

Legislative Council Panel on Transport

Train service disruption on Kwun Tong Line between Kwun Tong Station and Quarry Bay Station on 2 September 2001

Purpose

This paper provides information on the train service disruption of the Kwun Tong Line on 2 September 2001 and the remedial measures taken by the MTR Corporation for members' information.

Background

2. On Sunday, 2 September at 0619 hr, when the first train of the day on the Kwun Tong Line ran from Quarry Bay Station to Lam Tin Station through the open section near Lam Tin Station, the traction power supply tripped, indicating a possible fault. The first train was able to coast to Lam Tin, the power supply was restored and the train continued its journey.
3. The following train was cautioned by the Operations Control Centre and carried out a line check in accordance with laid down procedures. When the train left the Eastern Harbour Tunnel and was running in the open section towards Lam Tin at 0628 hr, the traction power supply tripped again and was unable to be restored. The train stopped at a location about 400 metres before Lam Tin Station with the leading cars in the tunnel and the rear cars in the open section.
4. It was reported that a lightning arrester on a nearby overhead line mast was broken into two pieces and the loosened part connected had come into contact with the roof of the second train, causing the overhead line system to trip and making it impossible to reclose the circuit breakers.
5. As a result, the power supply to this section was interrupted and the train service between Kwun Tong Station and Quarry Bay Station was temporarily suspended between 0628 hr to 0755 hr.
6. Upon the interruption of power supply, the Train Operator used the public address system to inform passengers on board of the potential delay. Passengers throughout the MTR system were duly informed of the disruption to train service by public announcements transmitted at stations. The Chief Controller in the Operations Control Centre declared

a “Major Incident” at 0634 hr and a “Red Alert” was issued to Transport Department as well as other transport operators, requesting their assistance, at 0637 hr. Electronic media were notified of the incident and the train service disruption by telephone accordingly. Press statements to update the media were despatched [Annex I, II & III].

7. Staff was despatched from Lam Tin Station to assist passengers to detrain to the track. Between 0648 hr and 0705 hr, approximately 400 passengers were detrained to the track via the front emergency exit and they were assisted to walk to Lam Tin station via the track.
8. Some reports were received from passengers of a “burning smell”, but there was no fire on the train or smoke in the train car. All passengers were detrained in an orderly and efficient manner without any difficulty.
9. Temporary repair was immediately arranged with the loosened part of the broken arrester cut and removed from the overhead line. Normal train service on both directions of Kwun Tong Line resumed at 0755 hr. The “Major Incident” and “Red Alert” were then cancelled.
10. During the incident, train Service on the Kwun Tong Line between Kwun Tong Station and Quarry Bay Station was suspended for a total of 87 minutes from 0628 hr to 0755 hr. During the period, train service between Kwun Tong Station and Yau Ma Tei Station was maintained at a 5-minute interval.

Causes of incident

11. A subsequent investigation confirmed that the overhead line equipment had been struck by a very high current lightning, in excess of 10,000 Ampere. This caused damage to the arrester which is specifically provided to protect the trains and the equipment from the very high electric current caused by lightning.
12. The arrester performed correctly by diverting the current to earth but was damaged and broken into two pieces such that one part came into contact with the air-conditioning unit on the roof of the train. This particular arrester was installed 8 years ago and the manufacturers recommended service life for such devices is in excess of 20 years.

Remedial Actions

13. A system-wide check on all similar lightning arresters has been undertaken. The check was completed in September 2001 and confirmed that they were all in good condition.
14. In order to avoid recurrence, all similar lightning arresters will be secured by additional fixing, so that if an arrester breaks, it will not come into contact with a passing train. The work has now been completed.

Conclusion

15. The incident was caused by a very high current lightning strike which induced permanent transformation of a lightning arrester. The lightning arrester was broken into two pieces and the loose part came into contact with the roof of a passing by train and resulted in interruption of power supply to a section of the railway. The subsequent investigation confirmed that the protection system operated as designed and that the installation and maintenance of the overhead line was in line with the necessary standards. Additional fixing will be added to all similar lightning arresters to avoid recurrence.
16. Immediate repair had been carried out in the shortest time possible. During the period, passengers on board of the incident train were at no time exposed to any safety hazards and the detrainment procedure was carried out in an orderly and efficient manner. Information to Transport Department, other transport operators and to the electronic media was despatched timely.

MTR Corporation
December 2001

二零零一年九月二日

新聞通告

由於架空電纜供電系統發生故障，地鐵觀塘綫觀塘站至鯉魚涌站之間的列車服務暫時停止，預計於上午十時恢復正常。

現時觀塘綫的列車服務維持於觀塘站至油蔴地站之間，每五分鐘一班車。

傳媒查詢

二十四小時傳媒查詢：

2212-2813

Press Release

Annex II

Press Statement

2 September 2001

The MTR Corporation apologises to its passengers for the inconvenience caused by the train service disruption to Kwun Tong Line this morning.

At around 6.28 am, an overhead line jumper was found loosened in the open section in the down direction towards Yau Ma Tei, near Lam Tin Station. As a result, Kwun Tong Line train service between Kwun Tong and Quarry Bay was temporarily suspended. At this moment, a Yau Ma Tei-bound train with about 400 passengers on board was stalled, about 0.5 km away from Lam Tin Station. Passengers were immediately assisted to alight the train and walk to Lam Tin Station. The walk took about 10 minutes. All passengers were helped to arrive at Lam Tin Station at 7.05 am.

At the same time, other public transport operators were requested to strengthen their services.

Emergency repairs were immediately carried out and normal train service resumed at 7.55 am.

The Corporation is conducting an investigation into this incident.

The Corporation once again apologises to its passengers for the inconvenience caused.

Press Release

Annex III

Press statement

2 September 2001

With reference to the train service disruption to the MTR Kwun Tong Line early this morning, preliminary findings revealed that some overhead line equipment in the open section in the down direction (towards Yau Ma Tei) near Lam Tin Station had been damaged by lightning last night. As a result, power supply was interrupted, hence train service on the Kwun Tong Line between Kwun Tong and Quarry Bay had been temporarily suspended from 6.28 am to 7.55 am to facilitate immediate repairing work to be carried out.

The MTR Corporation is continuing the investigation into this incident.

The Corporation apologises to its passengers for the inconvenience caused.