

SYDNEY TRAMWAY MUSEUM

ADELAIDE TRAMWAYS H TYPE TRAMCARS

Instruction Manual for Cars No. 357 and 358



SYDNEY TRAMWAY MUSEUM

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00 SPECIAL NOTICE

Although this instruction manual covers the operation of the two H type trams donated to the Museum, running of the trams as a coupled set will not be generally undertaken in the short term until the second car is reassembled and tested.

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FRONT COVER PHOTO: H type car No.358 parked at the Railway Square terminus of the Sydney Tramway Museum after having completed a successful trial run over the Museum main lines on 13th January 2007.

Photo: *Martin Pinches*

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ADELAIDE TRAMWAYS H TYPE BOGIE SALOON TRAMCARS INSTRUCTION BOOK FOR Nos. 357 and 358

01 GENERALLY

The H type trams are bogie saloon cars. As introduced in 1929 they were fairly typical vehicles of their time with remote automatic acceleration control, and air and hand brakes. Over the intervening years surviving cars in the class were progressively altered and upgraded with certain functions changed. They are also equipped with a number of auxiliary devices and controls that are sufficiently non-standard to warrant special consideration when compared with many other Museum fleet cars.

Although the power controller is superficially the same as the Museum's Sydney P class tram there are significant differences that render the P class tram operating instructions generally irrelevant.

Therefore, to avoid damage to the trams, members are directed not to attempt to drive them until they have undergone essential tuition.

02 THE TRAMS

They are double ended with driving controls at each end. Egress doors are fitted to each side at each end and are under the control of the Driver with override facilities available to the Conductors and Supervisors.

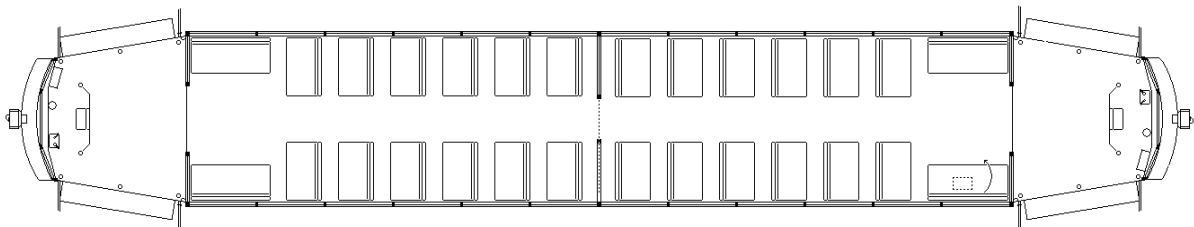


Fig 1. Outline Plan of H type Car

03 CURRENT COLLECTORS

The trams were delivered with a pantograph collector but this will have been removed and replaced by trolley wheel fitted poles. The poles are secured in the lowered position under double hook units. Until further notice the trolley poles are to be secured under the lower hook to ensure that the high mounted poles do not foul the overhead where the wire dips. Any reference remaining on the car related to pantographs may be considered redundant except where of a safety nature when the term "pantograph" should be read to imply "trolley poles".

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04 TROLLEY HOOKS

Because of clearance problems with sagging overhead the STA fitted a second trolley hook at each end of the H type trams. Until further notice, when the Museum overhead wiring is fully adjusted, this lower hook must be used in securing idle trolley poles.

05 TROLLEY BASE TENSION RELEASE

When an H car is to be out of service for a lengthy period, maintenance staff may release the tension on the trolley springs with a latch device fitted to the trolley base. If traffic staff members are unable to raise any trolley pole against a spring then that trolley pole must be carefully pulled down to roof level until this catch is heard to release. Then the pole should work normally.

06 ELECTRICAL SAFETY

Each tram has a composite body using timber, metal and fibreglass panels. Should it run onto non-conducting rails or be badly derailed all metal parts on the tram should be considered "live" until all trolley poles are removed from the overhead wire.

