

Request for Proposal (RFP) to Supply and Deliver  
**138" Wheelbase Dual Rear Wheel (DRW)  
Narrow Body Cutaway Vehicle**

**CRFQ 0805 PTR1700000005**

Prepared Exclusively For  
**West Virginia Division of Public Transit**



Bid Closing: Wednesday, May 3, 2017 at 1:30 p.m.

**Submitted by Sonny Merryman Inc.**

Chad Seals  
5120 Wards Road  
Evington, Virginia 24550  
ChadSeals@sonnymerryman.com  
(800) 533-1006 ext. 352

05/03/17 09:10:52  
Purchasing Division

# ► The Candidate II



► The Candidate II is the perfect solution for those in the market for a smaller shuttle bus or an alternative to a raised roof van. The Candidate II, with its narrow body and long list of standard features, can accommodate a variety of needs. Drivers will appreciate the improved handling and stability the Candidate II offers with its dual rear wheels. Because a Commercial Drivers License isn't needed to operate the Candidate II (check your state requirements), it's always ready for the road.

Passengers will be able to enter and exit the Candidate II with ease through the wide entry door and deep steps and can comfortably move throughout the bus with its 20" aisle and 76" of interior head room. Once seated, passengers will have a great view through the 36" x 36" windows. This, combined with the previously mentioned features, makes the Candidate II the most spacious shuttle bus in the industry.

## ► Candidate Features

## Features to Meet Your Specific Needs



Optional wheelchair accessible floor plan with mid back seats, top mounted grab handles and armrests.



Optional double wheelchair door with top mounted gas shocks to hold door open in windy conditions.



Optional 14 passenger capacity with mid back seats, top seat mounted grab handles and armrests.



# ► The Candidate II



## ► Standard Exterior Feature Highlights

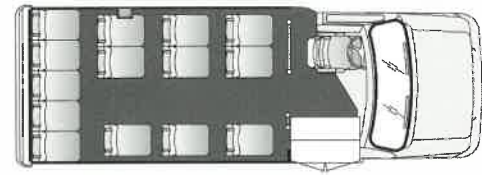
- Fully welded aluminized steel cage construction with laminated sidewall structure meeting all applicable FMVSS requirements
- "Starview" drivers visibility window in front of entry door
- Electric actuated passenger entry door with full length glass
- 36" high x 36" wide high upper double T-Slider tempered safety glass windows with climate control tint
- Black powder coated steel rear bumper
- Rear mud flaps
- Pre-painted white galvanized steel sidewalls and skirts
- One-piece seamless FRP (fiberglass reinforced plastic) roof
- Breakaway rearview mirrors with built-in convex
- Sealed LED stop, tail, and turn signal lights with reverse lights
- Exterior LED front and rear marker lights

## ► Standard Interior Feature Highlights

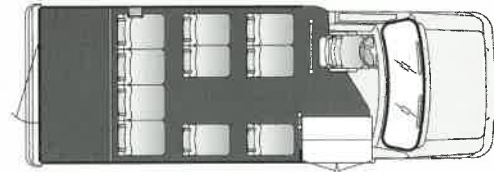
- 81" interior width
- 76" interior floor to ceiling height
- Welded floor and wall seat track for flexible seating
- Black slip resistant floor covering
- 5/8" exterior grade plywood flooring
- Ceiling and rear wall fabric for sound abatement
- White step nosing at passenger entry door
- 1.25" left hand vertical passenger assist rail at entry door
- Printed circuit board with automotive type fuses and LED trouble shooting lights
- LED Entry door step well lights
- LED driver and passenger area lighting
- Non-retractable seat belts

## ► Popular Option Highlights

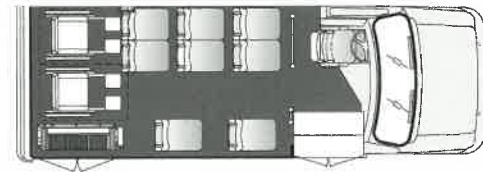
- Stainless steel wheel inserts
- Luggage storage areas (overhead luggage racks with reading lights, interior luggage racks, rear storage area)
- Rear emergency door with window(s)
- Passenger area rear heat and air conditioning
- Complete rubber flooring
- Passenger grab rails
- Padded vinyl or FRP walls and ceiling
- Fiberglass side walls and skirt
- Audio and video systems
- Mid back or high back seating
- ADA and FMVSS compliant wheel chair lifts and securement systems



14 Passenger Plus Driver



10 Passenger Plus Driver  
with Secure Rear Cargo Area



Lift System for Wheelchair Passengers,  
Plus 8 Ambulatory Passengers



Due to our commitment to product quality, specifications and options are subject to change without notice in the interest of product improvement and market changes.

StarTrans Bus, a division of Forest River, Inc., is owned by Berkshire Hathaway, one of the most respected and financially secure companies in the industry.

Scan this barcode using a QR Reader on your smart phone to learn more about Forest River.



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2367 Century Drive • Goshen, IN 46528 • Lit. No. STB-03/041515  
1.800.348.7440 • Fax: 574.642.3301

May 3, 2017

State of West Virginia  
Department of Administration  
Purchasing Division  
2019 Washington Street East  
Charleston, WV 25305-0130

Dear Mrs. Pettrey:

Thanks you for the opportunity to submit this bid in response to your Request for Quotation # PTR1700000005. We are offering the Startrans Candidate.

Should we receive an award for this solicitation, we will provide the material as outlined. The Startrans Candidate will be constructed in Goshen, Indiana.

Also addressed and included in the proposal are curb weights and warranty locations to be used to maintain vehicles.

We meet the warranty requirements specified within PTR1700000005.

We are in full understanding of training and will provide personnel to conduct training if we are the successful bidder. We have included "as-built" wiring schematics in our bid price. Also, as requested, we are offering schemes to match your existing fleets. The prices for the paint and graphics are included in our pricing.

We take exception to 6.4.2 and 6.4.3. Ford chassis are only equipped with the power packages on dual door chassis. We are unable to meet these requirements on a single door chassis.

Thank you again for this opportunity. Please call if you have questions.

Sincerely,



Chad Seals  
Account Manager  
West Virginia Public Transit Providers  
800-533-1006 x352  
434-821-4456  
[chad@sonnymerryman.com](mailto:chad@sonnymerryman.com)





Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

State of West Virginia  
 Request for Quotation  
 36 – Vehicles

Proc Folder: 184616

Doc Description: Open End Contract for 138" Wheel base DRW Cutaway Vehicle

Proc Type: Central Master Agreement

Date Issued	Solicitation Closes	Solicitation No	Version
2017-04-11	2017-05-03 13:30:00	CRFQ 0805 PTR1700000005	1

**BID RECEIVING LOCATION**

BID CLERK  
 DEPARTMENT OF ADMINISTRATION  
 PURCHASING DIVISION  
 2019 WASHINGTON ST E  
 CHARLESTON WV 25305  
 US

**VENDOR**

Vendor Name, Address and Telephone Number:

SONNY MERRYMAN INC  
 5120 WARDS ROAD  
 EVINGTON VA 24550  
 434-821-1000 or 800-533-1006

**FOR INFORMATION CONTACT THE BUYER**

Melissa Pettrey  
 (304) 558-0094  
 melissa.k.pettrey@wv.gov

Signature X

FEIN # 54-0806176

DATE 5/3/17

All offers subject to all terms and conditions contained in this solicitation



Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

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 melissa.k.pettrey@wv.gov

Signature X

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**ADDITIONAL INFORMATION:**

The West Virginia Purchasing Division is soliciting bids on behalf of the West Virginia Department of Transportation, Division of Public Transit, to establish an open-end contract for 138" Wheelbase Dual Rear Wheel Narrow Body Cutaway Vehicle per the Specifications, Terms & Conditions and the Pricing information as attached.

INVOICE TO		SHIP TO	
ACCOUNTS PAYABLE PUBLIC TRANSIT DIVISION OF BLDG 5 RM 650 1900 KANAWHA BLVD E CHARLESTON WV25305-0432 US		GENERAL MANAGER PUBLIC TRANSIT DIVISION OF KANAWHA VALLEY REGIONAL TRANSPORTATION AUTHORITY 1550 FOURTH AVE CHARLESTON WV 25324 US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	for Mid Sized light duty buses	0.00000	EA		

Comm Code	Manufacturer	Specification	Model #
25101502			

**Extended Description :**

138" Wheelbase Dual Rear Wheel Narrow Body Cutaway vehicles.

PTR170000005	<b>Document Phase</b> Final	<b>Document Description</b> Open End Contract for 138" Wheel base DRW Cutaway Vehicle	<b>Page 3</b> <b>of 3</b>
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**ADDITIONAL TERMS AND CONDITIONS**

See attached document(s) for additional Terms and Conditions



**REQUEST FOR QUOTATION**  
**138" Wheelbase Dual Rear Wheel (DRW) Narrow Body Cutaway Vehicle**

Exhibit A

CLASS	ITEM DESCRIPTION	UNIT PRICE PER VEHICLE	ESTIMATED QUANTITY	EXTENDED PRICE
A	Vehicle Non-Accessible / Paratransit Package	\$52,536.00	2	\$105,072.00
B	Vehicle with One Wheelchair (WC) Positions/ Paratransit Package	\$56,306.00	2	\$112,612.00
C	Vehicle with Two Wheelchair (WC) Position / Paratransit Package	\$57,480.00	2	\$114,960.00
D	Vehicle/Extended Length/ Front Lift / 3 WC Positions	\$58,965.00	2	\$117,930.00
E	Vehicle/ One Wheelchair (WC)/ Fixed Route Package	\$63,634.00	2	\$127,268.00
F	Vehicle/Two WC / Fixed Route Package	\$65,003.00	2	\$130,006.00
G	Vehicle/ Extended Length / Front Lift / Three Wheelchair Positions/ Fixed Route Package	\$66,738.00	2	\$133,476.00
H	Vehicle/ One WC Position / Fixed Route Package / Full Bus Paint	\$65,265.00	2	\$130,530.00
I	Vehicle / 2 WC Positions / Fixed Route Package / Full Bus Paint	\$66,469.00	2	\$132,938.00
J	Vehicle / Extended Length / Front Lift / Three WC Positions/ Full Bus Paint	\$67,773.00	2	\$135,546.00
K	Vehicle/One WC/Fixed Route Package/ Three Quarter Body Paint with Expanded Graphics Vehicle Skirt Painting	\$64,965.00	2	\$129,930.00
L	Vehicle/Two WC/Fixed Route Package/ Three Quarter Body Paint with Expanded Graphics Vehicle Skirt Painting	\$66,169.00	2	\$132,338.00
M	Vehicle/ Extended Length/ Front Lift / Three WC/Fixed Route Package/ Three Quarter Body Paint with Expanded Graphics	\$67,473.00	2	\$134,946.00
N	Vehicle/One WC/Fixed Route Package/ Vehicle Skirt Painting	64,005	2	\$128,010.00
O	Vehicle / Two WC Position/ Fixed Route Package / Vehicle Skirt Painting	64,005	2	\$128,010.00
P	Vehicle / Extended Length / Front Lift / Fixed Route Package / Vehicle Skirt Painting	66,003	2	\$132,006.00
Q	Vehicle / One WC Position / Paratransit Package Security Camera	65,329	2	\$130,658.00
R	Vehicle Two WC Position / Paratransit Package / Security Camera System System	60,488	2	\$120,976.00
S	Vehicle / Extended Length / Front Lift / Paratransit Package / Security Camera System	62,516	2	\$125,032.00
	<b>TOTAL BID FOR EVALUATION</b>			\$2,402,244.00
	<i>*Complete form provided.</i>			
	<i>*Please note these are only estimated quantities and do not reflect any guarantee of purchase.</i>			
	<i>*The DPT may purchase more or less as needed.</i>			
	<i>*Please do not alter pricing page.</i>			

*gr* 5/2/17



Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

State of West Virginia  
 Request for Quotation  
 36 – Vehicles

Proc Folder: 184616

Doc Description: Addendum No. 1. 138" Wheel base DRW Cutaway Vehicle

Proc Type: Central Master Agreement

Date Issued	Solicitation Closes	Solicitation No	Version
2017-04-20	2017-05-03 13:30:00	CRFQ 0805 PTR1700000005	2

**BID RECEIVING LOCATION**


BID CLERK  
 DEPARTMENT OF ADMINISTRATION  
 PURCHASING DIVISION  
 2019 WASHINGTON ST E  
 CHARLESTON WV 25305  
 US

**VENDOR**

Vendor Name, Address and Telephone Number:

**FOR INFORMATION CONTACT THE BUYER**

Melissa Pettrey  
 (304) 558-0094  
 melissa.k.pettrey@wv.gov

Signature X  FEIN # 54-0806176 DATE 5/3/17

All offers subject to all terms and conditions contained in this solicitation

**ADDITIONAL INFORMATION:**

**ADDENDUM**

Addendum No. 1 is issued to publish and distribute the attached information to the vendor community.

\*\*\*\*\*  
The West Virginia Purchasing Division is soliciting bids on behalf of the West Virginia Department of Transportation, Division of Public Transit, to establish an open-end contract for 138" Wheelbase Dual Rear Wheel Narrow Body Cutaway Vehicle per the Specifications, Terms & Conditions and the Pricing information as attached.

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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	for Mid Sized light duty buses	0.00000	EA		

Comm Code	Manufacturer	Specification	Model #
25101502			

**Extended Description :**

138" Wheelbase Dual Rear Wheel Narrow Body Cutaway vehicles.

<b>PTR170000005</b>	<b>Document Phase</b> Final	<b>Document Description</b> Addendum No. 1. 138" Wheel base DRW Cutaway Vehicle	<b>Page 3</b> <b>of 3</b>
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**ADDITIONAL TERMS AND CONDITIONS**

See attached document(s) for additional Terms and Conditions



Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
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State of West Virginia  
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 DEPARTMENT OF ADMINISTRATION  
 PURCHASING DIVISION  
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FEIN # 54-0806176

DATE 5/3/17

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INVOICE TO		SHIP TO	
ACCOUNTS PAYABLE		GENERAL MANAGER	
PUBLIC TRANSIT DIVISION OF		PUBLIC TRANSIT DIVISION OF	
BLDG 5 RM 650		KANAWHA VALLEY REGIONAL TRANSPORTATION AUTHORITY	
1900 KANAWHA BLVD E		1550 FOURTH AVE	
CHARLESTON	WV25305-0432	CHARLESTON	WV 25324
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	for Mid Sized light duty buses	0.00000	EA		

Comm Code	Manufacturer	Specification	Model #
25101502			

**Extended Description :**

138" Wheelbase Dual Rear Wheel Narrow Body Cutaway vehicles.



# SOLICITATION NUMBER: PTR1700000005

## Addendum Number: 1

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The purpose of this addendum is to modify the solicitation identified as PTR1700000005 ("Solicitation") to reflect the change(s) identified and described below.

### Applicable Addendum Category:

- Modify bid opening date and time
- Modify specifications of product or service being sought
- Attachment of vendor questions and responses
- Attachment of pre-bid sign-in sheet
- Correction of error
- Other

### Description of Modification to Solicitation:

1. To publish revisions, per the attached documentation.
2. To publish vendor questions and agency responses.
3. The bid opening remains 05/03/2017 at 1:30 p.m.

**Additional Documentation:** Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

### Terms and Conditions:

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.
2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

# Attachment A

## **DIVISION OF PUBLIC TRANSIT RESPONSES TO SPECIFICATION QUESTIONS**

### **CRFQ PTR 17\*5 138" Wheelbase Dual rear Wheel (DRW) Narrow Body Cutaway Vehicle**

**Request:** Section 4.5.1 Two 11" X 17" laminated as built schematics can they offered on a USB drive?

**Response:** The Division will accept as built schematics on a USB drive.

**Request:** Section 4.5.1 require all wiring to be supported every 12" on center, will the Division accept wiring to be supported every 18" on center?

**Response:** The Division will allow this request.

**Request:** Section 4.8.9 vs Section 4.8.13 states both fiberglass, galvanized steel and aluminum are noted for the skirts. Will the Division allow aluminum?

**Response:** The Division will allow aluminum skirting.

**Request:** Section 4.9.6 License plate mount location on the rear bumper. Will the Division allow the installation of the licensed on the rear cap in lieu of the rear bumper?

**Response:** Omit mounting on bumper and install license plate mount on the rear cap.

**Request:** Section 5.3.1 vs Section 5.3.5 both eight hundred (800) pound rated lifting capacity and one-thousand pound rated capacity are stated, which does the Division request?

**Response:** The Division requests the one-thousand pound rated capacity are required.

**Request:** Section 5.4.5 In addition to the windows in the rear emergency door, windows shall be provided on both sides of the door, one manufacturer utilizes a molded rear cap design on the Narrow body bus and cannot accommodate windows on either side of the door is it acceptable to take exception to the requirement and to provide windows integrated into the rear door only?

**Response:** The Division will accept the rear cap design without the windows beside the door due to the narrow body.

**Request:** Section 6.1.1 requires five (5) seat belt extenders per vehicle, four for passengers and one for the driver. It is stated that Ford will not modify the seat belt configuration for the Driver's seat to allow a belt extender, will the Division only allow the four (4) seat belt extenders for the passengers only?

**Response:** Since Ford will not allow the modification for the seat belt extender for the driver's seat, the Division will accept four (4) seat belt extenders for the passengers only.

**Request:** Section 6.1.9 Two (2) double mid-high with two (2) double child restraint seats, please clarify if the Division is wanting two (2) double mid-high with two (2) double child restraint seats totaling four (4) per vehicle.

**Response:** The Division is only asking for two (2) child restraint seats per vehicle on two (2) double mid-high seats.

**Request:** Section 6.4.1 – 6.4.5 These specifications seem to be for a smaller OEM passenger vehicle with a co-pilot seat, if these items are required, please accept that a passenger airbag when a passenger seat is not present.

**Response:** Omit passenger air bag.

**Request:** Document Checklist Page Section 3.3 Engine 3.6 liter V6 this solicitation calls for a 6.8 L gas engine for the chassis. Please accept the information will be provided on the 6.8L gas engine in place of the 3.6 liter.

**Response:** Document Checklist page should state documents for a 6.8L gas engine.

**Request:** Is the Division request the 36 units to be delivered in one (1) year or the duration of the contract of three (3) years?

**Response:** The 36 units is an estimated number for the whole duration of the contract. The Division could order depending on need.

**Request:** Section 3.8.4 Adjustable gear ratio, Ford doesn't allow gear ratio adjustment, please omit.

**Response:** The Division will omit Section 3.8.4.

**Request:** Section 4.5.1 All wiring must be at least 14 gauge, please accept wiring designed and gauged for milliamp ground signal conductivity to be smaller than 14 gauge.

**Response:** The Division will allow for this request.

**Request:** Section 4.7.2 Bus power center, please accept RC Tronics Bus Power Center and approved equal.

**Response:** The Division will allow RC Tronics Bus Power Center as approved equal.

**Request:** Section 4.8.14 Stepwells are required to be corrosive resistant and stated to be stainless steel, will the Division approve of corrosion resistant galvanized steel?

**Response:** The Division will accept corrosion resistant galvanized steel.

**Request:** Section 4.9.6 License Plate Mounts will the Division accept the rear license plate location that is recessed in the body and includes illumination?

**Response:** The Division will accept this request.

**Request:** Section 4.9.7 Paint Scheme, will the Division supply some paint scheme examples?

**Response:** Attached is examples of Paint Schemes.

**Request:** Section 5.0.2 Undercoating, Ford Quality Vehicle Modifier Program prohibits undercoating certain zones on the underbody, will the Division accept the QVM requirements?

**Response:** The Division will accept the Ford Quality Vehicle Modifier Program requirements.

**Request:** Section 5.1.3 Riser Height, please accept 9.5" as the riser height.

**Response:** The Division will allow the 9.5" on the riser height.

**Request:** Section 5.1.14 Door Ajar Indicators, please confirm that a buzzer is needed, the interlock will prevent the vehicle from moving if the wheelchair door is ajar.

**Response:** The Division will omit Section 5.1.4 Door Ajar on the wheelchair door. Interlock system will prevent the vehicle from moving if the door is ajar.

**Request:** Section 5.7.2 exterior lights, will the Division accept Optronics exterior lighting as approved equal.

**Response:** The Division will accept Optronics as approved equal.

**Request:** Section 5.7.12 Exterior lift door light, please accept one skirt mounted LED exterior lift door light mounted in the specified location. This light has been tested and does comply with ADA lighting.

**Response:** The Division will accept one skirt mounted LED exterior lift door light.



**Request:** Section 5.8.2 Flooring please accept Gerflor Tarabus Sirius safety floors and step treads as approved equal.

**Response:** The Division will accept Gerflor Tarabus Sirius safety floors and step tread as equal.

**Request:** Section 6.1.1 Seat Covering, can you offer more information on the hybrid grade 4 seat covering?

**Response:** The Division will accept Level 4 seat covering from Freedman. Omit the hybrid statement.

**Request:** Will the Division accept Ford OEM Driver's Seat with a Ford OE Power seat base?

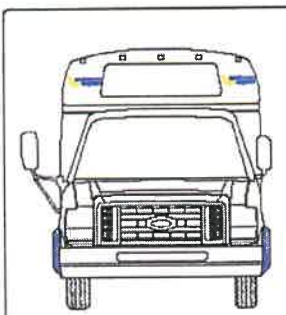
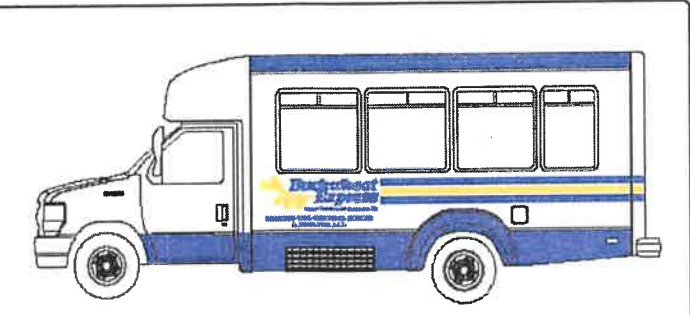
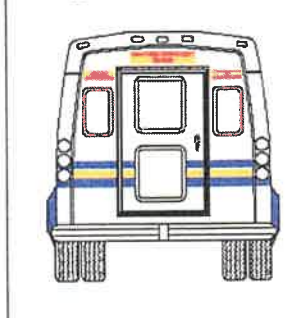
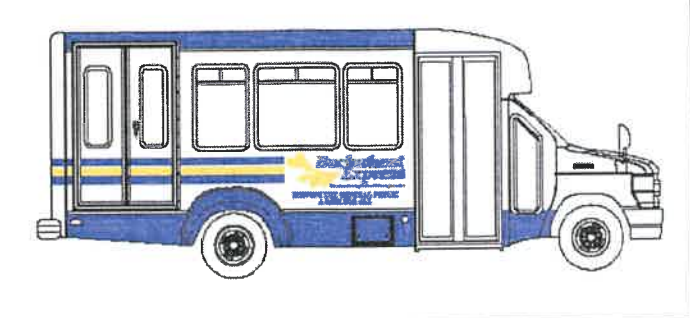


**Response:** The Division will allow for the Ford OEM Driver's Seat with OEM Power Seat base.

**Request:** Section 6.4.1 Rear Window Wiper and Defroster please confirm that a rear window wiper and defroster is required.

**Response:** The Division does not require a rear window wiper and defroster, please omit.

**Request:** Pricing Page, will the Division make multiple awards based on the low acceptable unit price per vehicle?

**Response:** The Division will not allow multiple awards, just to one vendor.

				
				
	<p>Proven Quality. Trusted Name.</p>	<p><b>Buckwheat Express</b></p>	<p>Accepted by: X _____</p>	
<p>800.227.3572 • <a href="http://www.tescobus.com">www.tescobus.com</a></p>		<p>FDC Graphic Films 2100 series:  <span style="color: yellow;">■</span> 020 Yellow    <span style="color: blue;">■</span> 130 Light Navy Blue  <span style="color: red;">■</span> 214 Specialty Red</p>	<p>FPG Finishes:  <span style="color: blue;">■</span> 202760 Grey    <span style="color: blue;">■</span> 17209 Metallic Blue</p>	





ADDENDUM ACKNOWLEDGEMENT FORM  
SOLICITATION NO.: PTR170000005

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:  
(Check the box next to each addendum received)

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6  |
| <input type="checkbox"/> Addendum No. 2            | <input type="checkbox"/> Addendum No. 7  |
| <input type="checkbox"/> Addendum No. 3            | <input type="checkbox"/> Addendum No. 8  |
| <input type="checkbox"/> Addendum No. 4            | <input type="checkbox"/> Addendum No. 9  |
| <input type="checkbox"/> Addendum No. 5            | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

SONNY MERRYMAN INC  
\_\_\_\_\_  
Company

  
\_\_\_\_\_  
Authorized Signature

5/3/17  
\_\_\_\_\_  
Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.

**REQUIRED BID DOCUMENTATION CHECKLIST**

Model Year: 2017 Model: STARTRANS CANDIDATE

**Mandatory Bid Forms – must be submitted with bid:**

- X Bid Form #1: Locations of Technical Service Representatives and Parts Distribution Centers
- X Bid Form #2: Certification for Air & Water Pollution
- X Bid Form #3: Disadvantaged Business Enterprise Vendors/Manufacturers Certification  
**The vendor shall also supply with bid FTA TVM DBE Goal Concurrence for the Current Fiscal Year Approval Letter.**
- X Bid Form #4: Buy America Certification Rolling Stock  
**Should the Vendor be declared responsive and low bid, pursuant to Pre-Award and Post Delivery Audit Requirements, the Division will require the Vendor to submit documentation (with the bid or prior to any award) that lists:**
- 1) Component and sub-component parts of the rolling stock to be purchased identified by manufacturer of the parts, their country of origin and cost; and
  - 2) The location of the final assembly point for the rolling stock, including a description of the activities that will take place at the final assembly point and the cost of final assembly.
- X Bid Form #5: Federal Motor Vehicle Safety Standards Certification  
**Vendor shall also supply with bid a breakdown of FMVSS standards to be met with proposed vehicle.**
- X Bid Form #6: U.S. Comptroller's Debarment List Certification
- X Bid Form #7: Certification of Primary Participant Regarding Debarment, Suspension, and Other Responsibility Matters
- X Bid Form #8: Vendor's Certification of Understanding and Acceptance
- X Bid Form #9: Certification of Restrictions on Lobbying
- X Bid Form #10: Certification of Compliance with FTA's Vehicle Testing Requirements  
**A copy of the vehicle testing report (if available) shall be included with the bid.**
- X Exhibit A Pricing Page (8)



**DOCUMENTATION TO BE SUBMITTED WITH BID:**

**Section**  
**Referenced**

- X 3.2      Chassis: include Load leveling System: provide product description, warranty information and product literature.
  
- X 3.3      Engine: 3.6 Liter V-6 gasoline engine with electronic fuel injection: provide product description, warranty information and product literature.
  
- X 6.10     Radio: AM/FM Stereo with CD: provide product description, warranty information and product literature.
  
- X 3.8      Transmission: provide product description, warranty information and product literature.
  
- X 3.5      Radiator and Cooling System: provide product description, warranty information and product literature.
  
- X 3.6      High Idle System, provide product description, warranty information and product literature.
  
- X 4.2      Brakes: provide product description, warranty information and product literature.
  
- X 4.0      Tilt Wheel, Cruise Control and Power Steering: provide details of water testing procedures.
  
- X 2.16     Wheelbase: provide length of proposed wheelbase.
  
- X 3.9.4    Rear View Back-Up Camera: provide product description, warranty information and literature.
  
- X 4.3      Wheels: provide product description, warranty information and product literature.
  
- X 4.4      Tires: provide product description, warranty information and product literature
  
- X 4.5.6    Battery: provide product description, warranty information and product literature
  
- X 4.5.5    Alternator: provide product description, warranty information and product literature
  
- X 5.5      Front and Rear Heating and Air Conditioning: provide product description, warranty information, product literature.
  
- X 4.8      Body Specifications: provide a description of how conversion will take place and meet the specification requirements. Provide Actual Interior height and Body length of proposed vehicle.
  
- X 5.0      Sealant, Rustproofing and Undercoating: provide product description, warranty information and product literature.

- X 5.1      Passenger Doors and Stepwells: Provide product description, dimensions, description of interlock system of all doors and locks to be provided.
  
