

LOGIC™ LANE CONDITIONER



Solid Science, Great Results, Pure LOGIC.

The art of lane conditioning matches the lane surface, lane pattern and bowling environment with the best conditioner. Logic Lane Conditioner is the final link to satisfied bowlers through superior performance.



Brunswick
Bowling with a capital B.

Logic Lane Conditioner

Brunswick understands the importance of optimizing the lane conditioner with the lane surface, conditioner pattern, bowler, bowling environment and conditioner pattern transition to provide great performance for your center. Through extensive Throbot testing, Brunswick quantified the performance of the best performing conditioners on the market today. From this data, Logic Lane Conditioner was developed using their best attributes. The result was the most predictable conditioner on the market to date.

Logic uses top-grade Swedish oils with an enhanced additive package. The results are a low lubricity conditioner with great durability and ball motion on harder, less aggressive surfaces. By maintaining stability and predictability of the first transition (carry down), Logic helps bowlers read the conditioner pattern and simplify their adjustments without losing the playability of the pattern.

Logic is an excellent product for *slow to medium* response time surfaces, like many synthetics. It is designed for low friction surface or when conditioner carry-down is excessive.

We created this document to aid you in the transition from your current lane conditioner to Logic Lane Conditioner. Logic does not require a special lane cleaner to remove it from your lane surface. It has been formulated to allow you the ease of cleaning, eliminating concerns that arise with other competitive conditioners. Logic can be used in Brunswick's Authority22 lane machine and all Sanction technology machines

For the *Authority22 Lane Machine*, drain the conditioner tank by removing the tubing from the #1 side of the pressure relief valve. Attach drain tube to the removed tubing and route to a container. Turn on conditioner pump in the conditioning diagnostics. It takes approximately 3 minutes to drain the conditioner tank completely. Carefully remove the white spin-on filter, drain, fill with the Logic Lane Conditioner and reinstall the filter. Fill conditioner supply tank about half full and turn on the conditioner pump to flush the conditioning system. Remove the drain tubing and reconnect the line tubing into side #1 on the pressure relief valve. Fill tank to the appropriate level and cycle the Logic Lane Conditioner for 3 minutes to ensure that the entire tank has been run through the conditioning system.

For *Sanction Technology* machines, we recommend that you drain the old conditioner from the tank, flush the tank with a small amount of Logic Lane Conditioner and then fill the tank to the appropriate level. The Logic Lane Conditioner requires a 3/16" OD x 6" length piece of tubing for the pressure regulating system. This will give you about 12-16 PSI on your pressure gage.

The information that follows is designed to help you successfully condition your lanes with Brunswick Logic Lane Conditioner. Although lane conditioner pattern basics are common, variables such as surface type, topography, environment, and bowlers may require adjustments to fit your particular needs. Verify your pattern using the Computer Lane Monitor. Changes in the graphs can help you isolate issues like an aging buffer brush that can affect your bowlers in an adverse way.

Note: Brunswick technical support is available any time you need assistance with your lane maintenance program. Call 800-937-2695 (select option 2) or call 231-725-4966. Providing your bowlers with a conditioner that can withstand today's environment will increase customer satisfaction.

Physical Properties:	VISCOSITY:	43.0 centipoise
	SURFACE TENSION**:	25.0 dynes/cm

**Surface tension is a measurement used in the Physical testing of a lane conditioner. Higher surface tension conditioners produce more carry down and tend to “bead up” more easily on the lane surface. Lower surface tension conditioners produce less carry down, lay better on the lane, and create better ball reaction.

For the Do-It Yourselfers out there please refer to the “*What should I do if...?*” when attempting to fine-tune your conditioner pattern. This will help you decide the proper adjustments to make based on the ball reaction and transition you and your bowlers see. These are listed below.

What should I do if...

I have too much carry-down?

Decrease the distance of the applied oil in the center of the lane and leave the pattern distance the same. This adjustment increases the buff distance and reduces the oil thickness at the end of the pattern.

My back ends are too strong?

Lengthen the pattern to “tone” down the ball reaction. Make sure that the conditioner application distance does not change, only the total pattern distance.

I don't have enough hold?

Hold is created by the length and amount of oil in the “mid-lane” (20-32 ft.). This is done by applying oil in the mid-lane on the reverse pass of most lane machines. Lengthening the reverse application distance creates hold oil which allows the ball to more consistently guide to the breakpoint. Brunswick's Authority22 easily accomplishes this by adding oil to the required boards in the Zones (20-32ft) during the forward run.

I have no swing area?