The trolley wire above the tram should be de-energised before any person climbs onto the roof.

07 ROOF ACCESS

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

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.

08 COUPLINGS

The H type tram is fitted at each end with a Tomlinson type combined mechanical/air/electrical coupling. Unlike the units fitted to the Sydney P class car the Adelaide cars have extra electrical contacts on the coupler faces and additional sockets on the side of the coupler head for extra circuits. A separate cable is stored on each car to enable these sockets to be connected. These extra circuits were installed in relation to certain surveillance equipment that was removed before the trams were handed over. Traffic staff must not install the coupling cables to these extra sockets.

09 COUPLING H TYPE CAR TO P CLASS CAR

Under no circumstances must the P class tram be coupled directly to an H type car. If it becomes necessary for a tram of one type to be used to retrieve one of the other then a cranked coupling bar must be used to accommodate the different mounting height of the Tomlinson couplers on the two classes of tram. If the trams are to be coupled for towing *only* then a Sydney R type bar may be used.

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10 ACCESS TO STABLED TRAM

If the tram has been properly stabled then one or more doors will be isolated and able to be opened by hand to gain access to the tram.

If for any reason the Driver is locked out of the tram then there are two door stabilisers (release cocks) fitted. These are also referred to as dump valves and are located under the side sill of the tram marked by a green arrow adjacent to E-F and G-H doors. Open valve and push nearby door open by hand. Once access has been gained to the tram, set the door switches as required and close the dump valve.

11 EQUIPMENT INDICATORS

Attached to the frame of each tram are a number of indicators related to equipment to be operated from the road.

1. **YELLOW ARROW:** This is the Sydney indicator for the air drain cock location.
2. **RED ARROW:** This is a Sydney indicator for the battery isolator switch.
3. **GREEN ARROW:** This a Sydney indicator for the emergency release dump valve.
4. **CUT OUT SWITCH SIGN:**
This is the Adelaide indicator for the motor cut out switches.

12 TRACTION CONTROLS

A conventional master controller is provided to operate the PC5 type remote main controller under the car. This has three notches. The first notch locks the controller in First Series for shunting use only. The second notch allows the remote controller to operate up to the Full Series running notch. To enable the tram to run up to Full Parallel the controller is moved to the third notch. Operating the controller handle directly to the Third notch from OFF is possible but should not be done in deference to the traction power supply and the weight of the car.

The master controller handle is fitted with a return spring and must be held in the running notch position while power is required to the tram motors. If pressure on the handle is not maintained the handle will return to OFF and power will be shut off. This is a safety feature that was fitted to the H type cars as delivered and must not be interfered with in any way while the tram is in operation.

13 MOTOR CUT OUT SWITCHES

These are located in a small compartment under the car floor where indicated. Make sure the trolley poles are lowered and the battery switch is turned off. To cut out traction motors, open the compartment door and swing the required knife switches as far over as possible.

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It is possible to isolate either pair of motors or all motors if necessary. The motors are paired 1 & 4, 2 & 3. The bottom switch isolates the No.1 motor, the top switch the No.2 motor. The motors are referenced from the No.1 End of the car.

NOTE: The trams can still be driven in parallel notches with one pair of motors cut out. Care must be taken to avoid notching up quickly when starting on steep hills or sharp curves while operating with motors cut out.

14 DRIVER'S EQUIPMENT

The Driver requires a reverser key, similar to but smaller than that fitted to Sydney corridor cars, a brake handle, a small "Yale" type control key and a key to which is attached a special three function acrylic key for access to various lockers on the tram. Bell and horn buttons are to be left on the tram on the Driver's platforms in the proper position for use.

15 DRIVER'S SEAT

There is a hinged, padded seat provided at each driving position for the use of the Driver, if required. Due to the rather cramped nature of the driving position Drivers may consider collapsing the seat and standing at the controls.

