

REPORT NUMBER: 111-MGA-05-003

**SAFETY COMPLIANCE TESTING FOR
FMVSS NO. 111
SCHOOL BUS REARVIEW MIRRORS**

**Les Entreprises Michel Corbeil Inc.
2004 Corbeil 30 Passenger School Bus
NHTSA No. C40902**

**PREPARED BY:
MGA RESEARCH CORPORATION
5000 WARREN ROAD
BURLINGTON, WI 53105**



Final Report Date: March 14, 2005

FINAL REPORT

**PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
ENFORCEMENT
OFFICE OF VEHICLE SAFETY COMPLIANCE
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WASHINGTON, D.C. 20590**

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FINAL REPORT ACCEPTED BY:

Date of Acceptance

Technical Report Documentation Page

1. Report No. 111-MGA-05-003	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle Final Report of FMVSS 111 Compliance Testing of 2004 Corbeil 30 Passenger School Bus NHTSA No.:C40902		5. Report Date March 14, 2005	
		6. Performing Organization Code MGA	
7. Author(s) James Hansen, Program Manager John Roberts, Project Engineer		8. Performing Organization Report No. 111-MGA-05-003	
9. Performing Organization Name and Address MGA Research Corporation 5000 Warren Road Burlington, WI 53105		10. Work Unit No.	
		11. Contract or Grant No. DTNH22-02-D-01057	
12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration Enforcement Office of Vehicle Safety Compliance (NVS-220) 400 Seventh St., S.W. Room 6115 Washington, D.C. 20590		13. Type of Report and Period Covered Final Report 01/07/2005 – 03/14/2005	
		14. Sponsoring Agency Code NVS-220	
15. Supplementary Notes			
16. Abstract Compliance tests were conducted on the subject 2004 Corbeil 30 Passenger School Bus, NHTSA No. C40902 in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-111SB-00 for the determination of FMVSS 111 compliance. Test failures were as follows: The field of view requirements were not met because the entire top surface of cylinders G, and H are not visible directly or through any system mirror. The top of cylinder H is blocked by the front bumper in both System B mirrors. The top of cylinder G is blocked by the left front cross view mirror mounting bracket in the left System B mirror and by the front bumper/hood in the right System B mirror. The required label indicating that the cross view mirrors are not to be used while driving is missing.			
17. Key Words Compliance Testing Safety Engineering FMVSS 111		18. Distribution Statement Copies of this report are available from: National Highway Traffic Safety Admin., Technical Information Services (TIS) Room 2336 (NPO-405) 400 Seventh Street, S.W. Washington, D.C. 20590	
19. Security Classif. (of this report) Unclassified	20. Security Classif. (of this page) Unclassified	21. No. of Pages 43	22. Price

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SECTION 1
PURPOSE OF COMPLIANCE TEST

Tests were conducted by the MGA Research Corporation-Wisconsin Operations on a 2004 Corbeil 30 Passenger School Bus, NHTSA No. C40902, in accordance with the specifications of the Office of Vehicle Safety Compliance (OVSC) Test Procedures TP-111SB-00 to determine compliance to the requirements of Federal Motor Vehicle Safety Standard (FMVSS) 111, "School Bus Rearview Mirrors."

This program is sponsored by the National Highway Traffic Safety Administration (NHTSA), under Contract No. DTNH22-02-D-01057.

SECTION 2 TEST DATA SUMMARY

Based on the tests performed, the 2004 Corbeil 30 Passenger School Bus, NHTSA No. C40902 does not appear to meet all of the requirements of FMVSS 111. See Test Summary Data Sheets on the following pages.

There were two non-compliance issues:

1. Title 49 CFR part 571.111 Paragraph S.9.3(a): "For each of the cylinders A through P whose entire top surface is not directly visible from the driver's eye location, System B shall provide, at that location: (1) a view of the entire top surface of that cylinder."

The field of view requirements were not met because the entire top surface of cylinders G, and H are not visible directly or through any system mirror. The top of cylinder H is blocked by the front bumper in both System B mirrors. The top of cylinder G is blocked by the left front cross view mirror mounting bracket in the left System B mirror and by the front bumper/hood in the right System B mirror.

2. Title 49 CFR part 571.111 Paragraph S.9.3(c): "Each school bus which has a mirror installed...that has an average radius of curvature of less than 889 mm...shall have a label visible to the seated driver... The label shall state the following: **USE CROSS VIEW MIRRORS TO VIEW PEDESTRIANS WHILE THE BUS IS STOPPED. DO NOT USE THESE MIRRORS TO VIEW TRAFFIC...**"

The required label indicating that the cross view mirrors are not to be used while driving is missing.

