

FINAL REPORT OF INVESTIGATION A&I E18442

October 15, 2018
Greenbelt Yard Collision

Adopted by the Metrorail Safety Commission at its meeting on July 11, 2019.

Washington Metrorail Safety Commission
777 North Capitol Street, NE, Suite 402
Washington, DC 20002



FINAL REPORT OF INVESTIGATION A&I E18442

SMS 20181015#74995MX

Date of Event:	10/14/2018
Type of Event:	Collision (I-3)
Incident Time:	23:50 hrs.
Location:	Greenbelt Yard, Track 8
Time and How received by SAFE:	00:22hrs., ROCC SAFE notification
Safety Officer Response:	Yes
Time of Safety Officer Arrival:	01:45 hrs.
Time of Safety Officer Departure:	03:05 hrs.
Rail Vehicle:	L7404-05X7412-13X7328-29X7356-57T
Injuries:	None
Damage:	Yes
Emergency Responders:	RTRA, ATC and TRST

Executive Summary

On October 14, 2018, at approximately 23:50 hrs., an eight (8) car Non-Revenue consist L7404-05x7412-13x7328-29x7356-57T within Greenbelt Yard was instructed by the Greenbelt Tower Interlocking Operator (I/O) to lay up/store on Yard Track 8. After receiving a lead to Yard Track 8, the train made contact with a Rail Tie and Geismar Torque Wrench which were improperly stored and fouling Track 8 during prior maintenance activity on Track 7. As a result, damages to the Collector Shoe Assembly on car 7404 and to the Air Spring Cut-Out Valve on car 7412 were identified.

The Train Operator (T/O) and the Interlocking Operator (I/O) were removed from service for post incident analysis and a subsequent incident interview with SAFE. Additionally, the train consist was removed from service for post incident analysis and an inspection was performed by Vehicle Program Services (CENV) and Car Maintenance (CMNT) respectively.

No other damage or injuries were reported as a result of this incident.