16 GENERAL EQUIPMENT LAYOUT

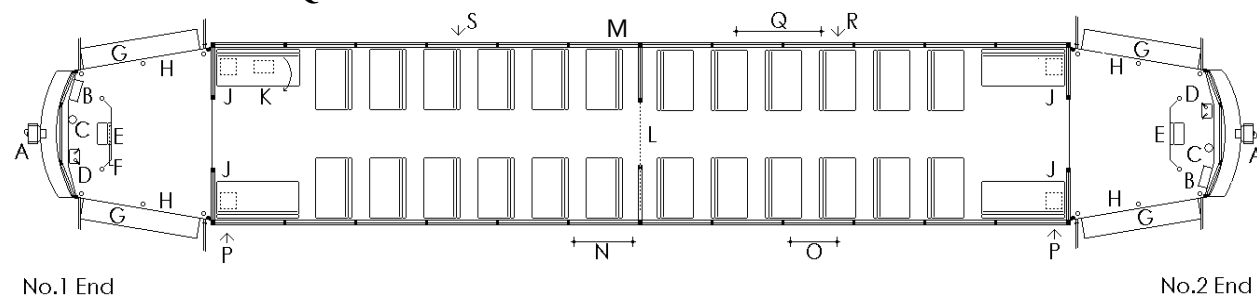


Fig. 2: General Equipment Layout

- A: Tomlinson coupler
- B: Driver's Auxiliary Control Panel
- C: Air brake valve/sander
- D: Traction power (master) controller
- E: Driver's seat
- F: Fuse box (on bulkhead)
- G: Fold down step (linked to adjoining doors)
- H: Folding air operated doors (A and B, G and H - No.1 End; C and D, E and F - No.2 End)
- J: Sand Hoppers (under hinged forward seat cushion)
- K: Equipment Isolation Switches (under hinged seat cushion)
- L: Sliding door
- M: Motor Cut-Out Switches (under car floor)
- N: Air conditioning compressor (under car floor)
- O: Parking brake (under car floor)
- P: Emergency access dump valve (behind green arrow)
- Q: Battery box (under car floor)

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- R: Battery isolating switch (at end of battery box below red arrow)
S: Air system drain cock (below yellow arrow)

17 DRIVER'S CONTROL CONSOLE

The main tram operating auxiliary controls are in a lockable console behind the windscreen at any driving position. To open the console cover use the double sided key provided. The double fold lid is then lifted back.

To the right of the Driver is a low voltage control panel that is used to operate various equipments from the 24 volt DC supply. In addition, a control key must be inserted in the key switch at the right hand end of the panel to enable the tram to be driven. The control panel has various switches and indicator lights

To drive the tram, insert the control key and turn it to the right. The key must be turned to the left and removed to the opposite end of the tram when changing ends.

