

PLATFORM SCREEN GATES (PSGS) FAILURES

Work description: The purpose of this document is to describe the actions necessary to handle PSGS failures. This document is applicable for the Operation and Maintenance Services on the Honolulu Rail Transit Project (H RTP).

Scope: All PSG incidents that require an immediate remedial response.

References: HNL-09527 Fault Reporting Process, HNL-09421 Contingency Plan, HNL- 09320 Unauthorized person trackside, HNL- 09535 Sweep Run, HNL-09415 Station Stop Problems

PPE and precautions	Competencies or qualifications	Licenses or permits required
	Train Attendant, Station Attendant, OCC Supervisor, Information Controller, Engineering & Faults Controller	Nil

Tools and equipment required

PSG Operating Panel Keys


System Description	<p>Whenever a platform screen gate fails to close upon completion of dwell time at a station, the ATC system does not allow the train to leave the station.</p> <p>When a platform screen gate is isolated (locally) or inhibited (from OCC), the ATC system ensures that the corresponding train door will not be opened when the train stops at the concerned station.</p> <p>When platform screen gates are isolated, a Train Attendant/ Station Attendant shall apply a warning sticker that indicates that the gate is out of service.</p> <p>Whenever a gate is isolated and in open position, the gate area shall be made inaccessible and the constant monitoring of a Train Attendant/ Station Attendant is required.</p> <p>The Train Controller can command the opening and closing of gates from OCC, with or without a train stopped at platform. However, the command can be performed only when a Train Attendant/ Station Attendant monitors the concerned platform.</p>
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Platform Screen Gate Fails to Open (train stopped at platform)	<p>In the event a train arrives at platform and one gate fails to open, ATC displays the relevant alarm.</p> <p>Passengers in front of the faulty gate will likely open it through the corresponding emergency release device located on the fixed panel.</p> <p>When activated, the emergency release device generates an alarm on the ATC system. After 15 seconds, the emergency egress gate will attempt to close (unless there is a failure or obstacle that impedes the closure). The remaining gates will close upon the expiry of the dwell time.</p>
OCC Supervisor	<p>The OCC supervisor shall:</p> <ul style="list-style-type: none"> Be ready to define the most appropriate contingency plan (see HNL-09421 Contingency Plan)

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<i>Train Controller</i>	<p>Train Controller shall:</p> <ul style="list-style-type: none"> • In the event the gate is opened by the passenger through the emergency release device, monitor the concerned gate • Dispatch a Train Attendant/ Station Attendant at the concerned platform • Check that the train leaves the platform • Monitor the subsequent train and check if the failure occurs again. <p>In the event one or more doors fail to close see section 4.</p>
<i>Engineering & Faults Controller</i>	<p>The Engineering & Faults Controller shall:</p> <ul style="list-style-type: none"> • Alert the maintenance team and open a failure notification according to HNL-09527 Fault reporting process.
<i>Information Controller</i>	<p>Information Controller shall:</p> <ul style="list-style-type: none"> • Inform passengers through PA to use the other gates to board or alight the train • Monitor the affected platform • Inform passengers on other trains and platforms about possible delays.
<i>Train Attendant/ Station Attendant</i>	<p>The Train Attendant/ Station Attendant shall:</p> <ul style="list-style-type: none"> • Upon Train Controller request, reach the affected platform • Operate in coordination with Train Controller • Instruct passengers to use the other gates to board or alight the train.

Platform Screen Gate fails to close (train stopped at platform)	<p>In the event a platform screen gate fails to close, the ATC does not allow the train to leave the platform. In case of obstruction, the gate attempts closure at slow speed for three times. If the closure attempts are not successful, the gate remains open.</p>
<i>OCC Supervisor</i>	<p>The OCC supervisor shall:</p> <ul style="list-style-type: none"> • Be ready to suggest the most appropriate contingency plan (see HNL-09421 Contingency Plan)
<i>Train Controller</i>	<p>Train Controller shall:</p> <ul style="list-style-type: none"> • Check, through ATS, the faulty gate • Dispatch a Train Attendant/ Station Attendant to the faulty gate • Instruct the Train Attendant/ Station Attendant to manually close the gate and to remain close to it • Manually execute the gates opening command through ATC and then close them.
	<div>  <div> <p>Note</p> <p>The remote opening/closing command from OCC requires a Train Attendant/ Station Attendant on the platform when a train is not present. This is to ensure passengers are far from gates.</p> </div> </div>


