

October 11, 2005

**Corbeil** Les Entreprises Michel Corbeil Inc.

573 Defect and Noncompliance Report **(School bus ceiling joints strength)**

On October 6 2005, Les Entreprises Michel Corbeil Inc. (Corbeil) decided that the ceiling joints on school buses which relate to motor vehicle safety could have a noncompliance with Federal Motor Vehicle Safety Standard FMVSS221 in the buses listed below, and is furnishing notification to the National Highway Traffic Safety Administration in accordance with 49 CFR Part 573 Defect and Noncompliance Reports.

Manufacturer

Les Entreprises Michel Corbeil Inc.
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St-Lin-Laurentides, QC, Canada, J5M 2V9
Phone : 450-439-3577, fax : 450-439-6852
Contact Person; Mr. Christian Thibault, Engineering Department.

Buses involved in Notification

School Buses (245) manufactured between April 26, 2004 and May 21, 2004 could potentially contain the noncompliance :

Models	Qty
F138DWS4UD	25
F138DWS5	15
F138SWS324UD	60
F138SWS5	26
F158DWS5CD	4
F158DWS5UD	99
F158DWS6UD	1
G139D3M4	4
G139D3M5	3
G139S3S5	8

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Description of noncompliance

Corbeil received test reports from NHTSA on August 1, 2005 explaining that the ceiling joints (interior) failed on one (1) school bus presently in testing in reference with FMVSS221. On the ceiling joints, Corbeil use Magnolia green/epoxy glue to reinforce the joints. During the test, two joints failed. To date, no accidents or injuries have occurred as a result of this situation.

Approximate percentage of buses involved in notification

We estimate 245 buses involved in this report could be affected.

History : During a period of time in April-May 2004, one (1) quality inspector was removed from sector 2 to another sector (Corbeil has five (5) production sectors and the sector 2 represent roof construction and interior panel assembly). New production teams were in formation in sector 2 during that time. During a formation, if the new team is not well informed about production procedures, the quality inspector will notify with a non production conformity. For the moment, this is the information that we have and could be in direct relation with the problem and could be causing the noncompliance. During this period of production (April 26 to May 21), 245 school buses were manufactured.

Description the noncompliance

RE : FMVSS221. This standard establishes requirements for the strength of the body panel joints in school bus bodies. Each body panel joint shall hold the body panel to the member to which it is joined when subjected to a force of 60 percent of the tensile strength of the weakest joined body panel.

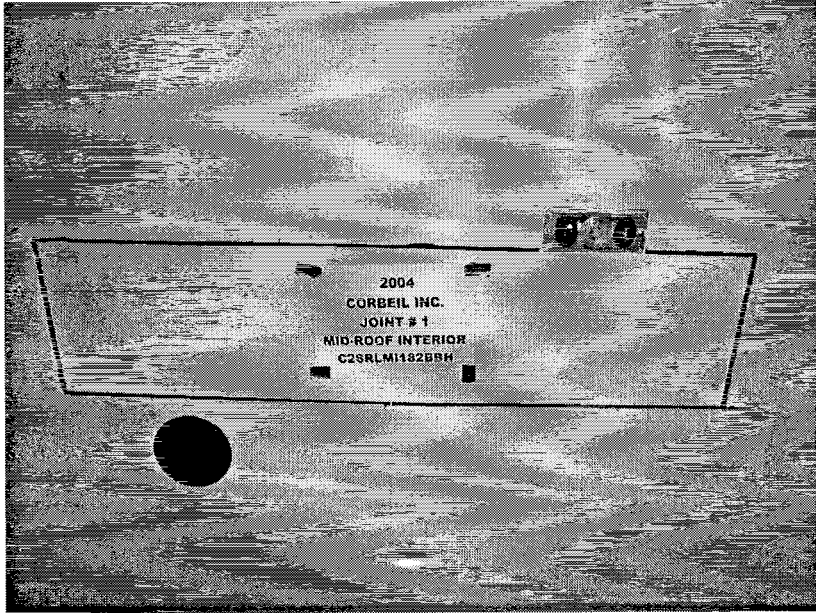
During the test, Corbeil bus failed on Ceiling joint #1 and #2

