-TASK 2.01 Learning Objective **Communicates with others** **JP Sign-off** _____	**2.01.01** Recognize customer expectations **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.01.02** Select and operate communication equipment and technology **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.01.03** Interact with customers **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.01.04** Communicate with other tradespeople and industry professionals **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.01.05** Communicate with other tradespeople **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	2.01.06 Communicate with apprentices **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.01.07** Communicate with supervisors and management **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.01.08** Use communication equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____		
SUB-TASK 2.02 Learning Objective **Performs lock-out and tagging procedures** **JP Sign-off** _____	**2.02.01** Interpret and apply safety regulations **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.02.02** Interpret and follow company safety policies **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.02.03** Interpret and apply environmental guidelines and regulations **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.02.04** Recognize and correct unsafe conditions **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.02.05** Keep workplace tidy and organized **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
SUB-TASK 2.03 Learning Objective **Interprets codes and documentation** **JP Sign-off** _____	**2.03.01** Identify and apply B139 code **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.03.02** Recognize relevant sections of codes such as building, plumbing, electrical and safety codes **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.03.03** Identify types of documentation such as permits, warranties and invoices **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.03.04** Utilize trade terminology present in codes and documentation **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.03.05** Locate specific information in codes and documentation **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____

Task 2 - A (cont'd)

Learning Outcome
Organizes work

Task 2
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Knowledge, Skills and Abilities - Competencies

SUB-TASK 2.04 Learning Objective **Completes documentation** **JP Sign-off** _____	**2.04.01** Identify types of business documentation such as work orders, purchase orders, service invoices and warranties **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.04.02** Identify types of government forms such as permits, inspection reports and environmental forms **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.04.03** Prepare quote **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.04.04** Prepare material list **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.04.05** Complete final inspection report **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	2.04.06 Use documentation equipment such as computers, digital cameras and video cameras **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____				

SUB-TASK 2.05 Learning Objective **Interpret drawings** **JP Sign-off** _____	**2.05.01** Identify and read all types of drawings such as blueprints, shop drawings and sketches **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.05.02** Identify drawing components such as lines, symbols, legends and schedules **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.05.03** Interpret specifications **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.05.04** Use drawing instruments **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.05.05** Locate layout dimensions **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	2.05.06 Reference specifications **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.05.07** Scale imperial and metric measurements **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____			

Task 2 - A (cont'd)

Learning Outcome
Organizes work

Task 2
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Rating:
6 - Expert, perform a task beyond expected level and quality of performance, lead and/or teach others
5 - Highly skilled, perform a task to the highest level and quality of performance, supervise others
4 - Meet task timelines and perform tasks to the highest level and quality required by industry, without supervision
3 - Complete a task to the level and quality of performance required by industry without assistance or supervision
2 - Complete a task with some assistance and supervision
1 - Complete task with assistance and constant supervision

Type of Proof: O - Observation I - Interview D - Documentation

Use: 1 -Daily 2 - Often 3 - Seldom 4 - Never

Knowledge, Skills and Abilities - Competencies

SUB-TASK 2.06 Learning Objective **Performs basic distribution layout** **JP Sign-off** _____	**2.06.01** Determine building size and application **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.06.02** Identify types of appliances and components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.06.03** Recognize forced air distribution systems **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.06.04** Recognize types of hydronic distribution systems such as radiant floor, fin tube and case iron **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.06.05** Estimate pipe and duct sizes, types and flow rates **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	2.06.06 Evaluate requirements **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.06.07** Take worksite measurements **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.06.08** Calculate heat loss and heat gain **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.06.09** Determine location of piping and ducting **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	
SUB-TASK 2.07 Learning Objective **Organizes material and components** **JP Sign-off** _____	**2.07.01** Identify types of material **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.07.02** Identify types of components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.07.03** Select material and components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.07.04** Prepare material and components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.07.05** Order material and components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	2.07.06 Take worksite measurements **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**2.07.07** Clean pipes and fittings **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____			

Oil Burner Mechanic

BLOCK B
17% - 19 Questions on the IP exam

Learning Category
FUEL SUPPLY AND STORAGE SYSTEMS

Task 3 - A
19 questions on the IP exam

Learning Outcome
Installs fuel storage tanks

Journeyperson Sign-off Task 3

Complete ☐

Incomplete ☐

Task 3
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Knowledge, Skills and Abilities - Competencies

SUB-TASK 3.01 Learning Objective **Selects fuel storage tanks** **JP Sign-off** _____	**3.01.01** Identify tank composition such as fibreglass, plastic and stainless steel **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.01.02** Recognize tank design **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.01.03** Identify building size and geographic location **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.01.04** Determine accessibility of tank location **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.01.05** Determine tank for specific location **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	3.01.06 Select stand **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____				

SUB-TASK 3.02 Learning Objective **Determines fuel storage tank location** **JP Sign-off** _____	**3.02.01** Determine location of utilities such as water source and electrical supply **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.02.02** Apply local regulations **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.02.03** Determine building orientation and property lines **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.02.04** Identify location of building openings such as air supply , windows and doors **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.02.05** Select tank capacity and design **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	3.02.06 Consider customer preferences **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.02.07** Take worksite measurements **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____			

Task 3 - A (cont'd)

Learning Outcome
Installs fuel storage tanks

Task 3
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Rating:
6 - Expert, perform a task beyond expected level and quality of performance, lead and/or teach others
5 - Highly skilled, perform a task to the highest level and quality of performance, supervise others
4 - Meet task timelines and perform tasks to the highest level and quality required by industry, without supervision
3 - Complete a task to the level and quality of performance required by industry without assistance or supervision
2 - Complete a task with some assistance and supervision
1 - Complete task with assistance and constant supervision

