

#### WMSC Commissioner Brief: W-0219 - Collision - Alexandria Rail Yard - January 7, 2023

Prepared for Washington Metrorail Safety Commission meeting on May 16, 2023

#### Safety event summary:

A Metro Transit Police Department Detective drove their Metro Transit Police Department vehicle into a grade crossing in Alexandria Rail Yard, leading to a collision with a moving train on Saturday, January 7, 2023. Metrorail procedures grant a train at a grade crossing the right of way.

The Train Operator, operating a two-car consist from the "B" Car (7301), which has a cab with less functionality than the "A" car (7300) but that allows for movements in the yard, properly stopped the consist at the crossing and sounded the train's horn. The Train Operator then waited, as required by procedure. The Train Operator began to move the railcars across the roadway toward the Service and Inspection Shop. As the train entered the grade crossing, the Detective slowed their car but did not stop at the stop sign and drove forward into the crossing ahead of the train. CCTV shows the Detective stopped after entering the path of the train and began to reverse just before the collision. The Train Operator slowed the train, but the front left portion of the train collided with the front right side of the car. The railcar sustained minor body damage. The Detective's Metrorail-issued vehicle sustained damage to the right front fender. Neither the Detective nor the Train Operator was injured.

The Train Operator reported the collision to the Interlocking Operator responsible for the rail yard, who reported the event to the Rail Operations Control Center.

The investigation demonstrated that the Detective did not know that train operators sound the vehicle's horn prior to moving. Instead, the Detective improperly interpreted the train horn as a signal for them to drive in front of the train.

There are blind spots and reduced visibility for operators utilizing a "B" Car to move via the Hostler Panel, but that did not appear to contribute to this collision.

#### **Probable Cause:**

The probable cause of this event was WMATA's insufficient training of Metrorail personnel, including Metro Transit Police Department personnel, on operational safety procedures.

#### **Corrective Actions:**

Metrorail updated its Metro Transit Police Department refresher training to include that the sounding of a horn on a stopped train can mean the train is going to move, and that, as specified by an existing Metrorail "Cardinal Rule," train movement should be expected in any direction at any time.

Metrorail plans to develop signage for rail yard grade crossings (Metrorail has no mainline grade crossings) that advises automobile drivers to be alert for train movements at all times and in any direction, with an emphasis that horn activation may be an indication of possible train movement.

Examples of other related corrective action plans CAPs

Ongoing





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- C-0164 was created to address the 2022 Emergency Management and Fire and Life Safety Program audit finding that MTPD personnel routinely enter the roadway despite not having RWP qualifications required by Metrorail rules and procedures, exposing themselves and others to the risk of serious injury or death. WMATA committed to conducting a gap analysis between the MTPD Roadway Operations Safety program and WMATA's Roadway Worker Protection program and then update both programs based on those findings. (Expected completion date February 2024)
- C-0165 was created to address the 2022 finding that MTPD general orders do not reflect current operational realities and procedures, and areas for improvement from prior events are not effectively communicated to frontline MTPD personnel. Under this CAP, WMATA committed to review and update general orders concerning incident command, major incident scene, operations aboard trains and on the roadway and person struck by a train. Metro will also update document control and records management procedures, communicate lessons learned and provide training on order and policy revisions. (Expected completion date December 2023)

#### WMSC staff observations:

All Metrorail personnel, including Metro Transit Police Department personnel, are required by Metrorail to follow Metrorail's rules. This means that they must be effectively trained on and understand these safety rules and procedures.

Metrorail conducted radio checks as part of this investigation that identified radio system communication deficiencies. However, Metrorail's radio communications group discounted these as known issues. Metrorail has open corrective action plans (C-0217, expected completion date May 2025, regarding addressing known radio issues, and C-0100, expected completion date October 2026, regarding maintaining fully functioning radio communications systems in all rail yards and shops) that it is implementing that are required to address known deficiencies in yard and other radio communications.



