



THIS BOOK IS THE PROPERTY OF
THE M. M. T. B.

and is issued to

Name J. L. Phiddian

Occupation Shift Electrician

Every Employee whose duties are in any way prescribed in this book is required to have a copy hereof constantly in his possession when on duty, and make himself perfectly acquainted with the contents.

On leaving the service of the Board such copy must be returned to the office of the Distribution Engineer.

T. P. STRICKLAND,

Chief Engineer.

**REGULATIONS AND INSTRUCTIONS
FOR THE GUIDANCE OF DISTRIBUTION
EMPLOYEES IN THE SERVICE
OF THE MELBOURNE AND METRO-
POLITAN TRAMWAYS BOARD.**

**Chancing it is a very poor speculation—
you will probably lose. Safety First is
a good investment—it pays.**

CAUTIONARY RULES.

When switching, think first, make up your mind what you are going to do, and then do it with decision.

Always open or close a switch by a single unhesitating motion, and, if possible, with one hand.

Circuits equipped with automatic and manual cutouts must always be opened by means of the automatic device.

When operating manual switches, keep the body well away to avoid injury in the event of a flash occurring.

Keep loose wires away from live parts, except those to which they are to be immediately connected; also, before bringing a wire near live apparatus, see that the other end of the wire is connected up correctly.

When applying an earth wire to normally live apparatus, the wire must first be earthed before bringing it near the apparatus, and must be removed from the live apparatus before removing it from the earth connection.

Do not place dependence for safety on the insulating covering of conductors.

Never use a damaged flexible lead for portable apparatus, such as a bank of lamps, testing voltmeter, or the like. Should it be necessary to make a joint do not fail to insulate it.

Never remove or replace a lamp in its socket unless the current is switched off.

Before working on any piece of apparatus which is liable to be carrying current, ascertain that it is safe to do so.

When working on live apparatus, see that all gear of opposite potential, with which any tool you are using could make contact, is protected effectively.

Danger tablets are supplied with the object of protecting the staff and equipment; do not fail to use them.

REGULATIONS.

1A. PROCEDURE TO BE FOLLOWED WHEN WORKING ON 600 VOLT SWITCHGEAR AND MACHINES.

(1) Before work is commenced the Foreman is to personally inspect, isolate as far as practicable, erect insulating barriers where necessary, and warn men working on the job of any adjacent live part or possible danger.

(2) The Foreman may delegate this duty to an Auto. Inspector or Asst. Control Operator.

(3) Each man must confine his work to the area set out by the Foreman and not work outside this area without permission of the Foreman.

(4) In carrying out the above the Foreman should comply with Rule 22 V11 (Use of Danger Tags).

REGULATIONS.

I. PROCEDURE TO BE FOLLOWED WHEN WORKING ON HIGH TENSION SWITCH GEAR OVER 750 VOLTS.

1. Substation Foremen and Shift Electricians will please note that no work of any sort whatever is to be carried out adjacent to high tension gear while alive, except by written permission from the Distribution Engineer. In all cases the isolating links must be drawn and the high tension gear isolated before any work is done.

2. Work in High Tension Cubicles.

In all cases where it is found necessary to enter a cubicle, the leading hand or senior man must make certain everything is dead, and then before entering must get another man (Automatic Substation Inspector or Shift Electrician, if available) to make an independent check that everything is dead. Each man must make the examination of disconnecting links, etc., quite independently of each other.

II. INSTRUCTIONS TO CONTROL OPERATORS. 26/3/29.

Superseding all previous instructions.

3. The following instructions are intended to be a co-ordinated summary of all previous instructions issued to Control.

4. Delays to Traffic.

Delays to traffic are generally due to one or more of 4 main causes, i.e.:—

- (i.) A.C. power failure.
- (ii.) Substation trouble.
- (iii.) Overhead line and feeder trouble.
- (iv.) Underground cable fault.

