5A

1.1 R-62 / R-62A FAMILIARIZATION

1.1.1 INTRODUCTION TO R-62 / R-62A EQUIPMENT

The R-62 is an A Division subway car model built from 1983-1985 by Kawasaki Heavy Industries in Kobe, Japan. The R-62A was built from 1984-1987 by Bombardier in Quebec, Canada.

R-62 / R-62A SPECIFICATIONS	
Length	51 feet
Width	8 feet 10 inches
Height	12 feet
Weight	74,500 lbs.
Unit Type Car Numbers	**R-62 (**5 Car Units) Cars 1301-1625
Unit Type Car Numbers	**R-62A (**5 Car Units) Cars 1651-2475
Coupler	H2C
Capacity	42 seated / 168 standing
Duplex Air Gauge Pressure Readings (When Train is Fully Charged)	90-110 PSI Brake Pipe (Black Needle) 70-80 PSI Straight Air (Red Needle)
Doorways	6 (3 per side)
Door Panels	12 (6 per side)

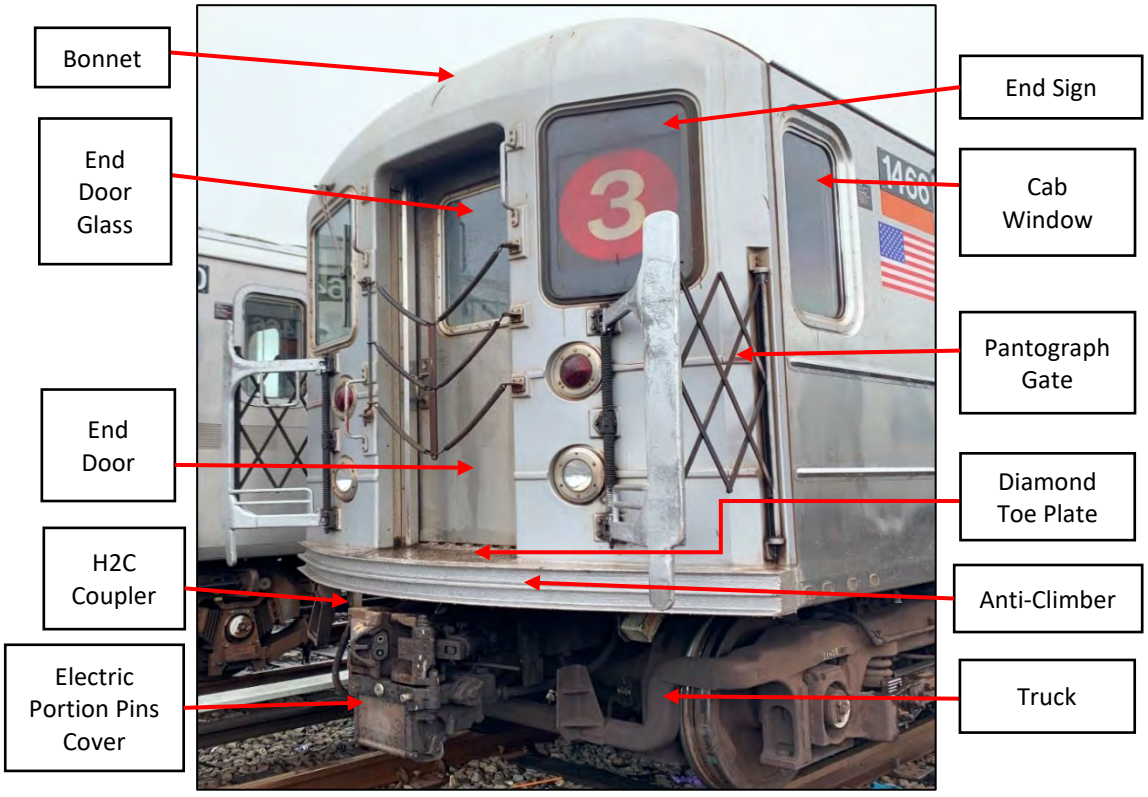
1.1.2 IDENTIFYING CHARACTERISTICS

Stainless steel exteriors
Equipped with Pantograph gates
3 Doorways per side
Manual side destination signs (roll signs)
Hand-crank end display signs
Contain both single and transverse cabs.
On cars configured as five car units, operating cabs are transverse.
Sealed Beams and Tail Lights arranged vertically on the ends of cars
Contact shoes extend 7 inches past the side of the car body

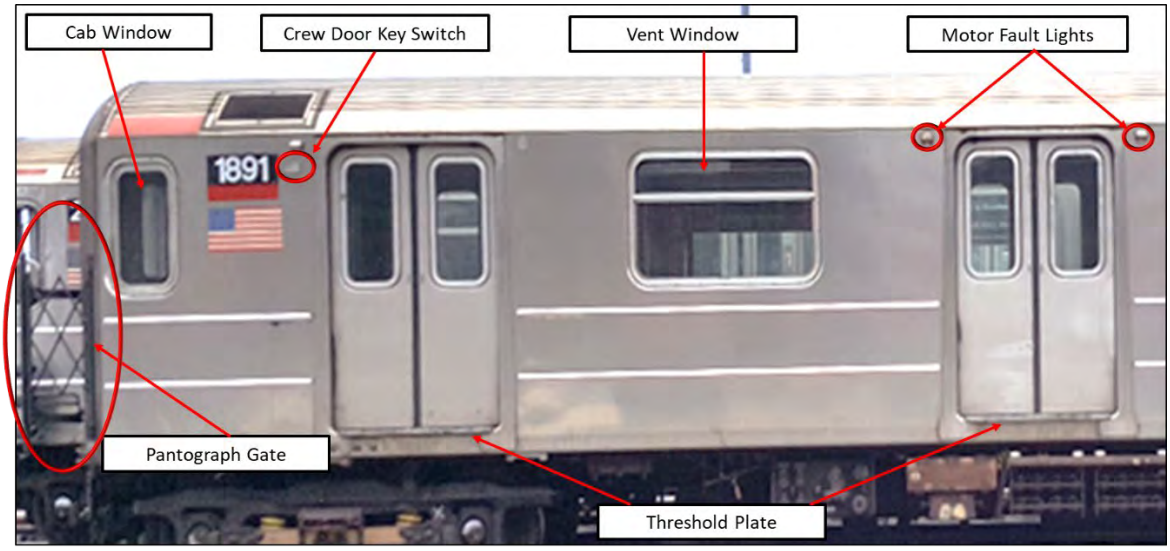
NOTE: R62 / 62A equipment was delivered originally as single cars with single / non-transverse cabs. The entire fleet was modified to 5 car units with transverse operating cabs except for twenty (20) select cars, not in numerical sequence, that remained single cars with single operating cabs exclusively for the Grand Central / Times Square Shuttle. These cars are stored and maintained at Livonia Yard facility.

