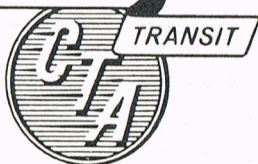


METROPOLITAN



**TROUBLE SHOOTING
PROCEDURES**

**RAPID TRANSIT CARS
SERIES**

5000, 6000

and

1-50

**CHICAGO TRANSIT AUTHORITY
TRAINING AND ACCIDENT PREVENTION DEPARTMENT**

**61-1-C3
1/62**

TRAIN WILL MOVE

Locate column which gives the panel indication you now have. Follow actions suggested in that column until trouble is corrected or by-passed. If you have more than one panel indication, treat each one separately.

YELLOW panel light **COMES "ON"** **IMMEDIATELY** when cineston handle is moved to a service braking position and train is moving in excess of 5 MPH*

TROUBLE: Loss of dynamic braking on one or more cars

CODE for reporting trouble:
Yellow Dynamic

PROCEDURE for shooting trouble:

- LOCATE DEFECTIVE CAR OR CARS
- CUT OUT 7 PT. SWITCH ON DEFECTIVE CAR

If operating a single car

1. HAVE FOLLOWER COUPLE
2. MOVE JUMPER SWITCHES BETWEEN TRAINS TO "COUPLED" POSITION
3. CUT OUT 7 PT. SWITCH ON DEFECTIVE CAR
4. OPERATE FROM HEAD CAB OF FIRST CAR

TO LOCATE DEFECTIVE CAR OR CARS: Move train in excess of 5 MPH. Apply brakes. Outside parking brake light on defective car will come "on" immediately.

- If outside parking brake lights are on sides of cars, you can see them from cab window
- If outside parking brake lights are on ends of cars, have Conductor watch lights while you move train

*You may have received this indication if the wheels on one or more cars were sliding. If you suspect this, test for indication again before starting to shoot trouble.

YELLOW panel light **REMAINS "ON"** regardless of position of cineston handle

TROUBLE: Parking brakes on one or more cars have not released

CODE for reporting trouble:
Yellow Parking

PROCEDURE for shooting trouble:

LOCATE DEFECTIVE CAR OR CARS*

- If only one car of train has outside parking brake light "on," MANUALLY CUT OUT ALL FOUR ACTUATORS ON THAT CAR

NOTE: Outside parking brake light remains "on" when actuators are cut out. Yellow panel light goes out.

- If all cars of train have outside parking brake lights "on"
 1. RESET P5 SWITCH IN HEAD CAB
 2. RESET BRAKES
 3. If yellow panel light still does not go out, CHANGE CAB (See "Procedure to Change Cabs")
- If operating a single car
 1. HAVE FOLLOWER COUPLE
 2. MOVE JUMPER SWITCHES BETWEEN TRAINS TO "COUPLED" POSITION
 3. MANUALLY CUT OUT ALL FOUR ACTUATORS ON DEFECTIVE CAR
 4. OPERATE FROM HEAD CAB OF FIRST CAR

*TO LOCATE DEFECTIVE CAR OR CARS: Reset brakes. Hold cineston handle depressed in "Coast" position. Defective car will have outside parking brake light "on."

- If outside parking brake lights are on sides of cars, you can see them from cab window
- If outside parking brake lights are on ends of cars
 1. Turn off control positive switch
 2. Reset brakes
 3. Have Conductor hold cineston handle depressed in "Coast" position. (Caution Conductor to release handle if train begins to move)
 4. Walk through or alongside train and observe parking brake lights

CIRCUIT BREAKER BUZZER sounds when cineston handle is moved to a power position

TROUBLE: Blown circuit breaker

CODE for reporting trouble: Blue

PROCEDURE for shooting trouble:

- OPERATE POWER RESET SWITCH
- MOVE CINESTON HANDLE TO POWER POSITION
- If buzzer sounds again, OPERATE POWER RESET SWITCH ONCE MORE
- MOVE CINESTON HANDLE TO POWER POSITION AGAIN
- If buzzer sounds again, LOCATE DEFECTIVE CAR (Defective car is one which has blue circuit breaker light "on")
- CUT OUT 7 PT. SWITCH ON DEFECTIVE CAR

If operating a single car

1. HAVE FOLLOWER COUPLE
2. MOVE JUMPER SWITCHES BETWEEN TRAINS TO "COUPLED" POSITION
3. CUT OUT 7 PT. SWITCH ON DEFECTIVE CAR
4. OPERATE FROM HEAD CAB OF FIRST CAR

WHITE light is "ON"

TROUBLE: Generator on one or more cars is not charging

CODE for reporting trouble: White

PROCEDURE for shooting trouble:

REPORT DEFECT SO THAT CAR CAN BE TAKEN OFF AT TERMINAL

- If you have a train phone, REPORT DEFECT TO LINE SUPERVISOR IMMEDIATELY
- If you do not have a train phone, REPORT DEFECT IMMEDIATELY UPON ARRIVAL AT TERMINAL

TRAIN WILL NOT MOVE

Locate column which gives the panel indication you now have. Follow actions suggested in that column until trouble is corrected or by-passed. If you have more than one panel indication, treat each one separately.

