Work Instruction - Operations

POINTS (SWITCH) FAILURE WORK INSTRUCTION

HITACHI

Hitachi Rail Honolulu JV

Work Description: This work instruction describes the steps to handle points (switch) failure

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

References:

HNL-09404 Equipment Out of Service/Restrictive Service Work Instruction, HNL-09100 Roadway Worker Protection Manual, HNL-09421 Contingency Plan (Alternate Service Plan) Work Instruction

PPE and precautions	Competencies or qualifications	Licenses or permits required
Nil	Train Controller/Yard Controller, Engineering and Fault Controller, OCC Supervisor, Information Controller, Maintenance Team, Train Operator / OTE Operator	Nil

Tools and equipment required

Nil

Handle Points (Switch) Failure

Train Controller / Yard Controller

You must:

- Stop any train / OTE movement toward / over the affected area
- Tell the OCC Supervisor of the failure
- Tell the Engineering & Fault Controller to arrange a maintenance team to the site to inspect the switch
- Protect the Train Operator and/or the maintenance team fouling the track and/or establishing a work block limit following the HNL-09100 Roadway Worker Protection Manual
- If a train needs to be clear from the switch zone, then dispatch a Train Operator to access the train and operate the train in BYPASS mode to clear from the switch zone as required
- On instructions from the OCC Supervisor, implement the selected HNL-09421 Contingency Plan (Alternate Service Plan)
- On notification of the full recovery of the switch, release all trains (one at a time) and monitor the resumption of normal service. Reinstate the movement authority previously removed from the trains in front of the faulty switch before resumption of normal service
- Log the event in the Train /Yard Controller Log

Warning

Switches installed for Honolulu Rail Transit are non-trailable. If a train / OTE trails through non-trailable switches and the switches are set in the incorrect position, the switches can be heavily damaged and may cause derailment of train / OTE.

Note

A switch may fail in such a way that it may gain correspondence in only one position (either normal or reverse). In such condition, the OCC Supervisor shall decide either to proceed with emergency repair activities to fully recover the switch, or to keep the switch in the working position (via securing it by blocking/clamping/locking the switch as applicable or apply appropriate protections) until the maintainer is available to troubleshoot the faulty switch at the end of Revenue Service Hours.

Note

Continued manual switch operations at turnback locations should be avoided as much as possible; in all cases, Train Controller shall consider using a different path (thus different set of switches) via implementing the Contingency Plan following HNL-09421 which will exclude the use of the faulty switch and treat it as a line blockage (thus allowing a work block limit to be established for the maintainer to carry out emergency repair activities).

Approved By:	☐ Director, Operations and Maintenance	☐ Department Manager	☐ Manager, HSE (Operations and Maintenance)
Signature:			
Date:			

POINTS (SWITCH) FAILURE WORK INSTRUCTION

	 ***Warning*** *Train Controller must make certain any AUTO trains stopped in front of the faulty switch will not move forward if the faulty switch suddenly clears of its problem. This would avoid maintainer from being ran over by the AUTO train should the route become clear because of a switch regaining its status.*
	 ***Warning*** *Before authorizing the train / OTE to move over the faulty switch, Train / Yard Controller shall confirm with the maintenance team that the switch is secured (blocked/clamped) in the position stated in the applicable restriction.*
	 ***Warning*** *Before traversing any switch via a manually driven train / OTE, the Train Controller must remind the Train Operator to visually inspect the switch to ensure that it is aligned, secured, and locked into the required position.*
Engineering & Fault Controller	You must: • Arrange a maintenance team to the site to inspect/ repair the switch • Keep track of the inspection / repair progress • Inform the OCC Supervisor and the Train Controller about the latest inspection/repair progress • If rectification is successful, inform the OCC Supervisor and the Train Controller / Yard Controller to resume normal operations • Instruct the maintenance team to remove all previously applied point clamps, and locks on switches

OCC Supervisor	You must:
	• Follow the inspection/fault rectifying progress closely
	• Assess the restriction recommended by the maintenance team
	• If train service over the affected area is not allowed until the faulty switch is repaired, then:
	  ○ Instruct the Train Controller to establish an emergency track possession (work block limit) to protect the maintenance team following the HNL-09100 Roadway Worker Protection Manual
	  ○ Decide whether a contingency plan is needed to run train service in the unaffected area
	  ○ If required, instruct the Train Controller to implement the selected HNL-09421 Contingency Plan (Alternate Service Plan) Work Instruction
	• Instruct the Information Controller to make regular public announcements on service delays to trains and stations affected
	• Follow the fault rectifying progress closely
	• Based on the confirmation/recommendation from the Engineering & Fault Controller and the maintenance team, instruct the Train Controller to resume normal train service and instruct the Information Controller to make public announcements on service resumptions to trains and stations
	• Log the event in the OCC Supervisor Daily Report

Information Controller	You must:
	• On instructions from the OCC Supervisor:
	  ○ Make public broadcast announcements on service delays to trains and stations affected
	  ○ Make regular announcements to update trains and stations affected
	  ○ Monitor crowd conditions on affected platforms
	  ○ Make public announcements on resumption of normal train service to trains and stations
	• Log the event in the Information Controller Log

Maintenance Team	You must:
	• Coordinate with the Train Controller to establish the required protection measures for on-track protection following the HNL-09100 Roadway Worker Protection Manual – before and during the fouling of the track and/ or the need to establish a work block limit if the emergency track possession is required for emergency switch repair
	• Assess the failure
	• Repair the failure where possible
	• If the failure cannot be remedied in the short term, determine the proper restriction to be put in place over the affected area until the completion of final repair:
	  o Temporary train service suspension (no train / OTE movement) over the affected area
	  o Train / OTE movement with the switch secured and locked in normal position
	  o Train / OTE movement with the switch secured and locked in reverse position
	• Block/clamp the switch as applicable or apply appropriate protections
	• If a restriction has been applied, handle the restriction in accordance with the procedure HNL-09404 Equipment Out of Service/Restrictive Service
	• Tell the Engineering and Fault Controller the recommended restriction
	• Once the problem is solved, update and close the associated work order with all relevant details. Work order updates will be supporting documents for the removal of the restriction

Train / OTE Operator	You must: • Coordinate with the Train Controller to establish the required protection measures for on-track protection following the HNL-09100 Roadway Worker Protection Manual – before and during the fouling of the track to reach and access the train safely • Operate the train in BYPASS mode to clear from the switch zone in accordance with the instructions from the Train / Yard Controller • Await further instruction from the Train / Yard Controller after clear of the switch zone and arriving at the next station