- X 5.8      Flooring: provide a description of product to be used, samples of floor covering, colors to be used and assembly process.
  
- X 6.1      Seats, Grab Handles, Passenger restraints: provide product description, warranty information and product literature.
  
- X 6.2      Mobility Aid/ Occupant Restraint Systems: provide product description, warranty information and product literature.
  
- X 6.13     Training: submit letter of understanding to the terms in this Section.
  
- X 6.8      Security Cameras System Including Playback: provide product description, warranty information and product literature.
  
- X 7.12.2   Warranty on Complete Vehicle.
  
- X 7.12.3   Warranty on Basic Vehicle Structure.
  
- X 7.12.5   Warranty: warranties to be provide on subsystems and components.
  
- X 11.3     Complete two (2) bids in binder form –one (1) marked for DPT.
  
- X 13.2 A   Complete mechanical description of vehicle, its construction and equipment including manufacturer's model name and / or number.
  
- X 13.2 B   Proposed interior floor plans, showing detailed dimensions including the location of the wheelchair securement system.
  
- X 13.2 C   Curb weight (empty weight) and gross vehicle weight rating (GVWR) of vehicle.
  
- X 13.2 D   Exterior Vinyl Colors: provide samples/chart of available colors.
  
- X 13.2 H   Identification of the conversion location of the van and listing of activities to take place at the location.
  
- X 13.2 I   A list of five (5) users names, addresses, emails and telephone numbers who have been provided similar equipment.
  
- X         No Debt Affidavit
  
- X         Addendum Acknowledgement

**List of Suggested Vendors**

Rohrer Vehicle Sales

**DESIGNATED CONTACT:** Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

\_\_\_\_\_  
 (Name, Title)  
 CHAD SEALS , COMMERCIAL SALES

\_\_\_\_\_  
 (Printed Name and Title)  
 5120 WARDS ROAD EVINGTON VA 24550

\_\_\_\_\_  
 (Address)  
 434-821-1000 / 434-821-4456


\_\_\_\_\_  
 (Phone Number) / (Fax Number)  
 chad@sonnymerryman.com

\_\_\_\_\_  
 (email address)

**CERTIFICATION AND SIGNATURE:** By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

SONNY MERRYMAN INC

\_\_\_\_\_  
 (Company)



\_\_\_\_\_  
 (Authorized Signature) (Representative Name, Title)

CHAD SEALS, COMMERCIAL SALES

\_\_\_\_\_  
 (Printed Name and Title of Authorized Representative)

5/3/17

\_\_\_\_\_  
 (Date)

434-821-1000 / 434-821-4456

\_\_\_\_\_  
 (Phone Number) (Fax Number)

- 21.1.1 Failure to provide Contract Items in accordance with the requirements c obtained herein.
- 21.1.2 Failure to comply with other specifications and requirements contained herein.
- 21.1.3 Failure to comply with any laws, rules, and ordinances applicable to the Contract Services provided under this Contract.
- 21.1.4 Failure to remedy deficient performance upon request.
- 21.2 The Following remedies shall be available to Agency upon default.
  - 21.2.1 Immediate cancellation of the Contract.
  - 21.2.2 Immediate cancellation of one or more release orders issued under this Contract.
  - 21.2.3 Any other remedies available in law or equity.

**22. MISCELLANEOUS:**

- 22.1 **No Substitutions:** Vendor shall supply only Vehicles as submitted in response to the Solicitation unless a contract modification is approved in accordance with the provisions contained in this Contract.
- 22.2 **Vendor Supply:** Vendor must carry sufficient inventory of the Contract Items being offered to fulfill its obligations under this Contract. By signing its bid, Vendor certifies that it can supply the Contract Items contained in its bid response.
- 22.3 **Contract Manager:** During its performance of this Contract, Vendor must designate and maintain a primary contract manager responsible for overseeing Vendor's responsibilities under this Contract. The Contract manager must be available during normal business hours to address any customer service or other issues related to this Contract. Vendor should list its Contract manager and his or her contact information below.

**Contract Manager:** CHAD SEALS

**Telephone Number:** 434-821-1000 EXT 352

**Fax Number:** 434-821-4456

**Email Address:** chad@sonnymerryman.com

**22.4 NOTIFICATION OF FEDERAL PARTICIPATION**

**BID FORM #1**

**MANDATORY BID FORM – MUST BE SUBMITTED WITH BID**

Location(s) of the Technical Service Representative(s) and parts distribution center(s) closest or in the State of West Virginia.

**Location(s) of the technical service representative(s).**

**Name:** BRADY CHILDRESS \_\_\_\_\_

**Address:** 5120 WARDS ROAD \_\_\_\_\_  
EVINGTON VA 24550 \_\_\_\_\_

**Telephone:** 434-821-1000 \_\_\_\_\_

**Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_  
\_\_\_\_\_

**Telephone:** \_\_\_\_\_

**Location(s) of parts distribution center(s).**

**Name:** GERALD LAYNE \_\_\_\_\_

**Address:** 5120 WARDS ROAD \_\_\_\_\_  
EVINGTON VA 24550 \_\_\_\_\_

**Telephone:** 434-821-1000 \_\_\_\_\_

**Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_  
\_\_\_\_\_

**Telephone:** \_\_\_\_\_

**BID FORM #2**

**CERTIFICATION FOR AIR & WATER POLLUTION  
MANDATORY BID FORM – MUST BE SUBMITTED WITH BID**

The Vendor certifies that the vehicles proposed:

**ARE**  in compliance with the regulations in 40 CFR Part 85, 40 CFR Part 86, 40 CFR Part 600, Clean Water Act and the air/water pollution criteria established by the Environmental Protection Agency of the United States Government.

**ARE NOT**  in compliance with the regulations in 40 CFR Part 85, 40 CFR Part 86, 40 CFR Part 600, Clean Water Act and the air/water pollution criteria established by the Environmental Protection Agency of the United States Government.

5/3/17

Date

  
Authorized Signature

COMMERCIAL SALES

Title

SONNY MERRYMAN INC  
Company Name



**BID FORM #3**

**DISADVANTAGED VEHICLEINESS ENTERPRISE  
VENDORS/ MANUFACTURERS CERTIFICATION**

**MANDATORY BID FORM – MUST BE SUBMITTED WITH BID**

**(Check appropriate statement)**

The Vendor, if a transit vehicle manufacturer, hereby certifies that it has complied with the requirements of 49 CFR Section 26.49 by submitting an annual DBE goal to the Federal Transit Administration (FTA). The goal has either been approved or not disapproved by FTA.

The Vendor, if a non-manufacturing supplier, hereby certifies that the manufacturer of the transit vehicle to be supplied has complied with the above-referenced requirement of 49 CFR Section 26.49.

5/3/17

Date



Authorized Signature

COMMERCIAL SALES

Title

SONNY MERRYMAN INC

Company Name

**BID FORM #4**

**BUY AMERICA CERTIFICATION  
ROLLING STOCK  
MANDATORY BID FORM – MUST BE SUBMITTED WITH BID**

**Certificate of Compliance**

The bidder or offeror hereby certifies that it will comply with the requirements of section 165(b) (3), of the Surface Transportation Assistance Act of 1982, as amended, and the applicable regulations of 49 CFR 661.11:

5/3/17

Date



Authorized Signature

SONNY MERRYMAN INC

Company Name

CHAD SEALS

Name

COMMERCIAL SALES

Title

**Certificate for Non-Compliance**

The bidder or offeror hereby certifies that it cannot comply with the requirements of section 165(b) (3) of the Surface Transportation Assistance Act of 1982, as amended, but may qualify for an exception to the requirement consistent with section 165(b) (2) or (b) (4) of the Surface Transportation Assistance Act, as amended, and the applicable regulations in 49 CFR 661.7.

Date

Authorized Signature

Company Name

Name

Title

**StarTrans Bus**

**Pre-Award BUY AMERICA CERTIFICATION**

This certifies compliance with FTA Buy America Regulations set forth in 49 C.F.R. § 661.11 for each component that more than 60% of the subcomponents, by cost, are of U.S. origin/manufacture and is manufactured in the U.S. Manufacturer attests that the U.S. content of subcomponents, by cost is as indicated below.

COMPONENT NAME	END USER: WWA CLASS A	MANUFACTURER NAME, PRODUCT TYPE	MFG LOCATION	% U.S. CONTENT	% OF TOTAL COST
FORD E-350 138" 6.8L GAS		StarTrans Bus CANDIDATE 2	Goshen, IN	74.54%	
SUBCOMPONENT NAME		MANUFACTURER NAME	MFG LOCATION	\$\$ U.S. CONTENT	
CHASSIS		FORD MOTOR CO	US	\$21,783	56.19%
AIR CONDITIONING		ACC - SPHEROS	US	\$2,520	6.50%
PASSENGER SEATS		FREEDMAN	US	\$3,483	8.98%
SUSPENSION SYSTEM		MOR-RYDE	US	\$570	1.47%
WC & REAR DOORS		CHALLENGER DOOR	US	\$222	0.57%
ROOF HATCH		TRANSPEC	US	\$159	0.41%
AUXILIARY HEATER		PRO AIR	US	\$159	0.41%
-		-	US	\$0	0.00%
-		-	US	\$0	0.00%
-		-	US	\$0	0.00%
-		-	US	\$0	0.00%
-		-	US	\$0	0.00%

**TOTAL CONVERSION MATERIAL COST** **\$38,766**  
**MAJOR ACTIVITIES UNDERTAKEN AT THE FINAL ASSEMBLY LOCATION:**

All purchasing of raw and assembled materials including the chassis, fabrication and welding of the frame, prime paint, installation of all wood, fabric, FRP, aluminum and/or other body panel and/or trim materials, installation of doors and windows, HVAC components and systems, electrical systems, installation of any required options such as wheel chair lifts, tie down kits, seats, radios and optional electronic items, if any, complete undercoat, exterior paint and/or graphics if ordered, full road test, rain booth test and all other final quality functions as needed to ensure compliance with the contract.

**BODY V.I.N. OF UNITS DELIVERED UNDER POST DELIVERY BUY AMERICA:**

LABOR AS A % OF TOTAL COST NOT INCLUDED IN THE MATERIAL COSTS ABOVE:  
 LABOR AS \$\$ OF TOTAL COST NOT INCLUDED IN THE MATERIAL COSTS ABOVE:

11.28%
\$2,160.00

*Mark Barczak*  
 AUTHORIZED SIGNATURE

Government Bid Admin  
 TITLE

4/28/2017  
 DATE

MARK BARCZAK  
 PRINT NAME

**StarTrans Bus**

**Pre-Award BUY AMERICA CERTIFICATION**

This certifies compliance with FTA Buy America Regulations set forth in 49 C.F.R. § 661.11 for each component that more than 60% of the subcomponents, by cost, are of U.S. origin/manufacture and is manufactured in the U.S. Manufacturer attests that the U.S. content of subcomponents, by cost is as indicated below.

COMPONENT NAME	END USER: WWA CLASS B	MANUFACTURER NAME, PRODUCT TYPE	MFG LOCATION	% U.S. CONTENT	% OF TOTAL COST
FORD E-350 138" 6.8L GAS		StarTrans Bus CANDIDATE 2	Goshen, IN	76.44%	
SUBCOMPONENT NAME		MANUFACTURER NAME	MFG LOCATION	\$\$ U.S. CONTENT	
CHASSIS		FORD MOTOR CO	US	\$21,783	52.82%
AIR CONDITIONING		ACC - SPHEROS	US	\$2,520	6.11%
PASSENGER SEATS		FREEDMAN	US	\$2,511	6.09%
SUSPENSION SYSTEM		MOR-RYDE	US	\$570	1.38%
WC & REAR DOORS		CHALLENGER DOOR	US	\$804	1.95%
ROOF HATCH		TRANSPEC	US	\$159	0.39%
AUXILIARY HEATER		PRO AIR	US	\$159	0.39%
WHEELCHAIR LIFT		BRAUN	US	\$2,679	6.50%
WHEELCHAIR TIE-DOWNS		QSTRAINT	US	\$339	0.82%
-		-	US	\$0	0.00%
-		-	US	\$0	0.00%
-		-	US	\$0	0.00%

TOTAL CONVERSION MATERIAL COST

**\$41,239**

MAJOR ACTIVITIES UNDERTAKEN AT THE FINAL ASSEMBLY LOCATION:

All purchasing of raw and assembled materials including the chassis, fabrication and welding of the frame, prime paint, installation of all wood, fabric, FRP, aluminum and/or other body panel and/or trim materials, installation of doors and windows, HVAC components and systems, electrical systems, installation of any required options such as wheel chair lifts, tie down kits, seats, radios and optional electronic items, if any, complete undercoat, exterior paint and/or graphics if ordered, full road test, rain booth test and all other final quality functions as needed to ensure compliance with the contract.

BODY V.I.N. OF UNITS DELIVERED UNDER POST DELIVERY BUY AMERICA:

LABOR AS A % OF TOTAL COST NOT INCLUDED IN THE MATERIAL COSTS ABOVE:

9.99%

LABOR AS \$\$ OF TOTAL COST NOT INCLUDED IN THE MATERIAL COSTS ABOVE:

\$2,160.00

*Mark Barczak*  
AUTHORIZED SIGNATURE

Government Bid Admin  
TITLE

4/28/2017  
DATE

MARK BARCZAK  
PRINT NAME

**StarTrans Bus**

**Pre-Award BUY AMERICA CERTIFICATION**

This certifies compliance with FTA Buy America Regulations set forth in 49 C.F.R. § 661.11 for each component that more than 60% of the subcomponents, by cost, are of U.S. origin/manufacture and is manufactured in the U.S. Manufacturer attests that the U.S. content of subcomponents, by cost is as indicated below.

COMPONENT NAME	END USER: WWA CLASS C	MANUFACTURER NAME, PRODUCT TYPE	MFG LOCATION	% U.S. CONTENT	% OF TOTAL COST
FORD E-350 138" 6.8L GAS		StarTrans Bus CANDIDATE 2	Goshen, IN	77.03%	
SUBCOMPONENT NAME		MANUFACTURER NAME	MFG LOCATION	\$\$ U.S. CONTENT	
CHASSIS		FORD MOTOR CO	US	\$21,783	51.84%
AIR CONDITIONING		ACC - SPHEROS	US	\$2,520	6.00%
PASSENGER SEATS		FREEDMAN	US	\$2,988	7.11%
SUSPENSION SYSTEM		MOR-RYDE	US	\$570	1.36%
WC & REAR DOORS		CHALLENGER DOOR	US	\$804	1.91%
ROOF HATCH		TRANSPEC	US	\$159	0.38%
AUXILIARY HEATER		PRO AIR	US	\$159	0.38%
WHEELCHAIR LIFT		BRAUN	US	\$2,679	6.38%
WHEELCHAIR TIE-DOWNS		QSTRAINT	US	\$705	1.68%
-		-	US	\$0	0.00%
-		-	US	\$0	0.00%
-		-	US	\$0	0.00%

**TOTAL CONVERSION MATERIAL COST**

**\$42,016**

**MAJOR ACTIVITIES UNDERTAKEN AT THE FINAL ASSEMBLY LOCATION:**

All purchasing of raw and assembled materials including the chassis, fabrication and welding of the frame, prime paint, installation of all wood, fabric, FRP, aluminum and/or other body panel and/or trim materials, installation of doors and windows, HVAC components and systems, electrical systems, installation of any required options such as wheel chair lifts, tie down kits, seats, radios and optional electronic items, if any, complete undercoat, exterior paint and/or graphics if ordered, full road test, rain booth test and all other final quality functions as needed to ensure compliance with the contract.

**BODY V.I.N. OF UNITS DELIVERED UNDER POST DELIVERY BUY AMERICA:**

LABOR AS A % OF TOTAL COST NOT INCLUDED IN THE MATERIAL COSTS ABOVE:

9.65%

LABOR AS \$\$ OF TOTAL COST NOT INCLUDED IN THE MATERIAL COSTS ABOVE:

\$2,160.00

*Mark Barczak*  
AUTHORIZED SIGNATURE

Government Bid Admin  
TITLE

4/28/2017  
DATE

MARK BARCZAK  
PRINT NAME

**StarTrans Bus**

**Pre-Award BUY AMERICA CERTIFICATION**

This certifies compliance with FTA Buy America Regulations set forth in 49 C.F.R. § 661.11 for each component that more than 60% of the subcomponents, by cost, are of U.S. origin/manufacture and is manufactured in the U.S. Manufacturer attests that the U.S. content of subcomponents, by cost is as indicated below.

COMPONENT NAME	END USER: WVA CLASS D	MANUFACTURER NAME, PRODUCT TYPE	MFG LOCATION	% U.S. CONTENT	% OF TOTAL COST
FORD E-350 158" 6.8L GAS		StarTrans Bus CANDIDATE 2	Goshen, IN	77.40%	
SUBCOMPONENT NAME		MANUFACTURER NAME	MFG LOCATION	\$\$ U.S. CONTENT	
CHASSIS		FORD MOTOR CO	US	\$22,300	52.40%
AIR CONDITIONING		ACC - SPHEROS	US	\$2,520	5.92%
PASSENGER SEATS		FREEDMAN	US	\$2,712	6.37%
SUSPENSION SYSTEM		MOR-RYDE	US	\$570	1.34%
WC & REAR DOORS		CHALLENGER DOOR	US	\$804	1.89%
ROOF HATCH		TRANSPEC	US	\$159	0.37%
AUXILIARY HEATER		PRO AIR	US	\$159	0.37%
WHEELCHAIR LIFT		BRAUN	US	\$2,679	6.30%
WHEELCHAIR TIE-DOWNS		QSTRAINT	US	\$1,035	2.43%
-		-	US	\$0	0.00%
-		-	US	\$0	0.00%
-		-	US	\$0	0.00%

**TOTAL CONVERSION MATERIAL COST** **\$42,557**  
**MAJOR ACTIVITIES UNDERTAKEN AT THE FINAL ASSEMBLY LOCATION:**

All purchasing of raw and assembled materials including the chassis, fabrication and welding of the frame, prime paint, installation of all wood, fabric, FRP, aluminum and/or other body panel and/or trim materials, installation of doors and windows, HVAC components and systems, electrical systems, installation of any required options such as wheel chair lifts, tie down kits, seats, radios and optional electronic items, if any, complete undercoat, exterior paint and/or graphics if ordered, full road test, rain booth test and all other final quality functions as needed to ensure compliance with the contract.

**BODY V.I.N. OF UNITS DELIVERED UNDER POST DELIVERY BUY AMERICA:**

LABOR AS A % OF TOTAL COST NOT INCLUDED IN THE MATERIAL COSTS ABOVE:  
 LABOR AS \$\$ OF TOTAL COST NOT INCLUDED IN THE MATERIAL COSTS ABOVE:

9.64%
\$2,160.00

*Mark Barczak*  
 AUTHORIZED SIGNATURE

Government Bid Admin  
 TITLE

4/28/2017  
 DATE

MARK BARCZAK  
 PRINT NAME





*Supplying the world with safety*

## Certificate Buy America Provisions

Q'Straint hereby certifies that it will comply with the requirements of section 165 (b) (3) of the Surface Transportation Assistance Act of 1982, as amended and regulations contained in 49 CFR Part 661.11.

Product Name/Number, Description	Country of Origin	% Domestic
Q-8100-A1-L	USA	>60%
Q5-7583-A	USA	>60%

The final assembly point location is: 5553 Ravenswood Rd., Bldg.110, Ft. Lauderdale FL,33312.

Signed: 

Date: August 18, 2016

Title: Customer Satisfaction Manager

If you have any additional questions, please do not hesitate to contact us at 1-800-987-9987.

5553 Ravenswood - Building 110  
Ft. Lauderdale, Florida 33312  
Tel: 954-986-6665 Fax 954-986-0021  
E-mail: [qstraint@qstraint.com](mailto:qstraint@qstraint.com)

ISO 9002 Registered Quality System



Corporate Office  
1966 Moyer Ave, Elkhart IN 46515  
Ph. 574-293-1581; Fax: 574-970-0883

**BUY AMERICA CERTIFICATION**

Company Name: MOR/ryde International, Inc.  
Address: 1966 Sterling Avenue  
Elkhart, IN 46516  
Phone: 574-293-1581  
Fax: 574-970-0883

The above named supplier does hereby certify that more than 60 percent of the cost of the components supplied to Starcraft Bus and Mobility, division of Forest River in support of the manufacture of its transit buses, is of domestic (U.S) origin.

As defined under the Buy America Requirement: Final Rule, 49 CFR Part 661.11, the cost includes the cost of labor, material, allowances for profit, and the administrative and overhead cost attributed to those components under normal accounting principles.

**I. COMPONENTS**

<u>Subcomponent</u>	<u>Subcomponents Cost/Percent</u>
Suspension Assemblies Including	
RL-E45-02C	
RL-E35-04C	

II. **TOTAL COST/PERCENT:** More than 60%

III. **LOCATION OF MANUFACTURING:** Elkhart, IN, USA

IV. **AUTHORIZING SIGNATURE:** Janice M. Freers **DATE:** 2/14/17

**PRINTED NAME:** Janice M. Freers **TITLE:** Manufacturing Administration



**BID FORM #5**


**FEDERAL MOTOR VEHICLE  
SAFETY STANDARDS CERTIFICATION**

**MANDATORY BID FORM – MUST BE SUBMITTED WITH BID**

The vendor hereby certifies that it shall submit, as required by Title 49 of the CFR, Part 663 - Subpart D, it's self-certification information stating that the vehicle(s) will comply with the relevant Federal Motor Vehicle Safety Standards issued by the National Highway Traffic Safety Administration in Title 49 of the Code of Federal Regulations, Part 571.

5/3/17

Date

  
Authorized Signature

COMMERCIAL SALES

Title

SONNY MERRYMAN INC

Company Name

**BID FORM #6**  
**U.S. Comptroller's Debarment List Certification**  
**MANDATORY BID FORM - MUST BE SUBMITTED WITH BID**

SONNY MERRYMAN INC hereby certifies that it

       **IS or**

XX **IS NOT** (specify one) included on the U.S. GSA's debarment and suspension information available at <https://www.sam.gov>.

5/3/17

Date



Authorized Signature

COMMERCIAL SALES

Title

SONNY MERRYMAN INC

Company Name

**BID FORM #7**

**MANDATORY BID FORM – MUST BE SUBMITTED WITH BID  
CERTIFICATION OF PRIMARY PARTICIPANT REGARDING  
DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS**

The Primary Participant (applicant for an FTA grant or cooperative agreement, or potential contractor for a major third party contract),  
SONNY MERRYMAN INC (COMPANY NAME) certifies to the best of its knowledge and belief, that it and its principals:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
2. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property.
3. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (2) of this certification; and
4. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

If the primary participant (applicant for an FTA grant, or cooperative agreement, or potential third party contractor) is unable to certify to any of the statements in this certification, the participant shall attach an explanation to this certification.)

THE PRIMARY PARTICIPANT (APPLICANT FOR AN FTA GRANT OR COOPERATIVE AGREEMENT, OR POTENTIAL CONTRACTOR FOR A MAJOR THIRD PARTY CONTRACT),  
SONNY MERRYMAN INC, CERTIFIES OR AFFIRMS THE TRUTHFULNESS AND ACCURACY OF THE CONTENTS OF THE STATEMENTS SUBMITTED ON OR WITH THIS CERTIFICATION AND UNDERSTANDS THAT THE PROVISIONS OF 31 U.S.C. SECTIONS 3801 ET SEQ. ARE APPLICABLE THERETO.

COMMERCIAL SALES

\_\_\_\_\_  
Signature and Title of Authorized Official

**BID FORM #8**  
**MANDATORY BID FORM – MUST BE SUBMITTED WITH BID**

***VENDOR'S CERTIFICATION OF  
UNDERSTANDING AND ACCEPTANCE***

The Vendor hereby certifies that all Technical Specifications and Contract Terms and Conditions have been carefully reviewed, are fully understood and shall be adhered to in performance and completion of any contract resulting from this bid.

5/3/17

Date



Authorized Signature

COMMERCIAL SALES

Title

SONNY MERRYMAN INC

Company Name

**SPECIFICATION COMPLIANCE**

**NOTE: Please check if what is offered is in exact compliance with specifications. Any discrepancies must be listed as an attachment to the bid proposal. Exact dimensions and/or descriptions must be provided as a part of the Vendor's bid proposal when submitted.**

XX Bid proposal submitted meets and/or exceeds all specification requirements.

       Bid proposal submitted contains deviations from specification requirements.  
Detailed descriptions of these deviations have been provided with this bid proposal.

**BID FORM #9**  
**MANDATORY BID FORM – MUST BE SUBMITTED WITH BID**  
**CERTIFICATION OF RESTRICTIONS ON LOBBYING**

The undersigned (Vendor, Contractor) certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid by or on behalf of the undersigned, to any person for influence or attempt to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress regarding the award of a Federal grant, loan (including a line of credit), cooperative agreement, loan guarantee, or loan insurance, or the extension, continuation, renewal, amendment, or modification of any Federal grant, loan (including a line of credit), cooperative agreement, loan guarantee, or loan insurance.
2. If any funds other than Federal appropriated funds have been or will be paid to any person to influence or attempt to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or any employee of a Member of Congress in connection with any application for a Federal grant, loan (including a line of credit), cooperative agreement, loan guarantee, or loan insurance, the undersigned assures that it will complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," Rev. 7-97; and
3. The undersigned understands that the language of this certification shall be included in the award documents for all sub awards at all tiers (including subcontracts, sub grants, sub agreements, and contracts under grants, loans (including a line of credit), cooperative agreements, loan guarantees, and loan insurance.

Undersigned understands that this certification is a material representation of fact upon which reliance is placed by the Federal government and that submission of this certification is a prerequisite for providing a Federal grant, loan (including a line of credit), cooperative agreement, loan guarantee, or loan insurance transaction covered by 31 U.S.C. 1352. The undersigned also understands that any person who fails to provide a required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The (Vendor, Contractor) SONNY MERRYMAN INC, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the (Vendor, Contractor) understands and agrees that the provisions of 31 U.S.C. §§ 3801, et seq., apply to this certification and disclosure.

5/3/17  
Date

  
Authorized Signature

COMMERCIAL SALES  
Title

**BID FORM #10**

**CERTIFICATION OF COMPLIANCE WITH FTA'S  
BUS TESTING REQUIREMENTS**

The undersigned (Vendor/Manufacturer) certifies that the vehicle offered in this procurement complies with 49 U.S.C. 5318, as amended by MAP-21, and FTA regulations, "Bus Testing," 49 CFR Part 665.

The undersigned understands that misrepresenting the testing status of a vehicle acquired with Federal financial assistance may subject the undersigned to civil penalties as outlined in the Department of Transportation's rule on Program Fraud Civil Remedies, 49 CFR Part 31. In addition, the undersigned understands that FTA may suspend or debar a manufacturer under the procedures in 49 CFR Part 29.

5/3/17

---

Date



---

Authorized Signature

COMMERCIAL SALES

---

Title

SONNY MERRYMAN INC

---

Company Name

STATE OF WEST VIRGINIA  
Purchasing Division

**PURCHASING AFFIDAVIT**

**MANDATE:** Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

**EXCEPTION:** The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

**DEFINITIONS:**

**"Debt"** means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

**"Employer default"** means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

**"Related party"** means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

**AFFIRMATION:** By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

**WITNESS THE FOLLOWING SIGNATURE:**

Vendor's Name: SONNY MERRYMAN INC

Authorized Signature: *C. C. S.* Date: 5/3/17

State of VIRGINIA

County of CAMPBELL, to-wit:

Taken, subscribed, and sworn to before me this 3 day of MAY, 2017.

My Commission expires MARCH 31, 2018.

