

**CROP DRYER INSTALLTION PRE-INSPECTION CHECKLIST**

August, 2020

**PURPOSE:**

This checklist has been prepared to assist owners, gas fitters and contractors to prepare for a scheduled inspection by an Inspection and Technical Services (ITS) gas inspector.

All items must be completed prior to receiving an inspection date.

Failure to comply may require a re-inspection date (which may incur up to a 2 week delay), including additional re-inspection fees.

Completion of this checklist will help ensure that all clients receive a timely inspection during the demanding harvest season, and reduces the need for re-inspections.

Please Note: This document does not contain an exhaustive list of all requirements.

It remains the responsibility of the gas permit holder to ensure compliance with all requirements of the Act, regulations, manufacturer’s certified instructions and applicable adopted codes in their entirety for a successful installation and inspection.

COMMON NON-COMPLIANCE	APPLICABLE REFERENCES	Completed
Tanks set permit applications submitted	C.C.S.M. c. G30 The Gas and Oil Burner Act Article 2(1)	
Appliance gas permit applications submitted	Gas and Oil Burner Regulation M.R. 146/2019.Article 24	
Appliance electrical permit applications submitted	C.C.S.M. c. E50 The Electricians' Licence Act Article 4(1)	
U-1A forms readily available for propane tanks	ASME Boiler and Pressure Vessel Code Rules, Section VIII	
Propane tanks and piping protected from physical damages	CSA B149.1:15: 4.23, CSA B149.2:15: 4.19, 5.3	
Gas piping buried at a safe depth and located away from hazardous areas such as under a grain dryer. Additional depth of cover shall be required where the piping is located in areas where physical damage is likely to occur, such as farm	CSA B149.1:15: 6.15	

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operations		
Propane tanks properly supported	CSA B149.2:15: 7.11	
Propane tanks in a flood plain secured	CSA B149.2:15: 7.11.1	
Propane tank(s) relief valves set to discharge at 250 psi and properly installed or covered to prevent foreign matter from entering relief device	CSA B149.2:15: 7.1.1, 7.2	
Excess flow valve(s) are the correct size.	CSA B149.2:15: Annex J of CSA B149.2	
Liquid piping is schedule 80	CSA B149.1:15: 6.2.3	
All piping painted	CSA B149.1:15: 6.16	
All gas lines that enter or exit ground areas protected from damages	CSA B149.1:15: 6.16.2; 6.16.3; 6.16.14	
Piping at ground penetrations protected from galvanic action at protection sleeves	CSA B149.1:15: 6.8.9,	
Propane tank(s) and appliance manual isolation valve(s) approved and rated for the pressure in relation to the set to discharge pressure of the hydrostatic relief valve(s)	CSA B149.1:15: 4.2.1, 6.18.1 CSA B149.2:15: 4.2.1	
The correct flare fittings used	CSA B149.1:15: 6.9	
Hydrostatics relief devices installed at all locations propane may be isolated	CSA B149.2:15: 5.6.1	
Set to discharge pressure(s) of all hydrostatic relief devices correct for the application they are used	CSA B149.1:15: 4.2.1,	
All-underground piping protected from damage i.e. Cathodic protection, level base, backfill free from sharp objects and foreign material)	CSA B149.1:15: 6.15	
A shut-off valve situated above ground at each end shall control gas supply to	CSA B149.1:15: 6.15.13	

