

ACTIONABLE LESSONS LEARNED: Haul Truck Steering Wheel Came Off



Vehicle Collision or Rollover

Incident Overview

Morenci, July 11, 2024

Bagdad, July 15, 2024

Morenci – A haul truck operator was traveling uphill, at low speed, on the haul road when the steering wheel fell off. The operator was able to stay in their traffic lane and stop the truck. There was no exposure to oncoming traffic.

Bagdad – A haul truck operator was preparing to reverse to a shovel when the steering wheel came off. The operator used the secondary brake to stop, put the truck in neutral and set the parking brake.



Causal Factors

- Steering wheel retaining nut was loose.

Site Specific Actions



- Administrative** – Perform an audit of the steering wheel retaining nuts on all 789 and 793 Cat haul trucks. Implement a white marking on all vehicles to signify the retaining nut has been audited and properly torqued.

Global Action Item



- Administrative** – Add a torque inspection of the steering wheel retaining nut to the monthly preventative maintenance list for Cat haul trucks.

Global Action Item



- Administrative** – Test a positive driving mechanism prototype for the steering wheel retaining nut. A global action item will be evaluated based on results.

Global Action Item Proposal



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Mine Maintenance Employees

- While performing monthly preventative maintenance, make sure you:
 - Identify the white marking (line) on haul truck steering wheel retaining nuts.
 - Verify the white line is aligned correctly to ensure the retaining nut is properly torqued.



Freeport Leadership

- Add a torque inspection of the Cat haul truck steering wheel retaining nut to your monthly preventative maintenance checklists.
- Conduct audits on preventative maintenance processes to make sure inspections are performed as scheduled.



All of Us


- Perform quality inspections on all equipment.
- Report maintenance concerns immediately so potential issues can be addressed.




Actionable Event: Haul Truck Steering Wheel Came Off

Preliminary Incident Details	
Operation	Morenci
Date / Time	July 11, 2024 / 7:20 a.m.
Event Type	Near Miss
Summary	<p>A haul truck operator was traveling uphill, at low speed, on the haul road when the steering wheel fell off. The operator was able to stay in their traffic lane and stop the truck. There was no exposure to oncoming traffic.</p>
Risk Category	Actionable – Significant (3) Likely (3)
Findings / Missing Controls	<ul style="list-style-type: none">Steering wheel locknut was not torqued to specified 60 lb./ft.Quality check to verify torque specifications was not applied by service contractor. The verification was to be conducted as part of the action plan following a previous PFE incident with a similar failure.
Applicable Policies / Procedures	<ul style="list-style-type: none">Manufacturer (OEM) Caterpillar Steering Column Assembly (REN2535-16)
Employee Condition	<ul style="list-style-type: none">No injuries.
Contact	<ul style="list-style-type: none">Gary Anderson, Manager-Mine MaintenanceRassie Ras, Manager-Health and Safety

Photos / Links




Detached haul truck steering wheel.




A photo showing the unsecure haul truck steering wheel locknut.

Preliminary Incident Details	
Operation	Bagdad
Date / Time	July 15, 2024 / 6:49 a.m.
Event Type	Near Miss
Summary	A haul truck operator was preparing to reverse to a shovel when the steering wheel came off. The operator used the secondary brake to stop, put the truck in neutral and set the parking brake.
Risk Category	Actionable – Significant (3) Likely (3)
Findings / Missing Controls	<ul style="list-style-type: none">Steering wheel keeper nut was not torqued to proper specifications.Quality check to verify torque specifications was not applied by service contractor.
Applicable Policies / Procedures	<ul style="list-style-type: none">Manufacturer (OEM) Caterpillar Steering Column Assembly (REN2535-16)
Employee Condition	<ul style="list-style-type: none">No injuries.
Contact	<ul style="list-style-type: none">Danielle Murphey, Sr. Supervisor-Industrial HygieneBenny Corbell, Manager-Mine

Photos / Links



Detached steering wheel.



Steering wheel assembly after wheel was detached.