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IMMEDIATE

MTA Finds Unrepaired Track Defects Caused F Train Derailment

Final Report Details Extensive Measures Taken to Minimize Risk of Future Derailments

MTA New York City Transit (NYCT) today released the final report on its exhaustive investigation into the cause of the May 2014 F train derailment along the Queens Boulevard subway line. The report uses prior inspection reports to identify several minor defects in track components present at the point of derailment. Individually, none of them was capable of causing a derailment, but the combination of defects in one location was the most likely cause of the derailment. New York City Transit has changed its inspection protocols to ensure rail defects are appropriately identified and repaired.

"Nothing is more important than providing the safest transportation possible for our customers and employees, so determining the cause of this derailment was a top priority for us," said New York City Transit President Carmen Bianco. "We immediately took corrective action to ensure we always focus on identifying and correcting track defects. This will minimize the risk of future derailments."

The eight-car F train derailed shortly after 10 a.m. on May 2 as it traveled toward Manhattan on the express track south of the Jackson Heights-Roosevelt Av station, under Broadway at 60th Street. A 7-foot, 11-inch section of a 19-foot, 6-inch-long rail fractured beneath the train as it traveled at approximately 40 miles per hour, causing six of the eight cars to derail. Approximately 1,000 people were safely evacuated by city rescue services. Thirty customers and two employees reported minor injuries, and the damage was valued at more than \$2 million.

New York City Transit's comprehensive track inspection program requires every inch of mainline track to be walked and inspected by trained personnel twice a week, and by supervisors twice a month. Automated inspection cars also traverse the system regularly to assess track geometry and to use ultrasonic technology to scan for rail defects invisible to the naked eye.

New York City Transit's Office of System Safety reviewed video data from prior automated inspections where the derailment occurred. The videos showed that a metal plate and fasteners under the rail had been broken for at least one year before the derailment but were not replaced. The wooden tie under that plate was also in poor condition. Maintenance records also showed that in the eleven months before the derailment, two other broken rails had been reported and replaced in the same 19-foot, 6-inch section of rail.

The combination of the broken plate, broken fasteners and deteriorated tie should have been prioritized for repairs. The report concludes that Division of Track personnel did not identify, document and correct the track defect at that location, either during regular inspections or when the two prior broken rails were replaced. They also did not adequately investigate the underlying causes of the broken rails.

Additionally, the report found that the top of the rail that broke was installed with a 1/8-inch vertical mismatch where the new rail met the slightly worn existing rail. In addition, the metal joint bars used to fasten the two rails together were reused, and one of them had a sharp edge where the top of the joint bar met the underside of the rail head. In addition, one of the six bolts required to secure the joint bar was not present.

Investigators found no anomalies in the performance of the crew, the signal system, the subway cars or the manufacture of the rail itself. Disciplinary action is being pursued against three Maintenance Supervisors and a Track Inspector for their roles in this derailment.

The Division of Track has taken several steps to ensure rail defects are properly identified and repaired. A new Broken Rail Procedure ensures broken plates and fasteners are replaced as soon as possible. The Division of Track will add eight Maintenance Supervisors, and will increase the number of times supervisors inspect the five corridors with the highest number of broken rails. Those corridors are now inspected monthly by ultrasonic inspection cars, and new teams have been established to rapidly respond to and correct rail defects identified by ultrasonic testing. The Division of Track is also installing continuously welded rail and resilient fasteners in these five corridors, which eliminates as many bolted joints as possible.

New York City Transit spends approximately \$180 million on track maintenance each year. The MTA invested \$1.5 billion in track rehabilitation and construction in its 2010-2014 Capital Program, and is proposing to increase that investment to almost \$2 billion in the 2015-2019 Capital Program.

"The magnitude of our investment in maintenance illustrates our strong commitment to the safety of our customers and employees," said Joseph Leader, Senior Vice President, Department of Subways. "We appreciate this detailed analysis of why the derailment occurred. We have quickly taken corrective action, and we will continue to embrace new technologies and continuously improve our track maintenance activities."