**AFFIX SEAL HERE**



**NOTARY PUBLIC**

*April A. R. Monroe Droog*  
Purchasing Affidavit (Revised 08/01/2015)

## IMPORTANT CONTACT INFORMATION

**Mailing Address: P.O. Box 495, Rustburg, VA 24588**

**Shipping: 5120 Wards Road, Evington, VA 24550**

• **MAIN OFFICE:**

**TOLL FREE: (800) 533-1006**

(434) 821-1000

FAX: (434) 821-8203

WEB: [www.sonymerryman.com](http://www.sonymerryman.com)

• **SERVICE DEPARTMENT:**

**TOLL FREE (800) 533-1006**

FAX: (434) 821-2131

Brady Childress, Director Customer Support

Ext. 332, [brady@sonnymerryman.com](mailto:brady@sonnymerryman.com)

Pam Lawhorn, Service Administrator

Ext. 341, [pam@sonnymerryman.com](mailto:pam@sonnymerryman.com)

Tim George, Service Team Leader

Ext. 353, [tim@sonnymerryman.com](mailto:tim@sonnymerryman.com)

• **WARRANTY:**

Patty Webb, Warranty Administrator

Ext. 323, [patty@sonnymerryman.com](mailto:patty@sonnymerryman.com)

• **PARTS:**

**TOLL FREE: (800) 386-7278**

FAX: (434) 821-2621

Gerald Layne, Parts Team Leader

Ext. 318, [gerald@sonnymerryman.com](mailto:gerald@sonnymerryman.com)

• **BUSINESS:**

June Wooten, Accounts Payable

Ext. 327, [june@sonnymerryman.com](mailto:june@sonnymerryman.com)

**Hampton Roads Sales & Service Center**

1221 Fleetway Drive

Chesapeake, VA 23320

**TOLL FREE: (866) 481-7211**

(757) 361-9070, FAX (757) 361-9072

Reggie Lewis, Customer Support Manager

[reggie@sonnymerryman.com](mailto:reggie@sonnymerryman.com)

**Northern Virginia Sales & Service Center**

10149 Piper Lane

Bristow, VA 20136

**TOLL FREE: (866) 470-0305**

(703) 331-5516 – (703) 331-5517

FAX (703) 331-5518

Ken Lewis, Customer Support Manager

[KenLewis@sonnymerryman.com](mailto:KenLewis@sonnymerryman.com)



## **Service Locations**

- **Mathney Motor Truck Company**  
4125 1<sup>st</sup> Ave.  
Nitro, WV 25143  
(304)769-5860
- **Matheny Motor Truck Company**  
50 Matheny Lane  
Mineral Wells, WV 26150  
(304)485-4418
- **Sonny Merryman Inc.**  
10149 Piper Lane  
Bristow, VA 20136  
(703)331-5516
- **Sonny Merryman Inc.**  
5120 Wards Road  
Lynchburg, VA 24550  
1-800-533-1006
- **Nearest Ford dealer that is truck certified (E450)**



## STARTRANS BUS WARRANTY

### NOTICE

Please return the warranty registration card to register the warranty with STARTRANS BUS so that Startrans Bus may record your rights under this limited warranty and to assure prompt assistance. Your dealer will provide the warranty card for you to sign. If you do not remember signing a STARTRANS BUS warranty card at the time of delivery, please contact your dealer.

### 1. Who Warrants the product

The product, as described and limited here, is warranted by the manufacturer and installer of the body: STARTRANS BUS, Division of Forest River, Inc., hereinafter referred to as STARTRANS BUS, 2408 Century Drive, Goshen, IN; an Indiana Corporation; and is administered by the STARTRANS BUS Customer Service Dept., Goshen, Indiana 46528.

### 2. Who Is Covered

STARTRANS BUS, the warrantor, extends this limited warranty to the original owner of the vehicle during the WARRANTY PERIOD.

### 3. What Is Covered

STARTRANS BUS, your warrantor, extends the following limited warranty to you, which limited warranty covers your conversion only as to material defects in all materials and workmanship supplied by or performed by STARTRANS BUS.

### 4. Warranty Period

The STARTRANS BUS limited warranty is for a period of one (1) year from the date of first delivery or 12,000 miles, whichever occurs first, except for other coverages listed under "Other Warranties that may Apply" and items listed under "Exclusions and Limitations" and "Limits of the Warranty."

### 5. Extended Warranty on Structural Items

Warrantor warrants to the original purchaser for a period of five (5) years from the date of first delivery or 75,000 miles, whichever comes first, that this produce shall be free of SUBSTANTIAL DEFECTS arising out of or relating to the structural portion of the product. THIS STRUCTURAL WARRANTY IS INTENDED TO COVER ONLY THE PERFORMANCE OF THE STEEL CAGE STRUCTURE OF THE BUS BODY.

Custom paint and/or tape application, if performed by STARTRANS BUS, is warranted to be free of substantial defects in workmanship and materials provided by STARTRANS BUS for one (1) year (12 months) from date of original purchase.

### 6. Other Warranties That May Apply

STARTRANS BUS does not warrant the base vehicle itself. The vehicle engine, chassis, drive train, suspension system, battery, and other chassis components are covered by a separate warranty offered by the manufacturer of the vehicle and administered by the manufacturer's authorized dealers. The tire manufacturer separately warrants tires. Examples of other manufacturer warranties, which may include the following, but not limited to:

- Electrical Components
- Air Conditioning and Heater(s)
- Wheelchair Restraints and Wheelchair Lifts

For a complete list of items and their respective warrantor, please contact Startrans Bus Customer Service Department.

### 7. Owner's Responsibility

Proper maintenance and cleaning of the exterior and interior of the vehicle is the responsibility of the owner. See the owner's manual for proper care instructions. Defects or damage as a result of improper care or maintenance are not covered by the warranty.

### 8. Exclusions and Limitations

Damage caused by abuse, misuse, neglect, failure to observe reasonable and required maintenance practices, acid rain, accidents, natural disasters, acts of war and normal wear and tear and facing of fabrics, carpeting and/or fiberglass are not covered. Light bulbs and fuses are not covered.

Damage or deterioration to the physical appearance of the unit if such damage is the result of normal use, wear and tear, or exposure to the elements.

Damages that may occur to the chassis, frame, other parts or components that occur due to overloading will not be covered and may invalidate portions of the STARTRANS BUS warranty.

Cosmetic or surface corrosion resulting from stone chips or scratches in paint are not covered.

STARTRANS BUS does not cover accessories covered by their own manufacturer's warranties. Those items listed in paragraph 6 above are not covered or warranted by STARTRANS BUS.

Replacement parts provided under terms of the warranty will whenever possible, match original equipment. When necessary, STARTRANS BUS will substitute parts of comparable function and value. Defective items may be replaced with new, remanufactured, reconditioned or repaired components.

Modifications, alterations or repairs performed by unauthorized personnel may invalidate portions of the STARTRANS BUS warranty. In addition, USING THIS VEHICLE TO TOW ANOTHER VEHICLE IS PROHIBITED AND MAY VOID WARRANTY. Contact STARTRANS BUS Customer Service before you make any changes.

### **9. Recovery Limitations**

NO PERSON SHALL BE ENTITLED TO RECOVER FROM WARRANTOR FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES ARISING OUT OF OR RELATING TO ANY DEFECT IN THE PRODUCT. These limitations include, but are not limited to, loss of time; loss of use; loss of revenues, salaries or commissions; towing charges; bus fares; car rentals; gasoline expenses; telephone charges; inconvenience or other incidental damages.

### **10. How to get warranty service**

To obtain warranty service, contact or visit the dealership where you originally purchased your vehicle or another warranty service facility designated by STARTRANS BUS. Have the dealership contact Startrans bus Customer Service Department for authorization to have a warranty claim submitted. If you or your dealer has moved, or if your dealer is no longer in business, contact STARTRANS BUS Customer Service Department (see address and telephone numbers below) for the name of a STARTRANS BUS dealer nearest you. Your claim must be made within 30 days of the discovery of the defect. Based on the determination of STARTRANS BUS, and subject to the terms of the warranty, the warranty repair work will be authorized by STARTRANS BUS.

All warranty claims must be reported within the warranty period. Warranty personnel must authorize all warranty service prior to performance. Warranty service may be reported directly to the warrantor or to one of their authorized dealers. If warranty personnel approve warranty service, you must leave the unit at the appropriate warranty service location for a sufficient time to perform service.

### **11. Who Performs Warranty Service**

The best place to obtain warranty service is at the dealership where you originally purchased your bus. If the dealership cannot perform the service work, they should call STARTRANS BUS Customer Service Department for assistance (see number below). If you are unable to visit your original dealer, contact STARTRANS BUS Customer Service Department (address below) for the name and location of a STARTRANS BUS dealer near you.

### **12. Dispute Resolution**

Should you be unable to resolve a disagreement with your dealer regarding your right to pursue warranty coverage for a needed repair, contact the STARTRANS BUS Customer Service Department (see address below). If a dispute about warranty service arises between STARTRANS BUS and you, the owner, the disagreement will be resolved in accordance with the customary procedures of the American Arbitration Association relating to commercial transactions, or the dispute will be submitted to a panel of three (3) arbitrators for decision. The panel will be made up of one member appointed by STARTRANS BUS, one member appointed by the complainant/owner, and one member from the arbitrators group mentioned above. Any and all legal remedies shall be available to the owner after pursuing this informal dispute resolution if a ruling is entered against STARTRANS BUS and STARTRANS BUS fails to abide by the ruling. The expenses of arbitration will be paid by the party against whom the arbitrator(s) rule.

### **13. Limits Of Warranty**

This written statement of limited warranty represents the entire warranty authorized and offered by STARTRANS BUS. There are no warranties or representations beyond those expressed in this written document. Any dealership, salesperson or agent cannot amend it. It expressly limits all warranties, including, but not limited to, by way of specification, both express and implied warranties, including warranties or merchantability and fitness for a particular purpose along with all other liabilities or obligations of STARTRANS BUS.

### **FEDERAL COMPLIANCE**

THE TERMS OF THE WARRANTOR'S UNDERTAKING EXPRESSED IN THIS LIMITED WARRANTY ARE DRAFTED TO COMPLY WITH THE MAGNUSON MOSS WARRANTY LEGISLATION, P.L. 93-637 OF 1974, AND OTHER APPLICABLE LAW. ANY WARRANTY PROVISIONS PROMULGATED BY THE FEDERAL TRADE COMMISSION PURSUANT TO RULES OR ANY OTHER LAW RELATIVE THERETO ARE EXPRESSLY INCORPORATED HEREIN. TO THE EXTENT ANY PROVISIONS OF THIS LIMITED WARRANTY ARE INCONSISTENT WITH STATE LAWS, ONLY THOSE PARTS INCONSISTENT ARE VOID.

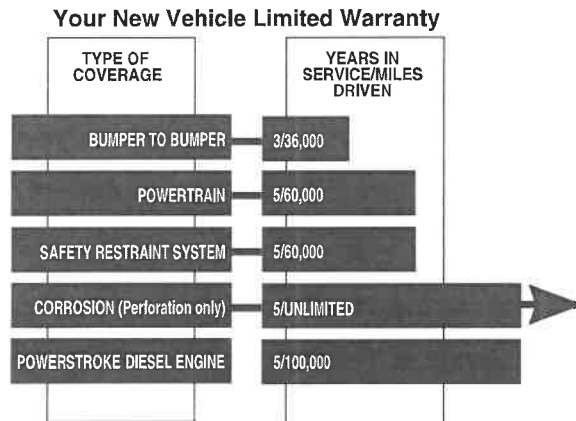
STARTRANS BUS  
Division of Forest River, Inc.  
CUSTOMER SERVICE DEPT.  
2408 Century Drive  
Goshen, IN 46528  
Phone: 800.348.7440

## QUICK REFERENCE: WARRANTY COVERAGE

This chart gives a general summary of your warranty coverage provided by Ford Motor Company under the **New Vehicle Limited Warranty**. Please refer to the description of warranty coverage for more specific information.

For each type of coverage, the chart shows two measures:

- years in service
- miles driven



The measure that occurs first determines how long your coverage lasts. For example: Your Bumper to Bumper Coverage lasts for three years - unless you drive more than 36,000 miles before three years elapse. In that case, your coverage ends at 36,000 miles.

For more details on coverage, see:

- ➔ **What is Covered?** (pages 8-12)
- ➔ **What is Not Covered?** (pages 12-15)

### WHAT IS COVERED?

Your NEW VEHICLE LIMITED WARRANTY gives you specific legal rights. You may have other rights that vary from state to state. Under your New Vehicle Limited Warranty if:

- your Ford vehicle is properly operated and maintained, and



The following information is submitted for all Startrans Bus products proposed on  PTR 1700000005  as supporting documentation of the structural soundness and impact resistance of the bodies manufactured. All vehicles are built using virtually the same materials with some minor differences in the height and width of cross members due to entry floor heights and/or body width variations.

A representative set of construction prints provided by engineering supplements this verbal accounting of our materials and assembly specifications.

If, in the reviewing of these written technical specifications and engineering frame prints submitted any questions arise, please contact us immediately for any clarification or help in interpretation and understanding.

## **1.0 Body Construction – General Frame Construction**

1. Manufactured from all aluminized steel products, the floor, roof, side walls, rear wall, driver halo assembly and entry door assembly are all wire welded (MIG) together to form an integral aluminized steel frame that is thoroughly coated in our primer paint shop, then mounted with specified hardware to the rubber body mount points (pucks) supplied by the chassis manufacturer. Once joined to the chassis, the bus finishing process begins.

### **1.0.1 Floor frame construction and assembly –**

- 1.0.1.1** Cross Members -- The floor cross members form the base structural support for the rest of the frame components. Our cross members are constructed of 14 gauge aluminized steel, formed to a capital “C” shape. Cross members over the fuel tank are made to provide the clearance needed to conform with FMVSS301, and include formed internal reinforcements welded in place for additional strength. All additional longitudinal and latitudinal structure is flush welded in place to form a one piece floor upon completion.
- 1.0.1.2** Aluminized steel “Hat Posts” – 1”x1”x4” run the length of the floor between cross members and are welded into place. This extremely strong form is used to weld our HSLA steel seat track in place.
- 1.0.1.3** Aluminized steel C Channel – 1”x1.5” C channel is welded in between cross members the full length of the floor in 5 places. Coupled with the Hat Posts this provides a one-piece strong “ladder” type frame for the flooring.
- 1.0.1.4** Seat Track – 12 gauge roll formed high strength/low alloy steel is wire welded in place for seat mounting down each side of the bus, with lengths predicated on the floor plan chosen. This is yet another stiffener in our extensive construction process.





- 1.0.1.5** Wheel Wells -- Constructed of 14 gauge aluminized steel, wheel wells are also welded in during the floor construction process. All seams in the wheel well are welded to create a one piece water resistant wheel housing structure. The wheel wells also provide additional strength to the body assembly, when welded in place.
- 1.0.1.6** Structural Aluminized steel Angle – 1/8” thick 1.5” x 2.5” structural aluminized steel angle is used the full perimeter length of each floor assembly, welded to the ends of all floor cross members. This provides not only a flat plane for joining the sidewall assembly, but also ties all cross members together and provides additional side impact resistance.
- 1.0.1.7** Additional structure – When adding vertical stanchions, wheel chair lifts and/or tie down options, additional structure is welded into the floor at locations specified by our engineering department on CAD drawings.

### **3.0.2 Sidewall Construction –**

- 1.0.1.8** Sidewall vertical member – The heart of our sidewall is the vertical structure, a roll formed 18 gauge aluminized steel capital “C” channel with 8 bends that create extreme strength and rigidity. The vertical member is installed in full lengths and in shorter sections below window frames. Additional vertical structure is used at both ends of the sidewall enabling the structure to withstand the forces applied by the vehicle when in motion. Using the open C member also enables a thorough primer application.
- 1.0.1.9** Aluminized steel Tubing – 1”x1” lower and 1”x3” upper 16 gauge aluminized steel tubing is welded in horizontally between vertical members to frame in window openings. This adds front to rear reinforcement as well.
- 1.0.1.10** Seat Track – 11 gauge high strength low alloy roll formed aluminized steel track is welded down each sidewall below the window frame. While serving as a seat attaching device, it adds excellent structure to the sidewall and also adds excellent side impact resistance.
- 1.0.1.11** Wheelchair Options – Add another layer of metal. Depending on track locations, another structure of 11 gauge thick aluminized steel is welded in place between each vertical member for attaching a shoulder belt mount. Also, additional structure is added to accommodate wheelchair door frames – either 1”x1” or 1”x2” 16 gauge wall aluminized steel tubing..
- 1.0.1.12** Full length aluminized steel tubing – 1”x1” 16 gauge aluminized steel tubing is stitch welded to the sidewall bottom and top at each vertical member for attaching to the floor and roof sections, respectively.

### **3.0.3 Rear Wall Construction –**

- 1.0.1.13** Rear wall vertical member – The vertical sidewall capital “C” channel with 8 bends is also used in the rear wall assembly. Full length structure is used at varying places, depending on choice of rear window, or rear door. Shorter cut pieces are used above windows and doors. Additional side windows used with the rear door also change the configuration.



**1.0.1.14** Aluminized steel Tubing – 1”x1” 16 gauge aluminized steel tubing is welded horizontally between vertical members to provide a window frame in the standard product, and used as an upper door frame in the optional rear assembly.

**1.0.1.15** Full length aluminized steel tubing – 1”x1” 16 gauge aluminized steel tubing is stitch welded to the rear wall top and bottom as in the sidewall assembly.

### **3.0.4 Roof Construction –**

**1.0.1.16** Roof Bows – Radius formed one-piece 16 gauge aluminized steel roof bows formed as a modified hat post design with eight bends for exceptional strength and located on 16” centers (the closest in the industry), including 4 bends in the web similar to our vertical sidewall aluminized steel provide a roof structure capable of taking severe loads. They are then capped with top flat pieces from flange to flange to provide abundant surface area for securing the exterior roof material.

**1.0.1.17** Aluminized steel Tubing – 1”x1” 16 gauge aluminized steel tubing is welded in horizontally to frame all lower window openings and 1” x 3” 16 gauge aluminized steel tubing to all upper window openings as required. A full perimeter is also welded on to mate the roof to the

**1.0.2** sidewall and rear wall, with short vertical pieces providing support on the front and rear ends. The 3” wide aluminized steel tube supplies a structural mounting surface for shoulder belt attachment and has been pull tested to federal standards.

### **1.0.3 Driver Compartment Overhead Halo –**

**1.0.3.1** Aluminized steel Tubing – 1”x1” 16 gauge aluminized steel tubing is cut and jig welded into an integrated one piece structure spanning from the front roof bow of the body to the newly cut roof line of the cab. Also created during the structure manufacture is the housing for mounting the electronic circuit board.

**1.0.3.2** 11 Gauge Aluminized steel – formed to make brackets used to mount to the chassis roof.

### **1.0.4 False Floor (Cab to body transition) –**

**1.0.4.1** Aluminized steel Tubing – 2” x2” 16 gauge aluminized steel tubing is welded together forming a flat body floor transition from the step area back to the actual body area. An overhang on the curbside provides a secure attach point frontally for the entry door frame added later.

**1.0.4.2** Structural aluminized steel angle – 11 gauge 1.5”x1.5” structural angle is added in short lengths five places to provide attachment points to the chassis floor.

### **3.0.7 Interior Vertical Transition Frames –**

**1.0.4.3** Aluminized steel Tubing – 1”x1” 16 gauge aluminized steel tubing is used vertically and a ladder type assembly is made welding the 1x 1 tube to .75”x.75” 11 gauge aluminized steel



tube that is used horizontally in the assemblies. These pieces transition from the body fronts on each side to the driver halo side assembly and the entry door frame assembly on the curbside.

**1.0.5 Entry Door & Step Assembly Frame –**

**1.0.5.1** Aluminized steel Tubing – 1”x1” 16 gauge and .75”x.75” 11 gauge aluminized steel tube is cut to length and welded together in a ladder type construction forming a rigid frame for attaching the entry door/step assembly.

**1.0.6 Entry Door/Step Assembly –**

**1.0.6.1** 11 Gauge Aluminized steel – The step riser/tread piece is manufactured from one-piece 11 gauge aluminized steel and uses 90° bends at all risers and treads. The bottom tread also adds an additional 90° bend for additional strength and safety. Upper and lower side pieces are then attached and an 11 gauge flat plate with holes is used to bridge the lower and upper side pieces, then is stitch welded and plug welded to form a strong one piece assembly prior to inserting and welding to the entry step framing.

**APPLICATION OF EXTERIOR SIDEWALL MATERIAL**

**GALVANIZED STEEL SIDEWALLS OR OPTIONAL FIBERGLASS/FRP/COMPOSITE SIDEWALLS**

The exterior is .024” galvanized steel pre-painted white with an underlayment of 5/32” luan.

The interior is 5/32” luan covered with a light gray frp or padded vinyl.

The foam filled aluminized steel cage is placed in the center and all layers are adhered using polyurethane hot melt adhesive. The entire assembly is the sent through a pressure application roller system to assure adhesion.

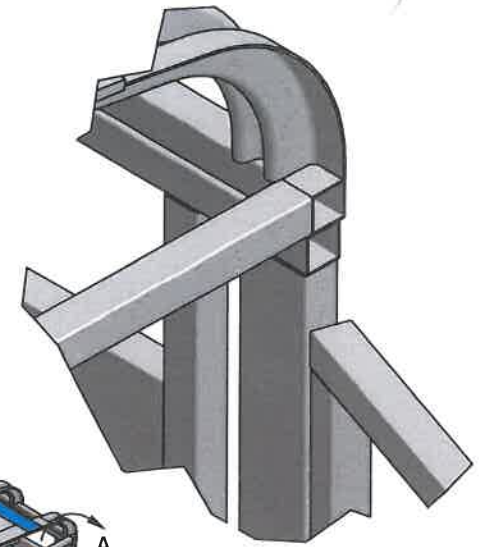
Composite FRP exterior sidewall panels are installed using the same method.

Should any further questions arise, please contact your Startrans Bus representative.



REAR WALL  
31-28-0003-05

ROOF FRAME  
32-13-0017-10



DETAIL A  
SCALE 1 / 2

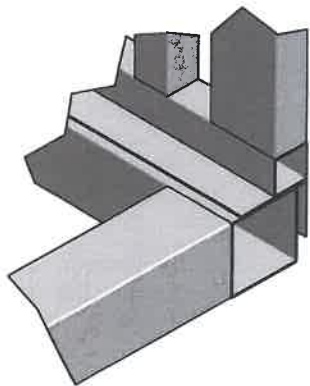
DRIVER SIDEWALL  
32-13-0001-10

PASSENGER SIDEWALL  
32-13-0009-10

FALSE FLOOR FRAME  
31-28-0534-10

FLOOR FRAME  
31-08-0016-12

ENTRYWAY  
31-28-0019-05 &  
31-28-0564-10



ISOMETRIC VIEW

DETAIL B  
SCALE 1 / 2

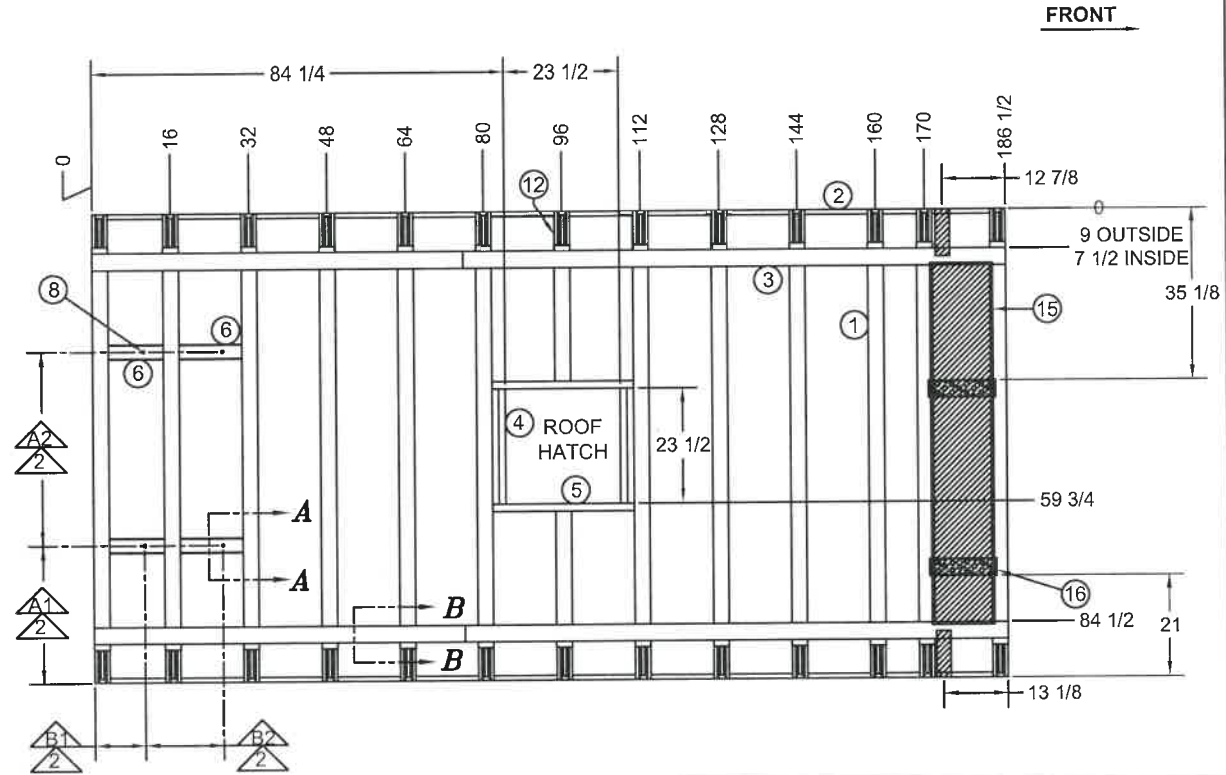
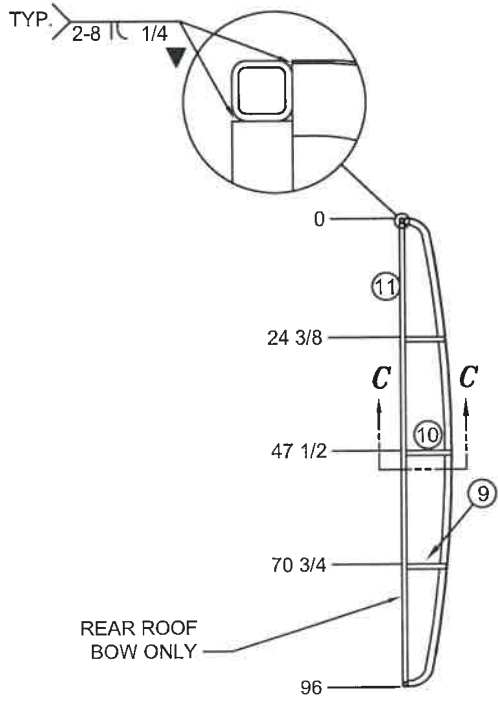
**STARTRANS**

DFTSN: <b>TAS</b>	TITLE Ford Senator 2 - 158 WB - 175 BOX CAGE W/C REAR LIFT, CUT N BUTT STYLE
DATE: <b>12/5/14</b>	FLOOR DWG NO <b>40016-2</b>
SHEET <b>1</b> OF <b>1</b>	

REVISION HISTORY			
ZONE	REV	DATE	APPROVED

▼ CRITICAL CONTROL ITEM

**USAGE: 2011 ALLSTAR, FORD, 158" WB - MODEL 24**



**\*\*** WHEN ADDING REAR LUGGAGE ADD THE SIZE OF THE REAR LUGGAGE TO DIM. B1

**NOTES:**

- 1- DRAWING VIEWED FROM EXTERIOR SIDE OF UNIT.
- 2- A/C BOLT PATTREN MAY VERY SEE SALES ORDER.
- 3- BEFORE CUT ROOF HATCH SEE SALES ORDER.
- 4- SCREW LOCATION AT SEAMS AND EDGES 8" ON CENTER ALL OTHER LOCATION 16" ON CENTER.
- 5- SEALANT USAGE: 1/4" MINIMUM 3/8" MAXIMUM BEAD ON ALL ROOF FRAME TO LUAN SURFACES.
- 6- ADD STRAP FOR CHEVY ONLY

16	2		STRAP: 11ga. x 3-1/2" x 13-3/4"Lg.
15	1		PLATE: 16ga. x 12-3/4" x 75"Lg.
14	1		SHEET STEEL: 16ga. x 2" x 103"Lg.
13	2		SHEET STEEL: 16ga. x 3-1/2" x 38-1/2"Lg.
12	2	02062357	ROOF BOW W/CAP 16ga. x 3-3/16 x 35-1/4"Lg.
11	1		TUBE: 11ga. x 1" x 1" x 94"Lg. A-513
10	1		TUBE: 11ga. x 1" x 1" x 8-1/2"Lg. A-513
9	2		TUBE: 11ga. x 1" x 1" x 8"Lg. A-513
8	4		BOLT: 3/8-16 x 3"Lg. HEX HEAD
7	2		SHEET STEEL: 16ga. x 3-1/2" x 36-1/2"Lg.
6	4	70009046	"C" CHANNEL: 16ga. x 1" x 3-1/2" x 14-1/2"Lg.
5	2	70009047	"C" CHANNEL: 16ga. x 1-3/8" x 1-3/8" x 30-1/2"Lg.
4	2	70009047	"C" CHANNEL: 16ga. x 1-3/8" x 1-3/8" x 24-1/4"Lg.
3	4		SHEET STEEL: 16ga. x 3-1/2" x 120"Lg.
2	2		TUBE: 16ga. x 1" x 1" x 186-1/2"Lg. A-513
1	10	02062357	ROOF BOW W/CAP 16ga. x 3-3/16 x 96"Lg.
REF. No.	QTY.	PART No.	MATERIAL DESCRIPTION

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A	2011 STYLE UPDATES	MK	10/29/13		
REV.	DESCRIPTION OF CHANGE	CHK	DATE	ECN No.	
LET.					