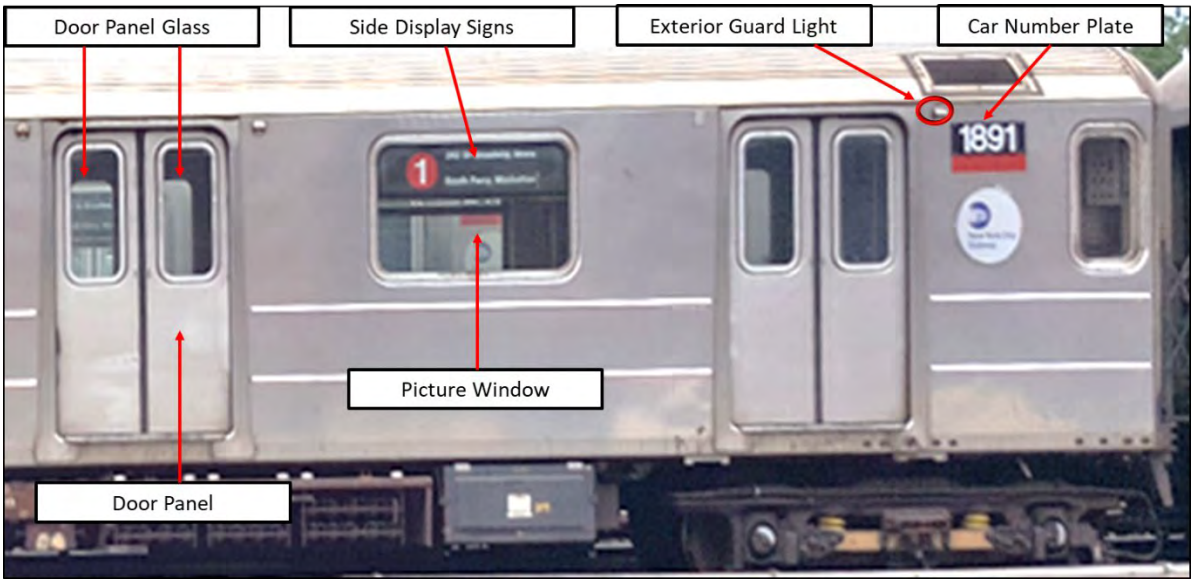
1.1.3 R62/62A FRONT VIEW

R62/62A FRONT VIEW CON'T



1.1.4 EXTERIOR: SIDE VIEW





1.2 GENERAL CONFIGURATION

R-62 and R-62A subway cars were originally purchased and operated as single car units. Later, most of the single car units were linked into 5 car units. However, some R-62A cars remained as single car units, presently assigned to the Grand Central / Times Square (42nd Street) Shuttle.

R-62 and R-62A Cars 1301-2475 are set up in five car units.

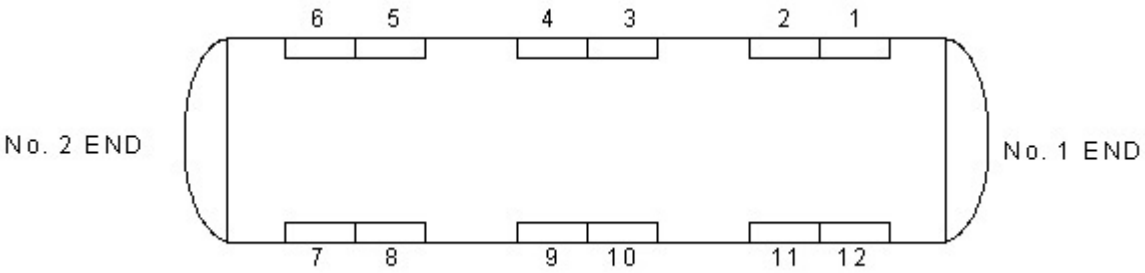
Select R-62A Cars are set up as single cars for the Grand Central / Times Square Shuttle.

&
(Single Cars)

All 5-car units of R-62 or R-62A cars contain transverse cabs at the ends of the unit, and single cabs on the other ends of each car.

Single cars typically contain single cabs at both ends of the car; however, select single cars have been modified so that there are transverse cabs available at the ends of the shuttle trains.

Each car has 12 door panels with individual door motor operators on all doors. They are numbered from 1 to 12, starting with the door panel opposite the #1 cab and numbering counterclockwise around the car body.