A lack of swing area can be caused by two things: 1. too much oil applied to the outside boards or 2. “crowned” lane topography. Reduce the amount of oil on the outside boards if there is too much. If topography is the problem, contact your professional lane resurfer.

Heads hook?

Two things cause the heads to hook. 1. Not enough oil applied to the head area. 2. The physical condition of the heads. To increase the volume of oil in the heads, slow the machine down on the reverse pass. With Brunswick's Authority22 direct oil system, during the forward run you can increase the units of oil by board in the head Zone(s) to resolve this problem.

The mid-lane ball track hooks too much?

The mid-lane ball track can hook if there is not enough oil or if there is too much oil. This can be determined by looking at the pattern settings along with Computer Lane Monitor graphs.

For help with your lane conditions or to learn more about Brunswick's family of top performance products visit our website at www.brunswickbowling.com, call 1-800-YES-BOWL or contact your Brunswick Aftermarket Product Specialist.

Volume Per Board: <u>45</u> μ L			Forward Logic 1				Start Med. Buff	Start Slow Buff	Oil Travel Distance
							feet	feet	feet
Screen #	Left End of Stream	Right End of Stream	# Loads or Streams	Travel Speed (in/sec)	Beginning Distance of Load (feet)	Ending Distance of Load (feet)	# Boards Crossed per Load	Total Boards Crossed	Total Volume of Oil (μ L)
01F	2	2	5	14	0	9	37	185	8325
02F	9	9	2	14	9	12	23	46	2070
03F	10	10	2	18	12	17	21	42	1890
04F	11	11	4	22	17	29	19	76	3420
05F	12	12	1	26	29	32	17	17	765
06F			0	26	32	42			
07F									
08F									
09F									
10F									
11F									
12F									
13F									
14F									
15F									
Total # Boards Crossed / mL on FWD								366	16.47
Lane Surface Type: _____ Comments: _____									Reverse Oil
Condition: 1 = poor 2 = fair 3 = average 4 = good 5 = excellent _____									Distance
Reverse									28
									feet
Screen #	Left End of Stream	Right End of Stream	# Loads or Streams	Travel Speed (in/sec)	Beginning Distance of Load (feet)	Ending Distance of Load (feet)	# Boards Crossed per Load	Total Boards Crossed	Total Volume of Oil (μ L)
01R			0	30	42	30			
02R	13	13	1	22	30	27	15	15	675
03R	11	11	4	18	27	17	19	76	3420
04R	10	10	3	14	17	12	21	63	2835
05R	8	8	3	14	12	7	25	75	3375
06R			0	10	7	0			
07R									
08R									
09R									
10R									
11R									
12R									
13R									
14R									
15R									
Total # Boards Crossed / mL on REV								229	10.305
Total # Boards / mL FWD and REV								595	26.775

Volume		Forward					Start	Start	Oil Travel
Per							Med. Buff	Slow Buff	Distance
Board: 45 μ L		Logic 2							40
							feet	feet	feet
Screen #	Left End of Stream	Right End of Stream	# Loads or Streams	Travel Speed (in/sec)	Beginning Distance of Load (feet)	Ending Distance of Load (feet)	# Boards Crossed per Load	Total Boards Crossed	Total Volume of Oil (μ L)
01F	2	2	4	14	0	7	37	148	6660
02F	10	10	1	14	7	8	21	21	945
03F	11	11	1	18	8	10	19	19	855
04F	12	12	2	22	10	16	17	34	1530
05F	14	14	3	22	16	25	13	39	1755
06F			0	30	25	40			
07F									
08F									
09F									
10F									
11F									
12F									
13F									
14F									
15F									
Total # Boards Crossed / mL on FWD								261	11.745
Lane Surface Type: <u>Wood</u> Comments: _____									Reverse Oil
Condition: 1 = poor 2 = fair 3 = average 4 = good 5 = excellent <u>5</u>									Distance
Reverse									27
									feet
Screen #	Left End of Stream	Right End of Stream	# Loads or Streams	Travel Speed (in/sec)	Beginning Distance of Load (feet)	Ending Distance of Load (feet)	# Boards Crossed per Load	Total Boards Crossed	Total Volume of Oil (μ L)
01R			0	30	40	27			
02R	14	14	3	18	27	20	13	39	1755
03R	12	12	3	18	20	13	17	51	2295
04R	10	10	1	14	13	12	21	21	945
05R	14	14	2	14	12	9	13	26	1170
06R			0	14	9	0			
07R									
08R									
09R									
10R									
11R									
12R									
13R									
14R									
15R									
Total # Boards Crossed / mL on REV								137	6.165
Total # Boards / mL FWD and REV								398	17.91