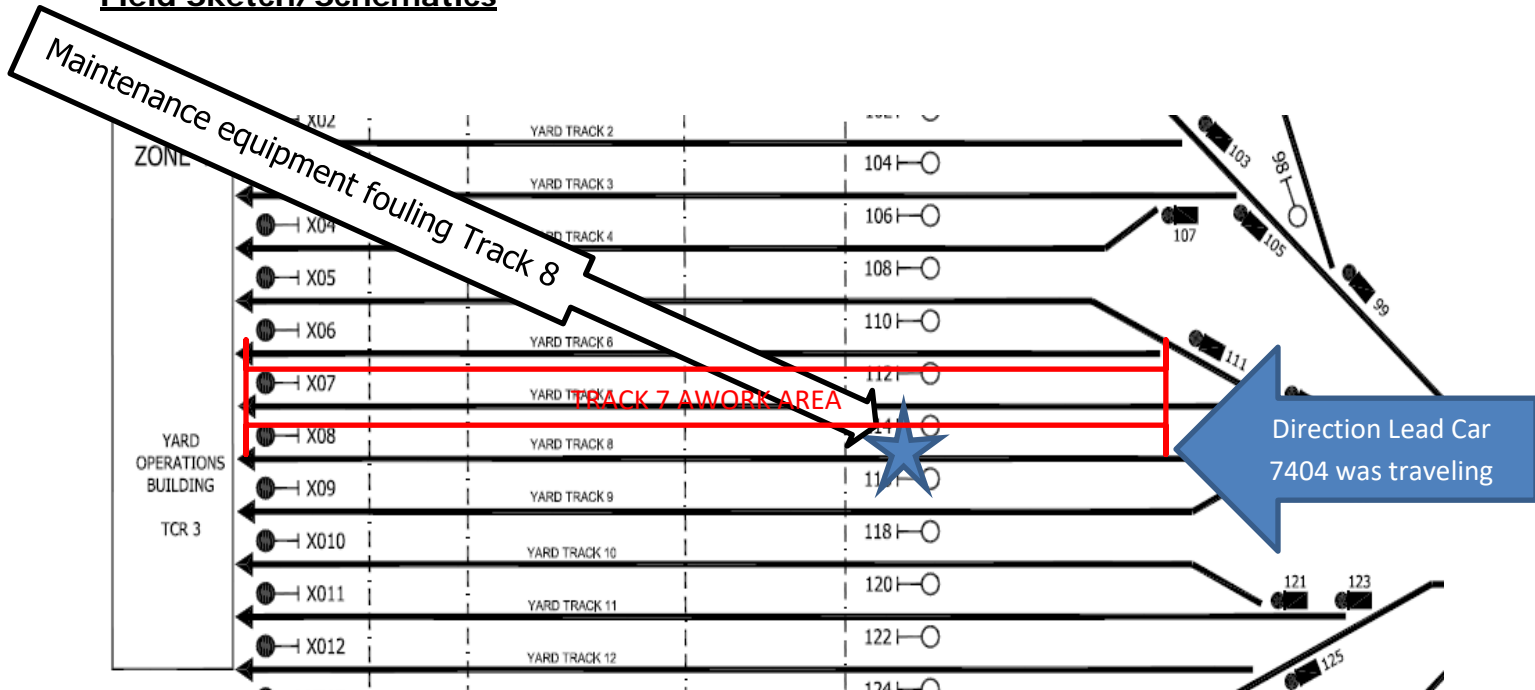
Notification

Title	Time	Comment:
FTA	01:08 hrs.	FWSO Notification
TOC	01:08 hrs.	FWSO Notification

Incident Site

Greenbelt Yard Track 8

Field Sketch/Schematics



Investigation

On October 14, 2018, at approximately 23:50 hrs., the T/O on Non-Revenue consist L7404-05x7412-13x7328-29x7356-57T was instructed by the Greenbelt Tower I/O to store train on Yard Track 8. After receiving a lead to yard Track 8, the train made contact with a rail tie and a Geismar Torque Wrench which were improperly stored during a prior maintenance activity on Track 7 and were fouling Track 8. The T/O reported stopping the train after hearing a loud bang. The T/O notified the I/O that the train was unable to clear the track and the T/O requested to reverse ends and store the consist on another track. As a result of this minor collision with the fixed object, the train sustained damage to the Collector Shoe Assembly on car 7404 and damage to the Air Spring Cut-Out Valve on car 7412.

Office of Transportation (RTRA)

Date: 10/14/2018 Time: 23:50 hrs.
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Drafted By: SAFE 705 - 3/6/2019
 Reviewed By: SAFE 701 - 3/6/2019
 Approved By: SAFE 70 - 5/24/2019

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Interlocking Operator

Per I/O Written Statement, "The T/O was laying Train ID 591 on Track 8. He had a collision with a tie remover unit that was on Track 7. The tie remover damaged car 7507 right side collector shoe assembly. I saw the T/O stop and I asked him if he was okay. The T/O said he needed to reverse ends. The communication was bad, so I gave permission to clear 92 and send him on Track 14 and then I asked the T/O to give me a landline. Once the T/O told me what happened I contacted the shop, ROCC and the office. The T/O never stated he came in contact with anything until he called me."

CMNT

Inspection was conducted by CMNT personnel to Rail Car 7404 and 7412 where damage was located. See Attachment 1 and 2.

Weather

At the time of the incident, the temperature was 57°F, and clear. SAFE has concluded that weather was not a contributing factor in this incident (Weather source: National Oceanic Atmospheric Administration (NOAA) - Location: Washington, DC.)