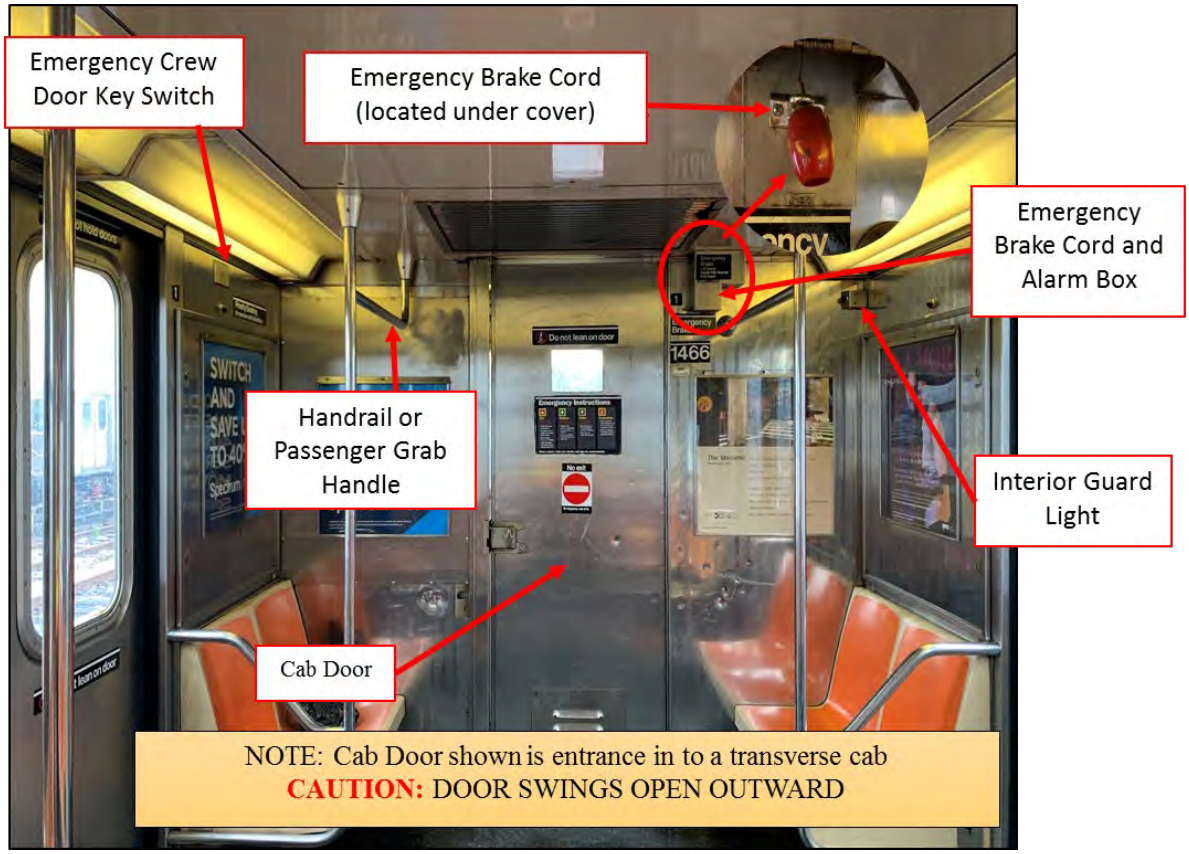
NOTE: Number 1 end of the car is identified by the end containing the car body manual Handbrake

NOTE: Specific information pertaining to Units and Consist explanations, refer to Unit 4.

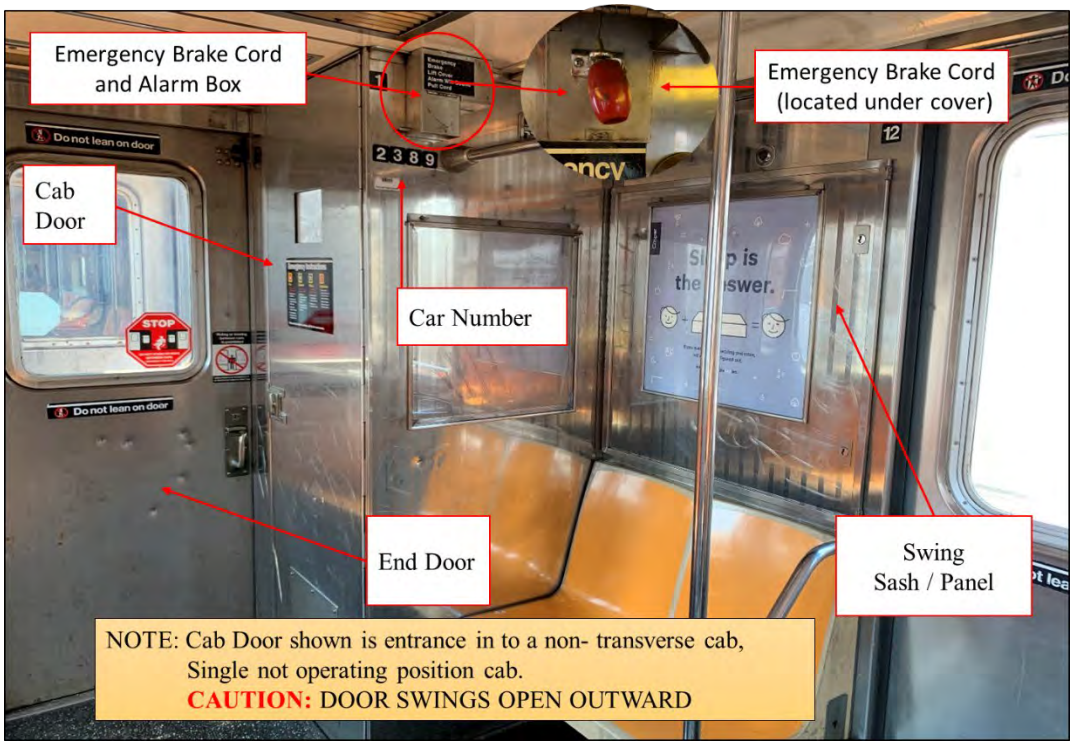
1.3 CAR INTERIOR

1.3.1 PASSENGER COMPARTMENT

1.3.2 R62/62A INTERIOR END WITH TRANSVERSE CAB



1.3.3 R62/62A INTERIOR END WITH A SINGLE (HALF CAB)



1.3.4 ACTIVATE / RESET EMERGENCY BRAKE VALVE

Each cab contains a B-3-C Emergency Brake Valve (EBV) located near the ceiling. There are multiple emergency brake cords connected to each valve.

Transverse cabs have three cords connected to the EBV. Two cords are located inside the cab for use by train crew members, and one cord is located outside the cab for passengers.

Single (half) cabs have two cords connected to the EBV. One is located inside the cab for use by train crew members, and one outside the cab for use by passengers.