**STARTRANS**

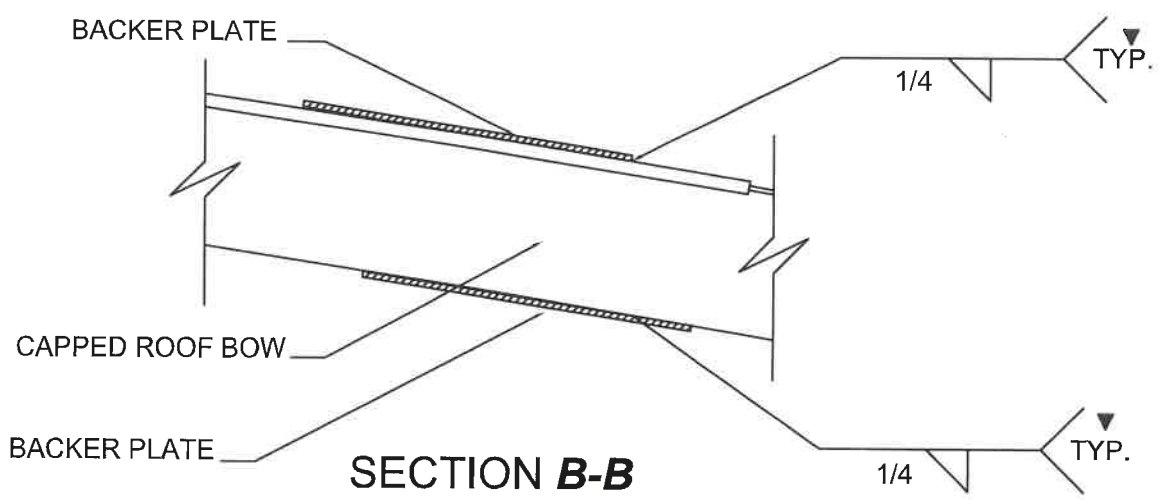
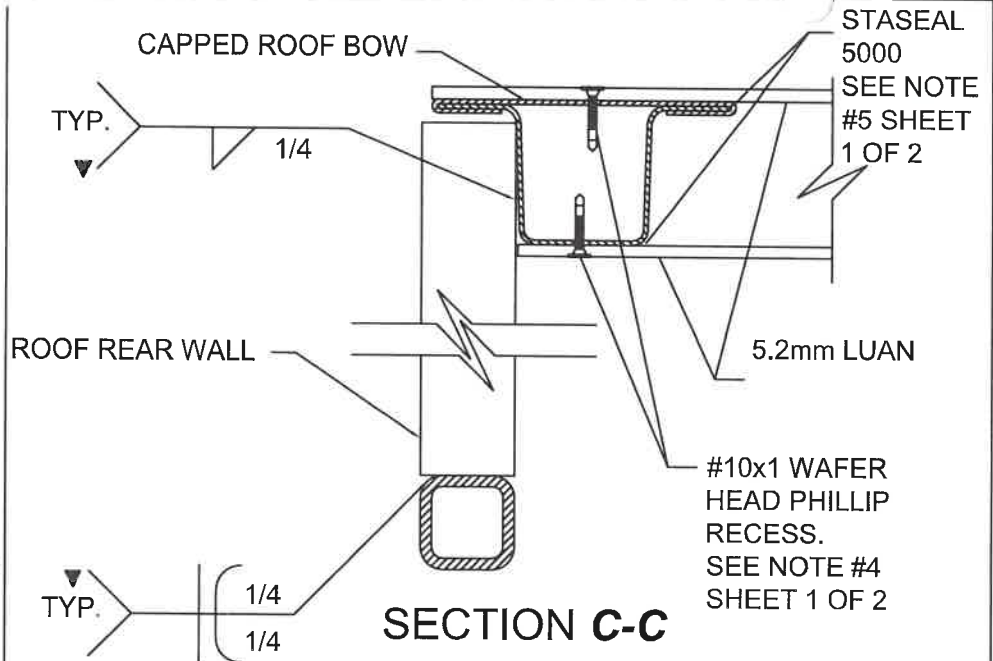
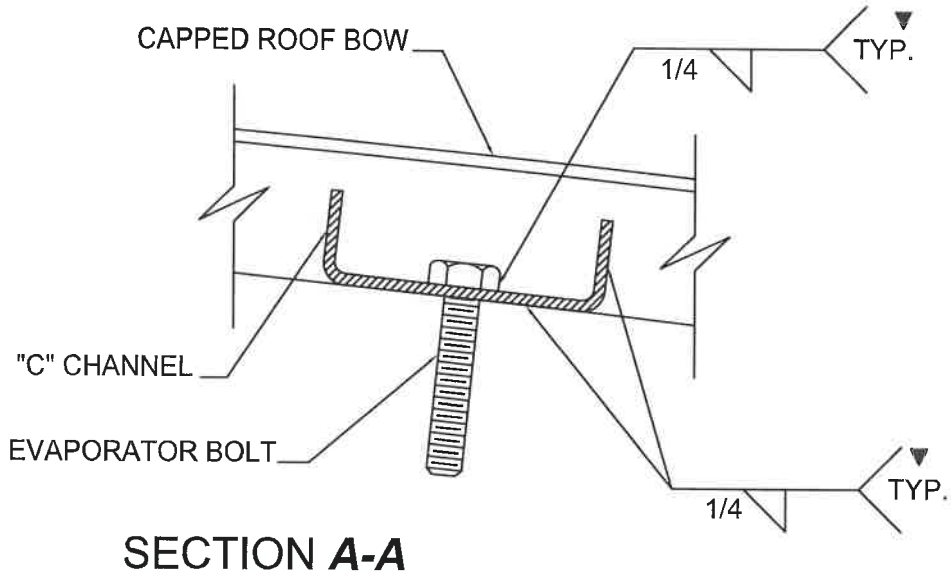
**Frame, Roof Ford & Chevy  
SENATOR 2**

DATE: 10/13/10  
DFTSN: MDK  
CHKR:  
APRVD:

TITLE  
DWG. No. 32-13-0017-10  
SCALE  
DISK No. SHEET 1 of 2

TOLERANCE UNLESS OTHERWISE SPECIFIED  
±.00 ±.030  
±.000 ±.015  
±.0000 ±.005

CRITICAL CONTROL ITEM



T/A-71 NEW STYLE	33-5/8	30	10	12-1/4
ACC 23022 SERIES	38	20	10	14-3/4
ACC 23023 SERIES	33-5/8	28-3/4	10	14-3/4
T/A-77	18-1/4	59-1/2	10	10-3/8
T/A-73	28-1/4	39-1/2	10	9-1/2
T/A-71 OLD STYLE	33-5/8	28-3/4	10	12-1/4
T/A-70	36-3/4	22-1/2	10	11-5/8
T/A-30	31	34	10	9-1/2
EM-14 & RE-29	30-3/4	34-1/2	10	9-1/2
EM-6 & RE-10	36	24	10	9-1/2
EM-3 & RE-30	28-1/4	39-1/2	10	16
RE-15 & RE-20	28-1/4	39-1/2	10	9-1/2
EM-1 & EM-2	28-1/4	39-1/2	10	9-1/2
EM-7 GEN 5	36-1/8	23-3/4	10	9-1/2
EM-2 GEN 5	32-3/8	31-1/16	10	9-1/2
EM-1 GEN 5	28-3/16	39-5/8	10	9-1/2
EVAPORATOR MODEL	A-1	A-2	B-1	B-2

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REV. LET.	DESCRIPTION OF CHANGE	BY	CHK	DATE	ECN No.

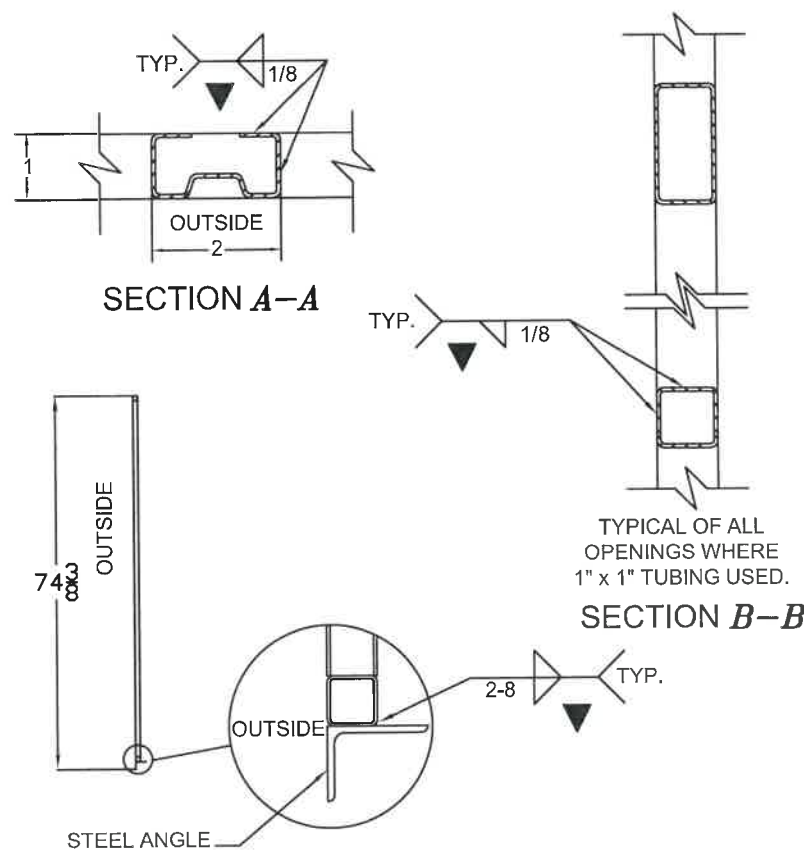
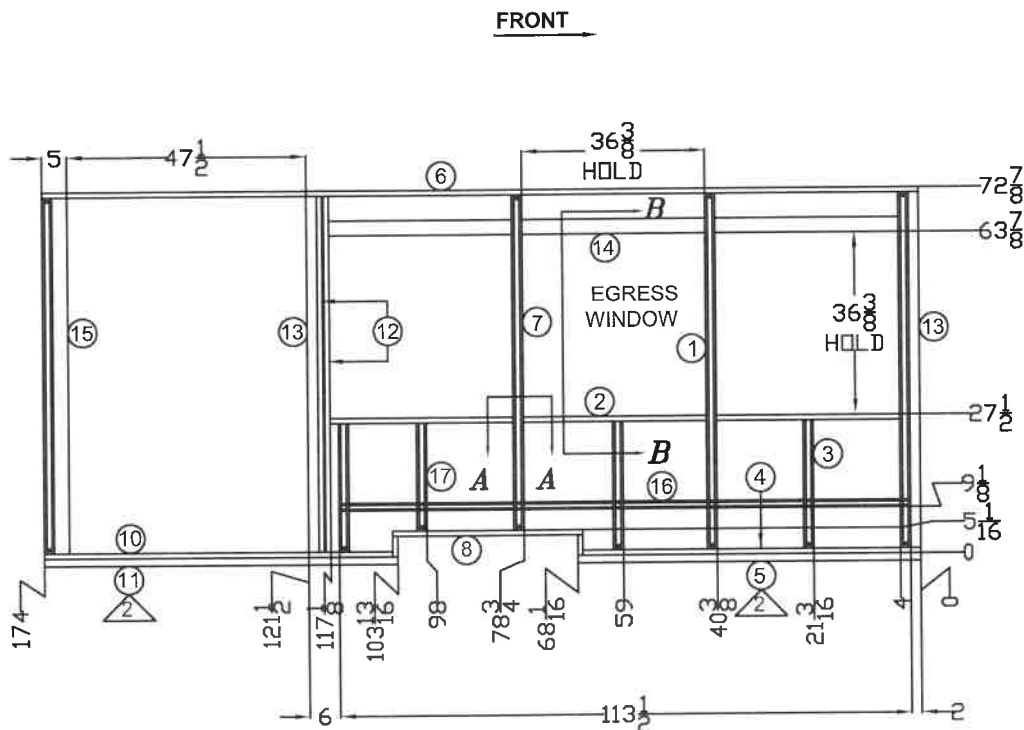
TOLERANCE UNLESS OTHERWISE SPECIFIED	DATE: 10/08/10	TITLE: <b>Frame, Details Roof, 2011 SENATOR 2</b>
±.00 ±.030	DFTSN: MDK	DWG. No. 32-13-0017-10
±.000 ±.015	CHKR:	SCALE
±.0000 ±.005	APRVD:	DISK No. SHEET 2 OF 2





▼ CRITICAL CONTROL ITEM

USAGE: FORD 158"WB/MODEL 24



**NOTES:**

- 1- DRAWING VIEWED FROM EXTERIOR SIDE OF UNIT.
- 2- ANGLE TO BE WELDED FLUSH WITH OUTSIDE EDGE OF WALL.

REF. No.	QTY.	PART No.	MATERIAL DESCRIPTION
9	0		TUBE: 16ga. x 1" x 1" x 24-3/8"Lg. A-513
8	1		FRAME, SIDEWALL WHEEL WELL FORD
7	1	02062351	WALL BOW: 18ga. x 1" x 2" x 66-13/16"Lg. A-513
6	1	02071055	TUBE: 16ga. x 1" x 1" x 174"Lg. A-513
5	1	02071056	ANGLE: 11ga. x 1-1/2" x 2" x 68-1/16"Lg. A-513
4	1	02071055	TUBE: 16ga. x 1" x 1" x 67-1/16"Lg. A-513
3	3	02062351	WALL BOW: 18ga. x 1" x 2" x 25-1/2"Lg. A-513
2	3		TUBE: 16ga. x 1" x 1" x 36-3/8"Lg. A-513
1	4	02062351	WALL BOW: 18ga. x 1" x 2" x 70-7/8"Lg. A-513

17	1		WALL BOW: 18ga. x 1" x 2" x 21-7/16"Lg. A-513
16	1		SEAT TRACK: 113-1/2"Lg.
15	1		TUBE: 16ga. x 1" x 3" x 70-7/8"Lg. A-513
14	3		TUBE: 16ga. x 1" x 3" x 36-3/8"Lg. A-513
13	2		TUBE: 18ga. x 1" x 2" x 70-7/8"Lg. A-513
12	2	02071055	TUBE: 16ga. x 1" x 1" x 70-7/8"Lg. A-513
11	1	02071056	ANGLE: 11ga. x 1-1/2" x 2" x 70-3/16"Lg. A-513
10	1	02071055	TUBE: 16ga. x 1" x 1" x 69-3/16"Lg. A-513

REF. No.	QTY.	PART No.	MATERIAL DESCRIPTION
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REV. LET.	DESCRIPTION OF CHANGE	CHK	DATE	ECN No.

**STARTRANS**

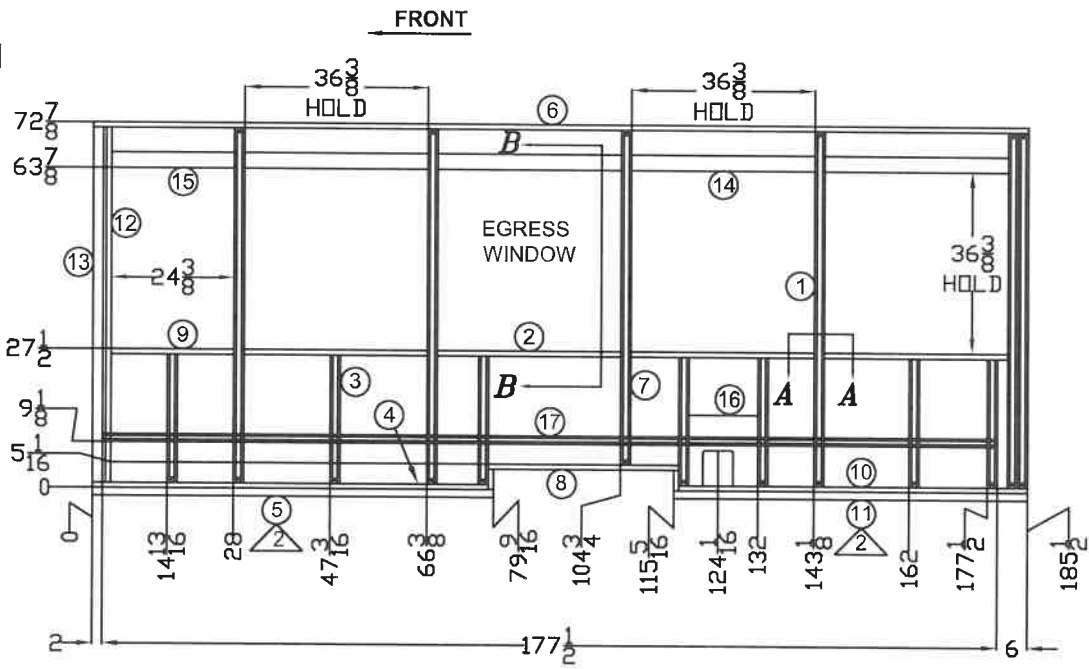
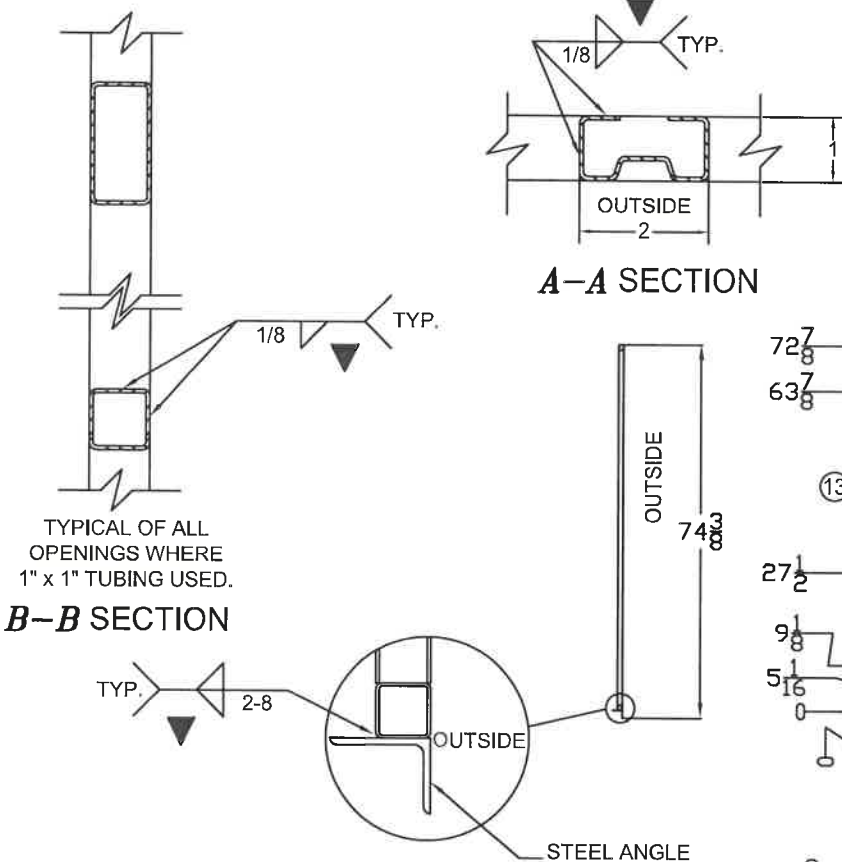
DATE: 10/08/10	TITLE: 158" WB MODEL 24, PASSENGER SIDEWALL, REAR LIFT, STANDARD FLOOR
DFTSN: MKLINE	DWG. No. 32-13-0009-10
CHKR:	SCALE
APRVD:	DISK No.
TOLERANCE UNLESS OTHERWISE SPECIFIED: ±.00 ±.030 ±.000 ±.015 ±.0000 ±.005	SHEET 1 OF

▼ CRITICAL CONTROL ITEM

USAGE: FORD 158"WB/MODEL 24

NOTES:

- 1- DRAWING VIEWED FROM EXTERIOR SIDE OF UNIT.
- 2- ANGLE TO BE WELDED FLUSH WITH OUTSIDE EDGE OF WALL.



REF. No.	QTY.	PART No.	MATERIAL DESCRIPTION
9	1		TUBE: 16ga. x 1" x 1" x 24-3/8"Lg. A-513
8	1		FRAME, SIDEWALL WHEEL WELL FORD
7	1	02062351	WALL BOW: 18ga. x 1" x 2" x 66-13/16"Lg. A-513
6	1	02071055	TUBE: 16ga. x 1" x 1" x 185-1/2"Lg. A-513
5	1	02071056	ANGLE: 11ga. x 1-1/2" x 2" x 79-9/16"Lg. A-513
4	1	02071055	TUBE: 16ga. x 1" x 1" x 78-9/16"Lg. A-513
3	7	02062351	WALL BOW: 18ga. x 1" x 2" x 25-1/2"Lg. A-513
2	4		TUBE: 16ga. x 1" x 1" x 36-3/8"Lg. A-513
1	5	02062351	WALL BOW: 18ga. x 1" x 2" x 70-7/8"Lg. A-513

17	1		SEAT TRACK: 177-1/2"Lg.
16	1		FUEL FILL BACKER BOARD
15	1		TUBE: 16ga. x 1" x 3" x 24-3/8"Lg. A-513
14	4		TUBE: 16ga. x 1" x 3" x 36-3/8"Lg. A-513
13	1		TUBE: 18ga. x 1" x 2" x 70-7/8"Lg. A-513
12	1		TUBE: 18ga. x 1" x 1" x 70-7/8"Lg. A-513
11	1	02071056	ANGLE: 11ga. x 1-1/2" x 2" x 70-3/16"Lg. A-513
10	1	02071055	TUBE: 16ga. x 1" x 1" x 69-3/16"Lg. A-513

REF. No.	QTY.	PART No.	MATERIAL DESCRIPTION
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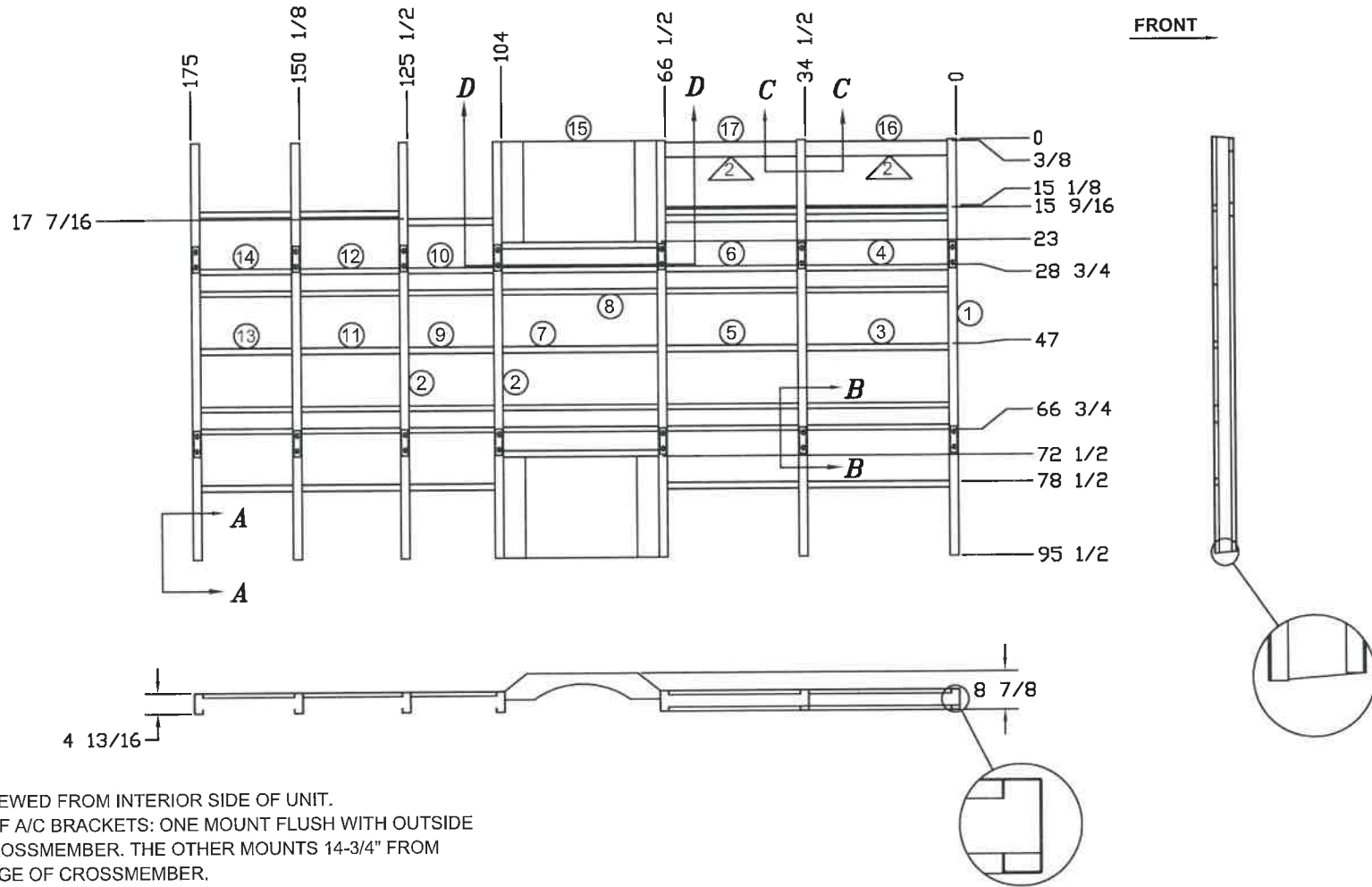
REV.	LET.	DESCRIPTION OF CHANGE	BY	CHK	DATE	ECN No.

**STARTRANS**

DATE: 10/08/10	TITLE: 158" WB MODEL 24, DRIVERS SIDEWALL, ALL PASSENGER
DFTSN: M/KLINE	DWG. No. 32-13-0001-10
CHKR:	SCALE
APRVD:	DISK No.
TOLERANCE UNLESS OTHERWISE SPECIFIED: ±.00 ±.030 ±.000 ±.015 ±.0000 ±.005	SHEET 1 OF 1

▼ CRITICAL CONTROL ITEM

USAGE: 2012 FORD 158" WHEEL BASE, 175" BODY



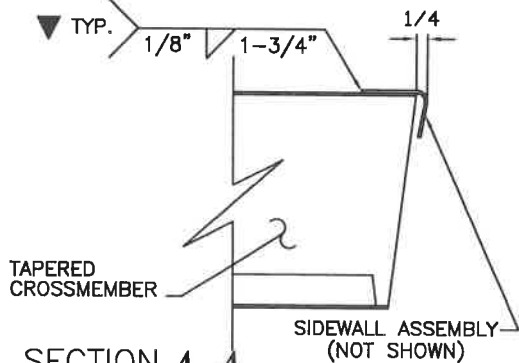
NOTES:

- 1- DRAWING VIEWED FROM INTERIOR SIDE OF UNIT.
- 2- LOCATION OF A/C BRACKETS: ONE MOUNT FLUSH WITH OUTSIDE EDGE OF CROSSMEMBER. THE OTHER MOUNTS 14-3/4" FROM OUTSIDE EDGE OF CROSSMEMBER.
- 3- SEE SHEET 2 OF 2 FOR DETAILS, TORQUE SPECIFICATIONS, SECTION VIEWS AND CUT LIST.