Findings

- TRST Supervisor was the Roadway Worker in Charge (RWIC) of the work area.
- TRST work crew was assigned to perform tie renewal, on Track 7 in Greenbelt Yard.
- On 10/14/2018 at 14:16 hrs., TRST Supervisor contacted Greenbelt Tower vis radio, clearing Track 7 and 8. TRST Supervisor also responded to the Tower station that, Track 8 is clear for train movement."
- Maintenance equipment was improperly stored
- I/O is a 12-year WMATA employee
- I/O has been Rail Operations for 10 years
- I/O did not have any recent safety violations

Immediate Mitigation

1. Train Consist was removed from service

2. Train Operator was sent for post incident testing
3. Interlocking Operator was sent for post incident testing
4. TRST Supervisor and the Interlocking Operator were counseled and re-instructed.

Conclusion

Based on the salient facts, SAFE has concluded that the incident was a result of human error. TRST Supervisor and crew worked on Track 7 prior to the accident on Track 8. The TRST Supervisor gave up both tracks and confirmed via radio with the Greenbelt Tower that Track 8 was clear for train movement. However, the TRST Supervisor failed to perform a thorough track inspection before relinquishing the work area. The improper storage and housekeeping of maintenance equipment on Track 7 was a contributing factor of this incident.

The I/O was notified by the T/O that Track 8 could not be cleared, and that the T/O needed to reserve ends. The I/O did not stop all movement in that section of the yard where the collision occurred. The I/O failed to personally investigate the incident that occurred in the yard. In addition, the I/O moved the incident train prior to investigating that it was safe to move the incident train.

Considering all the facts gathered from this investigation, SAFE has no further concerns regarding this incident and recommends E18442 for closure.

Corrective Action

No further corrective action taken as part of this event.

Attachments

Date: 10/14/2018 Time: 23:50 hrs.
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Washington Metropolitan Area Transit Authority
Maintenance and Material Management System
Work Order Details

Work Order #: 14587340
Type: CM

14587340

Status: COMP
10/16/2018 14:00

Work Description: Train made contact with a unit on YL Track 8. Damage to the collector shoe assembly. No report of injuries. SAFE notified.

Job Plan Description:

7356-7357.7329-7328.7412-7413.7405-7404(L)

Work Information			
Asset: R7404	7404, RAIL CAR, KAWASAKI, 7000 AC, A CAR	Owning Office: CMNT-CMNT-CMNT	Parent:
Asset Tag: R7404		Maintenance Office: CMNT-GRBT-INSP	Create Date: 10/15/2018 03:33
Asset S/N: 7404		Labor Group:	Actual Start: 10/15/2018 03:37
Location: 1437	E99, GREENBELT YARD	Crew:	Actual Comp: 10/16/2018 14:00
Work Location: 1437	E99, GREENBELT YARD	Lead:	Item: K18050001
Failure Class: CMNT001	RAIL CAR	GL Account: WMATA-02-33392-50499160-041-*****-OPR**	
Problem Code: 1025	ACCIDENT/COLLISION/DERAIL	Supervisor:	Target Start:
Requested By:		Requestor Phone:	Target Comp:
Chain Mark Start:		Chain Mark End:	Scheduled Start:
Create-Mileage: 84973.0		Complete-Mileage: 85335.0	

Task IDs

Task ID

10 VERIFIED COLLECTOR SHOE ASSEMBLY #1 HAS SUSTAINED INTENSIVES DAMAGES.REPLACED COLLECTOR SHOE ASSEMBLY AND SHORT CABLE.(PARTS FROM TRUCK SHOP)

000-300-K08 TRUCK&SUSPENSION: CURRENT
Component: COLLECTOR ASSY; TRUCK Work Accom: REPLACED USED Reason: BROKEN Status: COMP Position: 1 Warranty?: Y

Actual Labor

Task ID	Labor	Start Date	End Date	Start Time	End Time	Approved?	Regular Hours	Premium Hours	Line Cost
10		10/16/2018	10/16/2018	10:00	14:00	Y	04:00	00:00	\$153.32
10		10/16/2018	10/16/2018	10:00	14:30	Y	04:30	00:00	\$147.62
Total Actual Hour/Labor:							08:30	00:00	\$300.94

