

REPORT NUMBER: 120-MGA-2011-001

**SAFETY COMPLIANCE TESTING FOR
FMVSS NO. 120
TIRE SELECTION AND RIMS
FOR MOTOR VEHICLES WITH A GVWR OF MORE THAN 4,536 kg**

**FOREST RIVER, INC. / STARCRAFT DIVISION
2011 STARCRAFT QUEST SCHOOL BUS
NHTSA NO.: CB0902**

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

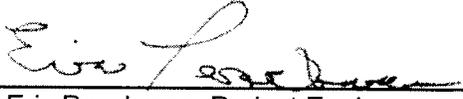


FINAL REPORT DATE: NOVEMBER 9, 2011

FINAL REPORT

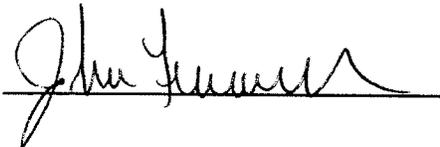
**PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
ENFORCEMENT
OFFICE OF VEHICLE SAFETY COMPLIANCE
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Prepared by:  Date: November 9, 2011
Eric Peschman, Project Engineer

Reviewed by:  Date: November 9, 2011
Michael Janovicz, Program Manager

FINAL REPORT ACCEPTED BY:



11/15/11
Date of Acceptance

Technical Report Documentation Page

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				6. Performing Organization Code MGA	
7. Author(s) Eric Peschman, Project Engineer Michael Janovicz, Program Manager				8. Performing Organization Report No. 120-MGA-2011-001	
9. Performing Organization Name and Address MGA Research Corporation 5000 Warren Road Burlington, WI 53105				10. Work Unit No.	
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12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration Enforcement Office of Vehicle Safety Compliance Mail Code: NVS-220 1200 New Jersey Avenue, S.E. Washington, D.C. 20590				13. Type of Report and Period Covered Final Report February 22 – 23, 2011	
				14. Sponsoring Agency Code NVS-220	
15. Supplementary Notes					
16. Abstract A compliance test was conducted on the subject 2011 Starcraft Quest School Bus, NHTSA No.: CB0902, in accordance with FMVSS 120, "Tire selection and rims for motor vehicles with a GVWR of more than 4,536 kilograms," and TP-120-03. The vehicle was weighed in the unloaded and fully loaded conditions and its tires, rims, and related information were checked. Test failures: None					
17. Key Words Compliance Testing Safety Engineering FMVSS 120				18. Distribution Statement Copies of this report are available from: NHTSA Technical Information Services (NPO-411) 1200 New Jersey Ave., S.E. Washington, DC 20590 Email: tis@nhtsa.dot.gov FAX: 202-493-2833	
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SECTION 1
PURPOSE OF COMPLIANCE TEST

The purpose of this test report is to document the results of tests performed on a MY 2011 Starcraft Quest School Bus, NHTSA No.: CB0902, in accordance with the requirements stated in Federal Motor Vehicle Safety Standard (FMVSS) No. 120, "Tire selection and rims for motor vehicles with a GVWR of more than 4,536 kilograms."

This standard establishes requirements to ensure that applicable vehicles are equipped with tires of adequate size and load rating and rims of appropriate size and type designation.

SECTION 2
TEST PROCEDURE AND DISCUSSION OF RESULTS

Testing of the 2011 Starcraft Quest School Bus, NHTSA No.: CB0902, was conducted at MGA Research Corporation in accordance with NHTSA TP-120-03, dated April 10, 2000 and MGA-TP-120-03 dated November 20, 2002. The vehicle mounted tires and rims were surveyed to ensure that the rims were suitable for the tires and that the tires inflated to the maximum inflation pressure stated on the tire sidewall were appropriate for the vehicle's certified Gross Axle Weight Ratings (GAWR). The vehicle certification and tire information labeling was surveyed to ensure that the vehicle manufacturer's recommended rims were suitable for the recommended tires, and that the recommended tires inflated to the recommended inflation pressures stated on the labeling were appropriate for the vehicle's certified GAWRs. The vehicle was ballasted and weighed in three different loading conditions to determine if axle or tire overloading could occur. The three loading conditions were:

Condition 1 – Unloaded Vehicle Weight (UVW).

Condition 2 – Vehicle in Condition 1 state plus the addition of ballast to simulate twenty-nine passengers (one adult driver and twenty-eight students).

Condition 3 – Vehicle in Condition 2 state plus the addition of ballast to simulate cargo loading. Target vehicle load is the vehicle loaded to the certified gross vehicle weight rating (GVWR).

The vehicle mounted tires inflated to the inflation pressure labeled on the tire sidewall and the vehicle labeled tires inflated to the recommended cold inflation pressures have load ratings appropriate to carry the maximum loads as required by FMVSS No. 120. The vehicle rims are suitable for the vehicle tires and contain the required markings.

