

# Troubleshooting

## Injection Molding Troubleshooting

	Black Specks	Silver Streaks (splay)	Air Streaks	Poor Surface Finish	Blush (flow mark)	Burns (diesel effect)	Discoloration	Gloss Difference	Blister
<b>Machine</b>									
Melt Temperature	4 ↓	3 ↓	7 ↓	2 ↑	5 ↓↑	4 ↓	2 ↓	6 ↓↑	3 ↓
Nozzle Temperature		7 ↓	8 ↓			5 ↓	3 ↓		
Injection Pressure				4 ↑	1 ↑	3 ↓			
Hold Pressure				5 ↑				3 ↓↑	
Back Pressure	6 ↓	6 ↓					5 ↓		
Injection Time									
Holding Time				6 ↑				4 ↓↑	
Cycle Time	5 ↓	9 ↓					6 ↓		
Cooling Time				8 ↑					
Injection Speed		5 ↓		3 ↑	2 ↓↑	2 ↓		5 ↓↑	
Clamping Force									4 ↓
Shot Size									
Screw Speed		4 ↓				6 ↓	4 ↓		1 ↓
Check Screw - Barrel Wear	7		2						
Check Heater Bands					4	7			
Check Back Flow Valve			1			8			
Check Dead Edges	8								
Purge Cylinder	1	10					1		
Use Fixtures and Jigs									
<b>Mold</b>									
Mold Temperature		8 ↓		1 ↑	6 ↓↑			2 ↓↑	
Make Even Mold Temperature				10	7				
Check Venting		11	6		8	1	7	7	2
Runner - Sprue - Gate Size		12 ↑			9 ↑	9 ↑			
Length of Sprue									
Change Gate Location				9		10			6
Check Mold Surface				7				1	
<b>Material</b>									
Dry Material		1	5		3				
Check Material Contamination	2	2	3				8		5
Check Regrind Quality	3		4				9		
Check Material Flow Property									

Numbers show the sequence of the necessary action

↑ : increase

↓ : decrease

↓↑ : adjust

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	Bubbles - Void	Delamination	Brittleness	Cracking	Crazing	Ejector Pin Mark	Flash	Jetting	Record Grooves
<b>Machine</b>									
Melt Temperature	12	2	2 ↓↑	2 ↑	1 ↓↑	3 ↓	4 ↓	3 ↑	4 ↑
Nozzle Temperature				4 ↑		4 ↓			
Injection Pressure	1		4 ↓	5 ↓			2 ↓		2 ↑
Hold Pressure	2			6 ↓	3 ↓		8 ↓		3 ↑
Back Pressure			1 ↓				7 ↓		
Injection Time									
Holding Time				7 ↓	4 ↓		5 ↓		
Cycle Time									
Cooling Time						5 ↑			
Injection Speed	6	3		1 ↓↑	5 ↓↑	1 ↓	3 ↓	1 ↓	1 ↑
Clamping Force							1 ↑		
Shot Size	8						9 ↓		
Screw Speed			3 ↓						
Check Screw - Barrel Wear									
Check Heater Bands								4	
Check Back Flow Valve	4								
Check Dead Edges									
Purge Cylinder		7							
Use Fixtures and Jigs									
<b>Mold</b>									
Mold Temperature	3	1	8 ↑	3 ↑	2 ↑	2 ↓	6 ↓	2 ↑	5 ↑
Make Even Mold Temperature									
Check Venting	5						10		
Runner - Sprue - Gate Size	7							5 ↑	
Length of Sprue	9 ↓								
Change Gate Location	10				6			6	
Check Mold Surface							11		6
<b>Material</b>									
Dry Material	11	6	7	9					
Check Material Contamination		4	6	8					
Check Re grind Quality		5	5						
Check Material Flow Property							12		

Numbers show the sequence of the necessary action

- ↑ : increase
- ↓ : decrease
- ↓↑ : adjust

# Troubleshooting

Injection Molding Troubleshooting		Short Shot	Sink Mark	Weldline	Screw Recovery	Sprue Sticking	Sticking in Mold	Warpage	Odor
Machine	Melt Temperature	4 ↑	7 ↓	4 ↑			7 ↓	6 ↓	5 ↓
	Nozzle Temperature	5 ↑				5 ↓↑	9 ↓		6 ↓
	Injection Pressure	2 ↑	4 ↑	1 ↑		1 ↓	1 ↓	4 ↓↑	
	Hold Pressure		2 ↑				2 ↓		
	Back Pressure				7 ↓				8 ↓
	Injection Time	3 ↑	6 ↑	2 ↑		2 ↓	3 ↓		
	Holding Time		3 ↑			3 ↓	4 ↓	5 ↑	
	Cycle Time								7 ↓
	Cooling Time					6 ↓↑	5 ↑	3 ↑	
	Injection Speed	7 ↑	5 ↑	3 ↑			8 ↓		
	Clamping Force								
	Shot Size	1 ↑	1 ↑				10 ↓↑		
	Screw Speed								
	Check Screw - Barrel Wear				1				4
	Check Heater Bands				2				3
	Check Back Flow Valve								
	Check Dead Edges				3				
	Purge Cylinder				4				
	Use Fixtures and Jigs							9	
Mold	Mold Temperature	6 ↑	8 ↓	5 ↑		4 ↓	6 ↓	2 ↓↑	
	Make Even Mold Temperature		9					1	
	Check Venting	8	10	6					
	Runner - Sprue - Gate Size	9 ↑	11 ↑	7 ↑				7 ↑	
	Length of Sprue			9 ↓					
	Change Gate Location		12	8				8	
Check Mold Surface						11			
Material	Dry Material				6				
	Check Material Contamination		13		5				1
	Check Regrind Quality		14						2
	Check Material Flow Property	10		10					

Numbers show the sequence of the necessary action

- ↑ : increase
- ↓ : decrease
- ↓↑ : adjust