(i.) In case of A.C. power failure the first thing to do is to ascertain what substations are affected and then ring up the M.C.C. or Yarraville to ascertain the cause of the trouble and its probable duration. Then instruct rostered Auto. Inspector to stand by in case units in Auto. Substations fail to come back on power being restored.

(ii.) In the event of Auto. Substation trouble, send Auto. Inspector to the substation affected and await his report. It should be assumed until it is known definitely to the contrary that any automatic devices or apparatus have functioned correctly. In the event of any serious trouble developing in the manual substations, Mr. Dowling or Mr. Veel should be notified.

(iii.) When the report received suggests overhead line or feeder trouble, call out and instruct the emergency standby crew, and await report of their inspection before giving any instructions as to the opening or closing of feeders or the jumpering or opening of sections.

(iv.) In the event of a faulty underground feeder this should be disconnected at both ends as soon as possible.

5. Persons to be Notified in the Order Given For any Delay to Traffic Exceeding 5 Minutes.

In every case of any delay to traffic exceeding 5 minutes occurring after office hours, Control must ring up the Chief Engineer at his home, Windsor (L) 4512, before 11 p.m., if it happens before that time, and should it happen after that time or during the night, at 8 a.m. next morning. It must be clearly understood that in these cases sole responsibility of advising the Chief Engineer rests with Control.

(i.) and (ii.) A.C. power failure, affecting substations and substation trouble.

AUTOMATIC SUBSTATIONS.

Notify Rostered Auto. Inspector (to stand by) —

Mr. Cassidy
Mr. Parris
Mr. Fairley
Mr. Robertson
Mr. Strickland

MANUAL SUBSTATIONS.

Notify —

Northern System.	Eastern System.
Mr. Veel	Mr. Dowling
Mr. Parris	Mr. Coffey <i>Parris</i>
Mr. Fairley	Mr. Robertson <i>Fairley</i>
Mr. Robertson	Mr. Robertson
Mr. Strickland	Mr. Strickland

(iii.) *Overhead Line or Feeder Trouble*
(Including 6600-volt line supplying Footscray
Substation), notify:

Northern System.

Eastern System.

(Including Footscray).

Mr. I'Donnell

~~Mr. R. J. Gardiner~~

~~Mr. R. B. Gardiner~~

~~Mr. Cermann~~

Mr. Coffey

Mr. Robertson

Mr. Robertson

Mr. Strickland

Mr. Strickland

(iv.) *Underground Cable Faults.*

If supplied from automatic substation rostered
Auto. Inspector.

Mr. Parris

Mr. Fairley

Mr. Robertson

Mr. Strickland

If supplied from manual substation on Eastern
System.

Mr. Dowling

~~Mr. Coffey~~ *Parris*

Mr. Robertson

Mr. Strickland

In case of troubles enumerated above, mem-
bers of the Control staff will be expected to use
their own discretion, depending upon the
seriousness of the mishap and traffic delay,
in informing the various officers enumerated
above in the order given. *One* only to be
notified.

Any minor trouble causing a delay to traffic
not exceeding 5 minutes need not be reported

after office hours until the following day in the
usual manner.

Any slight substation trouble, or power
failure of short duration happening after
office hours or during the night, should be
reported to Mr. Fairley, ~~Mr. Coffey~~ and Mr.
Parris, as the case may require, by telephone
at their houses, between 8 and 8.15 a.m. next
morning.

Similarly, any slight overhead trouble caus-
ing a delay to traffic not exceeding 5 minutes,
happening after office hours, should be reported
to Mr. Coffey and ~~Mr. Cermann~~ by telephone
at their homes between 8 and 8.15 a.m. next
morning.

In case of serious O.H. line trouble, such
as trolley down or feeder fault, causing delay
to traffic exceeding 5 minutes, the responsible
officer should always be notified. This applies
also in the case of serious substation trouble
or if the Control staff are in doubt on any
matter.

6. Notification to Officers.

During office hours it is only necessary to
advise one officer in the Distribution Depart-
ment at Head Office, who will pass on the
information. After office hours officers to be
rung up in the order given until one is advised.
He in turn will pass on the information.

