



Grove Maniowoc National Crane Potain



Grove GBT35

Product Guide



Features

- 38,7 m five-section boom
- Maximum tip height 57,6 m
- 35 t rating
- 3675 kg counterweight
- Main and auxiliary winch line pull 5000 kg
- Commercial truck carrier for optimised speed and efficiency





Features



Five-section boom

At 38,71 m, the GBT35 five-section boom is the longest in its size range. The long boom allows the operator to perform more lifts without the use of a jib, reducing setup time and improving efficiency.



Overload protection

All Grove boom trucks are equipped with overload protection. A Load Moment Indicator (LMI) is standard on all GBT35 machines. The LCD display is visible in full or low light and displays all crane load lifting values simultaneously. Includes Work Area Definition System (WADS).

Introducing the GBT35

- 35,0 t maximum capacity
- 41,15 m maximum tip height (main boom)
- 57,61 m maximum tip height (boom with jib)

Deluxe operator's cab

Rigid galvanized steel structure, well insulated, with tinted safety glass for operator visibility and comfort. Multi-position seat with arm rest mounted single axis controls, ventilation fans, diesel heater, dual cab mounted worklights and wipers. Optional air conditioning is available.



Outriggers

Outrigger span of 7,52 m when fully extended; 5,33 m at mid-span.

Equipped with both ground level and in-cab outrigger controls, the GBT35 outriggers allow quick and easy crane set-up and can be positioned at 0%, 50% and 100%.



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Specifications

Superstructure



Boom

9,45 m – 38,7 m, five-section, four-plate construction, full-power boom. Integral holding valve on the telescope cylinder. Three (3) quick reeve cast iron sheaves in the main boom nose.

Maximum tip height: 41,1 m



Swingaway extension

9,45 m-16,76 m Telescoping boom extension includes 7,32 m manual pull-out to 16,76 m. Stows alongside base boom section.

Maximum tip height: 57,7 m



Boom elevation

One double acting hydraulic cylinder with integral holding valve.

Elevation from -10° to +80°



Load moment and anti-two block system

Graphical, LMI system with Audio-visual (light/buzzer) warning system and control lever lockout system with electronic display of boom angle and length, relative load moment indication, rated load, load, radius and boom tip height. The standard Work Area Definition System (WADS) allows the operator to pre-select and define safe working areas.



Cab

All steel construction with acoustical lining and tinted glass throughout, deluxe seat with armrest mounted single-axis hydraulic pilot controllers, windshield and sliding skylight with electric wipers, hot water cab heater with defroster which is diesel fired, circulating fan, fire extinguisher, dual cab mounted work lights. Electronic throttles included. Unit is equipped with a signal horn switch and engine start/stop switches.



Slewing

360° continuous rotation, planetary “Glide swing” with foot actuated multi-disk brake, pinion guard.



Counterweight

Pinned to superstructure, 3675 kg.



Hydraulic system

Pressure compensated, load-sense, closed-center hydraulic system with (1) left-hand rotation, variable displacement piston pump; hydraulic reservoir, external sight level indicator, filter condition indicator; oil temperature indication and oil cooler with electric fan. Reservoir capacity 380 l equipped with butterfly valve on the suction line to the pump.



Hoist

Main hoist with grooved drum, two-speed power up and down with automatic multi-disc brake, electronic drum rotation indicator (DRI) & Last Layer Indicator and drum cable follower. Bare drum pull 6804 kg low speed.

Maximum single line pull:

1st layer: 6804 kg

3rd layer: 5579 kg

5th layer: 4721 kg

Maximum permissible line pull:

5117 kg with 34x7 class rope.

Maximum single line speed: 126 m/min

Rope construction:

34x7 EIPS IWRC, Rotation resistant

Rope diameter: 16 mm

Rope length:

Main hoist: 137 m

Auxiliary hoist: 137 m

Maximum rope stowage: 154 m



Specifications

Superstructure continued

Hook block

18 t, 149 kg single sheave, “quick reeve” type block with swivel hook and safety latch.

Maximum capacity 15 300 kg.