Joint #1--C2SRLMI182BBH

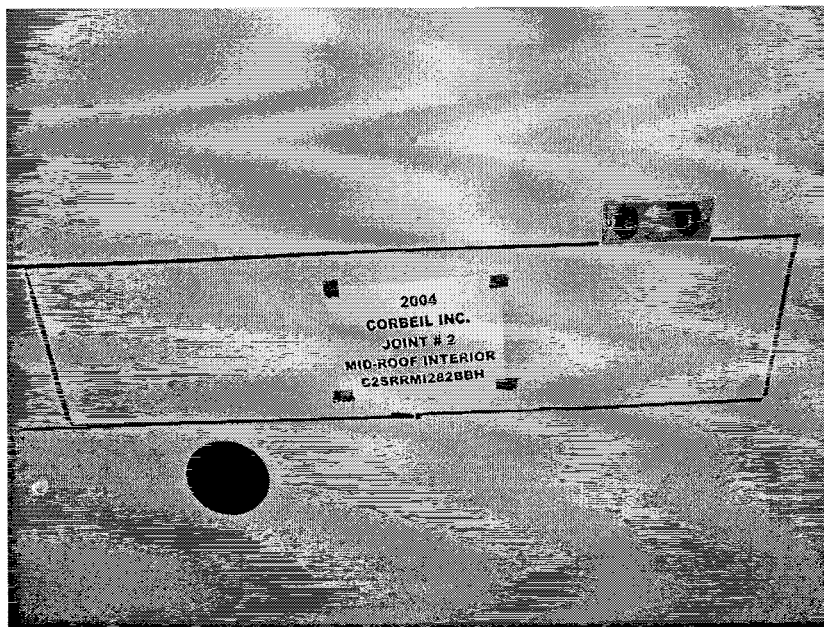
Maximum test load = 1574.3 lb_f (7003 N)
Required minimum load = 3659.5 lb_f (16.278.4 N)
Compliance Test Failure
(@ 43% from the required minimum load)

Joint #2--C2SRRMI282BBH

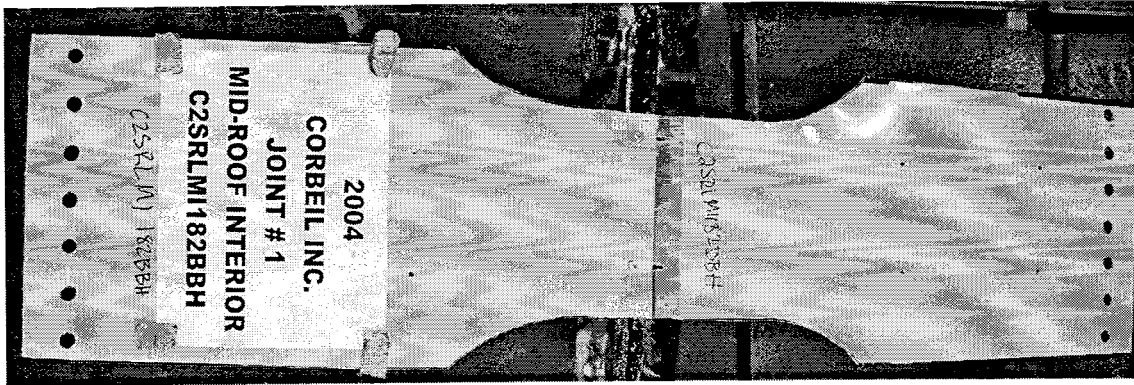
Maximum test load = 1460.1 lb_f (6495 N)
Required minimum load = 3659.5 lb_f (16.278.4 N)
Compliance Test Failure
(@ 40% from the required minimum load)



