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Presentation to the Task Force on Vehicle Weights and Dimensions Policy

All Terrain Cranes
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About CRAC

- National organization, founded in 1998
- Represent crane rental companies, worldwide manufacturers and suppliers of cranes and equipment, and suppliers of services used in the specialty crane rental business in Canada
- 130 member companies across Canada, the United States and Europe representing close to one hundred thousands employees

About CRAC

- Majority of our members are members of their respective provincial crane rental owners associations.
- Our equipment is used to support oil and gas, wind and renewable energy, mining, forestry, electricity and utilities, construction and infrastructure development.

Affiliations

- SC&RA - Specialized Carriers & Rigging Association
- ICSCA - International Crane Stakeholders Assembly
- AEM - Association of Equipment Manufacturers
- CICA - Crane Council of Australia
- World Crane & Transport Alliance
- International Union of Operating Engineers
- Canadian Hoisting and Rigging Safety Council

Our Broad Industry Support

Crane Rental Companies

NCSG Crane & Heavy Haul Services Ltd
Sterling Crane
Amherst Crane Rentals Ltd.
Bigfoot Crane Ltd.
Guay Inc.
Irving Equipment
Mammoet Canada
TNT Crane & Rigging Canada Inc.
LaPrairie Crane
Myshak Crane & Rigging
Sarens Canada
All-West Crane & Rigging Ltd.
A.W. Leil
Able Cranes
GCL Giesbrecht Cranes Ltd
Grues Gendron Ltd.

Manufacturers

Greenfield Products
Manitowoc Cranes
Terex Cranes
Link-Belt Construction Equipment Co
Nelson Trailers
Liebherr Canada
Transworld Manufacturing Co.

Others

BC Association for Crane Safety
SC&RA
International Union of Operating Engineers
Syncrude Canada
Canada Assoc. of Oil Well Drilling Contractors
U of C School of Engineering

Why are we here?

- The Crane industry is working on improving efficiency, reducing risks and planning for the next 20 years
- Focus on reviewing the use of dollies behind All Terrain(AT) Cranes, specifically, the size/frequency/design and application
- We would like to brief you on our findings and work with you to reduce the size and number of dollies in use behind our AT Cranes

Important differences

Truck Mounted Crane

- Truck mounted cranes are cranes on truck chassis with truck steering, braking and suspension systems.
- It handles like a truck, operates like a truck, drives like a truck, and tows like a truck.
- Trucks are regulated in weights and dimensions in all jurisdictions.



All Terrain Crane

- All Terrain cranes have an independent dynamic suspension system.
- An AT can be all-wheel drive and multiple axle steering.
- An AT has a unique centre of gravity.
- It is wider and heavier than truck-mounted equipment.
- ATs are not defined in all jurisdictions.



All Terrain (AT) Cranes



- All-terrain (AT) Cranes were designed and manufactured to operate with the boom facing forward
- Europe, Asia, parts of Australia and United States allow boom over front configuration
- Requires 12,500 kg/axle allowance
- ATs are not defined in all provinces, but all provinces allow them to travel by permit

