Compliance Cheat Sheet: OHS Noise Exposure & Protection Requirements Across Canada

Noise Control Requirements, 101

OHS laws require you to protect workers from hazardous noise levels. The way it works: A competent person using ANSI- or CSA-approved instruments and techniques must measure noise levels and determine if they're above the permissible exposure limit (PEL) for your particular jurisdiction. If so, you must implement reasonably practicable engineering controls, e.g., mufflers and insulation, to reduce the noise below the PEL. Only when it's not reasonably practicable to engineer the problem away are you allowed to rely on PPE and hearing protection devices that meet CSA Z94.2-02 standards to protect workers. In many jurisdictions, you must also provide exposed workers audiometric tests to ensure they're not suffering hearing loss.

The 7 Things You Must Know to Comply

To carry out these measures, there's certain technical information in your jurisdiction's OHS regulations that you need to know, including:

1. What is the PEL, typically expressed as dBA Lex, a weighted decibel measure over an 8-hour period’
2. What is the “action” or “investigation” level, i.e., the sound level that triggers the requirement to perform a noise assessment’
3. What’s the “exchange rate,” i.e., the amount by which you can increase the sound level as long as you cut the exposure time in half’
4. What, if anything, is the noise “impact or impulse” exposure limit’
5. What’s the ceiling rate or maximum sound level to which workers may be exposed’
6. When, if at all, must you ensure exposed workers get a baseline audiometric test and how often must it be repeated’
7. If audiometric testing is required, what’s the “standard threshold shift” (STS) level, i.e., the metric indicating that a worker exposed to hazardous sound has experienced or is developing hearing loss’

Of course, the answer to each of these questions varies depending on which jurisdiction you’re in. To spare you the trouble of looking it up yourself, we’ve summarized the key requirements of all the provinces and federal jurisdiction.

Noise Control Requirements by Jurisdiction
(abbrev.: NS = Not Specified)

FEDERAL	
Permissible Exposure Limit (PEL) (over 8 hours)	87 dBA Lex8 + Sked. 1
Action or Investig. Level	84 dBA for duration likely to endanger hearing
Exchange Rate	3 dB
Impulse/Impact	NS
Noise meas. threshold	74 dBA or “off”
Ceiling	120 dBA

Noise exposure monitoring*	Assess. meeting CSA Z107.56-13, A-weighted
Audiometry bckgd. Noise levels	NS
Audiometry baseline deadline	NS
Audiometry frequency after baseline	NS
Audiometers	NS
STS criteria	NS
ALBERTA	
Permissible Exposure Limit (PEL) (over 8 hours)	85 dBA Lex8 + Sked. 3, Table 1
Action or Investig. Level	85 dBA Lex8 + Sked. 3, Table 1
Exchange Rate	3 dB
Impulse/Impact	NS
Noise meas. threshold	80 dBA or “off”
Ceiling	115 dBA
Noise exposure monitoring*	Assess. meeting CSA Z107.56-06 using Type 2 instruments + sound meters meeting ANSI
Audiometry bckgd. Noise levels	• **Hz** • 500 • 1000 • 2000 • 4000 • 8000 • **Max dB** • 22 • 30 • 35 • 42 • 45

Audiometry baseline deadline	Within 6 months
Audiometry frequency after baseline	Within 12 months of baseline + every other year thereafter
Audiometers	Keep logbook showing written calibrations
STS criteria	**“abnormal audiogram”** if (a) the threshold in either ear > 25 dB at 500, 1000 or 2000 Hz, (b) the threshold in either ear > 60 dB at 3000, 4000 or 6000 Hz, ‘ one-sided hearing loss with difference between better + poorer ear > average of 30 dB at 3000, 4000 and 6000 Hz; **“abnormal shift”** = 15 dB shift in either ear at 2 consecutive test frequencies from 1000 Hz up to + including 6000 Hz
BRITISH COLUMBIA	
Permissible Exposure Limit (PEL) (over 8 hours)	85 dBA Lex8
Action or Investig. Level	82 dBA Lex8
Exchange Rate	3 dB
Impulse/Impact	NS
Noise meas. threshold	80 dBA or “off”
Ceiling	140 dBC

Noise exposure monitoring*	Assess. meeting CSA Z107.56-94 using sound meters meeting ANSI req’d for exposure > 82 dBA Lex8
Audiometry bckgd. Noise levels	NS
Audiometry baseline deadline	Within 6 months
Audiometry frequency after baseline	Within 12 months of baseline + every year thereafter
Audiometers	Must meet ANSI S3.6 for at least Type 4
STS criteria	NS
MANITOBA	
Permissible Exposure Limit (PEL) (over 8 hours)	85 dBA Lex
Action or Investig. Level	80 dBA Lex
Exchange Rate	3 dB
Impulse/Impact	NS
Noise meas. threshold	80 dBA Lex
Ceiling	NS
Noise exposure monitoring*	Assess. meeting CSA Z107.56-06 req’d for exposure > 80 dBA

