SUPPLEMENT TO

STATE OF COLORADO

DEPARTMENT OF REGULATORY AGENCIES
COLORADO PASSENGER TRAMWAY SAFETY BOARD
2012 RULES AND REGULATIONS

Effective Date: August 23, 2012

In the CPTSB Policy Statements, replace the policy statement with the following policy:

9. Clarification of modifications list.

CLARIFICATION OF MAJOR MODIFICATIONS

A major modification is defined as a significant change to the tramway's certified design or certified construction and materially affects the tramway's integrity, operation or control (see rule 21.1.2). The following list is intended to provide guidance in determining those changes to the tramway that are properly classified as major modifications, however, this list is not all inclusive and it must be recognized that the circumstances pertaining to a particular modification may justify reclassification to another category. Therefore, it is the responsibility of the area operator to exercise sound judgment and to consult the Board if further clarification is needed.

All Major Modifications require an acceptance test (see rule 21.3.7) and shall be completed prior to public operation of the passenger tramway. A CPTSB Inspector shall be present during each acceptance test (see rule 22.5.1). All Major Modifications are required to meet the current CPTSB and ANSI Standards.

a) A change in the design speed of the system.

1. Any increase beyond certified design.

Note: A decrease is not a major modification.

b) A change in design capacity by changing the number of carriers, spacing of carriers, or load capacity of carriers.

1. Carriers may be added or removed to accommodate normal rope stretch or relocation in rope splice area.

Note: If this is done within the certified design parameters, it is not a modification.

2. Increasing load capacity is interpreted to mean changing the number of passengers (i.e. double chair to triple chair).

Note: A change in carrier spacing which results from normal operation (i.e. grip slippage) is not a modification.

c) A change in the path of the rope.

1. Adding or removing midway load/unload terminal.

2. Moving a tower.

3. Change in tower height or number of towers.

4. Change in line gauge.

5. Moving a terminal is at a minimum a major modification and may be considered a relocation of the lift upon Board review.

d) A change in the type of brakes and/or backstops or components thereof.

1. A change to the application mechanism, defined as the energy used to set brake (i.e. weights to springs, springs to hydraulics, or different types of weights, springs or hydraulics, etc.).

Note: If the specifications of the component are equivalent, then it is treated as a one for one replacement and not a major modification.

e) A change in structural arrangements.

1. A change to the cross arm (i.e. removing angle brace and making it self supporting).

2. Tower.

3. Terminal support.

f) A change in power transmission equipment or type of prime mover or auxiliary engine.

1. An increase or decrease in the horsepower of an electric motor or internal combustion engine.

2. Changing an AC to DC or vice versa, etc.

3. Changing an internal combustion engine to electric or vice versa.

4. A change to the arrangement of the following power transmission equipment - gearbox, fluid coupling, torque converter, V-Belt drive, pulleys, U-joints, shaft couplings (i.e. fluid coupling to torque converter, V-Belt to gear box, etc.).

Note: A change in electric motor or internal combustion engine with equivalent specifications is treated as a one for one replacement and not a major modification.

g) A change in critical components as outlined in rule 1.4.

1. A change in specifications of the critical components.

2. A change from center pole to bail chairs.

3. A change in grip models or manufacturers.

4. Adding chair bubbles, change in type of carrier (i.e. quad chair to gondola).

h) Substantive change to the control system logic.

1. Replacement of the control system.

2. Changing from relay logic to digital.

3. Multiple component changes within system controls.

CLARIFICATION OF MINOR MODIFICATIONS

A minor modification is defined as a modification, addition or deletion to a tramway that alters the tramway's certified design or certified construction (see rule 21.1.3). The following list is intended to provide guidance in determining those changes to the tramway that are properly classified as minor modifications, however, this list is not all inclusive and it must be recognized that the circumstances pertaining to a particular modification may justify reclassification to another category. Therefore, it is the responsibility of the area operator to exercise sound judgment and to consult the Board if further clarification is needed. All Minor Modifications are required to meet the current CPTSB and ANSI Standards.

a) A repair or reinforcement of structural components including structural portions of critical components. This is to exclude wire rope and wire rope repair. Refer to Section 7.

