



Alberta Elevating Devices  
& Amusement Rides  
Safety Association

## Major and Minor Alterations Guidelines

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### **General Details**

This information document is issued to all SCOs as a **Guide** as to what constitutes major alteration.

### **Definitions:**

***ED, PR and AR Permit Regulation AR 28/2012***

**Major Alteration** means an alteration that, in the opinion of a safety codes officer, significantly changes the structural or operational characteristics of the original design, layout drawings, data or any other information submitted in support of an application for a permit for the elevating device, passenger ropeway or fixed amusement ride;

***Elevating Devices Codes Regulation AR 192/2015***

8.10.1.1.2 A person who installs or makes a **major alteration** to equipment must perform all of the applicable tests specified by Requirements 8.10.2 to 8.10.5 in the presence of an inspector specified in Requirement 8.10.1.1.1.

8.10.1.1.2.1 A person who alters equipment must perform all of the applicable tests specified by Requirements 8.10.2 to 8.10.5.

***ASME A17.1-2013/CSA B44-13***

Alteration: any change to equipment, including its parts, components, and/or subsystems, other than maintenance, repair, or replacement.

Replacement: the substitution of a device or component and/or subsystems, in its entirety, with a unit that is basically the same as the original for the purpose of ensuring performance in accordance with applicable Code requirements (see CSA B44-07 8.6.12.5 where replacement of specific components constitutes an alteration)

### **Specific Details**

#### **Major Alterations: Table A**

A Major Alteration submission/application must include the seal of an Alberta professional engineer approving the design drawings and specifications for a major alteration to an existing elevating device, and the professional engineer must verify the accuracy of the contents of the technical information package.

#### **Minor Alterations: Table B**

Minor Alteration means an alteration to an elevating device that is not a "major alteration". Therefore all alterations that do not fall under the list of major alterations will be considered a minor alteration. Table B lists the minor alterations that will require inspection.

**Multiple Minor Alterations (single device):** More than one minor alteration undertaken on a single device may constitute a MAJOR alteration. A complete scope of work should be submitted and reviewed by two level 2 SCOs to determine if the project is now considered as MAJOR.

#### **Type of inspections required:**

**Acceptance Inspection (A)** is required for all Major Alterations

**Special Inspection (SI)** is required for Minor Alterations listed. This inspection may be of a narrow scope limited to only the specific item altered. These items may not require Alberta Professional Engineer endorsement.

**ELECTRIC ELEVATORS Table A**

#	MAJOR ALTERATIONS DETAILS	Inspection Type	Code Reference
1	Hoistway enclosure walls (Structural)	S.I.	8.7.2.1.1
2	Location of the C.W.	A	8.7.2.3
3	Vertical clearances	A	8.7.2.4
4	Horizontal clearances	A	8.7.2.5
5	Protection of space below hoistway	A	8.7.2.6
6	Machine beams & foundation	A	8.7.2.9
7	Hoistway entrances & openings	A	8.7.2.10
8	Hoistway door locking devices & access	A	8.7.2.11
9	Car enclosure, car doors & gates	S.I.	8.7.2.14
10	Car frame & platform	A	8.7.2.15
11	Capacity, loading, classification	A	8.7.2.16
12	Change in rise & rated speed	A	8.7.2.17
13	Car & CW safeties	A	8.7.2.18
14	Speed governors & governor ropes	A	8.7.2.19
15	Ascending car & unintended movement	A	8.7.2.20
16	Suspension ropes & their connections	A	8.7.2.21
17	Counterweights	S.I.	8.7.2.22
18	Buffers & bumpers	A	8.7.2.23
19	Guide rails, supports & fastenings	A	8.7.2.24
20	Driving machines & sheaves	A	8.7.2.25
21	Operating devices & control equipment	A	8.7.2.27
22	FEO devices	A	8.7.2.28

**HYDRAULIC ELEVATOR Table A**

#	MAJOR ALTERATIONS DETAILS	Type of Inspection Required	Code Reference
23	Hoistway enclosure walls (Structural)	S.I.	8.7.3.1.1
24	Location of the C.W.	A	8.7.3.3
25	Vertical clearances	A	8.7.3.4
26	Horizontal clearances	A	8.7.3.5
27	Protection of space below hoistway	A	8.7.3.6
28	Machine beams & foundation	A	8.7.3.9
39	Hoistway entrances & openings	A	8.7.3.10
30	Hoistway door locking devices & access switches	A	8.7.3.11
31	Car enclosure, car doors & gates	S.I.	8.7.3.14
32	Safeties (car/CW gripper)	A	8.7.3.15
33	Speed governors & governor ropes	A	8.7.3.16
34	Change in type of service	A	8.7.3.17
35	Change in class of loading	A	8.7.3.18
36	Carrying of passenger	A	8.7.3.19
37	Increase in rated load	A	8.7.3.20
38	Increase in deadweight of the car	A	8.7.3.21
39	Change in rise or rated speed	A	8.7.3.22
40	Plunger Gripper	A	8.7.3.23.7
41	Suspension ropes & their connections	A	8.7.3.25
42	Counterweight alteration	A	8.7.3.26
43	Buffers & bumpers	A	8.7.3.27
44	Guide rails, supports & fastenings	A	8.7.3.28
45	Tanks	A	8.7.3.29
46	Operating devices & control equipment	A	8.7.3.31

