

General Equipment Safety Bulletin

Technical Support Department

Bulletin 006/2013

Subject: Failure of Articulation Locking Pin-part no. 346-2547

Affected Product: Caterpillar Load Haul Dump machines R2900G & R1700G

Affected Machines: Serial numbers JLK00921-UP & SBR00736-UP

Risks Identified: Failure to inspect pins identified in this Equipment Safety Bulletin may result in serious injury or death.

Problem Overview:

The failure of a welded ring on the articulation locking pin has been reported. The affected product listed above have an articulation lock pin that is inserted in the 180-7209 steering link group as a safety device, to prevent machine articulation during servicing procedures. The pin is also used when transporting the machine.

The pin includes a welded ring that forms a shoulder at one end of the pin. The pin shoulder locates the pin vertically in the articulation lock joint and prevents the pin dropping through the articulation lock bores on the machine frame.

The report described the welded ring breaking away from the 346-2547 pin assembly, as shown in Figure 1 below.



Figure 1 – showing lock pin failure mode

If the welded ring breaks away from the 346-2547 PIN AS, there is a potential for the 10 kg pin to fall unexpectedly while being handled, or after installation, causing personal injury and or property damage.



Figure 2 Updated lock pin

An updated 346-2547 pin is now available that has a revised welding process. To distinguish the updated pin from the earlier pin, the updated part is stamped with a 2-digit pin number and a 4-digit batch number for traceability. These numbers are located on top of the pin [as shown in figure 2 above]. The earlier version of the 346-2547 pin **does not** have the 2-digit pin number and 4-digit batch number.

Corrective Actions Implemented by Hastings Deering:

Machines in the above serial number range are to be inspected for the presence of a potentially defective welded ring on the 346-2547 pin assembly.

What to Do:

1. For affected product, inspect the welds on the pin shoulder for quality and signs of cracking, if any visible cracking is found, replace the pin with a new 346-2547 pin assembly. Ensure that the replacement pin is the updated part as shown in Figure 2 above before installation.
2. Visually inspect the pin collar area for defects prior to each use. Do not use a defective pin; replace the pin with an updated or serviceable pin of the same part number.

Contact Details:

If the inspection identifies the fitment of defective 346-2547 pin assembly, please contact your Hastings Deering Service Department.

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