When a cord has been activated (pulled), the associated EBV will off-center and the train will go into emergency. To reset the cord, manually re-center the associated EBV. If the EBV cannot be reached, it can be re-centered by pulling on the connecting cord that was not pulled: to find the center position of the EBV.

When a cord has been activated (pulled), the train will not provide any information as to the location of the pulled cord. The crew will notify the RCC and conduct an investigation to determine the location of the pulled cord. The reason why the cord was pulled and any other pertinent information must be reported to the Rail Control Center.

	
EBV Open (pulled)	**EBV Closed (after being reset)**

R-62 and R-62A cars have been equipped with a means of identifying the location of a pulled cord on trains. When a cord has been activated (pulled), an amber motor fault light on the exterior of the affected car will flash, indicating the train car with the pulled cord.

Additionally, an alarm will sound in the cars where the protective cover over the passenger Emergency Brake Cord has been raised (to access and pull the cord).

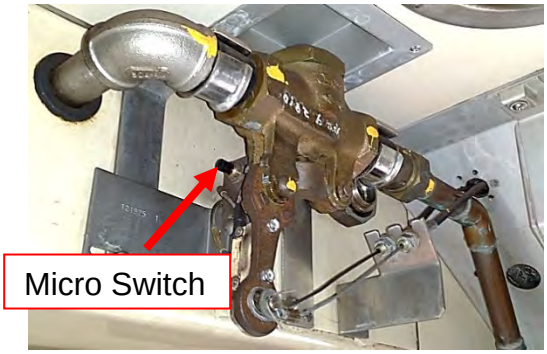
The crew, after notifying the RCC and entering the train car, must investigate to determine the cause of the pulled cord, along with any other required information.

NOTE: In the event of an emergency brake application due to a pulled cord and there is no flashing amber light on the exterior of the train; the crew must report this to RCC and note the defect with the motor amber light on the Car Defect Sheet.

To reset the EBV:

1. Close the EBV by centering it so that it is Perpendicular to the pipe (as pictured).

2. Press and hold the micro switch button behind the valve to extinguish the flashing yellow motor fault light. Failure to complete this step will cause the light to flash indefinitely.



R-62 / R-62A have an amber colored Motor Fault Lights at the center of the car. They illuminate steadily when there are dead motor(s) in that car. However, they serve a secondary purpose. They will flash continuously to indicate a car that has an emergency brake valve activated.

ACTIVITY: Each candidate will activate the Emergency Brake Valve from:

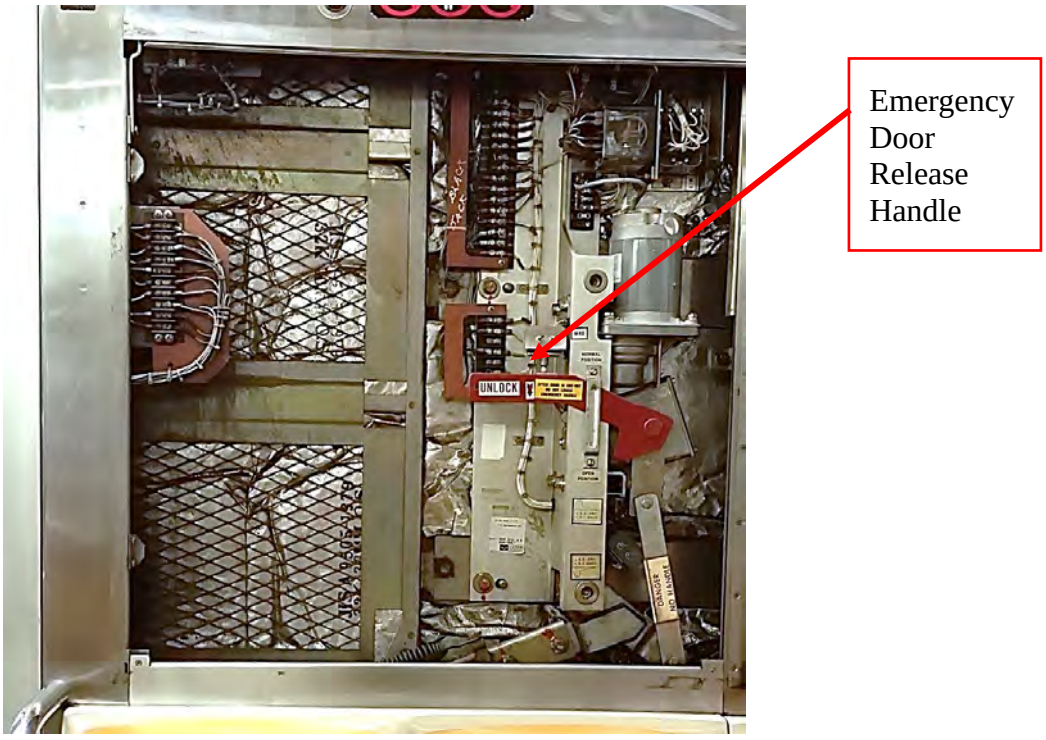
- Inside the cab and reset the valve.
- Outside the cab and reset valve
- Reset the Micro Switch

1.3.6 EMERGENCY CREW DOORS

On R-62 and R-62A equipment, door panels 1 and 9 are Emergency Crew Doors. Located diagonally opposite each other inside the car body, each can be opened using the R-9 key to manipulate the adjacent Emergency Crew Door Key Switch.

1.3.7 THE EMERGENCY DOOR RELEASE HANDLE

On R-62 and R-62A equipment, Emergency Door Release Handles are located on each Door Operator, behind the swing sash.



To operate, pull down on the red lever. To reset, restore the red lever to its original position.