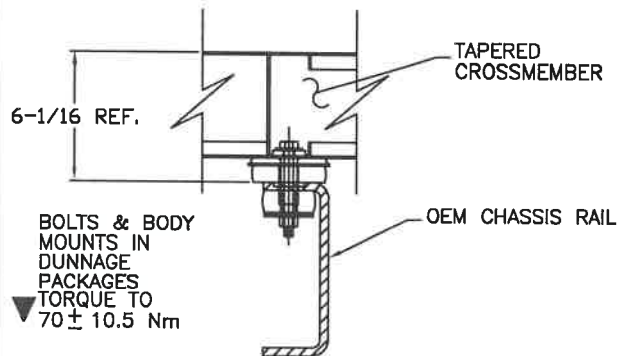
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										WOOD					
										± 1/8"				TITLE: <b>Frame, Floor Ford 158" Wheel Base 175" Body</b>	
												DATE: 08/02/12		SCALE: SHEET 1 OF 2	
												DFTSN: MDK		CHKR: MWG, No.31-08-0016-12	
REV. LET.	A	RELEASED TO PRODUCTION	EF	1/17/06	ECN No.										
		DESCRIPTION OF CHANGE													

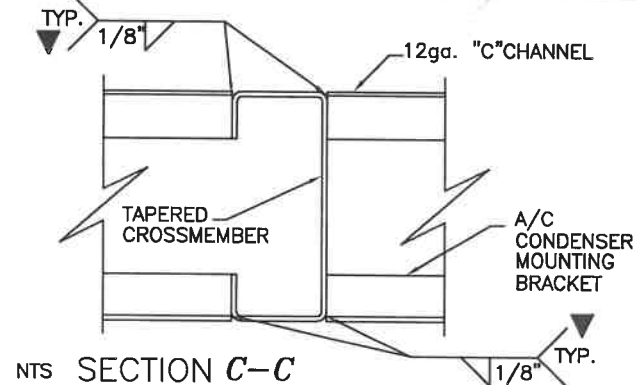
CRITICAL COMPONENT ITEM



NTS SECTION A-A

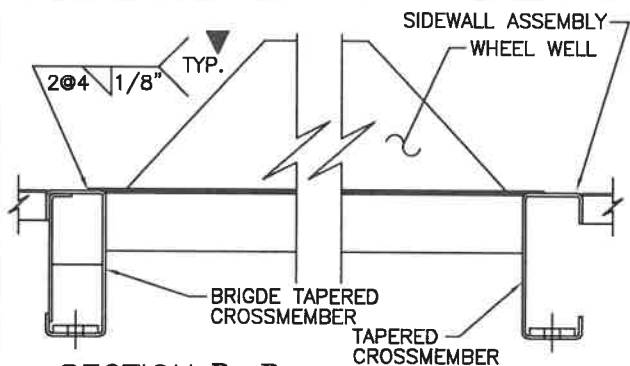


NTS SECTION B-B

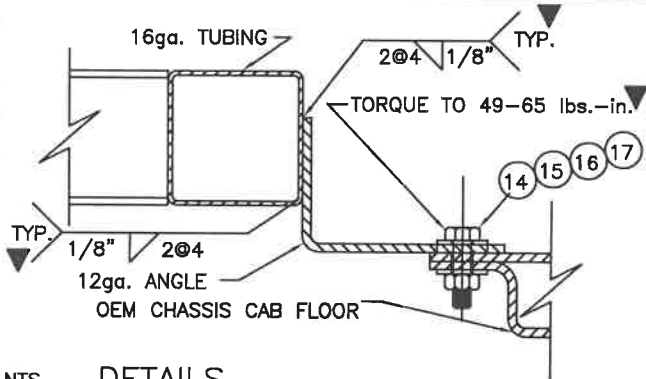


NTS SECTION C-C

USAGE: 2012 FORD 158" WHEEL BASE, 175" BODY



NTS SECTION D-D



NTS DETAILS

17	7		"C" CHANNEL: 16ga. x 1" x 3-1/2" x 30"Lg.
16	7		"C" CHANNEL: 16ga. x 1" x 3-1/2" x 32-1/2"Lg.
15	2		WHEEL WELL WIDE BODY
14	2		HAT CHANNEL: 16ga. x 1" x 6-5/16" x 20-7/8"Lg.
13	3		"C" CHANNEL: 16ga. x 1" x 1-1/2" x 20-7/8"Lg.
12	2		HAT CHANNEL: 16ga. x 1" x 6-5/16" x 22-5/8"Lg.
11	3		"C" CHANNEL: 16ga. x 1" x 1-1/2" x 22-5/8"Lg.
10	2		HAT CHANNEL: 16ga. x 1" x 6-5/16" x 19-1/2"Lg.
9	3		"C" CHANNEL: 16ga. x 1" x 1-1/2" x 19-1/2"Lg.
8	2		HAT CHANNEL: 16ga. x 1" x 6-5/16" x 35-1/2"Lg.
7	3		"C" CHANNEL: 16ga. x 1" x 1-1/2" x 35-1/2"Lg.
6	2		HAT CHANNEL: 16ga. x 1" x 6-5/16" x 30"Lg.
5	3		"C" CHANNEL: 16ga. x 1" x 1-1/2" x 30"Lg.
4	2		HAT CHANNEL: 16ga. x 1" x 6-5/16" x 32-1/2"Lg.
3	3		"C" CHANNEL: 16ga. x 1" x 1-1/2" x 32-1/2"Lg.
2	2		Bridged Crossmember: 14ga. x 2 x 4-13/16 x 95-1/2
1	5		Crossmember: 14ga. x 2 x 4-13/16 x 95-1/2

REF. No.	QTY.	PART No.	MATERIAL DESCRIPTION
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REV. LET.	DESCRIPTION OF CHANGE	BY	CHK	DATE	ECN No.	TOLERANCE UNLESS OTHERWISE SPECIFIED	WOOD	± 1/8"	± 1"	OTHER	± 1/16"	DATE: 8/02/12	SCALE:	SHEET 2 OF 2
A	RELEASED TO PRODUCTION	MK		8/1/12										DWG. No. 31-08-0016-12

**STARTRANS**

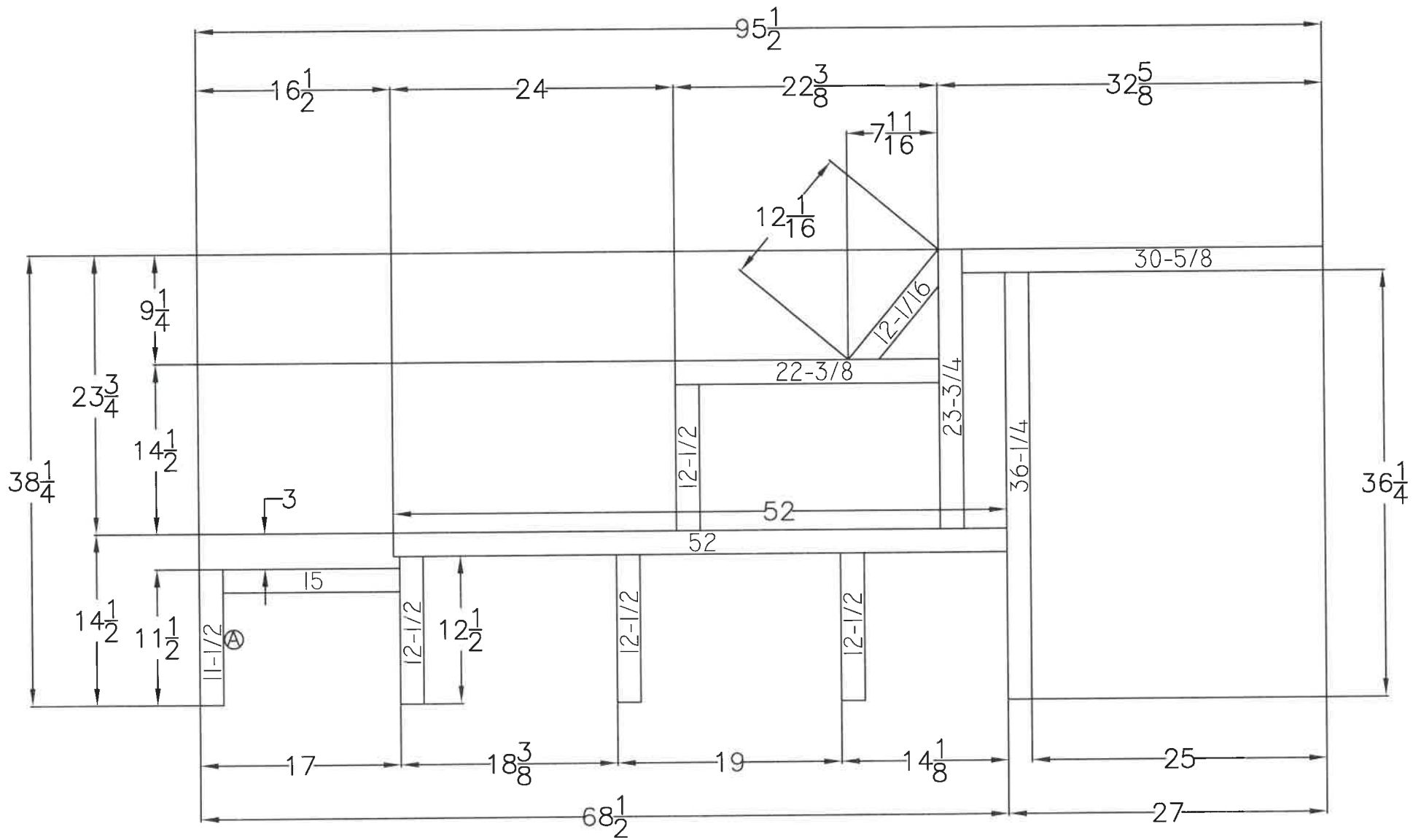
TITLE: **Frame, Details Floor Ford 158" Wheel Base 175" Body**

DATE: 8/02/12

DFTSN: MDK

CHKR:





MAT'L-16GA. 2" x 2" TUBE

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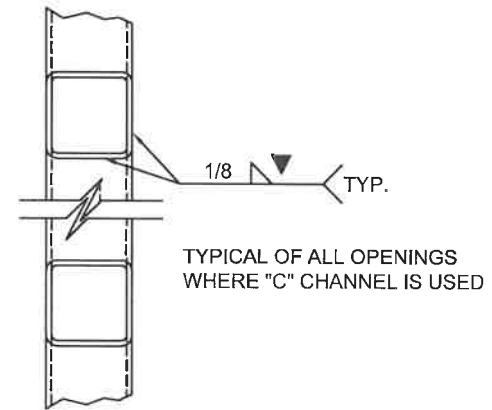
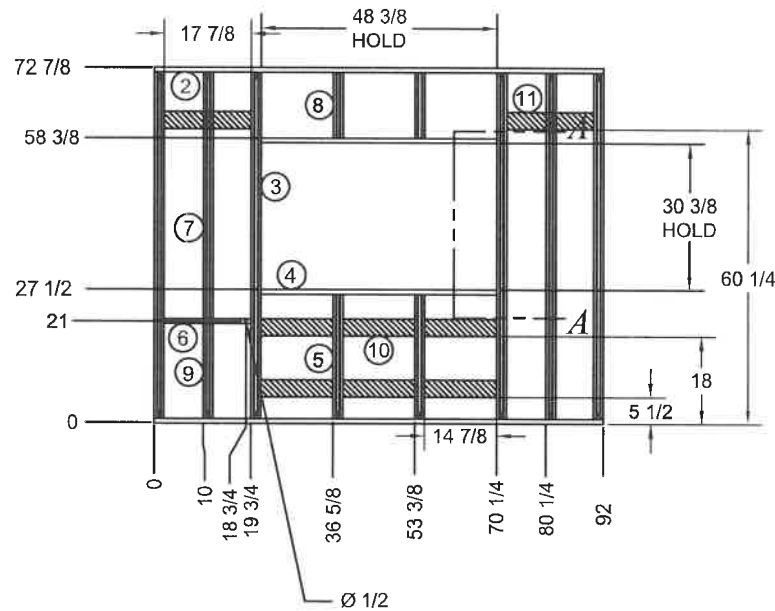
		DATE: 06/10/10		TITLE: 2011 ALLSTAR NEW STYLE FALSE FLOOR	
		DFTSN: MKLINE		DWG. No. 31-28-0534-10	
TOLERANCE UNLESS OTHERWISE SPECIFIED		CHKR:		SCALE:	
±.00 ±.030		APRVD:		DISK No.	
±.000 ±.015				SHEET 1 OF	
±.0000 ±.005					

A	SHORTENED TUBE 5/16"	MDK		6/14/10	
REV. LET.	DESCRIPTION OF CHANGE	CHK	DATE	ECN No.	



CRITICAL CONTROL ITEM

**USAGE: ALLSTAR W/ REAR  
EGRESS WINDOW**



SECTION A-A

**NOTES:**

1- DRAWING VIEWED FROM EXTERIOR SIDE OF UNIT.

11	2		STEEL PLATE: 11ga. x 3 1/2" x 17-7/8"Lg. A-513
10	6		STEEL PLATE: 11ga. x 3 1/2" x 14-3/4"Lg. A-513
9	1	02062351	WALL BOW: 18ga. x 1" x 2" x 19"Lg. A-513
8	2	02062351	WALL BOW: 18ga. x 1" x 2" x 12-7/8"Lg. A-513
7	1	02062351	WALL BOW: 18ga. x 1" x 2" x 50-7/8"Lg. A-513
6	1	02071055	TUBE: 16ga. x 1" x 1" x 17-3/4"Lg. A-513
5	2	02062351	WALL BOW: 18ga. x 1" x 2" x 25-1/2"Lg. A-513
4	2	02071055	TUBE: 16ga. x 1" x 1" x 48-3/8"Lg. A-513
3	5	02062351	WALL BOW: 18ga. x 1" x 2" x 70-7/8"Lg. A-513
2	2	02071055	TUBE: 16ga. x 1" x 1" x 92"Lg. A-513
1			

REF. No.	QTY.	PART No.	MATERIAL DESCRIPTION
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DATE: 09/20/10		TITLE: Frame, Rear Wall With 30" x 48" Window	
DFTSN: MDK		DWG. No. 31-28-0003-05	
CHKR:		SCALE:	
APRVD:		DISK No. SHEET 1 OF 1	

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REV. LET.	DESCRIPTION OF CHANGE	BY	CHK	DATE	ECN No.
A	ADDED 11ga. STRAP STEEL REINFORCEMENT FOR BAGS AND RESTRAINTS			10/29/13	

TOLERANCE UNLESS OTHERWISE SPECIFIED  
 ±.00 ±.030  
 ±.000 ±.015  
 ±.0000 ±.005

**FMVSS/CMVSS Compliance Summary 2015**

**Commercial and MFSAB**

The following information summarizes the C/FMVSS standards and the Compliance Action taken by Startrans Bus

C/FMVSS No.	Standard Description	Compliance Action
101	Control Location, Identification and Illumination	Startrans does not alter the OEM controls or displays. Any aftermarket seats and/or controls or displays subject to the standard meet this standard.
102	Transmission Shift Lever Sequence, Starter Interlock & Transmission Braking Effect	Compliance is deferred to the chassis manufacturer.
103	Windshield Defrosting & Defogging Systems	Compliance is deferred to the chassis manufacturer.
104	Windshield Wiping & Washing Systems	Compliance is deferred to the chassis manufacturer.
105	Hydraulic Brake Systems	Test data kept on file for vehicles that have had the wheelbase extended, or have had other system modifications. For unmodified vehicles, compliance is deferred to the chassis manufacturer.
106	Brake Hoses	Vehicles with wheelbase modifications have additional lines installed by chassis modifiers using OEM components. Other vehicles that have had system modifications use OEM or OEM-approved components and are tested for compliance. For Non-stretched vehicles compliance is deferred to the chassis manufacturer.
108	Lamps, Reflective Devices & Associated Equipment	Startrans does not alter OEM lighting. Additional lighting to include brake, turn, clearance, auxiliary and reverse lamps meet standard. Data on file.
108.1	Alternative Requirements for Headlamps	Startrans does not alter OEM lighting. Compliance is deferred to the chassis manufacturer.
110	Tire Selection and Rim for Motor Vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
111	Rear View Mirrors	All aftermarket mirrors installed by Startrans meet this standard and DOT regulations.
112	Headlamp Concealment Devices	Startrans does not manufacture vehicles with headlamp concealment devices.
113	Hood latch systems	Compliance is deferred to the chassis manufacturer.
114	Theft Protection	Compliance is deferred to the chassis manufacturer.
115	Vehicle Identification Number	Compliance is deferred to the chassis manufacturer.
116	Hydraulic Brake Fluids	Startrans does not alter brake systems. Vehicles with modified wheelbases have additional fluid added by chassis modifiers using OEM instruction and materials. All other system modifications utilize only OEM-approved fluid. For unmodified vehicles, compliance is deferred to the chassis manufacturer.
118	Power Operated Window, Partition, and Roof Panel Systems	Compliance is deferred to the chassis manufacturer.
120	Tire Selection and Rim for Motor Vehicles with a GVWR of 4,536kg (10,000 lbs.) or More	Compliance is deferred to the chassis manufacturer.
121	Air Brake Systems	Vehicles with wheelbase modifications have additional lines installed by chassis modifiers using OEM components. Other vehicles that have had system modifications use OEM or OEM-approved components and are tested for compliance. For unmodified vehicles, compliance is deferred to the chassis manufacturer.
124	Accelerator Control Systems	Startrans does not alter the OEM accelerator system, with the exception of the addition of aftermarket fast idle systems on some vehicles. These systems meet this standard when installed in accordance with instructions.
125	Warning Devices	All vehicles manufactured by Startrans that are equipped with aftermarket (3) triangle kit meet this standard.
131	School Bus Pedestrian Safety Devices	All vehicles manufactured by Startrans are not completed to be used as school buses.
135	Light Vehicle Brake System with a GVWR of 3,500kg (7,716lbs.) or Less	Startrans does not manufacture vehicles with a GVWR of 3,500kg (7,716 lbs.) or Less.
201	Occupant Protection in Interior Impact	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
202	Head Restraints	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.



## FMVSS/CMVSS Compliance Summary 2015

## Commercial and MFSAB

The following information summarizes the C/FMVSS standards and the Compliance Action taken by Startrans Bus

203	Impact Protection for the Driver from the Steering Control System	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
204	Steering Control Rearward Displacement	Compliance is deferred to the chassis manufacturer.
205	Glazing Materials	No modifications are made to the OEM Glazing materials. Additional glazing materials meet the standard. Data on file.
206	Door Locks and Door Retention Devices	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
207	Seating System	All seating installed by Startrans meets this standard. Test data on file.
208	Occupant Crash Protection	No alterations are made to the OEM seat belts, air bag systems or associated hardware. Any seat belt systems added meet the standard. Test data on file.
209	Seat Belt Assemblies	No alterations are made to the OEM seat belts or associated hardware. Any seat belt systems added meet the standard. Test data on file.
210	Seat Belt Assembly Anchorage	No alterations are made to the OEM seat belts or associated hardware. Seat belt systems and their installation meet the standard. Test data on file.
210.1	User-ready Tether Anchorages for Restraint System	No alterations are made to the OEM seat belts or associated hardware. Seat belt systems and their installation meet the standard. Data on file.
210.2	Lower Universal Anchorage Systems for Restraint Systems and Booster Cushions	No alterations are made to the OEM seat belts or associated hardware. Seat belt systems and their installation meet the standard. Data on file.
212	Windshield Mounting	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
213	Child Restraint Systems	Vehicles manufactured by Startrans, that are subject to this standard, have seating installed that meets this standard. Test data on file.
213.4	Built-in Child Restraint Systems and Built-in Booster Cushions	Vehicles manufactured by Startrans, that are subject to this standard, have seating installed that meets this standard. Test data on file.
214	Side Impact Protection with a GVWR of 4,536kg (10,000 lbs.) or Less	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
216	Roof Crush Resistance	Startrans does not manufacture vehicles with a GVWR of 2,722kg (6,000 lbs.) or Less.
217	Bus Window Retention and Release	No modifications are made to the OEM windows. Additional windows meet the standard. Test data on file.
219	Windshield Zone Intrusion	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
220	School Bus Rollover Testing	All vehicles manufactured by Startrans meet this standard. Test data on file
221	School Bus Body Joint Strength	All MFSAB vehicles manufactured by Startrans meet this standard. Test data on file
222	School Bus Passenger Seating and Crash Protection	All MFSAB vehicles manufactured by Startrans meet this standard. Test data on file
225	Child Restraint Anchorage Systems	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
301	Fuel System Integrity	Compliance is deferred to the chassis manufacturer.
301.1	LPG Fuel System Integrity	Compliance is deferred to the chassis manufacturer.
301.2	CNG Fuel System Integrity	Compliance is deferred to the chassis manufacturer.



## FMVSS/CMVSS Compliance Summary 2015

## Commercial and MFSAB

The following information summarizes the C/FMVSS standards and the Compliance Action taken by Startrans Bus

<b>302</b>	Flammability of Interior Materials	Materials installed in the interior of Startrans products meet the standard. Test data on file.
<b>303</b>	Fuel System Integrity of Compressed Natural Gas Systems	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
<b>304</b>	Compressed Natural Gas Fuel Container Integrity	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
<b>305</b>	Electrolyte Spillage and Electrical Shock Protection	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
<b>403</b>	Platform Lift System for Motor Vehicles	Startrans does not alter the platform lift system. Startrans install lift system in strict compliance with the manufacturers installation instructions. Startrans meets strength requirements. Test data on file.
<b>404</b>	Platform Lift Installation on Motor Vehicles	Compliance is deferred to the lift manufacturer.
<b>1106</b>	Noise Emissions	Startrans does not alter the OEM Chassis in the area which is stated in the incomplete vehicle documents. Data on file.

Signed: Dale H. [Signature]Date: 1/1/2015Title: Compliance Manger

CANDIDATE	20'
BUMPER TO BUMPER LENGTH	
<i>FORD</i>	256"
<i>CHEVY</i>	262"
USABLE FLOOR LENGTH	
<i>STREETSIDE</i>	
<i>FORD</i>	150"
<i>CHEVY</i>	150"
<i>CURBSIDE</i>	
<i>27" ENTRY DOORS</i>	143"
<i>37" ENTRY DOORS</i>	133"
CAB AREA FLOOR TO CEILING HEIGHT	76"
FLOOR TO CEILING HEIGHT AT CENTER AISLE	76"
FLOOR WIDTH AT FLOOR LINE	80"
INTERIOR WIDTH AT SEAT LEVEL	82"
AISLE WIDTH (WITH 2-1 SEATING)	26"
EXTERIOR HEIGHT	109"
EXTERIOR WIDTH (AT WHEEL FLARE)	94"
DOUBLE ENTRY DOOR DIMENSIONS	
<i>HEIGHT FROM FIRST STEP RISER</i>	83"
WIDTH	
<i>27" ENTRY DOORS</i>	27"
<i>37" ENTRY DOORS</i>	37"
<i>GROUND TO FIRST STEP</i>	10 1/2"
<i>STEP RISER</i>	8 3/8"
<i>TREAD DEPTH</i>	8 3/4"
FLOOR HEIGHT FROM GROUND	
<i>FRONT</i>	30"
<i>REAR</i>	30"

# S SUBURBAN FLEET SALES

2017 E3F 12,500 GVW 158 WITH OEM POWER SEAT

Order No: 0001    Priority: F2    Ord FIN: BZ074    Order Type: 4M Price Level: 750  
 Ord PEP: 780A Cust/Flt Name: CHAD WV    PO Number:

		RETAIL	DLR INV		RETAIL	DLR INV
E3F	COM CUTAWAY VAN			516	SP TIRE NOT INC	
	158" WHEELBASE			47B	SHUTTLE BUS PKG	
YZ	OXFORD WHITE				.FRT LICENSE BKT	
M	CLOTH CPTS CHR				.ENG BLK HEATER	
E	MEDIUM FLINT				.FRAME PUCKS	
780A	PREF EQUIP PKG			18A	EXT UPGRADE PKG	
	.STANDARD TRIM				.CHROME BUMPERS	
572	.A/C FRONT ONLY				JOB #2 ORDER	
593	.LT/CONVEN GRP					
	.INSTR CLUSTER					
945	.AUX FUEL PORT					
99S	6.8L EFI V10ENG					
44P	ELEC 6-SPD AUTO					
T67	LT225/75RX16E B					
X85	4.56 REG X85					
	SHUTTLE BUS DIS				.EXT HVY DUTY 78	
162	FLR VINYL, FRT				16" WHITE WHLS	
20C	12500# GVWR			657	FUEL TANK 40 GL	
21T	DR CAPT CHAIR			672	FRT MAX GAWR	
425	50 STATE EMISS			874	4 SPEAKERS	
47Z	AMB PKG NOT REQ			90P	PWR DRIVER SEAT	
525	CRUISE CONTROL			942	DAYTIME LIGHTS	
54F	MIRROR, DELETE				SP DLR ACCT ADJ	
57J	AUX HTR CONNECT					
58W	FORD WORKS 4 SP					
60X	RT DOOR NOT INC					
	.PASS AIRBAG DEL					
625	RRVIEW MIRROR					
63N	EXT HD 225-AMP					
634	BATTERIES-DUAL					
	SP FLT ACCT CR					
	FUEL CHARGE					
B4A	NET INV FLT OPT					
	PRICED DORA					
	DEST AND DELIV					

# S SUBURBAN FLEET SALES

2017 E3F 11, 500 GVW 138" WITH OEM POWER SEAT

Order No: 0001    Priority: F2    Ord FIN: BZ074    Order Type: 4M    Price Level: 750  
 Ord PEP: 780A    Cust/Flt Name: CHAD WV    PO Number:

		RETAIL	DLR INV		RETAIL	DLR INV
E3F	COM CUTAWAY VAN			516	SP TIRE NOT INC	
	138" WHEELBASE			47B	SHUTTLE BUS PKG	
YZ	OXFORD WHITE				.FRT LICENSE BKT	
M	CLOTH CPTS CHRS				.ENG BLK HEATER	
E	MEDIUM FLINT				.FRAME PUCKS	
780A	PREF EQUIP PKG			18A	EXT UPGRADE PKG	
	.STANDARD TRIM				.CHROME BUMPERS	
572	.A/C FRONT ONLY				JOB #2 ORDER	
593	.LT/CONVEN GRP					
	.INSTR CLUSTER					
945	.AUX FUEL PORT					
99S	6.8L EFI V10ENG					
44P	ELEC 6-SPD AUTO					
T67	LT225/75RX16E B					
X85	4.56 REG X85					
	SHUTTLE BUS DIS				.EXT HVY DUTY 78	
162	FLR VINYL, FRT				16" WHITE WHLS	
20Y	11500# GVW			657	FUEL TANK 40 GL	
21T	DR CAPT CHAIR			672	FRT MAX GAWR	
425	50 STATE EMISS			874	4 SPEAKERS	
47Z	AMB PKG NOT REQ			90P	PWR DRIVER SEAT	
525	CRUISE CONTROL			942	DAYTIME LIGHTS	
54F	MIRROR, DELETE				SP DLR ACCT ADJ	
57J	AUX HTR CONNECT					
58W	FORD WORKS 4 SP					
60X	RT DOOR NOT INC					
	.PASS AIRBAG DEL					
625	RRVIEW MIRROR					
63N	EXT HD 225-AMP					
634	BATTERIES-DUAL					
	SP FLT ACCT CR					
	FUEL CHARGE					
B4A	NET INV FLT OPT					
	PRICED DORA					
	DEST AND DELIV					

## REFERENCES

---

### Washington Metropolitan Area Transit Authority

Don Scruggs, Assistant Director MetroAccess (301) 562-5371

Washington Metropolitan Area Transit Authority

Department of Access Services

6505 Belcrest Road, Room 413

Hyattsville, MD 20782

[DScruggs@WMATA.com](mailto:DScruggs@WMATA.com)

Business to date: Over \$40,000,000/ Over 1000 units

### Virginia Department of Rail and Public Transportation

Neil Sherman, Specialized Transportation Program Manager (804) 786-1154

Virginia Department of Rail and Public Transportation

600 East Main Street, Suite 2102

Richmond, VA 23219

[Neil.sherman@drpt.virginia.gov](mailto:Neil.sherman@drpt.virginia.gov)

Business to date: Over \$70,000,000/ Over 1,500 units

### Greater Richmond Transit Authority

Gerald Brink, Director of Maintenance (804) 358-3871

Greater Richmond Transit

301 East Belt Boulevard

Richmond, VA 23224

[gbrink@ridegrtc.com](mailto:gbrink@ridegrtc.com)

Business to date: Over \$5,000,000/ Over 100 units





## **REFERENCES**

### **U.S. General Services Administration (GSA)**

Federal Acquisition Services, Office of Acquisition Services  
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Transit Infrastructure Specialist  
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**Missouri Department of Transportation**

Tom Veasman  
Senior General Services Specialist  
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Jefferson City, MO 65102  
(573) 522-4404



March 3, 2015

To Whom It May Concern:

RE: Starcraft Bus / StarTrans Bus FMVSS Compliance

All StarTrans Buses are built with the same high level of quality components as the Starcraft Bus products, which meet and/or exceed all applicable FMVSS compliances.

