Fall Protection on Stationary Trucks:

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1.800.372.7775

ISFP Symposium,
Las Vegas
6 13 08
Fall Hazard Problems

- Climbing the load to detach a chain hoist
Flatbed Deck Fall Hazards
Gypsum/Wallboard/Drywall Tarping:

- Fall Hazard Exposure

Driver told to move to a dirt lot outside gate, then tie-down, then tarp. Fell on his head and died after stepping into a void.
Loads requiring Tarping

- Drywall (sheetrock)
- Steel shapes and piping
- Aluminum shapes and packages
- Government shipments
- Glass
- Plywood/OSB
- Equipment
  Approx 60% of flatbed shipments
  Insurance underwriters pushing for more tarping
Selected occupations with high fatality rates, 2006

Truck Drivers had highest fatalities

Fatal work injury rates were highest for fishers, aircraft pilots and flight engineers, and logging workers in 2006.

### Occupational Fatal Fall Injuries 2006

**Ref BLS 8 10 07**

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</thead>
<tbody>
<tr>
<td><strong>OSHA total All deaths</strong></td>
<td>6,280</td>
<td>........</td>
<td>5704</td>
<td>5734</td>
<td>5703</td>
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<tr>
<td></td>
<td>av 94-97</td>
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<tr>
<td><strong>Falls total Lower level</strong></td>
<td>610</td>
<td>693</td>
<td>763</td>
<td>770</td>
<td>809</td>
</tr>
<tr>
<td></td>
<td>669</td>
<td>664</td>
<td>728</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Ladders</td>
<td>97</td>
<td>107</td>
<td>125</td>
<td>129</td>
<td>129</td>
</tr>
<tr>
<td>- Roofs</td>
<td>149</td>
<td>155</td>
<td>154</td>
<td>160</td>
<td>184</td>
</tr>
<tr>
<td>- Scaffolds</td>
<td>88</td>
<td>92</td>
<td>87</td>
<td>82</td>
<td>88</td>
</tr>
<tr>
<td><strong>Falls to Same Level</strong></td>
<td>52</td>
<td>57</td>
<td>73</td>
<td>84</td>
<td>59</td>
</tr>
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</table>
### 2005/6* Fall Statistics for 3.5 million Truckers

<table>
<thead>
<tr>
<th></th>
<th>All USA</th>
<th>All Truck Drivers</th>
<th>Falls to Lower</th>
<th>Falls to same level</th>
<th>Highway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deaths*</td>
<td>5,703</td>
<td>793</td>
<td>18?</td>
<td>32</td>
<td>540</td>
</tr>
<tr>
<td>Injuries</td>
<td>1.23M</td>
<td>65,930</td>
<td>14,800</td>
<td>13,000</td>
<td></td>
</tr>
</tbody>
</table>

- Elevated Falls 22% (non-Highway)
- All Trucker Falls 42% (non-Highway)

Ref: BLS.gov 10 11 07
ISFP – “Why so much FP investment and yet deaths go up?”

- Harness conversion occurred rapidly from belts
- Because FP is for show without internal enforcement – “looking good is the game”
- Because 80% of work fatalities are wearing harnesses when they hit the ground
- Because owners have not understood that FPS are engineered and not PPE
- Because FP is not planned in advance and is not continuous through transitions
OSHA jurisdiction over ships/vehicles: Mallard Bay Supreme Court decision 2002

- “US Coastguard v. OSHA”:
  - Uninspected Vessel deaths without remedy
- Lack of enforcement by DOT agency
- OSHA statutory rights under 4(b)(1)

4(b)(1): The OSHA Act shall not apply to working conditions of employees with respect to which other federal or state agencies that exercise statutory authority to prescribe or enforce standards or regulations affecting occupational safety or health.

OSHA now has right to inspect stationary vehicles
Hierarchy of Fall Protection

- Elimination – stay on the ground - best
- Prevention - railings
- Fall Arrest – harness systems
- Administrative controls alone - worst
Flatbed Access
4 - 5 ft height decks

Shipping/Receiving:
  a. Ladders/Steps

Shipping:
  b. Guardrails – temporary

Unique handholds reduce slide

www.andersonladder.com

www.garlockequip.com
Tarping with Shipper’s help

- 13.5 foot fall hazard at max. height
- Fall Hazards
- Alternatives for shippers
- Alternatives for receivers

Request shipper fork lift operator to lift tarps or use Shippers Crane Spreader Bar (*)

Driver stays on ground
Fork Lift Help from Shipper: TarpSlinger®

Great for pipe loads
Other types of Stationary Vehicles with established FP

- Tankcars
- Tanktrucks

2 L flexible cable system

Good for receiving
Tank cars portable alternative
Tank Car: Rack lowered

www.carbis.net
Vehicle Access w/Fall Protection %
(JNE est.)

- Garbage/gravel trucks 90% (50% usable) (Employees 100%)
- Tank cars 75% (Employees 100%)
- Tank trucks 50% (Employees 50%)
- Flatbed 5% (95% Fleet/independent truckers)
Tarp to contain gravel, garbage etc.

Shipper T post overhead rigid rail/SRL system over hopper trucks

Tarp condition must be enforced by State Police

Flip-arm tarp (www.Cramarotarps.com)
Overseas solutions

- Australian: Soft sides
  aka 1/2 Curtain sides
  SRL (Self-Retracting Lanyard on sliding bar anchorage)

Most Popular in Europe today
European Flatbed net prototype for Freight Lines loading by crane

Combination with guardrail one side is possible
Barrier on flatbed edge forklift loading or unloading

Rolling Tarp
Net Solution: loading by crane

Possible by contract: Shipper and Receiver

BlueScope Steel Australia, New Zealand and Alcoa, Louisiana
Rolling Tarp Fleet Solutions in USA

Guardrail concept

Load by crane or forklift

www.slidingtarpsystems.com
Rolling tarp is best
Eliminates tarping fall hazards

www.cramarotarps.com

$15,000 retrofit
HLL Fall Arrest Flexible Cable for Drywall

Shipper
T-Bars
Side Kits

For low height & heavy loads & low cost
$1000

Push-up rack platforms
Pull tarp over trailer by Shipper

Driver stays on ground

www.carbis.net
Hard Hats ANSI Z89.1-2003, Type II, Class E & G

Hard Hats make sense

w/3-point Chin Straps make better sense

Head injuries severe from 5 ft flatbed; Swing Impacts?

Note: always provide fall protection

17 ft and below www.bullard.com
OSHA jurisdiction and Law of Torts

- The effect of Mallard Bay Drilling?
- Recognition of fall hazards by Freight Lines?
- Example: dry wall flatbed truck driver catastrophe

Drywall plant fatality:
Owner’s Tarping Station had harness and chain lanyard suspended ten feet off the ground: “never used”; trucking line was cited by OSHA
On-board Truck Fall Protection

The challenge for trucking firms:

- How to provide fall protection in 5 mins?
- How to retrofit a fleet

Concept good for shipping and especially receiving
Flatbed Onboard Fall Protection

Protection in 5 mins using Double SRL system

Deployed

Stowed
Goal for Flatbed Trailers

- 10% flatbeds have Fall Protection System in North America by 2020
- 100,000 on board fall protection systems
- Publicity from case histories
- Magazine articles
- DVD’s
- Promote Rolling Tarps 150,000
- Promote soft sides 500,000
Questions?