

# Safety ALERT

## Aerial Equipment Operation in the Wind – March 29, 2021

Aerial equipment has restrictions for use based on wind speed. Operations is currently developing an SOP and other support documents to manage this activity.

The chart below is part of the SOP and provides information on specific makes and models of SaskPower aerial equipment and operation in wind. Operators of contractor owned aerial equipment or SaskPower owned aerial equipment not on the chart must follow specific manufacturer's guidance. Contractors will follow their own internal process for deviations if required .

No use of aerial equipment above **Normal Operating (Max)** wind speed until the Director of the workgroup has approved a Deviation from Safe Work. The Deviation from Safe Work form must be completed to operate aerial equipment above the **Normal Operating (MAX)** wind speed to the **Personnel Only (MAX)** wind speed with the specific task, hazards and controls identified.

Normal Operating (MAX) of listed aerial equipment up to this speed

Deviation approved by Director to operate from Normal Operating (MAX) speed to Personnel Only or Restricted Use speed.

Type	Manufacturer	Classes	Normal Operating (Max)	Personnel Only	Restricted Use	Restricted Use Condition
Bucket Truck	Altec, Terex, Posi, Versalift	115, 116, 159, 193, 255, 256	48 km/hr	64 km/hr	N/A	
Mobile Elevating work platform	JLG, GENIE, Skyjack	878	45 km/hr	N/A		CSA Standard and strict OEM requirements
Digger Derrick	UTV, Terex 4000 Series	190, 375	48 km/hr	64 km/hr	N/A	As per OEM requirements
Digger Derrick	Terex 5000, 6000 and General Series	260, 261, 271	48 km/hr	64 km/hr	64 km/hr	Up to 50% capacity of load chart up with only 2 booms extended (i.e. 2 <sup>nd</sup> extended and 3 <sup>rd</sup> retracted or 2 <sup>nd</sup> retracted and 3 <sup>rd</sup> extended).
Telescopic Crane	Elliot	376	48 km/hr	25 km/hr	N/A	
	Manitex	325	32 km/hr		48 km/hr	capacity reduced to 44%
	Tandano	325, 179			N/A	
Articulating Crane	Effer	237, 101	34 km/hr	N/A	40 km/hr	Boom Below 45 degrees
	Palfinger	237, 101			48 km/hr	

Normal Operation – is the general maximum wind speed use of the equipment without any special operating restrictions.

Personnel Only – Is the maximum rating for lifting personnel only (no material handling allowed). For example, an aerial devices can be used above 48 km/hr (up to 64 km/hr) when lifting personnel only. However, cranes are limited to 25km/hr only for personnel lifting.

Restricted Use – Refers to special restrictions for specific equipment. For example, a Manitex crane has the capacity is reduced to 44% when operating above 32.2km/hr (to a maximum of 48.3km/hr). In the case of a digger derrick the capacity is reduced to 50% when operating above 48.3km/hr (to a maximum of 64km/hr)

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## Ways to Measure Wind

**Note:** The best measure of wind is at a height of 10m (33 ft) with no obstruction. This is the best location for an anemometer.

Wind speed can be monitored in several ways.

- Windspeed monitor - Handheld or equipment mounted, etc.
- Weather Apps (when getting close to the milestones, a more accurate measurement is preferred).
- Weather Reports (accuracy is important near the milestones)

Measure the wind at ground level before starting to ascend

Measure the wind while ascending to the work location with a handheld monitor or boom tip monitor

Measure the wind at the working height and monitor as required. The closer the wind speed is to the milestones on the wind speed chart for aerial equipment above, the more rigorous the wind monitoring and measurement plan needs to be.

A critical lift plan would be required once the lift/load is higher than 85% of the new derated boom capacity.

Restrict lifting as directed on the wind speed chart for aerial equipment above.

## Wind Gusts and Sustained Wind

**NOTE:** Wind gust can be very dangerous and shall be considered when performing aerial lift operations. Gusts happen in a relatively short period of time and can be difficult to predict. A change in wind conditions including sustained wind speed and wind gusts shall be closely monitored. A wind gust speed is the average with a 3 second time frame, and sustained wind speed is the average over a 10-minute time frame

Take measurements to determine the sustained wind speed and the wind gust speed.

Wind gusts that last for 3 seconds or more are the determining factor for the wind speed chart for aerial equipment above.

When the sustained windspeed is beyond the limitations of the chart, ensure an adequate amount of time has passed with lower wind speeds before work resumes.

## Other

All requirements for load handling and lift planning must be followed with possible wind speed effect on the load and applicable controls identified.

All hazards must be considered and controls in place when working during this storm. If you do not feel it is safe to do the work, STOP and contact your supervisor.

**Personnel Only (MAX)** wind speeds shall not be exceeded.

**Please contact your Safety Business Partner if you require further information on this matter or assistance in determining how it applies to your operation.**