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Engineering & Faults Controller Information Controller Train Attendant/ Station Attendant	Check that the train leaves the station and request the Train Attendant/ Station Attendant to check the gate behavior upon the arrival of the next train.	
	<i>In the event the gate fails again:</i> Ask the Train Attendant/ Station Attendant to close and isolate the gate through the corresponding mode switch In the event the door cannot be isolated and closed, ask the Engineering & Faults Controller to alert the maintenance team.	
	The Engineering & Faults Controller shall: <ul style="list-style-type: none"> • Upon Train Controller's request, alert the maintenance team • Report the fault in the MMIS (see HNL-09527 Fault Reporting Process) 	
	Information Controller shall: <ul style="list-style-type: none"> • Monitor the platform • Inform passengers on other trains and platforms about the delay • Instruct passengers to board or alight trains from the other gates • In the event of obstruction, instruct passenger to stay far from the gate • In the event the gate fails to close for three times due to an obstacle, notify passengers about the obstruction. 	
	The Train Attendant/ Station Attendant, once reached the faulty gate, shall: <ul style="list-style-type: none"> • Upon instruction from Train Controller, close the gate manually • Remain in the vicinity of the faulty gate and check that the train leaves the station • Check the gate behavior upon the next train arrival • If the fault occurs again, isolate the gate through the mode switch and put on it the out of service sticker 	
		Note Once isolated the gate, the Train Attendant/ Station Attendant shall extract the key from the mode switch.
Unintended gate opening (no train at platform) OCC Supervisor	When an unintended gate opening is detected, the ATC system drops down the line speed in the approaching, platform and exit track circuits on both tracks. Thus trains entering, leaving or departing from the station cannot move.	
	The OCC supervisor shall: <ul style="list-style-type: none"> • Be ready to suggest the most appropriate contingency plan (see HNL-09421 Contingency Plan) 	

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<i>Train Controller</i>	Train Controller shall: <ul style="list-style-type: none"> Alert the Engineering & Faults Controller to be ready to de-energize the third rail in the affected area Based on information received from the Train Attendant/ Station Attendant and Information Controller, evaluate if anyone accessed the track and activate the procedure HNL- 09320 Unauthorized person trackside Once verified that the mainline is free, instruct a Train Attendant to perform a Sweep run according to the procedure HNL- 09535 Sweep Run. Monitor the gates behavior upon the next train arrival.
<i>Engineering & Faults Controller</i>	The Engineering & Faults Controller shall: <ul style="list-style-type: none"> Be ready to de-energize the third rail Be ready to alert the maintenance team and notify the failure through the MMIS (see HNL-09527 Fault Report Process)
<i>Information Controller</i>	Information Controller shall: <ul style="list-style-type: none"> Send PA messages to the platform, instructing passengers to stay far from the open gate Monitor the platform through CCTV to make sure that no passenger gets close to the open gate Monitor any train that is prevented to enter the affected platform through CCTV and send PA messages to reassure passengers that service is resuming shortly.
<i>Train Attendant</i>	The Train Attendant shall: <ul style="list-style-type: none"> Check that no unauthorized person accessed the track Close the affected gate Be on the platform to check that the train regularly leaves the platform Monitor the gates behavior upon the next train arrival In the event the fault occurs again, close and isolate the gate Put the out of service sticker on the affected gate.
	<div>  <div> Note Once the gate is isolated, the Train Attendant/ Station Attendant shall extract the key from the mode switch. </div> </div>







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Train stopped due to PSG failure (PSG faults preventing trains to enter a platform)	<p>In the event a train cannot enter the platform due to PSG failures, the ultimate aim is to bring the train as soon as possible at the platform.</p> <p>As a first instance, the Train Attendant/ Station Attendant at the platform shall check:</p> <ul style="list-style-type: none"> Platform Gate Open/fault indicators Emergency Gates fault indicators. <p>If one platform gate open indicator is on (i.e. light is on), independently on the status of the gate fault indicator on the same gate, the Train Attendant/ Station Attendant shall close the gate and inform the OCC.</p> <p>If one platform gate fault indicator is on and the relevant open indicator is off, the Train Attendant/ Station Attendant shall isolate the gate and inform the OCC.</p> <p>In all the other cases, the Interlock Override functionality shall be used to bring the train in the platform (see Interlock Overdrive Execution)</p>
<i>OCC Supervisor</i>	<p>The OCC supervisor shall:</p> <ul style="list-style-type: none"> Be ready to suggest the most appropriate contingency plan (see HNL-09421 Contingency Plan)
<i>Train Controller</i>	<p>Train Controller shall:</p> <ul style="list-style-type: none"> Dispatch a Train Attendant/ Station Attendant to the affected platform and ask to check gate closure/fault indicators and report back Based on the outcomes of the check, coordinate for gate isolation/closure or interlock override. In the event the interlock override is required, make sure that the platform is manned with two Train Attendant/ Station Attendants. <p>If after train arrival one or more gates cannot be closed, make sure that maintenance is alerted and that:</p> <ul style="list-style-type: none"> Train Attendant/ Station Attendant prevent passengers to access the area Engineering & Faults Controller alerts the maintenance team The OCC supervisor evaluates the implementation of the most suitable fallback scenario (HNL-09421 Contingency plan). <p>Monitor the behavior upon the next train arrival. Evaluate with the OCC Supervisor the most suitable contingency plan until repair is performed.</p>
<i>Engineering & Faults Controller Information Controller</i>	<p>The Engineering & Faults Controller shall:</p> <ul style="list-style-type: none"> Be ready to alert the maintenance team and notify the failure through the MMIS (see HNL-09527 Fault Report Process) <p>Information Controller shall:</p> <ul style="list-style-type: none"> Monitor the affected trains and platform Send PA messages to the affected platform inviting passengers to stay away from the gates and to follow the instructions of Train Attendant/ Station Attendants Send PA messages to passengers on the affected platforms and trains informing them about delays in train circulation.