# Washington Metropolitan Area Transit Authority Department of Safety (SAFE) Office of Safety Investigations (OSI) FINAL REPORT OF INVESTIGATION A&I E23018

Date of Event:	January 7, 2023
Type of Event:	Collision
Incident Time:	17:10 Hours
Location:	Alexandria Rail Yard – Roadway Crossing (East)
Time and How received by SAFE:	17:17 hours - SAFE/MAC
WMSC Notification Time:	18:54 hours
Responding Safety and Readiness	WMATA: Office of Safety Investigations (OSI)
Personnel:	WMSC: N/A
	Other: N/A
Rail Vehicle:	L7301-7300
Injuries:	None
Damage:	MTPD Passenger Vehicle (SV026661) – Right-side
	front fender damaged/replaced
	Rail Car 7301 – Light Scrape
Emergency Responders:	Metro Transit Police Department (MTPD)
SMS I/A Incident Number:	20230107#105349MX

Incident Date: 01/07/2023 Time: 17:10 hours

Final Report - Collision

E23018

# Alexandria Rail Yard - Collision

# January 7, 2023

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# **Abbreviations and Acronyms**

ARS Audio Recording System

**CAP** Corrective Action Plan

**CCTV** Closed-Circuit Television

**CMNT** Office of Car Maintenance

**COMR** Office of Radio Communication

MSRPH Metro Transit Police Department

MTPD Metrorail Safety Rules and Procedures Handbook

NOAA National Oceanic and Atmospheric Administration

**OSI** Office of Safety Investigations

RTRA Office of Rail Transportation

ROCC Rail Operations Control Center

**RWP** Roadway Worker Protection

**SAFE** Department of Safety

SMS Safety Measurement System

**SVMT** Service Vehicle Maintenance

**S&I** Service and Inspection

WMATA Washington Metropolitan Area Transit Authority

WMSC Washington Metrorail Safety Commission

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# Washington Metropolitan Area Transit Authority Department of Safety – Office of Safety Investigations

# **Executive Summary**

\*Note that all times listed are approximate and may contain minor variations due to differences between systems of record. \*

On Saturday, January 7, 2023, at 17:10 hours, a Metro Transit Police Department (MTPD) automobile SV026661, operated by an MTPD Detective, collided with a rail car (7301-7300) as the train consist was traversing a grade crossing within Alexandria Rail Yard.

At the time of the event, the Train Operator was performing a yard move under the instruction of the Interlocking Operator. The Train Operator was operating rail car 7301, which is a B-Car, from the Hostler panel while travelling eastbound in the direction of the Service and Inspection (S&I) shop. The Train Operator approached the road crossing and stopped as the MTPD vehicle approached the road crossing. The Train Operator then sounded the train horn and began to cross the roadway.

As the train entered the grade crossing, the MTPD Detective proceeded into the crossing as well. The MTPD vehicle's front passenger-side bumper collided with the front corner of rail car 7301, causing damage.

The Train Operator notified the Interlocking Operator. The Interlocking Operator notified the Rail Operations Control Center (ROCC). The MTPD Detective notified their Supervisor of the event. The Office of Safety Investigations (OSI) was notified and responded to the scene, along with personnel from MTPD and RTRA.

There were no injuries resulting from the event.

The Office of Rail Transportation (RTRA) removed the Train Operator from service for post-incident toxicology testing. MTPD removed the Detective from service for post-incident toxicology testing.

The probable cause of the collision at Alexandria Yard on January 7, 2023, was a lack of understanding of the MTPD Detective, as they were not aware that Rail Vehicles sound the vehicle's horn prior to making a move.

#### **Incident Site**

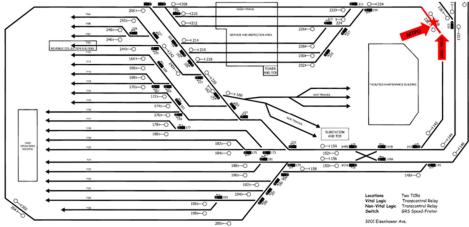
Alexandria Rail Yard – Roadway Crossing (East)

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## Field Sketch/Schematics



Locations are approximate. Not to scale.

# **Purpose and Scope**

The purpose of this accident investigation and candid self-evaluation is to collect and analyze available facts, determine the probable cause(s) of the incident, identify contributing factors, and make recommendations to prevent a recurrence.