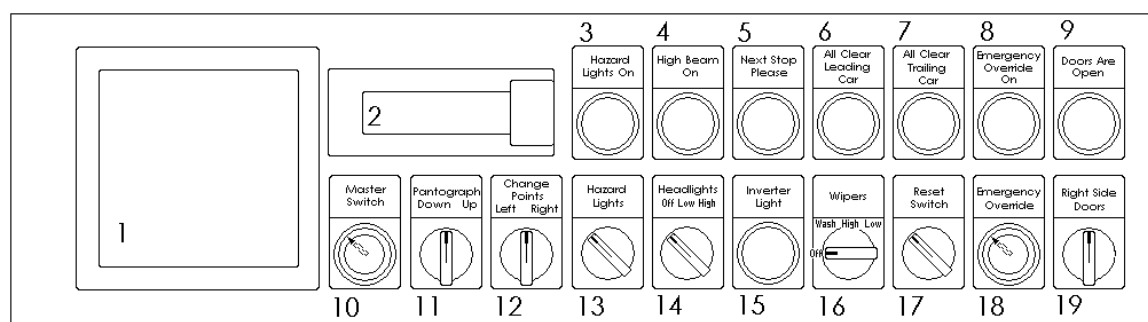


Fig. 3: DRIVER'S AUXILIARY CONTROL CONSOLE

1. Location of speedometer, removed before tram offered for preservation.
2. Location of digital clock, removed before tram offered for preservation.
3. HAZARD LIGHTS indicator.
4. HIGH BEAM indicator.
5. NEXT STOP PLEASE LIGHT – When a bell switch is pushed once, this blue light on the control panel will illuminate and a bell sound will be heard which indicates to the Driver that the next stop is required. The light will stay illuminated and bell switches will not operate again until the doors are opened and re-closed. "Next Stop" lights in the saloon will also be illuminated, indicating to the passengers that the tram will make the next stop.
6. ALL CLEAR LEADING CAR LIGHT - The all clear leading car light is a white light which will flash when the Conductor on the leading car gives two all clear buzzer signals.
7. ALL CLEAR TRAILING CAR LIGHT - The all clear trailing car light is a green light which will flash when the conductor on the trailing car gives two all clear buzzer signals. The tone of the buzzer from the rear car is slightly different from that of the front car.

DRIVERS ARE REMINDED THAT IT IS THEIR RESPONSIBILITY TO ENSURE ALL DOORS ARE CLEAR BEFORE CLOSING THEM AND MOVING OFF.

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8. EMERGENCY OVERRIDE SWITCH - This switch should only be used under instruction from the Traffic Officer or Workshops staff and is used for any malfunction in the door system.
9. DOORS OPEN INDICATOR
10. MASTER SWITCH - The master switch controls 600 volts power to the tram and is operated by inserting the Master switch key and turning the key to the right for the "on" position. The tram will not operate unless the key is turned to the "on" position. When switching the master switch off, turn the key to the left, for the "off" position.
11. PANTOGRAPH SWITCH - Redundant.
12. CHANGE POINTS SWITCH - Redundant.
13. HAZARD LIGHTS SWITCH - If a tram is stationary on the track because of a defect or breakdown, hazard lights must be used.
To operate the switch, turn to the right and all outside warning lights will operate as well as the yellow light on the panel above the switch.
The hazard lights operate directly off the battery, therefore can be used during the dewirement.
14. HEADLIGHT SWITCH - The headlight switch is used to turn the headlights from the "off" position to the low or high beam position. The "off" position is to be used when the control box is closed.
 - * Low beam is to be used in Tramway Avenue, whenever another tram or vehicle approaches within 200 metres, during daylight hours and within the confines of the depot.
 - * High beam is only to be used while driving on the enclosed track. A yellow illuminated light located above the switch indicates that high beam is being used.
 - * When the headlights fail to operate or power loss occurs, a small pilot light on the light cluster on the front of the tram will illuminate.
15. INVERTER FAILURE LIGHT - The Inverter Failure Light is a red light that will illuminate when the inverter is not working.
The inverter breaker should reset automatically about 15 seconds after traction power is restored. In the event of an inverter failure, Drivers are to notify the Officer-in-Charge immediately
16. WIPER SWITCH - The wiper switch has four positions:
 - * OFF; WASH; SLOW; FASTTo operate, turn switch to the desired position. There are windscreen washer bottles at both ends of the tram. Drivers will be responsible for ensuring that these bottles are kept full.
17. RESET SWITCH - The reset switch is designed to reset the protective overload switch housed on the main controller. If the motors are overloaded the switch will trip out and the motors will not operate until it is reset.
To operate the reset switch turn it to the right and then to the left.
18. EMERGENCY DOOR OVERRIDE SWITCH - To operate the switch, turn the master switch "OFF" (back to the left), extract key, place key in emergency override switch and turn key to the right ("ON" position), extract key, place key back into the master switch and turn back to the "ON" position (turn key to the right). This will illuminate the "emergency override on" light above the switch and also an orange light at both ends on the outside of the tram. These lights cannot be extinguished until the emergency override facility is reset by an Electrical fitter.

