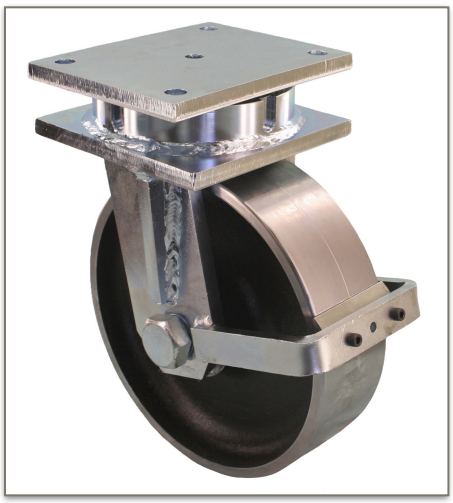
# Circular Solutions

**A case study from Algood Caster Innovations**

## The Crappy Side of Caster Innovation



Sometimes the leading edge of caster innovation can be pretty crappy. Literally.

Here's a case study that will be of interest to even veterans of the caster industry. A customer of ours was developing a totally unique piece of equipment to remove dry manure from the fields of dairy farms. It turns out that liquid manure is much easier to dispose of because it can be vacuumed. But getting rid of dry manure can be particularly slow and labour intensive. That's why our customer's piece of equipment can really save time and money. The manure loader attaches to a truck or tractor and on the back end to a wheel mounted bin into which the manure is loaded.

But here's the thing. The loader can't touch the ground and has to be able to move with the tractor in front as well as the bin in back. It needed casters to maintain mobility. But not just any caster would do. These casters would have to withstand demanding conditions while remaining operational. For example:

- The loader isn't always in its engaged position. It is dropped to the ground as needed. The casters must sustain thousands of pounds of impact without any flex.
- When the loader is dropped, there can be as little as an inch of clearance to the ground, meaning the yoke of the caster would have to almost function as a leg.
- Farmers' fields are highly uneven and rugged surfaces putting even more stress on the casters.
- Manure is very caustic and can cause significant damage to the bearings and other parts of a caster. The equipment is slow moving which increases the amount of manure to which it is exposed.

Algood's design and engineering departments took all this and more into consideration. This had to be a one of a kind caster and required the expertise and craftsmanship of true castersmiths. Initial sketches were transformed into engineering drawings and what we refer to as the "scraper caster" was successfully developed.


The caster is made with a steel wheel to withstand the dropping force and ground conditions. A two-blade scraping mechanism is attached to keep manure from the tread of the wheel. The second blade removes what the first cannot and is necessary to keep the wheel clean. To further strengthen the caster the swivel lead was reduced and two welded gussets were added to the yoke. There were no testing environments that could simulate the operating conditions of the caster so we had to be very detailed and proactive in both design and production. This couldn't be a –pardon the pun – crap shoot.

The customer was so happy with the performance of the first casters delivered that an order for additional units was almost immediate. More orders have followed and the customer acknowledges that Algood's scraper caster is helping to make their equipment and their company successful.

It's hard to imagine a more unique application or conditions for a caster to meet. It brought out the very best in what Algood has to offer its customers. And that's no bull crap. Literally.

---

For more information on how Algood Caster Innovations can provide solutions for your wheel and caster needs, call 1-800-254-6633 or email service@algood.com. Visit our website at www.algood.com.