# **Investigative Methods**

The investigative methodologies included the following:

- Physical Site Assessment through document review
- Formal Interviews SAFE interviewed two individuals as part of this investigation. Interview included persons present at, during, and after the incident, those directly involved in the response process, and representatives from the Washington Metrorail Safety Commission (WMSC). SAFE interviewed the following individuals:
  - Train Operator
  - MTPD Detective
- Documentation Review Collection of relevant work history information and process documentation contained in WMATA systems of record. These records include:
  - Metrorail Safety Rules and Procedures Handbook (MSRPH)
  - National Oceanic and Atmospheric Administration (NOAA)
  - Employee Training Records
  - Employee 30-day Work History
  - Certifications
- System Data Recording Review Collection of information contained in Metro Data Recording Systems. This data includes:
  - Audio Recording System (ARS) playback
  - Closed-Circuit Television (CCTV)

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## Investigation

On Saturday, January 7, 2023, at 17:10 hours, MTPD automobile SV026661, operated by an MTPD Detective, collided with rail consist 7301-7300 as the train was traversing the grade crossing on the east end of Alexandria Yard, adjacent to the overflow parking lot.



Image 1 – Collision between MTPD passenger vehicle and rail car 7301.

The Audio Recording System (ARS) revealed that at 16:57 hours, the Interlocking Operator instructed the Train Operator to board the rail cars on storage track 6B. At 17:05 hours, the Interlocking Operator instructed the Train Operator to move the rail cars into 2 East of the S&I Shop, the Train Operator acknowledged and proceeded to move the rail cars. The Train Operator was operating inside of rail car 7301, a B-Car while travelling eastbound in the direction of S&I shop.

The Closed-Circuit Television (CCTV) revealed that at 17:09 hours, both the train consist, and MTPD passenger vehicle approached the road crossing. The train consist stopped. The MTPD passenger vehicle slowed down but did not make a complete stop, then continued to enter the road crossing in front of the train. As the train began to traverse the crossing, the front end of the MTPD vehicle was over the first running rail. The MTPD vehicle stopped and began to reverse. The train began to slow down but the MTPD passenger vehicle's front passenger-side bumper and the front left corner of rail car 7301 collided. After reversing, the MTPD vehicle stopped outside of the road crossing. The train consist stopped within the crossing.

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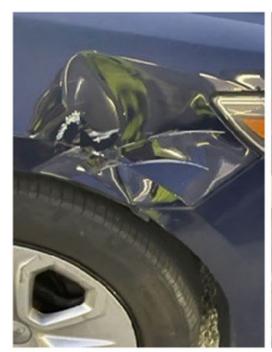




Image 2 – Vehicle damage to MTPD passenger vehicle and rail car 7301.

At 17:10 hours, the Train Operator notified the Interlocking Operator of the event. The Interlocking Operator notified ROCC at 17:11 hours. The MTPD Detective notified their Supervisor of the event. At 17:15 hours, the Interlocking Operator notified the Office of Car Maintenance (CMNT) of the event. The Office of Safety Investigations (OSI) and MTPD was also notified and dispatched to perform a field investigation.

At 17:49 hours, MTPD Units arrived at Alexandria Yard and at 18:00 hours, OSI arrived at Alexandria Yard. The field investigation identified that the Train Operator was operating from rail car 7301, which is the B-car¹ of the consist and observed several blind spots within the operating area. The Train Operator reported they noticed the vehicle, and utilized the appropriate safety precautions and followed operating procedures. The MTPD Detective admitted that they were at fault for assuming that the sounding of the train horn was a signal for them to pass in front of the train. The train's headlights were off and there was clear visibility when the event occurred.

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<sup>&</sup>lt;sup>1</sup> The B Car uniquely contains the Battery, and instead of the cab, the B Car has a secured Hostler Panel (HSTP) integrated into the collision post area of the Front-end doorway. The HSTP allows an Operator to safely couple/uncouple cars and make car moves in the yard and shop.



Image 3 – Hostler Panel located on rail car 7301, facing the direction of travel. Note panel door open to the left of the image and lack of side cab window, limiting the Operator's view to the immediate front/side of the train.

During the formal interview, the Train Operator stated that they saw the MTPD vehicle through the train window and the vehicle was at a stop, the train was also at a stop and the road crossing was clear. The Train Operator sounded the train horn prior to moving the train, the MTPD vehicle entered the railroad crossing and struck the train.

The MTPD Detective stated that they acknowledged that their vehicle made contact with the train at the road crossing. The MTPD vehicle was stopped prior to hearing the train horn. The MTPD Detective stated that they misunderstood the meaning of the train horn activation and thought it was a signal to proceed across the road crossing into the overflow parking lot.