SECTION 2
TEST PROCEDURE AND DISCUSSION OF RESULTS

Model Year / Mfr. / Model	2011 Starcraft Quest	
Incomplete Vehicle Make	Chevrolet	
NHTSA No.	CB0902	
GVWR	5,579 kg / 12,300 lbs	
Build Date for Bus	11/01/2010	
VIN	1GB3G3BG2B1112157	
Designated Seating Capacity	(1 Driver, 28 Passengers)	
Vehicle Type	School Bus	
Tire Pressure from certification label (at capacity)	Front: 448 KPa	Rear: 448 KPa
Odometer Reading	315 miles	
Dealer Installed Optional Accessories	None Noted	

SUMMARY

Requirements	PASS / FAIL
TIRE AND RIM SELECTION (S5.1) Installed tires and rims are suitable for vehicle	PASS
Rim Marking (S5.2) Rims contain all required markings of proper dimensions	PASS
LABEL INFORMATION (S5.3) Vehicle has proper certification/tire information label. Label tires at recommended inflation pressure and rims are suitable for vehicle.	PASS
Weight Distribution (49 CFR 567 Certification) Vehicle loaded with occupants and cargo does not exceed GVWR	PASS
Results Test data indicates compliance with FMVSS 120	PASS

SECTION 3
COMPLIANCE TEST DATA

DATA SHEET 1

GENERAL TIRE AND RIM DATA

Test Vehicle: **2011 Starcraft Quest School Bus**
 Test Lab: **MGA Research Corporation**

NHTSA No.: **CB0902**
 Test Dates: **2/22/11 – 2/23/11**

GENERAL DATA

Tire Type: (Passenger car or other)	Light Truck
Are the tire and rim sizes the same for all axles, including the spare?	Yes
Does the tire size fitted to the axles appear on the Certification or Tire label? (If NO, describe)	Yes
Number of axles	2
Dual tires on rear axle(s)	Yes

TIRE DATA FROM SIDEWALL

	Right Front
Manufacturer	Uniroyal
Brand	Laredo
Tire Size	LT225/75R16 – 115/112S
Maximum Tire Load Rating (kg)	Single: 1,215 kg / Dual: 1,120 kg
De-rated Tire Load Rating (kg)	N/A
Maximum Inflation Pressure (KPa)	550
Tire has DOT symbol (Yes/No)	Yes
DOT serial number	DOT M31L JD3U 3210

MOUNTED TIRE VS. AXLE RATING COMPARISON (AT SIDEWALL MAXIMUM INFLATION PRESSURE)

	Front Axle	Rear Axle
A. GAWR (kg) from certification label	1,950	3,901
B. (No. of tires) x (tire load rating (kg) from above table)	2,430	4,480
C. Is "B" equal to or greater than "A"? (Yes/No)	Yes	Yes

DATA SHEET 1
GENERAL TIRE AND RIM DATA

Test Vehicle: **2011 Starcraft Quest School Bus**
Test Lab: **MGA Research Corporation**

NHTSA No.: **CB0902**
Test Dates: **2/22/11 – 2/23/11**

RIM MARKINGS

	Right Front
A. Source of published dimensions (letter designation)	T
B. Rim Size	16 x 6.5J
C. Does rim contain DOT symbol? (Yes/No)	Yes
D. Manufacturer's name, symbol or trademark (copy format)	Accuride
E. Date of manufacture or symbol	9 16 10
Do items A-C appear on weather side of rim? (Yes/No)	Yes
Letter height (not less than 3mm)	Yes – 5.25
Lettering (impressed or embossed)	Impressed
Are all rim markings legible? (Yes/No)	Yes
Do all markings comply with requirements? (Yes/No)	Yes
Rims are suitable for tires on vehicles? (Yes/No)	Yes

RIM MEASUREMENTS

	Right Front
Rim width	165 mm
Rim diameter	406 mm
Rim measurements same as rim markings? (Yes/No)	Yes

Requirements	PASS / FAIL
TIRE AND RIM SELECTION (S5.1) Installed tires and rims are suitable for vehicle	PASS
Rim Marking (S5.2) Rims contain all required markings of proper dimensions	PASS

Remarks: None

Tested By: *Evo Leonard*

Approved By: *Michael Janusz*

Date: February 23, 2011

DATA SHEET 2

CERTIFICATION AND TIRE LABEL INFORMATION

Test Vehicle: **2011 Starcraft Quest School Bus**
 Test Lab: **MGA Research Corporation**

NHTSA No.: **CB0902**
 Test Dates: **2/22/11 – 2/23/11**

LABEL INFORMATION

Label Design (Combined Certification and Tire Label)	Yes
Label Design (Separate Tire Information Label)	No
Label in English? (Yes/No)	Yes
Block capital letter and numbers are not less than 2.4 mm in height (yes/no)	Yes – 2.44
Label is permanently affixed; describe method of affixing (rivets, glue, etc.)	Yes / Glue
Does label text color contrast with background? (yes/no)	Yes
Location of Label(s) on the vehicle	Driver Door Jamb Above Striker

TIRE AND RIM DATA FROM LABEL (FOR EACH GAWR/GVWR)

GVWR: 5,579 kg	Front Axle	Rear Axle
Tire Size	LT225/75R16E	LT225/75R16E
Rim Size (in)	16 x 6.5J	16 x 6.5J
Recommended inflation pressure (KPa)	448	448
Are labeled rims suitable for labeled tires (Yes/No) ¹	Yes	Yes
Referenced load rating at label recommended inflation pressure (kg) ¹	1,060	975