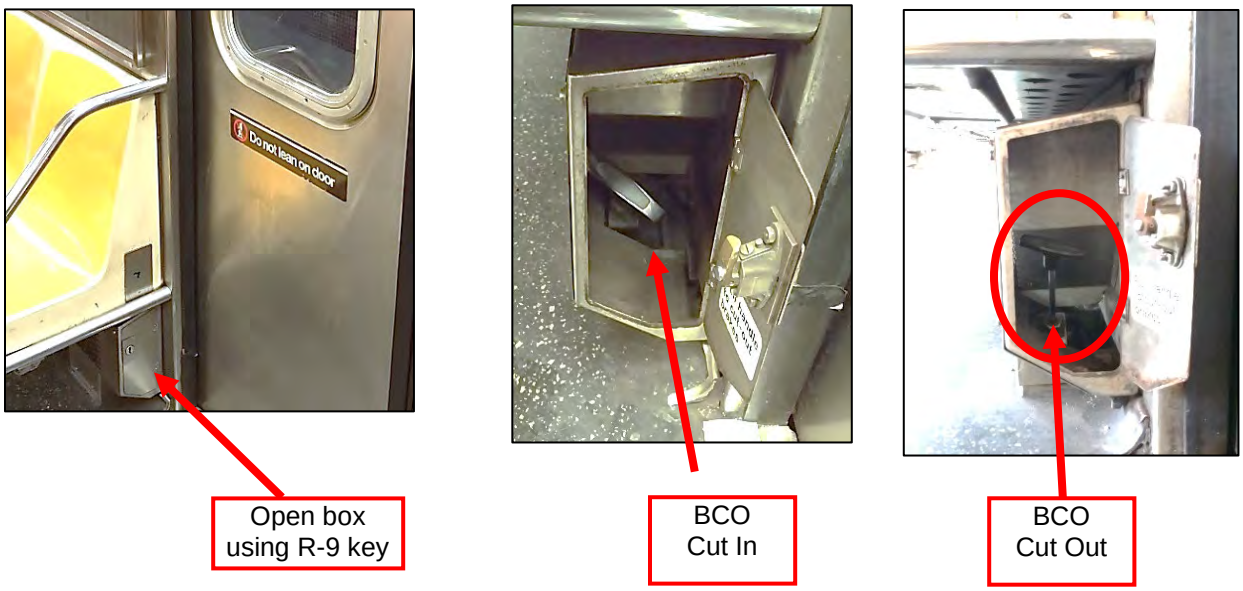
1.3.8 DOOR CUTOUT SWITCH CONFIGURATION / MECHANICAL LOCK

On R-62 and R-62A equipment, a Mechanical Lock / Cutout Switch (Door Cutout Key Switch) is located on the side of the seat adjacent to each side door.

1.3.9 BRAKE CUTOUT (BCO)

On R-62 and R-62A equipment, the Brake Cutout (BCO) is located in a box underneath the seat adjacent to the #2 door panel.

(Location) (Cut-in) (Cut-out)

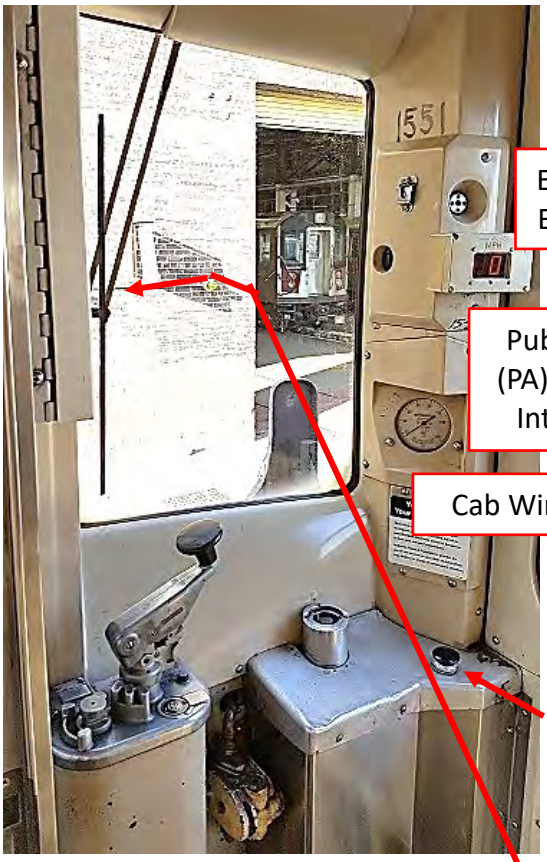


When the Brake Cutout (BCO) is activated (pulled up), the brakes on that car are cut out. When the Brake Cutout (BCO) is pushed all the way down, the brakes on that car are cut in.

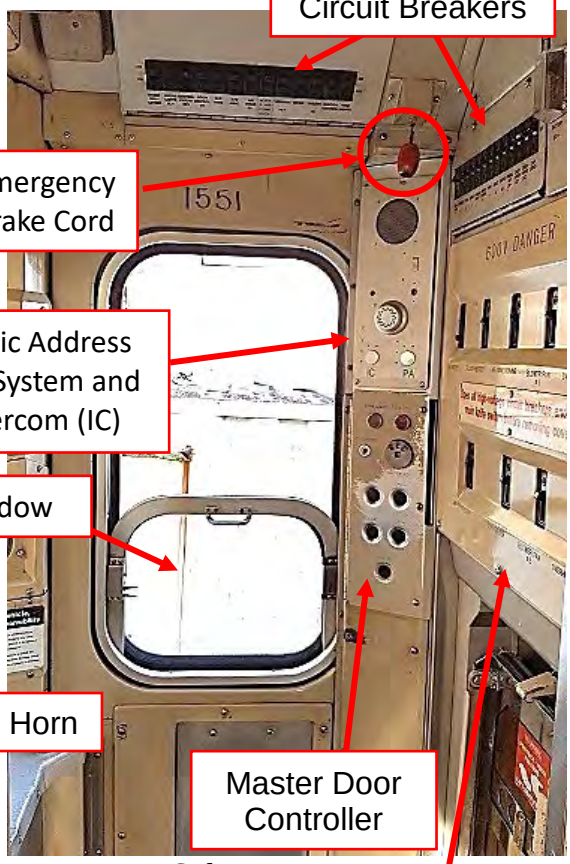
NOTE: Conductors should not activate or reset BCOs unless specifically directed to do so by the Train Operator assigned to their train, or a Service Delivery Supervisor

1.4 CAB LAYOUT

1.4.1 TRAIN OPERATOR SIDE



Front Facing View



Side Facing View

Low Voltage Circuit Breakers

Emergency Brake Cord

Public Address (PA) System and Intercom (IC)

Cab Window

Horn

Master Door Controller

High Voltage Circuit Breakers

Used to turn HVAC system (Air Conditioner & Heat Ventilation) ON and OFF train line (Press appropriate button)

Used to turn Main Lights ON and OFF train line (Press appropriate button)

Auxiliary Panel

1.4.2 HIGH VOLTAGE CIRCUIT BREAKERS

On R-62 and R-62A equipment, High Voltage Circuit Breakers (HVCB) are located inside the cab.

