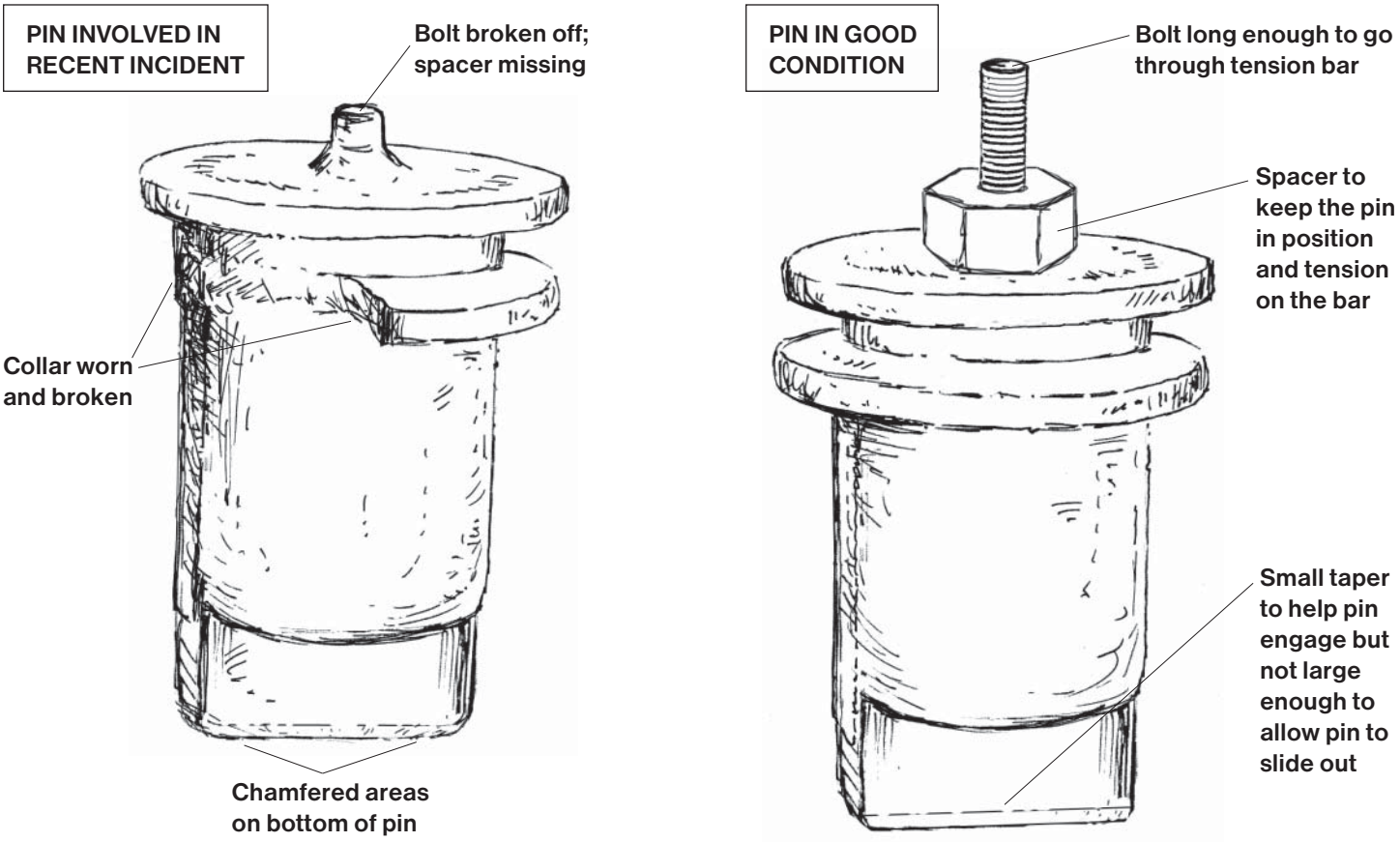
Inspect and maintain jeep pins, connections, and slider mechanisms

A fatal incident

An empty logging truck with jeep and trailer had turned onto a forest service road en route to a log landing. The forest service road wound uphill. Immediately after driving over a washboard section of road, the driver could not steer the truck. The reach of the trailer had become stuck in the bullboard. Attempts to free the reach from the bullboard caused the jeep to lurch backwards, striking and killing a worker.

The jeep had dislodged because the rear pin in the slider mechanism had come out of position. An investigation revealed that parts of the pin were worn or broken, as shown in the drawing below. A spacer critical to keeping the pin in place was missing, so the tension bar could not apply the necessary pressure to hold the pin in position. Additionally, other linkages in the system were loose. These factors created excessive play in the system and allowed the pin to lift up sufficiently to unlock the slider when the truck reached an incline and crossed over a washboard road.



In a recent incident, worn, broken, and missing parts in the pin assembly resulted in excessive movement of the pin and inadequate spring tension. The pin moved out of position, allowing the jeep to dislodge.

