

**Legislative Council Panel on Transport
Subcommittee on Matters Relating to Railways**

MTR Railway Service Performance

Purpose

This paper provides information on railway service performance for the period between 1 July and 15 August 2011.

Railway Service Performance

2. MTR Corporation Limited (MTRCL) is dedicated to operating a safe, reliable and efficient railway service for the people of Hong Kong. With 99.9% of passengers reaching their destinations within 5 minutes of their scheduled arrival times achieved every year since the Rail Merger in 2007 and carrying some four million passengers on average each weekday, the MTR system is recognised internationally as one of the world's most reliable and best performing railways.

3. MTRCL is aware of the high public expectations on its service and constantly makes effort to explore and introduce improvements whenever possible in pursuit of greater service excellence. Nevertheless, the Corporation also hopes the public appreciates that in any complex modern urban railway system requiring tens of thousands of systems and components to work together seamlessly, delays and equipment failures will occur from time to time, with their frequencies varying each year.

4. MTRCL understands that passengers experiencing a delay will be inconvenienced. As such, the Corporation undertakes to minimise any delay caused to passengers through restoring normal train service as quickly as possible and before that, providing passengers with the necessary information to help them continue their journeys. To this end, the Operating team has been strengthened by more than 260 staff members since 2008, to a total of 5,206 in 2010. In 2011, that number has been further increased through the setting up of the 60-member Customer Service Rapid Response Unit dedicated for deployment to MTR stations experiencing serious delays in train service with the specific purpose of providing assistance to passengers.

5. From 1 July to 15 August 2011, out of the 218,000 train trips operated in the heavy rail network (comprising the Kwun Tong Line, Tsuen Wan Line, Island Line, Tseung Kwan O Line, East Rail Line, West Rail Line, Ma On Shan Line, Tung Chung Line, Disneyland Resort Line and Airport Express), the number of delays of 8 minutes or more totalled 35. The numbers categorized according to the cause of delay is as follows:

	1 July to 15 August 2011
Equipment failure	25
Human factor	2
Passenger behaviour and external factor	8
Total	35

6. It can be noted that among the 35 delays in the heavy rail network, 33 were between 8 and 30 minutes, two were between 36 and 51 minutes. There were no delays of one hour or more. A summary of incidents in the MTR heavy rail lines causing a delay of 8 minutes or more are listed in Annex 1.

7. The two incidents causing a delay of more than 30 minutes include a suicide case at Shatin Station on 28 July and a Tung Chung Line signalling fault on 3 August which affected the last train of the day. Due to the remote location of the signal fault at Tai Ho Wan on Lantau Island and no more trains (as that was the last train) were available to carry maintenance personnel there, time was required for maintenance personnel to get to the location to attend to the fault, incurring a delay of 36 minutes to the affected train for the relevant part of the route.

8. The 3 August incident on the Island Line is worth noting as the overhead line safety protection was triggered to stop power supply after a trainborne circuit breaker could not stop the irregular electric current flow. The trainborne circuit breaker is the same model as the one involved in the service disruption at Yau Ma Tei Station on 21 October 2010. While the concerned circuit breaker is a model that has been tested and proven over time, nonetheless, MTRCL had informed Members earlier this year that the circuit breakers will be replaced by a new model by the end of 2011. Time is required to re-design the trainborne power supply system to accommodate the new circuit breaker and suppliers require time to manufacture and deliver the new equipment.

9. On the Light Rail network, 11 delays of 8 minutes or more were recorded. During the same period, more than 128,000 Light Rail trips were operated. Their causes are set out in the table below and a summary of the incidents are included in Annex 2:

	1 July to 15 August 2011
Equipment failure	6
Human factor	0
Passenger behaviour and external factor	4
Others	1*
Total	11

* On 13 August 2011, a Light Rail train captain reported ill and could not discharge driving duties. The Light Rail vehicle was delayed at Tin Shui Stop until a replacement train captain was arranged.

MTR's Fail-safe Design

10. Safety is the absolute top priority in MTR operations and it should be pointed out that safe train operation was not affected in any of the incidents or delays in the above-mentioned period. Indeed, MTRCL would never compromise safety in its day-to-day railway operations.

11. The MTR system is designed to be fail-safe. Built-in protections are in place in every system which will bring train operations to an automatic halt whenever any irregularity is detected to facilitate the required inspections. Train service will only resume after the systems and equipment are inspected and confirmed to be functioning normally. As a result, passengers may be inconvenienced by delays.

