



WIND CONDITIONS

Model 222 Wagon

TABLE OF CONTENTS

General	1
Manitowoc Recommendations	2
Operation Permitted	2
Operation Not Permitted	2

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.

GENERAL

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

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

Beware that the wind speed at boom or jib 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.

MANITOWOC RECOMMENDATIONS

Operation Permitted

Operation is permitted in steady winds or wind gusts up to 40 mph (18 m/s). However, ratings must be reduced the amount given in Tables 1 and 2.

Operation Not Permitted

Boom Only

- Up to 50 mph (22 m/s) —

Park crane (upper in line with wagon) and position boom at 70°.

- 50 mph (22 m/s) and Above —
Lower boom onto blocking at ground level.

Boom with Fixed Jib

- Up to 50 mph (22 m/s) —
Park crane (upper in line with wagon) and position boom at 60°.
- 50 mph (22 m/s) and Above —
Lower boom and jib onto blocking at ground level.

Table 1
Rating Reductions for Various Wind Speeds and Wind Gusts
WHEN EQUIPPED WITH BOOM ONLY

Boom Length ft (m)		40–70 (12.2–21.0)	80–120 (24.4–36.6)	130–200 (39.6–61.0)
Maximum Wind Speed		Percent Rating Reduction		
mph	m/s			
15	7	0	0	0
20	9	0	0	10
25	11	0	0	20
30	13	10	10	30
35	16	10	10	
40	18	20		
Above 40 mph (18 m/s)		OPERATION NOT PERMITTED		

For operation in winds above 30 mph (13 m/s) with boom positioned above 75°, load block must weigh at least 1,500 lb. (680 kg) or 2,500 lb. (1,340 kg) in winds above 35 mph (16 m/s). ***Boom may be blown over backwards if this precaution is not observed.***

Table 2
Rating Reductions for Various Wind Speeds and Wind Gusts
WHEN EQUIPPED WITH BOOM AND FIXED JIB

Boom Length ft (m)		70–140 (21.3–42.7)		150–190 (45.7–57.9)	
Fixed Jib Length ft (m)		30–40 (9.1–12.2)	50–60 (15.2–18.3)	30–40 (9.1–12.2)	50–60 (15.2–18.3)
Maximum Wind Speed		Percent Rating Reduction			
mph	m/s				
11	5	0	0	0	0
15	7	0	20	20	30
20	9	0	20	30	40
25	11	0	20	50	60
30	13	0	30	50	
35	16	0	40		
Above 35 mph (16 m/s)		OPERATION NOT PERMITTED			