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EXTREME CAUTION MUST BE EXERCISED WHEN USING THE OVERRIDE SWITCH AS THE TRAM WILL MOVE WITH THE DOORS OPEN.

18 MAIN FUSE BOX

The main fuse box is located at No.1 end of the tram above the Driver's head. It is opened by use of a triangular key (issued to the Driver).

A warning sign "DANGER. LOWER POLES BEFORE OPENING THIS LID" appears on the door of the fuse box.

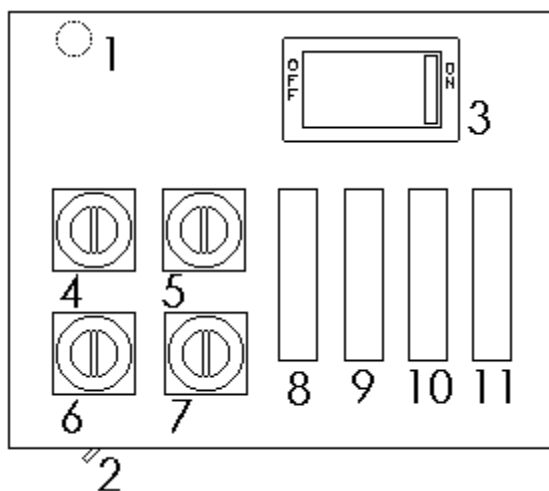


Fig. 4: Main Fuse Box (No.1 End)

1. Emergency light in fuse box.
2. Emergency light switch on bottom of case.
3. Main switch. Move to OFF, then ON to reset if opened due to overload.
4. Control circuit isolator.
5. Inverter isolator.
6. Compressor isolator.
7. Air conditioner isolator.
- 8, 9, 10, 11. Fuses. Spare fuses are slotted into side of fuse box.

19 FUSES/CHANGING FUSES

There are four fuses located in the lower half of the main fuse box as indicated above.

To check whether a fuse is defective isolate the circuit and remove the suspect fuse. Place the metal terminals of the fuse across the low voltage fuse tester at the rear of the front apron. If a buzzer sounds then the fuse is intact. Otherwise replace the fuse with a sound one of the same rating.

On returning to depot Drivers are to ensure that any defective fuses are booked off on the tram condition sheet and placed in the defective fuse box.

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20 24 VOLT CONTROL PANEL

This control panel is located under the long seat at the No.1 end, adjacent to A and B doors. The triangular key is used to unlock the control panel cover.

- 1 Main control isolator
- 2 Radio (redundant)
- 3 Headlights isolator
- 4 Emergency lights isolator
- 5 Saloon lights isolator
- 6 Compressor isolator

21 AIR PRESSURE GAUGE

Fixed to the body corner pillar to the right of the driver, this is provided to show the amount of air pressure in the tram's air system. Normal pressure of approximately 65 p.s.i. should be maintained.

A minimum of 50 p.s.i. must be attained before the tram controller can be operated and the parking brake released.

22 BRAKING SYSTEMS AND SANDING GEAR

The tram is fitted with two braking systems. Service braking is achieved by moving a brake valve handle at the driving position. The valve has three positions.

1. To the extreme left – OFF – the position for the handle when running.
2. Partway towards the right – LAP – the position where the handle may be inserted into or removed from the valve.
3. Towards the right – APPLY – the position where the brakes may be applied.