¹ Referenced source for tire/rim match and load rating data: 2011 Tire and Rim Association Yearbook

CERTIFICATION/TIRE LABEL MAXIMUM CAPACITY COMPARISON

GVWR: 5,579 kg	Front axle	Rear Axle
A.GAWR (kg) FROM CERTIFICATION LABEL	(C) 1,950	(D) 3,901
B.(No. of tires) x (Tire load rating (kg))	2,120	3,900
Is "B" equal or greater than "A"? (Yes/No)	Yes	Yes (marginal)*
Is (C) plus (D) equal to or greater than GVWR? (Yes/No)	Yes – 5,851	

*In English units the load rating of these tires at the recommended inflation pressure of 65 psi is 2,150 lb (duals). The load rating of four tires 8,600 lb (4 x 2,150) equals the 8,600 lb labeled rear GAWR.

DATA SHEET 2

CERTIFICATION AND TIRE LABEL INFORMATION

Test Vehicle: **2011 Starcraft Quest School Bus**
Test Lab: **MGA Research Corporation**

NHTSA No.: **CB0902**
Test Dates: **2/22/11 – 2/23/11**

Requirements	PASS / FAIL
LABEL INFORMATION (S5.3) Vehicle has proper certification/tire information label. Label tires at recommended inflation pressure and rims are suitable for vehicle.	PASS

Tested By: *Eiv Leandrea*

Approved By: *Michael Janoy*

Date: February 23, 2011

DATA SHEET 3
WEIGHT DISTRIBUTION

Test Vehicle: **2011 Starcraft Quest School Bus**
Test Lab: **MGA Research Corporation**

NHTSA No.: **CB0902**
Test Dates: **2/22/11 – 2/23/11**

FLUID LEVELS

Fuel	FULL
Coolant	FULL
Other Fluids: <u>Washer fluid, brake fluid, etc.</u>	FULL

TIRE PRESSURES

Tire	Left Front	Right Front	Left Rear	Right Rear
Tire Pressure (KPa)	448	448	448	448

OCCUPANT AND CARGO LOADS

Total Occupant Load (kg) [# of designated seating positions x 68 kg per adult or 54 kg per student]	1,580 (1 driver, 28 students)
Manufacturer's Rated Cargo Load (kg) [If not stated on vehicle or provided in owner's manual leave blank]	
Certified GVWR – Measured UVW – Total Occupant = Rated Cargo Load <u>5,579</u> kg – <u>3,683</u> kg – <u>1,580</u> kg = <u>316</u> kg (must be positive)	
Describe Placement of Cargo	Evenly Placed in Aisle

WEIGHT DISTRIBUTION

ITEM	Tire or Vehicle Rating* (kg)	CONDITION 1 UVW (kg)		CONDITION 2 Cond. 1 + occupants (kg)		CONDITION 3 Cond. 2 + cargo (kg)	
		Measured	Overload	Measured	Overload	Measured	Overload
Left Front Tire	1,060	816	No	941	No	937	No
Right Front Tire	1,060	814	No	955	No	943	No
Front Axle	1,950	1,630	No	1,896	No	1,880	No
Left Rear Tire	1,950	1,032	No	1,681	No	1,860	No
Right Rear Tire	1,950	1,021	No	1,696	No	1,839	No
Rear Axle	3,901	2,053	No	3,377	No	3,699	No
Total Vehicle	5,579	3,683	No	5,273	No	5,579	No

* Vehicle and axle weight ratings (GVWR & GAWR) are located on the vehicle certification label plate. Vehicle tire load ratings are based upon the inflation pressure specified on the certification label plate for each respective axle, as determined from the appropriate tire manufacturer's specification table.

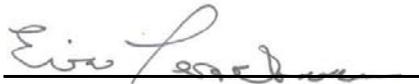
DATA SHEET 3
WEIGHT DISTRIBUTION

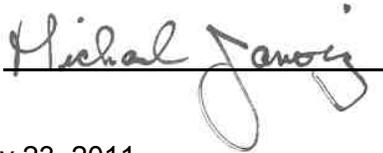
Test Vehicle: **2011 Starcraft Quest School Bus**
Test Lab: **MGA Research Corporation**

NHTSA No.: **CB0902**
Test Dates: **2/22/11 – 2/23/11**

Requirements	PASS / FAIL
Weight Distribution (49 CFR 567 Certification) Vehicle loaded with occupants and cargo does not exceed GVWR	PASS

Remarks: None

Tested By: 

Approved By: 

Date: February 23, 2011

SECTION 4

INSTRUMENTATION AND EQUIPMENT LIST

Test Vehicle: **2011 Starcraft Quest School Bus**
 Test Lab: **MGA Research Corporation**