StarTrans Bus is built on the same production line using the same skill labor as the Starcraft Bus product, using the same high level of quality components in the same manner, but cosmetically "Body Line and Badging" will be the StarTrans Bus model style.

Enclosed with this letter is a copy of FTA's understanding in this matter.

Sincerely,



Larry Hall  
Director of Engineering  
Starcraft Bus, a division of Forest River, Inc.

**FMVSS/CMVSS Compliance Summary 2017**

**Commercial and MFSAB**

The following information summarizes the C/FMVSS standards and the Compliance Action taken by Startrans Bus

C/FMVSS No.	Standard Description	Compliance Action
101	Control Location, Identification and Illumination	Startrans does not alter the OEM controls or displays. Any aftermarket seats and/or controls or displays subject to the standard meet this standard.
102	Transmission Shift Lever Sequence, Starter Interlock & Transmission Braking Effect	Compliance is deferred to the chassis manufacturer.
103	Windshield Defrosting & Defogging Systems	Compliance is deferred to the chassis manufacturer.
104	Windshield Wiping & Washing Systems	Compliance is deferred to the chassis manufacturer.
105	Hydraulic Brake Systems	Test data kept on file for vehicles that have had the wheelbase extended, or have had other system modifications. For unmodified vehicles, compliance is deferred to the chassis manufacturer.
106	Brake Hoses	Vehicles with wheelbase modifications have additional lines installed by chassis modifiers using OEM components. Other vehicles that have had system modifications use OEM or OEM-approved components and are tested for compliance. For Non-stretched vehicles compliance is deferred to the chassis manufacturer.
108	Lamps, Reflective Devices & Associated Equipment	Startrans does not alter OEM lighting. Additional lighting to include brake, turn, clearance, auxiliary and reverse lamps meet standard. Data on file.
108.1	Alternative Requirements for Headlamps	Startrans does not alter OEM lighting. Compliance is deferred to the chassis manufacturer.
110	Tire Selection and Rim for Motor Vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
111	Rear View Mirrors	All aftermarket mirrors installed by Startrans meet this standard and DOT regulations.
112	Headlamp Concealment Devices	Startrans does not manufacture vehicles with headlamp concealment devices.
113	Hood latch systems	Compliance is deferred to the chassis manufacturer.
114	Theft Protection	Compliance is deferred to the chassis manufacturer.
115	Vehicle Identification Number	Compliance is deferred to the chassis manufacturer.
116	Hydraulic Brake Fluids	Startrans does not alter brake systems. Vehicles with modified wheelbases have additional fluid added by chassis modifiers using OEM instruction and materials. All other system modifications utilize only OEM-approved fluid. For unmodified vehicles, compliance is deferred to the chassis manufacturer.
118	Power Operated Window, Partition, and Roof Panel Systems	Compliance is deferred to the chassis manufacturer.
120	Tire Selection and Rim for Motor Vehicles with a GVWR of 4,536kg (10,000 lbs.) or More	Compliance is deferred to the chassis manufacturer.
121	Air Brake Systems	Vehicles with wheelbase modifications have additional lines installed by chassis modifiers using OEM components. Other vehicles that have had system modifications use OEM or OEM-approved components and are tested for compliance. For unmodified vehicles, compliance is deferred to the chassis manufacturer.
124	Accelerator Control Systems	Startrans does not alter the OEM accelerator system, with the exception of the addition of aftermarket fast idle systems on some vehicles. These systems meet this standard when installed in accordance with instructions.
125	Warning Devices	All vehicles manufactured by Startrans that are equipped with aftermarket (3) triangle kit meet this standard.
131	School Bus Pedestrian Safety Devices	All vehicles manufactured by Startrans are not completed to be used as school buses.
135	Light Vehicle Brake System with a GVWR of 3,500kg (7,716lbs.) or Less	Startrans does not manufacture vehicles with a GVWR of 3,500kg (7,716 lbs.) or Less.
201	Occupant Protection in Interior Impact	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
202	Head Restraints	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.



## FMVSS/CMVSS Compliance Summary 2017

## Commercial and MFSAB

The following information summarizes the C/FMVSS standards and the Compliance Action taken by Startrans Bus

203	Impact Protection for the Driver from the Steering Control System	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
204	Steering Control Rearward Displacement	Compliance is deferred to the chassis manufacturer.
205	Glazing Materials	No modifications are made to the OEM Glazing materials. Additional glazing materials meet the standard. Data on file.
206	Door Locks and Door Retention Devices	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
207	Seating System	All seating installed by Startrans meets this standard. Test data on file.
208	Occupant Crash Protection	No alterations are made to the OEM seat belts, air bag systems or associated hardware. Any seat belt systems added meet the standard. Test data on file.
209	Seat Belt Assemblies	No alterations are made to the OEM seat belts or associated hardware. Any seat belt systems added meet the standard. Test data on file.
210	Seat Belt Assembly Anchorage	No alterations are made to the OEM seat belts or associated hardware. Seat belt systems and their installation meet the standard. Test data on file.
210.1	User-ready Tether Anchorages for Restraint System	No alterations are made to the OEM seat belts or associated hardware. Seat belt systems and their installation meet the standard. Data on file.
210.2	Lower Universal Anchorage Systems for Restraint Systems and Booster Cushions	No alterations are made to the OEM seat belts or associated hardware. Seat belt systems and their installation meet the standard. Data on file.
212	Windshield Mounting	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
213	Child Restraint Systems	Vehicles manufactured by Startrans, that are subject to this standard, have seating installed that meets this standard. Test data on file.
213.4	Built-in Child Restraint Systems and Built-in Booster Cushions	Vehicles manufactured by Startrans, that are subject to this standard, have seating installed that meets this standard. Test data on file.
214	Side Impact Protection with a GVWR of 4,536kg (10,000 lbs.) or Less	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
216	Roof Crush Resistance	Startrans does not manufacture vehicles with a GVWR of 2,722kg (6,000 lbs.) or Less.
217	Bus Window Retention and Release	No modifications are made to the OEM windows. Additional windows meet the standard. Test data on file.
219	Windshield Zone Intrusion	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
220	School Bus Rollover Testing	All vehicles manufactured by Startrans meet this standard. Test data on file
221	School Bus Body Joint Strength	All vehicles manufactured by StarTrans are not completed to be used as school buses, however, StarTrans does test vehicles to meet standard.
222	School Bus Passenger Seating and Crash Protection	All MFSAB vehicles manufactured by Startrans meet this standard. Test data on file
225	Child Restraint Anchorage Systems	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
301	Fuel System Integrity	Compliance is deferred to the chassis manufacturer.
301.1	LPG Fuel System Integrity	Compliance is deferred to the chassis manufacturer.
301.2	CNG Fuel System Integrity	Compliance is deferred to the chassis manufacturer.

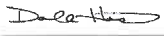


## FMVSS/CMVSS Compliance Summary 2017

## Commercial and MFSAB

The following information summarizes the C/FMVSS standards and the Compliance Action taken by Startrans Bus

<b>302</b>	Flammability of Interior Materials	Materials installed in the interior of Startrans products meet the standard. Test data on file.
<b>303</b>	Fuel System Integrity of Compressed Natural Gas Systems	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
<b>304</b>	Compressed Natural Gas Fuel Container Integrity	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
<b>305</b>	Electrolyte Spillage and Electrical Shock Protection	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
<b>403</b>	Platform Lift System for Motor Vehicles	Startrans does not alter the platform lift system. Startrans install lift system in strict compliance with the manufacturers installation instructions. Startrans meets strength requirements. Test data on file.
<b>404</b>	Platform Lift Installation on Motor Vehicles	Compliance is deferred to the lift manufacturer.
<b>1106</b>	Noise Emissions	Startrans does not alter the OEM Chassis in the area which is stated in the incomplete vehicle documents. Data on file.

Signed: Date: 1/10/2017Title: Compliance Manger



## FMVSS/CMVSS Compliance Summary 2016

## Commercial and MFSAB

The following information summarizes the C/FMVSS standards and the Compliance Action taken by Startrans Bus

C/FMVSS No.	Standard Description	Compliance Action
101	Control Location, Identification and Illumination	Startrans does not alter the OEM controls or displays. Any aftermarket seats and/or controls or displays subject to the standard meet this standard.
102	Transmission Shift Lever Sequence, Starter Interlock & Transmission Braking Effect	Compliance is deferred to the chassis manufacturer.
103	Windshield Defrosting & Defogging Systems	Compliance is deferred to the chassis manufacturer.
104	Windshield Wiping & Washing Systems	Compliance is deferred to the chassis manufacturer.
105	Hydraulic Brake Systems	Test data kept on file for vehicles that have had the wheelbase extended, or have had other system modifications. For unmodified vehicles, compliance is deferred to the chassis manufacturer.
106	Brake Hoses	Vehicles with wheelbase modifications have additional lines installed by chassis modifiers using OEM components. Other vehicles that have had system modifications use OEM or OEM-approved components and are tested for compliance. For Non-stretched vehicles compliance is deferred to the chassis manufacturer.
108	Lamps, Reflective Devices & Associated Equipment	Startrans does not alter OEM lighting. Additional lighting to include brake, turn, clearance, auxiliary and reverse lamps meet standard. Data on file.
108.1	Alternative Requirements for Headlamps	Startrans does not alter OEM lighting. Compliance is deferred to the chassis manufacturer.
110	Tire Selection and Rim for Motor Vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
111	Rear View Mirrors	All aftermarket mirrors installed by Startrans meet this standard and DOT regulations.
112	Headlamp Concealment Devices	Startrans does not manufacture vehicles with headlamp concealment devices.
113	Hood latch systems	Compliance is deferred to the chassis manufacturer.
114	Theft Protection	Compliance is deferred to the chassis manufacturer.
115	Vehicle Identification Number	Compliance is deferred to the chassis manufacturer.
116	Hydraulic Brake Fluids	Startrans does not alter brake systems. Vehicles with modified wheelbases have additional fluid added by chassis modifiers using OEM instruction and materials. All other system modifications utilize only OEM-approved fluid. For unmodified vehicles, compliance is deferred to the chassis manufacturer.
118	Power Operated Window, Partition, and Roof Panel Systems	Compliance is deferred to the chassis manufacturer.
120	Tire Selection and Rim for Motor Vehicles with a GVWR of 4,536kg (10,000 lbs.) or More	Compliance is deferred to the chassis manufacturer.
121	Air Brake Systems	Vehicles with wheelbase modifications have additional lines installed by chassis modifiers using OEM components. Other vehicles that have had system modifications use OEM or OEM-approved components and are tested for compliance. For unmodified vehicles, compliance is deferred to the chassis manufacturer.
124	Accelerator Control Systems	Startrans does not alter the OEM accelerator system, with the exception of the addition of aftermarket fast idle systems on some vehicles. These systems meet this standard when installed in accordance with instructions.
125	Warning Devices	All vehicles manufactured by Startrans that are equipped with aftermarket (3) triangle kit meet this standard.
131	School Bus Pedestrian Safety Devices	All vehicles manufactured by Startrans are not completed to be used as school buses.
135	Light Vehicle Brake System with a GVWR of 3,500kg (7,716lbs.) or Less	Startrans does not manufacture vehicles with a GVWR of 3,500kg (7,716 lbs.) or Less.
201	Occupant Protection in Interior Impact	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
202	Head Restraints	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.





## FMVSS/CMVSS Compliance Summary 2016

## Commercial and MFSAB

The following information summarizes the C/FMVSS standards and the Compliance Action taken by Startrans Bus

203	Impact Protection for the Driver from the Steering Control System	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
204	Steering Control Rearward Displacement	Compliance is deferred to the chassis manufacturer.
205	Glazing Materials	No modifications are made to the OEM Glazing materials. Additional glazing materials meet the standard. Data on file.
206	Door Locks and Door Retention Devices	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
207	Seating System	All seating installed by Startrans meets this standard. Test data on file.
208	Occupant Crash Protection	No alterations are made to the OEM seat belts, air bag systems or associated hardware. Any seat belt systems added meet the standard. Test data on file.
209	Seat Belt Assemblies	No alterations are made to the OEM seat belts or associated hardware. Any seat belt systems added meet the standard. Test data on file.
210	Seat Belt Assembly Anchorage	No alterations are made to the OEM seat belts or associated hardware. Seat belt systems and their installation meet the standard. Test data on file.
210.1	User-ready Tether Anchorages for Restraint System	No alterations are made to the OEM seat belts or associated hardware. Seat belt systems and their installation meet the standard. Data on file.
210.2	Lower Universal Anchorage Systems for Restraint Systems and Booster Cushions	No alterations are made to the OEM seat belts or associated hardware. Seat belt systems and their installation meet the standard. Data on file.
212	Windshield Mounting	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
213	Child Restraint Systems	Vehicles manufactured by Startrans, that are subject to this standard, have seating installed that meets this standard. Test data on file.
213.4	Built-in Child Restraint Systems and Built-in Booster Cushions	Vehicles manufactured by Startrans, that are subject to this standard, have seating installed that meets this standard. Test data on file.
214	Side Impact Protection with a GVWR of 4,536kg (10,000 lbs.) or Less	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
216	Roof Crush Resistance	Startrans does not manufacture vehicles with a GVWR of 2,722kg (6,000 lbs.) or Less.
217	Bus Window Retention and Release	No modifications are made to the OEM windows. Additional windows meet the standard. Test data on file.
219	Windshield Zone Intrusion	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
220	School Bus Rollover Testing	All vehicles manufactured by Startrans meet this standard. Test data on file
221	School Bus Body Joint Strength	All MFSAB vehicles manufactured by Startrans meet this standard. Test data on file
222	School Bus Passenger Seating and Crash Protection	All MFSAB vehicles manufactured by Startrans meet this standard. Test data on file
225	Child Restraint Anchorage Systems	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
301	Fuel System Integrity	Compliance is deferred to the chassis manufacturer.
301.1	LPG Fuel System Integrity	Compliance is deferred to the chassis manufacturer.
301.2	CNG Fuel System Integrity	Compliance is deferred to the chassis manufacturer.



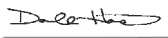


## FMVSS/CMVSS Compliance Summary 2016

## Commercial and MFSAB

The following information summarizes the C/FMVSS standards and the Compliance Action taken by Startrans Bus

<b>302</b>	Flammability of Interior Materials	Materials installed in the interior of Startrans products meet the standard. Test data on file.
<b>303</b>	Fuel System Integrity of Compressed Natural Gas Systems	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
<b>304</b>	Compressed Natural Gas Fuel Container Integrity	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
<b>305</b>	Electrolyte Spillage and Electrical Shock Protection	Startrans does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
<b>403</b>	Platform Lift System for Motor Vehicles	Startrans does not alter the platform lift system. Startrans install lift system in strict compliance with the manufacturers installation instructions. Startrans meets strength requirements. Test data on file.
<b>404</b>	Platform Lift Installation on Motor Vehicles	Compliance is deferred to the lift manufacturer.
<b>1106</b>	Noise Emissions	Startrans does not alter the OEM Chassis in the area which is stated in the incomplete vehicle documents. Data on file.

Signed: Date: 1/11/2016Title: Compliance Manger

## VALIDITY OF FMVSS STANDARDS FOR COMMERCIAL BUS

### **CRASHWORTHINESS**

Vehicle must be rear and side impact tested meeting all Federal and State vehicle safety standards.

#### **§571.214 Standard No. 214; Side impact protection.**

##### *S1 Scope and purpose.*

(a) *Scope.* This standard specifies performance requirements for protection of occupants in side impacts.

(b) *Purpose.* The purpose of this standard is to reduce the risk of serious and fatal injury to occupants of passenger cars, multipurpose passenger vehicles, trucks and buses in side impacts by specifying strength requirements for side doors, limiting the forces, deflections and accelerations measured on anthropomorphic dummies in test crashes, and by other means.

*S2 Applicability.* This standard applies to passenger cars, and to multipurpose passenger vehicles, trucks and buses with a gross vehicle weight rating (GVWR) of 4,536 kilograms (kg) (10,000 pounds (lb)) or less, except for walk-in vans, or otherwise specified.

As you can see, FMVSS 214 applies only to vehicles with a GVWR of 10,000 pounds or less. If this requirement applies to FTA funded rolling stock purchases, the purchaser is required to perform a sole source procurement, since we know of only one manufacturer that has performed this test.

We successfully meet all APPLICABLE FMVSS standards. An FMVSS self-certification sheet is always required for submission on FTA funded rolling stock purchases. A sample form is attached.

#### **§571.220 Standard No. 220; School bus rollover protection.**

*S1. Scope.* This standard establishes performance requirements for school bus rollover protection.

*S2. Purpose.* The purpose of this standard is to reduce the number of deaths and the severity of injuries that result from failure of the school bus body structure to withstand forces encountered in rollover crashes.

*S3. Applicability.* This standard applies to school buses.

Though FMVSS 220 is labeled as School Bus only, it has been accepted industry-wide that this test be successfully performed on Commercial Bus bodies as well. We have full test documentation on file.

**§571.221 Standard No. 221; School bus body joint strength.**

S1. *Scope.* This standard establishes requirements for the strength of the body panel joints in school bus bodies.

S2. *Purpose.* The purpose of this standard is to reduce deaths and injuries resulting from the structural collapse of school bus bodies during crashes.

S3. *Application.* This standard applies to school buses.

Note that this standard applies solely to school bus bodies. The origins of this requirement date back many years to a time when school bus structure required the rigid attachment of the skin for reinforcement.

This standard does not apply to Commercial Buses since the welded steel frame construction of the vehicles forms the safety barrier required and the body panels lend no significant strength to the overall structural integrity of the body construction. As evidence, we attach a letter we received from the FTA ruling that switching our exterior panels from metal to a composite material required no further testing at Altoona due to the strength of our welded steel frame.

Here is an FTA opinion on the requirement of FMVSS 221 for commercial vehicles from the website.

**Q.** Is the FMVSS221 regulation relevant to the commercial transit bus industry? Or is it only for school bus application?

**A.** FMVSS (Federal Motor Vehicle Safety Standard) No. 221, School Bus Body Joint Strength, applies only to school buses, and is not a basis for testing public transit vehicles under FTA's Bus Testing program (see <http://www.vss.psu.edu/btrc.htm>). (**Posted: May 2009**).

We have successfully tested FMVSS 221 on our vehicle where the sidewall and floor joints mate. This test is also attached.

**§571.224 Standard No. 224; Rear impact protection.**

S1. *Scope.* This standard establishes requirements for the installation of rear impact guards on trailers and semitrailers with a gross vehicle weight rating (GVWR) of 4,536 kg or more.

S2. *Purpose.* The purpose of this standard is to reduce the number of deaths and serious injuries occurring when light duty vehicles impact the rear of trailers and semitrailers with a GVWR of 4,536 kg or more.

S3. *Application.* This standard applies to trailers and semitrailers with a GVWR of 4,356 kg or more. The standard does not apply to pole trailers, pulpwood trailers, road construction controlled horizontal discharge trailers, special purpose vehicles, wheels back vehicles, or temporary living quarters as defined in 49 CFR 529.2.

If a cargo tank motor vehicle, as defined in 49 CFR 171.8, is certified to carry hazardous materials and has a rear bumper or rear end protection device conforming with 49 CFR part 178 located in the area of the horizontal member of the rear underride guard required by this standard, the guard need not comply with the energy absorption requirement (S5.2.2) of 49 CFR 571.223.

As you can see, this standard applies only to trailers and semitrailers.

**§571.301 Standard No. 301; Fuel system integrity.**

S1. *Scope.* This standard specifies requirements for the integrity of motor vehicle fuel systems.

S2. *Purpose.* The purpose of this standard is to reduce deaths and injuries occurring from fires that result from fuel spillage during and after motor vehicle crashes, and resulting from ingestion of fuels during siphoning.

S3. *Application.* This standard applies to passenger cars, and to multipurpose passenger vehicles, trucks and buses that have a GVWR of 4,536 kg or less and use fuel with a boiling point above 0 °C, and to school buses that have a GVWR greater than 4,536 kg and use fuel with a boiling point above 0 °C.

S4. *Definition.* *Fuel spillage* means the fall, flow, or run of fuel from the vehicle but does not include wetness resulting from capillary action.

*S5. General requirements.*

S5.1 *Passenger cars, and multipurpose passenger vehicles, trucks, and buses with a GVWR of 10,000 pounds or less.* Each passenger car and each multipurpose passenger vehicle, truck, and bus with a GVWR of 10,000 pounds or less shall meet the requirements of S6.1 through S6.4. Each of these types of vehicles that is manufactured to use alcohol fuels shall also meet the requirements of S6.6.

S6.6 *Anti-siphoning test for alcohol fuel vehicles.* Each vehicle shall have means that prevent any hose made of vinyl plastic or rubber, with a length of not less than 1200 millimeters (mm) and an outside diameter of not less than 5.2 mm, from contacting the level surface of the liquid fuel in the vehicle's fuel tank or fuel system, when the hose is inserted into the filler neck attached to the fuel tank with the fuel tank filled to any level from 90 to 95 percent of capacity.

Though FMVSS 301 is not required on our vehicles, it is actually performed by the chassis manufacturer and, assuming we follow all guidelines for our body construction is passed through to us in the incomplete vehicle that we modify.

We are in good standing with several 100% ratings from Ford during our QVM inspections that are performed annually. An excel spreadsheet of our last inspection dated 6/28/2016.

Alternate fuel conversions have their own set of requirements that are met and certified by the alternate fuel converter.

# STARCRAFT BUS

a division of Forest River, Inc.

## FMVSS/CMVSS Compliance Summary 2016-2017

## Commercial Only

The following information describes briefly the C/FMVSS standards and the Compliance Action that has been taken by either Starcraft Bus Commercial Division, the chassis manufacturer.

C/FMVSS No.	Standard Description	Compliance Action
101	Control Location, Identification and Illumination	Starcraft does not alter the OEM controls or displays. Any aftermarket seats and/or controls or displays subject to the standard meet this standard. Test data on file.
102	Transmission Shift Lever Sequence, Starter Interlock & Transmission Braking Effect	Compliance is deferred to the chassis manufacturer.
103	Windshield Defrosting & Defogging Systems	Compliance is deferred to the chassis manufacturer.
104	Windshield Wiping & Washing Systems	Compliance is deferred to the chassis manufacturer.
105	Hydraulic Brake Systems	Test data kept on file for vehicles that have had the frame stretched, or have had other system modifications. For Non-stretched vehicles compliance is deferred to the chassis manufacturer.
106	Brake Hoses	Vehicles with stretched frames have additional lines installed by chassis modifiers using OEM components. Other vehicles that have had system modifications use OEM or OEM-approved components and are tested for compliance. For Non-stretched vehicles compliance is deferred to the chassis manufacturer.
108	Lamps, Reflective Devices & Associated Equipment	Starcraft does not alter OEM lighting. Additional lighting to include brake, turn, clearance and reverse lamps meet standard. Data on file.
108.1	Alternative Requirements for Headlamps	Starcraft does not alter OEM lighting. Compliance is deferred to the chassis manufacturer.
110	Tire Selection and Rim for Motor Vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less	Starcraft does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
111	Rear View Mirrors	All aftermarket mirrors installed by Starcraft meet this standard and DOT regulations. Data on file.
112	Headlamp Concealment Devices	Starcraft does not manufacture vehicles with headlamp concealment devices.
113	Hood latch systems	Compliance is deferred to the chassis manufacturer.
114	Theft Protection	Compliance is deferred to the chassis manufacturer.
115	Vehicle Identification Number	Compliance is deferred to the chassis manufacturer.
116	Hydraulic Brake Fluids	Starcraft does not alter brake systems. Vehicles with stretched frames have additional fluid added by chassis modifiers using OEM instruction and materials. All other system modifications utilize only OEM-approved fluid. For Non-stretched vehicles compliance is deferred to the chassis manufacturer.
118	Power Operated Window, Partition, and Roof Panel Systems	Compliance is deferred to the chassis manufacturer.
120	Tire Selection and Rim for Motor Vehicles with a GVWR of 4,536kg (10,000 lbs.) or More	Compliance is deferred to the chassis manufacturer.
121	Air Brake Systems	Vehicles with stretched frames have additional lines installed by chassis modifiers using OEM components. Other vehicles that have had system modifications use OEM or OEM-approved components and are tested for compliance. For Non-stretched vehicles compliance is deferred to the chassis manufacturer.
124	Accelerator Control Systems	Starcraft does not alter the OEM accelerator system, with the exception of the addition of aftermarket fast idle systems on some vehicles. These systems meet this standard when installed in accordance with instructions.
125	Warning Devices	All vehicles manufactured by Starcraft that are equipped with aftermarket (3) triangle kit meet this standard.
131	School Bus Pedestrian Safety Devices	All vehicles manufactured by Starcraft are not completed to be used as school buses.
135	Light Vehicle Brake System with a GVWR of 3,500kg (7,716lbs.) or Less	Starcraft does not manufacture vehicles with a GVWR of 3,500kg (7,716 lbs.) or Less.
201	Occupant Protection in Interior Impact	All vehicles applicable to the standard (under 10,000 lbs.) do not have alterations made that affect the compliance to this standard. Compliance is deferred to the chassis manufacturer.
202	Head Restraints	All vehicles applicable to the standard (under 10,000 lbs.) have seating installed that meets this standard. Compliance is deferred to the chassis manufacturer.

# STARCRAFT BUS

a division of Forest River, Inc.

## FMVSS/CMVSS Compliance Summary 2016-2017

## Commercial Only

The following information describes briefly the C/FMVSS standards and the Compliance Action that has been taken by either Starcraft Bus Commercial Division, the chassis manufacturer.

203	Impact Protection for the Driver from the Steering Control System	Compliance is deferred to the chassis manufacturer.
204	Steering Control Rearward Displacement	Compliance is deferred to the chassis manufacturer.
205	Glazing Materials	No modifications are made to the OEM Glazing materials. Additional glazing materials meet the standard. Data on file.
206	Door Locks and Door Retention Devices	All vehicles manufactured by Starcraft (non-buses) that are subject to this standard have no modifications made which affect compliance to the standard. Compliance is deferred to the chassis manufacturer.
207	Seating System	All seating installed by Starcraft meets this standard. Test data on file.
208	Occupant Crash Protection	No alterations are made to the OEM seat belts, air bag systems or associated hardware. Any seat belt systems added meet the standard. Test data on file.
209	Seat Belt Assemblies	No alterations are made to the OEM seat belts or associated hardware. Any seat belt systems added meet the standard. Test data on file.
210	Seat Belt Assembly Anchorage	No alterations are made to the OEM seat belts or associated hardware. Seat belt systems and their installation meet the standard. Test data on file.
210.1	User-ready Tether Anchorages for Restraint System	No alterations are made to the OEM seat belts or associated hardware. Seat belt systems and their installation meet the standard. Data on file.
210.2	Lower Universal Anchorage Systems for Restraint Systems and Booster Cushions	No alterations are made to the OEM seat belts or associated hardware. Seat belt systems and their installation meet the standard. Data on file.
212	Windshield Mounting	Compliance is deferred to the chassis manufacturer.
213	Child Restraint Systems	Vehicles manufactured by Starcraft that are subject to this standard (under 10,000 lbs.) have seating installed that meets this standard. Test data on file.
213.4	Built-in Child Restraint Systems and Built-in Booster Cushions	Vehicles manufactured by Starcraft that are subject to this standard (under 10,000 lbs.) have seating installed that meets this standard. Test data on file.
214	Side Impact Protection with a GVWR of 4,536kg (10,000 lbs.) or Less	Starcraft does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less
216	Roof Crush Resistance	Starcraft does not manufacture vehicles that are subject to this standard.
217	Bus Window Retention and Release	No modifications are made to the OEM windows. Additional windows meet the standard. Test data on file.
219	Windshield Zone Intrusion	Compliance is deferred to the chassis manufacturer.
220	School Bus Rollover Testing	All vehicles manufactured by Starcraft are not completed to be used as school buses, however, Starcraft does test vehicles to meet standard.
221	School Bus Body Joint Strength	All vehicles manufactured by Starcraft are not completed to be used as school buses, however, Starcraft does test vehicles to meet standard.
222	School Bus Passenger Seating and Crash Protection	All vehicles manufactured by Starcraft are not completed to be used as school buses.
225	Child Restraint Anchorage Systems	Vehicles manufactured by Starcraft that are subject to this standard (under 10,000 lbs.) have seating installed that meets this standard.
301	Fuel System Integrity	Compliance is deferred to the chassis manufacturer.
301.1	LPG Fuel System Integrity	Compliance is deferred to the chassis manufacturer.
301.2	CNG Fuel System Integrity	Compliance is deferred to the chassis manufacturer.