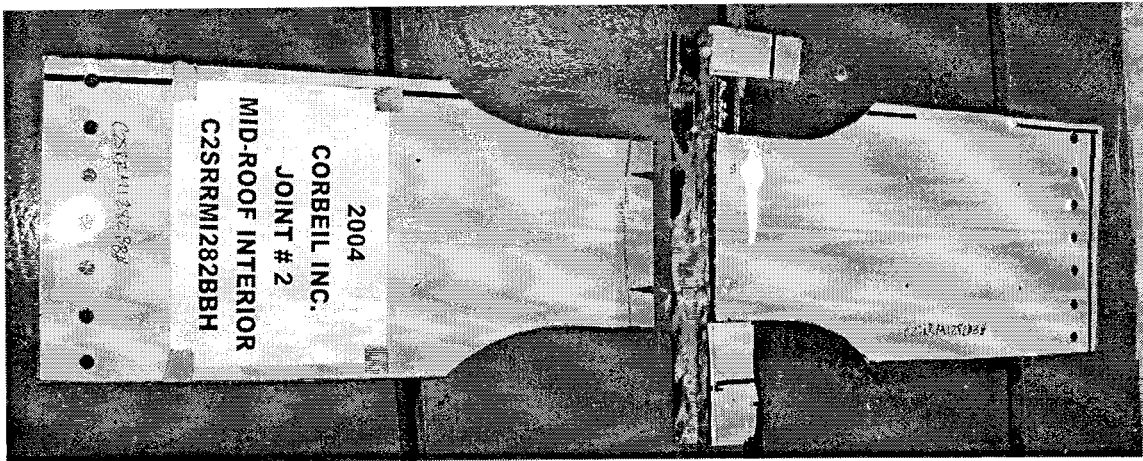
Corbeil bus Ceiling joint #1



Corbeil bus Ceiling joint #2



Corbeil bus Ceiling joint #1
 (@ 43% from the required minimum load)



Corbeil bus Ceiling joint #1
 (@ 40% from the required minimum load)

Describe the consequence(s) of the noncompliance condition.

Only if the bus has an accident, the ceiling joints could have less strength as required by the FMVSS221.

Provide the Chronology in Determining the Noncompliance

July 8, 2005 : MGA test Laboratory finalized FMVSS221 tests on one (1) Corbeil school bus. One report is send to NHTSA.

August 1, 2005 : Corbeil is informed by NHTSA that they failed on ceiling panels joints strength.

August 9, 2005 : Corbeil informed NHTSA that they will need three weeks to do there own tests to understand the results of MGA report.

August 24, 2005 : Corbeil Engineering and production department decided to add a second line of glue application on the production line (over design) until the Corbeil's Engineering department finished the investigation.

September 21-22, 2005 : Sebastien Dionne (Corbeil Engineer) went to MGA to look at the test samples. On Sept 21, Bob Andrews (Magnolia green/epoxy glue representative) look with Sebastien Dionne at the samples.

September 29, 2005 : Test failed Study of hypothesis Adhesive Magnolia Report send to Magnolia.

October 3, 2005 : Test failed Study of hypothesis, Adhesive Magnolia Report send to NHTSA.

October 6, 2005 : Telephone conference between Corbeil and NHTSA. Explanations (confirmation lack of glue) on Study of hypothesis about Magnolia green/epoxy glue (joints #1 & #2). Main reason failure joint #1 and #2 and Corbeil submit improvement points presently in study to be integrated to the production line as soon as possible to increase our quality in the adhesive application. Corbeil agrees to report this noncompliance (Report 573) by October 11, 2005.

