

TRAIN RESCUE BY MEANS OF ANOTHER TRAIN WORK INSTRUCTION

Work description: This work instruction details the train rescue operation by either automatic or manual coupling.

Scope: This work instruction is written specifically for OCC and train operating staff of Honolulu Rail Transit.

References: Nil

PPE and precautions

Nil

Competencies or qualifications

OCC Supervisor, Train Controller, Information Controller, Train Operator, Train & Stations Supervisor, Station Operator

Licenses or permits required

Train Driver

Tools and equipment required

Train Key, Train Operator Duty Bag



Warning

For automatic coupling to happen, the rescue train and the failed train must have fully functional ATC on board and are capable to communicate with trackside equipment.



Warning

Choose "push rescuing" ONLY IF the rescue train and the failed train have full braking capacity.



Note

A Train Operator must be sent to board the rescue train regardless of the location of the rescue train (either at station berth or in-between stations). This is to cater for the possibility of closing/opening train doors, manual coupling if unsuccessful automatic coupling and/or manual driving.



Note

As all train doors (and PSGS) must be closed before the automatic coupling begins, therefore staff intervention (to close the train doors and PSGS) must be arranged if the failed train at station berth.



Note

As the new consist configuration (after coupling) is longer than the platform length, train doors and PSGS may not open automatically when it is at station berth. In this case, both train doors and PSGS must be operated manually by the onboard Train Operator and the Station Operator using the PSGS local control panel.

The same situation applies to any consist not correctly docked at station where train doors do not align with PSGS.

Automatic Train Rescue

OCC Supervisor

Having assessed the operational context to proceed with automatic train rescue, you must:

- Instruct the Train Controller to:
 - Identify and prepare a train as the rescue train
 - Implement the automatic rescue operation to rescue the failed train
- Instruct the Information Controller to make public announcements to the affected trains/stations; informing passengers in the failed train to wait and to prepare for the approaching train coupling ("hold on to steady yourself while the train starts moving")

Train Controller

On OCC Supervisor's authorization to implement automatic train rescue, you must:

- Hold and stop trains from entering the affected area including manually driven trains
- Check and make certain that the failed train is in a zone possible for automatic coupling
- Identify a train as the rescue train; detain passengers if the rescue train can stop at a station on its way to the failed train without reversing

Approved By:

☐ Director, Operations and Maintenance

☐ Department Manager

☐ Manager, HSE (Operations and Maintenance)

Signature:

Date:

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Information Controller	<ul style="list-style-type: none"> • Arrange a Train Operator to get on board the rescue train as a standby; establish a safe path for the Train Operator to reach the rescue train if it is stopped outside the station • Brief the Train Operator on board the rescue train on the chosen rescue method • Make certain the tracks and the surrounding area of the failed train are clear that, passengers are NOT self-evacuating • Set a route for the rescue train to move in, to the closest point to the failed train • Route the rescue train to runs at slow speed (approximately at 3 mph) towards the failed train and automatically couples itself to the failed train • On notification from the ATS that the coupling is successful (new train ID representing the coupled consist), route the new consist to either the nearest station for passenger detrainment or to the depot without stopping at stations • Where required, inform the Station Operator to: <ul style="list-style-type: none"> ○ Operate the PSGS manually in unison with the opening/closing of the train doors ○ Assist passenger detrainment
	<p>On OCC Supervisor's instruction, you must:</p> <ul style="list-style-type: none"> • Make public announcements to the affected trains/stations; informing passengers in the failed train to wait and to prepare for the approaching train coupling (hold on before and after the coupling)

**Note**

The ATC system does not support automatic uncoupling for rescue operations. Any uncoupling must be carried out by qualified and trained Train Operator.

**Warning**

Information Controller must make passenger announcements informing the passengers on the failed train (and if required, the rescue train also) about the forthcoming train coupling in particular when the rescue train couples with the failed train and when the new consist is about to move as one unit.

Manual Train Rescue	
OCC Supervisor	<p>Having assessed the operational context to proceed with manual train rescue, you must:</p> <ul style="list-style-type: none"> • Instruct the Train Controller to: <ul style="list-style-type: none"> ○ Identify and prepare a train as the rescue train ○ Implement the manual rescue operation to rescue the failed train • Instruct the Information Controller to make public announcements to the affected trains/stations; informing passengers in the failed train to wait and to prepare for the approaching train coupling ("hold on to steady yourself while the train starts moving")
Train Controller	<p>On OCC Supervisor's authorization to implement manual train rescue, you must:</p> <ul style="list-style-type: none"> • Hold and stop trains from entering the affected area including manually driven trains • Identify a train as the rescue train; detrain passengers if the rescue train can be berthed at station on its way without reversing • Arrange 2 Train Operators to get on board the rescue train; one Train Operator is assigned to the rescue train as the train driver, the other one is assigned to the failed train • Brief the 2 Train Operators on the rescue train on the chosen rescue method • Conduct radio test with each of the Train Operators • Make certain the tracks and the surrounding area of the failed train are clear that, passengers are NOT self-evacuating • Authorize the Train Operator (rescue train) to put the train in ATP mode • Set a route for the rescue train to the closest point to the failed train • Authorize the Train Operator to operate the rescue train in STOP & PROCEED mode to move in and to stop 16.4 feet away from the failed train, alternatively, use BYPASS mode if the ATP/STOP & PROCEED mode cannot be used • Instruct the Train Operator assigned to the failed train to board the failed train to make certain the emergency brake is fully applied • At the 16.4 feet mark, authorize the Train Operator (rescue train) to put the rescue train in BYPASS mode (if in ATP mode) and move the train forward slowly until it is 3.28 feet away from the failed train