A list of telephone numbers of officers is
supplied to Control Room, and should be sub-
mitted for revision every 3 months.

7. Newspaper Enquiries.

Control Room operators are not authorised to give any information to the Press or to anyone outside the Department. They should refer them to Head Office during office hours and to the Chief Engineer after office hours.

8. Traffic Department.

The Traffic Department have full instructions to notify Control of any irregularity they or any of their officers notice on the road.

9. Incoming Telephone Calls.

It is essential, in Control's own interests, to get the fullest possible information from any person reporting any trouble. He should get his name, and by questioning him endeavour to get as much detail information as possible.

10. Railway Squares.

With reference to any notice received from the Railway Department with regard to working on railway squares on the system.

Depot Master
(a) South of the Yarra, Mr. Coffey should be notified; failing him, Foreman ~~R. B. Gardiner~~, *I'Donnell*

See Memo 28.3.30
(b) North of the Yarra, Mr. ~~German~~ *COTBY* should be notified; failing him, Foreman ~~R. J. Gardiner~~, *HIND*

III. REPORTING OF O.H. EMERGENCY CALLS.

11. Method of Dealing with Calls.

Control Operators must proceed as follows:— After logging report from the originator of an emergency call, Control Operator must communicate with the standby linesmen and relay the message before disconnecting the originator of the call from telephone. Control Operator must then tell linesman that the originator of the call is available on telephone line, and should the linesman desire to ask the originator any further questions, Control Operator must proceed as follows:—

- (1) If originator of call is on private telephone line Control Operator should connect linesman to originator of call, and for his own information, Control Operator should listen in to the resulting conversation.
- (2) If the originator of call is waiting on public telephone Control Operator must verbally relay the necessary questions and answers between standby linesman and originator of call.

IV. GENERAL INSTRUCTION — O.H. STANDBY AND EMERGENCY CALLS.

12. First and Last Cars.

The first car to leave any depot in the morning is timed to depart from Hanna Street

Depot for St. Kilda Beach at 5.24 a.m. The last car into any depot at night is timed to arrive at Essendon Depot at 1.22 a.m. from West Coburg. (Special cars or special arrangements excluded.)

13. Overhead Standby Hours of Duty.

Overhead standby crew are rostered for duty:—

Week Days—6 a.m. till 12.30 a.m.

Sundays—1.30 p.m. till 11.30 p.m.

14. Communication to Standby Depot.

By (1) Direct private line from Control.

(2) Extension telephone from service switchboard at Hanna Street Depot.

(3) Public telephone No. M1055.

15. Emergency Calls.

Instructions have been issued to all Departments that all emergency calls should be made through Control.

As it is possible that a short circuit or electrical fault occurring on overhead lines may cause damage to equipment in automatic substations, it is essential that Control be advised of such faults as soon as possible after their occurrence, and all linesmen must observe the following instruction:—

Any overhead line trouble which is caused by or involves a short circuit or electrical fault must be reported as soon as possible after being

noticed and cleared to Control at Carlton Substation by telephoning from the nearest service 'phone or ringing F 3279 on a G.P.O. 'phone.

16. Emergency Calls not Reported Through Carlton Control.

In cases where emergency calls are made direct to standby, the standby crew must immediately report to Control, giving particulars of call received before they proceed to the trouble.

17. Attending a Call.

During ordinary hours, 7.30 a.m. to 5 p.m., should standby attend to a call, and find, after getting traffic moving, that an unreasonable amount of time would be entailed in completing repairs, thereby keeping them away from Standby Depot, the standby should instruct Control to obtain a wagon to assist or relieve them.

18. Standby Crew Returning to Depot.

After attending to a call, and before returning to Depot, the standby must, either from a public 'phone or the nearest service 'phone, communicate with Carlton Control, reporting that they are about to return to the Standby Depot. Carlton must again be advised on arrival back at Depot.

19. Procedure by Control upon Receiving an Emergency Call at a Time when the Standby Crew is away from Depot Attending to a Call Previously Received.