Outrigger system

Hydraulic front and rear. Two section extendable beams with integral check valves for 360° operation; 607 mm diameter aluminum outrigger floats.

3 Position settings: 0%, 50% and 100%.

Controls located in crane cab and on both sides of subframe.

Unit has outrigger in motion alarm system.

Single front stabilizer - folds for tilting truck hood (requires extended front truck chassis frame rails).

*Optional equipment









- ▶ Air Conditioning in Cab
- ▶ Manual applied lock on rotation bearing (360° positioning)
- ▶ Swing away extension
- ▶ Auxiliary winch
- ▶ Four function remote control. (Will not function auxiliary winch option)



Specifications

GBT35 hookblock data

- All winch pulls and speeds are shown on the fourth layer.
- Winch line pulls would increase on the first, second, and third layers.
- Winch line speed would decrease on the first, second, and third layers.
- Winch line pulls may be limited by the winch capacity or the ANSI 5 to 1 cable safety factor.

1 part line	2 part line	3 part line	4 part line	5 part line	6 part line	7 part line	8 part line
							

Standard planetary winch	Cable supplied	Average breaking strength	Max. pull	Max. pull	Max. pull	Max. pull	Max. pull	Max. pull	Max. pull	Max. pull
Low speed	16 mm diameter rotation resistant IWRC	25 583 kg	5117 kg 62 m/min	10 233 kg 31 m/min	15 351 kg 21 m/min	20 468 kg 16 m/min	25 583 kg 13 m/min	30 700 kg 10 m/min	35 819 kg 9 m/min	40 936 kg 8 m/min
High speed	16 mm diameter rotation resistant IWRC	25 583 kg	2268 kg 126 m/min	4536 kg 62 m/min	6804 kg 42 m/min	9072 kg 31 m/min	11 340 kg 25 m/min	13 608 kg 21 m/min	15 876 kg 18 m/min	18 144 kg 16 m/min

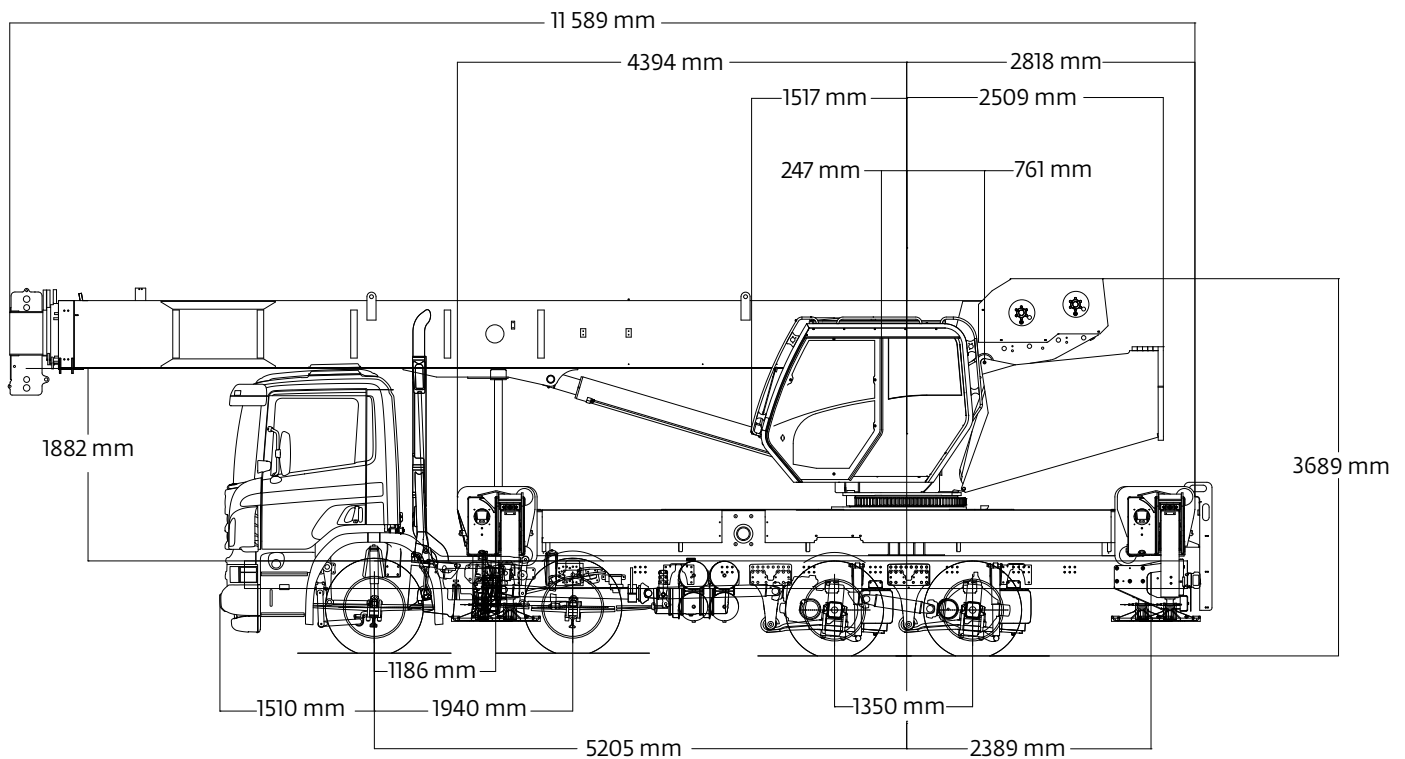
Winch	Fourth layer pull	Allowable cable pull
Standard planetary and auxiliary planetary	2557 kg high speed 5114 kg low speed	5117 kg 5117 kg