**FMVSS 111SB, SCHOOL BUS REARVIEW MIRRORS
TEST SUMMARY DATA SHEET**

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
 Test Lab: **MGA Research-Wisconsin Operations**

NHTSA No.: **C40902**
 Test Date: **1/7/05**

System A Mirrors

A. Outside Driver Side Mirror #3 - Unit Magnification

Requirements	Pass/Fail	Comments
Mounting	PASS	--
Field of View	PASS	--
Surface Area	PASS	--
Reflectance	PASS	--
Unit Magnification	PASS	--

B. Outside Passenger Side Mirror #4 - Unit Magnification

Requirements	Pass/Fail	Comments
Mounting	PASS	--
Field of View	PASS	--
Surface Area	PASS	--
Reflectance	PASS	--
Unit Magnification	PASS	--

C. Outside Driver Side Mirror #5 - Convex

Requirements	Pass/Fail	Comments
Mounting	PASS	--
Field of View	PASS	--
Reflectance	PASS	--

D. Outside Passenger Side Mirror #6 - Convex

Requirements	Pass/Fail	Comments
Mounting	PASS	--
Field of View	PASS	--
Reflectance	PASS	--

**FMVSS 111SB, SCHOOL BUS REARVIEW MIRRORS
TEST SUMMARY DATA SHEETS...continued**

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
 Test Lab: **MGA Research-Wisconsin Operations**

NHTSA No.: **C40902**
 Test Date: **1/7/05**

System B Mirrors

E. Driver Side Front Mirror #1 - Cross View

Requirements	Pass/Fail	Comments
Mounting	PASS	--
Field of View	FAIL	--
Overlap with System A	PASS	--
Distance to Eye Point	PASS	--
No Surface Discontinuities	PASS	--
Surface Area	PASS	--
If Convex – Radius of Curvature	PASS	--
Radius of Curvature Label	FAIL	--
Arc Separation	PASS	--
Reflectance	PASS	--

F. Passenger Side Front Mirror #2 - Cross View

Requirements	Pass/Fail	Comments
Mounting	PASS	--
Field of View	FAIL	--
Overlap with System A	PASS	--
Distance to Eye Point	PASS	--
No Surface Discontinuities	PASS	--
Surface Area	PASS	--
If Convex – Radius of Curvature	PASS	--
Radius of Curvature Label	FAIL	--
Arc Separation	PASS	--
Reflectance	PASS	--

SECTION 3
COMPLIANCE TEST DATA

**FMVSS 111SB – DATA SHEET 1
SCHOOL BUS INSPECTION AND IDENTIFICATION**

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
 Test Lab: **MGA Research-Wisconsin Operations**

NHTSA No.: **C40902**
 Test Date: **1/7/05**

GENERAL VEHICLE IDENTIFICATION

Final Stage Manufacturer	Corbeil	Date of Mfg.	05/2004
Chassis Manufacturer	Ford	Date of Mfg.	03/2004
Seating Capacity (including driver)	31	GVWR (kg)	6373
VIN No.	1FDXE45P14HA89660	GAWR Front (kg)	2087
		GAWR Rear (kg)	4286

DESCRIPTION OF MIRRORS

Mirror No.	Type			Description	Manufacturer
	Unit Mag	Convex	Cross View		
1			X	Driver Side	Rosco Mirror
2			X	Passenger Side	
3	X			Driver Side	MLC
4	X			Passenger Side	
5		X		Driver Side	
6		X		Passenger Side	

Recorded By: Brian Roud

Approved By: [Signature]

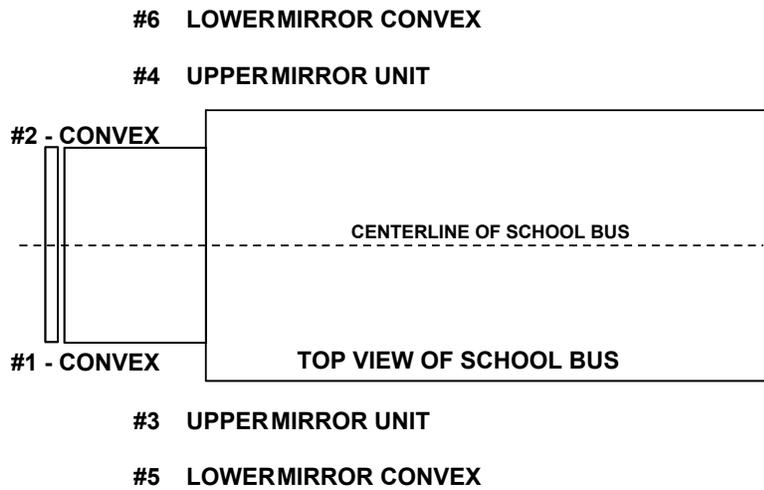
Date: January 7, 2005

**FMVSS 111SB – DATA SHEET 2
MIRROR LOCATION AND FIELD OF VIEW**

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
 Test Lab: **MGA Research-Wisconsin Operations**