In cases where Control receives an emergency call at a time when standby is absent from Depot, Control must communicate with the nearest of the following Depots to the source of the trouble:—

Hanna Street, Coburg, Essendon, Hawthorn, Malvern Road, and request the Depot Master or someone in authority to immediately despatch a message to the nearest overhead tower wagon, the location of which is known by means of notices posted on blackboards at each of the above-mentioned Depots.

20. Procedure by Control in Case of an Emergency Call Being Received at a Time when there is no Standby Crew Rostered for Duty.

In the above event, Control must notify the Overhead Foreman of the District concerned by ringing him at his private residence and supplying particulars of the call received. Control should then also ask the Foreman concerned if he requires a taxi to be sent to his residence to convey him to the scene of the trouble, and, upon receiving a reply in the affirmative, Control is to arrange for the provision of a taxi cab at the Foreman's residence while the Foreman is preparing for duty.

21. Speed of Tower Wagons.

Drivers of motor tower wagons must not drive their vehicles at dangerous speeds. Reasonable speed is permitted up to 20 m.p.h. when answering an emergency call, but a speed of 10 miles per hour must not be exceeded when turning corners. When returning to quarters or on ordinary runs 15 m.p.h. must not be exceeded. Drivers should remember that these vehicles are "top heavy" and high speeds can easily have serious consequences.

V. SPECIAL SWITCHING OF FEEDERS.

22. General.

When it is necessary to make alterations to feeders, especially temporary measures to allow construction or maintenance to proceed in working hours, the following procedure must be observed:—

- (i.) Where possible a programme should be mapped out by officers carrying out work and supplied to Control two days before it is required. The programme should clearly state the object of the operations. Control must record programme in writing and be satisfied that it is workable. This will minimise any delay due to Control coming to a decision while operations are being carried out.
- (ii.) The Foreman or other person carrying out the programme must supply Con-

trol with full and definite information as to the steps that have been taken outside the substation to alter feeder switches or sections.

- (iii.) Automatic Inspectors and Shift Electricians must only take instructions re opening or closing of feeders in substations from Control, except in case of emergency, and must make use of danger tags in the manner set out in section (vii.) hereunder.
- (iv.) Control must not allow any employee carrying out the operations to vary the programme until Control is satisfied as to the effect of such alterations.
- (v.) The cutting out of any feeder adds some complications and also some risks, for the load must be taken by adjacent sections. The various factors should, therefore, be given the careful consideration of everybody concerned.
- (vi.) (a) *Special Switching Arrangements.* — When gangs working on overhead wires find it necessary to have special switching arrangements on feeders, lighting circuits, etc., to ensure safety of those employed, all arrangements must be made through Control. The request from the man in charge of the gang must be logged by Control, and the instructions to the substation must also be logged by Control, together with a statement that the operator at

the station concerned has properly understood the instructions. Receipt of instructions from Control must be logged by the operator at the station concerned and danger tags used.

(b) *Emergency Cases.* — In cases of emergency, when danger exists, the employee in charge of the gang working on overhead wires must arrange with the substation concerned, if a manual one, for the opening of the necessary switches. The Shift Electrician must immediately report the switching operations to Control, logging the instructions received from the overhead gang. When he closes the switches he must advise Control as before, at the same time entering the operations on log sheet. The switches in question must not be closed until the responsible overhead line employee advises that all is clear.

- (vii.) *Use of Danger Tags.*—Form No. 5324. Danger tags, black on red, are provided for use in all substations when any switch is altered from its normal position. These tags should be used in accordance with the following instructions:—

The reason for the switching alteration must be stated on the tag and logged by Control. Control must issue an identification number which is to be

placed on the tag, with the date and initials of the person attaching same.

Control must post a danger tag, Identification Form No. 5358 4/29, on Special Notice Board giving full information, the notice to remain until tag is removed.

The remover of tag is to obtain permission from Control, and then restore switches to normal and remove tag, date and sign same, and forward it to Control.

Control should compare tag and notice, check log entry, and, if all O.K., file Form and destroy tag.

