

# Safety Alert



March 24, 2009

## ***Sheared Rotator Fastener Bolts on Genie AWP***

While conducting a pre-use inspection of a Genie AWP, a worker identified 8 (eight) sheared rotator fastener bolts sitting on the equipment's boom platform rotator. The worker tagged the equipment, removed it from service and notified his foreman.

The exact cause of the damage is undetermined, however the investigation found impact/contact had occurred to the top rail of the basket.

### ***What we know:***

- According to the manufacturer, the platform fastener bolts can shear as a result of a large side force or impact applied to the platform.
- Fastener bolts can also shear if they become loose from constant overloading of the basket (over 500 lbs).
- If the basket is not tied down to the flat deck trailer during transportation of equipment to the site, then fastener bolts can shear.
- The force or impact required to shear the bolts is significantly reduced if the fasteners are loose.

### ***What we can do to prevent similar or further incidents:***

- Inspect the equipment when it's initially brought to the site and verify the bolts did not loosen during transport.
- Do not overload the basket (tools and passengers cannot exceed 500 lbs).
- Verify that the path of travel is pre-determined and planned.
- Do not force the basket into an area where it will not fit, as this will cause unnecessary force on the fasteners.
- According to PCL's expectations and manufacturer's specifications, pre-operation and function tests are to be completed prior to each use.
- Hertz Equipment Rentals has placed paint stick marks on the fastener bolts after they have been torqued.
- Verify through visual inspection that the fastener bolts are secured and/or torqued (see photo). This must be confirmed on the AWP Checklist under section - 2 " turret bolts, pins, bushings and bolting systems secured".



**Left: Photo showing damage to man basket turret bolts on a Genie.**

**Possible causes:** Side loading of the basket (impact with solid objects) can cause the bolts to shear. Bolts can also shear if they become loose from constant overloading of the basket (over 500 lbs). Also, bolts can become loose during transportation to site on flat deck trucks if the basket is not secured to truck deck. It is recommended to check bolts when unit is received on site after transport.



# Safety Alert



Hertz has torqued all bolts to manufactures specs.  
During your pre use inspection be sure to check that paint stick marks line up.