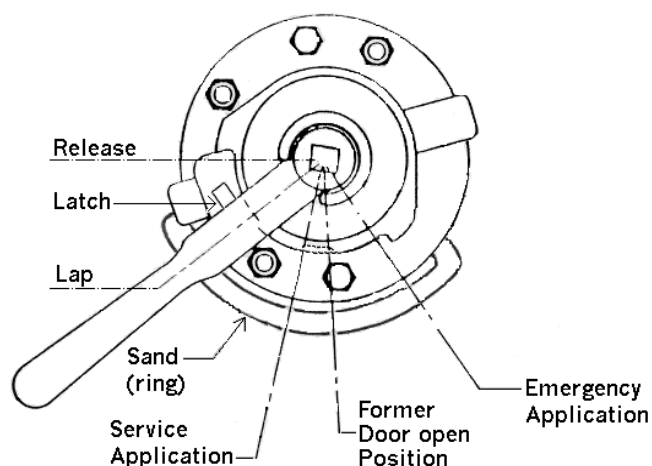


Fig 6: Modified Brake Valve

NOTE: The brake valve is a modified M28 type that initially provided for an emergency position and door opening facility. This has been put out of use and the brake handle need only be brought around to where the door open position has been built up.

The brake handle is hinged and rests on a harp. If the handle is pushed down it operates and air valve which

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will blow sand to delivery chutes to fall onto the rails and assist in braking on wet and greasy rails.

To remove the brake handle, turn it to LAP, retract the latch on the left hand side and lift the handle off the valve spindle.

23 PARKING BRAKE

The mechanical parking brake system has been replaced by spring-applied, air pressure released parking brake that operates only on the bogie at the No.2 end of the tram. Therefore, unless there is approximately 50 psi pressure in the air system the parking brake cannot be easily released. The brake applies when any door is opened or when the air pressure falls below 50 psi.

No door should be opened until the tram has been brought to a stand. Under no circumstances should the parking brake application be used to bring the tram to a stop.

24 EMERGENCY BRAKING

Provided there is sufficient pressure in the air system to work the controller then the normal Second/Fourth Electrical Emergency brakes can be applied.

25 EMERGENCY LIGHTING

An important safety feature of the tram is the added function of emergency lighting. The emergency lighting consists of four saloon lights, two platform lights and a light near the motor cut-outs.

If, for any reason, there is a loss of electrical power to the tram (eg. dewirement), these lights will stay illuminated for 20 minutes before automatically switching off. To re-activate emergency lighting, operate the emergency lighting switch located within the control panel under the long seat at the No.1 end, by sliding the switch first to the left then back to the right. The lights will then operate for another 20 minutes.

26 POWER INVERTER/BATTERIES

Control power at 24 volts DC is provided by the traction power supply feeding through a solid state inverter unit. This is in circuit with a 24 volt battery located under the tram floor, accessible from outside the car. There is a battery isolating switch on the left hand end of the battery box which must be turned ON before the tram can be operated and turned OFF when service is completed each day.

Apart from ensuring the panel in the front of the battery box is properly secured there is no reason for traffic staff to interfere with this box or the wet cells within.

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27 WARNING DEVICES

The H type car is fitted with three warning devices:

1. **FOOT GONG:** A bell punch is tapped in the normal manner.
2. **LOW VOLTAGE SELF CONTAINED AIR HORN:** This is operated by pressing a red ball switch fitted under the driver's footrest.
3. **HIGH PRESSURE AIR HORN:** This is fitted under the driving platform floor and is operated by a foot punch to the left of the bell punch. The horn operates from the main air supply. In the event that the horn fails to cancel and continues to sound an isolating cock will be found to the right of the power controller and is operated using the reverser key.

Only the foot gong is to be used in the museum grounds except in cases of emergency,

28 BUZZER SWITCHES

There are buzzer switches located at various points in the tram. The switch surrounds are white in colour with a brown button. This switch will operate as a normal passenger bell switch. Once pressed the "car stopping" indicators will operate the first time a bell push is operated. The indicators will cancel when any external door switch is operated.

To operate these switches as Conductor signal buttons a sensor located on top of the switch is pressed simultaneously with the button located in the centre of the switch. Provided that the sensor is pushed first, then the Conductor may signal with these devices regardless of whether the "blue light" function has been activated.

Sound buzzer twice for "PROCEED", three times or continuously for emergency stop.

29 DESTINATION BLINDS

Roller blind destination boxes are fitted above each driver's centre window and at each side of the tram near the centre. To operate: pull the operating handle out to release catch and turn as required to adjust blind. To lock: push handle in.

