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# TROUBLE SHOOTING GUIDE

## COLDIP MIDNIGHT 1500

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<u>PROBLEM</u>	<u>CAUSE</u>	<u>SOLUTION</u>
Parts not deep black	Short immersion time	Increase immersion time in increments of 15 seconds
	High pH	Adjust pH down in increments of 0.1 with nitric acid
	Low concentration of COLDIP MIDNIGHT 1500 A	Increase concentration in increments of 1.0% by volume
	Low concentration of COLDIP MIDNIGHT 1500 B	Increase concentration in increments of 0.5 - 1.0% by volume
	Low concentration of COLDIP MIDNIGHT 1500 C	Increase concentration in increments of 0.3% by volume
	Poor surface activation	Ensure bright dip prior to COLDIP MIDNIGHT 1500 maintains a pH between 1.5 - 2.0 using nitric acid or hydrochloric acid for at least 20 - 40 seconds
	High zinc contamination (>15,000 - 20,000 ppm)	Additions of COLDIP MIDNIGHT 1500 C should be made in increments of 0.5% - 1.0% by volume for every 1,000 ppm of zinc contamination
	Low zinc thickness	Maintain zinc thickness between 8.0 - 12.0 $\mu\text{m}$
	Poor deposit appearance	Ensure deposit has a bright and uniform deposit with optimal grain refinement
Low temperature	Maintain temperature between 85°F - 115°F	

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Overall iridescence	High pH	Adjust pH down in increments of 0.1 with nitric acid
	Low concentration of COLDIP MIDNIGHT 1500 A	Increase concentration in increments of 1.0% by volume
	Low concentration of COLDIP MIDNIGHT 1500 B	Increase concentration in increments of 0.5 - 1.0% by volume
	Low concentration of COLDIP MIDNIGHT 1500 C	Increase concentration in increments of 0.3% by volume
	Short immersion time	Increase immersion time in increments of 15 seconds
	Low temperature	Maintain temperature between 85°F - 115°F
	Poor surface activation	Ensure bright dip prior to COLDIP MIDNIGHT 1500 maintains a pH between 1.5 - 2.0 using nitric acid or hydrochloric acid for at least 20 - 40 seconds