**ESCALATORS AND MOVING WALKS Table A**

<b>#</b>	<b>MAJOR ALTERATIONS DETAILS</b>	<b>Type of Inspection Required</b>	<b>Code Reference</b>
47	Relocation of Escalators	A	8.7.6.1.2
48	Relocation of Moving walks	A	8.7.6.2.2
49	Construction Requirements for Escalators	A	8.7.6.1.5
50	Construction Requirements for Moving Walks	A	8.7.6.2.5
51	Handrails of an Escalator	A	8.7.6.1.6
52	Handrails of a Moving Walk	A	8.7.6.2.6
53	Escalators Step System	A	8.7.6.1.7
54	Moving Walk Treadway System	A	8.7.6.2.7
55	Escalators Combplate	A	8.7.6.1.8
56	Moving Walk Combplate	A	8.7.6.2.8
57	Escalators Trusses and Girders	A	8.7.6.1.9
58	Moving Walk Trusses and Girders	A	8.7.6.2.9
59	Escalators Step Wheel Tracks	A	8.7.6.1.10
60	Moving Walk Tracks	A	8.7.6.2.10
61	Escalators Rated Load and Speed	A	8.7.6.1.11
62	Moving Walk Rated Load and Speed	A	8.7.6.2.11
63	Escalators Driving Machine, Motor, and Brake	A	8.7.6.1.12
64	Moving Walk Driving Machine, Motor, and Brake	A	8.7.6.2.12
65	Escalators Operating and Safety Devices	A	8.7.6.1.13
66	Moving Walk Operating and Safety Devices	A	8.7.6.2.13
67	Escalators Lighting, Access, and Electrical Work	A	8.7.6.1.14
68	Moving Walks Lighting, Access, and Electrical Work	A	8.7.6.2.14
69	Escalators Controller	A	8.7.6.1.16
71	Moving Walks Controller	A	8.7.6.2.15

**ELECTRIC AND HYDRAULIC ELEVATOR / ESCALATORS AND MOVING WALKS****Table B**

<b>#</b>	<b>MINOR ALTERATIONS DETAILS</b>	<b>Type of Inspection Required</b>	<b>Code Reference</b>
<b>1</b>	<b>Machine room &amp; machine space alteration</b>	<b>S.I.</b>	<b>8.7.2.7</b>
<b>2</b>	<b>Electrical equipment, wiring, pipes in Hwy &amp; M/R</b>	<b>S.I.</b>	<b>8.7.2.8</b>
<b>3</b>	<b>Alteration of Valves</b>	<b>Hydraulic Elevator Tests Declaration</b>	<b>8.7.3.24</b>
<b>4</b>	<b>Restricted Access on Car Calls</b>	<b>Restricted Access and FEO Phase II Operation Tests Declaration</b>	
<b>5</b>	<b>Protection of floor opening of an Escalator</b>	<b>S.I.</b>	<b>8.7.6.1.3</b>
<b>6</b>	<b>Protection of floor opening of a Moving Walks</b>	<b>S.I.</b>	<b>8.7.6.2.3</b>
<b>7</b>	<b>Protection of Trusses and Machinery Spaces Against Fire on Escalators</b>	<b>S.I.</b>	<b>8.7.6.1.4</b>
<b>8</b>	<b>Protection of Trusses and Machinery Spaces Against Fire on Moving Walks</b>	<b>S.I.</b>	<b>8.7.6.2.4</b>
<b>9</b>	<b>Entrance and Egress on Escalators</b>	<b>S.I.</b>	<b>8.7.6.1.15</b>
<b>10</b>	<b>Driving Machine and Sheaves (Guarding of Equipment)</b>	<b>S.I.</b>	<b>8.7.2.25.1(a)</b>
<b>11</b>	<b>Internal Cab Modernization</b>	<b>S.I.</b>	<b>STANDATA ED-2009-004</b>
<b>12</b>	<b>Hydraulic cylinder</b>	<b>S.I.</b>	<b>8.7.3.23</b>
<b>13</b>	<b>Hydraulic plungers</b>	<b>S.I.</b>	<b>8.7.3.23.2</b>