NHTSA No.: **C40902**
 Test Date: **1/7/05**

MIRROR DIAGRAM



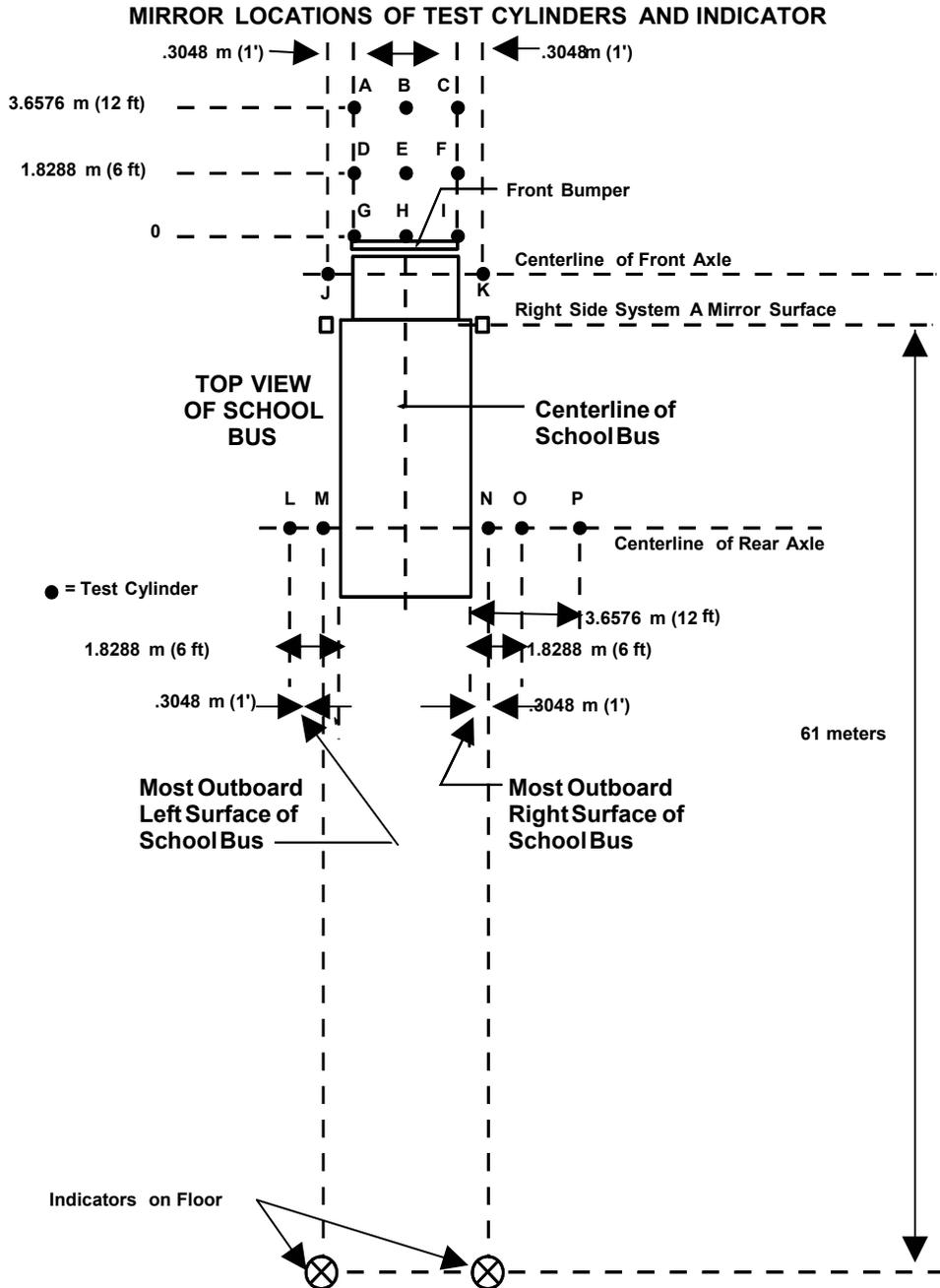
MIRROR NO.	TYPE	MIRROR SYSTEM	CYLINDERS VIEWED (entire top surface)
1	CROSS VIEW/CONVEX	B	B,C,E,F,J,L,M
2	CROSS VIEW/CONVEX	B	A,B,D,E,F,I,K,N,O,P
3	UNIT MAGNIFICATION	A	61 Meter INDICATOR
4	UNIT MAGNIFICATION	A	61 Meter INDICATOR
5	CONVEX	A	L,M
6	CONVEX	A	N,O

SEE FIGURE ON NEXT PAGE

**FMVSS 111SB – DATA SHEET 2...continued
MIRROR LOCATION AND FIELD OF VIEW**

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
 Test Lab: **MGA Research-Wisconsin Operations**

NHTSA No.: **C40902**
 Test Date: **1/7/05**



- NOTES:
1. The cylinders shall be a color which provides a high contrast with the surface on which the bus is parked (S13.1).
 2. The cylinders are 0.3048 m high and 0.3048 m in diameter, except for cylinder P which is 0.9144 m high and 0.3048 m in diameter.