Type of Proof: O - Observation I - Interview D - Documentation

Use: 1 -Daily 2 - Often 3 - Seldom 4 - Never

Knowledge, Skills and Abilities - Competencies

SUB-TASK 3.03 Learning Objective **Prepares location for fuel storage tanks** **JP Sign-off** _____	**3.03.01** Calculate tank weight at total capacity **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.03.02** Determine location of heating appliance **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.03.03** Select types of tank base material such as poured concrete or reinforced pads **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.03.04** Prepare base such as removing soil and compacting base **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.03.05** Calculate maximum weight load **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	3.03.06 Level tank base **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.03.07** Pour concrete pad **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.03.08** Select stand **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.03.09** Assess for possibility of soil erosion **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	
SUB-TASK 3.04 Learning Objective **Positions fuel storage tanks** **JP Sign-off** _____	**3.04.01** Determine tank incline required for tank design such as end and bottom outlet **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.04.02** Assess environmental conditions **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.04.03** Secure tank legs **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.04.04** Secure tank to base with fasteners **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	

Task 3 - A (cont'd)

Learning Outcome
Installs fuel storage tanks

Task 3
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Knowledge, Skills and Abilities - Competencies

SUB-TASK 3.05 Learning Objective **Installs fuel storage tank components** **JP Sign-off** _____	**3.05.01** Identify types and locations of components such as gauges, tank valves and vent alarms **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.05.02** Determine protection for components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.05.03** Seal components using approved sealants **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.05.04** Tighten components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.05.05** Retrofit components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	3.05.06 Test and inspect for fuel leaks **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____				

SUB-TASK 3.06 Learning Objective **Installs fill and vent pipes** **JP Sign-off** _____	**3.06.01** Recognize sizes and types of fill and vent pipes **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.06.02** Identify pipe fittings such as caps, elbows and unions **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.06.03** Use fasteners and supports **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.06.04** Cut and seal holes in building envelope **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.06.05** Prepare pipe by threading and applying sealant compound **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	3.06.06 Seal components using approved sealants **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.06.07** Torque pipe and fittings **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**3.06.08** Test and inspect for fuel leaks **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____		

Task 4 - A
19 questions on the IP exam

Learning Outcome
Installs fuel supply system

Journeyperson
Sign-off
Task 4

Complete ☐

Incomplete ☐

Task 4
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Rating:
6 - Expert, perform a task beyond expected level and quality of performance, lead and/or teach others
5 - Highly skilled, perform a task to the highest level and quality of performance, supervise others
4 - Meet task timelines and perform tasks to the highest level and quality required by industry, without supervision
3 - Complete a task to the level and quality of performance required by industry without assistance or supervision
2 - Complete a task with some assistance and supervision
1 - Complete task with assistance and constant supervision

Type of Proof: O - Observation I - Interview D - Documentation

Use: 1 -Daily 2 - Often 3 - Seldom 4 - Never

Knowledge, Skills and Abilities - Competencies

SUB-TASK 4.01 Learning Objective **Selects fuel supply components** **JP Sign-off** _____	**4.01.01** Identify components such as oil filters, valves, pumps and oil lines **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**4.01.02** Determine and select types of valves such as oil-safety, in-line, anti-siphon and check **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**4.01.03** Apply manufacturers' specifications **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**4.01.04** Determine size of fuel lines and oil filters **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**4.01.05** Determine when to use booster pump systems **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	4.01.06 Determine when to use two-line systems **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**4.01.07** Determine when to use specialized components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____			
SUB-TASK 4.02 Learning Objective **Installs fuel supply components** **JP Sign-off** _____	**4.02.01** Identify sealants **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**4.02.02** Determine location of components such as valves, booster pumps and de-aerators **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**4.02.03** Determine travel path of fuel line **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**4.02.04** Fasten and support pipe **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**4.02.05** Seal components using approved sealants **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	4.02.06 Test and inspect for fuel leaks **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____				

Oil-Burner Mechanic

BLOCK C
24% - 25 Questions on the IP exam

Learning Category
OIL-FIRED HEATING SYSTEMS

5 - C
4 questions on the IP exam

Learning Outcome
Installs and retrofits oil-fired and wood/oil appliances and components

Journeyperson Sign-off Task 5

Complete ☐

Incomplete ☐

Task 5
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Knowledge, Skills and Abilities - Competencies

SUB-TASK 5.01 Learning Objective **Selects appliance** **JP Sign-off** _____	**5.01.01** Apply code requirements **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.01.02** Determine system requirements **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.01.03** Apply local regulations **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.01.04** Determine types of appliances such as front and rear breech, and multi-position **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.01.05** Apply manufacturers' specifications **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	5.01.06 Assess customer needs **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.01.07** Evaluate desired appliance location **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.01.08** Select types of hydronic heating appliances **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.01.09** Consider location of other appliances such as clothes dryer, heat recovery ventilator and water heater **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	
SUB-TASK 5.02 Learning Objective **Positions appliance** **JP Sign-off** _____	**5.02.01** Apply code requirements **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.02.02** Apply local regulations **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.02.03** Determine types of appliances such as front and rear breech, and multi-position **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.02.04** Apply manufacturers' specifications **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.02.05** Determine desired appliance location **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	5.02.06 Recognize types of hydronic heating appliances **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.02.07** Evaluate location of other appliances such as clothes dryer, heat recovery ventilator and water heater **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.02.08** Select types of fasteners **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.02.09** Level appliance **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.02.10** Mount appliance **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	5.02.11 Secure appliance using fasteners **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____				

Task 5 - C (cont'd)

Learning Outcome
Installs and retrofits oil-fired and wood/oil appliances and components

Task 5
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Rating:
6 - Expert, perform a task beyond expected level and quality of performance, lead and/or teach others
5 - Highly skilled, perform a task to the highest level and quality of performance, supervise others
4 - Meet task timelines and perform tasks to the highest level and quality required by industry, without supervision
3 - Complete a task to the level and quality of performance required by industry without assistance or supervision
2 - Complete a task with some assistance and supervision
1 - Complete task with assistance and constant supervision