Number of All Terrain (AT) Cranes

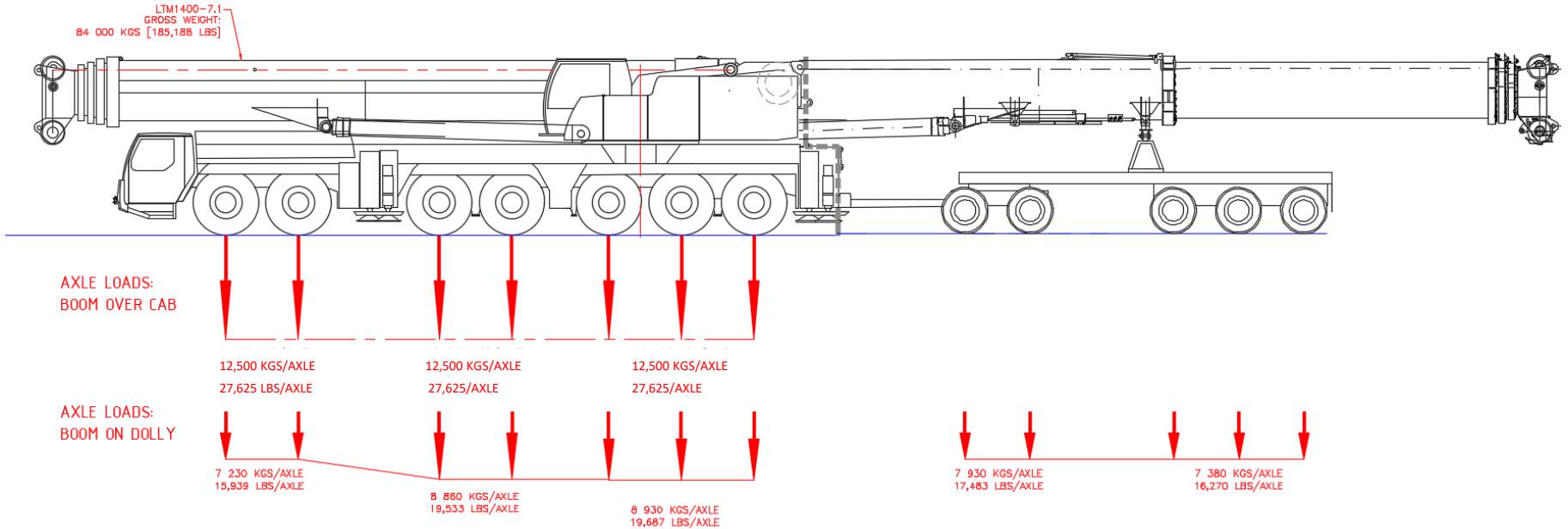


- Canada 450
- BC – MB 292
 - (Approx. 150 ATs in Fort McMurray, AB)
- ON – NL 158