**FMVSS 111SB DATA SHEET 2...continued
MIRROR LOCATION AND FIELD OF VIEW**

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
Test Lab: **MGA Research-Wisconsin Operations**

NHTSA No.: **C40902**
Test Date: **1/7/05**

SYSTEM A AND DIRECT VISION

System A Mirrors	Pass/Fail
Entire top surface of cylinder N and the indicator 61 meters (200 feet) rearward of the mirror surface be viewed in the photograph	PASS
Entire top surface of cylinder M and indicator 61 meters (200 feet) rearward of the mirror surface be viewed in the photograph	PASS
Which test cylinders A through P can not be photographed directly from the driver's eye location within the semi-circle viewing area using no mirror system:	A,B,C,D,E,F,G,H, I,J,K,L,M,N,O,P

SYSTEM B ARC'S AND DISTANCE

Mirror Number (from data sheet 2)	Mirror Location	Distance from the Driver's Eye Point to the Center of the Mirror (cm)	3 Minutes of Arc (cm)	9 Minutes of Arc (cm)
#1	Left Front	188	0.164	--
#2	Right Front	234	0.204	0.613

Distance determined in column 3 multiplied by 0.000873 yield 3 minutes of arc, for column 4, for that mirror as viewed from the driver's eye point; the distances determined in column 3 multiplied by 0.002618 yield 9 minutes of arc, for column 5, for that mirror as viewed from the driver's eye point. The minimum distance for any system B mirror between the driver's eye point and the center of the mirror is more than 95 centimeters:

Requirements	Distance	Pass/Fail
Distance between center of System B mirror #1 and driver's eye point	188 cm	PASS
Distance between center of System B mirror #2 and driver's eye point	234 cm	PASS

Recorded By: 

Approved By: 

Date: January 7, 2005

**FMVSS 111SB DATA SHEET 3
FIELD OF VIEW TEST – PHOTOGRAPHS System B**

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
Test Lab: **MGA Research-Wisconsin Operations**

NHTSA No.: **C40902**
Test Date: **1/7/05**

Requirements		Pass/Fail
All test cylinders with entire top surface not directly visible from the driver's semi-circle eye location are able to be viewed with System B mirrors from the driver's semi-circle location:		FAIL
All test cylinders with entire top surface not directly visible from the driver's semi-circle eye location but the image can be viewed with System B mirrors. The image is separated from the edge of the effective mirror surface of the mirror providing that image by a distance of not less than 3 minutes of arc:		PASS
If the entire top surface of test cylinder P is not directly visible from the driver's semi-circle eye location, the image can be viewed with System B mirrors from the driver's semi-circle eye location, where the angular size of the shortest dimension of that cylinder's image is not less than 3 minutes of arc, and the angular size of the longest dimension of that cylinder's image is not less than 9 minutes of arc:		PASS
Shortest arc length dimension	0.234 cm	
Longest arc length dimension	0.613 cm	
For each of the test cylinders whose entire top surface is not directly visible from the driver's eye location, System B provides a view of the ground that overlaps with the view of the ground provided by System A.		PASS

Recorded By: 

Approved By: 

Date: January 7, 2005

**FMVSS 111SB DATA SHEET 4
MOUNTING ADEQUACY TEST**

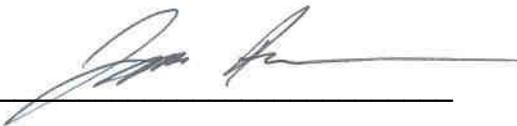
Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
 Test Lab: **MGA Research-Wisconsin Operations**

NHTSA No.: **C40902**
 Test Date: **1/7/05**

MOUNTING SUPPORT OF ALL MIRRORS

Mirror No. (from data sheet 2)	Type	System	Stable Support
			Yes/No
1	Cross View/Convex	B	Yes
2	Cross View/Convex	B	Yes
3	Unit Magnification	A	Yes
4	Unit Magnification	A	Yes
5	Convex	A	Yes
6	Convex	A	Yes

Requirements	Pass/Fail
Outside mirrors free of sharp points or edges that could contribute to pedestrian injury	PASS
System B mirrors have no discontinuities in the slope of the surface of the mirror	PASS

Recorded By: 

Approved By: 

Date: January 7, 2005

**FMVSS 111SB DATA SHEET 5
REFLECTANCE TEST – ALL MIRRORS**

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
Test Lab: **MGA Research-Wisconsin Operations**

NHTSA No.: **C40902**
Test Date: **1/7/05**

Mirror No.	Type	Light meter reading from calibration (FC)	Light meter reading from light reflected by mirror (FC)	Pass/Fail	Observations
1	Crossview/Convex	76	60	PASS	
2	Crossview/Convex	76	60	PASS	
3	Unit	76	57	PASS	
4	Unit	76	57	PASS	
5	Convex	75	57	PASS	
6	Convex	75	57	PASS	

Note: Reflectance _(example) = (Reflected Reading) 60 / (Cal Reading) 76 = 0.789 x 100 = 79%
Minimum Requirement = 35 percent