NHTSA No.: **CB0902**
 Test Dates: **2/22/11 – 2/23/11**

	Digital Caliper	Vehicle Scale	Vehicle Scale	Tape Measure
Make	Mitutoyo	GSE	GSE	Stanley
Model	CD 6" CS	465	465	Powerlock 3M
Serial No.	07416506	004804&212091R	004804&212092R	573
Range	0 to 150 mm	0 to 20,000 lb	0 to 20,000 lb	0 to 8 m
Accuracy	0.01 mm	0.25% static	0.25% static	1 mm
Cal. Date	12/28/10	10/01/10	10/01/10	12/06/10
Cal. Due Date	06/28/11	09/29/11	09/29/11	06/06/11

SECTION 4

INSTRUMENTATION AND EQUIPMENT LIST

Test Vehicle: 2011 Starcraft Quest School Bus
 Test Lab: MGA Research Corporation

NHTSA No.: CB0902
 Test Dates: 2/22/11 – 2/23/11

SCALE CALIBRATION SHEET

REPORT OF INSPECTION AND CALIBRATION											
Operating Under A2LA Accreditation #2006.01; Performed by Certified Scale Inc. N57 W13640 Carmen Avenue, Menomonee Falls, WI 53051. As Directed by MGA RESEARCH CORPORATION											
TYPE	DIGITAL FLOOR	SERIAL #	004804	ID #	NONE	CLASS	IIIL				
MANUFACTURER	GSE	CAPACITY	20,000	MAX. LOAD	15,000	UNITS	LBS				
MODEL	465	MIN. DIV.	5	LOCATION	BUS AND TRUCK BAY 1						
TEST AND UNCERTAINTY PROCEDURE JUSTIFICATION					NIST TRACEABLE TEST STANDARDS USED THIS CALIBRATION						
PLEASE REFER TO TEST STANDARD TRACEABILITY DOCUMENTS MADE PART OF					50# NUMBER(S) <u>2700 C1000-619</u>						
SCALE MAINTENANCE AND CALIBRATION PROCEDURE MANUAL; SERIAL # MGA-894-L1					500# NUMBER(S) <u>B01 - B06</u>						
<input checked="" type="checkbox"/> THERE WAS NO DEVIATION IN PROCEDURE AS WRITTEN					1000# NUMBER(S) <u>NSI-A100 - NSI-A115</u>						
<input type="checkbox"/> DEVIATION FROM PROCEDURE IS NOTED HEREUPON											
TEST WEIGHT CERTIFICATION					ESTIMATE OF ENVIRONMENTAL CONDITIONS						
PLEASE REFER TO TEST STANDARD TRACEABILITY DOCUMENTS MADE PART OF					Temperature <u>70</u> ° Humidity <u>31</u> % Air Movement <u>AW</u>						
SCALE MAINTENANCE AND CALIBRATION PROCEDURE MANUAL; SERIAL # MGA-894-L1					Vibration <u>none</u> Other <u>none</u>						
VISUAL INSPECTION					LOCATION OF TEST/NOTICE OF SUB-CONTRACTOR						
FUNCTIONALITY; as left	ACCEPT	REJECT	/	<input type="checkbox"/> This test was conducted at Certified Scale Inc. facility, Menomonee Falls, WI.							
REPEATABILITY/SENSITIVITY; as left	ACCEPT	REJECT	/	<input checked="" type="checkbox"/> This test was conducted within the customer facility; located at:							
PHYSICAL CONDITION; as left	ACCEPT	REJECT	/	5000 WARREN ROAD / BURLINGTON, WI 53105							
SUITABILITY FOR INTENDED USE	ACCEPT	REJECT	/	<input type="checkbox"/> Subcontracted to:							
*** FINAL TEST RESULTS ***											
TEST POINT	AS FOUND				AS LEFT				TOLERANCES		
	EXPECTED VALUE	MEASURED VALUE	ERROR	ACCEPT	REJECT	MEASURED VALUE	ERROR	ACCEPT	REJECT	LOW LIMIT	HIGH LIMIT
SCALE #1											
DISTRIBUTION	1000	1000	0	/		1000	0	/		995	1005
DISTRIBUTION	2000	2000	0	/		2000	0	/		1995	2005
DISTRIBUTION	3000	3000	0	/		3000	0	/		2990	3010
DISTRIBUTION	4000	4000	0	/		4000	0	/		3990	4010
DISTRIBUTION	5000	5000	0	/		5000	0	/		4990	5010
DISTRIBUTION	10,000	9995	{57}	/		10000	0	/		9980	10,020
DISTRIBUTION	15,000	4990	{10}	/		15000	0	/		14,970	15,030
DISTRIBUTION	18,000	17985	{15}	/		18000	0	/		17,960	18,040
PAGE (1) OF (2)											
*** FINAL CONCLUSIONS ***											
AS FOUND: ACCEPT <input checked="" type="checkbox"/> REJECT <input type="checkbox"/>				AS LEFT: ACCEPT <input checked="" type="checkbox"/> REJECT <input type="checkbox"/>				ACTION PENDING: <input type="checkbox"/>			
*** STATEMENT OF ESTIMATED UNCERTAINTY AND CONFIDENCE ***											
<input type="checkbox"/> ESTIMATED UNCERTAINTY OF THIS CALIBRATION IS _____; BY CSI TYPE EVALUATION DEFAULT; WITH A CONFIDENCE LEVEL OF 95%.											
<input checked="" type="checkbox"/> UNCERTAINTY OF THIS CALIBRATION IS UNKNOWN BY STATISTICAL CALCULATION; ASSUMED EQUAL TO ± 50% OF THE MINIMUM VALID DIVISION.											
Technician's Comments/Observations/Opinions: <u>Adjusted Calibration</u>											

APPROVED
M. W. D.

