

# SAFETY BULLETIN

Surplus Property Management (SPM) - Remediation and Reclamation Services (RRS)

## Securing Loads

On March 17, 2008 an IOL consultant's half tonne truck with canopy was towing a trailer loaded with an ARGO. The vehicle and trailer were returning to Whitecourt from a day in the field. At approximately 9:15 PM, one deer was spotted on the left shoulder of the highway. As the driver lightly applied the brakes, a second deer was spotted on the right shoulder of the highway. Threshold braking pressure was applied as the deer crossed the highway. The rear restraining strap which secured the Argo to the trailer failed resulting in the Argo sliding forward into the truck canopy, breaking the canopy window. The Argo's winch became lodged in the rear of the tailgate.

The subsequent investigation yielded the following information:

the Argo's weight was 1200 pounds, 2 nylon ratchet load rated (3300 pounds) straps were used to secure the Argo to the trailer, 1 for the front of the Argo and the 2<sup>nd</sup> for the rear of the Argo, both straps had some signs of wear, and it appears the routing of the rear strap passed over a rough edge of the trailer deck.

### **Fundamentals:**

- Forces by loads during driving are caused by acceleration, deceleration (braking) and centrifugal acceleration in curves.
- Incorrectly or unsecured loads are a potentially lethal risk in the event of a sudden maneuver or collision. An impact to an inflexible wall with 30 mph / 50 km/h will result in a force of 40 times (and more) the load weight. In these instances, even small items, like hand tools, become powerful, dangerous projectiles. Unsecured heavier loads can break through a bulkhead or rip out of its anchoring.

### Photos of:

Argo resting on hitch and showing broken canopy window, and broken strap



### **Lessons Learned:**

- Inspect tie down straps before use and ensure they are properly rated for the intended use,
- Ensure the tie down straps are secured correctly and are not in contact with sharp rub spots,
- Replace tie down straps that are unsuitable (show wear, under rated for intended use)