# STARCRAFT BUS


a division of Forest River, Inc.

## FMVSS/CMVSS Compliance Summary 2016-2017

## Commercial Only

The following information describes briefly the C/FMVSS standards and the Compliance Action that has been taken by either Starcraft Bus Commercial Division, the chassis manufacturer.

302	Flammability of Interior Materials	Materials installed in the interior of Starcraft products meet the standard. Test data on file.
303	Fuel System Integrity of Compressed Natural Gas Systems	Starcraft does not typically produce vehicles with CNG systems. All vehicles equipped with CNG systems exceed the applicability (10,000 lbs. or less) of this standard.
304	Compressed Natural Gas Fuel Container Integrity	Starcraft does not typically produce vehicles with CNG systems. All vehicles equipped with CNG systems exceed the applicability (10,000 lbs. or less) of this standard.
305	Electrolyte Spillage and Electrical Shock Protection	Starcraft does not produce vehicles that use electricity as propulsion power.
403	Platform Lift System for Motor Vehicles	Starcraft does not alter the platform lift system. Starcraft install lift system in strict compliance with the manufacturers installation instructions. Starcraft meets strength requirements. Test data on file.
404	Platform Lift Installation on Motor Vehicles	Compliance is deferred to the lift manufacturer.
1106	Noise Emissions	Starcraft does not alter the OEM Chassis in the area which is stated in the incomplete vehicle documents. Data on file.

Signed: 

Date: 1/11/2016

Title: Compliance and Development Manager



Progressive Engineering Inc.

**StarCraft Bus and Mobility**

FMVSS 221  
Body Panel Joint Strength Test

12/23/2008

This test report contains eight (8) pages, including the cover sheet. Any additions to, alterations of, or unauthorized use of excerpts from this report are expressly forbidden.

2008-1885

58640 State Road 15 - Goshen, IN 46528  
Phone: 574-533-0337 - Fax: 574-533-9736  
[www.p-e-i.com](http://www.p-e-i.com)



**1. TITLE**

FMVSS 221 Body Panel Joint Strength Test

**2. OBJECTIVE**

To determine the body panel joint strength on several materials and configurations when tested in tension.

*This test report pertains only to the specimen tested. It remains the sole responsibility of the manufacturer to provide a product consistent to that which was tested.*

**3. TESTED FOR**

StarCraft Bus and Mobility  
2367 Century Drive  
Goshen, IN 46528

**4. TESTING ORGANIZATION**

*Progressive Engineering Inc.*  
58640 State Road 15  
Goshen, IN 46528  
[www.p-e-i.com](http://www.p-e-i.com)

*See IAS Evaluation Report TL-178 for ISO 17025 Accreditation*

**5. TESTING PERSONNEL**

Laboratory Manager      - Jason R. Holdeman  
Technician                - Todd Miller



**6. REFERENCE STANDARDS**

Body Joint Strength Test per the Federal Motor Vehicle Safety Standard (FMVSS) 221 Section 6.3 as stated in the Code of Federal Regulations Title 49, Volume 5, Section 571.221.

**7. TESTING EQUIPMENT**

Tinius Olsen Tension and Compression Hydraulic test machine (PEI No. 144).  
Calibrated to ASTM E4.

## 8. TEST SPECIMEN

### Test No. 1 - Specimen Labeled "A"

- Aluminum Side Wall Skin. Measured thickness is .063".
- Aluminum Skirt. Measured thickness is .040".
- 1-1/2" x 1-1/2" x 8" 11ga. Steel Angle. Measured thickness is .127".
- Double-Sided (V2520) PVC Tape (.031" x .250") between aluminum and steel angle.
- 1/2" x 8" Vinyl Side Trim
- 1-15/16" x 8" Aluminum Trim
- (2) #8 x 1" Self-Tapping Aluminum Pan Head Screws (set 4" o.c.).
- Additional framing included on Aluminum Side Wall Skin as depicted in attached drawing.

See attached StarCraft drawing entitled "Allstar Joint Test Assembly"

### Test No. 2 - Specimen Labeled "B"

- Aluminum Side Wall Skin. Measured thickness is .063".
- Aluminum Skirt. Measured thickness is .040".
- 1-1/2" x 1-1/2" x 8" 11ga. Steel Angle. Measured thickness is .127".
- SikaFast-3131, 10:1 Acrylic adhesive between aluminum and steel angle, between skins.
- 1/2" x 8" Vinyl Side Trim
- 1-15/16" x 8" Aluminum Trim
- (5) 3/16" dia. Stainless Mandrel Rivets, Grade 51 Buttonhead (set 1-1/2" o.c.).
- Additional framing included on Aluminum Side Wall Skin as depicted in attached drawing.

## 9. TEST SPECIMEN CONSTRUCTION

The test specimens were provided to *PEI* assembled for testing by StarCraft Bus

The test specimen drawings were provided to *PEI* by StarCraft Bus and verified by *PEI* personnel.

The specimens were cut into the dog bone shape as required in Figure 1 of FMVSS 221.

*Specimen designations were provided to PEI by StarCraft Bus.*

## 10. TEST SET-UP

The ends of the test specimens were bolted to the tension grips such that the load direction was applied perpendicular to the joint as required by Section 6.3.2. of FMVSS 221.

See attached fixture drawing no. F1103 for details.

## 11. TEST PROCEDURE

The load was applied at an approximate rate of .321" per section 6.3.3 of FMVSS 221 until the specimen was separated.

## 12. TEST RESULTS

See attached data sheet for details.

*Progressive Engineering Inc.*

**FMVSS 221 Body Panel Joint Test**

Date: 12/23/2008

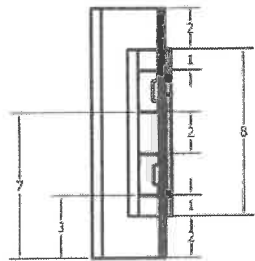
Client: StarCraft Bus and Mobility

Project No.: 2008-1885

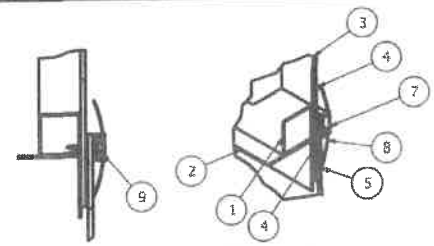
Test Condition: 64 °F and 43% R.H.

Load Rate: .321" per minute

Sample No.	Specimen Description	Adhesive	Fasteners	Ultimate Load (lbf)	Specimen Width (in)	Pounds per Linear inch	Failure / Comments
A	Aluminum Side Wall Skin adhered & fastened at mid-point overlap to Aluminum Skirt	(V2520) Dbl. Sided PVC Tape	(2) - Self-Tapping Aluminum Screws	1,245	8.050	155 pli	Adhesive sheared cohesively and aluminum tore around fasteners.
B	Aluminum Side Wall Skin adhered & fastened at mid-point overlap to Aluminum Skirt	SikaFast-3131, 10:1 Acrylic	(5) - 3/16" dia. Stainless Mandrel Rivets, Grade 51 Buttonhead	9,000	8.090	1112 pli	Aluminum Skirt tore 1" from mid-point.

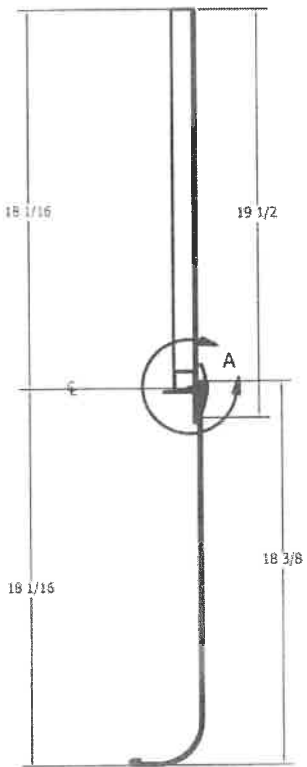


TOP VIEW

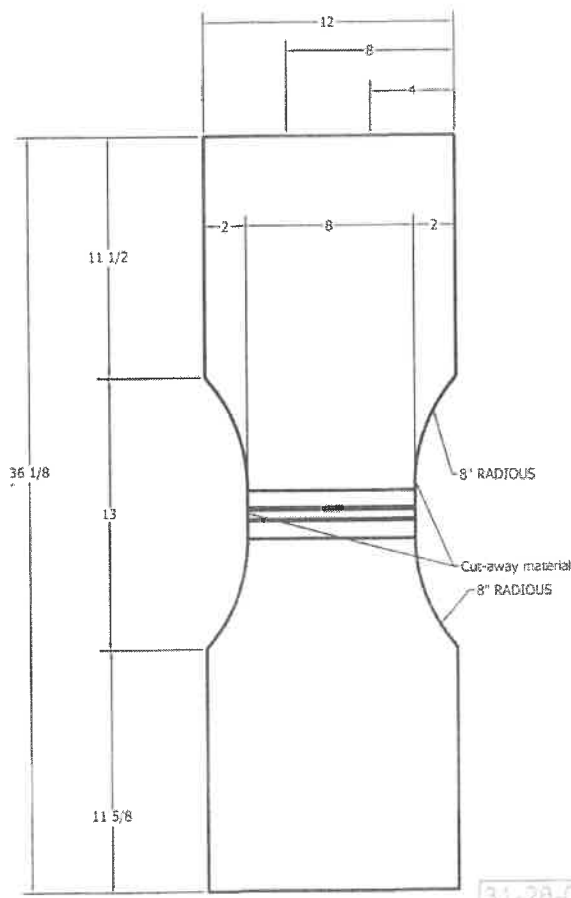


DETAIL A  
SCALE 1 / 2

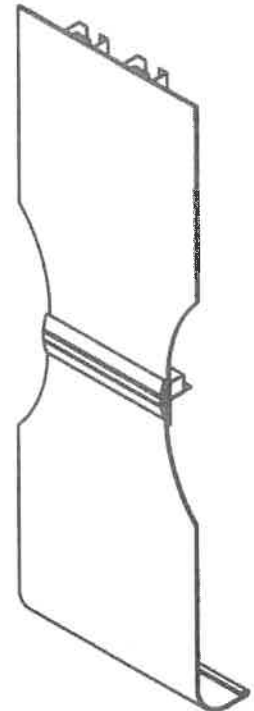
DETAIL B  
SCALE 1 / 2



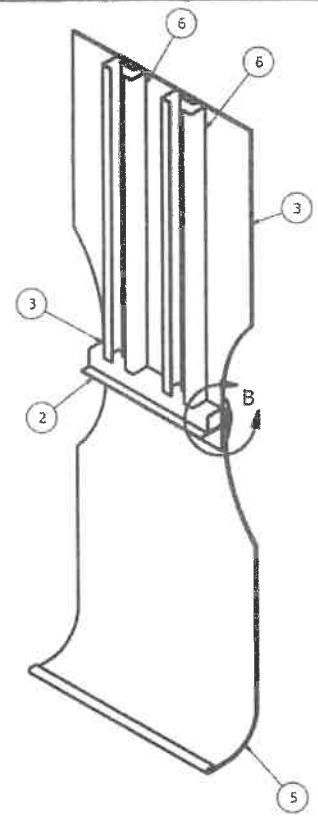
SIDE VIEW



FRONT VIEW



FRONT SIDE ISOMETRIC



BACK SIDE ISOMETRIC

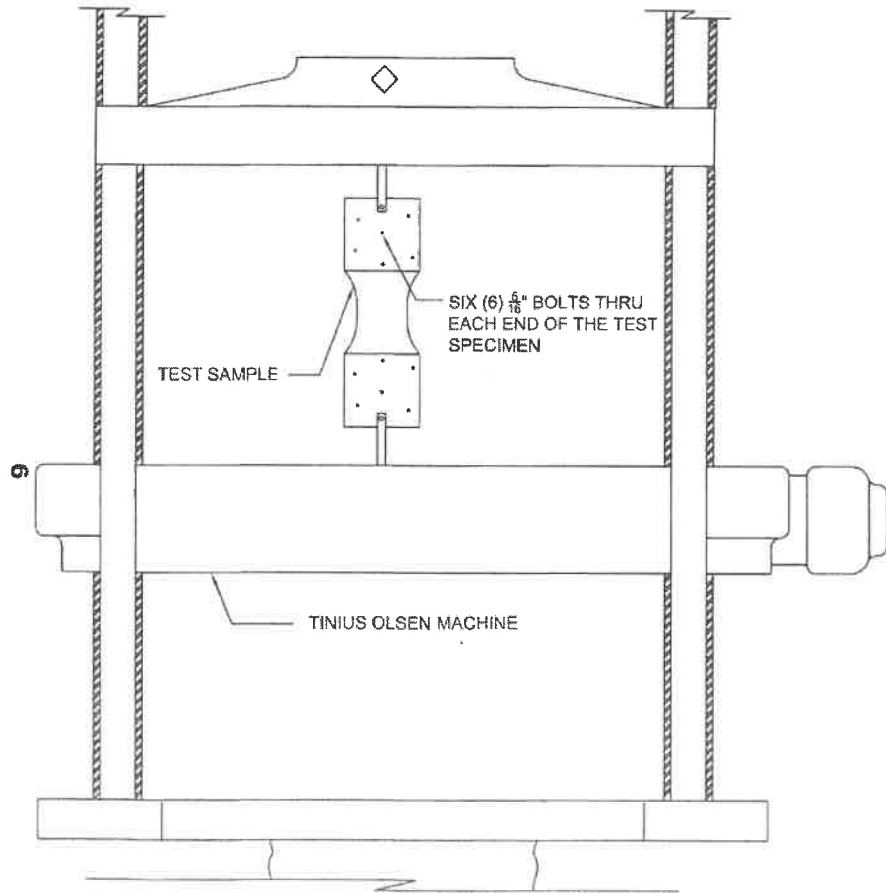
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	1x1x12	Steel Tube 16ga. 1"x 1"x 12"
2	1	02071056-12	STEEL ANGLE 11ga.x 1-1/2"x 1-1/2"x 8" lg. A-513
3	1	Alum .060 x 12x18	Aluminum Side Wall Skin .060"x 12"x 19-1/2" Sample
4	1	Double sided Adhesive	(V2520) PVC Tape, #2520-.031"x .250" Foam Tape.
5	1	Alum skirt .060.x 12x18	Aluminum Skirt .060"x 12"x 18" Sample
6	2	02062351-17.25	Wall Bow 18ga. 1"x 2"x 17-1/4"
7	1	70008998-12	8" Vinyl Side Trim
8	1	70008999	8" Aluminum Trim
9	3	SELF TAPPING PAN HEAD SCREW 1	1" Self Tapping Aluminum Pan Head Screws

**STARCRAFT BUS**  
a division of Forest River, Inc.

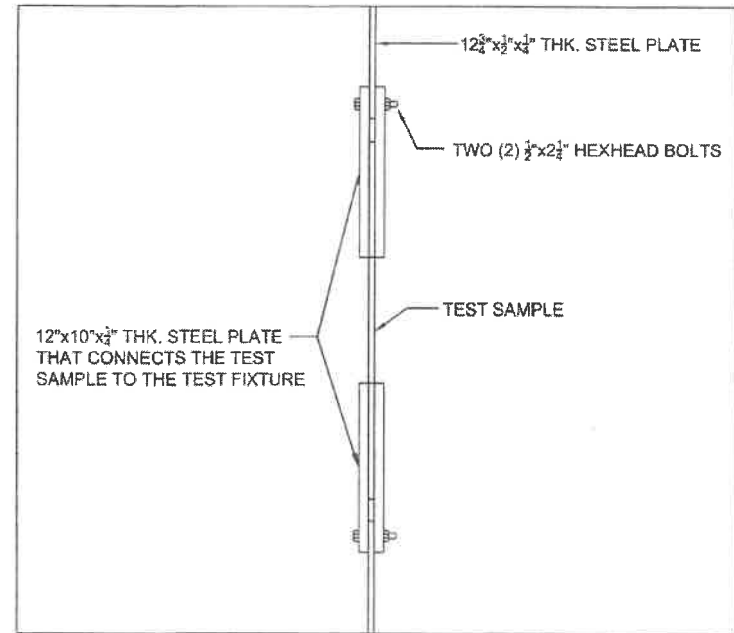
31-28-0413-08

DATE: 12/18/08  
 TITLE: Allstar Joint Test  
 DWG NO: 31-28-0413-08  
 SHEET: 1 OF 1

### FRONT VIEW



### SIDE VIEW



DATE	6/1/04	This drawing and all information contained herein is the property of PROGRESSIVE ENGINEERING, INC. and is not to be reproduced without the written permission of Progressive Engineering, Inc. assumes no responsibility for unauthorized use of this drawing.
DRAWING NUMBER	F1103	
TITLE	TEST SET-UP	

Progressive Engineering Inc.



# Certificate of Registration

This is to certify the Quality Management System of:

**FOREST RIVER MANUFACTURING, LLC**  
Division 5

**Location Addresses:**

**Starcraft Bus: Commercial**  
2367 Century Drive  
Goshen, IN 46528

**Starcraft Bus: School Bus**  
2408 Century Drive  
Goshen, IN 46528

**StarTrans Bus**  
2367 Century Drive  
Goshen, IN 46528

has been assessed and found to be in compliance with the requirements of

**ISO 9001:2008**

for the following scope:

Design, Manufacturing, Sales, and Administration of Commercial, Government and School Busses

Certificate Number: **SARA-2006-CA-0031-B**

Originally Registered:  
**February 28, 2006**

Latest Issue:  
**October 14, 2016**

Expiry Date:  
**January 25, 2018**

*President, SARA Registrar*



This registration is subject to the company maintaining its system to the required standard which will be monitored by SARA Registrar. This certificate remains the property of Standards American Registrations Authority (SARA Registrar) and shall be returned immediately upon request.  
SARA Registrar Headquarters: 1807D Santa Rita Road, #175, Pleasanton, CA 94566





U.S. Department  
Of Transportation  
**Federal Transit  
Administration**

Headquarters

East Building, 5<sup>th</sup> Floor – TCR  
1200 New Jersey Avenue, SE  
Washington, DC 20590

November 9, 2016

Donall Hasty  
Starcraft Bus/StarTrans Bus  
DBE Liaison Officer  
2367 Century Drive  
Goshen, IN 46525

Re: TVM DBE Goal Concurrence/Certification Letter – Fiscal Year 2017

Dear Mr. Hasty:

This letter is to inform you that the Federal Transit Administration's (FTA) Office of Civil Rights has received Starcraft/StarTrans Bus' Disadvantaged Business Enterprise (DBE) goal and methodology for FY 2017 for the period of October 1, 2016–September 30, 2017. This goal submission is required by the U.S. Department of Transportation's DBE regulations at 49 CFR Part 26 and must be implemented in good faith.

We have reviewed your FY 2017 DBE goal and determined that it is compliant with DOT's DBE regulations. You are eligible to bid on FTA-funded transit contracts. This letter or a copy of the TVM listing on FTA's website may be used to demonstrate your compliance with DBE requirements when bidding on federally funded vehicle procurements.

FTA reserves the right to remove/suspend this concurrence if your DBE program or FY 2017 DBE goal is not implemented in good faith. In accordance with this good faith requirement, you must submit your DBE Uniform Report to FTA by December 1, 2016. This report should reflect all FTA-funded contracting activity for the second period of FY 2016 (i.e., from April 1 to September 30).

Please also be mindful that your FY 2018 DBE goal methodology must be submitted to FTA by August 1, 2017. Any updates to the program plan must be submitted to FTA as they occur. Thank you for your cooperation. If you have any questions regarding this approval, please contact the FTA DBE Team via e-mail at [FTATVMSubmissions@dot.gov](mailto:FTATVMSubmissions@dot.gov).

Sincerely,

John Day  
Program Manager for Policy and Technical Assistance  
Office of Civil Rights



The Chemical Company

January 14, 2011

BASF has tested the Degacoat 310 in respect to Salt Spray (Fog) resistance. Adhesion was determined primarily through Pull-Off Adhesion (ASTM D4541). In order to test corrosion resistance, panels are exposed in a Salt Fog Corrosion Chamber in accordance with ASTM B117. Panels are removed at 500 hour intervals for a total exposure of 1500 hours within the corrosion chamber. Resistance to corrosion is measured by loss of adhesion through Pull-Off (ASTM D4541) and Tape Test (ASTM D3359) methods as well as visual inspection.

**OBJECTIVE:**

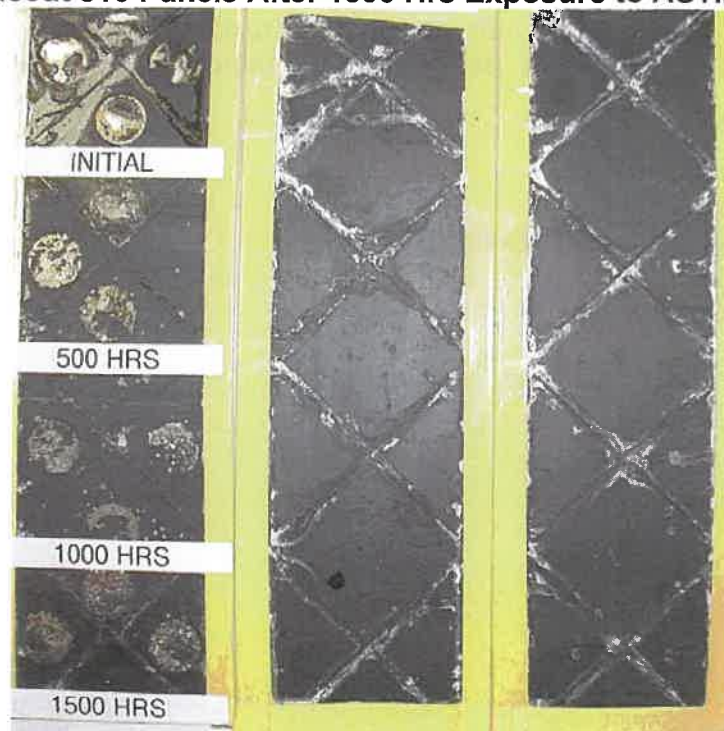
ASTM B117 Salt Fog testing on Degacoat 310 at 20 mils wet on the panels provided.

**RESULTS:**

**Degacoat 310**

Degacoat 310 showed good resistance to corrosion by ASTM B117 Salt Fog testing. After 1500 hours of salt fog exposure, there was minimal corrosion in the area around the scribed lines. Upon removal of the coating, there was minimal corrosion evident on the panel.

**Degacoat 310 Panels After 1500 Hrs Exposure to ASTM B117**





The Chemical Company

**Degacoat 310 Removed After 1500 hrs Exposure to ASTM B117**



**CONCLUSIONS:**

Degacoat 310 fully complies with:

**ASTM D 1187 Standard Specification for Asphalt-Base Emulsions for Use as Protective Coatings for Metal, Type 1**

Degacoat 310 displays excellent adhesion to galvanized metal panels and provides excellent resistance to corrosion on metals, passing the appropriate ASTM Specification.

Bob Miller  
OEM Technologies Specialist  
OEM/Industrial Products Group  
BASF Construction Chemicals - Building Systems  
889 Valley Park Dr.  
Shakopee, MN 55379



The Chemical Company

PRODUCT DATA

# DEGACOAT™ 300, 310

General purpose underbody/protective coatings

## Description

DegaCoat™ 300 and 310 are non-fibered asphalt emulsions specifically formulated for use as protective underbody coatings which provide excellent corrosion preventative barriers for transport applications.

DegaCoat™ 300 and 310 are fiber-free for application by brush or spray.

## Packaging

DegaCoat™ 300:  
53 gallon (200.6 L) drums  
16 gallon (60.48 L) kegs  
DegaCoat™ 310:  
53 gallon (200.6 L) drums  
16 gallon (60.48 L) kegs  
330 gallon (1247 L) totes

## Color

Applies dark brown and dries to a durable matte black finish

## Shelf Life

1 year when properly stored

## Storage

Store in unopened containers in a cool, clean, dry area. Do not allow these materials to freeze in the container; do not store below 35° F (2° C).

## Features

- Anti-corrosion coating
- Nonflammable
- Water clean up
- Fast drying

## Benefits

- Beautifies and protects
- Minimizes fire hazards during application; improves worker safety
- User friendly; enhances production/ process time
- Speeds production

## Where to Use

### LOCATION

- Truck and trailer
- Bus
- RV
- House/cargo trailers
- Rail cars

### SUBSTRATE

- Metals
- Aluminum
- Plywood
- OSB
- Can be sprayed over oxidized metals

## How to Apply

### Surface Preparation

Surface should be free of oil, grease, dirt and loose material.

### Application

Spray with the proper equipment. Consult the spray equipment manufacturer for more information.

### UNDERBODY COATING

1. DegaCoat™ 300 and 310 are recommended to be used for corrosion protection on steel surfaces and other metal substrates.

2. DegaCoat™ 300 is designed for spray application using airless equipment. For best results under a wide variety of conditions, a 30:1 or higher ratio pump with a .027 orifice size is recommended. Under limited spray conditions, a 15:1 ratio can be substituted. A heavy film thickness (125 mils wet) can be achieved on vertical surfaces without sagging.

3. DegaCoat™ 310 is designed for spray application using airless equipment. A 15:1 or higher ratio pump with a minimum .023 orifice size is recommended.

## Clean Up

Tools and hands should be cleaned with soap and water before emulsion sets. Dried material can be removed with the appropriate solvent.

## For Best Performance

- Keep from freezing in the container.
- Do not apply at temperatures below 40° F (4° C) or when temperatures are expected to fall to 40° F (4° C) in the next 24 hours.
- Make certain the most current versions of product data sheet and MSDS are being used; call Customer Service (1-800-433-9517) to verify the most current versions.
- Proper application is the responsibility of the user. Field visits by BASF personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

**Technical Data**

**Composition**

DegaCoat™ 300 and 310 are asphalt-based emulsions.

**Compliances**

- DegaCoat™ 300 and 310 comply with ASTM D 1187, Type 1, and ASTM D 1227, Type 3, Class I
- DegaCoat™ 300 and 310 comply with ASTM D 1227, Type 2, Class I and ASTM D 1187, Type 1

**Test Data**

PROPERTY	RESULTS	TEST METHODS
<b>Density</b>		
DegaCoat™ 300, lbs/gal	9.1 – 9.9	Industry Method
DegaCoat™ 310, lbs/gal	9.1 – 9.9	
<b>Solid content</b>		
DegaCoat™ 300, % by weight	55.1	Industry Method
DegaCoat™ 310, % by weight	50.0	
<b>Clay content</b>		
DegaCoat™ 300, % by weight	16.2	Industry Method
DegaCoat™ 310, % by weight	4	
<b>Asphalt content</b>		
DegaCoat™ 300, % by weight	38.9	Industry Method
DegaCoat™ 310, % by weight	46	
<b>Median particle size</b>		
DegaCoat™ 300, μ	15	Industry Method
DegaCoat™ 310, μ	15	
<b>Specific gravity</b>		
DegaCoat™ 300	1.1 – 1.2	Industry Method
DegaCoat™ 310	1.1 – 1.2	
<b>Dry to the touch</b>		
DegaCoat™ 300, hrs	1	Industry Method
DegaCoat™ 310, hrs	1	
<b>Consistency</b>		
DegaCoat™ 300	Semi-paste like	Industry Method
DegaCoat™ 310	Semi-paste like	
<b>Color</b>		
DegaCoat™ 300	Black	Industry Method
DegaCoat™ 310	Black	
<b>Water resistance</b>		
		ASTM 2939-94
<b>Blistering</b>		
DegaCoat™ 300	None	
DegaCoat™ 310	None	
<b>Reemulsification</b>		
DegaCoat™ 300	Nil	
DegaCoat™ 310	Nil	

Test results are averages obtained under laboratory conditions. Reasonable variations can be expected.