The MTPD Investigative Report determined that the MTPD Detective failed to operate the WMATA service vehicle safely and with due regard for the safety of all persons and property; the MTPD Detective could have taken preventative measures to avoid the collision and that the accident was preventable. The MTPD Officer went through the MTPD disciplinary process. MTPD will hold a mandatory In-Service Training which will incorporate that the activation of a train horn from a non-moving train can be an indication of possible train movement. And that train movement should be expected in any direction at any time.

The RTRA Investigative Report revealed that the Train Operator followed proper procedures in the performance of their duties. The Train Operator stopped the train at the roadway crossing, sounded the train horn, waited 5 seconds, and proceeded to move after observing a clear track ahead. The Train Operator observed a MTPD unmarked police cruiser attempting to cross the roadway as the train was in motion. The train was immediately stopped, however the MTPD vehicle made contact with the train.

RTRA will develop signage to be placed at all rail yard crossings that will advise motor vehicle drivers to be on the lookout for train movement at all times and in any direction with an emphasis that horn activation may be an indication of possible train movement.

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CMNT performed a body and under car inspection on rail car 7301 and determined no damage to the under car was reported. Body damage included a light scrape. No wheel flats were noted, the rail car was cleared to return for service.

The Office of Service Vehicle Maintenance and Equipment (SVMT) performed an inspection of MTPD vehicle SV026661 and reported that the right side front fender needed to be replaced. The material cost of the repair was \$381.33. The vehicle is in operational status.

# **Chronological Event Timeline**

Time	Description
16:57:21 hours	Interlocking Operator instructed Train Operator to move cars on track 6B. [Radio Yard Ops]
17:05:19 hours	Interlocking Operator instructed Train Operator to move the cars to 2E, securing in the shop. [Radio Yard Ops]
17:09:35 hours	The train consist and MTPD passenger vehicle approach the road crossing and stop. [CCTV]
17:10:45 hours	Train Operator reported to the Interlocking Operator that a Transit Vehicle made contact with the train at the roadway. [Radio Yard Ops]
17:11:00 hours	MTPD Detective notification to Supervisor. [MTPD Report]
17:11:34 hours	Interlocking Operator notified ROCC RTC. [Phone]
17:12:30 hours	RTC notification to OM. [Phone]
17:13:14 hours	Interlocking Operator notification to RTRA Line Director. [Phone]
17:15:09 hours	Interlocking Operator advised CMNT that the train that was heading to the shop was involved in an accident. [Phone]
17:17:29 hours	MTPD notification to MAC. [Phone]
17:24:10 hours	MTPD Detective notification to SOCC. [Phone]
17:49:10 hours	MTPD Units arrived. [CCTV]
18:00:47 hours	OSI arrived at Alexandria Yard. [Radio Yard Ops]

Note: Times above may vary from other systems' timelines based on clock settings.

# Office of System Maintenance, Office of Radio Communication Section (COMR)

On Thursday, February 2, 2023, COMR performed radio testing at Alexandria Rail Yard and provided the following:

"The majority of the radio checks were loud and clear. There were a couple of missed communications, known issues for this yard."

# **Metro Transit Police Department (MTPD)**

The MTPD Investigative Report determined that the MTPD Detective failed to operate the WMATA service vehicle safely and with due regard for the safety of all persons and property; the MTPD Detective could have taken preventative measures to avoid the collision and that the accident was preventable. The MTPD Officer went through the MTPD disciplinary process. MTPD will hold a mandatory In-Service Training, which will incorporate that the activation of a train horn from a non-moving train can be an indication of possible train movement. And that train movement should be expected in any direction at any time.

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# Office of Rail Transportation (RTRA)

The RTRA Investigative Report revealed that the Train Operator followed proper procedures in the performance of their duties. The Train Operator stopped the train at the roadway crossing, sounded the train horn, waited 5 seconds, and proceeded to move after observing a clear track ahead. The Train Operator observed a MTPD unmarked police cruiser attempting to cross the roadway as the train was in motion. The train was immediately stopped however the MTPD vehicle made contact with the train.

SAFE, in conjunction with RTRA and other stakeholders, will develop signage to be placed at all rail yard crossings that will advise motor vehicle drivers to be on the lookout for train movement at all times and in any direction with an emphasis that horn activation may be an indication of possible train movement.

# Office of Chief Mechanical Officer (CMOR) Incident Investigation Team (IIT)

There were no mechanical inspection holds on the rail cars involved in the incident.