Mirror No.	Type	Reflectance	Requirement
1	Crossview/Convex	79%	>35%
2	Crossview/Convex	79%	>35%
3	Unit	75%	>35%
4	Unit	75%	>35%
5	Convex	76%	>35%
6	Convex	76%	>35%

Recorded By: 

Approved By: 

Date: January 7, 2005

**FMVSS 111SB DATA SHEET 6
UNIT MAGNIFICATION/CONVEX MIRROR TEST – ALL MIRRORS**

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
Test Lab: **MGA Research-Wisconsin Operations**

NHTSA No.: **C40902**
Test Date: **1/7/05**

**CONVERSION DATA TABLE FROM SPHEROMETER DIAL
READING TO RADIUS OF CURVATURE**

MIRROR NO. 1 (CONVEX)

Test Position	Dial Reading (inches)	Radius of Curvature (mm)	Deviation between the Average Radius of Curvature and the Test Position Radius of Curvature (mm)	Percent Deviation from the Average Radius of Curvature
1	0.05515	130.2	48.3	27.1%
2	0.03450	207.5	-28.9	-16.2%
3	0.02620	273.0	-94.4	-52.9%
4	0.05850	122.9	55.7	31.2%
5	0.04755	150.8	27.7	15.5%
6	0.03280	218.2	-39.6	-22.2%
7	0.05545	129.5	49.0	27.5%
8	0.02645	270.4	-91.9	-51.4%
9	0.05235	137.1	41.4	23.2%
10	0.04915	146.0	32.6	18.3%
Average Radius of Curvature - The Summation of the Radius of Curvature readings divided by 10 178.6			Greatest Percent Deviation from the Average Radius of Curvature 51.4%	

MIRROR NO. 2 (CONVEX)

Test Position	Dial Reading (inches)	Radius of Curvature (mm)	Deviation between the Average Radius of Curvature and the Test Position Radius of Curvature (mm)	Percent Deviation from the Average Radius of Curvature
1	0.05300	135.5	37.5	21.7%
2	0.03405	210.2	-37.2	-21.5%
3	0.02735	261.5	-88.5	-51.2%
4	0.05605	128.2	44.8	25.9%
5	0.05100	140.7	32.3	18.7%
6	0.03520	203.4	-30.4	-17.6%
7	0.06250	115.1	57.9	33.5%
8	0.02730	262.0	-89.0	-51.5%
9	0.05685	126.4	46.6	26.9%
10	0.04880	147.0	26.0	15.0%
Average Radius of Curvature - The Summation of the Radius of Curvature readings divided by 10 173.0			Greatest Percent Deviation from the Average Radius of Curvature 51.5%	

FMVSS 111SB DATA SHEET 6...continued
UNIT MAGNIFICATION/CONVEX MIRROR TEST – ALL MIRRORS

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
 Test Lab: **MGA Research-Wisconsin Operations**

NHTSA No.: **C40902**
 Test Date: **1/7/05**

**CONVERSION DATA TABLE FROM SPHEROMETER DIAL
 READING TO RADIUS OF CURVATURE**

MIRROR NO. 3 (UNIT MAGNIFICATION)

Test Postion	Dial Reading (inches)	Radius of Curvature (mm)	Deviation between the Average Radius of Curvature and the Test Position Radius of Curvature (mm)	Precent Deviation from the Average Radius of Curvature
1	0.00000	N/A	N/A	N/A
2	0.00000	N/A	N/A	N/A
3	0.00000	N/A	N/A	N/A
4	0.00000	N/A	N/A	N/A
5	0.00000	N/A	N/A	N/A
6	0.00000	N/A	N/A	N/A
7	0.00000	N/A	N/A	N/A
8	0.00000	N/A	N/A	N/A
9	0.00000	N/A	N/A	N/A
10	0.00000	N/A	N/A	N/A
Average Radius of Curvature - The Summation of the Radius of Curvature readings divided by 10 0.00000			Greatest Percent Deviation from the Average Radius of Curvature 0%	

MIRROR NO. 4 (UNIT MAGNIFICATION)

Test Postion	Dial Reading (inches)	Radius of Curvature (mm)	Deviation between the Average Radius of Curvature and the Test Position Radius of Curvature (mm)	Precent Deviation from the Average Radius of Curvature
1	0.00000	N/A	N/A	N/A
2	0.00000	N/A	N/A	N/A
3	0.00000	N/A	N/A	N/A
4	0.00000	N/A	N/A	N/A
5	0.00000	N/A	N/A	N/A
6	0.00000	N/A	N/A	N/A
7	0.00000	N/A	N/A	N/A
8	0.00000	N/A	N/A	N/A
9	0.00000	N/A	N/A	N/A
10	0.00000	N/A	N/A	N/A
Average Radius of Curvature - The Summation of the Radius of Curvature readings divided by 10 0.00000			Greatest Percent Deviation from the Average Radius of Curvature 0%	

FMVSS 111SB DATA SHEET 6...continued
UNIT MAGNIFICATION/CONVEX MIRROR TEST – ALL MIRRORS

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
 Test Lab: **MGA Research-Wisconsin Operations**