YELLOW panel light REMAINS "ON"	GREEN panel light is "OFF"	NORMAL panel indications
TROUBLE: Defective emergency relay circuit	TROUBLE: Defective door or door circuit	TROUBLE: Defective power control relay or power control circuit
CODE for reporting trouble: Yellow, Emergency	CODE for reporting trouble: Green	CODE for reporting trouble: Normal
<p>PROCEDURE for shooting trouble:</p> <p>If one of the following is known to be causing the trouble, CORRECT THE TROUBLE, RESET THE BRAKES AND PROCEED</p> <ul style="list-style-type: none"> ● Open side trip ● Jumper switch at wrong position ● Conductor's emergency switch pulled <p>If the cause of the trouble is not known, CHECK P5 SWITCH IN HEAD CAB CHECK SIDE TRIPS, JUMPER SWITCHES AND CONDUCTOR'S EMERGENCY SWITCHES until the trouble is found, then CORRECT THE TROUBLE, RESET THE BRAKES AND PROCEED</p> <p>If the trouble cannot be found or cannot be corrected when found</p> <ul style="list-style-type: none"> ● RESET P5 SWITCH IN HEAD CAB ● DEPRESS AND HOLD EMERGENCY RELAY BY-PASS BUTTON (Releasing button will cause brakes to reapply) ● PROCEED WITH CAUTION (When the emergency relay by-pass button is depressed, overrunning a track trip, opening a Conductor's emergency switch or releasing cineston handle will not stop the train. To obtain emergency braking, move the cineston handle to the 4th point of braking) 	<p>PROCEDURE for shooting trouble:</p> <ol style="list-style-type: none"> 1. Have Conductor OPERATE DOOR SWITCHES SEVERAL TIMES 2. Have Conductor CHECK FOR OPEN DOOR <p>If a door is open</p> <ul style="list-style-type: none"> ● RESET PASSENGER'S EMERGENCY If this does not close door . . . ● TURN DOOR CUT-OUT SWITCH TO "OFF" POSITION (If door remains open, push it closed) ● PROCEED <p>If no door is open</p> <ul style="list-style-type: none"> ● PLUG POWER CONTROL RELAY "IN" ● OPERATE ON BUZZER SIGNALS <p>If a door arm is broken</p> <ul style="list-style-type: none"> ● TURN DOOR CUT-OUT SWITCH TO "OFF" POSITION ● CLOSE DOOR. SECURE IT WITH A ROPE OR TROLLEY SLIPPER OR HAVE IT GUARDED ● PROCEED 	<p>PROCEDURE for shooting trouble:</p> <ul style="list-style-type: none"> ● MAKE CERTAIN CONTROL POSITIVE SWITCH IS "ON" ● RESET P3 AND P11 SWITCHES IN HEAD CAB ● PLUG POWER CONTROL RELAY "IN" AND OPERATE ON BUZZER SIGNALS

If train still will not move, see PROCEDURE TO CHANGE CABS

PROCEDURE TO CHANGE CABS

If after all Trouble Shooting steps are completed, the train still cannot be moved from the head cab, take the following steps:

ONE UNIT TRAIN

1. Lock up cineston in head cab
2. Move back to rear cab (left side of train)
3. Operate train

If train will not operate, see PROCEDURE TO HAVE FOLLOWER COUPLE

ALL TRAINS EXCEPT ONE UNIT TRAINS

1. Lock up cineston in head cab
2. Move back to next cab on right side of train
3. Move both jumper switches at this point to "Uncoupled" position
4. Test the cab for response
5. If train responds, cut out the 7 pt. switches on all cars ahead and operate train

If train will not operate from this cab, move both jumper switches back to "Coupled" position and repeat steps 2 through 5 above until you find a cab from which you can operate the train

If you reach the last cab on the right side of the train and the train still will not operate, trouble is probably in the last unit

1. Leave both jumper switches at this point in the "Uncoupled" position
2. Cut out 7 pt. switches on rear unit
3. Return to head cab and attempt to operate

If train will not operate from any cab, see PROCEDURE TO HAVE FOLLOWER COUPLE

PROCEDURE TO HAVE FOLLOWER COUPLE

1. Have following train couple
2. Leave jumper switches between trains in the "Uncoupled" position
3. Cut out 7 pt. switches on all cars of defective train
4. Have defective train pushed to terminal