Type of Proof: O - Observation I - Interview D - Documentation

Use: 1 -Daily 2 - Often 3 - Seldom 4 - Never

Knowledge, Skills and Abilities - Competencies

SUB-TASK 5.03 Learning Objective **Installs components on appliance** **JP Sign-off** _____	**5.03.01** Identify appliance components such as burners, appliance jackets and controls **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.03.02** Determine sequence of assembly **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.03.03** Select location of controls **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.03.04** Apply sealing compounds **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.03.05** Attach fittings and adapters **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	5.03.06 Connect water supply to the appliance **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.03.07** Assemble and mount burners **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____			

SUB-TASK 5.04 Learning Objective **Connects fuel supply to appliance** **JP Sign-off** _____	**5.04.01** Identify types of fuel lines such as steel, flexible and coated copper **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.04.02** Select types of adapters and fittings **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.04.03** Apply codes **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.04.04** Apply sealing compounds **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.04.05** Flare fuel line **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	5.04.06 Support fuel line **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.04.07** Protect fuel line **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.04.08** Determine termination point **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____		

Task 5 - C (cont'd)

Learning Outcome
Installs and retrofits oil-fired and wood/oil appliances and components

Task 5
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Knowledge, Skills and Abilities - Competencies

SUB-TASK 5.05 Learning Objective **Connects electrical supply to appliance** **JP Sign-off** _____	**5.05.01** Apply relevant sections of electrical codes **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.05.02** Select types of connectors and fasteners **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.05.03** Select wire for specific load requirements **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.05.04** Strip and fasten wire **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.05.05** Secure wire to building structure **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	5.05.06 Seal electrical connectors on balanced flue and direct vent application **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____				

SUB-TASK 5.06 Learning Objective **Connects vent/ exhaust piping to appliance** **JP Sign-off** _____	**5.06.01** Identify vent/ exhaust piping components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.06.02** Select types of fasteners **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.06.03** Determine sequence of application of sealants **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.06.04** Apply codes **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.06.05** Cut and crimp piping **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	5.06.06 Fasten piping to appliance **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.06.07** Apply sealants **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____			

Task 5 - C (cont'd)

Learning Outcome
Installs and retrofits oil-fired and wood/oil appliances and components

Task 5
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Rating:
6 - Expert, perform a task beyond expected level and quality of performance, lead and/or teach others
5 - Highly skilled, perform a task to the highest level and quality of performance, supervise others
4 - Meet task timelines and perform tasks to the highest level and quality required by industry, without supervision
3 - Complete a task to the level and quality of performance required by industry without assistance or supervision
2 - Complete a task with some assistance and supervision
1 - Complete task with assistance and constant supervision

Type of Proof: O - Observation I - Interview D - Documentation

Use: 1 -Daily 2 - Often 3 - Seldom 4 - Never

Knowledge, Skills and Abilities - Competencies

SUB-TASK 5.07 Learning Objective **Installs dump zones for wood/oil systems** **JP Sign-off** _____	**5.07.01** Determine application of dump zones **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.07.02** Determine appropriate location of dump zones **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.07.03** Assemble dump zone components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.07.04** Solder connections on hydronic systems **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.07.05** Fabricate emergency access panel on forced air heating system **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	5.07.06 Connect wiring to dump zones **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____				

SUB-TASK 5.08 Learning Objective **Connects drain to appliance** **JP Sign-off** _____	**5.08.01** Apply relevant sections of plumbing codes **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.08.02** Evaluate liquids to be drained **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.08.03** Determine termination point of drain **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.08.04** Select drain pipe materials **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.08.05** Fasten drain pipe to appliance **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	5.08.06 Protect drain pipe **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**5.08.07** Apply sealant **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____			

Task 6 - C
4 questions on the IP exam

Learning Outcome
Installs forced air heating systems

Journeyperson
Sign-off
Task 6

Complete ☐

Incomplete ☐

Task 6
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Knowledge, Skills and Abilities - Competencies

SUB-TASK 6.01 Learning Objective **Assembles ductwork** **JP Sign-off** _____	**6.01.01** Identify and select ductwork material **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**6.01.02** Identify components installed during assembly such as zone dampers and fire dampers **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**6.01.03** Determine sequence of assembly **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**6.01.04** Select hangers and supports **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**6.01.05** Join ducting **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	6.01.06 Modify ductwork by using methods such as cutting, forming and flanging **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**6.01.07** Size supply and return ducts **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____			

SUB-TASK 6.02 Learning Objective **Installs ductwork** **JP Sign-off** _____	**6.02.01** Apply codes **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**6.02.02** Apply all types of sealants such as duct sealer, foil tape and vinyl duct tape **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**6.02.03** Connect plenums to appliance **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**6.02.04** Connect starting collars and takeoffs **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**6.02.05** Install hangers **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	6.02.06 Seal joints **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**6.02.07** Connect trunk lines and branch lines **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**6.02.08** Install dampers such as manual and motorized **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**6.02.09** Install finish components such as registers and return air grilles **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	

Task 7 - C
4 questions on the IP exam

Learning Outcome
Installs hydronic heating systems

Journeyperson
Sign-off
Task 7

Complete ☐

Incomplete ☐

Task 7
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Rating:

6 - Expert, perform a task beyond expected level and quality of performance, lead and/or teach others
5 - Highly skilled, perform a task to the highest level and quality of performance, supervise others
4 - Meet task timelines and perform tasks to the highest level and quality required by industry, without supervision
3 - Complete a task to the level and quality of performance required by industry without assistance or supervision
2 - Complete a task with some assistance and supervision
1 - Complete task with assistance and constant supervision