Audiometry bckgd. Noise levels	• **kHz** • .5 • 1 • 2 • 4 • 8 • **dB** • ó30 • ó30 • ó35 • ó42 • ó45
Audiometry baseline deadline	Within 6 months of initial exposure >85 dBA
Audiometry frequency after baseline	Every 2 years thereafter
Audiometers	Must meet CSA Z107.4-M86

STS criteria	**“abnormal audiogram”** if (a) the threshold in either ear > 25 dB at 500, 1000 or 2000 Hz, (b) the threshold in either ear > 60 dB at 3000, 4000 or 6000 Hz, (c) one-sided hearing loss with difference between better + poorer ear > average of 30 dB at 3000, 4000 and 6000 Hz; **“abnormal shift”** = 15 dB shift in either ear at 2 consecutive test frequencies at 1000 Hz up to + including 6000 Hz
NEW BRUNSWICK	
Permissible Exposure Limit (PEL) (over 8 hours)	85 dBA Lex
Action or Investig. Level	80 dBA Lex
Exchange Rate	3 dB
Impulse/Impact	NS
Noise meas. threshold	80 dBA
Ceiling	140 dBC
Noise exposure monitoring*	Assess. using Type 2 A-weighted sound meter meeting ANSI standards req’d. if exposure is or may be >80 dBA
Audiometry bckgd. Noise levels	NS
Audiometry baseline deadline	NS

Audiometry frequency after baseline	NS
Audiometers	NS
STS criteria	NS
NEWFOUNDLAND	
Permissible Exposure Limit (PEL) (over 8 hours)	85 dBA Lex
Action or Investig. Level	NS
Exchange Rate	3 dB
Impulse/Impact	NS
Noise meas. threshold	80 dBA
Ceiling	140 dBC SPL
Noise exposure monitoring*	NS
Audiometry bckgd. Noise levels	NS
Audiometry baseline deadline	NS
Audiometry frequency after baseline	NS
Audiometers	NS
STS criteria	NS
NOVA SCOTIA	
Permissible Exposure Limit (PEL) (over 8 hours)	85 dBA Lex
Action or Investig. Level	NS
Exchange Rate	3 dB
Impulse/Impact	140 dBC peak + 100 impacts per day
Noise meas. threshold	NS
Ceiling	140 dBC
Noise exposure monitoring*	NS
Audiometry bckgd. Noise levels	NS

Audiometry baseline deadline	NS
Audiometry frequency after baseline	NS
Audiometers	NS
STS criteria	NS
ONTARIO	
Permissible Exposure Limit (PEL) (over 8 hours)	85 dBA Lex
Action or Investig. Level	NS
Exchange Rate	3 dB
Impulse/Impact	NS
Noise meas. threshold	NS
Ceiling	140 dBC
Noise exposure monitoring*	NS
Audiometry bckgd. Noise levels	NS
Audiometry baseline deadline	NS
Audiometry frequency after baseline	NS
Audiometers	NS
STS criteria	NS
PRINCE EDWARD ISLAND	
Permissible Exposure Limit (PEL) (over 8 hours)	85 dBA Lex
Action or Investig. Level	If >PEL
Exchange Rate	3 dB
Impulse/Impact	NS
Noise meas. threshold	NS
Ceiling	115 dBA

Noise exposure monitoring*	Assess. meeting CSA Z107.56-06 using sound meters meeting ANSI req’d if expos. >PEL
Audiometry bckgd. Noise levels	NS
Audiometry baseline deadline	Within 6 months of hire
Audiometry frequency after baseline	Every year after that
Audiometers	NS
STS criteria	NS
QU□BEC	
Permissible Exposure Limit (PEL) (over 8 hours)	90 dB
Action or Investig. Level	NS
Exchange Rate	5 dB
Impulse/Impact	Impacts per 8 hrs. in dB peak 120 = 10,000; 130 = 1,000; 140 = 100
Noise meas. threshold	85 dBA
Ceiling	115 dBA or 140 dBC peak SPL
Noise exposure monitoring*	Assess. meeting CSA Z107.1-1973 using Type 2 instruments + sound meters meeting ANSI req’d. at sites with 50 or more employees
Audiometry bckgd. Noise levels	NS
Audiometry baseline deadline	NS

Audiometry frequency after baseline	NS
Audiometers	NS
STS criteria	NS
SASKATCHEWAN	
Permissible Exposure Limit (PEL) (over 8 hours)	85 Lex or regular exposure >90 dB
Action or Investig. Level	80 dBA
Exchange Rate	3 dB
Impulse/Impact	NS
Noise meas. threshold	80 dBA
Ceiling	NS
Noise exposure monitoring*	Assess. req'd for exposure > 80 dBA
Audiometry bckgd. Noise levels	• **kHz** • .5 • 1 • 2 • 4 • 8 • **dB** • ó30 • ó30 • ó35 • ó42 • ó45
Audiometry baseline deadline	NS
Audiometry frequency after baseline	Every 24 months
Audiometers	Must meet CSA Z107.4-M86 or ANSI 3.6
STS criteria	NS

* Where required, noise measurements and assessments must be performed by a

competent person