Test results & other data

FMVSS221-Detail on our Joints, Sebastien Dionne, Sept 12, 2005

Test failed Study of hypothesis, Adhesive Adchem, Sebastien Dionne, Sept 26, 2005

Test failed Study of hypothesis, Adhesive Magnolia, Sebastien Dionne, rev: Oct. 11, 2005

NCP-04-341 ; NCP 04-429

Purchase History 16211030 (1&2)

16211030 Information

16211030 Expired glue & production May 2004

Magnolia 6375 AB (1-2)

M0469ag ; M0469bag ; M0416ag ; M0425ag : M0436ag : M0447aag ; M0447bag

101-8917 : 101-0086 ; 101-3195 ; 101-8156

Remedy Program

We are still searching if the fact that the inspector wasn't on sector 2 during period April 26 to May 21, 2004 was the problem. We will recall few units manufactured during the period January 2004 through August 2004 and inspect the ceiling joints to verified the Magnolia green/epoxy quantity of glue.

When it will be determined how many vehicles were affected, we have presently two (2) but not confirmed solutions :

- A) On each recalled buses, we can remove each panel and had the good quantity of Magnolia green/epoxy glue.
- B) On each recalled buses, we can add screws on each joint to reach the strength required by the FMVSS221.

Vehicles possibly affected by this 573 report

Mfg Date	Veh #	Model			
04-26-04	56312	F138DWS5	04-26-04	55783	F158DWS5UD
04-26-04	56313	F138DWS5	04-26-04	55800	F158DWS5UD
04-26-04	56314	F138DWS5	04-26-04	55784	F158DWS5UD
04-26-04	56315	F138DWS5	04-26-04	56409	G139D3M4
04-26-04	56316	F138DWS5	04-26-04	56410	G139D3M4
04-26-04	56217	F138SWS324UD	04-26-04	56411	G139D3M4
04-26-04	56218	F138SWS324UD	04-26-04	56412	G139D3M4
04-26-04	56219	F138SWS324UD	04-26-04	56275	G139D3M5
04-26-04	56220	F138SWS324UD	05-03-04	56250	F138DWS4UD
04-26-04	56221	F138SWS324UD	05-03-04	56251	F138DWS4UD
04-26-04	56222	F138SWS324UD	05-03-04	56252	F138DWS4UD
04-26-04	56223	F138SWS324UD	05-03-04	56253	F138DWS4UD
04-26-04	56224	F138SWS324UD	05-03-04	56254	F138DWS4UD
04-26-04	56225	F138SWS324UD	05-03-04	56255	F138DWS4UD
04-26-04	56226	F138SWS324UD	05-03-04	56256	F138DWS4UD
04-26-04	56227	F138SWS324UD	05-03-04	56257	F138DWS4UD
04-26-04	56228	F138SWS324UD	05-03-04	56258	F138DWS4UD
04-26-04	56229	F138SWS324UD	05-03-04	56259	F138DWS4UD
04-26-04	55578	F138SWS5	05-03-04	56260	F138DWS4UD
04-26-04	55999	F138SWS5	05-03-04	56261	F138DWS4UD
04-26-04	55749	F158DWS5CD	05-03-04	56263	F138DWS4UD
04-26-04	55785	F158DWS5UD	05-03-04	56264	F138DWS4UD
04-26-04	56276	F158DWS5UD	05-03-04	56265	F138DWS4UD
04-26-04	55786	F158DWS5UD	05-03-04	56266	F138DWS4UD
04-26-04	55787	F158DWS5UD	05-03-04	56267	F138DWS4UD
04-26-04	55788	F158DWS5UD	05-03-04	56269	F138DWS4UD
04-26-04	55766	F158DWS5UD	05-03-04	56272	F138DWS4UD
04-26-04	55789	F158DWS5UD	05-03-04	56273	F138DWS4UD
04-26-04	55767	F158DWS5UD	05-03-04	56274	F138DWS4UD
04-26-04	55790	F158DWS5UD	05-03-04	56317	F138DWS5
04-26-04	55768	F158DWS5UD	05-03-04	56230	F138SWS324UD
04-26-04	55791	F158DWS5UD	05-03-04	56231	F138SWS324UD
04-26-04	55769	F158DWS5UD	05-03-04	56232	F138SWS324UD
04-26-04	55792	F158DWS5UD	05-03-04	56233	F138SWS324UD
04-26-04	55770	F158DWS5UD	05-03-04	56235	F138SWS324UD
04-26-04	55793	F158DWS5UD	05-03-04	56236	F138SWS324UD
04-26-04	55777	F158DWS5UD	05-03-04	56237	F138SWS324UD
04-26-04	55794	F158DWS5UD	05-03-04	56238	F138SWS324UD
04-26-04	55778	F158DWS5UD	05-03-04	56239	F138SWS324UD
04-26-04	55795	F158DWS5UD	05-03-04	56240	F138SWS324UD
04-26-04	55779	F158DWS5UD	05-03-04	55801	F158DWS5UD
04-26-04	55796	F158DWS5UD	05-03-04	55802	F158DWS5UD
04-26-04	55780	F158DWS5UD	05-03-04	55803	F158DWS5UD
04-26-04	55797	F158DWS5UD	05-03-04	55804	F158DWS5UD
04-26-04	55781	F158DWS5UD	05-03-04	55805	F158DWS5UD
04-26-04	55798	F158DWS5UD	05-03-04	55806	F158DWS5UD
04-26-04	55782	F158DWS5UD	05-03-04	55807	F158DWS5UD
04-26-04	55799	F158DWS5UD	05-03-04	55808	F158DWS5UD

