MANITOWOC 60' PLATFORM RINGER
LOAD LINE SPECIFICATIONS
FRONT DRUM: 54.5" WIDTH, 28" DIAMETER, 66" DIAMETER FLANGE
RIGHT REAR DRUM: 31.8" WIDTH, 28" DIAMETER, 66" DIAMETER FLANGE
LEFT REAR DRUM: 14.6" WIDTH, 28" DIAMETER, 66" DIAMETER FLANGE
PROCEDURE FOR DETERMINING PARTS OF LINE, MAXIMUM HOIST DISTANCE AND WIRE ROPE LENGTH USING FRONT OR REAR DRUMS

TABLE 1: HOIST REEVING FOR MAIN LOAD BLOCK

MAXIMUM LOAD IN POUNDS FOR VARIOUS WIRE ROPE SIZES

Parts of Line	1	2	3	4	5	6	7	8	9	10
1-1/4" Wire Rope	44,000	88,000	132,000	176,000	220,000	264,000	308,000	352,000	396,000	440,000
1-3/8" Wire Rope	45,000	90,000	135,000	180,000	225,000	270,000	315,000	360,000	405,000	450,000
1-1/2" Wire Rope	50,000	100,000	150,000	200,000	250,000	300,000	350,000	400,000	450,000	500,000
1-5/8" Wire Rope	66,000	132,000	198,000	264,000	330,000	396,000	462,000	528,000	594,000	660,000
Parts of Line	11	12	13	14	15	16	17	18	19	20
1-1/4" Wire Rope	484,000	528,000	572,000	616,000	660,000	704,000	748,000	792,000	836,000	880,000
1-3/8" Wire Rope	495,000	540,000	585,000	630,000	675,000	720,000	765,000	810,000	855,000	900,000
1-1/2" Wire Rope	550,000	600,000	650,000	700,000	750,000	800,000	850,000	900,000	950,000	1,000,000
1-5/8" Wire Rope	726,000	792,000	858,000	924,000	990,000	1,056,000	1,122,000	1,188,000	1,254,000	1,320,000

Load Lines: 1-1/4" - 6 x 31 Warrington-Seale, Monitor AAA, Regular Lay, IWRC.
Minimum Breaking Strength 175,800#. Approx. weight = 2.98#/Ft.

1-3/8" - 6 x 41 Warrington-Seale, Extra Improved Plow Steel, Regular Lay, IWRC.
Minimum Breaking Strength 192,000#. Approx. weight = 3.5#/Ft.

1-1/2" - 6 x 41 Seale Filler Wire, Extra Improved Plow Steel, Regular Lay, IWRC.
Minimum Breaking Strength 228,000#. Approx. weight = 4.16#/Ft.

1-5/8" - 6 x 41 Seale Filler Wire, Extra Improved Plow Steel, Regular Lay, IWRC.
Minimum Breaking Strength 264,000#. Approx. weight = 4.88#/Ft.

TABLE 2: MAXIMUM SPOOLING CAPACITIES

Front drum (load line)	1-1/4" wire rope - 15 layers - 7,261'
	1-3/8" wire rope - 13 layers - 5,675'
	1-1/2" wire rope - 12 layers - 4,828'
	1-5/8" wire rope - 11 layers - 3,977'
Right rear drum (whip line - jib)	1-1/4" wire rope - 15 layers - 4,236'
Left rear drum (whip line - 10' upper boom point or upper jib point)	1-1/4" wire rope - 15 layers - 1,946'
	1-3/8" wire rope - 13 layers - 1,521'
	1-1/2" wire rope - 12 layers - 1,294'
	1-5/8" wire rope - 11 layers - 1,061'

Deduct 16' from maximum spooling capacities for 2 dead wraps per drum.

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TABLE 3: WIRE ROPE CONSTANT

Amount of Wire Rope Required to Reeve Sheaves in Sheave Carrier & Load Block										
Parts of Line	1	2	3	4	5	6	7	8	9	10
Wire Rope Constant	45'	50'	55'	65'	70'	75'	80'	85'	90'	95'
Parts of Line	11	12	13	14	15	16	17	18	19	20
Wire Rope Constant	105'	110'	115'	120'	125'	130'	135'	145'	150'	155'
NOTE: Above lengths include initial wraps on front drum and wire rope required from front drum to sheaves on front roller carrier.										

A. Parts of line required to hoist a given load are shown in (Table 1). Weight of load block, hook, weight ball, slings, etc. is considered part of the load.

B. (1) From job layout, determine maximum distance load is to be lifted.

(2) Multiply hoist distance (from Step B-1) x parts of line. Check this total amount of rope with drum spooling capacity (Table 2) to determine if spooling capacity is adequate.

C. (1) To determine total length of wire rope required for main hoist, multiply parts of line x total distance from centerline of sheaves in boom top to centerline of sheaves in block with block at lowest elevation. Add boom length plus wire rope constant from 'Table 3' corresponding to parts of line used.

(2) To determine total length of wire rope required for whip line using split rear drum (right rear drum for jib main fall and left rear drum for upper boom point or upper jib point), multiply parts of line x total distance from centerline of sheaves in jib top to centerline of sheaves in block with block at lowest elevation. Add boom length, jib length and wire rope constant from 'Table 3' corresponding to parts of line used.

(3) Other considerations such as length of rope available and wire rope required to drop hook to grade may influence total length of wire rope selected.

Refer to load line hoisting range charts #6928-B and #6928-C for maximum hoisting ranges.

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