

Issued: March 26, 2018

Program: Sprinkler Fitter (Sprinkler System Installer)

To: ITA Training Providers
Articulation Chair
System Liaison Person
School Districts

Subject: **Sprinkler Fitter (Sprinkler System Installer)**

OPSN No.: **OPSN 2018 004**

Effective Date: **April 1, 2019**

Summary of Change: Please be advised that changes have occurred to the Sprinkler System Installer program as a result of the Pan-Canadian Harmonization Initiative and will be implemented effective April 1, 2019.

These changes are as follows:

- Trade name change from Sprinkler System Installer to Sprinkler Fitter
- Sprinkler Fitter Program Outline Update
- Increase of Work-Based Training Hours – 6,480 hours (from 5,680 hours)
- Reduction of technical training levels from a 4-level to a 3-level program

The Harmonized Sprinkler Fitter Program Outline has been posted on the Sprinkler Fitter webpage at www.itabc.ca. The Harmonized Sprinkler Fitter Program Profile will be posted at a later date and will be announced with a subsequent OPSN.

Rationale: At the request of industry, the Canadian Council of Directors of Apprenticeship's (CCDA) Harmonization Initiative was launched in Fall 2013, and endorsed by the Forum of Labour Market Ministers (FLMM) in 2014. The goal of Harmonization is to *substantively align* apprenticeship systems across Canada by making apprenticeship training requirements more consistent in Red Seal trades.

In consultation with stakeholders, the CCDA identified four Harmonization priorities: trade name, total training hours (in-school plus on-the-job), number of training levels, and the sequencing of the training content.

Sprinkler Fitter is one of five trades identified for the third phase of Harmonization. After a series of consultations and pan-Canadian webinars, the finalized priorities for the Harmonized Sprinkler Fitter program were as follows:

1. Use of the Red Seal **trade name** – Sprinkler Fitter
 - *BC – changed from Sprinkler System Installer.*
2. Consistent **total training hours** (in-school plus on-the-job) – 7,200 hours total
 - *BC - Technical training will remain the same at 720 hours (24 weeks) and Work-based Training is increased from 5,680 hours to 6,480 hours.*
3. Same number of **training levels** – 3-level program
 - *BC – changed from 4-levels of technical training to 3-levels. The 24 weeks of technical training in the Harmonized Sprinkler Fitter program are re-distributed as follows:*
 - *Level 1 – 8 weeks*
 - *Level 2 – 8 weeks*
 - *Level 3 – 8 weeks*
4. Consistent **sequencing** of training content
 - *BC – Significant changes required to align to the Harmonized sequencing.*

Details:

A Sprinkler Fitter program review was conducted in November 2017 to align BC's Sprinkler Fitter program to the Harmonized sequencing. The review resulted in significant changes to the current sequence of technical training.

ITA will identify transition strategies for apprentices in the current program and invite training providers to participate in webinars beginning in March 2018.

ITA is also working on a communication plan to inform apprentices and employer sponsors of the changes to the program.

Attachments: *Sprinkler Fitter Program Outline Review Details*

This attachment provides details of the revisions made to the Sprinkler Fitter Program Outline during the review process.

For more information contact:

ITA Program Standards
email: programstandards@itabc.ca

cc: All Staff

SPRINKLER FITTER COMPETENCY MIGRATION CHART

LINE	NEW COMPETENCY TITLES	New Level	Current Level	LINE	PREVIOUS COMPETENCY TITLES	Notes
LINE A	PERFORM SAFETY RELATED FUNCITONS	1	1	LINE A	USE SAFE WORK PRACTICES	
A1	Maintains Safe Work Environment	1	1	A1 A2 A3	Control Workplace Hazards Describe Occupational Health and Safety Regulations Describe WHMIS and Hazardous Materials Safety	✓ Aligned
A2	Use Personal Protective Equipment (PPE) and Safety Equipment	1	1	A4	Use Personal Protective Equipment	✓ Aligned
A3	Perform Lock-Out and Tag-Out Procedures	1	1	A1	Control Workplace Hazards	✓ Aligned
A4	Use Fire Extinguishers	1	1	A5	Practice Fire Prevention	✓ Aligned
LINE B	USE TOOLS AND EQUIPMENT	1	1 / 3	LINE B	USE TOOLS AND EQUIPMENT	
B1	Use Common Tools and Equipment	1	1 1 1 1/3	B1 B2 B3 B4	Use Hand Tools Use Portable Power Tools Use Stationary Power Tools Use Measuring and Levelling Tools	Gap CL1 → HL2: not critical
B2	Use Access Equipment	1	1	B6	Use Ladders, Scaffolds and Elevated Work Platforms	✓ Aligned
B3	Use Rigging, Hoisting, Lifting and Positioning Equipment	1	1	B7	Use Rigging and Hoisting Equipment	✓ Aligned
B4	Use Soldering and Brazing Equipment	1	1	B3	Use Cutting, Brazing and Soldering Equipment	✓ Aligned
LINE C	PERFORM ROUTINE TRADE ACTIVITIES	1-3	1-4	LINE C	ORGANIZE WORK	
C1	Use Mathematics and Science	1/2	1/2 2	C1,C2 E2	Use Mathematics and Science Use Trade Related Electrical Principles	Gap CL1 → HL2
C2	Interpret Drawings and Specifications	1-3	1-3	C3	Read Drawings and Specifications	✓ Aligned
C3	Use Codes, Regulations and Standards	1-3	1	C4	Use Codes, Regulations and Standards	✓ Level 1 Aligned, Level 2 expanded content, Level 3 expanded content
C4	Use Manufacturer and Supplier Documentation	1 / 2	1	C5	Use Manufacturer and Supplier Documentation	✓ Level 1 Aligned Level 2 (currently in context)
C5	Perform Piping System Layout	1-3	4	E7	Install Residential and Dwelling Sprinklers	Gap CL3 → HL4
LINE D	INSTALL PIPING AND COMPONENTS	1/2	1-4	LINE D	PREPARE AND ASSEMBLE SPRINKLER COMPONENTS	
D1	Prepare Pipe and Tubing	1	1/3	D1	Install Pipe and Fittings	Gap CL2→HL3
D2	Join Tube, Tubing and Pipe	1	1/3	D1	Install Pipe and Fittings	Gap CL2→HL3: not critical
D3	Install Pipe and Tubing	1/2	1/3 1	D1 D3	Install Pipe and Fittings Penetrate Structures	✓ Aligned



SPRINKLER FITTER COMPETENCY MIGRATION CHART

Implementation Support

D4	Install Valves	1/2	1/3	D2	Install Valves	Gap CL2→HL3: not critical
D5	Install Fittings	1	1/3	D1	Install Pipe and Fittings	Gap CL2→HL3: not critical
D6	Install Piping Components	1/2	2 2	D4 D5	Install Sprinkler Heads Install and Maintain Sprinkler Components and Ancillary Equipment	Gap CL1→HL2 Level 2 ✓ Aligned
LINE E	INSTALL WATER-BASED SYSTEMS	1-3	2	LINE E	INSTALL SPRINKLER SYSTEMS	
E1	Install Wet Pipe Systems	1/2	2	E4	Install Water Based Sprinkler Systems	Gap CL1→HL2: not critical
E2	Install Dry Pipe Systems	1/2	2	E4	Install Water Based Sprinkler Systems	Gap CL1→HL2: not critical
E3	Install Antifreeze Systems	1/2	2	E4	Install Water Based Sprinkler Systems	Gap CL1→HL2: not critical
E4	Install Preaction/Deluge Systems	1/2	2	E4	Install Water Based Sprinkler Systems	Gap CL1→HL2: not critical
E5	Install Standpipe Systems	2	4	E6	Install Standpipe Systems	Gap, CL3 will need to take HL2 or CL4
E6	Install Foam Systems	3	3	E5	Install Foam Systems	✓ Aligned
E7	Install Water Mist and Hybrid Systems	3	3	E5	Install Special Application Sprinkler Systems	✓ Aligned
LINE F	USE COMMUNICATION TECHNIQUES	1 / 3				
F1	Use Communication Techniques	1				New
F2	Use Mentoring Techniques	3				New
LINE G	INSTALL WATER SUPPLY	2 / 3	2/3/4	LINE F LINE E	INSTALL WATER SUPPLY FOR SPRINKLER SYSTEMS INSTALL SPRINKLER SYSTEMS	
G1	Install Underground Water Supply	2	3	F1	Install Underground Piping	Gap CL2→HL3
G2	Install Fire Department Connections	2	3	F2	Test Fire Protection Water Supply Systems	Gap CL2→HL3
G3	Install Fire Pump Units	3	4	F3	Install Fire, Booster and Ancillary Pumps	Gap, CL3 will need to take HL3 or CL4
G4	Install Private Water Supply Systems	3	3	F2	Test Fire Protection Water Supply Systems	✓ Aligned
G5	Install and Test Cross Connection Control Components	2	3	F2	Test Fire Protection Water Supply Systems	Gap CL2→HL3
LINE H	INSTALL FIRE SUPPRESSION SYSTEMS AND DEVICES	2 / 3	2 / 3 / 4	LINE E	INSTALL SPRINKLER SYSTEMS	
H1	Install Detection Systems and Devices	2/3	2	E3	Install Detection Devices and Systems	Level 2 ✓ Aligned Overlap CL2→HL3
H2	Install Alarm-Initiating Devices	2	2	E3	Install Detection Devices and Systems	✓ Aligned
H3	Install Dry and Wet Chemical , Clean Agent and Carbon Dioxide Systems	3	3	E5	Install Special Application Sprinkler Systems	✓ Aligned
H4	Install Portable Extinguishers	3	3	E5	Install Special Application Sprinkler Systems	✓ Aligned
H5	Install Spark Detection Systems	3	2	E3	Install Detection Devices and Systems	Overlap CL2→HL3