Type of Proof: O - Observation I - Interview D - Documentation

Use: 1 -Daily 2 - Often 3 - Seldom 4 - Never

Knowledge, Skills and Abilities - Competencies

SUB-TASK 7.01 Learning Objective **Assembles boilers** **JP Sign-off** _____	**7.01.01** Recognize all types of boilers such as horizontal and vertical tube, cast iron and sectional **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.01.02** Identify applications of boilers such as residential and commercial **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.01.03** Determine sequence of assembly **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.01.04** Identify boiler components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.01.05** Join sections of boilers **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	7.01.06 Fasten jacket **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.01.07** Apply sealants **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.01.08** Install boiler components such as aquastat well, controls and boiler drain **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____		
SUB-TASK 7.02 Learning Objective **Installs hydronic distribution system** **JP Sign-off** _____	**7.02.01** Identify types of distribution systems such as radiant floor, cast iron and fin tube convector **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.02.02** Determine piping and tubing materials **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.02.03** Calculate piping and tubing size **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.02.04** Apply relevant plumbing codes **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.02.05** Prepare rough-in to accept distribution systems **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	7.02.06 Install fasteners and supports **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.02.07** Join and fit piping and fittings using methods such as crimping, soldering, threading and using compression fittings **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.02.08** Fasten piping and tubing **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____		

Task 7 - C (cont'd)

Learning Outcome
Installs hydronic heating systems

Task 7
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Knowledge, Skills and Abilities - Competencies

SUB-TASK 7.03 Learning Objective **Installs indirect water heater** **JP Sign-off** _____	**7.03.01** Determine types of indirect water heaters such as stainless steel and glass lined heaters **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.03.02** Interpret and apply relevant sections of plumbing and electrical codes **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.03.03** Calculate water requirements of building occupants **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.03.04** Level heater **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.03.05** Wire heater **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	7.03.06 Connect heater to appliance **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.03.07** Install heater components such as circulating pump, check valves and temperature controls **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____			
SUB-TASK 7.04 Learning Objective **Installs oil-fired water heater** **JP Sign-off** _____	**7.04.01** Identify water heater components such as venting, controls, drains, vacuum relief values, pressure reducing valves and anti-scale valves **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.04.02** Calculate water heater sizes **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.04.03** Select types of burners **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.04.04** Determine flooring materials **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.04.05** Apply manufacturers' specifications and recommendations **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	7.04.06 Size burner **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.04.07** Install components such as burners **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.04.08** Connect appliance to fuel, electrical and water supply **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.04.09** Connect to distribution system **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.04.10** Level heater **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____

Task 7 - C (cont'd)

Learning Outcome
Installs hydronic heating systems

Task 7
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Rating:
6 - Expert, perform a task beyond expected level and quality of performance, lead and/or teach others
5 - Highly skilled, perform a task to the highest level and quality of performance, supervise others
4 - Meet task timelines and perform tasks to the highest level and quality required by industry, without supervision
3 - Complete a task to the level and quality of performance required by industry without assistance or supervision
2 - Complete a task with some assistance and supervision
1 - Complete task with assistance and constant supervision

Type of Proof: O - Observation I - Interview D - Documentation

Use: 1 -Daily 2 - Often 3 - Seldom 4 - Never

Knowledge, Skills and Abilities - Competencies

SUB-TASK 7.05 Learning Objective **Installs hydronic heating system components** **JP Sign-off** _____	**7.05.01** Determine and install hydronic heating system components such as expansion tanks, air scoops and backflow preventers **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.05.02** Select types of valves **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.05.03** Identify low-water cutoffs **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.05.04** Locate and fasten components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.05.05** Join components using methods such as crimping, expanding, soldering and threading **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	7.05.06 Seal components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**7.05.07** Connect components to electrical supply **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____			

Oil Burner Mechanic

BLOCK D
16% -18 Questions on the IP exam

Learning Category
VENTING, COMBUSTION AIR AND MAKE-UP AIR

Task 8 - D
4 questions on the IP exam

Learning Outcome
Installs venting systems

Journeyperson
Sign-off
Task 8

Complete ☐

Incomplete ☐

Task 8
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Knowledge, Skills and Abilities - Competencies

SUB-TASK 8.01 Learning Objective **Selects venting system** **JP Sign-off** _____	**8.01.01** Identify all types of venting systems such as chimney, balanced flue and mechanical **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**8.01.02** Apply relevant sections of code **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**8.01.03** Apply manufacturers' specifications **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**8.01.04** Determine chimney construction **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**8.01.05** Measure clearances **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	8.01.06 Calculate capacities **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____				

SUB-TASK 8.02 Learning Objective **Prepares location for termination** **JP Sign-off** _____	**8.02.01** Evaluate building construction **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**8.02.02** Apply relevant sections of building codes **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**8.02.03** Determine material characteristics **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**8.02.04** Apply manufacturers' specifications **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**8.02.05** Access outside influences such as trees, dust and snow **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	8.02.06 Recognize regional conditions **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**8.02.07** Measure clearances **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**8.02.08** Perform basic carpentry **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**8.02.09** Visualize layout of system **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**8.02.10** Perform basic masonry **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	8.02.11 Remove liners **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____				

Task 8 - D (cont'd)

Learning Outcome
Installs venting systems

Task 8
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Rating:
6 - Expert, perform a task beyond expected level and quality of performance, lead and/or teach others
5 - Highly skilled, perform a task to the highest level and quality of performance, supervise others
4 - Meet task timelines and perform tasks to the highest level and quality required by industry, without supervision
3 - Complete a task to the level and quality of performance required by industry without assistance or supervision
2 - Complete a task with some assistance and supervision
1 - Complete task with assistance and constant supervision

Type of Proof: O - Observation I - Interview D - Documentation

Use: 1 -Daily 2 - Often 3 - Seldom 4 - Never

Knowledge, Skills and Abilities - Competencies

SUB-TASK 8.03 Learning Objective **Installs venting components** **JP Sign-off** _____	**8.03.01** Identify types of venting components and liners **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**8.03.02** Apply manufacturers' specifications **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**8.03.03** Select types of sealants **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**8.03.04** Select types of fasteners and supports **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**8.03.05** Assemble components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	8.03.06 Apply sealants **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**8.03.07** Fasten and secure venting and components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**8.03.08** Install liners **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**8.03.09** Perform basic masonry **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	
SUB-TASK 8.04 Learning Objective **Secures venting system to structure** **JP Sign-off** _____	**8.04.01** Select types of fasteners and supports **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**8.04.02** Apply manufacturers' specifications **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**8.04.03** Apply relevant sections of codes **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**8.04.04** Measure support points **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**8.04.05** Fasten venting system to structure **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	8.04.06 Apply sealants **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**8.04.07** Perform basic masonry **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____			