In the number one cab, whether it is a single or transverse cab, they are located on a panel above the Train Operator seat.

The Heating Ventilation and Air Conditioning (HVAC) system for the car is powered by the Blower Fan, Air Conditioning, Overhead Heater and Floor Heater high voltage circuit breakers (HVCB). IF any of these circuit breakers are tripped or turned off, they all must be turned off and reset in the order listed above.

In addition, there are other high voltage circuit breaker on the panel. The Cab Heater circuit breaker, which is located in every cab, allows the user to turn "On" or "Off" the heater for that cab only. It is used for the crews comfort and must be turned off upon vacating the cab.

On the High Voltage panel in the number one cab there is also an Air Compressor circuit breaker. It is used to provide power to the air compressor unit located under that car. The Converter circuit breaker provides power to the Converter unit mounted under the car.

INSIDE THE #1 CAB

Above the Train Operator Seat.

NOTE: If any circuit breaker trips, you may reset it once by pushing it down to the "Off" position, then all the way up to the "On" position. If the circuit breaker trips a second time, notify RCC and be governed by their instructions.

1.4.3 LOW VOLTAGE CIRCUIT BREAKERS

On R-62 and R-62A equipment, Low Voltage Circuit Breakers (LVCB) are located in *both* cabs on *every* subway car whether the cab is a single or transverse cab.

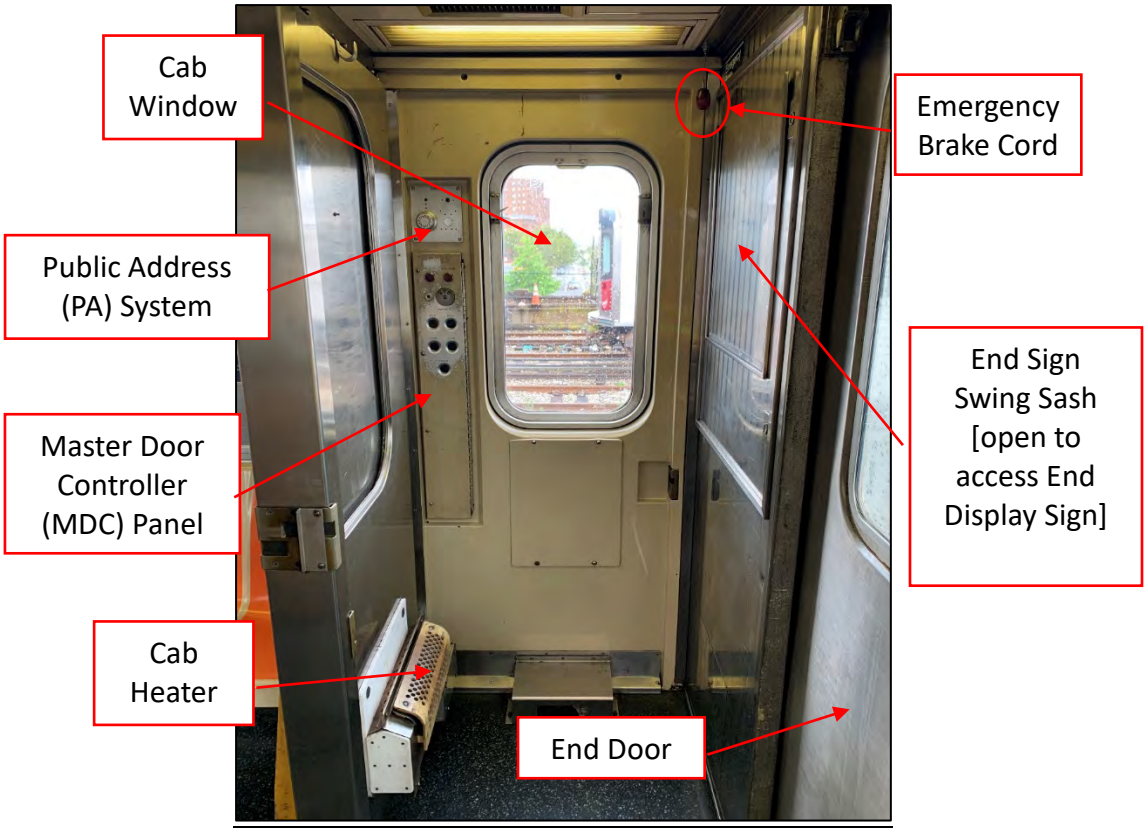
In the #1 cab, they are located above the window and above the high voltage circuit breakers. In the #2 cab they are located above the window.