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underground plastic piping or tubing.		
Crop dryer holds proper certification for use in Canada	C.C.S.M. c. G30 The Gas and Oil Burner Act Article 2(1)	
Isolation valve(s) certified with correct gas and pressure	CSA B149.1:15: 4.2.1	
All regulators installed in the correct orientation and vented to a safe location	CSA B149.1:15: 5.4	
All crop dryer guards in place	CSA B149.1-15 and CSA B149.2-15: 4.1.3, (4.5.2)	
All walkways complete	CSA B149.1:15: 4.14	
All pipe pressure tests complete	CSA B149.1:15: 6.22	
Crop dryer installed on a concrete pad	CSA 149.1-15: 4.1.3	
Crop dryer location 50 feet from inhabited building	CSA 3.8-14: 4.9.4	
Crop dryer protected from physical damages	CSA B149.1:15: 4.23	
Is two-stage regulation used for vapor propane systems?	CSA B149.1:15: 5.2.2.2	
Crop dryer has a regulator	CSA 3.8-14: 4.11	
Crop dryer installation code complaint	CSA B149.1:15: 4.1.3	
Piping and tubing shall be mounted and braced to provide for vibration, contraction or jarring.	CSA B149.1-15: 6.16.3	
A defective section of piping or tubing shall be replaced	CSA B149.1-15: 6.14.1	
Piping shall not be field bent	CSA B149.1-15: 6.14.5	
Joint sealant shall conform to Can/ULC642 and shall be applied to male threads of the pipe	CSA B149.1-15: 6.9.6	
Piping ends shall be free of cuttings and burrs	CSA B149.1-15: 6.8.1	

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Piping shall be reamed	CSA B149.1-15: 6.8.2	
Bushings shall not be nested	CSA B149.1-15: 6.9.10	
Provide effective swing joints at manifolds to accommodate for expansion and contraction and ground level and at appliance level	CSA B149.1-15: 6.16.3	
Metallic gas hose used only in commercial or industrial environments where vibrations, expansions or contractions are present.	CSA B149.1-15: 6.20.5	
A fitting used with steel shall be malleable iron or steel	CSA B149.1-15: 6.2.2	
Hydrostatic relief devices shall be used where liquid propane can be trapped and vented to a safe location	CSA B149.2-15: 5.6.1	
When piping or tubing is run in a sleeve the sleeve shall be of a type of material that will avoid galvanic reaction and protect the tubing	CSA B149.1-15: 6.16.3, 6.16.9	
Plastic pipe shall not be used in a liquid piping system	CSA B149.1-15: 6.2.15	
Close nipples, street elbow or street T shall not be used	CSA B149.1-15: 6.14.7	
Flare nuts forged from UNS C37700 brass and not externally machined.	CSA B149.1-15: 6.2.5	
Copper shall be of the type K, G or L for gas systems	CSA B149.1-15: 6.2.4	
Close nipples, street elbow or street T shall not be used in piping system	CSA B149.1-15: 6.4.17	
<b>VENTING</b>		
Hydrostatic relief devices must be vented to a "safe location"	CSA B149.1-15: 5.4.1	

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<p>Hydrostats may be vented into a common header provided the cross sectional area is equal to the cross sectional area of the multiple vents E.g. 2 ½ inch could vent into a 1 inch line</p>	<p>CSA B149.1-15: 5.4.2</p>	
<p>The outdoor vent termination of regulators and line relief devices shall be equipped with a means to prevent the entry of water, insects, or foreign material.</p>	<p>CSA B149.1-15: 5.5.6</p>	
<p>Vents shall terminate 10 feet from mechanical air intake, source of ignition and appliance vents. This shall also include recirculation vents of crop dryers</p>	<p>CSA B149.1-15: 5.5.9</p>	
<p>Vents shall not be capped off or made in-operable</p>	<p>CSA B149.1-15: 5.5.8</p>	
<p><b>EMERGENCY MANUAL SHUT-OFF VALVE</b></p>		
<p>The gas piping installer must install a manual emergency shutoff valve in an appropriate location that allows access to this valve to shut off the fuel to the dryer in case of a fire or explosion at the dryer. This installation must conform to the following:</p>		
<p>A readily accessible manual shutoff valve must be installed as per below. Either one is acceptable.</p> <ul style="list-style-type: none"> <li>➤ In the drop or rise, as close as possible to the valve train of a commercial or industrial valve train.</li> <li>➤ In the horizontal piping of the drop or riser and the appliance valve train within 2 feet of the appliance.</li> </ul>	<p>CSA B149.1-15: 6.18.2</p>	