9 - D
4 questions on the IP exam

Learning Outcome
Installs equipment and components for combustion air and make-up air

Journeyperson
Sign-off
Task 9

Complete ☐

Incomplete ☐

Task 9
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Knowledge, Skills and Abilities - Competencies

SUB-TASK 9.01 Learning Objective **Selects equipment and components** **JP Sign-off** _____	**9.01.01** Identify appliances such as water heater and forced air furnace **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**9.01.02** Select components such as fans, ducts and grilles **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**9.01.03** Calculate appliance capacities **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**9.01.04** Apply relevant sections of codes **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**9.01.05** Measure clearances **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	9.01.06 Calculate size **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**9.01.07** Determine location of intakes for combustion air and make-up air **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____			
SUB-TASK 9.02 Learning Objective **Prepares location of equipment and components for combustion air and make-up air** **JP Sign-off** _____	**9.02.01** Evaluate building construction **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**9.02.02** Apply relevant sections of building codes **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**9.02.03** Apply manufacturers' specifications **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**9.02.04** Identify material characteristics **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**9.02.05** Assess outside influences such as trees, dust and snow **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	9.02.06 Recognize regional conditions **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**9.02.07** Perform basic carpentry **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**9.02.08** Measure clearances **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**9.02.09** Visualize layout of system **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	
SUB-TASK 9.03 Learning Objective **Assembles equipment and components** **JP Sign-off** _____	**9.03.01** Select equipment and components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**9.03.02** Apply manufacturers' specifications **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**9.03.03** Select types of sealants **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**9.03.04** Apply sealants **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**9.03.05** Connect components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____

9 - D
(cont'd)

Learning Outcome
Installs equipment and components for combustion air and make-up air

Task 9
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Rating:
6 - Expert, perform a task beyond expected level and quality of performance, lead and/or teach others
5 - Highly skilled, perform a task to the highest level and quality of performance, supervise others
4 - Meet task timelines and perform tasks to the highest level and quality required by industry, without supervision
3 - Complete a task to the level and quality of performance required by industry without assistance or supervision
2 - Complete a task with some assistance and supervision
1 - Complete task with assistance and constant supervision

Type of Proof: O - Observation I - Interview D - Documentation

Use: 1 -Daily 2 - Often 3 - Seldom 4 - Never

Knowledge, Skills and Abilities - Competencies

SUB-TASK 9.04 Learning Objective **Secures equipment and components to structure** **JP Sign-off** _____	**9.04.01** Select fasteners and supports **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**9.04.02** Apply manufacturers' specifications **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**9.04.03** Apply relevant sections of codes **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**9.04.04** Measure spacing for fasteners and supports **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**9.04.05** Fasten equipment and components to structure **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____

Oil Burner Mechanic

BLOCK E
18% - 20 Questions on the IP exam

Learning Category
ELECTRICAL/ ELECTRONIC SYSTEMS

Task 10 - E
4 questions on the IP exam

Learning Outcome
Installs electrical and electronic systems

Journeyperson Sign-off Task 10

Complete ☐

Incomplete ☐

Task 10 Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Knowledge, Skills and Abilities - Competencies

SUB-TASK 10.01 Learning Objective **Selects controls and components** **JP Sign-off** _____	**10.01.01** Identify types of controls **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**10.01.02** Calculate types of loads **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**10.01.03** Determine sequence of operation of controls **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**10.01.04** Determine application of controls and components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**10.01.05** Apply relevant sections of electrical, building and oil codes **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	10.01.05 Demonstrate an under-standing of basic electronic theory as it relates to system components such as elec-tronic controls, Electronically Commutated Motors (ECM) and hydronic mixing controls **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**10.01.02** Demonstrate a working knowledge of basic electrical principles as they relate to system operation **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**10.01.02** Demonstrate an understanding of the system and its design **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____		
SUB-TASK 10.02 Learning Objective **Selects location of controls and components** **JP Sign-off** _____	**10.02.01** Determine positioning of controls, loads and wiring **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**10.02.02** Apply manufacturers' specifications **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**10.02.03** Apply relevant sections of electrical, building and oil codes **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**10.02.04** Position controls, loads and wiring **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**10.02.05** Measure distances **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	10.01.06 Recognize physical and environmental limitations of controls and loads **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____				

Task 10 - E (cont'd)

Learning Outcome
Installs electrical and electronic systems

Task 10
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Rating:
6 - Expert, perform a task beyond expected level and quality of performance, lead and/or teach others
5 - Highly skilled, perform a task to the highest level and quality of performance, supervise others
4 - Meet task timelines and perform tasks to the highest level and quality required by industry, without supervision
3 - Complete a task to the level and quality of performance required by industry without assistance or supervision
2 - Complete a task with some assistance and supervision
1 - Complete task with assistance and constant supervision

Type of Proof: O - Observation I - Interview D - Documentation

Use: 1 -Daily 2 - Often 3 - Seldom 4 - Never

Knowledge, Skills and Abilities - Competencies

SUB-TASK 10.03 Learning Objective **Installs controls and components** **JP Sign-off** _____	**10.03.01** Select and apply fasteners and supports **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**10.03.02** Apply manufacturers' specifications **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**10.03.03** Apply relevant sections of codes **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**10.03.04** Apply basic carpentry skills **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**10.03.05** Install wire **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	10.03.06 Follow wiring diagram **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**10.03.07** Fasten controls and components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____			

Task 11 - E
4 questions on the IP exam

Learning Outcome
Tests electrical and electronic systems

Journeyperson Sign-off Task 11

Complete ☐

Incomplete ☐

Task 11
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Knowledge, Skills and Abilities - Competencies

