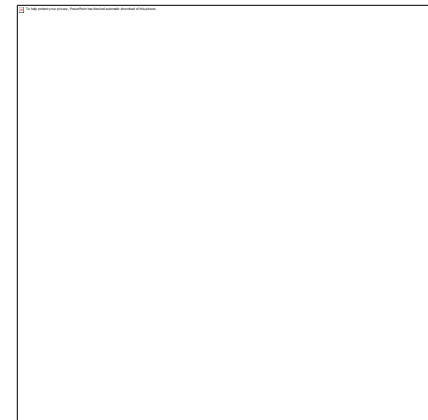
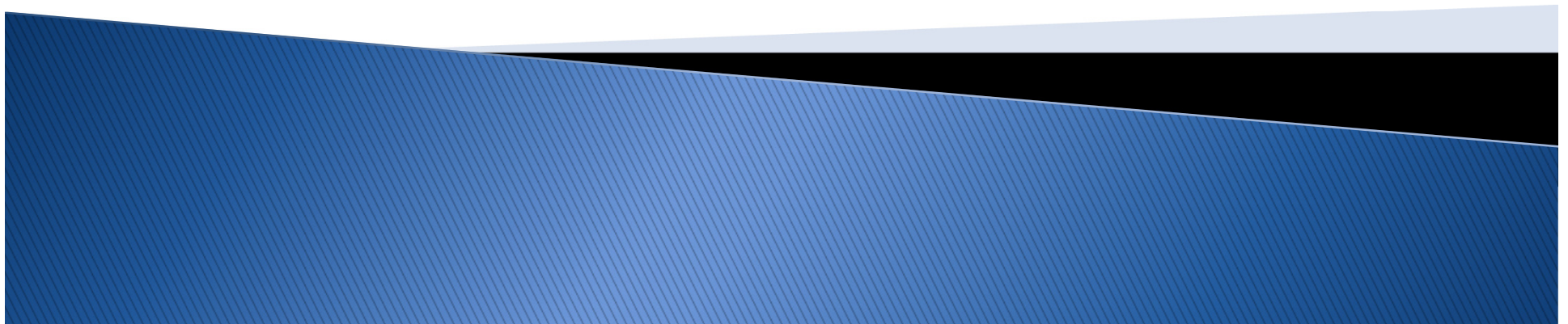


# Boom Dolly Safety Update

June 9, 2018



Presented by: Chad Stall



# Nelson Manufacturing Company

- ▶ Established in 1947 by Jack and Virginia Nelson as a “Lowboy” Trailer Manufacturer.
- ▶ Located at Present Location in Ottawa, Ohio since 1956.
- ▶ Designs and builds specialty trailers for numerous industries including: heavy haul trucking, aerospace, automotive, nuclear, crane and rigging.
- ▶ Provides transportation solutions for cranes with crane boom carriers and boom launch trailers.
- ▶ Offers structural repairs and complete rebuilds of trailers and boom dollies.



# Nelson Multi-Axle Trailers

For the Heavy Haul Industry



**Nelson MA-80 Hydraulic  
Adjustable Width Deck  
80 Ton Capacity Trailer**

**Owned by Scott Woods  
Transport, Inc.**



# Nelson 100 Ton Multi-Axle Trailer



## Trailer features:

**(20) Axles with Disc Brakes**

**Nelson Air Ride Trunnion Axle Suspensions**

**Hydraulic Steering on (3) Axle Groups**

**Recessed Well Deck Section**



# Modular Concrete Beam Hauler



4 + 4 + 4 Unit Converts into  
multiple different smaller units



# James Webb Space Telescope Transport Assembly



# Nelson Crane Transportation Equipment History

- ▶ First boom dolly was built in 1962 for a P & H truck crane
- ▶ Our first load transfer axle was built in 1968 for a P & H crane
- ▶ Our first boom launch trailer was built in 1995 for a Krupp KMK6275



# Pin 'n Go for Rough Terrain Cranes



Can be designed to accommodate most any RT crane. Nelson works with the crane manufacturers to ensure a structurally sound connection.