Loadline deduct		
	Aux boom head	45 kg
5,1 t	Downhaul weight	82 kg
15,3 t	1-sheave block	170 kg
25,5 t	2-sheave block	250 kg
35,7 t	3-sheave block	318 kg
40,8 t	4-sheave block	409 kg

**Denotes optional equipment*



Dimensions



Weights			
Series	Front axle	Rear axle	Total GVW
GBT35	13 362 kg	16 938 kg	30 300 kg

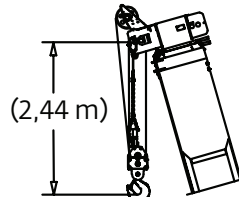
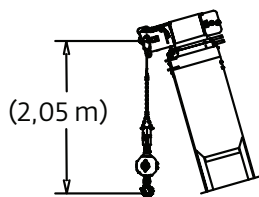
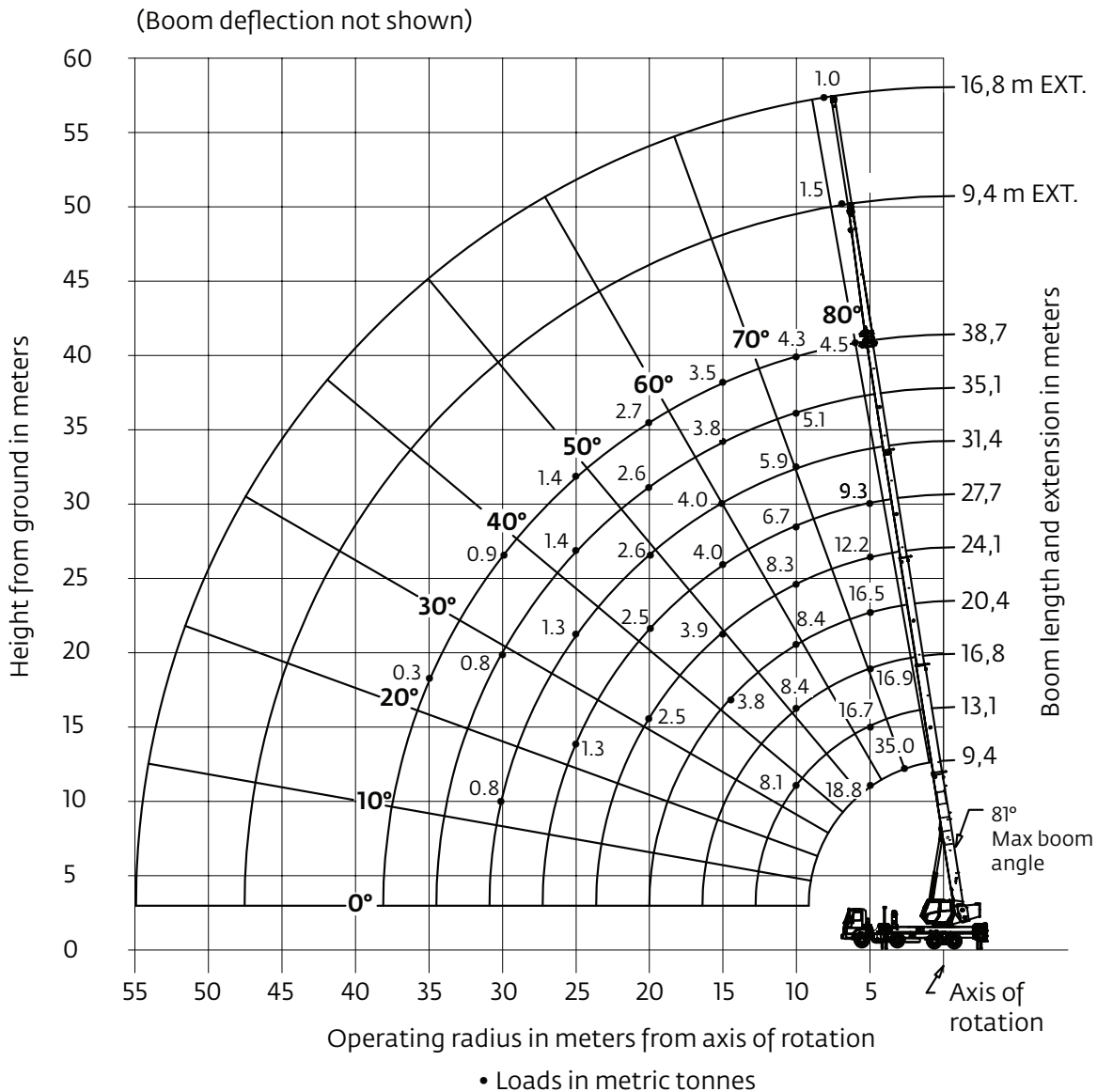
Note: Dimensions are typical and vary depending on exact specifications of carrier.

With jib, auxiliary hoist, and 2/3 hookblock.



Working range

38,71 m main boom with extension, 360°, outriggers fully extended, 3675 kg counterweight



Dimensions are for largest furnished hook block and headache ball, with anti-two block activated.

*Drawing is to show the physical reach of the machine. Always refer to load chart to see what portions of this range are structurally and stability limited.

THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.

The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane.



Load chart

38,71 m main boom without stowed extension, 360°, outriggers fully extended, 3675 kg counterweight