Stringent Maintenance Regime

12. To ensure high-quality performance and the good condition of its train service systems and equipment, MTRCL has in place a stringent maintenance regime as well as a comprehensive programme to upgrade and renew assets. Preventive and corrective maintenance works are carried out in different areas including civil engineering structures, railway tracks, signalling system, power supply system, overhead lines, passenger trains, engineering trains and buses. These maintenance works include inspection,

maintenance, cleaning and asset replacement, and are carried out according to an established regular maintenance schedule.

13. More than \$4 billion is invested each year into the maintenance, repair and renewal of railway assets. The resources deployed have, in fact, increased in recent years as seen below :

Year	2008	2009	2010
Total investment in maintenance, repair and renewal of railway assets (HK\$ billion)	4.078	4.292	4.663
Human resources (Number of full-time maintenance staff)	3,724	3,758	3,828

Conclusion

14. Safety is the top pre-requisite for MTRCL in providing a high-quality railway service to the people of Hong Kong. The network is built to a fail-safe design, which will bring train operations to an automatic halt whenever any irregularity is detected to facilitate the required inspections. As a prudent measure, trains may be operated at slow speeds under some situations such as a signalling fault. While these occurrences may cause delays to train service, MTRCL wishes to emphasize that public safety is and will never be compromised in its railway operations.

15. Understanding train service delays will cause inconvenience to passengers, MTRCL will continue to adopt a proactive approach to seek improvements to minimise the occurrence of delays and the inconvenience caused. New railway technology and engineering developments will be explored as they become available in the market. By continually looking for ways to improve its performance, MTRCL strives to maintain its position as one of the best performing railways in the world.

MTR Corporation
September 2011

Record of Train Service Delays of 8 minutes or more from 1 July to 15 August 2011 (Heavy Rail)

Incident Date	Incident Time	Railway Line Affected	The Incident	Findings of Investigation/ Remedial Action Taken	Delay (min.)
3-Jul-11	07:01 AM	Ma On Shan Line	Trains were delayed at Che Kung Temple Station because of a false alarm of the Platform Emergency Plunger.	Investigations during non-traffic hours found faulty electronic cards of the signalling equipment, which were subsequently replaced.	9
6-Jul-11	09:45 AM	Tseung Kwan O Line	A North Point-bound train was withdrawn from service at Po Lam Station because the Train Captain forgot to release the Emergency Stop Push Button which was activated earlier for handling a minor trainborne equipment fault.	The Train Captain was reminded of the proper procedure and lesson learned shared with other train staff.	17
7-Jul-11	10:49 AM	East Rail Line	A Lok Ma Chau-bound train was delayed at Tai Wo Station and subsequently withdrawn from service upon arrival at Fanling Station because a pair of doors failed to close after platform duties.	Investigations found a faulty component of the door equipment, which was immediately replaced.	13
9-Jul-11	01:29 PM	Kwun Tong Line	A Tiu Keng Leng-bound train was delayed at Lok Fu Station and subsequently withdrawn from service upon arrival at Wong Tai Sin Station because its trainborne signalling computer failed.	Investigations found two loosened mounting screws of the speedometer. The loosened screws were immediately replaced.	14
10-Jul-11	05:37 AM	East Rail Line	A Lo Wu-bound train was delayed at Fo Tan Station and subsequently withdrawn from service upon arrival at University Station because it overran the stopping mark by a length of three pairs of doors at Fo Tan Station, doors were not able to open as such.	Investigations confirmed all equipment were functioning normally. Further monitoring could not find any faults.	13
10-Jul-11	10:52 AM	East Rail Line	A Lok Ma Chau-bound train was delayed between Fo Tan Station and University Station because a track circuit failed intermittently.	Investigations found a faulty component of the point, which was immediately replaced.	11
10-Jul-11	07:27 PM	East Rail Line	A Hung Hom-bound train was delayed at Tai Po Market Station because a drunken passenger fell from the platform onto the track. Station staff immediately operated the Platform Emergency Plunger to stop approaching trains.	Station staff descended onto the track and assisted the passenger to return to the platform. The passenger sustained no apparent injury and was conveyed to the hospital.	9
12-Jul-11	10:32 PM	East Rail Line	A Hung Hom-bound train was delayed at Lok Ma Chau Station because two track circuits inside Lok Ma Chau Tunnel failed.	Investigations during non-traffic hours found iron filing at the junction between track circuits. It was immediately removed.	11
14-Jul-11	02:15 PM	Tung Chung Line	A Tung Chung-bound train was withdrawn from service at Sunny Bay Station because the brake could not be released.	Investigations found faulty components of the brake equipment, which were immediately replaced.	8