# Office of Service Vehicle Equipment Maintenance (SVMT)

The latest preventative maintenance inspection that occurred on MTPD vehicle #26661 was performed on Tuesday, November 8, 2022. The inspection included testing on the vehicle's braking system. The braking system passed inspection.

Repairs were completed to the vehicle on February 9, 2023.

#### Office of Car Maintenance (CMNT)

CMNT performed a body and under car inspection on rail car 7301 and determined no damage to the under car was reported. Body damage included a light scrape. No wheel flats were noted, the rail car was cleared to return for service.

#### **Interview Findings**

#### MTPD Detective

The detective acknowledged that their vehicle made contact with the train at the railroad crossing. The vehicle was stopped prior to hearing the train horn being activated. The detective misunderstood the meaning of the train horn activation as a signal to proceed across the East Lead track into the overflow parking lot.

#### Train Operator

The Train Operator reported that they saw the detective through the train window and that the vehicle was at a complete stop. The train was also at a complete stop and the railroad crossing was clear. The train horn was activated prior to train movement thereafter the vehicle entered the railroad crossing and struck the train.

#### Weather

On January 7, 2023, at the time of the incident, the National Oceanic and Atmospheric Administration (NOAA) recorded the temperature as 62° F, with clear skies throughout the

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afternoon. Weather was not a contributing factor in this incident. (Weather source: NOAA – Location: Alexandria, VA)

#### **Related Rules and Procedures**

MSRPH Section 5, RWP Rules – Cardinal Rule #2, Personnel shall expect, and be vigilant of, rail vehicle movement in all directions at all times.

#### **Human Factors**

Fatigue

#### MTPD Detective

We evaluated signs and symptoms of fatigue that may have been present at the time of the indecent. No signs or symptoms of fatigue were present. Employee reported feeling fully alert at the time of the incident. Employee reported experiencing no symptoms of fatigue in the time leading up to the incident.

#### Train Operator

We evaluated signs and symptoms of fatigue that may have been present at the time of the indecent. No signs or symptoms of fatigue were present. Employee reported feeling fully alert at the time of the incident. Employee reported experiencing no symptoms of fatigue in the time leading up to the incident.

Fatigue Risk

# MTPD Detective

We evaluated incident data for fatigue risk factors. No significant risk was identified. The incident time of day did not suggest an increased risk of fatigue-related impairment. Employee reported keeping a regular sleep schedule in the days leading up to the incident. The employee worked a morning shift in the days leading up to the incident. The employee was awake for six hours at the time of the incident. The employee reported eight hours of sleep in the 24 hours preceding the incident. The off-duty period was sixteen hours which provides an opportunity for 7-9 hours of sleep. This was a comparable amount of time to the employee's usual workday sleep durations. The employee reported no issues with sleep. The employee worked the morning shift in the days leading up to the incident.

#### Train Operator

We evaluated incident data for fatigue risk factors. No significant risk was identified. The incident time of day did not suggest an increased risk of fatigue-related impairment. Employee reported keeping a regular sleep schedule in the days leading up to the incident. The employee worked a morning shift in the days leading up to the incident. The employee was awake for five hours at the time of the incident. The employee reported six hours of sleep in the 24 hours preceding the incident. The off-duty period was fifteen hours which provides an opportunity for 7-9 hours of sleep. This was a comparable amount of time to the employee's usual workday sleep durations. The employee reported no issues with sleep. The employee worked the morning shift in the days leading up to the incident.

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# Post-Incident Toxicology Testing

WMATA's Drug and Alcohol Program determined the MTPD Detective was not in violation of the Drug and Alcohol Policy and Testing Program 7.7.3/7.

WMATA's Drug and Alcohol Program determined the Train Operator was not in violation of the Drug and Alcohol Policy and Testing Program 7.7.3/7.

# **Findings**

- The Train Operator adhered to established procedures for operating through a grade crossing within the rail yard.
- The Train Operator was operating from the B-Car, which has areas that limit the view around the front and sides of the train during operation.
- The MTPD Detective believed the sounding of the train horn was a signal that they were clear to pass in front of the train.

#### <u>Immediate Mitigation to Prevent Recurrence</u>

- RTRA removed the Train Operator from service for post-incident toxicology testing.
- MTPD removed the Detective from service for post-incident toxicology testing.

# **Probable Cause Statement**

The probable cause of the collision at Alexandria Yard on January 7, 2023, was the lack of knowledge and awareness of the MTPD Detective, as they were not aware that Rail Vehicles sound the vehicle horn prior to making a move.

