Investigators say a Canadian Pacific freight train was parked and began to move on its own before it derailed and killed three crew members near the Alberta-British Columbia boundary on Monday.

The Transportation Safety Board said Tuesday the westbound 112-car train had been parked on a grade for two hours near Field, B.C. — about 80 kilometres west of Banff along the Trans-Canada Highway — when it started rolling.

It barrelled along for just over three kilometres before 99 cars and two locomotives derailed at a curve ahead of a bridge, the TSB said. Only 13 cars and the tail-end locomotive remained on the tracks.

"The lead locomotive came to rest on its side in a creek and a number of derailed cars came to rest on an embankment," said TSB senior investigator James Carmichael as he provided an update on the investigation in Calgary on Tuesday.

"The remaining cars, including the mid-train remote locomotive, piled up behind."

On Monday, Greg Edwards, with the Teamsters Canada Rail Conference (TCRC), said the train fell more than 60 metres.
The crash killed conductor Dylan Paradis, engineer Andrew Dockrell and trainee Daniel Waldenberger-Bulmer, all based out of Calgary.

"At this point, we're calling it a loss of control, which is when the crew can no longer maintain the track speed," said Carmichael.

Carmichael said a new crew had just boarded and was preparing to take over control of the train, which had been parked with its emergency air brakes activated. "It was not anything the crew did. The train started to move on its own," he said.

"We're going to try to determine why the brakes didn't stay in place."

Train was going far faster than recommended speed
The TSB said the train gained speed well in excess of the 32 km/h maximum for the tight turns in the mountain pass in the moments leading up to the derailment, which happened at Mile 130.6 of the Laggan Subdivision between the Upper and the Lower Spiral Tunnel, near Field, B.C.

Christopher Monette, TCRC's director of public affairs, had described it as "a runaway train." At Tuesday's briefing Carmichael, of the TSB, used the phrase "loss of control."
He said it was too early in the investigation to conclude what led to the derailment.

"We will look at every indication of how that train was handled going down that hill," he said.

The probe will also look at when each car and locomotive was built and when they were last in for repairs, as well as what discussions might have taken place during the crew switch-over.

"We haven't had an opportunity to talk to the previous crew that was on there," Carmichael said. "But that is one of the things that we're going to find out if there was any issue beforehand. At this time we just know that they met, talked, and the switch was made."

The TSB website says the investigation will also examine weather conditions at the time of the incident, the railway's "winter operating plan" and its training specific to the reliability of air brakes in extreme cold temperatures.

Some data was recovered from the tail-end remote locomotive, and work is underway to obtain data from the mid-train remote locomotive, the agency said.

An aerial view of the site of Monday's fatal Canadian Pacific Railway derailment near the Alberta-B.C. border. (CBC)

There are currently two investigators on site and two working from Calgary, with assistance from the TSB Engineering Lab and the TSB Human Factors Division.

Transport ministry involved
Federal Minister of Transport Marc Garneau said he has sent a ministerial observer as well as staff from Calgary and Vancouver to help the TSB investigation.
"I want to see what actually comes out of the investigation to be done by the Transportation Safety Board and also supported by my ministry," he said.

"It's always a possibility that accidents or derailments will happen. We're trying to make it as safe as possible, and we will continue to make that our priority."

CP Rail said there was no threat to public safety and there were no dangerous goods involved in the derailment. British Columbia's Environment Ministry confirmed dozens of grain cars went off the tracks.

RCMP said they are assisting in the investigation, along with Employment Safety Standards Canada and the B.C. Coroners Service.

Edwards, with the TCRC, said he got the call in the middle of the night.

"It's one of the worst calls that you want to take," he said Monday.

"Everybody I've spoken with, both within the company and within the union, is just devastated by this."

Edwards said Dockrell, the engineer, had more than two decades of railroad experience.

The tunnels opened in 1909, to reduce previous grade of 4.5%.

The spiral tunnels opened in 1909, to reduce the previous grade of 4.5%. (CBC)
CP Rail president and CEO Keith Creel said the tragedy will have a long-lasting impact on CP's family of railroaders.

"We continue to mourn the loss of our three CP family members. I spent the day at the derailment site yesterday, and I have not stopped thinking about this incident since it occurred," Creel said in a prepared statement.

"With any significant incident, there are many questions that need to be answered," he said, adding that the investigation will be thorough and co-operative, and that at this time "we are establishing some key facts and gaining a preliminary understanding of the chain of events."

"In the meantime, CP crews, contractors and agencies are working diligently in challenging conditions to remove the damaged rail cars and equipment," Creel said. "We expect this process to take a number of days."

Locomotive engineer Danielle Hand, who was hired at the same time as Dylan Paradis in 2007, called him "a great railroader," said she has driven trains through the Laggan subdivision several hundred times and it can be a challenge. "It can get a little scary," she said.

Section of track is one of steepest in North America
The accident happened just short of the Spiral Tunnels, which were built 110 years ago to help trains traverse the treacherously steep Kicking Horse Pass.

It has a slope grade of 2.2 per cent, one of the highest rail slopes anywhere in North America, according to the Encyclopedia of North American Railroads, which includes historical maps of what the author refers to as the region's "arduous" slopes.
Sixteen cars of a CP Rail train derailed on Jan. 3 in the same area, which is near the Upper Spiral Tunnels, close to Cathedral Mountain, between Field and Lake Louise, Alta.

No one was hurt in that derailment.

A search of data on the Transportation Safety Board website shows that since 2004 there have been 64 CP Rail derailments on the 220-kilometre stretch of railway between Field, B.C., and Calgary, nearly half of which happened within 30 kilometres of the treacherous area near Spiral Tunnels. No one was killed in any of those incidents.

In 1997, a CP Rail train derailed during an uncontrolled high-speed descent through Upper Spiral Tunnels. In that incident, an exhausted operator dealt with a depleted air brake and did not remember to engage a supplemental braking system, according to the TSB report. The three crew members were not hurt in that incident.

Teamsters Canada says eight railway workers have died in accidents in Canada since November 2017.