For the locking out of a unit or feeder in automatic stations during cleaning operations these tags need not be used, provided an Auto. Inspector is present during the whole time.

It is not intended that these tags should be used as a warning that certain parts are alive; in such a case the white tag with *Danger* in red should be used.

Special instructions on blue paper and red tag with *Warning* are now cancelled.

SWITCHES OUTSIDE SUBSTATIONS.

(viii.) Installation, removal, or alteration in the location or electrical condition of section insulators, aerial switches, or automatic sectionalising switches must

in all cases be reported in writing to the Distribution Engineer's Office in order that feeder maps may be revised.

(ix.) All aerial switches installed are to be left locked in the open position by the Installing Branch, and are to be closed only by the overhead maintenance staff for the district concerned after co-ordination with the substation staff concerned. The overhead emergency crew or maintenance staff must not close any aerial switch or place a jumper in any section insulator or lines under construction without previously notifying and checking up with the overhead construction staff.

(x.) Substation staff is authorised to open knife switches in pillars and aerial switches for the purpose of disconnecting feeders from the live trolley system so that work on feeder connections at substations or on underground cables may be carried out in safety. The overhead maintenance staff concerned must be advised beforehand of the intention to open or alter any switches, and again advised when switches have been closed or restored.

(xi.) Switches opened by substation staff must be locked open with a special padlock to prevent danger of apparatus or feeder being made alive by the switch in question being closed by any other person.

VI. FIRES ON TRAMWAY ROUTES.

23. General.

The following information has been supplied to the Metropolitan Fire Brigade:—

All emergency communications with regard to overhead lines of the Board's tramway system, which the officers of the Fire Brigade may find necessary, should be made to the Board's Control Room at Carlton Substation, in Bourverie Street, Telephone No. F3279, where Control Operators are in continuous attendance.

24. Instructions.

In the event of it being necessary to make "dead" a section of trolley wire in a street on account of a fire or other emergency, the Control Operator in conjunction with the overhead emergency crew shall arrange for the opening of the necessary switches. The overhead emergency crew is to remain in the vicinity of a fire and arrange for switches to be reclosed as soon as the street is safe for traffic.

25. Procedure to be Followed by Traffic Officers.

The traffic staff is authorised to *open* only in case of fire or emergency such as a fallen trolley wire the switches listed in the following instruction to Traffic Department:—

PROCEDURE TO BE FOLLOWED BY TRAFFIC OFFICERS IF NECESSARY TO DEADEN TROLLEY WIRE.

- (i.) *Swanston Street*, between Lonsdale Street and Flinders Street—
 - (a) Open aerial switch on Pole 215 (near S.E. cr. of Swanston and Flinders Streets).
 - (b) Ring Carlton Control and ask Control to open feeder supplying Swanston Street South (P.C. 27).
- (ii.) *Swanston Street*, between Lonsdale Street and Queensberry Street—

Ring Carlton Control and ask Control to open feeder supplying trolley wire in that area (P.C. 21 and 26).
- (iii.) *Flinders Street*, East of Swanston Street to Pole No. 67, Wellington Parade—

Open aerial switches at Poles 38 and 63 in Flinders Street.
- (iv.) *Flinders Street and Spencer Street*, West of Swanston Street to Lonsdale Street terminus—

Open two aerial switches at Pole 21, near S.E. cr. of Flinders and Market Streets.

Open aerial switch at cr. Lonsdale and Spencer Streets.
- (v.) *William Street*, South of Victoria Street—

Open switch on centre pole 14 in Peel Street (North of Victoria Street).

Open switch on centre pole No. 42 in William Street (North of Lonsdale Street).

(vi.) *Chapel Street*—

(a) Between Toorak Road and Malvern Road—Open switches on Pole 102, near Toorak Road, and on 124, near Malvern Road.

(b) Between Malvern Road and High Street—Open switch on Pole 127, near Malvern Road.

(c) Between High Street and Dandenong Road—Open switch on Pole 144, near High Street.