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<i>Train Attendant/ Station Attendant</i>	<p>The Train Attendant/ Station Attendant shall:</p> <ul style="list-style-type: none"> • Check Platform Gate Open/fault indicators • Emergency Gates fault indicators • If one platform gate open indicator is on (i.e. light is on), independently on the status of the gate fault indicator on the same gate, close the gate in coordination with OCC • If one platform gate fault indicator is on and the relevant open indicator is off, isolate the gate in coordination with OCC • In all the other cases, coordinate with OCC to implement the Interlock Override. If only one Train Attendant/ Station Attendant is present, ask for an additional Train Attendant/ Station Attendant at platform • Monitor the platform upon the next train arrival and act in compliance with Train Controller's instructions. 				
Interlock Override Execution	<p>This functionality will only be used when it is impossible for the Train Attendant/ Station Attendants to identify a faulty/not properly closed gate. So, in the event that the closed and locked signal is broken but the platform is deemed safe for operations to continue, the actual closed and locked signal can be overridden by the Interlock Override switch on the local control panel by turning the relevant key-switch to the right. The key-switch is biased and must be held in place to maintain the signal.</p> <table border="1" data-bbox="373 1045 1466 1455"> <tr> <td data-bbox="373 1045 581 1297">  </td><td data-bbox="581 1045 1466 1297"> <p>Note</p> <p>All platform screen gates, and emergency egress gates shall be confirmed physically closed to perform the interlock override functionality. The affected platform shall be manned with two Train Attendant/ Station Attendants to perform the interlock override: one to activate the command, one to keep passengers away from gates and to close/isolate the faulty gate.</p> </td></tr> <tr> <td data-bbox="373 1297 581 1455">  </td><td data-bbox="581 1297 1466 1455"> <p>Note</p> <p>The Interlock Override functionality is a temporary measure. In the event the fault cannot be resolved by the Train Attendant/ Station Attendant, the command can be used until the maintenance team fixes the fault.</p> </td></tr> </table> <p>The execution of this command requires a strong coordination between the Train Controller and Train Attendant/ Station Attendants.</p>		<p>Note</p> <p>All platform screen gates, and emergency egress gates shall be confirmed physically closed to perform the interlock override functionality. The affected platform shall be manned with two Train Attendant/ Station Attendants to perform the interlock override: one to activate the command, one to keep passengers away from gates and to close/isolate the faulty gate.</p>		<p>Note</p> <p>The Interlock Override functionality is a temporary measure. In the event the fault cannot be resolved by the Train Attendant/ Station Attendant, the command can be used until the maintenance team fixes the fault.</p>
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<i>Train Controller</i>	<p>Train Controller shall:</p> <ul style="list-style-type: none"> • Make sure that two Train Attendant/ Station Attendants are available at the affected platform • After assessing traffic condition, authorize the Train Attendant/ Station Attendant to execute the interlock override • Put a TWC hold on the affected platform • Check with Train Attendant/ Station Attendants that all platform gates are physically closed after the expiration of dwell time • Release the TWC hold once the Train Attendant/ Station Attendants confirm that all gates and train doors are closed, and the train is safe to leave • Coordinate with Train Attendant/ Station Attendants to ensure train movements on the other track as well.
<i>Train Attendant/ Station Attendant</i>	<p>The Train Attendant/ Station Attendant shall:</p> <ul style="list-style-type: none"> • Request the second Train Attendant/ Station Attendant at the platform if not already present • Activate the override key only upon Train Controller's authorization • Once the train arrives at platform, do not release the override key until instructed by the Train Controller • Ask the Train Controller to close all gates, if required • Upon expiration of dwell time, instruct the other Train Attendant/ Station Attendant to manually close the faulty gates • Inform the Train Controller when all gates are closed and locked and the train is safe to leave the platform.

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