05-03-04	55809	F158DWS5UD	05-10-04	56458	F138SWS5
05-03-04	55810	F158DWS5UD	05-10-04	56043	F138SWS5
05-03-04	55811	F158DWS5UD	05-10-04	56459	F138SWS5
05-03-04	55812	F158DWS5UD	05-10-04	56044	F138SWS5
05-03-04	55813	F158DWS5UD	05-10-04	56340	F158DWS5UD
05-03-04	55814	F158DWS5UD	05-10-04	56341	F158DWS5UD
05-03-04	55815	F158DWS5UD	05-10-04	56339	F158DWS5UD
05-03-04	55816	F158DWS5UD	05-10-04	56342	F158DWS5UD
05-03-04	55817	F158DWS5UD	05-10-04	55834	F158DWS5UD
05-03-04	55818	F158DWS5UD	05-10-04	55835	F158DWS5UD
05-03-04	55819	F158DWS5UD	05-10-04	55836	F158DWS5UD
05-03-04	55820	F158DWS5UD	05-10-04	55837	F158DWS5UD
05-03-04	55821	F158DWS5UD	05-10-04	55838	F158DWS5UD
05-03-04	55822	F158DWS5UD	05-10-04	55839	F158DWS5UD
05-03-04	55823	F158DWS5UD	05-10-04	55840	F158DWS5UD
05-03-04	55825	F158DWS5UD	05-10-04	55841	F158DWS5UD
05-03-04	55826	F158DWS5UD	05-10-04	55842	F158DWS5UD
05-03-04	55827	F158DWS5UD	05-10-04	55843	F158DWS5UD
05-03-04	55828	F158DWS5UD	05-10-04	55844	F158DWS5UD
05-03-04	55829	F158DWS5UD	05-10-04	55845	F158DWS5UD
05-03-04	55830	F158DWS5UD	05-10-04	55846	F158DWS5UD
05-03-04	55831	F158DWS5UD	05-10-04	55847	F158DWS5UD
05-03-04	55832	F158DWS5UD	05-10-04	56379	G139S3S5
05-03-04	55833	F158DWS5UD	05-10-04	56380	G139S3S5
05-10-04	56262	F138DWS4UD	05-10-04	56381	G139S3S5
05-10-04	56268	F138DWS4UD	05-10-04	56382	G139S3S5
05-10-04	56270	F138DWS4UD	05-10-04	56383	G139S3S5
05-10-04	56391	F138DWS5	05-10-04	56384	G139S3S5
05-10-04	56387	F138DWS5	05-10-04	56385	G139S3S5
05-10-04	56388	F138DWS5	05-17-04	56271	F138DWS4UD
05-10-04	56389	F138DWS5	05-17-04	56359	F138SWS324UD
05-10-04	56393	F138DWS5	05-17-04	56360	F138SWS324UD
05-10-04	56343	F138SWS324UD	05-17-04	56361	F138SWS324UD
05-10-04	56344	F138SWS324UD	05-17-04	56362	F138SWS324UD
05-10-04	56345	F138SWS324UD	05-17-04	56363	F138SWS324UD
05-10-04	56346	F138SWS324UD	05-17-04	56364	F138SWS324UD