NHTSA No.: **C40902**
 Test Date: **1/7/05**

**CONVERSION DATA TABLE FROM SPHEROMETER DIAL
 READING TO RADIUS OF CURVATURE**

MIRROR NO. 5 (CONVEX)

Test Position	Dial Reading (inches)	Radius of Curvature (mm)	Deviation between the Average Radius of Curvature and the Test Position Radius of Curvature (mm)	Percent Deviation from the Average Radius of Curvature
1	0.02235	319.9	-0.6	-0.2%
2	0.02175	328.7	-9.4	-3.0%
3	0.02235	319.9	-0.6	-0.2%
4	0.02285	312.9	6.3	2.0%
5	0.02310	309.5	9.7	3.0%
6	0.02275	314.3	5.0	1.6%
7	0.02265	315.7	3.6	1.1%
8	0.02150	332.5	-13.3	-4.2%
9	0.02265	315.7	3.6	1.1%
10	0.02210	323.5	-4.3	-1.3%
Average Radius of Curvature - The Summation of the Radius of Curvature readings divided by 10 319.3			Greatest Percent Deviation from the Average Radius of Curvature 4.2%	

MIRROR NO. 6 (CONVEX)

Test Position	Dial Reading (inches)	Radius of Curvature (mm)	Deviation between the Average Radius of Curvature and the Test Position Radius of Curvature (mm)	Percent Deviation from the Average Radius of Curvature
1	0.02315	308.9	8.3	2.6%
2	0.02185	327.2	-10.1	-3.2%
3	0.02305	310.2	6.9	2.2%
4	0.02185	327.2	-10.1	-3.2%
5	0.02315	308.9	8.3	2.6%
6	0.02325	307.6	9.6	3.0%
7	0.02215	322.8	-5.7	-1.8%
8	0.02285	312.9	4.2	1.3%
9	0.02250	317.8	-0.6	-0.2%
10	0.02180	328.0	-10.8	-3.4%
Average Radius of Curvature - The Summation of the Radius of Curvature readings divided by 10 317.1			Greatest Percent Deviation from the Average Radius of Curvature 3.4%	

**FMVSS 111SB DATA SHEET 6...continued
UNIT MAGNIFICATION/CONVEX MIRROR TEST – ALL MIRRORS**

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
Test Lab: **MGA Research-Wisconsin Operations**

NHTSA No.: **C40902**
Test Date: **1/7/05**

UNIT MAGNIFICATION IN SYSTEM A

Requirements	Pass/Fail
At least one System A Mirror on the left and right sides of the bus is unit magnification -0 Radius of Curvature	PASS

**AVERAGE RADIUS OF CURVATURE
OF CONVEX MIRRORS USED IN SYSTEM B**

Mirror No.	Radius of Curvature	If needed, wording printed properly* Pass/Fail
1	178.6 mm	FAIL
2	173.0 mm	FAIL

* If any of the Convex Mirrors in System B have an average radius of curvature less than 889 mm, then the following words must be printed on a label in type face and color that are clear and conspicuous to the driver:

“USE CROSS VIEW MIRRORS TO VIEW PEDESTRIANS WHILE BUS IS STOPPED. DO NOT USE THESE MIRRORS TO VIEW TRAFFIC WHILE BUS IS MOVING, IMAGES IN SUCH MIRRORS DO NOT ACCURATELY SHOW ANOTHER VEHICLE’S LOCATION.”

Recorded By: 

Approved By: 

Date: January 7, 2005

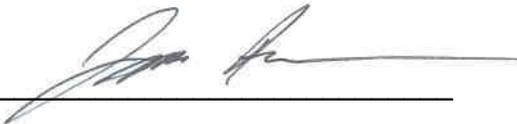
**FMVSS 111SB DATA SHEET 7
MIRROR REFLECTIVE SURFACE AREA TEST
SYSTEM A & B**

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
Test Lab: **MGA Research-Wisconsin Operations**

NHTSA No.: **C40902**
Test Date: **1/7/05**

DATA TABLE FOR SURFACE AREA

System A Mirrors Mirror No.	Area	Requirement Min. 323 cm ²	Pass/Fail
3	464 cm ²	323 cm ²	PASS
4	464 cm ²	323 cm ²	PASS
System B Mirrors Mirror No.	Area	Requirement Min. 258 cm ²	Pass/Fail
1	570 cm ²	258 cm ²	PASS
2	570 cm ²	258 cm ²	PASS

Recorded By: 

Approved By: 

Date: January 7, 2005

SECTION 4
INSTRUMENTATION AND EQUIPMENT LIST

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
Test Lab: **MGA Research-Wisconsin Operations**