Record of Train Service Delays of 8 minutes or more from 1 July to 15 August 2011 (Heavy Rail)

Incident Date	Incident Time	Railway Line Affected	The Incident	Findings of Investigation/ Remedial Action Taken	Delay (min.)
14-Jul-11	07:00 PM	East Rail Line	A Hung Hom-bound train was delayed at Tai Wai Station because a passenger alarm was operated for a passenger dispute. Station staff had to operate the Exterior Emergency Door Release to release the concerned passengers from the train.	Normal service resumed after the device had been restored.	9
15-Jul-11	06:10 AM	Kwun Tong Line	A Yau Ma Tei-bound train was delayed at Kowloon Bay Station because a passenger operated the Platform Emergency Plunger to report that a dog was wandering on tracks.	Some stray dogs were seen on the tracks around Choi Hung Station and were removed from the track area.	11
18-Jul-11	06:28 PM	Tung Chung Line	A Hong Kong-bound train was delayed shortly after it departed Sunny Bay Station because a passenger alarm and a Platform Emergency Plunger were operated as a boy had his right palm nipped by train doors.	The train set back and the boy was assisted to leave the train and conveyed to the hospital.	9
18-Jul-11	07:16 PM	Island Line	A Sheung Wan-bound train was withdrawn from service upon arrival at Sheung Wan Station because there was an alarm indication of an air bag fault.	Investigations found faulty components of pneumatic equipment, which were immediately replaced.	8
19-Jul-11	08:51 PM	Tung Chung Line	A Tung Chung-bound train was delayed at Tai Ho Wan because the train received a warning on rear door not properly closed. The train was automatically stopped and after inspection by the Train Captain, it was confirmed the door was physically in closed position. The train continued to Tung Chung Station where it was withdrawn from service.	Investigations found a faulty lock switch of the door, which was immediately replaced.	25
20-Jul-11	10:26 AM	East Rail Line	A Hung Hom-bound train was withdrawn from service at Lok Ma Chau Station because all train doors failed to close after platform duties.	Investigations found a faulty component of door equipment, which was immediately replaced.	8
21-Jul-11	07:51 AM	East Rail Line	A Lo Wu-bound train was delayed between University Station and Tai Po Market Station, and subsequently withdrawn from service upon arrival at Fanling Station because the Door Closed Indicator flashed intermittently on its way from University Station to Tai Po Market Station.	Investigations found faulty components of door equipment, which were immediately replaced.	11
24-Jul-11	04:40 PM	Tung Chung Line	A Tung Chung-bound train was withdrawn from service at Tung Chung Station because it sustained jerking movements when it was entering Tung Chung Station.	Investigations showed that the bearing of a bogie had shifted slightly, causing damage to some steel clips on the trackside. As the early stages of a fault developing in a bearing can be detected by its operation temperature, the Corporation has stepped up its inspection regime by checking the temperature labels every day as well as the position and general condition of bearings.	8

Record of Train Service Delays of 8 minutes or more from 1 July to 15 August 2011 (Heavy Rail)