05-10-04	56347	F138SWS324UD	05-17-04	56365	F138SWS324UD
05-10-04	56348	F138SWS324UD	05-17-04	56059	F158DWS5CD
05-10-04	56349	F138SWS324UD	05-17-04	55860	F158DWS5UD
05-10-04	56350	F138SWS324UD	05-17-04	56277	F158DWS5UD
05-10-04	56351	F138SWS324UD	05-17-04	55848	F158DWS5UD
05-10-04	56352	F138SWS324UD	05-17-04	56281	F158DWS5UD
05-10-04	56353	F138SWS324UD	05-18-04	56366	F138SWS324UD
05-10-04	56354	F138SWS324UD	05-18-04	56367	F138SWS324UD
05-10-04	56355	F138SWS324UD	05-18-04	56368	F138SWS324UD
05-10-04	56356	F138SWS324UD	05-18-04	56369	F138SWS324UD
05-10-04	56357	F138SWS324UD	05-18-04	56370	F138SWS324UD
05-10-04	56358	F138SWS324UD	05-18-04	56371	F138SWS324UD
05-10-04	56460	F138SWS5	05-18-04	56372	F138SWS324UD
05-10-04	56461	F138SWS5	05-18-04	56060	F158DWS5CD
05-10-04	56454	F138SWS5	05-18-04	56061	F158DWS5CD
05-10-04	56040	F138SWS5	05-18-04	56446	F158DWS5UD
05-10-04	56455	F138SWS5	05-18-04	56279	F158DWS5UD
05-10-04	56041	F138SWS5	05-18-04	56599	F158DWS5UD
05-10-04	56456	F138SWS5	05-18-04	56278	F158DWS6UD
05-10-04	56042	F138SWS5	05-19-04	56373	F138SWS324UD

05-19-04	56374	F138SWS324UD	05-20-04	56675	F138SWS5
05-19-04	56375	F138SWS324UD	05-20-04	56676	F138SWS5
05-19-04	56376	F138SWS324UD	05-20-04	56677	F138SWS5
05-19-04	56289	F138SWS324UD	05-20-04	56284	F158DWS5UD
05-19-04	56671	F138SWS5	05-20-04	56445	F158DWS5UD
05-19-04	56672	F138SWS5	05-20-04	56285	F158DWS5UD
05-19-04	56462	F138SWS5	05-21-04	56822	F138SWS324UD
05-19-04	56282	F158DWS5UD	05-21-04	56678	F138SWS5
05-19-04	56280	F158DWS5UD	05-21-04	56679	F138SWS5
05-19-04	56600	F158DWS5UD	05-21-04	56680	F138SWS5
05-19-04	56283	F158DWS5UD	05-21-04	56457	F138SWS5
05-19-04	56601	F158DWS5UD	05-21-04	56444	F158DWS5UD
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05-20-04	56395	F138DWS5	05-21-04	56559	G139D3M5
05-20-04	56290	F138SWS324UD	05-21-04	56560	G139D3M5
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