Inside #1 Cab
Above Cab Window

Inside #1 Cab
Above the high voltage circuit breakers (Above Cab Seat)

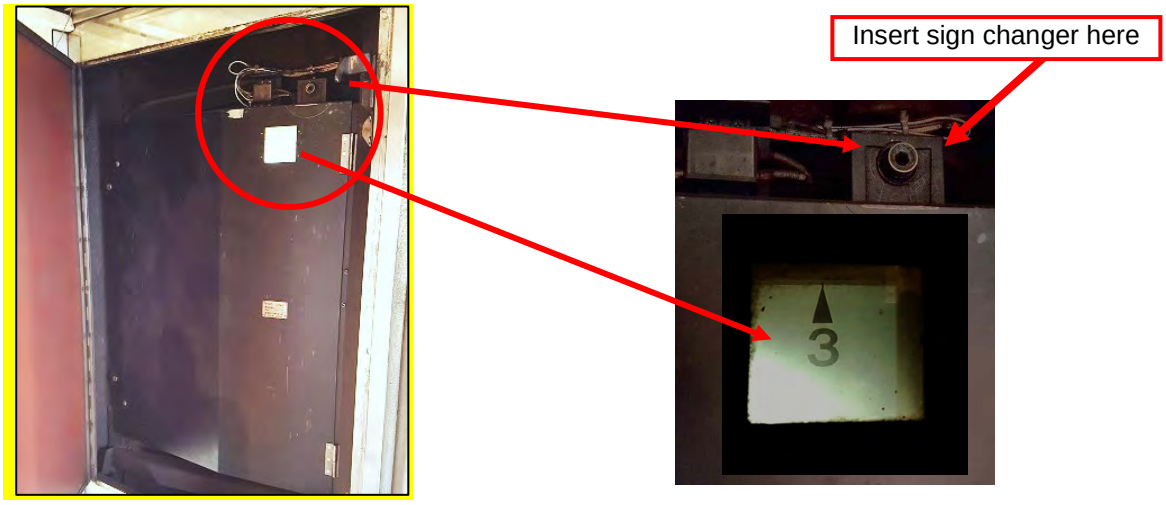
Inside #2 Cab
Above Cab Window

1.4.4 CAB LAYOUT: SIDE OPPOSITE TRAIN OPERATOR



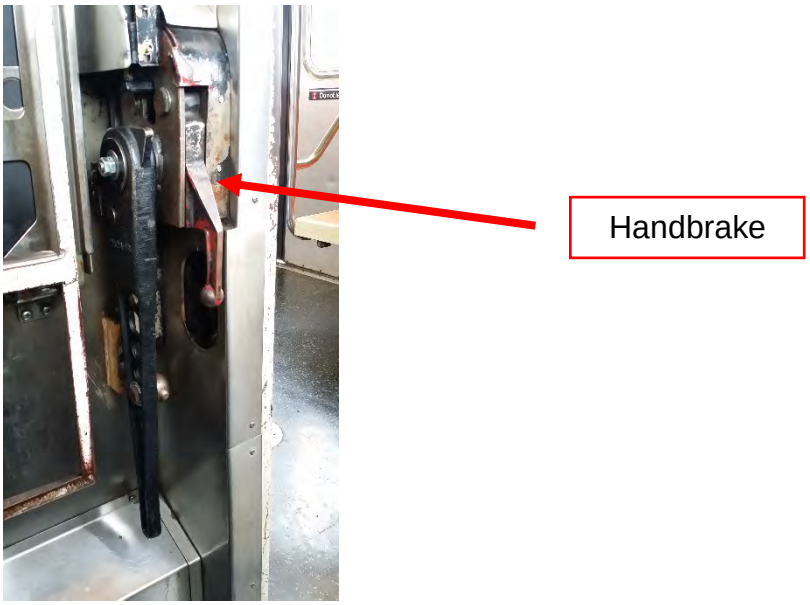
1.4.5 END DISPLAY SIGN

R-62 and R-62A subway cars are equipped with a non-motorized roll sign on the ends of each car. To select the display that corresponds with the train's service route, open the end sign swing sash and insert the narrow end of the Sign Changer into the slot, then rotate clockwise or counterclockwise until the desired route is centered in the small window. The desired route will now be properly displayed on the end of the car.

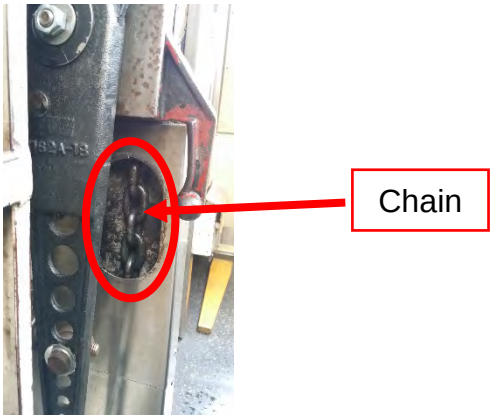


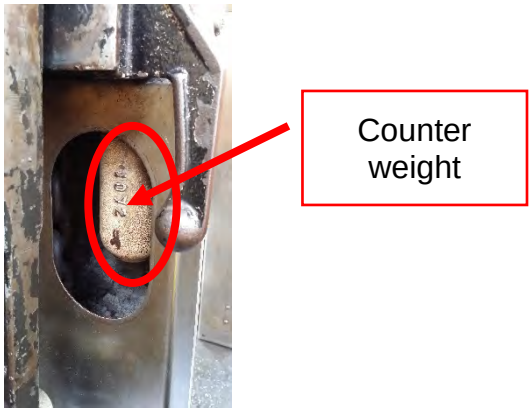
1.4.6 HANDBRAKE

On R-62 and R-62A equipment, the Handbrake is located inside the cab at the #1 end of each subway car, next to the cab seat. It is always at the #1 end whether the cab is a transverse cab or single cab.



