

# Kick Out Pin Failure

## Safety Alert

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### Enform

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## Description of Incident:

A mechanic finished installing the boom stick on a Caterpillar 572G sideboom. While parking the sideboom, the mechanic noticed that the stick had continued to boom in, resulting in the stick bending. The mechanic then shut off the engine and let out the boom line to relieve tension on the boom stick. The sideboom was shut down and tagged out for investigation.

## What Caused It?

During the investigation it was found that the kick out pin was only functional at low idle. The kick out pin was not functioning at high idle, because the orifice on the main valve regulating the flow of hydraulic fluid to the kick out pin was rebuilt improperly. In addition, the boom line control lever remained stuck in the engaged position because the bolts on the lever caught on the control panel.



The orifice was rebuilt in the improper order, as it was installed in the main valve.



The proper order for the orifice to be assembled for use. Note location of the spring.



The boom stick control lever stuck in the engaged position.

## Contributing Factors:

- Previous servicing of the unit left the main valve orifice installed incorrectly, rendering the kick out inoperative with the throttle over idle.
- The operator did not ensure that the boom line control lever was in neutral prior to moving.

## Corrective/Preventative Actions:

- All sidebooms in the fleet that had the same hydraulic system were tested for proper kick out response at low and high idle.
- The control levers were tested for the sticking malfunction on all sidebooms and repaired as required.
- Secondary hydraulic or electric bypass systems to disable the boom system will be investigated.

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