SUB-TASK 11.01 Learning Objective **Cycles appliance control** **JP Sign-off** _____	**11.01.01** Identify operation of controls **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**11.01.02** Determine sequence of operation of system **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**11.01.03** Operate appliance controls **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____		
SUB-TASK 11.02 Learning Objective **Checks operating and safety controls** **JP Sign-off** _____	**11.02.01** Demonstrate an understanding of system operations **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**11.02.02** Test circuits **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**11.02.03** Evaluate set points **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**11.02.04** Disable operating components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**11.02.05** Trace circuits **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	11.02.06 Verify that controls operate to system specifications through full cycle **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____				
SUB-TASK 11.03 Learning Objective **Checks accessories and components** **JP Sign-off** _____	**11.03.01** Identify types of accessories such as zone valves, booster pumps and air cleaning devices **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**11.03.02** Identify types of components such as circulators, blower motors and burners **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**11.03.03** Determine system operation **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**11.03.04** Determine operation of circuits **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**11.03.05** Use multi-meters and diagnostic equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	11.03.06 Test circuits, accessories and components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**11.03.07** Interpret readings **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**11.03.08** Verify that circuits, accessories and components operate to system specifications through full cycle **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____		

Task 11 - E (cont'd)

Learning Outcome
Tests electrical and electronic systems

Task 11
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Rating:
6 - Expert, perform a task beyond expected level and quality of performance, lead and/or teach others
5 - Highly skilled, perform a task to the highest level and quality of performance, supervise others
4 - Meet task timelines and perform tasks to the highest level and quality required by industry, without supervision
3 - Complete a task to the level and quality of performance required by industry without assistance or supervision
2 - Complete a task with some assistance and supervision
1 - Complete task with assistance and constant supervision

Type of Proof: O - Observation I - Interview D - Documentation

Use: 1 -Daily 2 - Often 3 - Seldom 4 - Never

Knowledge, Skills and Abilities - Competencies

SUB-TASK 11.04 Learning Objective **Sets up operating parameters** **JP Sign-off** _____	**11.04.01** Interpret system specifications **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**11.04.02** Assess operating controls such as thermostat, aquastat and fan control **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**11.04.03** Adjust controls **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**11.04.04** Adjust equipment and components to meet system design **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____

Oil Burner Mechanic

BLOCK F
19% - 21 Questions on the IP exam

Learning Category
MAINTENANCE, REPAIR AND REMOVAL

Task 12 - F
4 questions on the IP exam

Learning Outcome
Maintains oil-fired heating systems and components

Journeyperson Sign-off Task 12

Complete ☐

Incomplete ☐

Task 12 Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Knowledge, Skills and Abilities - Competencies

SUB-TASK 12.01 Learning Objective **Checks oil-fired heating system and components** **JP Sign-off** _____	**12.01.01** Evaluate equipment and its operation **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**12.01.02** Assess service history **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**12.01.03** Determine condition of equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**12.01.04** Identify potential problem areas **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	
SUB-TASK 12.02 Learning Objective **Cleans components** **JP Sign-off** _____	**12.02.01** Perform cleaning methods such as vacuuming, flushing and washing **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**12.02.02** Select cleaning materials **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**12.02.03** Drain and recharge expansion tanks **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**12.02.04** Clean distribution fan **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**12.02.05** Clean burner components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	12.02.06 Clean exhaust components such as sidewall vents, direct vents, smoke pipe and chimneys **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**12.02.07** Set or adjust temperature and pressure controls **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____			
SUB-TASK 12.03 Learning Objective **Changes preventative maintenance components** **JP Sign-off** _____	**12.03.01** Identify types of preventative maintenance components such as nozzles, oil filters, air filters, fan belts and gaskets **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**12.03.02** Evaluate component specifications **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**12.03.03** Access components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**12.03.04** Install new components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	
SUB-TASK 12.04 Learning Objective **Lubricates moving components** **JP Sign-off** _____	**12.04.01** Identify types of lubricants **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**12.04.02** Determine lubrication requirements such as frequency, locations and amount of lubricant **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**12.04.03** Apply lubricant **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____		

Task 13 - F
4 questions on the IP exam

Learning Outcome
Diagnoses oil-fired heating systems and components

Journeyperson
Sign-off
Task 13

Complete ☐

Incomplete ☐

Task 13
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Rating:
6 - Expert, perform a task beyond expected level and quality of performance, lead and/or teach others
5 - Highly skilled, perform a task to the highest level and quality of performance, supervise others
4 - Meet task timelines and perform tasks to the highest level and quality required by industry, without supervision
3 - Complete a task to the level and quality of performance required by industry without assistance or supervision
2 - Complete a task with some assistance and supervision
1 - Complete task with assistance and constant supervision

Type of Proof: O - Observation I - Interview D - Documentation

Use: 1 -Daily 2 - Often 3 - Seldom 4 - Never

Knowledge, Skills and Abilities - Competencies

SUB-TASK 13.01 Learning Objective **Checks for electrical problems** **JP Sign-off** _____	**13.01.01** Determine sequence of operation **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**13.01.02** Apply basic electrical principles **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**13.01.03** Perform electrical testing procedures **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**13.01.04** Interpret component schematics **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**13.01.05** Check for polarity **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	13.01.06 Check for continuity **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**13.01.07** Check voltage **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**13.01.08** Check amperage **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**13.01.09** Check resistance **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	
SUB-TASK 13.02 Learning Objective **Checks for burner problems** **JP Sign-off** _____	**13.02.01** Determine burner operation **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**13.02.02** Identify and select burner components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**13.02.03** Recognize safety features such as primary controls and flame sensors **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**13.02.04** Apply combustion testing procedures **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**13.02.05** Check fuel supply **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	13.02.06 Check ignition **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**13.02.07** Check flame **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**13.02.08** Check safety features **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____		

Task 13 - F (cont'd)

Learning Outcome
Diagnoses oil-fired heating systems and components

Task 13
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Knowledge, Skills and Abilities - Competencies

SUB-TASK 13.03 Learning Objective **Checks for distribution problems** **JP Sign-off** _____	**13.03.01** Identify distribution systems and components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**13.03.02** Diagnosis distribution problems such as no heat, insufficient heat and excessive heat **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**13.03.03** Perform testing procedures **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**13.03.04** Isolate source of problem **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____