NHTSA No.: **C40902**
Test Date: **1/7/05**

	Digital Caliper	Light Meter	Tape Measure	Spherometer
Make	Starrett	AEMC	Stanley	MGA
Model	721	CA813	Powerlock	001
Serial # (s)	00410129	04L1017Y	SN173	001
Range	0 to 150 mm	2000fc, 2000lux	0-8 m	2.25×10^{13} $(\text{cm} * \text{Hz}^{1/2}) \div W$
Accuracy	0.01 mm	0.0 fc or 0.01 lux	1 mm	1.1×10^{-13} $W/H^{1/2}$
Cal. Date	8/26/04	9/27/04	9/1/04	Daily when used
Cal. Due Date	2/26/05	3/27/05	3/1/05	N/A

SECTION 5
PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

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Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
Procedure: **FMVSS 111**

NHTSA No.: **C40902**



Three-Quarter Left Front View of School Bus

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
Procedure: **FMVSS 111**

NHTSA No.: **C40902**



Three-Quarter Right Rear View of School Bus

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
Procedure: **FMVSS 111**

NHTSA No.: **C40902**

FACTORY SERVICE NUMBER

MFD. BY
Les Entreprises Michel Corbeil Inc.

DATE OF MANUFACTURE 05/2004

INCOMPLETE VEHICLE MANUFACTURED BY:
FORD

DATE INC. VEH. MFD. 03/2004

GVWR 14 050

GAWR FRONT 4 600 Lbs WITH
LT225/75R16 TIRES, 16 X 6.0K RIMS
@ 65 PSI COLD SINGLE

GAWR REAR 9 450 Lbs WITH
LT225/75R16 TIRES, 16 X 6.0K RIMS
@ 80 PSI COLD DUAL

THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S.
FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN
EFFECT IN 05/2004

VEHICLE IDENTIFICATION NUMBER:
1FDXE45P14HA89660

VEHICLE TYPE SCHOOL BUS
MODEL 30 PASSENGERS
SERIAL WO - 56340

Close-up View of Certification and Tire Placard

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
Procedure: **FMVSS 111**

NHTSA No.: **C40902**



Right Front Cross View Mirror and Mounting

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
Procedure: **FMVSS 111**

NHTSA No.: **C40902**

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Passenger Side Rearview Mirror and Mounting

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
Procedure: **FMVSS 111**

NHTSA No.: **C40902**



Left Front Cross View Mirror and Mounting

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
Procedure: **FMVSS 111**

NHTSA No.: **C40902**



Driver Side Rearview Mirror and Mounting

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
Procedure: **FMVSS 111**

NHTSA No.: **C40902**



Field of View Instrument Setup

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
Procedure: **FMVSS 111**

NHTSA No.: **C40902**



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Mirror #2 System B Field of View

Test Vehicle: 2004 Corbeil 30 Passenger School Bus
Procedure: FMVSS 111

NHTSA No.: C40902



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Mirror #1 System B Field of View

