



## **TROUBLE SHOOTING PROCEDURES**

# **RAPID TRANSIT CARS SERIES 6000 AND 1- 50**

# TRAIN WILL MOVE

As soon as trouble is indicated, notify the Line Supervisor. Then, 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.

\*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."

**CIRCUIT BREAKER BUZZER** sounds

Buzzer can only sound with cineston handle in a power position.

**TROUBLE:** Blown circuit breaker

**CODE** for reporting trouble: Blue

**PROCEDURE** for shooting trouble:

- MOVE CINESTON HANDLE TO COAST POSITION AND OPERATE POWER RESET SWITCH
- MOVE CINESTON HANDLE TO POWER POSITION
- If buzzer sounds again, MOVE CINESTON HANDLE BACK TO COAST POSITION AND OPERATE POWER RESET SWITCH AGAIN
- MOVE CINESTON HANDLE BACK TO POWER POSITION
- 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" for prolonged period

NOTE: On cars 51, 52 & 53 white light comes "on" momentarily when crossing gaps. This does not indicate trouble

**TROUBLE:** Generator on one or more cars is not charging

**CODE** for reporting trouble: White

**PROCEDURE** for shooting trouble:

REPORT DEFECT TO LINE SUPERVISOR IMMEDIATELY

# TRAIN WILL NOT MOVE

As soon as trouble is indicated, notify the Line Supervisor. Then, 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.

<b>YELLOW</b> panel light REMAINS "ON"	<b>GREEN</b> panel light is "OFF"	<b>NORMAL</b> panel indications
<b>TROUBLE:</b> Defective emergency relay circuit	<b>TROUBLE:</b> Defective door or door circuit	<b>TROUBLE:</b> Defective power control relay or power control circuit
<b>CODE</b> for reporting trouble: Yellow, Emergency	<b>CODE</b> for reporting trouble: Green	<b>CODE</b> for reporting trouble: Normal
<p><b>PROCEDURE</b> for shooting trouble:</p> <p>If the reason for the train being in emergency has been determined and IF THE CAUSE OF THE TROUBLE HAS BEEN CORRECTED, RESET THE BRAKES AND PROCEED.</p> <p>If the cause of the trouble is not known, CHECK P5 SWITCH IN HEAD CAB AND RESET IF BLOWN.</p> <p>If this does not correct the trouble, then walk the length of the train and, CHECK ALL SIDE TRIPS, JUMPER SWITCHES, WHEELS ON TRACK AND CONDUCTOR'S EMERGENCY SWITCHES. If any defects are found correct them, if possible.</p> <p>When visual inspection is completed, REPORT YOUR FINDINGS AND ANY CORRECTIVE ACTIONS TO THE LINE SUPERVISOR, who will decide if additional corrective actions are necessary.</p> <p>If instructed to use the Emergency By-Pass</p> <ul style="list-style-type: none"> <li>• RESET P5 SWITCH IN HEAD CAB</li> <li>• DEPRESS AND HOLD EMERGENCY RELAY BY-PASS BUTTON (Releasing button will cause brakes to reapply)</li> <li>• 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)</li> </ul>	<p><b>PROCEDURE</b> for shooting trouble:</p> <ol style="list-style-type: none"> <li>1. Have Conductor OPERATE DOOR SWITCHES SEVERAL TIMES</li> <li>2. Have Conductor CHECK FOR OPEN DOOR</li> </ol> <p>If a door is open</p> <ul style="list-style-type: none"> <li>• RESET PASSENGER'S EMERGENCY. If this does not close door . . .</li> <li>• TURN DOOR CUT-OUT SWITCH TO "OFF" POSITION (If door remains open, push it closed)</li> <li>• PROCEED</li> </ul> <p>If no door is open, report findings to Line Supervisor and request permission to by-pass power control relay circuit. If permission is given</p> <ul style="list-style-type: none"> <li>• PLUG POWER CONTROL RELAY "IN"</li> <li>• OPERATE ON BUZZER SIGNALS</li> </ul> <p>If a door arm is broken</p> <ul style="list-style-type: none"> <li>• TURN DOOR CUT-OUT SWITCH TO "OFF" POSITION</li> <li>• CLOSE DOOR. SECURE IT WITH A ROPE OR TROLLEY SLIPPER OR HAVE IT GUARDED</li> <li>• PROCEED</li> </ul>	<p><b>PROCEDURE</b> for shooting trouble:</p> <ul style="list-style-type: none"> <li>• MAKE CERTAIN CONTROL POSITIVE SWITCH IS "ON"</li> <li>• RESET P3 AND P11 SWITCHES IN HEAD CAB</li> </ul> <p>If this does not correct trouble, contact Line Supervisor and request permission to by-pass power control relay circuit. If permission is given</p> <ul style="list-style-type: none"> <li>• PLUG POWER CONTROL RELAY "IN"</li> </ul> <p><b>NOTE:</b> CARS EQUIPPED WITH PAN TROLLEY:</p> <p>CHECK FRONT TROLLEY</p> <ul style="list-style-type: none"> <li>• If trolley is up, lower it.</li> <li>• If trolley is down, take steps above.</li> </ul>

**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 folder PROCEDURE FOR AND UNCOUPLING ALL ELECTRIC CARS, "Coupling to a Train with Equipment Trouble."

## 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 folder PROCEDURE FOR COUPLING AND UNCOUPLING ALL ELECTRIC CARS, "Coupling to a Train with Equipment Trouble."