



November 16, 2010

Ms. Jennifer T. Timian
Chief, Recall Management Division
Office of Defects Investigation
National Highway Traffic Safety Administration
1200 New Jersey Avenue
Washington, D. C. 20590

Re: Safety Recall 10E-049

Dear Ms. Timian:

This letter responds to yours of November 2, 2010.

In your letter of November 2, 2010 you asked to be provided with a chronology of the principal events that were the basis for Norcold's decision to implement Recall 10E-049, and you asked that it include a summary of the warranty claims, field or service reports, and other information, with their respective dates of receipt, that led to the decision to implement Recall 10E-049. Further, your letter recited what you believed to be the history of Norcold's identification of defects in the Model 1200 refrigerators, and Norcold's efforts to remediate them, and you asked Norcold to confirm your understanding of that history.

Because the production and recall histories are pertinent to the chronology leading up to Recall 10E-049 – indeed, comprises much of it - please allow the histories to be addressed first. While your recited histories are correct in many respects, they do contain some inaccuracies. We believe the production and recall histories are more accurately described as follows:

Production Chronology

Build dates 12/1996 – 2/1999:

Series 1200 refrigerators currently have two heating elements housed in two sleeves that are welded saddle style over the boiler tube. From 1996 to 1999 the heater sleeves were welded together with a weld between the heater sleeves. That design turned out to be susceptible to fatigue cracking.

Build dates 3/99 – 2/2001:

Norcold changed the weld configuration in 3/1999 to separate the heater sleeves better allowing the metal to expand between welds. These welds were done robotically with a horizontal process.

Build dates 3/2001 – 12/2002:

In March 2001, Norcold changed the weld process from horizontal to vertical to address weld strength issues.

Regional
23666 Cooper Drive
Elkhart, IN 46515
Phone: 219-266-6660
Fax: 219-266-5779

Headquarters
600 S. Kuther Road
P.O. Box 180
Sidney, OH 45365
Phone: 937-497-3080
General Fax: 937-497-3085
Administrative Fax: 937-497-3167

Gettysburg
1 Century Drive
Gettysburg, OH 45328
Phone: 937-447-2241
Fax: 937-497-3074

Build dates 2003 – 9/2005:

Norcold added an algorithm to the system that would shut the cooling unit down when internal fresh food compartment temperatures were not decreasing while the cooling unit was energized. Algorithm looks at cooling temps at the fins in the fresh food area. If after two cycles of demanded cooling the box is below a threshold the refrigerator is shut down.

Build dates 9/2005 – 10/2010:

From 9/2005 through 10/2006, a thermal switch was mounted to a bracket. 11/2006, the thermal switch was mounted to a collar around the boiler tube insulation. High temps will trigger a system shutdown.

Build dates 10/2010 – Current:

Norcold is now using a thermocouple mounted directly to the burner tube to sense abnormally high temperatures at the boiler and respond more quickly to shut off the refrigerator.

Recall Chronology:

02E-045:

Involved 12/1996 – 2/1999 production. Campaign replaced cooling units that have heater tubes welded together.

08E-030:

Involved 3/1999 – 2/2001 production to add a thermal switch attached to a collar around the boiler tube insulation – not attached directly to the boiler. Heater wells were separated and heater wells were robotically welded in a horizontal fashion. Units built after the affected population have a stronger weld configuration and were not included in this campaign.

09E-026:

Re-recalled 1996-1999 units to add a thermal switch kit on replaced cooling units which did not include a thermal switch (used in production since 2005). The switch is attached to a collar around the burner tube insulation – not attached directly to the boiler.

09E-027:

Recalled 3/2001 – 12/2002 units to add thermal switch (sister recall to 09E-026). The switch is attached to a collar around the boiler tube insulation – not attached directly to the boiler.

10E-049:

This campaign involves the full population, 1996-2010. Norcold will mount a thermocouple directly to the boiler tube intended to identify overheat situations sooner than the thermal switch could and shut the system down before a fire can manifest.

Chronology Of The Principal Events That Were The Basis For Norcold's Decision To Implement Recall 10E-049

It is respectfully submitted that the chronology submitted last month accurately described the principal events that were the basis for Norcold's decision to implement Recall 10E-049.

