



Inside **THE** RAIL

From NASA's Confidential Close Call Reporting System



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One of the most important tasks to initiate a shove or push move is a job briefing, which determines the type of communication, the crewmember controlling the move, and how to provide point protection. Point protection visually determines the track is clear and whether switches and derails are properly lined for the intended route. Cameras or other technologies are acceptable for use, as long as they can provide the same visual determination as a crewmember. The crew should not perform any unrelated tasks except to supervise the movement. Changes that may require additional job briefings may include reduced visibility, adverse rail or weather conditions, or train handling that may affect the ability to stop. For more information, 49 CFR Part 218, Subpart F, §218.99, outlines shove or push moves. Contributing factors to the following close call incidents shared by the crews were switches improperly lined, communication breakdowns, and shoving without an employee on, at, or ahead of the movement.

Stop Lite

An Assistant Conductor rode the steps of a lite locomotive and gave the Engineer hand signs with a flashlight. About 30 feet from the switch, the reporter gave a hand sign to stop for a misaligned switch.

■ *Protected shove on locomotive. Hand signals weren't prominent enough. Wasn't clear if track was lined for movement. Went through the switch and split. In [the] future, when making a move, make sure to line for movement prior to actually moving equipment, give more obvious and bigger hand signs, and stop the movement if hand signals aren't recognized.*

C³RS Expert Analyst's Callback Summary:

The reporter, an Assistant Conductor, stated...the crew had been making move after move all night and in the early morning were given another move at the other end of the yard. The Assistant Conductor explained that the crew was pretty exhausted and may not have been completely awake

and alert... A stop sign was given, but the Engineer mistook it as a car count rather than a, "that'll do." Another stop sign was given, but the movement continued through the switch at 2-3 MPH, bending the switch's tie rod. The reporter was smaller in stature making it more difficult for the Engineer to pick up the signs.

When the Slack Runs Out

A Conductor spotted a car without making a safety stop prior to the customer's spot. After applying the brakes, the slack ran out and the car hit a bumping block.

■ *I lined the switch for the customer and walked back to where we spot the cars. I told the Engineer back 7 or 8 cars for a spot. As I was counting the Engineer down...the Engineer applied the brakes, the slack ran out and hit the bumping post. What caused the problem was, I should have stopped the Engineer before the place we spot the car, and then brought him back one more for the spot.*

The Engineer on the crew also submitted a report on the incident that explained the train handling during the move.

■ *My Conductor started a shoving movement we previously briefed on. I was told that the switch was in the correct position and the derail was removed, to proceed back 8 car lengths. I received car counts the entire time in half increments from 8, 4, 2, 1, then a half, then ten feet, then good. The Conductor then asked me to pull ahead a little. I had a minimum service set when I started the movement while using the independent [brake] and throttle modulation to control the movement. I fully applied the independent when my Conductor said 10 feet to compensate for slack in the long drawbar cars we were handling. We then tested the brakes on the car, cut away and proceeded to spot the next customer. The Conductor then instructed me to shove the entire train in back in and clear, that we needed to have a job briefing. That is when the Conductor told me about the situation, and we proceeded to look at the damage to the block.*

C³RS Expert Analyst's Callback Summary:

The reporter, an Engineer, stated that while shoving the train, there was a minimum service set on the cars because they were under the impression that they were going to perform a safety stop prior to actually spotting the cars. There is a rule in place to make a safety stop before spotting the cars. The Conductor, after the event, told the Engineer that they were unaware of this rule and thought they were able to spot the cars without conducting a safety stop. The Engineer also mentioned that they would have applied more than minimum service to the cut of cars if they had known they were going to spot instead of making the safety stop. The damage to the bumper block was minimal. In the future, the safety stop will be added to the Job Safety Briefing prior to spotting, to prevent this from happening again.



Crisis Averted

A Conductor's keen situational awareness stopped another train from running through a switch and prevented it from colliding with the reporter's train while the other crew was conducting a blind shove.

■ *Observed a [passenger] coach coming west through the foul point on the west end of Track Z and almost through switch lined against Track Z. I started screaming stop multiple times on the radio. I also screamed train in Yard Y stop 3 times. At this point, my train stopped, and the train on Track Z stopped within 10 feet of breaking the switch on west end of Track Z and came within 50 feet of hitting my train. Yard check was incorrect and showed 13 cars on a track that holds 14 cars. The other crew asked Yardmaster if anyone [had] switched that track and the Yardmaster responded no. Then the Crew made a blind shove from the east end of Track Z, shoving the west car about a car and a half past the foul point on the west end of yard.*

Report Intake By Craft January through May 2020	
Transportation	995
Mechanical	43
Engineering	31

C³RS Inside The Rail

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<https://c3rs.arc.nasa.gov>

Monthly Report Intake Previous 3 Months

March	258
April	128
May	116

Not Enough Room

A Train Crew was switching in a yard and the Conductor thought there was enough room on the track to shove a cut of cars. The blind shove resulted in a run through switch, a near miss collision with another train and a derailment when the cars were pulled back.

■ *Upon arrival, I observed the hind end of each track in [the] Yard. Seeing what I believed to have the most room to shove cars into, I made the decision to put some of the cars on Track X in [the] Yard. The problem was discovered when a Foreign Carrier crew were trying to get by to Track Y. They told me that I was out on the lead and that they could not get by Track X. That's when I walked back to the hind end of Track X and noticed that I had run the switch...This problem could have been avoided if I would have double checked the hind end of Track X before shoving.*

C³RS Expert Analyst's Callback Summary:

The reporter, a Conductor, was shuttling a train from one yard to another...The reporter explained there were two empty tracks in the yard. Normally, crews can see the empty tracks, but it was dark [and] not a lot of lighting. The crew proceeded to shove the train into the incorrect track resulting in two to three cars being shoved out the other end onto the lead... When the reporter was notified there were cars out to foul, the crew proceeded to pull the cut of cars back over the switch that had been run through. This resulted in one set of trucks derailing on one car. There was no damage to the car or switch. The switch was a low ground hand throw with a target. The reporter shared it was a long day. The crew had problems getting out of the yard but nothing unusual. This was not the last move of the night. The reporter felt rushed.

Did You Know?

If you submit a C³RS report, a NASA C³RS Expert Analyst may call you if you do not include enough information or to better understand the safety issues you are sharing. It is very important that you return our call within 3 days so that your identification (ID) strip (sent by the U.S. Mail) can be returned to you quickly.

The more information you include in your report, the faster the ID strip can be returned to you!