Incident Date	Incident Time	Railway Line Affected	The Incident	Findings of Investigation/ Remedial Action Taken	Delay (min.)
26-Jul-11	11:20 AM	Ma On Shan Line	A Wu Kai Sha-bound train was delayed at Sha Tin Wai Station and subsequently withdrawn from service upon arrival at Tai Shui Hang Station because the train could not obtain proper door closing signals.	Investigations confirmed all equipment were functioning normally, but some components of the door equipment were replaced as a precautionary measure.	9
27-Jul-11	08:44 AM	Tung Chung Line	A Hong Kong-bound train was withdrawn from service at Kowloon Station because a pair of train doors sustained a fault.	Investigations found a faulty component of the door equipment, which was immediately replaced.	9
28-Jul-11	10:11 AM	East Rail Line	Train service between Sha Tin Station and Fo Tan Station was suspended for 51 minutes after a passenger jumped onto the track when a Hung Hom-bound train was entering the platform at Sha Tin Station.	Fire Services and Police were summoned. Police classified the case as 'Suicide'.	51
30-Jul-11	10:58 AM	East Rail Line	Trains were delayed because the Train Control System failed.	Normal service resumed after all local workstations in Operations Control Centre was re-booted.	12
1-Aug-11	06:02 AM	Tung Chung Line	A Tung Chung-bound train was delayed at Tung Chung Station because a track circuit failed.	Investigations revealed that the failure was caused by damaged insulation of a support bar to the rails. Service resumed after the support bar was removed.	14
1-Aug-11	05:07 PM	West Rail Line	Trains into and out of Tsuen Wan West Station were delayed because of a signalling failure.	Investigations found a faulty miniature circuit breaker, which was immediately replaced.	15
2-Aug-11	08:04 AM	Kwun Tong Line	A Tiu Keng Leng-bound train was delayed at Kowloon Bay Station because the Automatic Platform Gates failed.	Investigations found a faulty component of the Automatic Platform Gates, which was replaced during non-traffic hours.	21
2-Aug-11	06:16 PM	East Rail Line	A Lo Wu-bound train was blocked and delayed between Sheung Shui Station and Lo Wu Station by the preceding Ktt Through Train which was held at a signal because Shenzhen Rail Control encountered a regulation problem and did not allow the train to cross the boundary.	Normal service resumed after the problem was fixed.	8
3-Aug-11	01:11 AM	Tung Chung Line	The last Tung Chung-bound train was delayed at Tai Ho Wan due to a failed track circuit. Because of the track circuit's remote location, it took maintenance personnel 28 mins to reach site to attend to the fault as there were no following passenger trains available to carry them to the location.	Investigations found a faulty electronic card of the track circuit, which was immediately replaced.	36

Record of Train Service Delays of 8 minutes or more from 1 July to 15 August 2011 (Heavy Rail)

Incident Date	Incident Time	Railway Line Affected	The Incident	Findings of Investigation/ Remedial Action Taken	Delay (min.)
3-Aug-11	08:59 AM	Island Line	A Sheung Wan-bound train was withdrawn from service at Wan Chai Station because the Direct Current Circuit Breaker for the overhead line tripped open, interrupting the traction current supplies between Tin Hau Station and Admiralty Station.	Investigations found that the overhead line safety protection was triggered to stop power supply after the trainborne circuit breaker could not stop the irregular electric current flow. The trainborne circuit breaker is the same model as the one involved in the service disruption at Yau Ma Tei Station on 21 October 2010. The circuit breakers will be replaced by a new model by the end of 2011.	28
3-Aug-11	12:42 PM	East Rail Line	A Lo Wu-bound train was withdrawn from service at Tai Wai Station because an air-conditioning unit failed.	Investigations found a faulty component of the air-conditioning equipment, which was immediately replaced.	9
5-Aug-11	09:32 AM	Kwun Tong Line	A Tiu Keng Leng-bound train was withdrawn from service at Diamond Hill Station because the trainborne power supply equipment failed.	Investigations found faulty components of the trainborne power supply equipment, which were immediately replaced.	14
5-Aug-11	11:31 AM	West Rail Line	Trains between Hung Hom Station and Austin Station were delayed because the signalling computer failed.	Investigations found a power cable inside the signalling equipment room was unintentionally detached during a routine inspection. The staff has been reminded of the proper procedure and the lesson learned was shared with other staff.	11
5-Aug-11	10:15 PM	Ma On Shan Line	Trains were delayed at Sha Tin Wai Station because a male passenger accidentally activated a Platform Emergency Plunger while waiting for trains.	Service resumed after the plunger was reset.	10
5-Aug-11	11:41 PM	East Rail Line	A Sheung Shui-bound train was delayed shortly after departing Mong Kok East Station because a passenger alarm was operated for a female passenger who was unconscious and lying on the train floor.	The passenger was attended by station staff and was conveyed to hospital upon arrival at Kowloon Tong Station.	8
6-Aug-11	01:28 PM	East Rail Line	A Lok Ma Chau-bound train was delayed between University Station and Tai Po Market Station because a track circuit failed intermittently.	Investigations found faulty components of the point equipment, which were immediately replaced.	26
7-Aug-11	07:21 AM	East Rail Line	A Lo Wu-bound train was withdrawn from service at Tai Po Market Station because the train doors sustained a fault.	Investigations found a loosened component of the door equipment, which was immediately fixed.	12