** THIS REPORT IS APPLICABLE ONLY TO THE DEVICE IDENTIFIED IN THE LOCATION SPECIFIED AS PART OF THIS REPORT. **

The serial number of this report is 100110MGA01. "The report may not be duplicated without written consent of Certified Scale Inc."

This report, page (1) of (2) was completed on 10/1/2010 by B. W. D. Certified Scale Inc. Representative

Next scheduled Full Calibration is due 9/30/11 Date Next Preventive Maintenance visit is due N/A Date

The calibration interval for this instrument is 12 months. The next scheduled full calibration is due September 30, 2011.

SECTION 4

INSTRUMENTATION AND EQUIPMENT LIST

Test Vehicle: 2011 Starcraft Quest School Bus
 Test Lab: MGA Research Corporation

NHTSA No.: CB0902
 Test Dates: 2/22/11 – 2/23/11

SCALE CALIBRATION SHEET

REPORT OF INSPECTION AND CALIBRATION											
Operating Under A2LA Accreditation #2006.01; Performed by Certified Scale Inc. N57 W13640 Carmen Avenue, Menomonee Falls, WI 53051. As Directed by MGA RESEARCH CORPORATION											
TYPE	DIGITAL FLOOR	SERIAL #	004804	ID #	NONE	CLASS	IIIL				
MANUFACTURER	GSE	CAPACITY	20,000	MAX. LOAD	15,000	UNITS	LBS				
MODEL	465	MIN. DIV.	5	LOCATION	BUS AND TRUCK BAY 1						
TEST AND UNCERTAINTY PROCEDURE JUSTIFICATION					NIST TRACEABLE TEST STANDARDS USED THIS CALIBRATION						
PLEASE REFER TO TEST STANDARD TRACEABILITY DOCUMENTS MADE PART OF					50# NUMBER(S) C1600-619						
SCALE MAINTENANCE AND CALIBRATION PROCEDURE MANUAL; SERIAL # MGA-804-L1					500# NUMBER(S) B01-B06						
<input checked="" type="checkbox"/> THERE WAS NO DEVIATION IN PROCEDURE AS WRITTEN					1000# NUMBER(S) NSS-9100 thru NSS-A115						
<input type="checkbox"/> DEVIATION FROM PROCEDURE IS NOTED HEREUPON											
TEST WEIGHT CERTIFICATION					ESTIMATE OF ENVIRONMENTAL CONDITIONS						
PLEASE REFER TO TEST STANDARD TRACEABILITY DOCUMENTS MADE PART OF					Temperature 70 ° Humidity 39 % Air Movement Minimal						
SCALE MAINTENANCE AND CALIBRATION PROCEDURE MANUAL; SERIAL # MGA-804-L1					Vibration None Other None						
VISUAL INSPECTION			ACCEPT	REJECT	LOCATION OF TEST/NOTICE OF SUB-CONTRACTOR						
FUNCTIONALITY; as left			/		<input type="checkbox"/> This test was conducted at Certified Scale Inc. facility, Menomonee Falls, WI.						
REPEATABILITY/SENSITIVITY; as left			/		<input checked="" type="checkbox"/> This test was conducted within the customer facility, located at:						
PHYSICAL CONDITION; as left			/		5000 WARREN ROAD / BURLINGTON, WI 53105						
SUITABILITY FOR INTENDED USE			/		<input type="checkbox"/> Subcontracted to:						
*** FINAL TEST RESULTS ***											
TEST POINT	AS FOUND				AS LEFT				TOLERANCES		
	EXPECTED VALUE	MEASURED VALUE	ERROR	ACCEPT	REJECT	MEASURED VALUE	ERROR	ACCEPT	REJECT	LOW LIMIT	HIGH LIMIT
SCALE #2											
DISTRIBUTION	1000	1000	0	-		1000	0	/		995	1005
DISTRIBUTION	2000	1995	<5	-		2000	0	/		1995	2005
DISTRIBUTION	3000	2985	<15	-		3000	0	/		2990	3010
DISTRIBUTION	4000	3980	<20	-		4000	0	/		3990	4010
DISTRIBUTION	5000	4980	<20	-		5000	0	/		4990	5010
DISTRIBUTION	10,000	9965	<35	-		10,000	0	/		9980	10,020
DISTRIBUTION	15,000	14960	<40	-		15000	0	/		14,970	15,030
DISTRIBUTION	18,000	17955	<45	-		18000	0	/		17,960	18,040
PAGE (2) OF (2)											
*** FINAL CONCLUSIONS ***											
AS FOUND: ACCEPT <input type="checkbox"/> REJECT <input checked="" type="checkbox"/>				AS LEFT: ACCEPT <input checked="" type="checkbox"/> REJECT <input type="checkbox"/>				ACTION PENDING: <input type="checkbox"/>			
*** STATEMENT OF ESTIMATED UNCERTAINTY AND CONFIDENCE ***											
<input type="checkbox"/> ESTIMATED UNCERTAINTY OF THIS CALIBRATION IS _____; BY CSI TYPE EVALUATION DEFAULT; WITH A CONFIDENCE LEVEL OF 95%.											
<input checked="" type="checkbox"/> UNCERTAINTY OF THIS CALIBRATION IS UNKNOWN BY STATISTICAL CALCULATION; ASSUMED EQUAL TO ± 50% OF THE MINIMUM VALID DIVISION.											
Technician's Comments/Observations/Opinions: Normal Adjustments											
APPROVED M. W. D.											