SUB-TASK 13.04 Learning Objective **Checks for problems with combustion air and make-up air** **JP Sign-off** _____	**13.04.01** Evaluate combustion air and make-up air requirements **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**13.04.02** Determine building alterations **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**13.04.03** Perform testing procedures **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**13.04.04** Check for blockages **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**13.04.05** Check pressure differential **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____

Task 14 - F
4 questions on the IP exam

Learning Outcome
Repairs oil-fired heating systems and components

Journeyperson
Sign-off
Task 14

Complete ☐

Incomplete ☐

Task 14
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Rating:
6 - Expert, perform a task beyond expected level and quality of performance, lead and/or teach others
5 - Highly skilled, perform a task to the highest level and quality of performance, supervise others
4 - Meet task timelines and perform tasks to the highest level and quality required by industry, without supervision
3 - Complete a task to the level and quality of performance required by industry without assistance or supervision
2 - Complete a task with some assistance and supervision
1 - Complete task with assistance and constant supervision

Type of Proof: O - Observation I - Interview D - Documentation

Use: 1 -Daily 2 - Often 3 - Seldom 4 - Never

Knowledge, Skills and Abilities - Competencies

SUB-TASK 14.01 Learning Objective **Corrects electrical problems** **JP Sign-off** _____	**14.01.01** Apply basic electrical principles **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**14.01.02** Apply relevant sections of electrical codes **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**14.01.03** Interpret component schematics **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**14.01.04** Lock out equipment **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**14.01.05** Reset switches and breakers **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	14.01.06 Replace defective electrical components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**14.01.07** Repair damaged wires and terminals **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____			
SUB-TASK 14.02 Learning Objective **Corrects burner problems** **JP Sign-off** _____	**14.02.01** Determine burner operation **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**14.02.02** Identify burner components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**14.02.03** Determine safety features **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**14.02.04** Interpret component schematics **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**14.02.05** Repair and replace defective burner components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	14.02.06 Set operating parameters **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**14.02.07** Reset burner components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____			

Task 14 - F (cont'd)

Learning Outcome
Repairs oil-fired heating systems and components

Task 14
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Knowledge, Skills and Abilities - Competencies

SUB-TASK 14.03 Learning Objective **Corrects distribution problems** **JP Sign-off** _____	**14.03.01** Evaluate distribution systems and components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**14.03.02** Assess building alterations **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**14.03.03** Interpret component schematics **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**14.03.04** Repair and replace defective distribution components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**14.03.05** Purge hydronic distribution system **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	14.03.06 Realign and adjust drive belts and pulleys **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**14.03.07** Set operating parameters **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____			

Task 15 - F
4 questions on the IP exam

Learning Outcome
Removes appliances and components

Journeyperson Sign-off Task 15

Complete ☐

Incomplete ☐

Task 15
Learning Needs

Sub-Tasks
Learning Objectives
to be completed
Comments

Rating:
6 - Expert, perform a task beyond expected level and quality of performance, lead and/or teach others
5 - Highly skilled, perform a task to the highest level and quality of performance, supervise others
4 - Meet task timelines and perform tasks to the highest level and quality required by industry, without supervision
3 - Complete a task to the level and quality of performance required by industry without assistance or supervision
2 - Complete a task with some assistance and supervision
1 - Complete task with assistance and constant supervision

Type of Proof: O - Observation I - Interview D - Documentation

Use: 1 -Daily 2 - Often 3 - Seldom 4 - Never

Knowledge, Skills and Abilities - Competencies

SUB-TASK 15.01 Learning Objective **Decommissions appliance and components** **JP Sign-off** _____	**15.01.01** Interpret and apply WHMIS **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**15.01.02** Recognize material handling hazards **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**15.01.03** Identify waste products such as fuel tanks, oil, glycol, mercury, heavy metals, asbestos and contaminated soil **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**15.01.04** Identify products that can be recycled components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**15.01.05** Disconnect utilities **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	15.01.06 Drain system **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**15.01.07** Seal breeches **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**15.01.08** Strap ductwork and pipings **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**15.01.09** Disassemble appliance **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	
SUB-TASK 15.02 Learning Objective **Disposes of waste products** **JP Sign-off** _____	**15.02.01** Follow jurisdictional guidelines and requirements for storage and disposal of removed components **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**15.02.02** Identify containment systems **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**15.02.03** Interpret and apply WHMIS **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**15.02.04** Interpret and apply TDG regulations and signage **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____	**15.02.05** Identify and utilize local resources for disposal such as environmental agencies, coast guard and certified disposal companies **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____
	15.02.06 Handle waste products and containers **Rating** ____ **Complete** **Proof** ____ ☐ **Use** ____				

APPENDIX A

OIL BURNER MECHANIC
NATIONAL OCCUPATIONAL ANALYSIS
GLOSSARY OF TERMS

Appliance	A device to convert fuel into energy, and including all components, controls, wiring, and piping required as part of the device by the applicable standard
Boiler	An appliance intended to supply hot water or steam for space heating, processing or power purposes
Burner	a device or group of devices forming an integral unit for the introduction of fuel, with or without air or oxygen, into the combustion zone for ignition
Chimney	A primarily vertical shaft enclosing at least one vent for conducting flue gases to the outside atmosphere
Combustion air	the air required for satisfactory combustion of fuel, including excess air
Component	An essential part of an appliance that may be certified separately from the appliance
Damper	A movable plate or valve for regulating the flow of air or flue gas
Decommission	Take out of service, dismantle and make safe
Dump zone	Safety bypass that diverts the excess temperature and pressure in the heating system
Forced air furnace	a furnace equipped with a blower which provides the primary means for circulation of air (refer to furnace)