Record of Train Service Delays of 8 minutes or more from 1 July to 15 August 2011 (Heavy Rail)

Incident Date	Incident Time	Railway Line Affected	The Incident	Findings of Investigation/ Remedial Action Taken	Delay (min.)
13-Aug-11	05:46 AM	Ma On Shan Line	A Wu Kai Sha bound train was cancelled because its trainborne signalling computer failed.	Investigations found a faulty component of trainborne signalling equipment, which was immediately replaced.	8

Record of Railway Service Delays of 8 minutes or more from 1 July to 15 August 2011 (Light Rail)

Incident Date	Incident Time	Railway Line Affected	The Incident	Findings of Investigation/ Remedial Action Taken	Delay (min.)
2-Jul-11	05:57 PM	Light Rail	A Light Rail Vehicle was withdrawn from service at Tai Tong Road Stop because the trainborne traction supply system failed.	Investigations found faulty components of the trainborne traction supply system, which were immediately replaced.	8
21-Jul-11	02:18 PM	Light Rail	A Light Rail Vehicle was withdrawn from service upon arrival at Tsing Shan Tsuen Stop because it sustained no forward movement.	Investigations found a faulty component of the pneumatic equipment, which was immediately replaced.	20
24-Jul-11	01:26 PM	Light Rail	A Light Rail Vehicle was withdrawn from service because the pantographs were damaged by a section of sagged overhead line auxiliary support wire after passing a junction between Hang Mei Tsuen Stop and Tong Fong Tsuen Stop.	Investigations revealed that the incident was caused by the difference in tension between the overhead line wires under hot weather. The tension of overhead line wires was immediately adjusted.	19
30-Jul-11	07:27 PM	Light Rail	A Light Rail Vehicle was delayed at Chung Uk Tsuen Stop because of an alleged indecent assault case.	Police was summoned to handle the case.	9
1-Aug-11	04:26 PM	Light Rail	A Light Rail Vehicle was delayed at the junction between Tin Wing Road and Tin Shing Road, and subsequently withdrawn from service upon arrival at Tin Yuet Stop because it sustained air leakage.	Investigations found that an air hose was detached, which was immediately fixed.	31
4-Aug-11	05:11 PM	Light Rail	A Light Rail Vehicle was withdrawn from service at Lam Tei Stop because it sustained no forward movement.	Investigations found a faulty component of the trainborne traction equipment, which was immediately replaced.	18
9-Aug-11	10:21 AM	Light Rail	Train service between Siu Hong Stop and Hung Shui Kiu Stop was suspended for 39 minutes after a private car collided with a Light Rail Vehicle at the junction between Castle Peak Road and Yick Yuen Road. The driver of the private car was certified dead upon arrival at hospital.	Normal service resumed when the site was cleared by the Police.	39
11-Aug-11	07:00 AM	Light Rail	A Light Rail Vehicle was blocked and delayed at Lung Mun Stop by a non-service Light Rail Vehicle in front which sustained a fault on the air compressor.	Investigations found a faulty component of auxiliary equipment, which was immediately replaced.	16
13-Aug-11	01:53 PM	Light Rail	A Light Rail Vehicle was delayed at Tin Shui Stop after the Train Captain reported that he felt sick and was unable to discharge driving duties.	A replacement Train Captain was arranged.	8
14-Aug-11	12:17 PM	Light Rail	A Light Rail Vehicle was withdrawn from service at Tai Tong Road Stop because a female passenger was nipped by closing doors while alighting.	Ambulance was summoned and the passenger was conveyed to hospital.	12

Record of Railway Service Delays of 8 minutes or more from 1 July to 15 August 2011 (Light Rail)

Incident Date	Incident Time	Railway Line Affected	The Incident	Findings of Investigation/ Remedial Action Taken	Delay (min.)
14-Aug-11	12:51 PM	Light Rail	A Light Rail Vehicle was withdrawn from service at Siu Lun Stop after a cyclist dashed out from the left-hand side of the vehicle to cross the pedestrian walkway. The Train Captain applied emergency brakes to stop the vehicle. The cyclist was not hit.	Service resumed after the site was cleared.	10