

# MD Alignment

Are Alignments on Trucks and Buses a GREEN procedure or a Money Drain (Part 18)

Loose Components Continued: U-Bolts

The second major loose component we see revolves around loose u-bolts on rear suspensions. There is an identifiable class of suspensions that have this issue and the original and longest surviving example is the Freightliner Airliner Suspension. The most visible characteristic of this on the Airliner suspension is the tendency for the rear airbags to tilt with the bottoms toward the center of the truck. The looser the u-bolts are the more the air bags tilt.

You should be asking why the u-bolts are such a problem on this suspension and the answer is very simple. The leaf springs are attached to the bottom of the axle and as a result of that, all the weight is carried on the u-bolts.

In most other suspensions the springs are on top of the axle and the weight transfers directly to the axle. The u-bolts in this type of suspension merely clamp the components together and if they come loose they vibrate and create rust runs on the metal and can be struck with a hammer and they will give a clang sound instead of a ring. On the under slung suspension like the Airliner, the u-bolt actually carries weight and even when loose will not create the traditional rust runs and will always ring when hit.

For the alignment tech, if the axle cannot be held in place properly an alignment is a waste of time and money.

In 2005 when Freightliners patent protection on the Airliner suspension expired, it was copied and is now used on International Trucks. The major difference with the new International suspension is that the bracket the leaf spring mounts to under the axle is designed to prevent the inboard movement when the u-bolt gets loose so the visual clue is lost. There are also some models that put stretcher bars between the air bags to prevent the tilt. This does nothing to keep the u-bolts tight, it just looks better.

In addition to the International and Freightliner suspensions there are others

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with this issue including the Peterbilt FlexAir and Kenworth 380 suspensions.

A classic example of a u-bolt carrying weight successfully is the Mack Camelback suspension. However you might consider the size u-bolts used on that suspension.