Fuel oil	Kerosene or any hydrocarbon oil as classified in CSA Standard B140.0, General Requirements for Oil Burning Equipment
Furnace	A space-heating appliance, using warm air as the heating medium, and usually having provision for the attachment of ducts
Heat exchanger	The firebox and any auxiliary heat transfer surfaces within the casing of an appliance
Ignition	Establishment of a flame
Incinerator	An appliance in which combustible wastes are ignited and burned
Indirect water heater	A water heater which derives its heat from a heating medium such as warm air, steam or hot water
Limit control	A safety control intended to prevent unsafe conditions of temperature, pressure or liquid level
Make-up air	Fresh air that is introduced to the furnace room to replace air that has been exhausted
Manual damper	An adjustable damper manually set and locked in the desired position
Piping	The fuel conduits of circular cross section that are of sufficient wall thickness and or suitable outside diameter for threading to Iron Pipe Size (IPS) Standards, and that are specified by nominal inside diameter (ID)
Plenum	A chamber for distributing warm air from a furnace to the supply ducts (supply plenum), or for receiving air to be heated by the furnace (return plenum)
Retrofit	To replace an obsolete or defective component for the purpose of updating the heating system

Safety control	An automatic control of a safety control system that is intended to automatically prevent unsafe operation of the controlled equipment, and may include relays, switches and other auxiliary equipment and interconnecting circuitry
Storage tank	A tank for the storage of fuel and from which the fuel-burning equipment is not intended to be fed automatically
Tubing	Fuel conduits of circular cross section that are not of sufficient wall thickness or of suitable outside diameter to permit threading to Iron Pipe Size (IPS) Standards, and are specified by outside diameter (OD)
Valve	a device by which the flow of a fluid may be started, stopped or regulated by a movable part which opens or obstructs passage
Vent	An enclosed passageway for conveying flue gases
Venting	The removal of flue gases or vent gases to the outside air by means of building openings or venting systems
Venting system	a system for the removal of flue gases or vent gases to the outside air by means of vent connectors, chimneys, gas vents or exhaust systems, natural or mechanical
Water heater	An appliance intended for the heating of water for plumbing services

ACRONYMS

ECM	Electronically Commutated Motors
TDG	Transportation of Dangerous Goods
WHMIS	Workplace Hazardous Materials Information System

APPENDIX B

ESSENTIAL SKILL	REQUIRED ESSENTIAL SKILLS TASKS FOR TRADES
Technical Reading	➢ Find and use information from one source - i.e., a book, Internet, and work order ➢ Find and use information from many parts of a single source - i.e., a code book ➢ Recognize what is important from several sources of information ➢ Interpret information using more than one source ➢ Apply information to the task
Document Use	➢ Use large or difficult documents which are organized into units, headings chapters or sub-headings -i.e., a code book ➢ Find information in large or very specialized documents which may have many smaller documents - i.e., operations manuals, safety manuals ➢ Find information from many sources - i.e., code books, blueprints, work manuals ➢ Enter information into pre-set documents and forms - i.e., accident report forms, order forms ➢ Combine information from several sources and use it – i.e., alter a work order using information from code books, manuals and blueprints ➢ Create new documents using information from a variety of sources – i.e., create work orders, material lists, time log sheets

ESSENTIAL SKILL	REQUIRED ESSENTIAL SKILLS TASKS FOR TRADES
Writing	➢ Write information into a pre-set form – i.e., contract, lease, building permit ➢ Write short messages, explanations, requests or directions – i.e., write a work order, memo, written message for a foreman, supervisor or client ➢ Write longer messages, explanations, requests or directions – i.e., write an accident report, a detailed message to a foreman, supervisor or client ➢ Write a longer article which may need to be organized into headings with a table of contents, i.e., work report, section of a work manual ➢ Write detailed, non-routine articles – i.e., make recommendations, use technical language to give directions to or ask for information from other tradespeople
Math	➢ Perform math calculations using formulas, fractions, decimals and percent ➢ Combine one or more math operations to solve a problem ➢ Estimate numbers ➢ Convert between imperial and metric measurement systems ➢ Solve equations ➢ Use trigonometry to solve problems (not a requirement in every trade)

ESSENTIAL SKILL	REQUIRED ESSENTIAL SKILLS TASKS FOR TRADES
Computer Use	➢ Perform basic computer operations needed to produce a document – i.e., a letter ➢ Find information on the Internet ➢ Find information in workplace databases ➢ Send and receive e-mail ➢ Enter data into a set format – i.e., form, spreadsheet, chart ➢ Manage electronic information – i.e., save files ➢ Choose and use the best software program for the task
Oral Communication	➢ Take directions from a supervisor or co-workers on work-related projects ➢ Give directions to co-workers on work-related projects ➢ Exchange information using trade terminology ➢ Provide details on facts ➢ Provide opinions on work-related projects ➢ Organize, present and interpret ideas in a logical manner ➢ Communicate one-on-one or in a group about complex work-related matters

ESSENTIAL SKILL	REQUIRED ESSENTIAL SKILLS TASKS FOR TRADES
Thinking Skills	➢ Identify problems ➢ Apply learning from previous experiences to identify possible solutions to a problem ➢ Find, evaluate and choose appropriate information to solve a problem ➢ Evaluate the best possible solution to a problem ➢ Make decisions ➢ Plan and organize job tasks to set time-lines ➢ Ensure quality control standards are met
Working with Others	➢ Complete tasks to industry standard under supervision ➢ Complete tasks to industry standard without supervision ➢ Complete assigned tasks to meet time-lines that meet project deadlines ➢ Accept feedback ➢ Give feedback ➢ Evaluate and apply recommendations from co-workers ➢ Resolve conflict ➢ Mentor an apprentice

ESSENTIAL SKILL	REQUIRED ESSENTIAL SKILLS TASKS FOR TRADES
Continuous Learning	➢ Identify work/career strengths and areas for improvement ➢ Develop a work/career learning plan ➢ Set goals ➢ Participate in learning opportunities to meet workplace goals ➢ Apply new learning in the workplace environment ➢ Revisit, reflect and revise the learning plan regularly ➢ Engage in learning opportunities to keep skills current and meet career goals