Radius in meters	#01								
	Main boom length in meters								
	9,4	13,1-A	16,8-B	20,4-C	24,1-D	27,7-E	31,4-F	35,1-G	38,7
2,5	35 000 (71,2)								
3	32 000 (67,9)	18 400 (74,4)							
3,5	27 650 (64,5)	18 400 (72,1)							
4	24 025 (61,0)	18 275 (69,7)	18 400 (74,6)	17 750 (77,8)					
4,5	21 100 (57,3)	17 500 (67,4)	18 400 (72,8)	17 125 (76,4)	12 675 (78,8)				
5	18 800 (53,5)	16 725 (64,9)	16 900 (71,0)	16 500 (75,0)	12 275 (77,6)	9 350 (79,5)			
6	15 150 (45,2)	15 200 (59,9)	15 400 (67,3)	15 225 (72,0)	11 450 (75,1)	8 825 (77,4)	6 875 (79,3)		
7	12 675 (35,4)	12 550 (54,5)	13 150 (63,4)	13 200 (69,0)	10 625 (72,7)	8 225 (75,4)	6 725 (77,6)	5 800 (79,3)	
8	10 725 (21,9)	10 925 (48,8)	11 125 (59,5)	11 200 (65,8)	9 800 (70,1)	7 600 (73,2)	6 600 (75,8)	5 575 (77,8)	4 500 (79,4)
9		9 500 (42,4)	9 700 (55,3)	9 775 (62,6)	9 075 (67,6)	7 175 (71,1)	6 250 (74,0)	5 325 (76,2)	4 425 (78,1)
10		8 175 (35,2)	8 400 (50,9)	8 475 (59,3)	8 375 (64,9)	6 750 (68,9)	5 900 (72,1)	5 100 (74,8)	4 350 (76,7)
12		5 900 (11,4)	6 250 (41,0)	6 350 (52,3)	6 350 (59,4)	6 025 (64,4)	5 275 (68,2)	4 650 (71,5)	4 075 (73,9)
14			4 775 (29,6)	4 950 (45,1)	5 025 (53,8)	5 100 (59,9)	4 750 (64,5)	4 250 (68,1)	3 800 (70,9)
16				3 850 (36,2)	3 950 (47,4)	4 000 (54,7)	4 075 (60,3)	3 875 (64,5)	3 500 (67,8)
18				3 050 (24,5)	3 125 (40,3)	3 200 (49,2)	3 250 (55,7)	3 300 (60,6)	3 250 (64,6)
20					2 525 (31,8)	2 575 (43,3)	2 625 (50,8)	2 675 (56,5)	2 725 (61,0)
22					2 025 (20,3)	2 075 (36,5)	2 125 (45,7)	2 175 (52,2)	2 200 (57,2)
24						1 675 (28,3)	1 725 (40,0)	1 750 (47,6)	1 800 (53,3)
26						1 325 (16,7)	1 375 (33,4)	1 425 (42,7)	1 450 (49,2)
28							1 100 (25,4)	1 125 (37,2)	1 150 (44,8)
30							850 (13,2)	875 (30,8)	900 (40,0)
32								650 (22,9)	700 (34,7)
34								475 (9,2)	500 (28,4)
36									325 (20,4)
Minimum boom angle (°) for indicated length (no load)									0
Maximum boom length (m) at 0° boom angle (no load)									38,7

NOTE: () Boom angles are in degrees.

#LMI operating code. Refer to LMI manual for operating instructions.

Lifting capacities at zero degree boom angle										
Boom angle	Main boom length in meters									
	9,4	13,1-A	16,8-B	20,4-C	24,1-D	27,7-E	31,4-F	35,1-G		
0°	9 300 (8,7)	5 800 (12,3)	3 625 (16,0)	2 500 (19,7)	1 725 (23,3)	1 125 (27,0)	750 (30,6)	450 (34,3)		

NOTE: () Reference radii in meters.

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Rated Load Reductions from main boom capacity when lifting over main boom nose with ext. erected (retracted):									
(in kg)	1045	975	910	885	865	840	820	795	775



Load chart

38,71 m main boom with stowed extension, 360°, outriggers fully extended, 3675 kg counterweight