Keys for above aerial switches are available as follows:—

In Swanston Street.—In small glass-fronted boxes in the track emergency box at Lonsdale Street and in the telephone box at Princes Bridge station.

In all other cases given above in small locked boxes on the pole given. Keys for track emergency boxes fit the locks.

(vii.) *Tramway Routes not Listed Above.*—

To deaden trolley wire on routes not listed above, Traffic Officers should communicate with Carlton Control, who will arrange accordingly.

Traffic officers must advise Control immediately of all switches opened by them, and also as soon as line is clear.

Traffic Officers must not close any switches. All switches under this regulation will be closed by overhead linesmen after Control's permission has been obtained.

VII. INSTRUCTIONS REGARDING A.C. SUPPLY TO FOOTSCRAY SUBSTATION.

26. General.

Footscray substation is supplied with 6600-volt, 3 phase, 25 cycle energy by means of two separate transmission lines on one pole line from Angliss Substation. This supply is controlled by a 20,000-volt Reyrolle Oil Circuit Breaker, situated at Angliss Substation, feeding a 20,000-volt bus, thence through 20,000-volt isolators to two static transformers, which, on the secondary side, feed through 6600-volt isolators to a 6600 bus, and thence through outdoor fuse type isolators on the roof of Angliss Substation to the Footscray tramways transmission line as shown on Drg. No. E.5163, attached.

27. Communication.

The Tramways Control is always on duty at Carlton Substation.

- F2488**
- (1) P.M.G. telephone numbers, ~~F2011~~, F3279.
 - (2) On Private magneto system ask for "Control."

Footscray Substation.

- (1) P.M.G. telephone No., Footscray 1115.
- (2) Also connected with private magneto system.

The Railways Control Engineer is always on duty at Newport Power House.

Telephone numbers: (1) P.M.G., Williamstown 211; (2) V.R. 406; (3) Railways private automatic 44 or 45.

Note.—The only telephone installed at Angliss Substation is connected to Railways private automatic exchange.

28. Operation.

There will be no attendant at Angliss Substation, and, in the event of the Tramways requiring to disconnect or connect a transmission line or lines, the Tramways representative will, after providing himself with a key of Angliss Substation (left at Footscray Substation) proceed to Angliss Substation and communicate with the Control Engineer. Should he require to disconnect a line or lines, the Tramways representative will, after obtaining the Control Engineer's permission, open in the following order the 20,000-volt oil circuit breaker, the 20,000-volt and 6600-volt isolators. He will then withdraw from the line or lines concerned the outdoor fuse type isolators situated above the roof of the building, attach a warning notice to the disconnected line or lines, place the isolators in the correct position in cupboard, and attach a warning notice to the isolators. He will then lock the cupboard and return the key to usual position inside Angliss Substation.

No access permit will be required by the Tramways Board for work upon their own line or lines.

To place a line or lines into service, the procedure will be similar to that outlined above, except that, after obtaining the Railways Control Engineer's permission and opening the 20,000-volt oil circuit breaker, the 20,000-volt and 6600-volt isolators, the outdoor fuse type isolators are to be removed from the cupboard, and, after making sure that all is clear, placed in their correct position for the line or lines required. The key of the fuse cupboard is then to be returned to usual position inside Angliss Substation.

To restore supply after disconnecting or connecting a line or lines, the Tramways representative will, after replacing any blown fuses on the 20,000-volt oil circuit breaker panel and obtaining the Railways Control Engineer's permission, close, in the following order, the 6600-volt isolators, the 20,000-volt isolators, and the 20,000-volt Reyrolle oil circuit breaker.

29. Emergency Procedure.

(a) In the event of a failure of supply due to any cause external to Angliss Substation, the Tramways representative will proceed to Angliss Substation, and, after obtaining permission of the Railways Control Engineer, will open the 20,000-volt oil circuit breaker (if not already opened), the 20,000-volt and 6600-volt isolators, and then, if necessary, isolate the faulty line, as described under the heading of "Operation."