SPRINKLER FITTER COMPETENCY MIGRATION CHART

Implementation Support

LINE I	COMMISSION AND MAINTAIN SYSTEMS	2 / 3	4 4	C7 D5	Use Trade Related Codes Install and Maintain Sprinkler Components and Ancillary Devices	
			2/3 3	LINE E LINE F	INSTALL SPRINKLER SYSTEMS INSTALL WATER SUPPLY FOR SPRINKLER SYSTEMS	
I1	Commission Systems	2/3	4 2 3	C7 E3 F1	Use Trade Related Codes Install Detection Devices and Systems Install Underground Piping	✓ Aligned: any discrepancies will be caught in context
I2	Inspect and Test Fire Protection Systems	3	4 3 3	C7 E5 F2	Use Trade Related Codes Install Special Application Sprinkler Systems Test Fire Protection Water Supply Systems	Gap, CL3 will need to take HL3 or CL4
I3	Maintain and Repair Fire Protection Systems	3	4 2/4 3 3	C7 D5 E5 F2	Use Trade Related Codes Install and Maintain Sprinkler Components and Ancillary Equipment Install Special Application Sprinkler Systems Test Fire Protection Water Supply Systems	Gap, CL3 will need to take HL3 or CL4

SPRINKLER FITTER HARMONIZED ACHIEVEMENT CRITERIA BY LEVEL (<i>PRACTICALS</i>)								
LEVEL 1			LEVEL 2			LEVEL 3		
Line #	Practical Overview	PO page #	Line #	Practical Overview	PO page #	Line #	Practical Overview	PO page #
A1	WHMIS – <i>workplace assessment</i>	19	C2	Plan a material take-off	62	C2	Prepare a bid for a sprinkler system arrangement	98
B1	Establish 5 sights; Determine groove compatibility	27	E1	Trim an alarm check valve	75			
B3	Tie knots	30	E2	Trim a dry pipe valve	78	C5	Layout multiple and single family dwelling sprinkler systems; Layout a piping system	101
B4	Braze and solder	32	G5	Install and test cross connection components required for certification	90			
C2	Create an isometric drawing	39						
D3	Prepare, join and install pipe	49	H2	Install an alarm-initiating device; Install a supervisory-initiating device	94			

SPRINKLER FITTER CURRENT ACHIEVEMENT CRITERIA BY LEVEL (<i>PRACTICALS</i>)			
LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
B4 – pressure gauges and manometers	C6 – Materials take-off list	B4 – establish 10 sights	C6 – plan an installation from drawings and specs including material and project costs
B5 – braze and solder; cut carbon steel	D5 – electrical testing equipment	C3 – establish materials from a given set of plans	
B7 – tie knots	E4 – install and commission water based systems	D2 – install a supervisory switch	D5 – Inspection documentation; troubleshoot and adjust equipment
C3 – isometric drawing		F2 – install, test and repair a cross connection control assembly	E7 – Plan an installation of a residential system from drawings and specs
D1 – Install pipe			
D2 – Install valves			