# Pin 'n Go for Rough Terrain Cranes

- ▶ Advantages of the Pin 'n Go vs a lowboy trailer
- ▶ Front and Rear Pin Together for “empty” travel
- ▶ No Tie Down Required
- ▶ Quick Load and Unload
- ▶ Lighter weight

**Pin 'n Go system offers a simpler, easier and safer loading / unloading operation.**



# Nelson Crane Boom Carriers



**Nelson CBC-30ST shown with a Link-Belt HTC-86110 crane**

**Nelson CBC-40RT shown with a Link-Belt HTC-86100 Crane**



# Nelson Crane Boom Carriers



**Nelson CBC-30ST shown with a Terex AC100/4L all terrain crane**



**Nelson CBC-30S with a Liebherr Crane**



# Nelson Crane Boom Carriers

Nelson CBC-50RT on a  
Grove GMK5275



Nelson CBC-30WS on a  
Tadano ATF-220G-5



# Nelson CBC-50RT Shown with Liebherr LTM1130-5.1 Crane



# Nelson Crane Boom Carriers



**Nelson CBC-30RT on a  
Link-Belt HTC-3140  
Truck Crane**



**Nelson CBC-30P with a Potain  
Self Erecting Tower Crane**



# Nelson Crane Boom Carriers



**Nelson CBC-30RT shown with  
a Liebherr LTM-1160-5.1 Crane**



**Nelson CBC-30S shown  
with a Terex AC250 Crane**

# Nelson Boom Launch Trailer



**The Nelson boom launch trailer safely removes the boom from an AT crane for over the road transport in 30 – 45 minutes.**



# Nelson Boom Launch Sequence



The launch trailer provides all the functionality to travel the boom. Crane hydraulics are NOT needed to launch the boom onto the trailer.

Once the main trolley is connected to the boom hydraulically travel to the transport position on the boom.



# Nelson Boom Launch Sequence



Once the boom is into the proper position hydraulically lower the boom into the rear boom support saddles. Remove the weight from the main trolley for transport.



# Nelson Boom Launch Sequence



Raise up the hydraulic legs, turn off the pony motor on the trailer, strap the boom down and complete your pre-trip inspection. The boom is now ready to be transported.



# Boom Dolly Safety Update

- ▶ **Limit Boom Extension when possible.**
- ▶ **Hand Brake/Spike Brake in Cab**
- ▶ **Nelson has an internal 60/40 rule.**
  - **60% minimum of the gross weight on the crane axles**
  - **40% maximum of the gross weight on the dolly axles**



# Boom Dolly Safety Update



# Boom Dolly Safety Update

- ▶ Wabco Roll Stability ABS Valves
  - Valve actuates when it senses a .2 g sideload – sets brakes on dolly
  - Installed (2) valves on 5 axle (2+3) rolling tower dolly for Mammoet in November, 2017
    - Drove around Edmonton and did not get a Roll Stability Event
    - Downloaded files last week, dolly has 1,357 miles since install



# Boom Dolly Safety Update

- Tandem
  - 8 ABS applications since November 2017
  - 2 Level 1 applications – Warning that rollover is possible – no intervention from ABS valve
  - 0 Level 2 applications – Intervention from ABS valve
- Tridem
  - 5 ABS activations since November 2017
  - 0 Level 1 applications – Warning that rollover is possible – no intervention from ABS valve
  - 0 Level 2 applications – Intervention from ABS valve



# Boom Dolly Safety Update

- ▶ Bendix Multi-volt Roll Stability ABS valve
  - Have installed this valve on several trailers to monitor speed and control an output
  - Multi-volt will replace the voltage converter because most cranes are 24V and a voltage converter is currently used to step down to 12V so the ABS valve is not fried
  - We can also sense other inputs and turn on a warning light
  - Tire pressure monitoring system
  - Wi-fi link to crane if Bendix valve is installed on crane – no wires necessary for readouts in crane – has (2) back up camera inputs





# Boom Dolly Safety Update

▶ Questions?