30 DOOR OPERATION

Egress doors are electro-pneumatically controlled from switches at the driving ends.

LEFT SIDE DOORS – TO OPEN

Turn the "OPEN DOORS" switch to OPEN. This switch is on the right hand pillar at the doors.

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LEFT SIDE DOORS – TO CLOSE

Turn the "OPEN DOORS" switch to CLOSED.

RIGHT SIDE DOORS - TO OPEN

Turn the "OPEN DOORS" switch to OPEN. This switch is on the right end of the auxiliary control panel.

RIGHT SIDE DOOR – TO CLOSE

Turn the "OPEN DOORS" switch to CLOSED.

In addition to the normal door operation switches, each pair of doors is fitted with an air release valve. This must be used to isolate the doors in emergency operations and when changing ends to prevent the doors from slamming shut when the control keys are removed from one end of the car to the other.

31 AIR CONDITIONING

Air conditioning units are provided over the driving position at each end of the tram for the comfort of drivers. These are individually operated from a switch on the door pillar to the right of the driver. Turn the switch to the appropriate position and adjust the air curtain each side of the cabin to restrain the air above the driver. Drivers are to consider only using the air conditioning in extremes of weather, either hot or cold.

32 PREPARING TRAM FOR TRAFFIC

Having verified that the tram is approved for traffic and having inspected the car all round, raise the trailing trolley pole to the overhead. Ensure the overhead is alive above the tram. Locate the red arrow on the underframe and turn the battery-isolating switch so identified to ON. If the car saloon lights come on and the compressor is heard to operate, close the air drain cock that is below the underframe marked by a yellow arrow. If the lights fail to come on and the compressor fails to operate then remove the trolley wheel from the overhead wire and turn the battery switch to OFF. The car will not be used until checked by workshop staff.

If the tram has been correctly stabled access may be gained using one of the isolated doors. Push this open and fold down the step.

Open the control panel cover and insert the control key in the switch and turn to ON. Insert the reverser key into the main controller and brake handle into the brake valve. Restore the door isolating switch(es) to CLOSED, close the doors using controls. The left hand doors are controlled by a switch on the door pillar, the right hand doors are controlled by a switch on the control panel.

When all doors are closed, indicated by the DOORS CLOSED light on the control panel being extinguished sound foot gong and try to drive the tram. If successful, drive the tram until it is clear of the shed doors, then stop and check that the Tomlinson coupler at each end is swung to the centre line of the car.

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33 IN TRAFFIC

Because of the controls on the power operated doors, the Conductor must move to the rear of the car when the tram is stopped and any doors are opened and must use the door isolating switch to isolate the door at the rear of the tram. This will prevent the doors being inadvertently closed and trapping passengers. Before the Conductor gives the PROCEED signal the door isolating switch must be returned to CLOSED. The Driver will operate the isolating switch at the driving end particularly when the tram reaches a terminus or turn-back point before turning the control off and removing the control key and reverser and brake handles. If this is not done then doors may close unexpectedly.

Once the Driver has changed ends then the doors will come under controls of the crew as above and isolated doors must be restored before the tram can move.

34 CLEARANCE PROBLEMS

Because of clearance problems with this large tram, the tram must always be run with the Tomlinson couplers at each end centred. Only when operating into the tram shed and required to close up on the car ahead must the coupler be swung to the air brake pedestal side of the tram. When another car is being closed up on an H type car then the coupler on the H car must be swung over to the air brake pedestal side.

When an H type car is removed from any tram shed road to take up running it must be stopped clear of the doorway and the Driver will inspect *both* couplings and centre them if necessary.

When leaving Railway Square siding towards Sutherland the Driver of the H type car will yield right of way to any other tram operating on the main line where clearances are tight and there might be a danger of trams colliding.

