



SYDNEY TRAMWAY MUSEUM

CLIMBING ONTO ROOFS OF TRAMS PROCEDURE

NOVEMBER 2008

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1. Purpose

To provide a procedure for the explaining the ways to climb onto the roofs of the various tram types at the Sydney Tramway Museum.

2. Scope

This process applies to all of the trams used within the Sydney Tramway Museum.

3. Responsibilities

Normally there should be no reason for anyone, other than maintenance staff, to climb onto the roof of a tramcar. However Traffic staff may have to climb onto the roof of a tram if the trolley cord breaks, or for any other reason, whilst the tram is outside the Museum's boundary.

4. References

- None

5. Definitions

RNP Royal National Park

STM Sydney Tramway Museum: the trading name of South Pacific Electric Railway Co-Operative Society Limited for tram activities, therefore references to STM.

6. Actions

6.1 General

Normally there should be no reason for anyone, other than maintenance staff, to climb onto the roof of a tramcar.

For most trams the roof is canvas covered and painted which may be slippery when wet. Persons climbing onto the roof must take special care in such a situation.

If the maintenance staff are on site, no Traffic staff should be on the roof of a tram when it is in the depot complex. The maintenance staff should attend to the problem as a wooden ladder should be used to access the roof instead of the foot holds provided on the side of the trams. However if a problem develops whilst the tram is outside the Museum area (i.e. on the RNP or Sutherland line), traffic staff who are experienced may climb onto the roof to fix the problem.

No persons, except approved maintenance staff, are permitted to travel on the roof of any tram.

However if the trolley cord breaks, or for any other reason, any person is required to climb onto a tram roof (e.g. the trolley cord has wrapped itself around the trolley pole), the tram must be brought to a stand and secured. The reverser handle must be removed and given into the care of the person climbing onto the roof.

SYDNEY TRAMWAY MUSEUM

On two pole cars, at least one trolley pole should be in contact with the overhead wire if there is any chance of the person making simultaneous contact with the overhead wire and a trolley pole, otherwise both poles should be down.

On single pole cars, extra care should be taken when the pole is NOT in contact with the overhead wire. If possible, ALL switches on the tram should be opened to increase the safety margin.

Special attention must be given to climbing onto the roof of the all metal bodied PCC car No.1014, Melbourne Z2 111, NET car No.1054, the Berlin trams, the Munich trams or BCC "Phoenix" car No.548.

However if in doubt or any difficulty, use the timber ladder, if necessary it can be brought to the location on the footboard of another car.

6.2 ROOF ACCESS - PCC car 1014

Climbing on to the roof of the car should be avoided as much as possible. Because the car has an all steel body, any work done on the car roof, e.g. replacing broken trolley ropes, servicing, etc., should be done with both trolley poles down.

The access steps to the roof are located at each end of the car next to the near side front door, or, next to the number. Try to remain on the timber walkway or the rubber step treads where practicable.

NOTE: Apart from a broken trolley rope, there is no reason for traffic staff to climb onto the roof.

6.3 ROOF ACCESS – Melbourne Z2 111 Tramcar

The tram is fitted with fold down steps on each side of the car.

The roof is a fibreglass shell that may be slippery when wet. Persons climbing onto the roof must take special care in such a situation.

6.4 ROOF ACCESS – NET car No.1054 Tramcar

The tramcar is fitted with fold down steps, now permanently welded in the down position. These are located on each end of the car front left corner pillar facing the tram from the outside.

The roof is coated with a resin finish which may be slippery when wet.

6.5 ROOF ACCESS – ROOF LADDER – Berlin Tramcars

The trams have an all-steel body. Therefore, should they run onto non-conducting rails or be badly derailed, all metal parts on the tram should be considered "live" until the trolley poles are removed from the overhead wire.

Because of control equipment that is carried on the roof of the trams, the trolley wire above the tram should be de-energised before any person climbs onto the roof.

The motor tramcars are fitted with a folding roof ladder located in the Right Hand door pillar, "A" End, indicated by a handrail from the gutter rail to the roof housing. To open, unlatch this

SYDNEY TRAMWAY MUSEUM

ladder using the triangle key and pull down, using the finger pull below. Ensure the ladder is folded and latched before moving the tram.

6.6 ROOF ACCESS – Munich Trams

The tram has an all-steel body. Should it run onto non-conducting rails or be badly derailed, all metal parts on the tram should be considered “live” until the pantograph is removed from the overhead wire.

The trolley wire above the tram should be de-energised before any person climbs onto the roof. The tram is fitted with fold down steps that have been placed out of commission. Until these are restored any person who requires access to the tram roof must use a ladder suitable for electrical work.

6.7 ROOF ACCESS – BCC "Phoenix" car No.548

The tramcar is fitted with small steps fixed to the door reveal of a centre access door, inside the loading gauge of the tram. Open the sliding door fully before attempting to climb up onto the roof.

The roof is fibreglass sheeted and painted which may be slippery when wet.

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