The Tramways representative will then ex-

amine the overload fuses on the Reyrolle oil circuit breaker and replace any blown fuses. He will then obtain the Railways Control Engineer's permission to close in the following order the 6600-volt isolators, the 20,000-volt isolators, and the 20,000-volt Reyrolle oil circuit breaker.

(b) In the event of the supply failing, the cause being probably due to the failure of the transformer on load, the Tramways representative will obtain the Railways Control Engineer's permission to change over these transformers, the procedure being as follows:—

Open the 20,000-volt oil switch (if not already opened), then open the 20,000-volt and 6600-volt isolators of the transformer which had been on load. Close the 6600-volt and 20,000-volt isolators on the spare transformer, examine and replace if necessary the over-load fuses on the Reyrolle oil switch, and then close the 20,000-volt oil circuit breaker.

Spare overload fuses for the 20,000-volt oil circuit breaker are kept in clips fitted in relay cover situated on control panel.

30. Important Points to be observed.

(1) Under no circumstances must the 20,000-volt isolators, the 6600-volt isolators or the outdoor type fuse isolators be operated until the Tramways representative is certain that the 20,000-volt oil switch is open.

(2) The Railways Control Engineer's per-

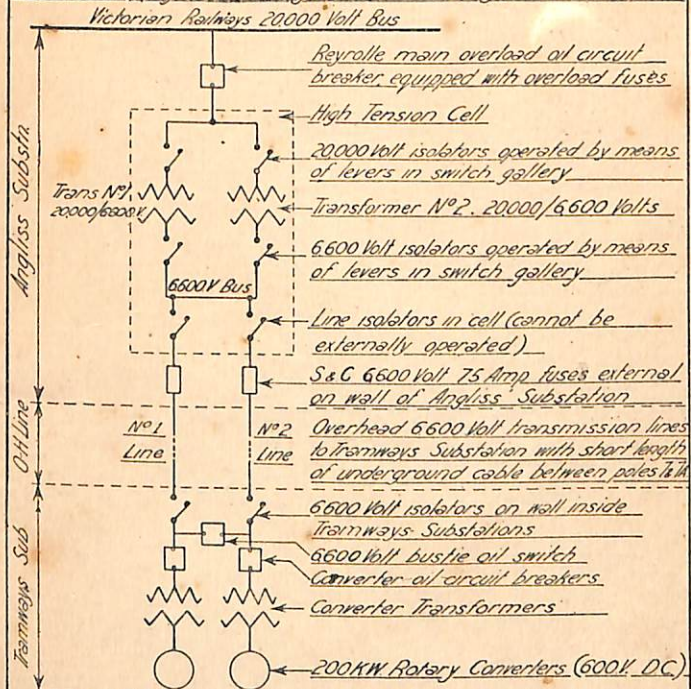
mission must be obtained before opening or closing the 20,000-volt oil circuit breaker.

(3) In the event of overhead linesmen requiring to carry out maintenance work on one or both of the 6600-volt lines, the line or lines required shall be isolated as described under "Operation," and then the line or lines shall be effectively earthed by means of the device provided, such earthing connection to be removed upon the completion of the work and before any isolators are closed.

(4) In the event of any of the 75 amp. 6600-volts fuse isolators becoming "blown" or damaged, such condition shall be reported as soon as possible to Carlton Control, who shall arrange with Mr. ~~German~~ ^{Cotley} or O.H. Foreman ~~R. J. Gardiner~~ for repairs or replacement.

(5) ^{BIRD} Carlton Control is to be advised whenever any line or lines has been disconnected, and their permission obtained before any line or lines are connected. An entry describing all operations is to be made in log book provided in fuse cupboard at Angliss Substation.

Single line diagram of Connections for Tramways Board supply from Angliss to Tramways Substation



- NOTE!
1. Reyrolle main circuit breaker must not be opened or closed without first obtaining permission from Railways Control Engineer
 2. No isolators must be opened or closed without first opening the Reyrolle main oil circuit breaker
 3. This Dwg supersedes Dwg N° E 5025
- E 5163