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
Procedure: **FMVSS 111**

NHTSA No.: **C40902**



Mirror #4 and #6 System A Field of View

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
Procedure: **FMVSS 111**

NHTSA No.: **C40902**



Mirror #3 and #5 System A Field of View

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
Procedure: **FMVSS 111**

NHTSA No.: **C40902**



View of Cone Setup from Front

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
Procedure: **FMVSS 111**

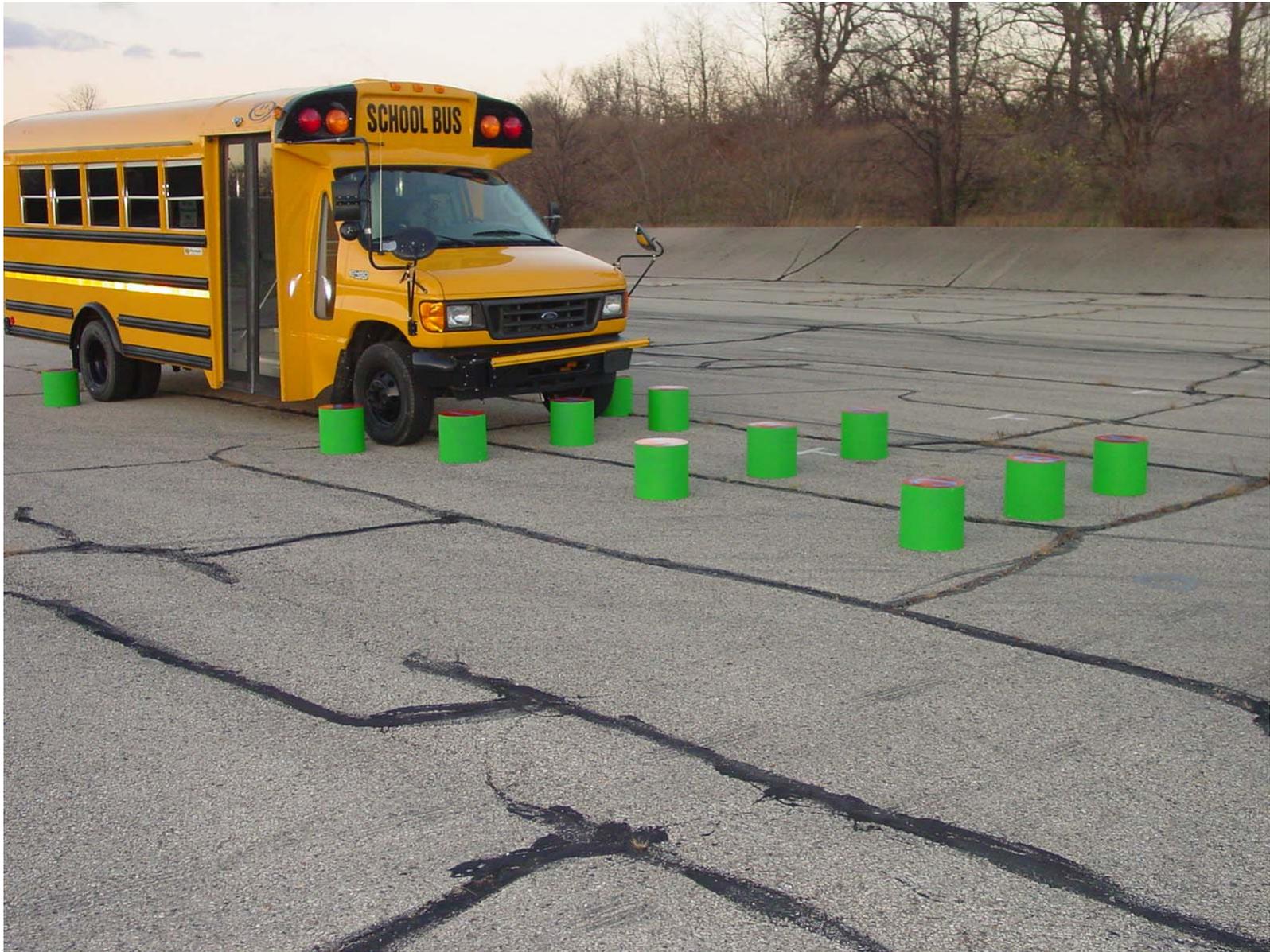
NHTSA No.: **C40902**



Three-Quarter Left Front View of Cone Setup

Test Vehicle: **2004 Corbeil 30 Passenger School Bus**
Procedure: **FMVSS 111**

NHTSA No.: **C40902**



Three-Quarter Right Front View of Cone Setup

Test Vehicle: 2004 Corbeil 30 Passenger School Bus
Procedure: FMVSS 111

NHTSA No.: C40902



Reflectance Test Setup

SECTION 6
LABORATORY NOTICE OF TEST FAILURE

LABORATORY NOTICE OF TEST FAILURE TO OVSC

Test Procedure:	FMVSS 111	Test Date:	January 11
Test Vehicle:	Corbeil	Test Lab:	MGA Research Corp.
NHTSA No.:	C40902	Project Engineer:	Jim Hansen
Contract No.:	DTNH22-02-D-01057	Delivery Order No.:	2
MFR.:	Corbeil	VIN:	1FDXE45P14HA89660
Build Date:	05/04		

TEST FAILURE DESCRIPTION

The required label indicating that the cross view mirrors are not to be used while driving is missing.

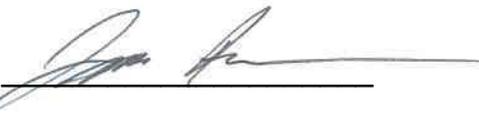
FMVSS REQUIREMENTS DESCRIPTION

Paragraph S.9.3(c): "Each school bus which has a mirror installed...that has an average radius of curvature of less than 889 mm...shall have a label visible to the seated driver... The label shall state the following: USE CROSS VIEW MIRRORS TO VIEW PEDESTRIANS WHILE THE BUS IS STOPPED. DO NOT USE THESE MIRRORS TO VIEW TRAFFIC..."

Remarks: No remarks.

Notification to NHTSA (COTR): John Finneran

Date:

By: 

LABORATORY NOTICE OF TEST FAILURE TO OVSC

Test Procedure:	FMVSS 111	Test Date:	January 11
Test Vehicle:	Corbeil	Test Lab:	MGA Research Corp.
NHTSA No.:	C40902	Project Engineer:	Jim Hansen
Contract No.:	DTNH22-02-D-01057	Delivery Order No.:	2
MFR.:	Corbeil	VIN:	1FDXE45P14HA89660
Build Date:	05/04		

TEST FAILURE DESCRIPTION

The System B mirrors do not provide a field of view adequate for the entire top surface of cylinders G and H. The top of cylinder H is blocked by the front bumper in both System B mirrors. The top of cylinder G is blocked by the left front cross view mirror mounting bracket in the left System B mirror and by the front bumper/hood in the right System B mirror.

FMVSS REQUIREMENTS DESCRIPTION

Paragraph S.9.3(a): "For each of the cylinders A through P whose entire top surface is not directly visible from the driver's eye location, System B shall provide, at that location: (1) a view of the entire top surface of that cylinder.

Remarks: No remarks.

Notification to NHTSA (COTR): John Finneran

Date:

By: 