Related Incidents

Ticket	Description	Class	Status	Relationship
8363984	Train made contact with a unit on YL Track 8. Damage to the collector shoe assembly. No report of injuries. SAFE notified.	SR	RESOLVED	ORIGINATOR

Failure Reporting

Cause	Remedy	Supervisor	Remark Date
1929 FOREIGN OBJECT DAMAGE	0004 REPLACED		10/16/2018

Remarks: VERIFIED FAILURE, R/R COLLECTOR ASY. & POWER CABLE, TORQUED & STRIPPED ALL HARDWARE, OK FOR SERVICE PART PROVIDED BY MRO

Attachment 1 - Rail Car 7404 Work Order



Washington Metropolitan Area Transit Authority
Maintenance and Material Management System
Work Order Details

Work Order #: 14590249
Type: CM

14590249

Status: COMP
10/16/2018 13:36

Work Description: FRONT RIGHT AIR SPRING C/O VALVE SHIELD BENT
Job Plan Description:

Work Information			
Asset: R7412	7412, RAIL CAR, KAWASAKI, 7000 AC, A CAR	Owning Office: CMNT-CMNT-CMNT	Parent:
Asset Tag: R7412		Maintenance Office: CMNT-GRBT-INSP	Create Date: 10/16/2018 12:54
Asset S/N: 7412		Labor Group:	Actual Start: 10/16/2018 12:58
Location: 1437	E99, GREENBELT YARD	Crew:	Actual Comp: 10/16/2018 13:36
Work Location: 1437	E99, GREENBELT YARD	Lead:	Item: K18050001
Failure Class: CMNT008	PNEUMATIC	GL Account: WMATA-02-33392-50499160-041-*****-OPR**	
Problem Code: 2428	N/A CODE (PNEUMATIC SYSTEM)	Supervisor:	Target Start:
Requested By:		Requestor Phone:	Target Comp:
Chain Mark Start:		Chain Mark End:	Scheduled Start:
Create-Mileage: 98630.0		Complete-Mileage: 98630.0	

Task IDs

Task ID	Description
10	INSPECTED FOR FOREIGN OBJECT DAMAGE, FOUND DAMAGED AIR SPRING CUT OUT VALVE SHIELD BENT, SEE TASK 20 FOR REPAIRS

Component	Description	Work Accomplishment	Reason	Status	Position	Warranty?
000-300-K12-001 PIPING, AIR SPRING; PNEUMATIC		INSPECTED	BENT	APPR		Y
Component: PIPE ASSY; 5K/6K/7K						
20	I FIXED FRONT RIGHT AIR SPRING C/O VALVE SHIELD BENT I FIXED FRONT RIGHT AIR SPRING C/O VALVE SHIELD BENT	REPAIRED	BENT	COMP	1	Y
Component: 000-300-K12-001 PIPING, AIR SPRING; PNEUMATIC						
Component: PIPE ASSY; 5K/6K/7K						

Actual Labor

Task ID	Labor	Start Date	End Date	Start Time	End Time	Approved?	Regular Hours	Premium Hours	Line Cost
10		10/16/2018	10/16/2018	09:00	10:00	Y	01:00	00:00	\$32.80
20		10/16/2018	10/16/2018	12:00	14:00	Y	02:00	00:00	\$68.26
Total Actual Hour/Labor:							03:00	00:00	\$101.06

Failure Reporting

Cause	Remedy	Supervisor	Remark Date
1929 FOREIGN OBJECT DAMAGE	2825 REPAIRED		10/16/2018
Remarks: VERIFIED, REPAIRED SHIELD AS NEEDED, GOOD FOR SERVICE			

Attachment 2 - Rail Car 7412 Work Order

Photos

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Photo 1 - Geismar Torque Wrench



Photo 2 - Rail Tie



Photo 3 – Damaged Collector Shoe Assembly



Photo 4 – Damaged Collector Shoe Assembly