
WIND CONDITIONS

Model 1015

GENERAL

Wind adversely affects lifting capacity and stability as shown in Figure 1. The result could be loss of control over the load and crane, even if the load is within the crane's capacity.



WARNING **TIPPING CRANE HAZARD!**

Judgment and experience of qualified operators, job planners, and supervisors must be used to compensate for affect of wind on lifted load and boom by reducing ratings, reducing operating speeds, or a combination of both.

Failing to observe this precaution can cause crane to tip or boom and/or jib to collapse. Death or serious injury to personnel can result.

Wind speed (to include wind gusts) must be monitored by job planners and supervisors.

Beware that wind speed at boom point can be greater than wind speed at ground level. Also beware that the larger the sail area of the load, the greater the wind's affect on the load.

As a general rule, ratings and operating speeds must be reduced when:

Wind causes load to swing forward past allowable operating radius or sideways past either boom hinge pin.

OPERATION PERMITTED

Operation is permitted in steady winds or wind gusts up to the maximum specified in Table 1. However, ratings must be reduced the amount given in the table when the corresponding wind speed is reached.

RATING REDUCTIONS/OPERATION NOT PERMITTED

Table 1

Rating Reductions for Various Wind Speeds and Gusts
WHEN EQUIPPED WITH BOOM ONLY

Boom Length ft (m)		50-160 (15.2-48.8)	170-200 (51.8-61.0)
Maximum Wind Speed		Percent Rating Reduction	
mph	m/s		
20	9	0	0
25	11	0	10
30	13	10	20
35	16	20	20
Above 35 mph (16 m/s)		OPERATION NOT PERMITTED	

Adhere to minimum block and hook and weight ball requirements given in Liftcrane Boom Capacity Chart. **Boom may be blown over backwards if this precaution is not observed.**

Operation Not Permitted

Operation is not permitted when wind speed is above the following limits or when wind gusts above these limits are expected:

Boom Only

- **Above 35 mph (16 m/s) –**
Extended crawler position only. **Retracted crawler position not allowed.** Park crane (upper in line with crawlers) and position boom at 65°.
- **50 mph (22 m/s) and Above –**
Lower boom onto blocking at ground level.

Table 2

Rating Reductions for Various Wind Speeds and Gusts
WHEN EQUIPPED WITH BOOM AND JIB

Boom Length ft (m)		90-170 (27.4-51.8)	
Fixed Jib Boom Length ft (m)		20-40 (6.1-12.2)	50-70 (15.2-21.3)
Maximum Wind Speed		Percent Rating Reduction	
mph	m/s		
20	9	0	0
25	11	0	0
30	13	10	10
35	16	10	20
Above 35 mph (16 m/s)		OPERATION NOT PERMITTED	

For operation in winds above 25 mph (11 m/s) with boom positioned above 65°, load block must weigh at least 3,900 lb (1 770 kg) and hook and weight ball must weigh at least 1,310 lb (590 kg). **Boom and jib may be blown over backwards if this precaution is not observed.**

Operation Not Permitted

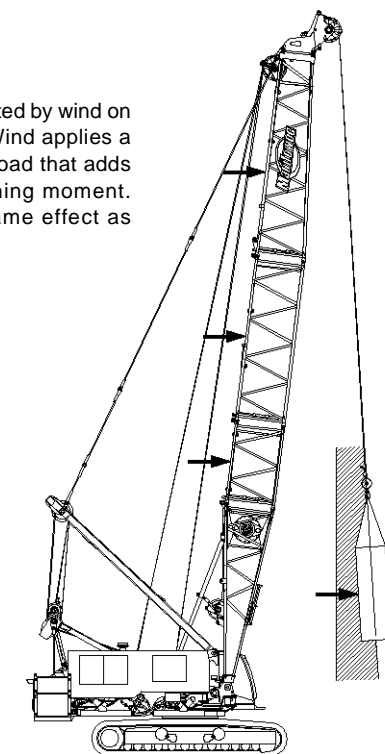
Operation is not permitted when wind speed is above the following limits or when wind gusts above these limits are expected:

Boom With Fixed Jib

- **Above 35 mph (16 m/s) –**
Extended crawler position only. **Retracted crawler position not allowed.** Park crane (upper in line with crawlers) and position boom at 60°.
- **50 mph (22 m/s) and Above –**
Lower boom and jib onto blocking at ground level.

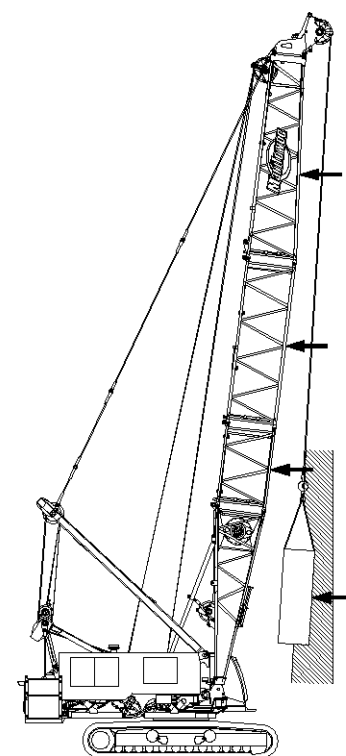
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Forward stability is affected by wind on the rear of the boom. Wind applies a force to the boom and load that adds to the crane's overturning moment. This action has the same effect as adding load to the hook.



The wind's affect on the rear of the load increases load radius. This condition can result in an overload hazard, possibly causing the crane to tip or the boom to collapse.

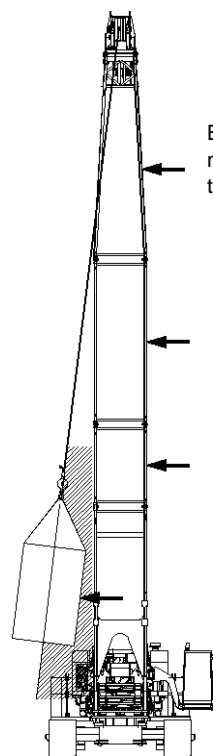
To avoid this hazard, reduce operating speeds and load (see appropriate table for recommended capacity reductions).



Backward stability is affected by wind on the front of the boom. This condition is especially dangerous when the boom is at or near the maximum angle when operating without load.

Wind forces on the front of the boom reduce the normal forward tipping effect of the boom. The crane can tip or the boom can collapse if this condition is not avoided.

The boom can buckle and collapse if the load contacts the boom.



Boom strength is affected the most when the wind acts on the side of the boom.

The wind's affect on the side of the load can cause the load to swing out past the boom hinge pin. This condition can result in excessive side load forces on the boom, possibly causing the crane to tip or the boom to collapse.

To avoid this hazard, reduce operating speeds and load (see appropriate table for recommended capacity reductions).

FIGURE 1