** THIS REPORT IS APPLICABLE ONLY TO THE DEVICE IDENTIFIED IN THE LOCATION SPECIFIED AS PART OF THIS REPORT. **
 The serial number of this report is 10011016A012. The report may not be duplicated without written consent of Certified Scale Inc.
 This report, page 2 of 2 was completed on 10/1/2010 by [Signature] Certified Scale Inc. Representative
 Next scheduled Full Calibration is due 9/30/11 Date Next Preventive Maintenance visit is due N/A Date

The calibration interval for this instrument is 12 months. The next scheduled full calibration is due September 30, 2011.

SECTION 5
PHOTOGRAPHS

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*This vehicle appears to have two certification labels attached. This issue was forwarded to the NHTSA Certification Division for further action. The vehicle and tire information required for this FMVSS 120 Test was the same on both labels.

Test Vehicle:
Test Lab:

2011 Starcraft Quest School Bus
MGA Research Corporation

NHTSA No.: CB0902
Test Dates: 02/22/11 – 02/23/11

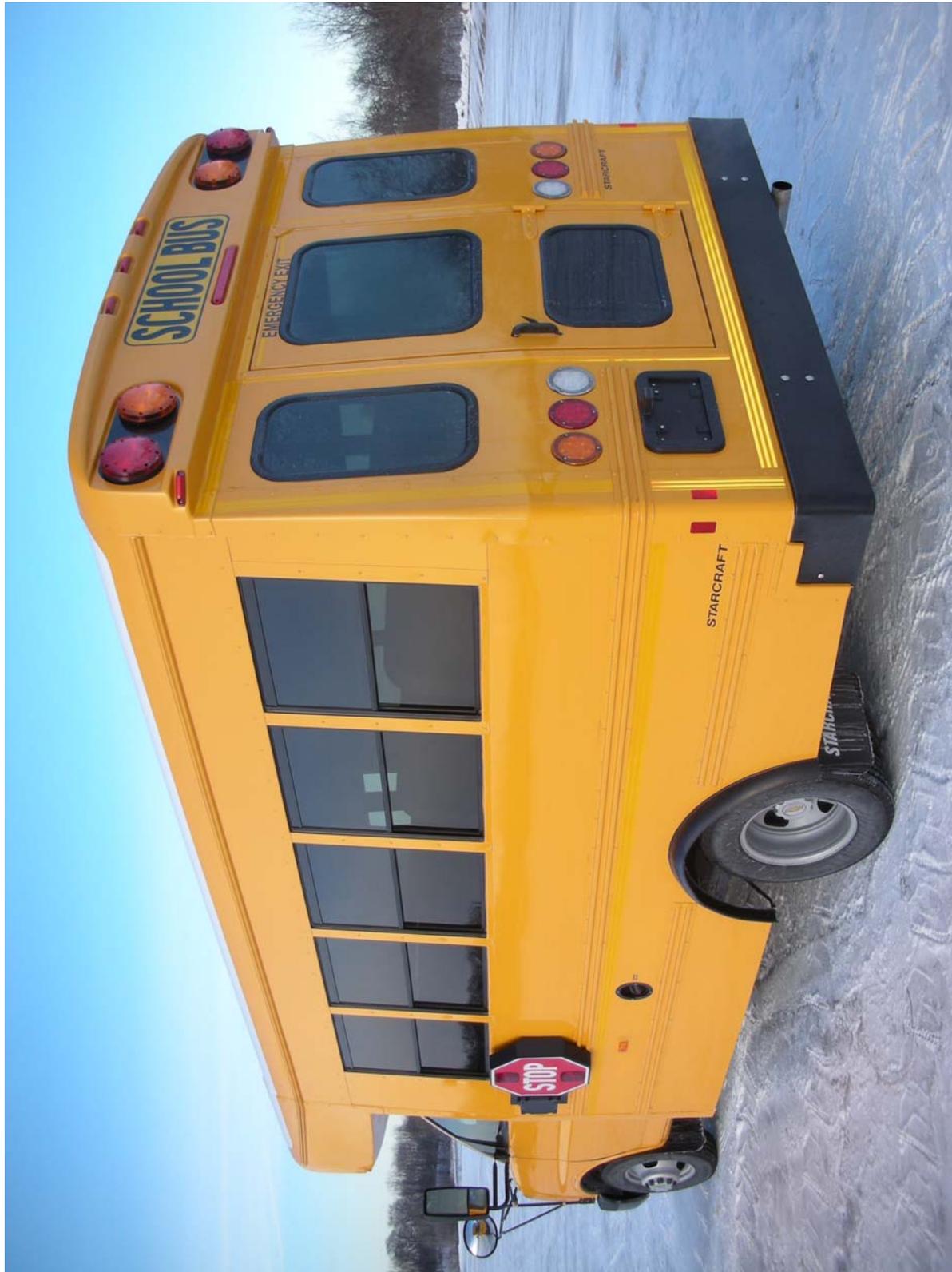


Three-Quarter Frontal View of Left Side of Vehicle

Test Vehicle:
Test Lab:

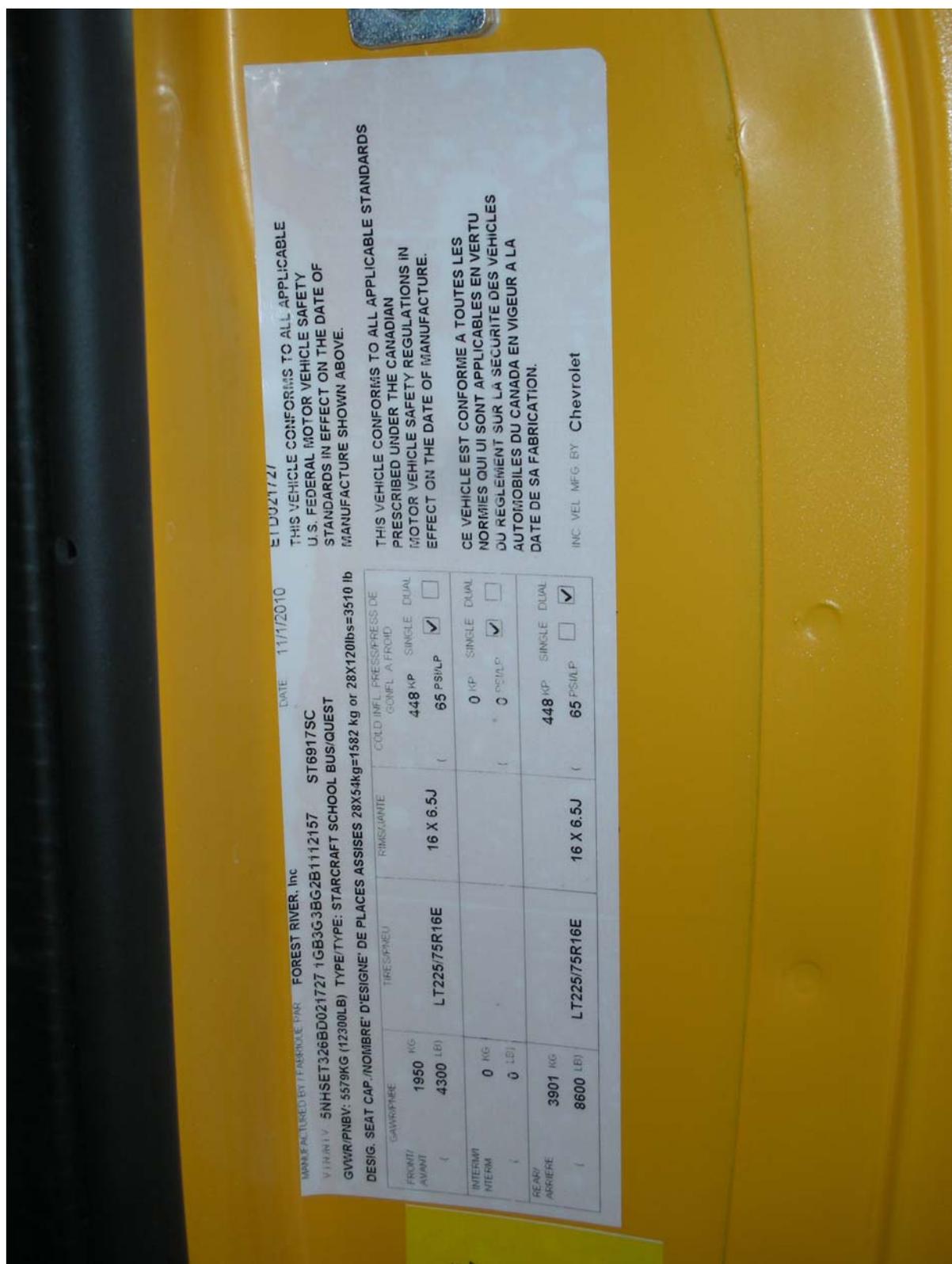
2011 Starcraft Quest School Bus
MGA Research Corporation

NHTSA No.: CB0902
Test Dates: 02/22/11 – 02/23/11



Three-Quarter Rear View of Left Side of Vehicle

Test Vehicle: 2011 Starcraft Quest School Bus
 Test Lab: MGA Research Corporation
 NHTSA No.: CB0902
 Test Dates: 02/22/11 – 02/23/11



E1D0217Z1

THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.

THIS VEHICLE CONFORMS TO ALL APPLICABLE STANDARDS PRESCRIBED UNDER THE CANADIAN MOTOR VEHICLE SAFETY REGULATIONS IN EFFECT ON THE DATE OF MANUFACTURE.