# **Recommended Corrective Actions**

Corrective Action Code	Description	Responsible Party	Estimated Completion Date
105349_SAFE CAPS_MTPD _001	Mandatory In-Service Training Program for Officers will incorporate that the activation of a train horn from a non-moving train can be an indication of possible train movement. And that train movement should be expected in any direction at any time.	MTPD	Completed
105349_SAFE CAPS_SAFE_ 002	Work with the Office of Safety Risk Management and or Office of Operating Practices to develop signage to be placed at all rail yard crossings that will advise motor vehicle drivers to be on the lookout for train movement at all time and in any direction with an emphasis on horn activation may be an indication of possible train movement.	SAFE	9/30/2023

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# **Appendices**

# Appendix A – Interview Summaries

The below narratives summarize the incident and represent the statements made by the involved individual. As such, times and details may present a conflict with the data contained in systems of record.

# MTPD Detective

The Detective is a WMATA employee with 7 years of service. The Detective holds a Roadway Worker Protection (RWP) Level 2 certification that expires May 2023.

The detective acknowledged that their vehicle made contact with the train at the railroad crossing. The vehicle was stopped prior to hearing the train horn being activated. The detective misunderstood the meaning of the train horn activation as a signal to proceed across the East Lead track into the overflow parking lot.

# **Train Operator**

The Train Operator is a WMATA employee with 22 years or service, with 18 years of service as a Train Operator. The Train Operator holds a Roadway Worker Protection (RWP) Level 2 certification that expires November 2023.

The Train Operator reported that they saw the detective through the train window and that the vehicle was at a complete stop. The train was also at a complete stop and the railroad crossing was clear. The train horn was activated prior to train movement thereafter the vehicle entered the railroad crossing and struck the train.

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# Appendix B - Maximo Repair Work Orders



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

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Work Order #: 17596402 Type: CM



Status: CLOSE 02/14/2023 09:07

Work Description: Unmarked MPTD vehicle made contact with train in Alexandria Yard. Job Plan Description:

Asset: R7301	7301, RAIL CAR, KAWASAKI, 7000 AC CAR	C, B2	Owning Office	: CMNT-CMNT-CM	INT		Par	ent:	
Asset Tag: R7301			Maintenance Office	: CMNT-SDYG-INS	P		Create D	ate: 01/08/202	3 01:00
Asset S/N: 7301			Labor Group	:			Actual St	art: 01/08/202	3 01:01
Location: 1136	A99, SHADY GROVE YARD		Crew	:			Actual Co	mp: 01/13/202	3 13:27
Work Location: 1213	C99, ALEXANDRIA YARD		Lead	<b>:</b>			It	em: K1806000	1
Failure Class: CMNT001	RAIL CAR		GL Account	: WMATA-02-33320	0-50499160-04	1-*****	PR**		
Problem Code: 1025	ACCIDENT/COLLISION/DERAIL		Supervisor	:			Target St	art:	
Requested By:			Requestor Phone	:			Target Co	mp:	
Chain Mark Start:			Chain Mark End	:		S	cheduled St	art:	
Create-Mileage: 436103.0			Complete-Mileage	: 436103.0					
ik IDs									
Task ID									
	ION								
10 UNDERCAR INSPECT									
10 UNDERCAR INSPECT INSPECTED BODY AND U	INDERCAR FOR DAMAGE, NO DAMAGE ON	N UNDER CAR. LIG	SHT SCRAP ON BODY.						
10 UNDERCAR INSPECT INSPECTED BODY AND U 000-300-B01 CAR BOD	UNDERCAR FOR DAMAGE. NO DAMAGE ON DY: UNDER CAR STRUCTURE			FORE	IGN OBJECT		Position:	War	ranty?: V
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10 UNDERCAR INSPECT INSPECTED BODY AND 1 000-300-B01 CAR BOD mponent: GROUP; 2K/3K/6K/7K tual Labor Task ID Labor	UNDERCAR FOR DAMAGE. NO DAMAGE ON DY: UNDER CAR STRUCTURE	ork Accomp: INS	SPECTED  End Date	FORE Reason: DAMA	EIGN OBJECT AGE End Time	Status: CLOSE Approved?	Regular Hours	Premium Hours	Line Cos
10 UNDERCAR INSPECT INSPECTED BODY AND I 000-300-B01 CAR BOD IMPONENTIAL GROUP; 2K/3K/6K/7K Utal Labor 10 Labor	UNDERCAR FOR DAMAGE. NO DAMAGE ON DY: UNDER CAR STRUCTURE	Start Date 01/08/2023	End Date 01/08/2023	FORE Reason: DAMA Start Time 12:30	End Time 13:00 13:00	Status: CLOSE  Approved?  Y	Regular Hours 00:30	Premium Hours 00:00	Line Cos \$21.4
10 UNDERCAR INSPECT INSPECTED BODY AND U 000-300-B01 CAR BOD IMPONENT: GROUP; 2K/3K/6K/7K INSPECTED BODY AND U 000-300-B01 CAR BOD IMPONENT: GROUP; 2K/3K/6K/7K INSPECTED BODY INSPECTED B	UNDERCAR FOR DAMAGE. NO DAMAGE ON DY: UNDER CAR STRUCTURE	Start Date 01/08/2023	End Date 01/08/2023	FORE Reason: DAMA Start Time 12:30	End Time 13:00 13:00	Status: CLOSE  Approved?  Y  Y	Regular Hours 00:30 00:30	Premium Hours 00:00	Line Cos \$21.4 \$20.8
10 UNDERCAR INSPECT INSPECTED BODY AND U 000-300-B01 CAR BOD IMPOINT STATE OF THE S	UNDERCAR FOR DAMAGE. NO DAMAGE ON DY: UNDER CAR STRUCTURE	Start Date 01/08/2023	End Date 01/08/2023	FORE Reason: DAMA Start Time 12:30	End Time 13:00 13:00	Status: CLOSE  Approved?  Y  Y	Regular Hours 00:30 00:30	Premium Hours 00:00	Line Co \$21.4 \$20.8 \$42.3
10 UNDERCAR INSPECT INSPECTED BODY AND U 000-300-B01 CAR BOD INSPECTED BODY AND U 100-300-B01 CAR BOD INSPECTED BODY AND U 101-101-101-101-101-101-101-101-101-101	UNDERCAR FOR DAMAGE. NO DAMAGE ON DY: UNDER CAR STRUCTURE	Start Date 01/08/2023 01/08/2023	End Date 01/08/2023	FORE Reason: DAMA Start Time 12:30 12:30	End Time 13:00 13:00	Status: CLOSE  Approved?  Y  Y  Actual Hour/Labor:	Regular Hours 00:30 00:30	Premium Hours 00:00 00:00	Line Co \$21.4 \$20.6 \$42.3
10 UNDERCAR INSPECT INSPECTED BODY AND U 000-300-B01 CAR BOD INSPECTED BODY AND U 000-300-B01 CAR BOD INSPECTED BODY AND U 10 INSPECTED BODY	INDERCAR FOR DAMAGE, NO DAMAGE ON YY: UNDER CAR STRUCTURE Wo	Start Date 01/08/2023 01/08/2023	End Date 01/08/2023	FORE Reason: DAMA Start Time 12:30 12:30 Class	End Time 13:00 13:00	Status: CLOSE  Approved?  Y  Y  Actual Hour/Labor:  Status	Regular Hours 00:30 00:30	Premium Hours 00:00 00:00 00:00	Line Co \$21.4 \$20.6 \$42.3
10 UNDERCAR INSPECT INSPECTED BODY AND U 000-300-B01 CAR BOD INSPECTED BODY AND U 000-300-B01 CAR BOD INSPECTED BODY AND U 10 Labor	INDERCAR FOR DAMAGE, NO DAMAGE ON YY: UNDER CAR STRUCTURE Wo	Start Date 01/08/2023 01/08/2023 oria Yard.	End Date 01/08/2023	Start Time 12:30 12:30 Class SR	End Time 13:00 13:00	Status: CLOSE  Approved?  Y  Y  Actual Hour/Labor:  Status	Regular Hours 00:30 00:30	Premium Hours 00:00 00:00 00:00 Relations ORIGINAT	Line Co: \$21.4 \$20.6 \$42.3

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Document 1 - Maximo Work Order - 17596402, Railcar 7301 Page 1 of 1

Incident Date: 01/07/2023 Time: 17:10 hours

Final Report - Collision

E23018



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

Page 1 of 2 MX76PROD

Status: CLOSE 02/14/2023 14:05

Work Description: R/S FRONT FENDER WMATA ACCIDENT POLICE Job Plan Description:

**Work Information** SV026661, SEDAN SPO, Owning Office: BMNT-COO-MTPD Asset: SV026661 Parent: Asset Tag: SV026661 Maintenance Office: BMNT-SVMT-ALEX Create Date: 01/27/2023 13:33 Asset S/N: 1FAHP2L95HG109129 Labor Group: Actual Start: 02/02/2023 08:06 J03, FRANCONIA-SPRINGFIELD Crew: SVMTBODY Location: 8395 Actual Comp: 02/14/2023 14:05 T38, CARMEN TURNER FACILITY, BUILDING (F) BUS2, 1ST FLOOR HEAVY OVERHAUL BODY SHOP Item: SVMTV0631 Work Location: 3611 Lead: Failure Class: SVMT019 BODY GL Account: WMATA-01-32380-50499070-041-\*\*\* Problem Code: 1020 ACCIDENT DAMAGE (WMATA) Supervisor: Target Start: Requested By: Target Comp Chain Mark End: Complete-Mileage: 66636.1 Chain Mark Start: Scheduled Start: Create-Mileage: 66636.1

Task ID

10 R/S FRONT FENDER

Component	: 000-100 5	SERVICE VEHICLE	Work Accomp: RE	PLACED NEW	Reason: I	NCIDENT//ACCIDE	NT Status: CLOS	E Position:	War	ranty?: N
Actual Labor	r.									
Task ID	Labor		Start Date	End Date	Start Time	End Time	Approved?	Regular Hours	Premium Hours	Line Cost
10			02/09/2023	02/09/2023	10:00	14:00	Υ	04:00	00:00	\$177.50
10			02/02/2023	02/02/2023	09:00	13:00	Y	04:00	00:00	\$177.50
10			02/03/2023	02/03/2023	06:00		Υ	08:00	00:00	\$355.00
						Total	Actual Hour/Labor	: 16:00	00:00	\$710.01
Actual Materi	ials									
Task ID	Item	Assetnum	Description		Storeroom	Trans Date	Issue Unit (	Quantity	<b>Unit Cost</b>	Line Cost
			INV # 11417, LANHAM FORD, FENDER, BRACI DG1Z-16005-B, AG1Z-17C947-A	KET PT#		02/06/2023		1	\$381.33	\$381.33
								Total Actua	al Materials:	\$381.33

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Document 2 - Maximo Work Order – 17635969, MTPD automobile Page 1 of 2

Incident Date: 01/07/2023 Time: 17:10 hours

Final Report - Collision

E23018

Drafted By: SAFE 708 – 03/06/2023 Reviewed By: SAFE 71 – 03/06/2023 Approved By: SAFE 71 – 03/08/2023 Page 15



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

Page 2 of 2 MX76PROD

Status: CLOSE 02/14/2023 14:05

Work Description: R/S FRONT FENDER WMATA ACCIDENT POLICE Job Plan Description:

Cause			
Cause	Remedy	Supervisor	Remark Date
Remarks:			

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Document 3 - Maximo Work Order - 17635969, MTPD automobile Page 2 of 2

Incident Date: 01/07/2023 Time: 17:10 hours

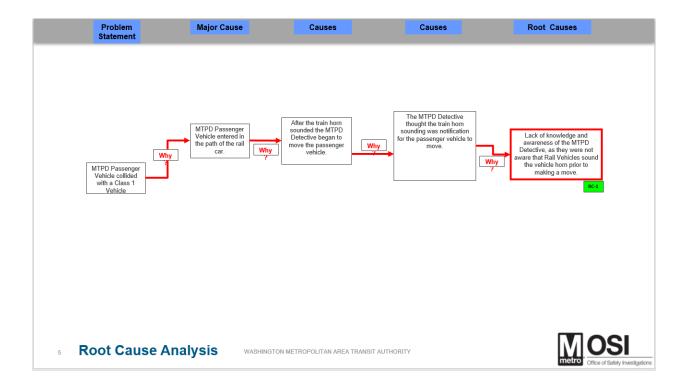
Final Report - Collision

E23018

Drafted By: SAFE 708 - 03/06/2023 Reviewed By: SAFE 71 - 03/06/2023 Approved By: SAFE 71 – 03/08/2023

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# Appendix C - Root Cause Analysis



Incident Date: 01/07/2023 Time: 17:10 hours

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