35 STABLING TRAM

When the tram is to be stabled the Driver will ensure the Tomlinson coupler at the leading end, entering the tram shed, is swung to the air brake side before the tram is closed up on the one ahead. If the H car is to be followed into the shed then the rear coupler must also be swung to the air brake side.

Once the car is positioned the Driver will open and isolate at least one door and remove the control keys. Exit from the tram, remove the trolley pole from the overhead wire, turn off the battery switch and open the air drain cock. Manually close any doors that may be open.

36 COUPLED CAR OPERATION

Until further notice, coupled operation of the H type cars will only be with the approval of the Board for specific traffic duties.

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37 COUPLING PROCEDURE

Secure one tram on the parking brake with a door open at the end to be coupled. Centre the Tomlinson coupler. Ensure that the retaining pin is removed from the coupler head. Remove the air brake handle and reverser key and stow them on the ledge above the driver's windscreen. Switch off the control panel.

The second tram is to be driven up within 1 metre (3 feet) of the first tram and the Tomlinson coupler is to be centred. Ensure that the retaining pin is removed from the coupler head. With an observer outside the trams guiding the driver, the second tram is to be driven onto the first making sure the coupling tongues are aligned. The coupling tongues should push aside then return to the central position under the influence of the internal springs. The driver will then release the air brake on the second car. If it disengages then drive the second car forward once more. Repeat until the coupling tongues interlock then have the observer restore the retaining pins in both coupler heads.

The driver will then reach under each tram in turn and operate the coupling lever to the "Coupled" position. The car set may then be operated under multiple unit remote control by the driver from either end of the tram. Test the set by driving a short distance.

If all is in order then the cars may be taken into traffic.

38 RUNNING COUPLED CARS

Special care should be taken by the driver when operating the coupled set of H cars to observe the following:

- * Remember that the car set is longer than any other tram in the fleet and ensure that it is not allowed to stand foul of junctions and the like.
- * When notching up do so at a slower rate than with a single car, pausing on first notch to be certain that the tram is powering satisfactorily.
- * Try not to start the tram when another heavy car is operating on the system. This is an important factor concerning the limitations of the traction power supply.

39 RUNNING

The door control switch at the front of the first tram will operate the matching doors on the trailing car. The buzzer switches on the trailing car operate a different sounding device from those on the front car so the driver will be aware when the conductor in charge has signalled "right-of-way." The light switches on the leading tram will operate the lights on the trailing car.

In normal operations do not stop the coupled set over any points. Stop short until there is room beyond the points to accommodate the tram.

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40 STOPPING

There is quite a lag in operation of the straight air brakes on the coupled set and the driver should allow for this when approaching a known stopping place.

41 UNCOUPLING PROCEDURE

Stop and secure the coupled set. Work the "Single/Coupled" operating rods to the "Single" position on both cars. Remove the retaining pins. With two assistants standing one each side of the each will take hold of the coupling release chain and pull it away from the centreline of the tram. The driver will then carefully move the uncoupling tram away from the other. If the couplings disengage then the cars are free to be operated separately. If they don't disengage then repeat the procedure but first run the uncoupling car onto the stationary car. Then try to reverse away. If successful a second driver will then retrieve the stowed controls and fit them into the brake valve and controller. The retaining pins must be refitted into the respective coupler heads.

DETAILS

Adelaide H type trams:

Built: Pengelley, Adelaide 1929
In Service: December 1929
Length: 56' 4"
Weight: 23.1 tons
Control: PC5L2, remote electro-pneumatic, automatic acceleration
Master Controllers:
CJ129A, C129A
Motors: 4 x 65 hp E.E. 308

No.358:
Left Adelaide: 28th November 2006
Arrived Loftus:
30th November 2006
Trial trip to Waratah Loop:
16th December 2006
Trial trip to The Royal National Park:
13th January 2007

No.357:
Left Adelaide: 26th June 2007-10-22
Arrived Loftus:
28th June 2007
Trial trip to Waratah Loop:
30th June 2007 (coupled to 358)