CE VEHICULE EST CONFORME A TOUTES LES NORMES QUI UI SONT APPLICABLES EN VERTU DU REGLEMENT SUR LA SECURITE DES VEHICLES AUTOMOBILES DU CANADA EN VIGEUR A LA DATE DE SA FABRICATION.

INC. VEL. MFG. BY: Chevrolet

MANUFACTURED BY: FOREST RIVER, INC.
 VIN: 5NHSET326BD021727 1GB3G3BG2B112157 ST6917SC
 GWR/PBW: 5579KG (12300LB) TYPE/TYPE: STARCRAFT SCHOOL BUS/QUEST
 DESIG. SEAT CAP./NOMBRE D'ESSES: 28X54kg=1582 kg or 28X120lbs=3510 lb

FRONT/AVANT	REAR/ARRIERE	TIRE/NEU	RIMS/ANTIE	COLD INFL. PRESSURE/DE GONFL. A FROID
1950 KG 4300 LB	3901 KG 8600 LB	LT225/75R16E	16 X 6.5J	448 kPa (65 PSI) <input checked="" type="checkbox"/> SINGLE <input type="checkbox"/> DUAL
0 KG 0 LB	0 KG 0 LB			0 kPa (0 PSI) <input checked="" type="checkbox"/> SINGLE <input type="checkbox"/> DUAL
		LT225/75R16E	16 X 6.5J	448 kPa (65 PSI) <input type="checkbox"/> SINGLE <input checked="" type="checkbox"/> DUAL

Test Vehicle:
Test Lab:

2011 Starcraft Quest School Bus
MGA Research Corporation

NHTSA No.: CB0902
Test Dates: 02/22/11 – 02/23/11

STARCRAFT BUS

a division of Forest River, Inc.

COMPLETED VEHICLE MANUFACTURED BY:

Starcraft Bus a Division of Forest River, Inc.
2376 Century Drive, Goshen, IN 46528
Phone: 800-348-7440

Date of Manufacture: Nov-10

INCOMPLETE VEHICLE MANUFACTURED BY:

Chevrolet
1500 East Route A, Wentzville, MO 63385
Phone: 586-492-7440
Date of Manufacture: Oct-10
GVWR: 12300

GAWR Front: 4300 With LT225/75R16E Tires 16 X 6.5J Rims @ 65 PSI Cold SINGLE

GAWR Rear: 8600 With LT225/75R16E Tires 16 X 6.5J Rims @ 65 PSI Cold DUAL

VIN: 1GB3G3BG2B1112157

VEHICLE TYPE: STARCRAFT SCHOOL BUS/QUEST

VEHICLE MAKE: Chevrolet

MODEL NUMBER: ETD021727

GROSS VEHICLE WEIGHT: 8174

Maximum Permitted Seated Passenger: 28

Actual Configured Seating Capacity: 28

Maximum Permitted W/C Passengers: 0

Actual Configured W/C Capacity: 0

Approval Numbers

MIDWEST TRANSIT

**THIS VEHICLE CONFORMS TO
ALL APPLICABLE U.S.
FEDERAL MOTOR VEHICLE
SAFETY STANDARDS IN
EFFECT ON THE DATE OF
MANUFACTURE SHOWN
ABOVE.**

Test Vehicle:
Test Lab:

2011 Starcraft Quest School Bus
MGA Research Corporation

NHTSA No.: CB0902
Test Dates: 02/22/11 – 02/23/11



Tire DOT Serial Number

Test Vehicle:
Test Lab:

2011 Starcraft Quest School Bus
MGA Research Corporation

NHTSA No.: CB0902
Test Dates: 02/22/11 – 02/23/11



Tire Load Ratings and Tire Size Designation

Test Vehicle:
Test Lab:

2011 Starcraft Quest School Bus
MGA Research Corporation

NHTSA No.: CB0902
Test Dates: 02/22/11 – 02/23/11



Rim Manufacturer and DOT Symbol

Test Vehicle:
Test Lab:

2011 Starcraft Quest School Bus
MGA Research Corporation

NHTSA No.: CB0902
Test Dates: 02/22/11 – 02/23/11



Rim Size

Test Vehicle:
Test Lab:

2011 Starcraft Quest School Bus
MGA Research Corporation

NHTSA No.: CB0902
Test Dates: 02/22/11 – 02/23/11



Rim Date of Manufacture Markings

Test Vehicle: 2011 Starcraft Quest School Bus
Test Lab: MGA Research Corporation
NHTSA No.: CB0902
Test Dates: 02/22/11 – 02/23/11



Vehicle on Scales Doing Measurement of Front Axle Loads

Test Vehicle:
Test Lab:

2011 Starcraft Quest School Bus
MGA Research Corporation

NHTSA No.: CB0902
Test Dates: 02/22/11 – 02/23/11



Vehicle on Scales Doing Measurement of Rear Axle Loads

Test Vehicle:
Test Lab:

2011 Starcraft Quest School Bus
MGA Research Corporation

NHTSA No.: CB0902
Test Dates: 02/22/11 – 02/23/11



Simulated Occupant Loading