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- Instruct the Train Operator (failed train) to stand at the emergency walkway, to make certain the coupling faces of the rescue train and the failed train are aligned
- Instruct the Train Operator (failed train) to guide the Train Operator (rescue train) to move forward at 1.86 mph to couple with the failed train
- Confirm with the Train Operator (rescue train) on the coupling status of the new consist
- Check the ATS that the coupling is successful (new train ID representing the coupled consist)
- Position the 2 Train Operators in the coupled train (new consist) according to the pushing or pulling operation chosen (detailed in the last two sections of this work instruction)
- Where applicable, route the new consist to the nearest station for passenger detrainment followed by the yard without stopping at other stations
- Where required, authorize the Train Operator (rescue train) to operate the new consist to either the nearest station for passenger detrainment followed by the yard without stopping at other stations
- Where required, inform the Train & Stations Supervisor to arrange Station Operator to operate the PSGS manually and to assist passenger detrainment

Information
Controller

On OCC Supervisor's instruction, you must:

- Make public announcements to the affected trains/stations; informing passengers in the failed train to wait and to prepare for the approaching train coupling (hold on before and after the coupling)

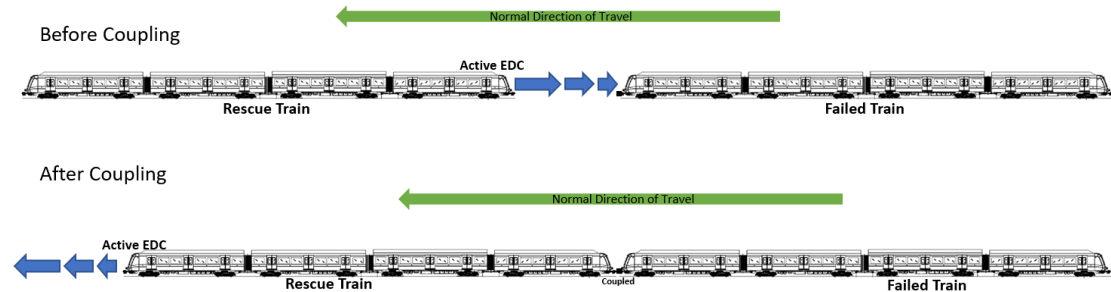
Pulling Operations

Train Operator

In pulling operations, the rescue train is in the leading end pulling the failed train in the normal train travel direction.

For Train Operator (rescue train), you must:

- 1) Make sure you are at the leading car of the new consist
- 2) Obtain authorization from Train Controller before moving the new consist
- 3) Understand the route and any imposed speed restrictions
- 4) Observe track conditions and wayside signals while driving
- 5) Maintain communication with the Train Operator (failed train) through the hand portable radio



Note

During pulling operations, the Train Operator (failed train) must remain in the front cab area of the failed train in the direction of travel and be ready to activate EB on the EDC if required.



Note

During the pushing or pulling operations, any person can stop the coupled train if it is not safe. On instruction to stop the coupled train, the person who is in the position to apply emergency brake must do so immediately. The braking must remain until the reason for stopping has been resolved.

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Pushing Operations

In pushing operations, the rescue train is at the rear of the failed train. The Train Operator (failed train) must be positioned in the front cab area of the failed train to observe the track condition and to stand ready to apply the emergency brake on the EDC.

*Train Operator
(rescue train)*

For Train Operator (rescue train), you must:

- 1) Make sure you are at the front cab of the rescue train
- 2) Obtain authorization from Train Controller prior to moving the new consist
- 3) Understand the route and any imposed speed restrictions
- 4) Maintain communication with the Train Operator (failed train) through the hand portable radio who will relay the track conditions to you along the way
- 5) Operate the new consist based on the instructions from the Train Operator (failed train) who is standing at the leading car of the new consist

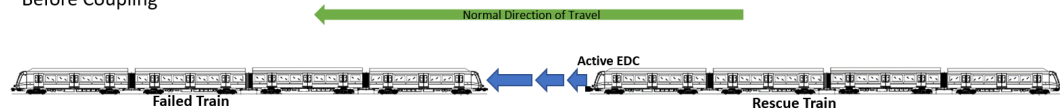
*Train Operator
(failed train)*

For Train Operator (failed train), you must:

- 1) Observe the track condition and give driving instructions to Train Operator (rescue train)
- 2) Stop the new consist immediately by pressing the emergency brake pushbutton on the EDC if unsafe condition is observed
- 3) Maintain communication with the Train Operator (rescue train) through the hand portable radio

If the rear coupler of the failed train has failed or pushing operation cannot be carried out, Train Controller shall arrange the rescue train to carry out coupling operation at the front of the failed train followed by a pulling operation.

Before Coupling



After Coupling