1. Welding or adding reinforcement steel on bullwheels.

2. Adding gussets to carriers.

3. Repair of dented tower tube caused by snowcat.

b) A change in configuration of tower machinery.

1. Changing in number of sheaves on sheave assembly.

2. Change from support or depression to a combination sheave assembly.

c) Substantive change to component systems within the main controls (all system modifications shall utilize an acceptance test by a qualified engineer to verify system changes and performance and the test results shall be documented).

1. Adding test circuitry (i.e. zone masking or brake testing).

2. Upgrades in the low voltage control system.

3. Change to an anti-collision system.

4. Change to the rope position detectors.

5. Change to motor controller run command and feedback.

6. Change to rope speed feedback.

7. Any change in the software logic that would affect a protection or operational circuit.

d) Substantive change to the motor controller drive system (all system modifications shall utilize an acceptance test by a qualified engineer and the test results shall be documented).

1. An upgrade to or a change from analog to digital drives where the control logic remains the same with drives of equivalent or similar performance specifications.

Note: Those that are not equivalent or similar are considered a major modification.

e) Other.

1. Changing type of deropement switches on all towers (i.e. break fork to proximity).

2. Any addition or deletion to carriers after the initial acceptance test, which are not considered one-for-one replacements.

3. Changing chair seat type (i.e. plastic to metal).

4. Changing chair guides (i.e. moving guidage contact from stem to bail, lengthening chair bail).

5. Weighting carriers.

6. Increasing size or addition of communication lines.

7. Change in roll back detection devices (i.e. whisker switch to photo eye; mechanical switch to photo eye).

8. A change in the type of brake releasing mechanism (i.e. manual to hydraulic).

9. Change in brake plumbing configuration.

10. Moving pump actuator hand pump (i.e. motor room to lift shack or vice versa).

11. A change to type of brake pump (i.e. manual to electric).

12. An addition or change of a supervisory, safety or automatic emergency shutdown circuit.

13. Adding, moving or changing lifting frames, ladders, platforms and catwalks.

CLARIFICATION OF MINOR ALTERATIONS

A minor alteration is defined as any other addition or deletion to a passenger tramway that does not meet the criteria of a major or minor modification or one for one replacement, and that does not materially affect the tramway's integrity, operation or control (see rule 21.1.4). The following list is intended to provide guidance in determining those changes to the tramway that are properly classified as minor alterations, however, this list is not all inclusive and it must be recognized that the circumstances pertaining to a particular alteration may justify

reclassification to another category. Therefore, it is the responsibility of the area operator to exercise sound judgment and to consult the Board if further clarification is needed.

a) An addition of control system logic or circuits which does not affect the integrity of the existing control system logic

1. Timing circuit that will not allow pumps to run beyond rated cycle.

2. Adding manually operated bypass circuits.

b) An addition or change of operating circuits (reference x.2.1.7.1)

1. Addition of down loader safety gate or photo eye.

2. Changing safety gate switch from limit switch to photo eye.

3. Addition of normal and emergency switches and speed control.

4. Adding signaling devices or switches.

5. Addition or change to manually operated emergency shutdown switches.

c) Adding, moving or changing personnel access and safety equipment.

1. Machinery guards.

2. Rotating machinery retainers.

d) Replacement of a component with an equivalent component whose operating parameters are identical to the original equipment.

1. Communication systems (i.e. phone).

2. Hydraulic pump.

e) Removal of a component that is not required by code and is not part of the certified design.

1. Safety gate for downloading because lift is not downloaded lift anymore.

CLARIFICATION OF ONE FOR ONE REPLACEMENT

A one for one replacement is defined as a replacement of a component with an equivalent component (see rule 21.1.5). The following list is intended to provide guidance in determining those changes to the tramway that are properly classified as one for one replacement, however, this list is not all inclusive and it must be recognized that the circumstances pertaining to a particular replacement may justify reclassification to another category. Therefore, it is the responsibility of the area operator to exercise sound judgment and to consult the Board if further clarification is needed.

Replacing:

1. batteries and chargers;
2. sheave and bullwheel liners;
3. bearings/bushings;
4. detach mechanism rails;
5. wear strap on top of chair head;
6. heating, venting, lighting;
8. tires;
9. seat pads, footrest bumpers, etc.