## Health and Safety

DEGACOAT™ 300

### Caution

DegaCoat™ 300 contains asphalt petroleum.

### Risks

May cause skin, eye or respiratory irritation. Ingestion may cause irritation.

### Precautions

KEEP OUT OF THE REACH OF CHILDREN. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Keep container closed when not in use. DO NOT take internally. Use only with adequate ventilation. Use impervious gloves, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable Federal, state and local regulations.

### First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs or if swallowed, SEEK IMMEDIATE MEDICAL ATTENTION.

Refer to Material Safety Data Sheet (MSDS) for further information.

### Proposition 65

This product contains materials listed by the state of California as known to cause cancer and birth defects or other reproductive harm.

### VOC Content

24 g/L or 0.20 lbs/gal, less water and exempt solvents.

DEGACOAT™ 310

### Caution

DegaCoat™ 310 contains asphalt petroleum and 2-butoxyethanol.

### Risks

May cause skin, eye and respiratory irritation. Ingestion may cause irritation. May be absorbed through skin. Repeated or prolonged exposure increases the risk of absorption. Reports associate repeated or prolonged occupational overexposure to solvents with permanent brain, nervous system, liver and kidney damage. INTENTIONAL MISUSE BY DELIBERATELY INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.

### Precautions

Keep container closed. Use only with adequate ventilation. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Avoid breathing vapors. DO NOT take internally. Use impervious gloves, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable Federal, state and local regulations.

### First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes. SEEK IMMEDIATE MEDICAL ATTENTION. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs or if swallowed, SEEK IMMEDIATE MEDICAL ATTENTION.

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### Proposition 65

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### VOC Content

24 g/L or 0.20 lbs/gal, less water and exempt solvents.

**For medical emergencies only,  
call ChemTrec (1-800-424-9300).**

**BASF Construction Chemicals, LLC –  
Building Systems**

889 Valley Park Drive  
Shakopee, MN, 55379

[www.BuildingSystems.BASF.com](http://www.BuildingSystems.BASF.com)

**Customer Service** 800-433-9517

**Technical Service** 800-243-6739



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# NaCl and MgCl

## UBC Salt Spray Comparison

Bob Miller

5/9/2011

 **BASF**

The Chemical Company



# Test Protocol NaCl and MgCl



## **ASTM G 85 Standard Practice for Modified Salt Spray (Fog) Testing**

# Test Protocol Samples

- **Three samples ran for each time interval**
- **Two Panels are selected at random for evaluation**
- **One panel left intact (evaluated for visual appearance)**
- **One panel stripped (evaluated for metal protection)**
- **Panels stripped by gently scrapping and residual removed with solvent**
- **Stripped panels are coated with an oil in order to prevent further corrosion.**
- **All samples then photographed**

# Test Protocol Time Interval

- 250 Hours
- 500 Hours
- 750 Hours
- 1000 Hours

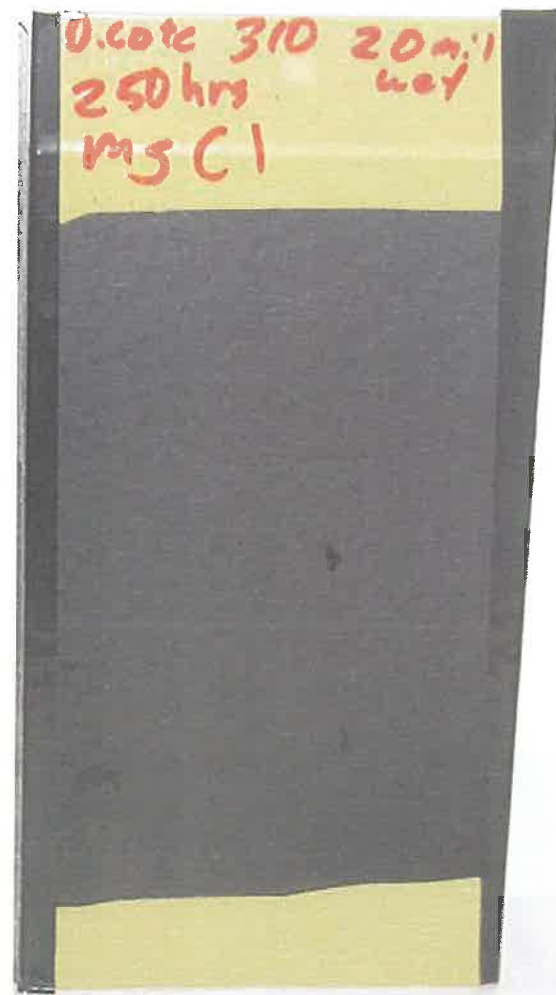


# 250 Hours



## NaCl

- No bubbles
- No Adh. loss



## MgCl

- No bubbles
- No Adh. Loss
- No Surface Corrosion



# 250 Hours Scrapped

## NaCl

- Light surface staining
- No Pitting



## MgCl

- Light surface staining
- No Pitting



# 500 Hours



## NaCl

- No Bubbles
- No Adh. Loss
- Slight Surface Staining at Edge



## MgCl

- No bubbles
- No Adh. Loss
- No Surface Corrosion

# 500 Hours Scrapped

## NaCl

- Light surface staining
- No Pitting



## MgCl

- Light surface staining
- No Pitting





# 750 Hours

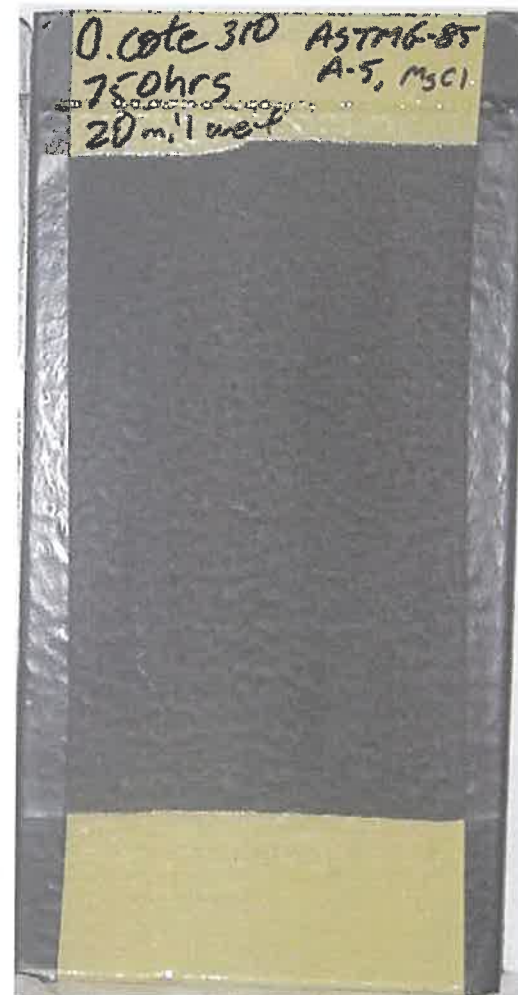
## NaCl

- No bubbles
- No Adh. Loss
- Slight Surface Corrosion



## MgCl

- No bubbles
- No Adh. Loss
- No Surface Corrosion





# 750 Hours Scrapped

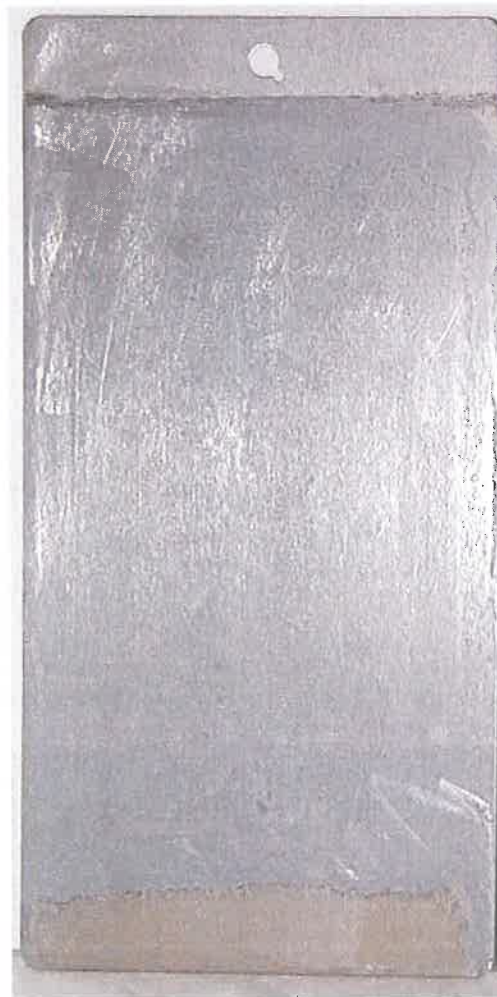
## NaCl

- Light surface staining
- No Pitting



## MgCl

- Light surface staining
- No Pitting



# 1000 Hours

## NaCl

- No bubbles
- No Adh. Loss
- Slight Surface Corrosion



## MgCl

- No bubbles
- No Adh. Loss
- No Surface Corrosion



# 1000 Hours

## NaCl

- Surface Rust
- Staining of Metal
- No Pitting



## MgCl

- Light surface staining
- No Pitting





# Summary

- Preliminary salt fog tests indicate MgCl may be less corrosive to steel than NaCl in these test environments.
- This test indicates that DegaCoat 310 does an excellent job in preventing oxidation and corrosion on coated steel.
- Recently published articles suggest an increased concern for electrical components and connections when exposed to MgCl deicing compounds.
- Our comparative test results indicate that MgCl is less corrosive to steel than standard deicing compounds.



**1FDFE4FS5HDC41662**

**Dry Weight: 10230 lbs**



**SAL003086**

**Dry Weight: 10230 lbs**

MANUFACTURED BY / FABRIQUE PAR: **FOREST RIVER, Inc.**

DATE: **3/28/2017**

**SAL003086**

V.I.N./N.I.V.: **1FDFE4FS5HDC41662**

**ST69928C**

**GVWR/PNBV: 6577KG (14500LB) TYPE/TYPE: BUS/AUTOBUS**

**DESIG. SEAT CAP./NOMBRE D'ESIGNE DE PLACES ASSISES 15X68kg=1020 kg or 15X150lbs=2250 lbs**

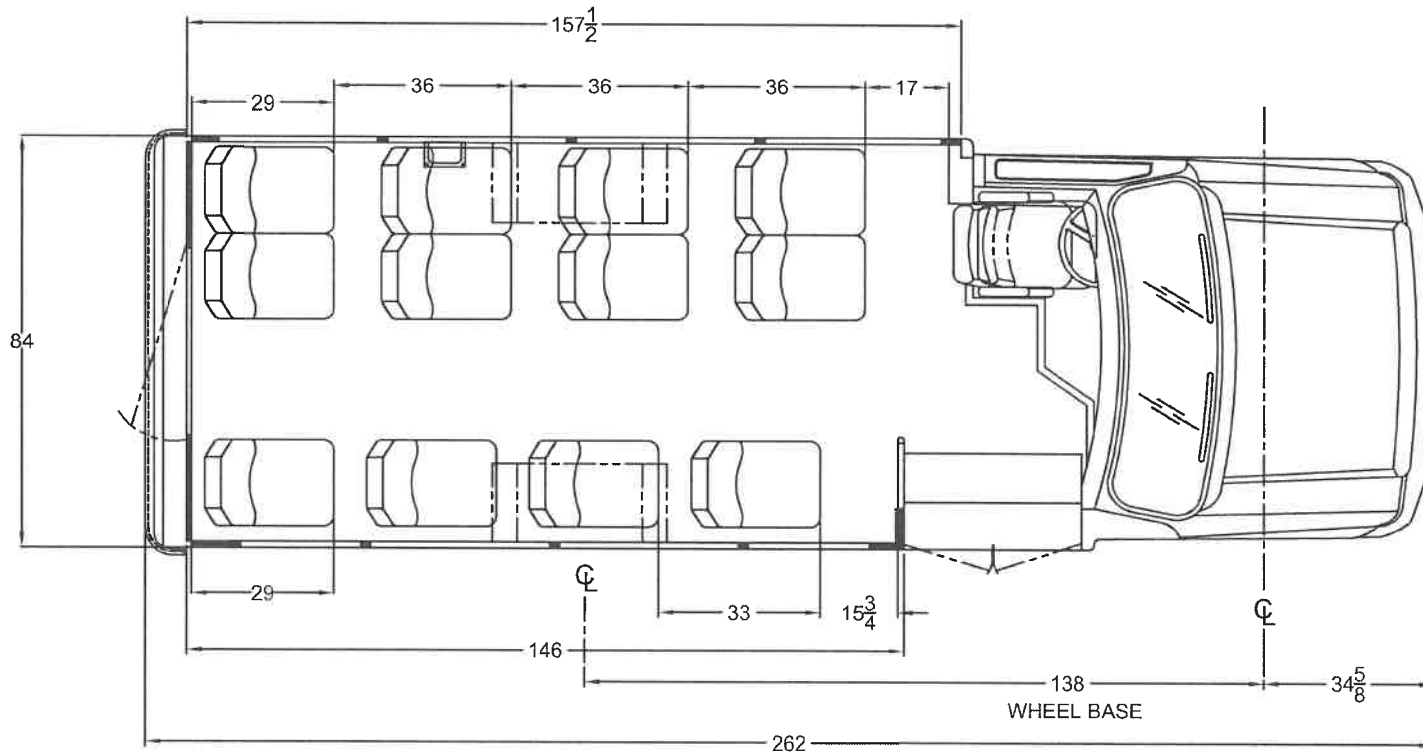
**THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.**

GAWR/PNBE	TIRES/PNEU	RIMS/JANTE	COLD INFL. PRESS/PRESS DE GONFL. A FROID
FRONT/ AVANT ( 2268 KG 5000 LB)	LT225/75R16E	16 X 6.0K	517 KP SINGLE DUAL ( 75 PSIA/P <input checked="" type="checkbox"/> <input type="checkbox"/>
INTERM/ NTERM ( 0 KG 0 LB)			0 KP SINGLE DUAL ( 0 PSIA/P <input checked="" type="checkbox"/> <input type="checkbox"/>
REAR/ ARRIERE ( 4355 KG 9600 LB)	LT225/75R16E	16 X 6.0K	552 KP SINGLE DUAL ( 80 PSIA/P <input type="checkbox"/> <input checked="" type="checkbox"/>

**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 LI SONT APPLICABLES EN VERTU DU REGLEMENT SUR LA SECURITE DES VEHICLES AUTOMOBILES DU CANADA EN VIGEUR A LA DATE DE SA FABRICATION.**

INC. VEH. MFG. BY: **Ford**



**DEALER APPROVAL**

APPROVED

\_\_\_\_\_  
CUSTOMER SIGNATURE

NOTE: SHOWN WITH MID HI FREEDMAN SEATS  
 CANDIDATE II E-350 11,500 GVWR  
 THIS FLOOR PLAN IS FOR ILLUSTRATION PURPOSES ONLY.  
 A WEIGHT ANALYSIS HAS NOT YET BEEN PERFORMED.  
 FINAL APPROVAL WITH A WEIGHT ANALYSIS IS REQUIRED UPON RECEIPT OF A  
 COMPLETED ORDER WITH ALL OPTIONS SHOWN.  
 OPTIONAL EQUIPMENT MAY BE SHOWN.  
 THE SALES ORDER PLACED DICTATES ACTUAL OPTION CONTENT.

**SCALE  
IN INCHES**

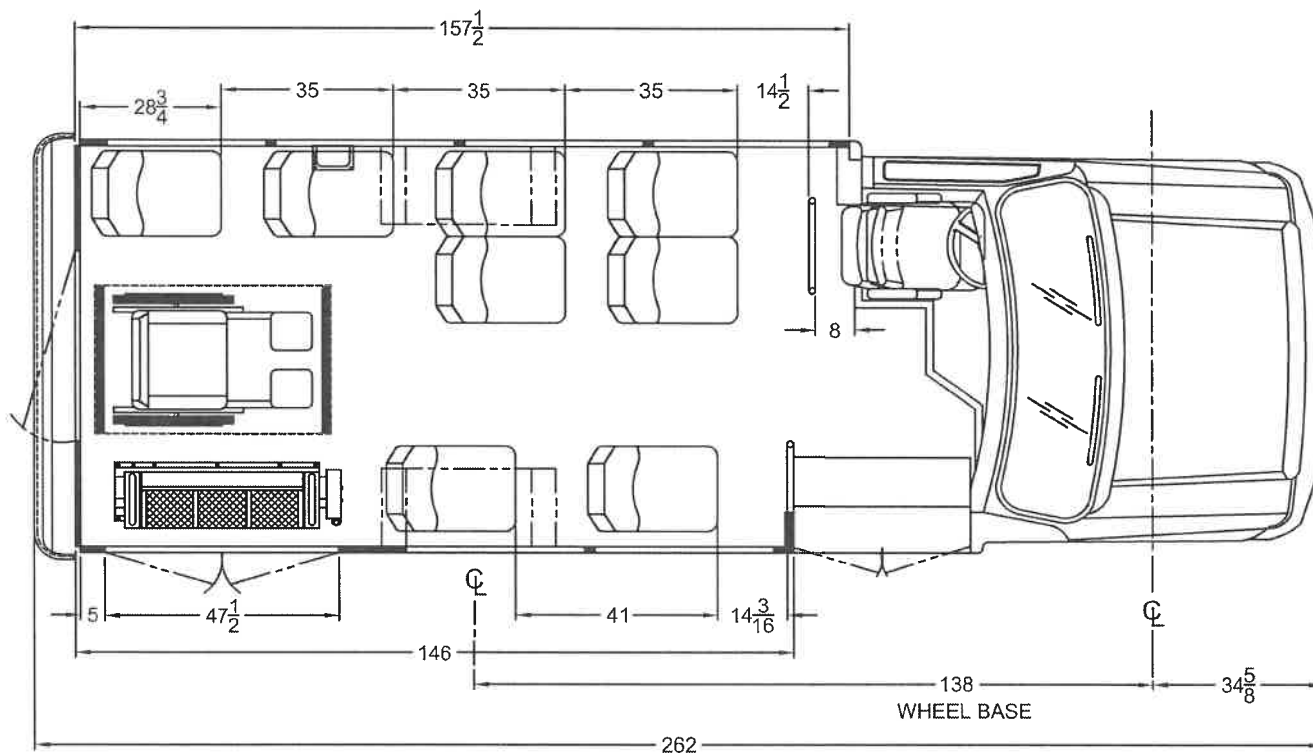


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REV. LET.	DESCRIPTION OF CHANGE	BY	CHK	DATE	ECN No.

TOLERANCE UNLESS OTHERWISE SPECIFIED		 <b>STARTRANS</b> a division of Forest River, Inc.	
WOOD	OTHER	DATE: 04/25/17	TITLE: 12 PASS 138" WB 146 BDY 20' CANDIDATE II
± 1/8"	± 1/16"	NAME: JPC	
± 1°	± 1/2°	DWG. No.	12 PASS 138 146 USA





DEALER APPROVAL

APPROVED

\_\_\_\_\_  
CUSTOMER SIGNATURE

NOTE: SHOWN WITH MIC HI FREEDMAN SEATS  
 CANDIDATE II E-350 11,500 GVWR  
 THIS FLOOR PLAN IS FOR ILLUSTRATION PURPOSES ONLY.  
 A WEIGHT ANALYSIS HAS NOT YET BEEN PERFORMED.  
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SCALE  
IN INCHES



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REV. LET.	DESCRIPTION OF CHANGE	BY	CHK	DATE	ECN No.

TOLERANCE UNLESS OTHERWISE SPECIFIED

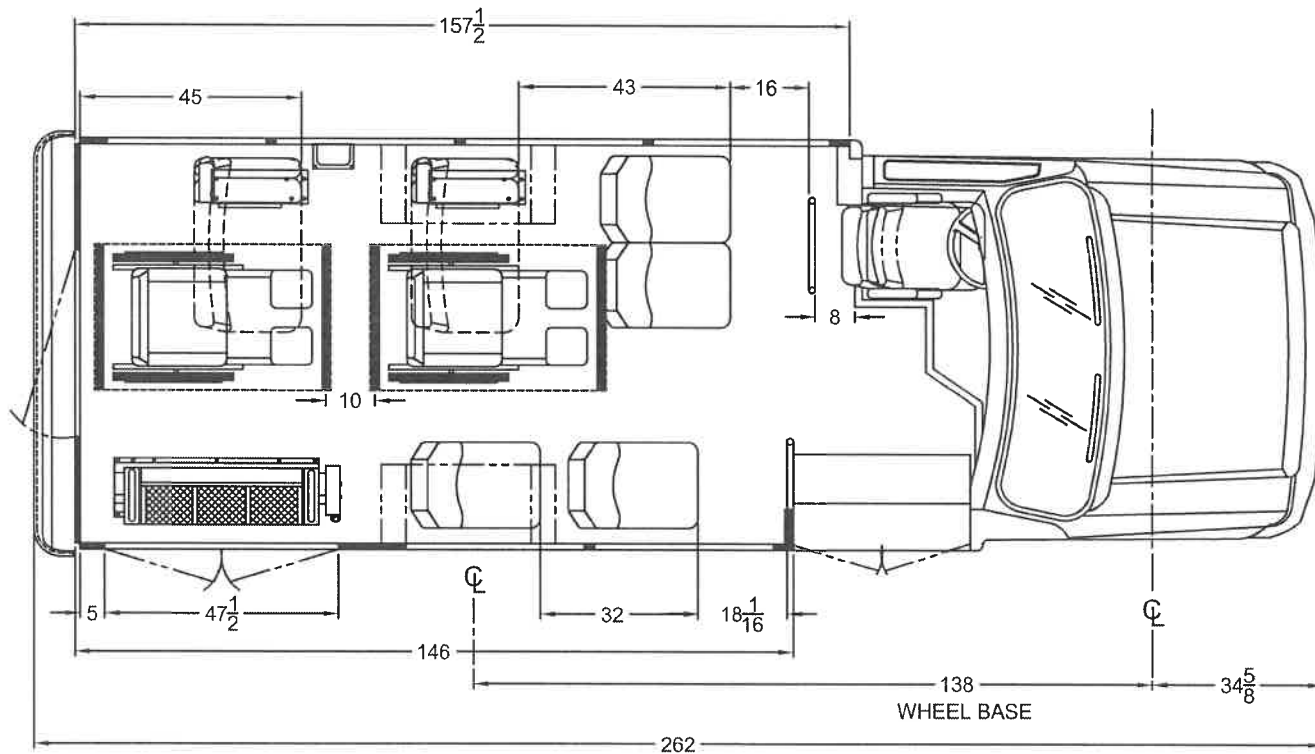
WOOD	OTHER
± 1/8"	± 1/16"
± 1°	± 1/2°

**STARTRANS** a division of Forest River, Inc.

DATE: 04/25/17 TITLE: 8/1 W/C 138" WB 20' CANDIDATE II  
 NAME: JPC  
 DWG. No. 8 1 WC 138 146-8 USA







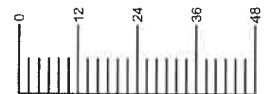
**DEALER APPROVAL**

APPROVED

\_\_\_\_\_  
CUSTOMER SIGNATURE

NOTE: SHOWN WITH MIC HI FREEDMAN SEATS  
 CANDIDATE II E-350 11,500 GVWR  
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**SCALE  
IN INCHES**



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REV. LET.	DESCRIPTION OF CHANGE	BY	CHK	DATE	ECN No.

TOLERANCE UNLESS OTHERWISE SPECIFIED

WOOD	OTHER
± 1/8"	± 1/16"
± 1°	± 1/2°

**STARTRANS** a division of Forest River, Inc.

DATE: 04/25/17 TITLE: 4 PASS. 2 W/C 138" WB  
20' CANDIDATE II

NAME: JPC

DWG. No. 4 2 WC 2 DBL FOLDS 138 146 USA







Paint Samples  
Available Upon  
Request

**ALTOONA TEST RESULTS  
INCLUDED ON FLASH DRIVE  
IN BINDER COVER**



U.S. Department  
of Transportation  
**Federal Transit  
Administration**

1200 New Jersey Avenue SE  
Washington, D.C. 20590

December 16, 2014

Larry Hall  
Director of Engineering  
Starcraft Bus, Division of Forest River, Inc.  
2367 Century Drive  
Goshen, IN 46528

Dear Mr. Hall,

This is in response to your letters dated November 7, 2014 and November 13, 2014 and an email dated December 2, 2014 in which you requested assistance from the Federal Transit Administration (FTA) concerning the applicability of the Bus Testing Regulation (49 CFR Part 665) to Starcraft bus models being sold as Startrans bus models. In your letters, email and subsequent phone discussions you indicated that:

- Forest River Inc. has purchased the “Startrans” brand. As a result, Forest River intends to offer comparable Starcraft bus models branded as existing Startrans bus models and leverage the existing Startrans bus dealer network to deliver them to FTA grantees.
- The future Startrans bus models will be produced on the same production line as the comparable Starcraft bus models. The remaining Startrans bus production runs to fulfill open contracts will be completed on the Startrans production lines. Once those are completed, all future Startrans bus models will be Starcraft products.
- Starcraft would like to use the existing Starcraft bus testing reports as evidence of satisfying the Bus Testing regulation for the future Startrans bus models built on the Starcraft production lines. The corresponding Starcraft bus model for each Startrans bus model is provided in the table below. The test report for the Starcraft Allstar is PTI-BT-0518. This report also covers the Starlite bus model which is a narrow body version of the Allstar. The test report for the Allstar XL is PTI-BT-0815.



<b>Existing Startrans Bus Model</b>	<b>Corresponding Starcraft Bus Model</b>
<b>Senator II</b> Chassis: Ford E-350/450 & GM 3500/4500	<b>Allstar</b> Chassis: Ford E-350/450 & GM 3500/4500
<b>Senator II MFSAB</b> Chassis: Ford E-350/450 & GM 3500/4500	<b>Allstar</b> Chassis: Ford E-350/450 & GM 3500/4500
<b>Candidate II</b> Chassis: Ford E-350/450	<b>Starlite</b> Chassis: Ford E-350/450
<b>Senator II HD</b> Chassis: Ford F-450/550	<b>Allstar XL</b> Chassis: Ford F-450/550

You have asked FTA to determine if any testing will be required to offer the existing Starcraft bus models with the "Startrans" name as identified above. FTA has reviewed your request and has determined that the Starcraft Allstar, Starlite, and Allstar XL built on the Starcraft production line can be offered to FTA grantees as the Startrans Senator II, Senator II MFSAB, Candidate II, Senator II HD **without any additional testing**. Starcraft should submit the latest comparable chassis test report that reflects the correct chassis, fuel type and fuel conversion supplier (if an alternative fuel conversion) and powertrain of the Startrans bus being offered to FTA grantees. This report is in addition to submitting the applicable Starcraft test report (PTI-BT-0518 or PTI-BT-0815).

This determination is based on the changes outlined to FTA as stated above. Should you make any other changes to the bus models, additional testing may be required. Feel free to contact me at the address above, or by e-mail ([gregory.rymarz@dot.gov](mailto:gregory.rymarz@dot.gov)), fax (202-366-3765), or telephone (202-366-6410) with any other questions.

Sincerely,



Gregory Rymarz  
Bus Testing Program Manager  
Office of Mobility Innovation, TRI-12

**STURAA TEST**

**7 YEAR**

**200,000 MILE BUS**

**from**

**STARCRAFT BUS,  
A DIVISION of FOREST RIVER INC.**

**MODEL ALLSTAR -25**

**FEBRUARY 2006**

**PTI-BT-R0518**

**PENNSSTATE**



---

**The Pennsylvania Transportation Institute**

201 Research Office Building (814) 865-1891  
The Pennsylvania State University  
University Park, PA 16802

**Bus Testing and Research Center**

2237 Old Route 220 N. (814) 695-3404  
Duncansville, PA 16635

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