Radius in meters	#02								
	Main boom length in meters								
	9,4	13,1-A	16,8-B	20,4-C	24,1-D	27,7-E	31,4-F	35,1-G	38,7
2,5	34 635 (71,2)								
3	31 635 (67,9)	18 105 (74,4)							
3,5	27 285 (64,5)	18 105 (72,1)							
4	23 660 (61,0)	17 980 (69,7)	18 195 (74,6)	17 565 (77,8)					
4,5	20 735 (57,3)	17 205 (67,4)	18 195 (72,8)	16 940 (76,4)	12 490 (78,8)				
5	18 435 (53,5)	16 430 (64,9)	16 695 (71,0)	16 315 (75,0)	12 090 (77,6)	9190 (79,5)			
6	14 785 (45,2)	14 905 (59,9)	15 195 (67,3)	15 040 (72,0)	11 265 (75,1)	8665 (77,4)	6735 (79,3)		
7	12 310 (35,4)	12 255 (54,5)	12 945 (63,4)	13 015 (69,0)	10 440 (72,7)	8065 (75,4)	6585 (77,6)	5685 (79,3)	
8	10 360 (21,9)	10 630 (48,8)	10 920 (59,5)	11 015 (65,8)	9615 (70,1)	7440 (73,2)	6460 (75,8)	5460 (77,8)	4405 (79,4)
9		9205 (42,4)	9495 (55,3)	9590 (62,6)	8890 (67,6)	7015 (71,1)	6110 (74,0)	5210 (76,2)	4330 (78,1)
10		7880 (35,2)	8195 (50,9)	8290 (59,3)	8190 (64,9)	6590 (68,9)	5760 (72,1)	4985 (74,8)	4255 (76,7)
12		5605 (11,4)	6045 (41,0)	6165 (52,3)	6165 (59,4)	5865 (64,4)	5135 (68,2)	4535 (71,5)	3980 (73,9)
14			4570 (29,6)	4765 (45,1)	4840 (53,8)	4940 (59,9)	4610 (64,5)	4135 (68,1)	3705 (70,9)
16				3665 (36,2)	3765 (47,4)	3840 (54,7)	3935 (60,3)	3760 (64,5)	3405 (67,8)
18				2865 (24,5)	2940 (40,3)	3040 (49,2)	3110 (55,7)	3185 (60,6)	3155 (64,6)
20					2340 (31,8)	2415 (43,3)	2485 (50,8)	2560 (56,5)	2630 (61,0)
22					1840 (20,3)	1915 (36,5)	1985 (45,7)	2060 (52,2)	2105 (57,2)
24						1515 (28,3)	1585 (40,0)	1635 (47,6)	1705 (53,3)
26						1165 (16,7)	1235 (33,4)	1310 (42,7)	1355 (49,2)
28							960 (25,4)	1010 (37,2)	1055 (44,8)
30							710 (13,2)	760 (30,8)	805 (40,0)
32								535 (22,9)	605 (34,7)
34								360 (9,2)	405 (28,4)
36									230 (20,4)
Minimum boom angle (°) for indicated length (no load)									0
Maximum boom length (m) at 0° boom angle (no load)									38,7

NOTE: () Boom angles are in degrees.

#LMI operating code. Refer to LMI manual for operating instructions.

Lifting capacities at zero degree boom angle									
Boom angle	Main boom length in meters								
	9.4	13.1-A	16.8-B	20.4-C	24.1-D	27.7-E	31.4-F	35.1-G	
0°	8935 (8,7)	5505 (12,3)	3420 (16,0)	2315 (19,7)	1540 (23,3)	965 (27,0)	610 (30,6)	335 (34,3)	

NOTE: () Reference radii in meters.

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Load chart

9,4 m - 16,8 m telescopic jib, 360°, outriggers fully extended, 3675 kg counterweight

Radius in meters	9,4 m LENGTH
	#03
9,1	1525 (80)
14,0	1450 (75)
18,2	1200 (70)
22,2	950 (65)
25,9	750 (60)
29,2	525 (55)
32,3	275 (50)
Min. boom angle for indicated length (no load)	44°
Max. boom length at 0° boom angle (no load)	13,1 m

Radius in meters	16,8 m LENGTH
	#04
10,9	1000 (80)
16,4	1000 (75)
21,3	700 (70)
25,9	450 (65)
Min. boom angle for indicated length (no load)	47°
Max. boom length at 0° boom angle (no load)	13,1 m

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NOTE: () Boom angles are in degrees.
#LMI operating code. Refer to LMI manual for operating instructions.

BOOM EXTENSION CAPACITY NOTES:

- All capacities above the bold line are based on structural strength of boom extension.
 - 9,4 m and 16,8 m extension lengths may be used for single line lifting service.
 - Radii listed are for a fully extended boom with the boom extension erected. For main boom lengths less than fully extended, the rated loads are determined by boom angle. For boom angles not shown, use the rating of the next lower boom angle.
- WARNING: Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.
- Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
 - Capacities listed are with outriggers properly extended and vertical jacks set.
 - When lifting over the main boom nose with 9,4 m or 16,8 m extension erected, the outriggers must be fully extended or 50% extended.



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