Difference in Distribution of Weight

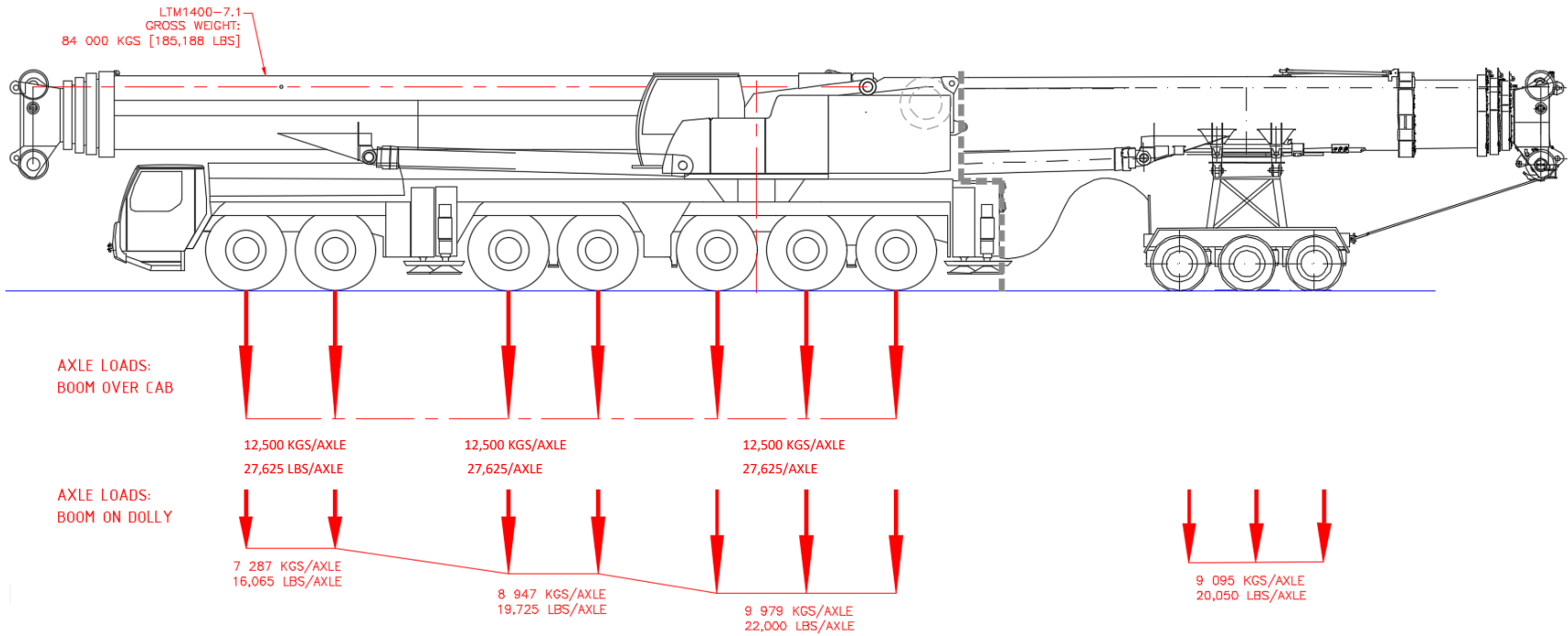


Difference in Distribution of Weight



- Boom transported on a tandem tridem dolly.
- The non-divisible weight is removed from the carrier and trucked separately.
- Increased passing time on highways.
- Workplace incidents can occur when operators assemble & disassemble the equipment for transport
- The amount of assembly/disassembly required with this configuration adds many hours and costs to a potential job.

Difference in Distribution of Weight



- A shorter tridem dolly can be utilized.
- Smaller ATs can operate with a boom over the front.
- The boom can be pulled in much closer to the carrier.
- Fewer non-divisible loads need to be transported separately.
- Load transfer from the carrier is reduced.
- Less assembly/disassembly required resulting in fewer workplace incidents, increased productivity.

Collaborative Industry Partnership

Alberta Road Research Initiative (ARRI)

- In 2005 the Government of Alberta, Alberta Crane Owners Association, Leduc County and Schulich School of Engineering (UofC) formed ARRI
- Undertook five-year research project to focus on the effect of AT Crane on pavement looking at:
 - Vehicle type; season; pavement type; vehicle speed; axle spacing



Collaborative Industry Partnership

Alberta Road Research Initiative (ARRI)

■ Findings:

- Impact to pavement, kms driven are less. Risks from utilizing boom dollies are more significant than previously thought.
- Multiple axle groups are less damaging per tonnage than single axles; increasing the number of axles and carrying the same load resulted in less damage; axles spaced closer together decreased damage to the pavement
- The use of super single or wide base tires are better able to handle the weights, significantly lessening the stress on asphalt.

Objectives for our Industry

■ Create Public Friendly Environment:

- Decrease highway passing times, reduce turning tail swing, increase traction and stability on ice and hills.
- Reduce the need for appropriate staging area for temporary parking of dollies during crane operation.

■ Increase Productivity:

- Reduce the need for additional licensing class to handle the extended length, swing out and unique handling (Crane operators can operate with a Class 3 license; require Class 1 training to manage extended length and swing out).
- Less strain on labour and union to provide additional training.
- Reduce the removal of extra crane components needed to meet axle weight requirements which reduces the need for additional manpower, costs and time to the industry to dismantle, transport and re-install.

■ Environmental Improvements:

- Reducing land disturbance for storage of large oversize dollies when entering sites.
- Decrease greenhouse gas footprint and infrastructure damage by reducing additional equipment needed to transport and configure the equipment.

In Conclusion

The Crane Rental Association of Canada and its associates would like to be active partners with governments to mitigate risks for the industry and public.

- Better dollies are being built;
- Manufacturers, engineers and operators are working together to identify opportunities for improvement;
- We understand that each jurisdiction has its own unique challenges (geology, robustness of structures, etc.) and that one solution may not fit all provinces;
- We support the needs of our members in their respective provinces.

To improve our industry's productivity we require increases in axle weights to allow us to transfer weight back to the crane, which is responsible for the control, traction, stability and braking.



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Thank you!

QUESTIONS ?