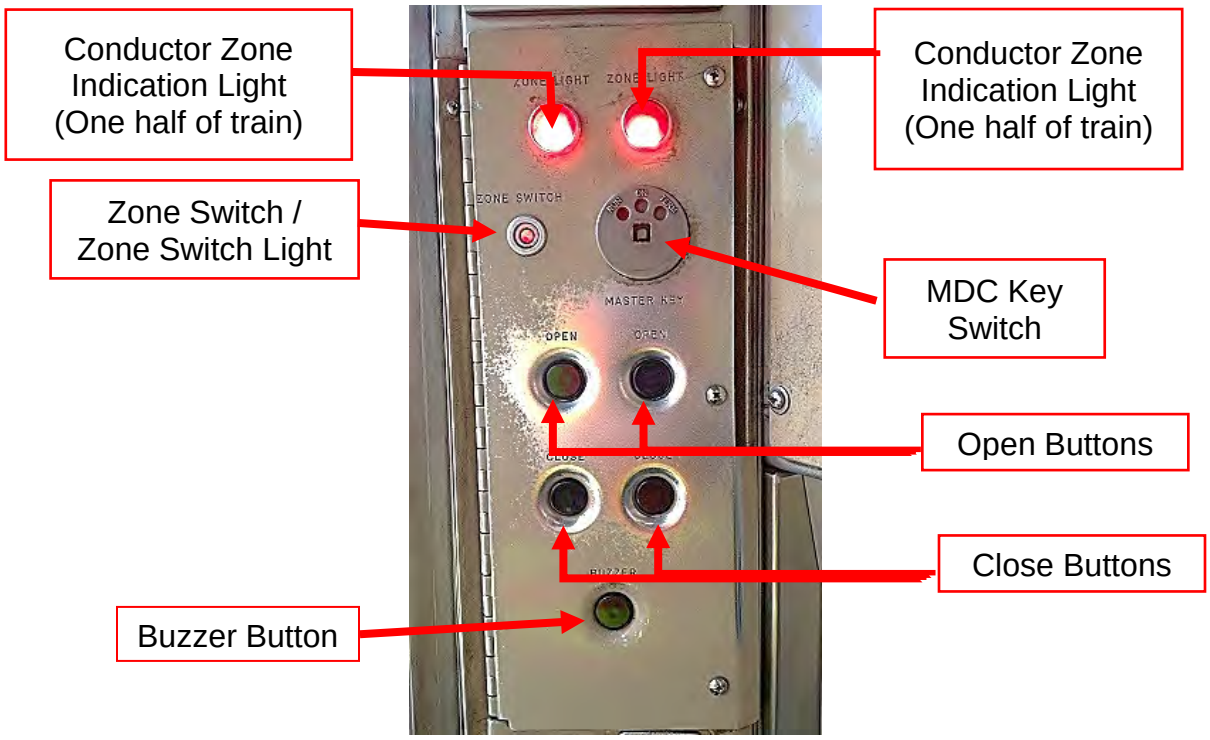
When a handbrake is applied (ON) the chain will be showing within the window, when released (OFF) the counterweight (Ball) will be showing within the window (no chain must be showing).





NOTE: Counter weight must be in the window (opening) and "snug"(tight).
When the counter weight **is** loose or the chain is showing, the handbrake is considered applied or Self Applying. A counter weight that is not tightly in place can start to drop on its own to the point that the chain is only seen.
This means that the hand brake is "Self Applying". This condition will not have a "Hand Brake Light" illuminate.

1.4.7 MASTER DOOR CONTROLLER (MDC) PANEL



1.4.7.1 R-62 and R-62A CONDUCTOR ZONE INDICATION LIGHT

In Transverse Cabs, Indication lights for both zones are located on each MDC panel.
When illuminated, it indicates all side doors in that section are closed and locked. This illumination function is only active on a Zoned / Active MDC.

1.4.7.2 R-62 and R-62A ZONE SWITCH (and LIGHT)

When the Zone Switch is illuminated, it indicates that this cab is zoned up (activated) as a Conductor's operating position. To de-zone, depress the Zone Switch (both MDCs in transverse cabs will dezone).

1.4.7.3 R-62 AND R-62A MDC (MASTER DOOOR CONTROL) KEY SWITCH

Used to zone up (establish) Operating Cab. Also controls the door open/close commands.

NOTE: **R-62 and R-62A – NO DOOR ENABLE FEATURE**
R-62 and R-62A subway cars are not equipped with a Door Enable System

1.4.7.4 R-62 and R-62A – BUZZER

Used to send buzzer signals.

Train crew who utilize the buzzer on R-62 and R-62A subway cars will not hear the outgoing buzzer signal (sound) in the cab where the buzzer is utilized; however, the recipient (receiver) of the signal will hear it.

NOTE: Chapter 3 in the Book of Rules of Regulations lists and explains the Buzzer Signals along with Train Horn / Whistle signals.

1.4.7.5 R-62 and R62A OPEN BUTTONS

Buttons are active when MDC Key Switch is in the 'ON' position. If enabled, side doors will open as soon as the OPEN Button is pressed, not when pressure is released.

1.4.7.6 R-62 and R62A CLOSE BUTTONS

Buttons are active when MDC Key Switch is in 'ON' position. The side doors will close as soon as the CLOSE Button is pressed, not when pressure is released.

1.4.7.6 ALTERNATE CONDUCTOR INDICATION

In transverse cabs, if Conductor Indication is lost on the MDC panel, alternate indication may be found on the MDC panel on the other side of the same operating cab.

1.8 DOOR RELATED CIRCUIT BREAKERS

CIRCUIT BREAKER (LOCATION)	FUNCTION	SYMPTOM IF TRIPPED
D8 (#1 cab in C/R's Operating Car)	Powers the MDC in that cab. If the MDC is zoned up in that cab, powers train line door operation.	Doors close train line and MDC loses power.
D8 (#2 cab in every car)	Powers door commands to each car.	Doors close in the affected car.
DC1 / DC2 (#1 cab in every car)	Each circuit breaker powers door operators (motors) on one side of the car.	In the affected car, doors on the affected side remain in their current position.
C/R INDIC (#2 cab in every car)	Powers the Signal Light Relay (SLR)	Exterior and Interior Guard Lights will illuminate in the affected car regardless of the position of the doors.
C/R INDIC (first and last cab)	Powers the Conductor Indication Circuit	The Conductor will lose Indication
M/M INDIC (rear cab of the train)	Powers the Train Operator Indication Circuit	The Train Operator will lose Indication
GL	Powers the Guard Lights and Door Fault Indicator Lights (Fault Lights) in each car	Interior Guard Lights, Exterior Guard Lights, and Fault Lights will not illuminate, regardless of the position of the doors.

NOTE: A complete list of circuit breakers will be discussed in detail with specific information for trouble shooting techniques pertaining to door operations and train operation. This specific information is in the troubleshooting unit.

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