Please observe first of all that prior to the implementation of Safety Recall 10E-049 Norcold had already implemented Safety Recalls 08E-030, 09E-026 and 09E-027 which applied a thermal switch to all units not previously equipped with such a switch (production 1996 – 2002). Please also observe that as of January of 2003 all new production had been equipped with either an algorithm (production 2003 – 9/2005) or a thermal switch (production 9/2005 – 10/2010) protecting the units from unacceptably high heat build-up. As a result, Norcold was confident after implementing Safety Recalls 08E-030, 09E-026 and 09E-027 that if conditions that caused excessive heat build-up were experienced (sensed by the algorithm) or if excessive heat was detected (sensed by the thermal switch), power to the refrigerator would be tripped thus short-circuiting the potential for a refrigerator fire.

Accordingly, it was Norcold’s view that from 2003 onward all Model 1200 refrigerators were equipped with, or through Safety Recalls 08E-030, 09E-026 and 09E-027 were being equipped with, a safety device that would effectively prevent high heat build-up that could lead to a fire.

Norcold tracks the incidence of product failures brought to its attention. In June 2010, Norcold observed that its fire claim experience with respect to units produced since 2003, the population it believed to be least likely to experience fire claims because the safety sensing devices were built into the original production, was experiencing a fire claim rate approaching .1% (.08%) of the total population. As updated since June, Norcold’s fire claim experience for units built since 2003 has been as follows:

Year Made	Year of Loss								
	2003	2004	2005	2006	2007	2008	2009	2010	
2003	1	1			2	4	15	22	
2004			1	2	5	8	14	30	
2005			2	1		5	21	18	
2006				2			1	9	
2007								1	
2008									
2009									
2010									
Total Claims	1	1	3	5	7	17	51	80	165
103,345 Units Made									
% of units					0.01%	0.02%	0.05%	0.08%	0.16%

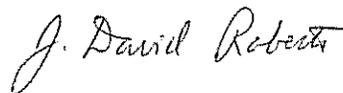
As a result of its observation in June of 2010 Norcold began the process to identify an alternative thermal sensor that could be attached directly to the boiler section of the cooling unit. According to additional testing of the thermal switch by Norcold in July of 2010 the switch then in use was unable to identify some overheats fast enough to prevent all fires. Thus, Norcold sought an alternative thermal sensor that would provide a faster response time to interrupt power to the cooling unit should the boiler section of the cooling unit reach temperatures that could result in a rupture and thus possibly in a fire. Final design and testing of the alternative thermocouple was completed on October 1 with initial component parts for the proposed safety enhancement placed on order.

As previously advised, the voluntarily implementation of Safety Recall 10E-049 is more in the nature of a voluntary enhancement of the remedy already undertaken through Safety Recalls 08E-030, 09E-026 and 09E-027 (both through their ongoing field campaigns and through the changes in new production as announced) than it is the recognition of a “new” defect not previously reported. To accomplish the enhancement Norcold voluntarily notified NHTSA of the need for the enhancement, and is undertaking a field campaign to recall motor vehicles equipped with the Model 1200 refrigerators so the enhancement can be implemented. In doing so Norcold submits to the requirements of the Motor Vehicle Safety Act and the Regulations thereunder.

The chronology of the principal events that were the basis for Norcold’s decision to implement Recall 10E-049 cannot and should not be divorced from the production and recall histories summarized above, all of which were specifically referred to in Norcold’s notification letter to NHTSA of October 7, 2010. The chronology of events filed soon after October 7, 2010 added to the production and recall histories already of record, and appropriately set forth the time line in reaching, and the factual basis for, the decision to implement Safety Recall 10E-049. Please notice that we’ve added to this letter a chart graphically depicting the fire claim incidence Norcold observed in June of 2010 that led to the decision to implement Safety Recall 10E-049.

We hope this satisfactorily responds to your letter of November 2, 2010, and we hope you’ll contact us for further information, if needed. Thank you.

Very Truly Yours,



J. David Roberts
Vice President
Norcold, Inc.