Pin mechanism

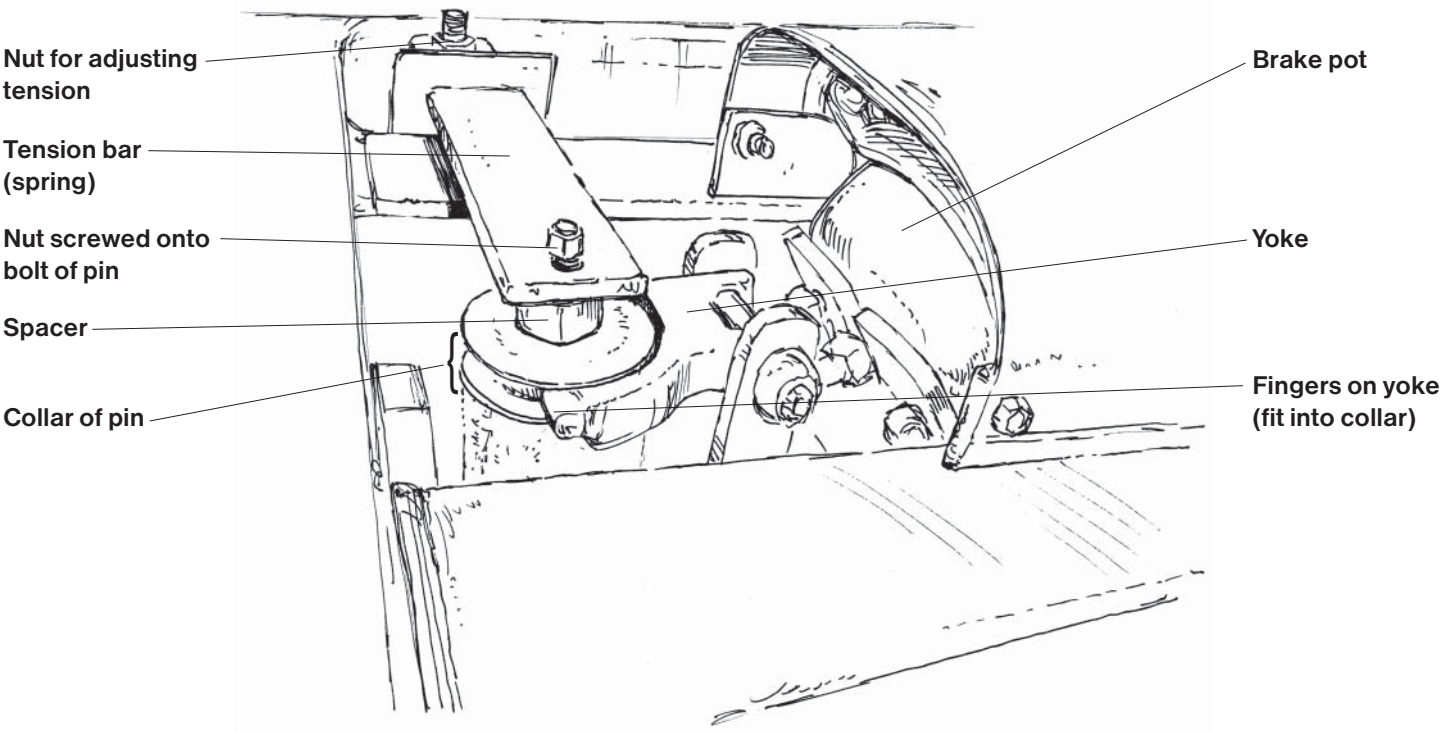
In other incidents, pins have moved out of position and allowed the jeep to slide. Often these incidents result in problems with the load but no injuries. However, a few years ago in another fatal incident, the pin in the slider mechanism also dislodged. The jeep, trailer, and logs moved forward and hit the bulkhead, crushing the operator in the cab.

The pin mechanism is intended to keep the jeep from sliding out of position. The pin is kept in position mainly by the spacer and the tension bar. If worn or missing parts cause excessive movement of the pin or if the tension bar is not adjusted properly, the bar may not hold the pin in place.

Jeep models vary; the mechanism involved in the recent incident is shown below. In this model, the brake pot has a light coil spring, not a heavy spring that can hold the pin in position. The brake pot's main function is to *release* the pin when air is applied. When air is applied to the brake pot, the yoke moves and pulls the pin up. When the air is off, the brake pot guides the pin into the correct position and the tension bar holds the pin down. Excessive play in the linkage and inadequate tension from the tension bar can permit the pin to dislodge and cause the jeep to move.

Safe work practices

- Follow the manufacturer's instructions to provide enough tension on the tension bar to ensure the pin stays in position when travelling over rough roads.
- After switching off air to the pin's brake pot, visually check the pin to ensure it is in the proper position.
- Inspect the pin mechanism for broken or missing parts at the start of shift and according to the manufacturer's instructions.
- Replace worn, broken, or missing parts.



Ensure that the pin is in the proper position before driving and that the pin mechanism is in good working condition to prevent the pin from dislodging on bumpy roads or upon sudden stops. Be aware that dirt or snow can make it difficult to see the condition of some parts.

WORK SAFE BC

WORKING TO MAKE A DIFFERENCE

worksafebc.com